

**COOPERATIVE PURCHASING AGREEMENT FOR FIBER OPTIC NETWORK ASSET
MANAGEMENT SOFTWARE**

THIS COOPERATIVE PURCHASING AGREEMENT FOR FIBER OPTIC NETWORK ASSET MANAGEMENT SOFTWARE ("Piggyback Agreement") is entered into by and between the **CITY OF OCALA**, a Florida municipal corporation ("City") and **GEOGRAPH TECHNOLOGIES, LLC**, a limited liability company duly organized in the state of South Carolina and authorized to do business in the state of Florida (EIN: 82-5526557) ("Contractor").

WHEREAS, after a competitive procurement process, the City of Chesapeake, Virginia (Chesapeake) entered into a contract with Geograph Technologies, LLC for the provision of fiber optic network asset management software, City of Chesapeake contract number 25-068-6328 (the "Chesapeake Agreement"); and

WHEREAS, in accordance with Chapter 287, Florida Statutes and the City of Ocala's contracting and procurement policies and procedures, City has the legal authority to "piggyback" the purchase of goods and services as contracted by another governmental entity as a form of inter-governmental cooperative purchasing when seeking to utilize the same or similar services provided for in said contract; and

WHEREAS, City desires to purchase labor, services, and materials for the provision of fiber optic network asset management software pursuant to essentially the same terms and conditions provided under the Chesapeake Agreement as applicable and amended by the terms and conditions of this Piggyback Agreement; and

WHEREAS, Contractor agrees to extend the terms, conditions, and pricing of the Chesapeake Agreement to the City of Ocala, subject to the terms and conditions of the Piggyback Agreement.

NOW THEREFORE, in consideration of the foregoing recitals, the following mutual covenants and conditions, and other good and valuable consideration, City and Contractor agree as follows:

1. **RECITALS.** City and Contractor hereby represent, warrant, and agree that the Recitals set forth above are true and correct and are incorporated herein by reference.
2. **DEFINITIONS.** As used in this Piggyback Agreement, the following terms shall have the meaning specified below:
 - A. **Piggyback Agreement:** shall mean this Cooperative Purchasing Agreement for Fiber Optic Network Asset Management Software as it may from time to time be amended or modified pursuant to its terms and provisions.
 - B. **Chesapeake Agreement:** shall mean the contract between the City of Chesapeake and Geograph Technologies, LLC and its exhibits, as amended and attached hereto as **Exhibit A – Chesapeake Agreement**.
3. **INCORPORATION OF CHESAPEAKE AGREEMENT.** The Chesapeake Agreement attached hereto as **Exhibit A** is hereby incorporated by reference as if set forth herein in its entirety. However, to the extent that any terms and conditions set forth in the Chesapeake Agreement conflict with any of the amended or supplemental terms and conditions set forth in this Piggyback Agreement, then the amended and supplemental terms and conditions set forth in this Piggyback Agreement shall be given precedence.

4. **CONTRACT DOCUMENTS.** The Contract Documents which comprise the entire understanding between City and Contractor shall only include this Agreement and those documents listed in this section as Exhibits to this Agreement. Each of these documents are incorporated herein by reference for all purposes. If there is a conflict between the terms of this Agreement and the Contract Documents, then the terms of this Agreement shall control, amend, and supersede any conflicting terms contained in the remaining Contract Documents.

Exhibits to Agreement: The Exhibits to this Agreement are as follows:

- A. Exhibit A: Chesapeake Agreement (A-1 through A-167)
5. **AMENDED TERMS AND CONDITIONS.** The following terms and conditions of the Chesapeake Agreement are modified and replaced, in their entirety, as follows:
- A. The terms "City of Chesapeake," or "City" shall be replaced and intended to refer to the "City of Ocala."
 - B. **COMPENSATION.** City shall pay Contractor a price not to exceed the maximum limiting amount of **ONE HUNDRED SIX THOUSAND, TWO HUNDRED AND NO/100 DOLLARS (\$106,200)** over the contract term for the performance of the work and in accordance with the contract documents based on the most current prices set forth in **Exhibit A – Chesapeake Agreement**.
 - C. **TIME FOR PERFORMANCE.** This Agreement shall become effective and commence on **NOVEMBER 19, 2025** and continue through and including **JANUARY 27, 2030**.
 - D. **Invoice Submission.** All invoices submitted by Contractor shall include the City Contract Number, an assigned Invoice Number, and Invoice Date. Contractor shall submit the original invoice through the responsible City Project Manager at: **Ocala Fiber Network**, 3001 NE 21st Street, Ocala, Florida 34470, Attn: **Kenneth Jamerson** E-Mail: kjamerson@ocalafl.gov; Office: 352-401-6923.
 - E. **Payment of Invoices by City.** The City Project Manager must review and approve all invoices prior to payment. City Project Manager's approval shall not be unreasonably withheld, conditioned, or delayed. Payments by City shall be made no later than the time periods established in section 218.735, Florida Statutes.
 - F. **Withholding of Payment.** City reserves the right to withhold, in whole or in part, payment for any and all work that: (i) has not been completed by Contractor; (ii) is inadequate or defective and has not been remedied or resolved in a manner satisfactory to the City Project Manager; or (iii) which fails to comply with any term, condition, or other requirement under this Agreement. Any payment withheld shall be released and remitted to Contractor within **THIRTY (30)** calendar days of the Contractor's remedy or resolution of the inadequacy or defect.
 - G. **Excess Funds.** If due to mistake or any other reason Contractor receives payment under this Agreement in excess of what is provided for by the Agreement, Contractor shall promptly notify City upon discovery of the receipt of the overpayment. Any overpayment shall be refunded to City within **THIRTY (30)** days of Contractor's receipt of the overpayment or must also include interest calculated from the date of the overpayment at the interest rate for judgments at the highest rate as allowed by law.

- H. **Amounts Due to the City.** Contractor must be current and remain current in all obligations due to the City during the performance of services under the Agreement. Payments to Contractor may be offset by any delinquent amounts due to the City or fees and/or charges owed to the City.
 - I. **Tax Exemption.** City is exempt from all federal excise and state sales taxes (State of Florida Consumer's Certification of Exemption 85-8012621655C-9). The City's Employer Identification Number is 59-60000392. Contractor shall not be exempted from paying sales tax to its suppliers for materials to fulfill contractual obligations with the City, nor will Contractor be authorized to use City's Tax Exemption Number for securing materials listed herein.
6. **COMMERCIAL AUTO LIABILITY INSURANCE.** Contractor shall procure, maintain, and keep in full force, effect, and good standing for the life of this Agreement a policy of commercial auto liability insurance with a minimum combined single limit of One Million Dollars (\$1,000,000) per occurrence for bodily injury and property damage arising out of Contractor's operations and covering all owned, hired, scheduled, and non-owned automobiles utilized in said operations. If Contractor does not own vehicles, Contractor shall maintain coverage for hired and non-owned automobile liability, which may be satisfied by way of endorsement to Contractor's Commercial General Liability policy or separate Commercial Automobile Liability policy.
 7. **GENERAL LIABILITY INSURANCE.** Contractor shall procure and maintain, for the life of this Agreement, commercial general liability insurance with minimum coverage limits not less than:
 - A. One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) aggregate limit for bodily injury, property damage, and personal and advertising injury; and
 - B. One Million Dollars (\$1,000,000) per occurrence and Two Million Dollars (\$2,000,000) aggregate limit for products and completed operations.
 - C. Policy must include coverage for contractual liability and independent contractors.
 - D. Policy must include Additional Insured coverage in favor of the City that is no less restrictive than that afforded under the CG 20 26 04 13 Additional Insured Form.
 8. **WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY.** Worker's Compensation insurance shall be provided by Contractor as required by Chapter 440, Florida Statutes, or any other applicable state or federal law, including the U.S. Longshoremen's and Harbor Workers Compensation Act and the Jones Act.
 - A. Contractor shall similarly require any and all subcontractors to afford such coverage for all of its employees as required by applicable law.
 - B. Contractor shall waive and shall ensure that Contractor's insurance carrier waives, all subrogation rights against the City of Ocala and its officers, employees, and volunteers for all losses or damages. Contractor's policy shall be endorsed with WC 00 03 13 Waiver of our Right to Recover from Others or its equivalent.
 - C. Exceptions and exemptions to this Section may be allowed at the discretion of the City's Risk Manager on a case-by-case basis in accordance with Florida Statutes and shall be evidenced by a separate waiver.

9. **ADDITIONAL INSURANCE REQUIREMENTS.**

- A. Contractor's insurance coverage shall be primary insurance for all applicable policies. The limits of coverage under each policy maintained by Contractor shall not be interpreted as limiting Contractor's liability or obligations under this Agreement. City does not in any way represent that these types or amounts of insurance are sufficient or adequate enough to protect Contractor's interests or liabilities or to protect Contractor from claims that may arise out of or result from the negligent acts, errors, or omissions of Contractor, any of its agents or subcontractors, or for anyone whose negligent act(s) Contractor may be liable.
- B. No insurance shall be provided by the City for Contractor under this Agreement and Contractor shall be fully and solely responsible for any costs or expenses incurred as a result of a coverage deductible, co-insurance penalty, or self-insured retention to include any loss not covered because of the operation of such deductible, co-insurance penalty, self-insured retention, or coverage exclusion or limitation.
- C. **Certificates of Insurance.** No work shall be commenced by Contractor under this Agreement until the required Certificate of Insurance and endorsements have been provided nor shall Contractor allow any subcontractor to commence work until all similarly required certificates and endorsements of the subcontractor have also been provided. Work shall not continue after expiration (or cancellation) of the Certificate of Insurance and work shall not resume until a new Certificate of Insurance has been provided. **Contractor shall provide evidence of insurance in the form of a valid Certificate of Insurance (binders are unacceptable) prior to the start of work contemplated under this Agreement to: City of Ocala. Attention: Procurement & Contracting Department, Address: 110 SE Watula Avenue, Third Floor, Ocala Florida 34471, E-Mail: vendors@ocalafl.gov.** Contractor's Certificate of Insurance and required endorsements shall be issued by an agency authorized to do business in the State of Florida with an A.M. Best Rating of A or better. The Certificate of Insurance shall indicate whether coverage is being provided under a claims-made or occurrence form. If any coverage is provided on a claims-made form, the Certificate of Insurance must show a retroactive date, which shall be the effective date of the initial contract or prior.
- D. **City as Additional Insured.** The City of Ocala shall be named as an Additional Insured and Certificate Holder on all liability policies identified in this Section with the exception of Workers' Compensation, Auto Liability (except when required by Risk Management) and Professional Liability policies. **Workers Compensation policy must contain a Waiver of Subrogation in favor of the City.**
- E. **Notice of Cancellation of Insurance.** Contractor's Certificate of Insurance shall provide **THIRTY (30) DAY** notice of cancellation, **TEN (10) DAY** notice if cancellation is for non-payment of premium. In the event that Contractor's insurer is unable to accommodate the cancellation notice requirement, it shall be the responsibility of Contractor to provide the proper notice. Such notification shall be in writing by registered mail, return receipt requested, and addressed to the certificate holder. Additional copies may be sent to the City of Ocala at vendors@ocalafl.gov.
- F. **Failure to Maintain Coverage.** The insurance policies and coverages set forth above are required and providing proof of and maintaining insurance of the types and with such terms and limits set forth above is a material obligation of Contractor. Contractor's failure to obtain

or maintain in full force and effect any insurance coverage required under this Agreement shall constitute material breach of this Agreement.

- G. **Severability of Interests.** Contractor shall arrange for its liability insurance to include or be endorsed to include a severability of interests/cross-liability provision so that the "City of Ocala" (where named as an additional insured) will be treated as if a separate policy were in existence, but without increasing the policy limits.
10. **PUBLIC RECORDS.** Contractor shall comply with all applicable provisions of the Florida Public Records Act, Chapter 119, Florida Statutes. Specifically, Contractor shall:
- A. Keep and maintain public records required by the public agency to perform the service.
 - B. Upon request from the public agency's custodian of public records, provide the public agency with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes, or as otherwise provided by law.
 - C. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if Contractor does not transfer the records to the public agency.
 - D. Upon completion of the contract, transfer, at no cost, to the public agency all public records in possession of Contractor or keep and maintain public records required by the public agency to perform the service. If Contractor transfers all public records to the public agency upon completion of the contract, Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If Contractor keeps and maintains public records upon completion of the contract, Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the public agency, upon request from the public agency's custodian of public records, in a format that is compatible with the information technology systems of the public agency.

IF CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT: CITY OF OCALA, OFFICE OF THE CITY CLERK; 352-629-8266; E-mail: clerk@ocalafl.gov; City Hall, 110 SE Watula Avenue, Ocala, FL 34471.

11. **AUDIT.** Contractor shall comply and cooperate immediately with any inspections, reviews, investigations, or audits relating to this Agreement as deemed necessary by the Florida Office of the Inspector General, the City's Internal or External auditors or by any other Florida official with proper authority.
12. **PUBLICITY.** Contractor shall not use City's name, logo, seal or other likeness in any press release, marketing materials, or other public announcement without City's prior written approval.

13. **E-VERIFY.** Pursuant to section 448.095, Contractor shall register with and use the U.S. Department of Homeland Security's ("DHS") E-Verify System, accessible at <https://e-verify.uscis.gov/emp>, to verify the work authorization status of all newly hired employees. Contractor shall obtain affidavits from any and all subcontractors in accordance with paragraph 2(b) of section 448.095, Florida Statutes, and maintain copies of such affidavits for the duration of this Agreement. By entering into this Agreement, Contractor certifies and ensures that it utilizes and will continue to utilize the DHS E-Verify System for the duration of this Agreement and any subsequent renewals of same. Contractor understands that failure to comply with the requirements of this section shall result in the termination of this Agreement and Contractor may lose the ability to be awarded a public contract for a minimum of one (1) year after the date on which the Agreement was terminated. Contractor shall provide a copy of its DHS Memorandum of Understanding upon City's request. Please visit www.e-verify.gov for more information regarding the E-Verify System.
14. **CONFLICT OF INTEREST.** Contractor is required to have disclosed, with the submission of their bid, the name of any officer, director, or agent who may be employed by the City. Contractor shall further disclose the name of any City employee who owns, directly or indirectly, any interest in Contractor's business or any affiliated business entity. Any additional conflicts of interest that may occur during the contract term must be disclosed to the City of Ocala Procurement Department.
15. **WAIVER.** The failure or delay of any party at any time to require performance by another party of any provision of this Agreement, even if known, shall not affect the right of such party to require performance of that provision or to exercise any right, power or remedy hereunder. Any waiver by any party of any breach of any provision of this Agreement should not be construed as a waiver of any continuing or succeeding breach of such provision, a waiver of the provision itself, or a waiver of any right, power or remedy under this Agreement. No notice to or demand on any party in any circumstance shall, of itself, entitle such party to any other or further notice or demand in similar or other circumstances.
16. **SEVERABILITY OF ILLEGAL PROVISIONS.** Wherever possible, each provision of this Agreement shall be interpreted in such a manner as to be effective and valid under the applicable law. Should any portion of this Agreement be declared invalid for any reason, such declaration shall have no effect upon the remaining portions of this Agreement.
17. **INDEMNITY.** Contractor shall indemnify City and its elected officials, employees and volunteers against, and hold City and its elected officials, employees and volunteers harmless from, all damages, claims, losses, costs, and expenses, including reasonable attorneys' fees, which City or its elected officials, employees or volunteers may sustain, or which may be asserted against City or its elected officials, employees or volunteers, arising out of the activities contemplated by this Agreement including, without limitation, harm or personal injury to third persons during the term of this Agreement to the extent attributable to the actions of Contractor, its agents, and employees.
18. **NO WAIVER OF SOVEREIGN IMMUNITY.** Nothing herein is intended to waive sovereign immunity by the City to which sovereign immunity may be applicable, or of any rights or limits of liability existing under Florida Statute § 768.28. This term shall survive the termination of all performance or obligations under this Agreement and shall be fully binding until any proceeding brought under this Agreement is barred by any applicable statute of limitations.

19. **NOTICES.** All notices, certifications or communications required by this Agreement shall be given in writing and shall be deemed delivered when personally served, or when received if by facsimile transmission with a confirming copy mailed by registered or certified mail, postage prepaid, return receipt requested. Notices can be concurrently delivered by e-mail. All notices shall be addressed to the respective parties as follows:

If to Contractor:

Geograph Technologies, LLC
Attention: Joe Caldwell
103 West Main Street
Easley, South Carolina 29640
Phone: 800-674-4803 ext. 3
E-mail: ar@geograph.tech

If to City of Ocala: Daphne M. Robinson, Esq., Contracting Officer
City of Ocala
110 SE Watula Avenue, 3rd Floor
Ocala, Florida 34471
Phone: 352-629-8343
E-mail: notices@ocalafl.gov

Copy to: William E. Sexton, Esq., City Attorney
City of Ocala
110 SE Watula Avenue, 3rd Floor
Ocala, Florida 34471
Phone: 352-401-3972
E-mail: cityattorney@ocalafl.gov

20. **ATTORNEYS' FEES.** If any civil action, arbitration or other legal proceeding is brought for the enforcement of this Agreement, or because of an alleged dispute, breach, default or misrepresentation in connection with any provision of this Agreement, the successful or prevailing party shall be entitled to recover reasonable attorneys' fees, sales and use taxes, court costs and all expenses reasonably incurred even if not taxable as court costs (including, without limitation, all such fees, taxes, costs and expenses incident to arbitration, appellate, bankruptcy and post-judgment proceedings), incurred in that civil action, arbitration or legal proceeding, in addition to any other relief to which such party or parties may be entitled. Attorneys' fees shall include, without limitation, paralegal fees, investigative fees, administrative costs, sales and use taxes and all other charges reasonably billed by the attorney to the prevailing party.

21. **JURY WAIVER.** IN ANY CIVIL ACTION, COUNTERCLAIM, OR PROCEEDING, WHETHER AT LAW OR IN EQUITY, WHICH ARISES OUT OF, CONCERNS, OR RELATES TO THIS AGREEMENT, ANY AND ALL TRANSACTIONS CONTEMPLATED HEREUNDER, THE PERFORMANCE HEREOF, OR THE RELATIONSHIP CREATED HEREBY, WHETHER SOUNDING IN CONTRACT, TORT, STRICT LIABILITY, OR OTHERWISE, TRIAL SHALL BE TO A COURT OF COMPETENT JURISDICTION AND NOT TO A JURY. EACH PARTY HEREBY IRREVOCABLY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY. NEITHER PARTY HAS MADE OR RELIED UPON ANY

ORAL REPRESENTATIONS TO OR BY ANY OTHER PARTY REGARDING THE ENFORCEABILITY OF THIS PROVISION. EACH PARTY HAS READ AND UNDERSTANDS THE EFFECT OF THIS JURY WAIVER PROVISION.

22. **GOVERNING LAW.** This Agreement is and shall be deemed to be a contract entered and made pursuant to the laws of the State of Florida and shall in all respects be governed, construed, applied and enforced in accordance with the laws of the State of Florida.
23. **JURISDICTION AND VENUE.** The parties acknowledge that a majority of the negotiations, anticipated performance and execution of this Agreement occurred or shall occur in Marion County, Florida. Any civil action or legal proceeding arising out of or relating to this Agreement shall be brought only in the courts of record of the State of Florida in Marion County or the United States District Court, Middle District of Florida, Ocala Division. Each party consents to the exclusive jurisdiction of such court in any such civil action or legal proceeding and waives any objection to the laying of venue of any such civil action or legal proceeding in such court and/or the right to bring an action or proceeding in any other court. Service of any court paper may be effected on such party by mail, as provided in this Agreement, or in such other manner as may be provided under applicable laws, rules of procedures or local rules.
24. **REFERENCE TO PARTIES.** Each reference herein to the parties shall be deemed to include their successors, assigns, heirs, administrators, and legal representatives, all whom shall be bound by the provisions hereof.
25. **MUTUALITY OF NEGOTIATION.** Contractor and City acknowledge that this Agreement is a result of negotiations between Contractor and City, and the Agreement shall not be construed in favor of, or against, either party because of that party having been more involved in the drafting of the Agreement.
26. **SECTION HEADINGS.** The section headings herein are included for convenience only and shall not be deemed to be a part of this Agreement.
27. **RIGHTS OF THIRD PARTIES.** Nothing in this Agreement, whether express or implied, is intended to confer any rights or remedies under or because of this Agreement on any persons other than the parties hereto and their respective legal representatives, successors and permitted assigns. Nothing in this Agreement is intended to relieve or discharge the obligation or liability of any third persons to any party to this Agreement, nor shall any provision give any third persons any right of subrogation or action over or against any party to this Agreement.
28. **AMENDMENT.** No amendment to this Agreement shall be effective except those agreed to in writing and signed by both parties to this Agreement.
29. **COUNTERPARTS.** This Agreement may be executed in counterparts, each of which shall be an original and all of which shall constitute the same instrument.
30. **ELECTRONIC SIGNATURE(S).** Contractor, if and by offering an electronic signature in any form whatsoever, will accept and agree to be bound by said electronic signature to all terms and conditions of this Agreement. Further, a duplicate or copy of the Agreement that contains a duplicated or non-original signature will be treated the same as an original, signed copy of this original Agreement for all purposes.

31. **ENTIRE AGREEMENT.** This Agreement, including exhibits, (if any) constitutes the entire Agreement between the parties hereto with respect to the subject matter hereof. There are no other representations, warranties, promises, agreements or understandings, oral, written or implied, among the Parties, except to the extent reference is made thereto in this Agreement. No course of prior dealings between the parties and no usage of trade shall be relevant or admissible to supplement, explain, or vary any of the terms of this Agreement. No representations, understandings, or agreements have been made or relied upon in the making of this Agreement other than those specifically set forth herein.
32. **LEGAL AUTHORITY.** Each person signing this Agreement on behalf of either party individually warrants that he or she has full legal power to execute this Agreement on behalf of the party for whom he or she is signing, and to bind and obligate such party with respect to all provisions contained in this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement on _____.

ATTEST:**CITY OF OCALA**

Angel B. Jacobs
City Clerk

Kristen Dreyer
City Council President

Approved as to form and legality:**GEOGRAPH TECHNOLOGIES, LLC**

William E. Sexton, Esq.
City Attorney

By: _____
(Printed Name)

Title: _____
(Title of Authorized Signatory)



CONTRACT MODIFICATION AGREEMENT

Date: September 25, 2025

Contract No.: 25-068-6328

Commodity: Fiber Optic Network Asset Management Software

Modification No.: 1

Issued By: Kim White, Procurement Specialist I
City of Chesapeake
Purchasing Division
306 Cedar Road, 5th Floor
Chesapeake, Virginia 23322
Phone: (757) 382-6359

Contractor: Geograph Technologies, LLC
103 W. Main Street
Easley, SC 29640

Attn: Grey Pittman
grey.pittman@geograph.tech

This Supplemental Agreement is entered into pursuant to the provisions of the basic contract.

Description of Modification:

Pursuant to Section 14. General Terms and Conditions, Item 14.17. Change to the Contract, the subject Contract is being modified to replace the cooperative language under Section 15. Special Terms and Conditions, Item 15.6. Cooperative Procurement.

Cooperative sharing is now available to any public agency or body in the United States.

Current language:

Any resultant contract of this solicitation may be extended to any public agency or body in the Commonwealth of Virginia to permit those public agencies or bodies to purchase at contract prices, in accordance with the terms, conditions and specifications of this bid/proposal. The successful vendor/contractor shall deal directly with each public agency or body in regard to order placement, delivery, invoicing and payment.

Shall be replaced with:

Any resultant contract of this solicitation may be extended to any public agency or body in the United State, or its territories, and the District of Columbia to permit those public agencies or bodies to purchase at contract prices, in accordance with the terms, conditions and specifications of this bid/proposal. The successful vendor/contractor shall deal directly with each public agency or body in regard to order placement, delivery, invoicing and payment.

Change shall take effect immediately upon full execution of Modification No. 1.

END OF MODIFICATION NO. 1

Except for the changes provided herein, all other terms and conditions of this contract remain unchanged and in full force and effect.

GEOGRAPH TECHNOLOGIES, LLC

CITY OF CHESAPEAKE

By: Grey Pittman

Grey Pittman, COO	09/25/2025
Name and Title (Type or Print)	Date Signed

Name and Title (Type or Print)

Date Signed _____

By: Arakel Cohen

Carol A. Robinson, Procurement Administrator | Date Signed 9-25-25

9-25-25

****Must be signed by an AUTHORIZED representative****



PURCHASING

CONTRACT

CONTRACT NUMBER: 25-068-6328

Fiber Optic Network Asset Management Software

This Contract is entered into this 28 day of January, 2025, between Geograph Technologies, LLC, (Contractor), located at 103 W. Main Street, Easley, SC 29640, and the City of Chesapeake, located at 306 Cedar Road, Chesapeake, Virginia 23322 ("The City").

WITNESSETH that the Contractor and The City, in consideration of the mutual covenants, promises and agreements herein contained, agree as follows:

PERIOD OF PERFORMANCE: The Contract term shall be for a period of five (5) years from the date of execution with five (5), one-year renewal options upon mutual written agreement of the parties.

SCOPE OF CONTRACT: The Contractor shall provide the goods and services to the City of Chesapeake as set forth in RFP Number 25-068-6328 for Fiber Optic Network Asset Management Software and the contractor's proposal response dated November 22, 2024.

AVAILABILITY OF FUNDS: It is understood and agreed between the parties herein that The City shall be bound hereunder only to the extent of the funds available, or which may hereafter become available for the purpose of providing the Fiber Optic Network Asset Management Software.

The Contract documents shall consist of the following, all of which are Incorporated by reference:

1. This signed Contract;
2. City of Chesapeake Request for Proposal No. 25-068-6328, Fiber Optic Network Asset Management Software dated October 24, 2024, to include Addendum 1 issued November 12, 2024;
3. Geograph Technologies, LLC response to the City of Chesapeake Request for Proposals dated November 22, 2024;
4. Chesapeake Addendum to Contractor's Form, referencing Geograph's Terms and Conditions, last updated June 1, 2024.
5. Negotiations, ending January 13, 2025, including City letter, Geograph Response with clarified pricing, and emails;
6. Pricing/Fee Schedule—Geograph Technologies, LLC Proposed Pricing response dated January 6, 2025.

IN WITNESS WHEREOF, the parties have caused this Contract to be duly executed intending to be bound thereby.

CONTRACTOR: Geograph Technologies, LLC

CITY OF CHESAPEAKE

By: Bruce Smith

By: Carol A Robinson

Printed Name: Bruce Smith

Printed Name: Carol A Robinson

Title: CEO

Title: Procurement Administrator

Date: 1/29/2025

Date: 1-29-25



PURCHASING

Note: The City of Chesapeake does not discriminate against faith-based organizations in accordance with Code of Virginia Section 2.2-4343.1 or against any contractor, bidder, or offeror because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by State law relating to discrimination in employment.



REQUEST FOR PROPOSAL

25-068-6328

FIBER OPTIC NETWORK ASSET MANAGEMENT SOFTWARE

Release Project Date	October 24, 2024
Submission of Question Deadline	November 1, 2024, 2:00pm
Submission of Response Deadline	November 18, 2024, 2:00pm
Evaluation of Proposals	November 19, 2024

Submissions are accepted electronically at City’s e-Procurement Portal:
<https://procurement.opengov.com/portal/cityofchesapeakeva>

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1. Purpose

The City of Chesapeake, Virginia is soliciting sealed proposals for the purpose of identifying an appropriate vendor to supply fiber asset management, conduit assets and mapping software to be used to document and manage existing and planned Chesapeake Connects Next-Generation-Network (NGN) Outside Plant (OSP), allowing the City of Chesapeake to accurately document the location and status of fiber assets within the City of Chesapeake.

The City of Chesapeake does not discriminate against faith-based organizations in accordance with Code of Virginia Section 2.2-4343.1 or against any contractor, bid, or offeror because of race, religion, color, sex, national origin, age, disability, or any other basis prohibited by State law relating to discrimination in employment.

2. Background

The City of Chesapeake VA (hereinafter "City") is deploying the Chesapeake Connects (C-C), a next-generation fiber and wireless network. The development and expansion of the City's fiber network requires new software tools for the design and management of the fiber network infrastructure that is vital to supporting the day-to-day operations of the City, Schools, and Libraries.

The rapidly expanding use of fiber and the continuing innovation in design and best practices has created opportunities that require better ways for the City to standardize its approach toward fiber management.

There is a strong desire by City staff to utilize a more dynamic, centralized, GIS-based solution that incorporates real-time location of OSP assets. Acquiring and implementing modern GIS- based fiber optic network (and conduit) asset management software can provide process improvements and improved efficiency and effectiveness benefits well beyond current business practices.

It is anticipated that software can provide appreciable benefits including:

- Integrated system to document, plan, design, analyze and maintain the City's fiber network and conduit system
- Centralized data storage for easy dissemination to other enterprise users
- Fiber network and conduit system data is accurate and up to date.
- Annotation and handhole diagrams are automatically updated as data changes; and
- Create revenue for accurate tracking of leased ducts, use the tracing queries to determine duct availability for new leases.

The fiber optics network asset management software will be implemented for the City of Chesapeake, to manage the OSP infrastructure. The system will contain information for splice boxes, conduit runs, and cables for multiple fiber optic systems across the city.

Applications will include tools to easily identify and access fiber optics detailed information, conduct proximity infrastructure buffer analyses, and generate what-if "scenarios" (e.g., alternate circuit routing, fiber build-out, etc.) to support decision analysis.

Fully implemented, asset management software will be used for efficient and effective management of assets, organizing daily interventions (e.g., work order fulfillment and outage management), managing leasable fiber optics conduits, and planning new fiber optics developments.

3. Scope of Work

3.1. Scope of Services

The successful respondent under this RFP (hereafter, the "Contractor") shall provide all labor, personnel, supplies, materials, goods, and services necessary to design, configure, implement, install, and maintain a fiber optic network asset management software solution (the "Solution" or the "Software") containing all the functions and features required under this RFP.

Contractor shall deliver a Solution for the management of all assets in the Chesapeake Connects Next-Generation-Network ("NGN") Outside Plant ("OSP"). For the purpose of this RFP, "OSP" refers to all of the physical cabling and supporting infrastructure (including, without limitation, conduit, cabinets, splice boxes, towers, and poles) and any associated hardware located between a demarcation point in a facility and a demarcation point in another facility or customer location.

3.2. Required Information Technology Computing and Software Standards

Contractor shall deliver a Solution which supports, and runs properly under, the City of Chesapeake's current enterprise geospatial environment, as identified below and listed in Table 1.

If Contractor will deliver an on-premises Solution, all proposed software must integrate with the City's pre-existing geospatial platform, which includes the following:

1. Microsoft SQL Server 2019 enterprise edition or above;
2. Environmental Systems Research Institute (ESRI) ArcGIS Enterprise version 10.9.1 currently, expected to upgrade to version 11.3 by May 2025;
3. ESRI ArcGIS® Desktop version 10.8.1;
4. ESRI ArcGIS Pro v3.x and
5. Microsoft .NET Desktop Runtime 5.x (only for customizations and integration with application programming interfaces (APIs)).

Whether Contractor proposes an on-premises or off-premises Solution, any exceptions or deviations from the City of Chesapeake IT computing and software standards listed above and in Table 1 must be clearly and concisely stated in the respondents RFP submission.

The City has the right to reject as non-responsive any proposal that does not meet these standards.

Request For Proposal #25-068-6328
 Title: Fiber Optic Network Asset Management Software

Table 1 - City of Chesapeake IT Required Computing and Software Standards¹

System	Standard
Authentication	Active Directory
Browser	Edge, Chrome, or Firefox at current release
Database Server	Microsoft SQL Server 2019
Geospatial Databases (Geo-Databases)	ESRI ArcGIS Enterprise v10.9.1
Geospatial Platform (GIS)	ESRI ArcGIS Enterprise v10.9.1 (expected to upgrade to v11.3 by May 2025)
GIS Web Server	ESRI Portal for ArcGIS v10.9.1 (expected to upgrade to v11.3 by May 2025)
Office Suite	Microsoft 365
Server Operating System(s)	Microsoft Windows Server 2019
Web Application Server	Microsoft IIS
Workstation Operating System	Window 11

¹Software standards applicable to the Fiber Optic Network (FON) Asset Management Software request for proposal.

3.3. Task I – Describe How Proposed Software Will Support OSP Operations

Without limiting the generality of any other provision of this RFP, Contractor shall deliver a Solution which has each of the following features and functions (and shall perform related services as required in relation thereto):

OSP Asset Management

The Solution must support the inventory and connectivity of the completed NGN fiber network and its OSP, including all network assets. The fiber management functions of the Solution must support a range of network topologies including (without limitation) traditional fiber transport, point-to-point networks, and fiber ring networks.

The Solution must be able to manage all OSP assets through a mapping interface, which interface must be interoperable with the fiber optic management components or extensions of the software. Software features and functions for managing conduit cannot be standalone or separate from the fiber optic management components. Modular or extension-based software is acceptable as long as each module or extension integrates directly with other software modules or extensions.

Fiber Optic Network Design

The Solution must support the planning, engineering design, analysis, and maintenance of the OSP facility network; must be capable of modeling conduit, fiber, and other relevant equipment components; and must accommodate the connectivity of the complete network from any terminating device to any inside plant (ISP) termination point.

The Software must be capable of managing fiber-specific assets. The Solution must be capable of circuit provisioning. The Solution must be capable of service remediation through creating and optimizing alternative routes in the event of fiber faults or fiber outages. The Solution must be capable of mapping hypothetical “what-if scenarios” for extending and remediating services to customers on the network.

Work Order Integration

The Solution must support key business processes for work order design, execution, mapping, asset records management, and maintenance records of the entire system.

Contractor shall update the Solution's geospatial network model as is necessary (or otherwise when directed by the City) to accommodate changes to the network related (without limitation) to network maintenance, service repair, provisioning, or network extensions.

The Solution should be capable of attributing network facilities as desired by the City, including (without limitation) the association of compatible units, validating all edits using business rules, and generating work instructions and prints (i.e., both digital and printed copies of work to be performed) to support changes to the network.

Field Automation

The Solution must include field automation capabilities which allow the City to dispatch field crews with information corresponding to the job assigned (e.g., network repairs, modifications, and extensions). Specifically (and without limitation), the Solution must be compatible with the City geospatial platform outlined in **Table 1 - City of Chesapeake IT Required Computing and Software Standards** above, and also with standard-issue tablets and smartphones, such that mobile field crews have tools necessary to trace networks and locate faults, validate the physical network model to the digital network model, capture inspection and status information about field equipment, and capture redlines against the digital network model representing as-built changes.

The Solution should also have mobile software application to manage field work, and also to dispatch or reassign work and field crews.

Digital Image Management

The Solution must support large volumes of asset imagery (e.g., high-resolution, large coverage, multiple-time snapshots), including (without limitation) both orthogonal and oblique aerial imagery, with a high-performance image management and retrieval system capable of providing quick access to images when viewing OSP assets in a mapping interface (i.e., images and photos geo-coded and "pinned" to the appropriate OSP asset).

Contractor acknowledges high-resolution imagery is used extensively by the City of Chesapeake for a variety of different applications. The City pay provide aerial imagery through an application programming interface ("API") or web map service ("WMS") from Nearmap Pty. Ltd. (or such other contractor the City may engage for this purpose from time to time). The City will use this imagery during network maintenance and field engineering operations to help understand the location and characteristics of the physical network.

Enterprise Sharing

The Solution must provide the tools to share the most recent information on the physical network and its attributes, which tools must include, without limitation, desktop viewing and analysis tools linked to the central geo-database, as well as internet and intranet portals that may include dashboard and executive business intelligence information.

3.4. Task II - Provide Software Features & Functions Capability Matrix For Standalone and Server-Based Software

Without limiting the generality of any other provision of this RFP, Contractor shall deliver a Solution which may consist of:

- A standalone desktop software (integrated with ESRI ArcGIS® Software); OR
- A server-based web/cloud software (integrated with ESRI ArcGIS® Server Software), OR
- A combination of both.

The Solution must have the ability to integrate with other networking monitoring systems, such as (by way of illustration and not limitation) Solar Winds and Juniper, etc., to quickly visualize faults and alarms and identify services that are impacted.

Any portion of the Solution which is a standalone desktop software must run in conjunction with ESRI's ArcGIS® Desktop software, ArcMap, or ArcGIS Pro (client/server), or otherwise be web-based and run on ESRI's ArcGIS® Enterprise software platform. Any portion of the Solution which is a server-based web/cloud application must run on ESRI's ArcGIS® Server software platform.

In addition to any other requirement in this RFP, Contractor shall deliver a Solution which provides, at a minimum, each of the following features and functions:

1. Data Management

1. Geo-database schema for asset data management
2. Support for the following OSP assets:
 - Conduit and Fiber Cable
 - Cabinets
 - Network Points
 - Managed and Unmanaged Switches
 - Hand-holes
 - Splices
 - Radio transceivers used inside or outside buildings, such as wireless access points, and hardware associated with them, such as antennas and towers.
 - Traffic Controllers
 - Other Miscellaneous OSP equipment assets

c. Such functions or features necessary to accurately depict the location and current status of OSP assets, any faults in the network, and the connectivity status of all elements of the network.

f. Detailed Connection and Splice Modeling

g. Calculate circuit/fiber distance between two points accounting twist factor, index of refraction and fiber ring configurations

h. Store attenuation losses, including splice and mated-connector losses

i. Ability to hierarchically list fiber assets from map regions to signals on a cable

j. Creation and visualization of physical connectivity between the optical fiber

2. Select and Retrieve Data for any OSP Asset

1. Display geographic views of the outside plant (OSP)
2. Display graphical views such as map view, schematic view, rack view, etc.

3. Map Functionalities. Any map feature must contain the following functions:

1. A tool to measure distances within the map

2. The ability to identify locations by latitude/longitude, decimal degree, X, Y coordinates, and degrees, minutes, and seconds ("DMS"), and to convert values from one such format to another
3. The ability to pan to a specific location based on specified latitude/longitude, decimal degree, X, Y coordinates, or DMS

4. Map Navigation tools

1. Zoom In
2. Zoom Out
3. Pan
4. Full Extent
5. View Attributes using Identify Tool

5. Search Tool. The Solution must be capable of identifying and navigating to locations based on:

1. Address Based Search
2. Address
3. Tax ID
4. Land Mark

6. Inventory Search. The Solution must be capable of identifying and navigating to any single asset included following categories based on a search for that particular asset:

1. Conduit
2. Branch
3. Joint
4. Cable

7. Redlining

1. Graphics Redlining
2. Text Redlining

8. Query & Analyze. The Solution must be capable of automatically generating the following information for each individual asset:

1. What is it?
2. Where is it?
3. What are its physical attributes and capacity?
4. How is it connected?
5. What project details are related to that asset?
6. What is its estimated lifespan (based on estimated installation date)?

9. Physical Connectivity. The Solution must be capable of calculating the circuit or fiber distance between two points, accounting for twist factor and fiber ring configurations.

10. Fault Tracing and Visualization. The Solution must be capable of determining the location of a fault using results of an optical time-domain reflectometer ("OTDR") test, tracing the distance from the location to specified equipment ports, and displaying a "Fault" feature at the location.

11. Detail Network Tracing. The Solution must be capable of tracing from any point to any other point in any direction.

12. Project Management. The Solution must be capable of performing industry-standard analyses of OSP assets and preparing reports on those assets in accordance with industry standards.

13. Report Generation. The Solution must be capable of preparing any other report that the City may request.

14. Single sign-on. In addition to the above requirements, any portion of the Solution which is a server-based web/cloud application must have a "single sign-on" function, and to this end must contain a log-in page using the security assertion management language ("SAML") protocol supported by either the Azure Active Directory or the Microsoft Active Directory.

3.5. Task III - Provide Example Project Plan and Timeline For Software Implementation

Provide an example of a step-by-step project plan and timeline that the City can use as a guideline for implementing the software. Please identify the necessary steps to fully implement all features and functions of the software proposed. Include in the plan software installation steps, configuration steps, training steps, deployment steps, and testing steps.

4. Conflicts and Questions

Should there be conflicts with the RFP and a proposal, the RFP takes precedence unless otherwise agreed to in writing.

Questions regarding this Fiber Optic Network Asset Management Software should be directed to Kimberly White via the [City's e-Procurement Portal](#). All questions and requests for clarification must be received by the Purchasing Division before 2:00 pm Friday, November 1, 2024.

Conflict of Interest: The Offeror represents to the City that it is entering into this agreement with the City does not entail any violation of the Virginia Conflict of Interest Act.

5. Specific Proposal Instructions

In order to be considered for selection, Offerors must submit a complete response to this solicitation via the [City's e-Procurement Portal](#)

Tab 1: Qualifications and Experience: The offeror shall provide a concise description of its work experience as it relates to the Scope of Services outlined herein including, but not be limited to:

- A. A brief history of the firm, including the number of years in business, the size of the firm, the number of locations in the Tidewater area, and the location of the office from which the work is to be done.
- B. A minimum of four (4) references, preferably public sector/government organizations, where the firm is currently under contract. References can be from clients in both public, nonprofit and private sectors, including the following:
 - 1. Name of organization
 - 2. Address of organization
 - 3. Name, title, email address, and phone, of a contact for the organization
 - 4. Number of years offeror has served the organization
 - 5. Dates of Service
 - 6. Contract Value

Tab 2: Capabilities and Skills: The offeror shall provide a description of the firm's capabilities and skills to perform the contract including, but not limited to perform the requirements described in this RFP.

Tab 3: Specific Plan and Methodology to Perform Services/Resources: Provide a step-by-step project plan and timeline that the City can use as a guideline for implementing the Solution. Please identify the necessary steps to fully implement all features and functions of the software proposed.

Include in the plan software installation steps, configuration steps, training steps, deployment steps, and testing steps.

If not identified in the project plan, Proposer shall also include the following information under this Tab:

- A. An Introduction with an overview of Offeror's understanding of the scope of work and services to be provided.
- B. Provide the number, type and qualifications of the offeror's employee pool, which it is the City's expectation of contractor(s) would have an established workforce and recruit based on need.
- C. Describe the staff and other resources which will be assigned to this contract and include resumes of those individuals.
- D. Provide a detailed matrix describing all features and functions of the Proposer's proposed Solution. If the City accepts a proposal for a Solution which includes features or functions not specifically required by this RFP, the additional features and functions proposed shall become mandatory requirements of the resulting contract. **Failure to submit a matrix of features and functions may cause a proposal to be rejected as non-responsive.**
- E. Offer best practice approaches and innovative solutions to the City that provide functionality which enhance efficiency and effectiveness.
- F. A detail of any assistance, equipment, or other items the Offeror will require the City to furnish under the Contract.
- F. A statement explaining why the Offeror's proposed solution would be the most advantageous to the City.
- G. A statement explaining process/procedures for conflict resolutions or how issues will be treated and resolved as they arise.

Tab 4: Cost of Services: Proposals shall provide pricing based on the requirements and terms set forth in this RFP. Pricing shall be all-inclusive covering every aspect of the contract. No additional fees shall be added unless authorized by the City.

Tab 5: Additional or Miscellaneous Information:

- A. Resumes and other specific items or data requested in the RFP that is not include under a specific Tab.
- B. Offeror shall provide a copy of appropriate license(s) and Certificate of Insurance indicating compliance with the insurance requirements as outlined in the Appendix A, Section I, General Terms and Conditions, Item U.

6. Proposal Preparation and Submission Instructions

- A. Proposals shall be signed by an authorized representative of the offeror. This includes, at a minimum the RFP Cover sheet and all Addendums. All information requested must be submitted. Failure to submit all information requested may result in the Purchasing Division requiring prompt submission of missing information, giving a lowered evaluation of the proposal, or finding the proposal non-responsive. Mandatory requirements are those required by law or such that they are determined in the sole discretion of the Procurement Administrator to be formalities that cannot be waived and are not subject to negotiation.
- B. Proposals should be prepared simply and economically, providing a straightforward, concise description of capabilities to satisfy the requirements of the RFP. Emphasis should be placed on completeness and clarity of content. Elaborate brochures and excessive promotional materials are not required or desired.
- C. Proposals should be organized in the order in which the requirements are presented in the RFP. All pages of the proposal should be numbered. Each paragraph should reference the paragraph number of the corresponding section of the RFP. Offeror shall adhere to the instructions outlined in Section XII ("SPECIFIC PROPOSAL INSTRUCTIONS") for submitting a completed proposal. The proposal should contain a table of contents which cross references the RFP requirements. Information which the Offeror desires to present that does not fall within an area of the requirement of the RFP should be inserted at an appropriate place or be attached at the end of the proposal and designated as additional material. Proposals that are not organized as outlined risk elimination from consideration if the evaluators are unable to find where the RFP requirements are specifically addressed. The following information must be contained in the proposal. Proposals submitted are to conform to the following:
 - 1. The minimum font size shall be 10-point.
 - 2. Page size shall be limited to 8.5 by 11-inch paper.
 - 3. Proposals shall be submitted as one (1) electronic PDF document and be as thorough and detailed as possible so that the Selection Committee may properly evaluate the offeror's capabilities to provide required services.
- D. As used in this RFP, the terms "must" and "shall" identify requirements whose absence will have a major negative impact on the suitability of the proposed solution. The terms "should" or "may" are highly desirable, and would be useful, but their absence will not have a large impact and they are not absolutely necessary. The inability of an Offeror to satisfy a "must" or "shall"

requirement does not automatically remove that Offeror from consideration; however, it may seriously affect the overall rating of the Offerors' proposal. As used in this RFP, the terms "successful offeror" and "consultant team" both refer to an offeror which is awarded a contract pursuant to this RFP, and are used interchangeably.

- E. Ownership of all data, materials, and documentation originated and prepared for the City pursuant to the RFP shall belong exclusively to the City and be subject to public inspection in accordance with the *Virginia Freedom of Information Act*. Trade secrets or proprietary information submitted by an offeror shall not be subject to public disclosure under the *Virginia Freedom of Information Act*; however, the offeror must invoke the protections of § 2.2-4342(F) of the *Code of Virginia*, in writing, either before or at the time the data or other material is submitted. The written notice must specifically identify the data or materials to be protected and state the reasons why protection is necessary. The proprietary or trade secret material submitted must be identified by some distinct method such as highlighting or underlining and must indicate only the specific words, figures, or paragraphs that constitute trade secret or proprietary information. The classification of an entire proposal document or prequalification application, line-item prices, and total proposal prices as proprietary or trade secrets is invalid and such documents will be disclosed in full upon request by the public, as required by law.
- F. Any and all costs or expenses incurred or associated with the preparation of responses to this Request for Proposals, including site visits, oral presentations and any other costs shall be entirely the responsibility of the offeror and shall not be reimbursable in any manner by the City.
- G. The City reserves the right to reject any or all proposals, to waive any technicalities in proposals received, and to negotiate and to accept the proposal which shall be in the City's best interest.
- H. The City may cancel this Request for Proposals at any time prior to an award and is not required to furnish a reason why a particular proposal was not deemed the most advantageous.
- I. The right is reserved, as the interests of the City may require, to revise and amend the specifications prior to the date set for acceptance of proposals; the acceptance date may be postponed if deemed necessary by the Procurement Administrator. Such revisions and amendments, if any, will be announced by an addendum to this solicitation and posted on the [City's e-Procurement Portal](#).
- J. Exceptions: Offeror shall detail any and all exceptions taken to the Scope of Work and Terms and Conditions sections of this RFP. For each exception, specify the RFP page number, section number, and the exception taken.
- K. Late Proposals: To be considered for selection, proposals must be received in the City's Purchasing Office by the designated date and hour via the [City's e-Procurement Portal](#). Proposals received in the issuing office after the date and hour designated may be disqualified

and may not be considered. It is the sole responsibility of the Offeror to ensure that its proposal reaches the Purchasing Division by the designated date and hour via the [City's e-Procurement Portal](#). Receipt of proposals scheduled during a period of suspended City business operations will be rescheduled for processing at the same time on the next business day.

7. Disclosure of Proposal Contents

Offerors should be aware that the terms of the contract are public information and can be accessed by the public, except as provided herein as to trade secrets and proprietary information. The City or third parties may use any ideas presented in any proposal. Selection or rejection of the proposal does not affect this provision.

8. Evaluation Criteria

Evaluation of proposals will be under the complete jurisdiction of the City of Chesapeake and shall be in accordance with the City of Chesapeake's Purchasing Policies and Procedures Manual and Chesapeake Code Section 54-67(4). A Selection Committee to be wholly or primarily composed of representatives from the City will evaluate each proposal received and submit a recommendation to the Procurement Administrator. The Selection Committee will evaluate each proposal pursuant to its standard procurement procedures consistent with the procurement of services through competitive negotiation. Selection will be made on the basis of the criteria listed in the Evaluation Criteria section of the RFP.

No.	Evaluation Criteria	Scoring Method	Weight (Points)
1.	Professional Qualifications Offeror shall demonstrate their expertise, specialized experience, and qualifications for this work by explaining the history of the firm, in terms of length of existence, and types of services provided.	Points Based	10 (10% of Total)
2.	Experience with Similar Projects Quality of work previously performed for similar projects by the firm for the City or other governmental agencies, with a proven ability to complete projects within budgeted amounts.	Points Based	10 (10% of Total)

3.	Proposed Project Team and Organization The organizational structure of the Respondent will be evaluated in terms of its effective use of personnel; relevant experience and time commitment of key personnel, especially the designated Project Manager and sub-consultants (if applicable); logic of project organization; adequacy of labor commitment and resources; capability to reallocate resources as needed to meet project schedules.	Points Based	5 (5% of Total)
4.	Software Features and Functions Whether the proposal meets the functionality requirements of the City, according to the Scope of Work of the RFP. A detailed software features/functions matrix is to be presented which lists all software features and functions determined to be necessary to accomplish the work of this project.	Points Based	50 (50% of Total)
5.	Fee Proposal Offeror shall provide a firm rate/fee structure to cover all work detailed in this RFP and be a firm fixed price for the initial contract period. This total may be adjusted after negotiations with the City and prior to signing a formal contract, if justified.	Points Based	25 (25% of Total)

9. Oral Presentations

Offerors who submit a proposal in response to this RFP may be required to give an oral presentation of their proposal. This will provide an opportunity for the offeror to clarify or elaborate on the proposal. This is a fact finding and explanation session only and will not include negotiation. The City will schedule the time and location of these presentations. Oral presentations are an option and may or may not be conducted.

10. Period of Performance

The resulting contract shall be for a period of five (5) years from the date of execution with five (5) 1-year renewal options upon mutual written agreement between the parties.

11. Pricing/ Fee Schedule

Provide software license costs, annual maintenance, and training costs for the proposed software.

Offeror shall provide a firm rate/fee structure with the proposal.

Price/fee proposal shall be all-inclusive and cover all work detailed in this RFP and be a firm fixed price for the initial contract period.

Price adjustments shall be made in accordance with 14. Special Terms and Conditions, Item 10 - Price Escalation/De-Escalation of this RFP.

Provide discounts, if applicable, to municipal governments.

Please specify the software license type as well (e.g., per seat, concurrent user, server based, etc.).

Assume an initial estimate of five (5) users, two (2) of whom have design capability.

11.1 Software Costs (standalone desktop and web application)				
Quantity	Description	Unit Cost	Total Cost	License Type ¹

¹Please specify the software license type (per seat, concurrent user, server based, etc.)

11.2 Maintenance Costs (standalone desktop and web application)			
Quantity	Description	Unit Cost	Total Cost

11.3 Training Costs				
Quantity	Description	Unit Cost	Total Cost	License Type ²

²Indicate type: administrator, technical user, end user. Do not include travel and lodging costs.

12. Vendor Questionnaire

1. Full Proposal Response (with Cost)*

One complete PDF document of the full proposal response including the matrix should be uploaded here.

*Response required

2. Certification of Compliance with Immigration Laws and Regulations*

Please download the below documents, complete and have notarized. An online notarization option will be provided for you when responding.

- [CERTIFICATION OF COMPLIANCE...](#)

*Response required

3. Virginia State Corporation Commission (SCC) Registration Information*

AUTHORIZATION TO CONDUCT BUSINESS IN THE COMMONWEALTH: A contractor organized as a stock or non-stock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so, required by Title 13.1 or Title 50 of the Code of Virginia or as otherwise required by law. Any business entity described LISTED that enters into a contract with a public body pursuant to the Virginia Public Procurement Act shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the contract. A public body may void any contract with a business entity if the business entity fails to remain in compliance with the provisions of this section.

Pursuant to Code of Virginia, §2.2-4311.2 subsection B, a bidder or offeror organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50 is required to include in its bid or proposal the identification number issued to it by the State Corporation Commission (SCC). Any bidder or offeror that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 or as otherwise required by law must indicate by selecting one of the following reasons why the bidder or offeror is not required to be so authorized:

- ☐ is a corporation or other business entity with the SCC identification number
- ☐ is not a corporation, limited liability company, limited partnership, registered limited liability partnership, or business trust
- ☐ is an out-of-state business entity that does not regularly and continuously maintain as part of its ordinary and customary business any employees, agents, offices, facilities, or inventories in Virginia (not counting any employees or agents in Virginia who merely solicit orders that require acceptance outside Virginia before they become contracts, and not counting any incidental presence of the bidder in Virginia that is needed in order to assemble, maintain, and repair goods in accordance with the contracts by which such goods were sold and shipped into Virginia from bidder's out-of-state location)
- ☐ is an out-of-state business entity that is including with this bid an opinion of legal counsel which accurately and completely discloses the undersigned bidder's current contacts with Virginia and describes why those contacts do not constitute the transaction of business in Virginia within the meaning of § 13.1-757 or other similar provisions in Titles 13.1 or 50 of the Code of Virginia.
- ☐ If the business entity has not completed any of the foregoing options but currently have pending before the SCC an application for authority to transact business in the Commonwealth of Virginia and wish to be considered for a waiver to allow you to submit the SCC identification number after the due date for bids (The City of Chesapeake reserves the right to determine in its sole discretion whether to allow such waiver).

*Response required

4. Litigation Disclosure Form

Respond to each of the questions below by checking the appropriate box. Failure to fully and truthfully disclose the information required by this Litigation Disclosure Form may result in the disqualification of your bid or proposal from consideration or termination of the contract, once awarded. For purposes of this disclosure form, "you" means the individual or entity in whose name the bid or proposal is submitted.

4.1. *Have you or any principal, officer or director of your company, or any individual who will be assigned to work under any contract awarded pursuant to this solicitation, been convicted of a felony, or a misdemeanor involving moral turpitude, during the last ten (10) years? **

- ☐ Yes
☐ No

*Response required

4.2. *Have you or any principal, officer or director of your company, or any individual who will be assigned to work under any contract awarded pursuant to this solicitation, been terminated from any work being performed for the City of Chesapeake or any other governmental entity in the Commonwealth of Virginia during the last ten (10) years?**

- ☐ Yes
☐ No

*Response required

4.3. *Have you or any principal, officer or director of your company, or any individual who will be assigned to work under any contract awarded pursuant to this solicitation, been involved in any claim or litigation with the City of Chesapeake or any other governmental entity in the Commonwealth of Virginia during the last seven (7) years? **

- ☐ Yes
☐ No

*Response required

4.4. *Has any parent company or wholly owned subsidiary of your company been involved in any claim or litigation with the City of Chesapeake or any other governmental entity in the Commonwealth of Virginia during the last seven (7) years? **

- ☐ Yes
☐ No

*Response required

4.5. *If you answered "Yes" to any of the above questions, please state the name(s) of the person(s), the nature, and the status and/or outcome of the conviction, termination, claim or litigation, as applicable. Any such information should be provided on a separate page, attached to this form and submitted with your bid or proposal.*

4.6. **STATE CORPORATION COMMISSION IDENTIFICATION NUMBER***

Pursuant to Code of Virginia, §2.2-4311.2 subsection B, a bidder or offeror organized or authorized to transact business in the Commonwealth pursuant to Title 13.1 or Title 50 is required to include in its bid or proposal the identification number issued to it by the State Corporation Commission (SCC). Any bidder or offeror that is not required to be authorized to transact business in the Commonwealth as a foreign business entity under Title 13.1 or Title 50 or as otherwise required by law is required to include a statement describing why the bidder or offeror is not required to be so authorized.

*Response required

5. Small, Women-Owned, Minority-Owned (SWaM) and Service Disabled Veteran-Owned Business

A certified SWaM Business is one that holds a current certification from the Virginia Department of Small Business and Supplier Diversity (SBSD), the U.S. Small Business Association (SBA), the Women's Business Enterprise National Council (WBENC), National Minority Supplier Development Council (NMSDC) or from other U.S. State and some Local Government Supplier Diversity Programs.

5.1. *Is your company a certified Small, Woman or Minority Owned (SWaM) Business or Disadvantaged Business Enterprise?**

☐ Yes

☐ No

*Response required

5.2. **Certification Type**

If applicable, what is your company's certification type?

Select all that apply

☐ Small Business

☐ Woman-owned Business

☐ Minority-owned Business

☐ Service Disabled Veteran (SDV)

☐ Disadvantaged Business Enterprise (DBE)

5.3. **SWaM Certificate/Supporting Documentation**

If applicable, attach any supporting documentation, including certificates, in regards to your company's SWaM status.

13. Negotiations and Award of Contract

- A. Negotiations are conducted with at least two Offerors so selected unless a written determination is made as provided in Subpart C of Section 7.3.2. Negotiations allows modifications of proposals, including price, but the Procurement Administrator or designee shall not consider any modifications to terms and conditions stated in the RFP for which the Offeror's written proposal did not include any exceptions. Offers and counter-offers may be made as many times with each Offeror as is necessary to secure a reasonable contract. The Procurement Administrator selects the Offeror which, in its opinion, has made the best proposal. In all instances, written confirmation shall be obtained from the Offeror of any modifications to the original proposal. Should the Procurement Administrator or designee determine in writing and in his or her sole discretion that only one Offeror is fully qualified or that one Offeror is clearly more highly qualified and suitable than the others under consideration, a contract may be negotiated and awarded to that Offeror. Once an Intent to Award notice is posted, no further negotiations shall be conducted.
- B. When a provision for receiving best and final offers (BAFO) is included in the RFP, after negotiations, Offerors are given the opportunity to submit a best and final offer. The Offeror's proposal, if already received and scored, may be rescored to combine and include the information contained in the BAFO with the technical evaluation score previously assigned, and the award decision made. The contract file shall be documented to show the basis for the award, and include the final rescoring of the proposals following negotiation and receipt of best and final offers.
- C. For competitively negotiated procurements, once evaluation and negotiations have been completed with selected Offeror(s), the Purchasing Division may prepare a written narrative summarizing the rationale for the criteria that are developed for each proposal negotiated. The summary shall address the merits of the proposals relative to the evaluation criteria. The City is not, however, required to furnish a statement of the reason why a particular proposal was not deemed to be the most advantageous (Code of Virginia § 2.2-4359D). Only Offerors may inspect the proposal records after evaluation and negotiations are completed, but prior to award (Chesapeake City Code § 54-75 and Code of Virginia, § 2.2-4342(D)). Once negotiations have been finalized, the Purchasing Division shall complete and evaluation summary and place in the procurement file. This worksheet for each Offeror negotiated with should be a compilation of the evaluation committee's ratings.
- D. The City may cancel a RFP, or reject proposals at any time prior to making an award (City Code Section 54-68).

- E. The award documents shall incorporate, by reference, the terms and conditions of the RFP and the contractor's proposal, together with all written modifications thereof.

Cancellation, Rejection of Bids or Proposals; Waiver of Informalities

- A. An invitation to Bid (IFB), a Request for Proposal (RFP) or other solicitation may be cancelled or any or all bids or proposals may be rejected in whole or in part when the Procurement Administrator or designee determines that it is in the best interest of the City to do so. The reasons for such action shall be made a part of the contract file.
- B. The City may waive informalities in bids. "Informality" means a minor defect or variation of a bid or proposal from the exact requirements of the Invitation to Bid, or the Request for Proposal, which does not affect the price, quality, quantity or delivery schedule for the goods, services or construction being procured.

14. Required General Terms and Conditions

14.1. CLARIFICATION OF TERMS

If any bidder/offeror has questions about the specifications or other solicitation documents, the bidder/offeror should contact the buyer whose name appears on the face of the solicitation no later than 5 working days before the due date. Any revisions to the solicitation will be made only by addendum issued by the City.

14.2. MANDATORY USE OF CITY FORM

Failure to submit a bid on the official City form provided for that purpose shall be a cause for rejection of the proposal. Modification of or additions to any portion of the proposal may be cause for rejection of the proposal; however, the City reserves the right to decide on a case by case basis, in its sole discretion, whether to reject such a proposal as nonresponsive. As a precondition to its acceptance, the City may, in its sole discretion, request that the offeror withdraw or modify nonresponsive portions of a proposal which do not affect quality, quantity, price, or delivery. No modification of or addition to the provisions of the contract shall be effective unless reduced to writing and signed by the parties.

14.3. ANTITRUST

By entering into a contract, the Consultant conveys, sells, assigns, and transfers to the City of Chesapeake all rights, title and interest in and to all causes of action it may now have or hereafter acquire under the antitrust laws of the United States and the Commonwealth of Virginia, relating to the particular services acquired by the City of Chesapeake under said contract.

14.4. DEBARMENT STATUS

By submitting their bids/proposals, bidders/offerors certify that they are not currently debarred by the Commonwealth of Virginia or any political subdivision or agency of the Commonwealth from submitting bids/proposals on contracts for the type of services covered by this solicitation, nor are they an agent of any person or entity that is currently so debarred.

14.5. IMMIGRATION REFORM AND CONTROL ACT OF 1986

By submitting their (bids/proposals), (bidders/offerors) certify that they do not and will not during the performance of this contract employ illegal alien workers or otherwise violate the provisions of the federal Immigration Reform and Control Act of 1986.

14.6. ETHICS IN PUBLIC CONTRACTING

By submitting their bids/proposals, bidders/offerors certify that their bids/proposals are made without collusion or fraud and that they have not offered or received any kickbacks or inducements from any other bidders/offerors, supplier, manufacturer or subcontractor in connection with their bids/proposals, and that they have not conferred on any public employee having official responsibility for this procurement transaction 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.

14.7. ANTI-DISCRIMINATION

By submitting their proposals, offerors certify to the City that they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended, as well as the Virginia Fair Employment Contracting Act of 1975, as amended, where applicable, the Virginians with Disabilities Act, the Americans With Disabilities Act and § 2.2-4311 of the *Virginia Public Procurement Act (VPPA)*. If the award is made to a faith-based organization, the organization shall not discriminate against any recipient of goods, services, or disbursements made pursuant to the contract on the basis of the recipient's religion, religious belief, refusal to participate in a religious practice, or on the basis of race, age, color, gender or national origin and shall be subject to the same rules as other organizations that contract with public bodies to account for the use of the funds provided; however, if the faith-based organization segregates public funds into separate accounts, only the accounts and programs funded with public funds shall be subject to audit by the public body (*Code of Virginia*, § 2.2-4343.1E).

During the performance of this contract, the contractor agrees as follows:

- A. The contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, sexual orientation, gender identity, national origin, age, disability, or any other basis prohibited by state law or federal law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor. 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. The contractor, in all solicitations or advertisements for employees placed by or on behalf of the contractor, will state that such contractor is an equal opportunity employer.
- C. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

- D. The contractor will include the provisions of a., above in every subcontract or purchase order over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

14.8. APPLICABLE LAWS AND COURTS

- A. This solicitation and any resulting contract shall be governed in all respects by the laws of the Commonwealth of Virginia, and any litigation with respect thereto shall be brought in in the courts of the City of Chesapeake, Virginia, or the United States District Court for the Eastern District of Virginia, if independent federal jurisdiction exists. The Consultant shall comply with all applicable federal, state and local laws, rules and regulations. This solicitation is governed by provisions of Chapter 54 of the Chesapeake City Code, and any revisions thereto, which are hereby incorporated into this contract by reference. Contact the Purchasing Division at (757) 382-6359, for more information. The City Code may be read online at <http://www.municode.com>.

14.9. PROCUREMENT ORDINANCE

This solicitation is subject to the provisions of the City of Chesapeake Procurement Ordinance and Chesapeake Purchasing Policies and Procedures Manual. A copy of the City's ordinance and Chesapeake Purchasing Policies and Procedures Manual is available for review at the purchasing office or accessible on the Internet at www.CityOfChesapeake.net/Purchasing.

14.10. PAYMENT

A. To Consultant:

1. Invoices for services rendered shall be submitted by the Consultant directly to the payment address shown on the purchase order/contract. All invoices shall show the City contract number and/or purchase order number; social security number (for individual Consultants) or the federal employer identification number (for proprietorships, partnerships, and corporations).
2. Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment in less than 30 days, however.
3. All services provided under this contract or individual purchase order, that are to be paid for with public funds, shall be billed by the Consultant at the contract price, regardless of which City department is being billed.
4. The following shall be deemed to be the date of payment: the date of postmark in all cases where payment is made by mail, or the date of offset when offset proceedings have been instituted as authorized under the Virginia Debt Collection Act.
5. Unreasonable Charges. Under certain emergency procurements and for most time and material purchases, final job costs cannot be accurately determined at the time orders are

placed. In such cases, Consultants should be put on notice that final payment in full is contingent on a determination of reasonableness with respect to all invoiced charges. Charges which appear to be unreasonable will be researched and challenged, and that portion of the invoice held in abeyance until a settlement can be reached. Upon determining that invoiced charges are not reasonable, the City shall promptly notify the Consultant, in writing, as to those charges which it considers unreasonable and the basis for the determination. A Consultant may not institute legal action unless a settlement cannot be reached within 30 days of notification. The provisions of this section do not relieve a department of its prompt payment obligations with respect to those charges which are not in dispute (*Code of Virginia*, § 2.2-4363).

B. To Subcontractors:

1. A Consultant awarded a contract under this solicitation is hereby obligated:
 - a. To pay the subcontractor(s) within 7 days of the Consultant's receipt of payment from the City for the proportionate share of the payment received for work performed by the subcontractor(s) under the contract; or
 - b. To notify the Purchasing Division and the subcontractor(s), in writing, of the Consultant's intention to withhold payment and the reason.
2. The Consultant is obligated to pay the subcontractor(s) interest at the rate of one percent per month (unless otherwise provided under the terms of the contract) on all amounts owed by the Consultant that remain unpaid 7 days following receipt of payment from the City, except for amounts withheld as stated in (a)(2) above. The date of mailing of any payment by U.S. Mail is deemed to be payment to the addressee. These provisions apply to each sub-tier consultant performing under the primary contract. A Consultant's obligation to pay interest to a subcontractor shall not be construed as an obligation of the City.

14.11. CLAIMS

In the event that a different administrative claim resolution process is not provided in the solicitation, the following claim process shall apply. In the event of a contractual dispute, Consultant must submit a written notice of the dispute specifically entitled "notice of intent to file a claim" within ten (10) days of the occurrence on which the claim is based to the City Manager or designee. No more than thirty (30) days from the occurrence on which the claim is based, the Consultant must submit a written statement of the basis of the claim together with a proposed remedy and all supporting evidence of the claim to the City Manager or designee. The timely and complete filing of the notice and claim are a prerequisite to recovery by the Consultant, and failure to follow the claim process stated herein shall operate as a conclusive waiver of the claim by the Consultant. Oral notice, the actual knowledge of a City employee or official, or an untimely or incomplete written notice and claim shall not be sufficient to satisfy the requirements of this provision.

The Consultant may not institute legal action prior to the receipt of a final written decision by the City Manager or designee unless the City Manager or designee fails to render a decision within ninety (90)

days of the submission of the claim. Failure of the City Manager or designee to render a decision within ninety (90) days shall be deemed a denial.

The decision of the City Manager or designee shall be final and conclusive unless the Consultant appeals within six (6) months of the date of the final decision (or time specified for a final decision if no response is made) by instituting legal action as provided by Va. Code Section 2.2-4364.

The parties' contract and their performance obligations shall be governed, interpreted and enforced pursuant to the laws and regulations of, and in accordance with the laws of the Commonwealth of Virginia without regard to the conflicts of law principles thereof. The Consultant shall carry on the work and adhere to the progress schedule during all disputes or disagreements with the City. No work shall be delayed or postponed pending resolution of any disputes or disagreements, except as the City and the Consultant may otherwise agree in writing.

14.12. NO WAIVER OF LEGAL RIGHTS

Neither the acceptance by the City or any representative of the City, nor any payment for or acceptance of the whole or any part of the Work, nor any extension of time, nor any possession taken by the City shall operate as a waiver of any portion of the Contract or of any power herein reserved or of any right to damages. A waiver of any breach of the Contract shall not be held to be a waiver of or implied course of dealing applicable to any other or subsequent breach. The City reserves all rights, privileges, immunities and defenses available to it at law.

14.13. PRECEDENCE OF TERMS

The General Terms and Conditions shall apply in all instances. In the event there is a conflict between any of the other General Terms and Conditions and any Special Terms and Conditions in this solicitation, the Special Terms and Conditions shall apply.

14.14. QUALIFICATIONS OF BIDDERS/OFFERORS

The City may make such reasonable investigations as deemed proper and necessary to determine the ability of the offerors to perform the services and the offerors shall furnish to the City all such information and data for this purpose as may be requested. The City reserves the right to inspect offerors' physical facilities prior to award to satisfy questions regarding the offerors' capabilities. The City further reserves the right to reject any proposals if the evidence submitted by, or investigations of, such offerors fails to satisfy the City that such offerors is properly qualified to carry out the obligations of the contract and to provide the services contemplated therein.

14.15. TESTING AND INSPECTION

The City reserves the right to conduct any test or inspection it may deem advisable to assure goods and services conform to the specifications.

14.16. ASSIGNMENT OF CONTRACT

A contract shall not be assignable by the Consultant in whole or in part without the written consent of the City.

14.17. CHANGES TO THE CONTRACT

Changes can be made to the contract in any of the following ways, provided that City staff other than the Procurement Administrator, City Manager, or designee shall have no authority to approve or order changes in the work that alter the terms and conditions of the Contract, except for changes permitted by the Chesapeake Purchasing Policies and Procedures Manual as to contract time or price that are mutually agreed and reduced to a written change order or contract modification:

- A. The parties may agree in writing to modify the terms or conditions of the contract. Any additional services to be provided shall be of a sort that is ancillary and directly related to the contract services, or within the same product or service categories as were included in the contract award. Any increase or decrease in the price of the contract resulting from such modification shall be agreed to by the parties as a part of their written agreement to modify the contract.
- B. The Purchasing Division may order changes within the general scope of the contract at any time by written notice to the Consultant. Changes within the scope of the contract include, but are not limited to, things such as services to be performed. The Consultant shall comply with the notice upon receipt, unless the Consultant intends to claim an adjustment to compensation, schedule, or other contractual impact that would be caused by complying with such notice, in which case the Consultant shall, in writing, promptly notify the Purchasing Division of the adjustment to be sought, and before proceeding to comply with the notice, shall await the Purchasing Division's written decision affirming, modifying, or revoking the prior written notice. If the Purchasing Division decides to issue a notice that requires an adjustment to compensation, the Consultant shall be compensated for any additional costs incurred as the result of such order and shall give the Purchasing Division a credit for any savings. Said compensation shall be determined by one of the following methods:
 - 1. By mutual agreement between the parties in writing; or
 - 2. By agreeing upon an hourly rate or a unit price, or, using an hourly rate or unit price set forth in the contract, if the work to be done can be expressed in hourly increments or units, and the Consultant accounts for the number of hourly increments or units of work performed, subject to the Purchasing Division's right to audit the Consultant's records and/or to determine the correct number of units independently; or
 - 3. By ordering the Consultant to proceed with the work and keep a record of all costs incurred and savings realized. A markup for overhead and profit may be allowed if provided by the contract. The same markup shall be used for determining a decrease in price as the result of savings realized. The Consultant shall present the Purchasing Division with all vouchers and records of expenses incurred and savings realized. The Purchasing Division shall have the right to audit the records of the Consultant as it deems necessary to determine costs or savings. If the parties fail to agree on an amount of adjustment, the question of an increase or decrease in the contract price or time for performance shall be resolved in

accordance with the procedures for resolving disputes provided by the Claims clause of this contract. Neither the existence of a claim nor a dispute resolution process, litigation or any other provision of this contract shall excuse the Consultant from promptly complying with the changes ordered by the Purchasing Division or with the performance of the contract generally.

- C. Any modification of a lump sum contract price is subject to the terms of City Code Section 54-71, which provides that such a contract may not be increased by the greater of more than \$10,000 or 10% of the original contract price without approval of the City Manager and notice to the City Council.

14.18. DEFAULT

In case of failure to deliver services in accordance with the Contract, the City, after due oral or written notice, may procure them from other sources and hold the Consultant responsible for any resulting additional purchase and administrative costs. This remedy shall be in addition to any other remedies which the City may have.

14.19. TAXES

Sales to the City are normally exempt from State sales tax. State sales and use tax certificates of exemption, Form ST-12, will be issued upon request. Deliveries against this contract shall usually be free of Federal excise and transportation taxes. The City's excise tax exemption registration number is 54-072-1442.

14.20. DRUG-FREE WORKPLACE

During the performance of this contract, the Consultant agrees to (i) provide a drug-free workplace for the Consultants 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 Consultants workplace and specifying the actions that will be taken against employees for violations of such prohibition; (iii) state in all solicitations or advertisements for employees placed by or on behalf of the Consultant that the Consultant maintains a drug-free workplace; and (iv) include the provisions of the foregoing clauses in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

For the purposes of this section, "*drug-free workplace*" means a site for the performance of work done in connection with a specific contract awarded to a Consultant, the employees of whom are prohibited from engaging in the unlawful manufacture, sale, distribution, dispensation, possession or use of any controlled substance or marijuana during the performance of the contract.

14.21. EMPLOYMENT DISCRIMINATION BY CONSULTANT PROHIBITED

During the performance of this contract, the Consultant agrees as follows:

- A. The Consultant will not discriminate against any employee or applicant for employment because of race, religion, color, sex, national origin, age, disability, or other basis prohibited by state law relating to discrimination in employment, except where there is a bona fide occupational qualification reasonably necessary to the normal operation of the Consultant. The Consultant agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
- B. The Consultant, in all solicitations or advertisements for employees placed by or on behalf of the Consultant, will state that such Consultant is an equal opportunity employer.
- C. Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.
- D. The Consultant will include the provisions of the foregoing paragraphs a, b and c in every subcontract or purchase order of over \$10,000, so that the provisions will be binding upon each subcontractor or vendor.

14.22. AVAILABILITY OF FUNDS

It is understood and agreed between the parties herein that the City shall be bound hereunder only to the extent of the funds available or which may hereafter become available, subject to appropriations, for the purpose of this solicitation.

14.23. BID/PROPOSAL PRICE CURRENCY

Unless stated otherwise in the solicitation, bidders/offerors shall state bid prices in US dollars.

14.24. AUTHORIZATION TO CONDUCT BUSINESS IN THE COMMONWEALTH

A Consultant organized as a stock or non-stock corporation, limited liability company, business trust, or limited partnership or registered as a registered limited liability partnership shall be authorized to transact business in the Commonwealth as a domestic or foreign business entity if so required by Title 13.1 or Title 50 of the *Code of Virginia* or as otherwise required by law. Any business entity described above that enters into a contract with a public body pursuant to the *Virginia Public Procurement Act* shall not allow its existence to lapse or its certificate of authority or registration to transact business in the Commonwealth, if so required under Title 13.1 or Title 50, to be revoked or cancelled at any time during the term of the contract. A public body may avoid any contract with a business entity if the business entity fails to remain in compliance with the provisions of this section.

14.25. TERMINATION OF CONTRACT

The City may terminate the contract for cause or for convenience after giving 30 days' notice in writing to the Consultant. The written notice shall state whether the termination is for convenience or cause. The notice shall be delivered by a commercial courier service or mailed certified with return

receipt requested to the address listed on the bid/proposal, unless notice of a change of address has been provided to the Purchasing Division.

- A. **Termination for Cause:** If the Consultant should breach the contract or fail to perform the services required by the contract, the City may terminate the contract for cause by giving written notice or may give the Consultant a stated period of time within which to remedy its breach of contract. If the Consultant shall fail to remedy the breach within the time allotted by the City, the contract may be terminated by the City at any time thereafter upon written notice to the Consultant or, in the alternative, the City may give such extension of time to remedy the breach as the City determines to be in its best interest. The City's forbearance by not terminating the contract because of a breach of contract shall not constitute a waiver of the City's right to terminate, nor shall the City's acquiescence in any future act or omission by the Consultant. If the contract is terminated for cause, breach of contract or failure to perform, the Consultant may be subject to a claim by the City for the costs and expenses incurred in securing a replacement Consultant to fulfill the obligations of the contract. In the event a Cure Notice is issued, the City will use the address provided to the City listed in the proposals. It shall be the Consultant's responsibility to notify the City in writing within 10 days of knowing a change of address. The written notice shall include the City's contract number and the effective date of the address change.

In the event the Consultant breaches the contract or fails to perform the services required by the contract, in addition to terminating this contract for cause, the City reserves the right, in its sole discretion, to terminate for cause any other open contract that the Consultant has with the City.

- B. **Termination for Convenience:** The contract may be terminated by the City in whole or in part for the convenience of the City without a breach of contract by delivering to the Consultant a written notice of termination specifying the extent to which performance under the contract is terminated and the effective date of the termination. Upon receipt of such a notice of termination, the Consultant must stop work, including but not limited to work performed by subcontractors, at such time and to the extent specified in the notice of termination.

If the contract is terminated in whole or in part for the convenience of the City, the Consultant shall be entitled to those fees earned for work done prior to the notice of termination and thereafter shall be entitled to any fees earned for work not terminated, but shall not be entitled to lost profits for the portions of the contract which were terminated.

- C. **Delivery of Materials:** Contract termination shall not relieve the Consultant of the obligation to deliver to the City all products or services for which the Consultant has been or will be compensated. Unless otherwise agreed to in writing, the Consultant shall deliver the materials or other deliverables to the City within 30 days of the Notice of Termination of the Contract. Failure to do so may result in an action for breach of contract.

- D. **Compensation Due the Consultant:** In event of termination, the Consultant shall be entitled to the compensation accrued to the date of termination. Payment of the balance of the accrued compensation shall be dependent on the Consultant providing the required project material to the City. Said fees which have been earned shall be billed to the City in accordance with the normal billing process, but in no case later than 60 days after the last work is performed. Any termination by the City for default, found by a court of competent jurisdiction not to have been justified as a termination for default, shall be deemed a termination for the convenience of the City.

The Consultant shall submit invoices for all such amounts in accordance with the normal billing process, but in no event later than 60 days after all services are performed. All amounts invoiced are subject to deductions for amounts previously paid and offsets authorized by Contract. All payments due the Consultant under this contract are subject to appropriation by the Chesapeake City Council.

14.26. LITIGATION WITH THE CITY

The City in its sole discretion may choose not to make an award to an offerors who is in litigation with the City at the time of proposals evaluation. This provision also applies if any parent company, principal, officer, or wholly owned subsidiary of the offerors is in litigation with the City at the time of the proposals evaluation.

14.27. PRIOR DEFAULTED CONTRACTS

The City in its sole discretion may choose not to make an award to an offeror who has previously defaulted on a contract with the City or has been debarred by another public entity. This provision also applies if any parent company, principal, officer, or wholly owned subsidiary of the bidders/offerors has previously defaulted on a contract with the City.

14.28. CRIMINAL CONVICTIONS

The City in its sole discretion may choose not to make an award to an offerors if any principal, officer, director, or staff member of the firm assigned to work under a contract awarded pursuant to this solicitation has been convicted of a felony or a misdemeanor involving moral turpitude in the past 10 years.

14.29. INDEMNIFICATION

Consultant agrees, for itself, its agents, servants, employees, subcontractors, and subconsultants, to perform all work hereunder or associated herewith in accordance with any and all applicable professional standards and in accordance with sound professional practice and principles. The following provisions shall apply to the fullest extent permitted by law and regulations and shall not require indemnification for claims to the extent caused by or resulting solely from the negligence of the City, its agents, or employees.

Consultant shall indemnify and hold harmless the City and its officers, agents, volunteers, servants, employees and officials from and against any and all liability, losses, reasonable attorney's fees and litigation expenses or other expenses suffered by any party or entity as the result of any claim found to have been caused in whole or part by the negligent or willful acts, errors, or omissions of Consultant, or those for whom Consultant is legally liable, made in the course of performing Consultant's professional services. With the prior approval of the City, Consultant may assume the defense of any such professional liability claim(s) made against the City, its agents, volunteers, servants, employees or officials.

As to all matters of liability related to or arising out of this contract other than professional liability (if any), Consultant shall indemnify and hold harmless the City, its agents, volunteers, servants, employees and officials from and against any and all liability, losses, reasonable attorney's fees and litigation expenses, or other expenses suffered by any party or entity as a result of any claim found to have been caused in whole or part by the negligent or willful acts, errors, or omissions of Consultant or those for whom Consultant is legally liable. With the prior approval of the City, Consultant shall assume the defense of any such claim(s) made against the City, its agents, volunteers, servants, employees or officials.

14.30. ADVERTISING

In the event a contract is awarded for supplies, equipment, or services resulting from this solicitation, no indication of such sales or services to the City will be used in product literature or advertising. Without prior written approval from the proper authority of the City, the Consultant shall not state in any of its advertising, product literature, or other promotional materials that the City or any department or agency of the City has purchased or uses its products or services.

14.31. AUDIT

The Consultant shall retain all books, records, and other documents relative to this contract for 5 years after final payment, or until audited by the City, whichever is sooner. An auditor retained by the City or any state or federal funding source shall have full access to and the right to examine any of said materials during said period. In the event that a project is funded by state or federal funds, the rights of audit shall also extend to respective state or federal agencies.

14.32. BID/PROPOSAL ACCEPTANCE PERIOD

Any bids/proposals in response to this solicitation shall be valid for 90 days. At the end of the 90 days the bids/proposals may be withdrawn at the written request of the bidders/offerors. If the bids/proposals is not withdrawn at that time it remains in effect until an award is made or the solicitation is canceled.

14.33. CONFIDENTIALITY OF PERSONALLY IDENTIFIABLE INFORMATION

The Consultant assures that information and data obtained as to personal facts and circumstances related to patients or clients will be collected and held confidential, during and following the term of this agreement, and unless disclosure is required pursuant to court order, subpoena or other

regulatory authority, will not be divulged without the individual's and the City's written consent and only in accordance with federal, state, and City Code. Consultants who utilize, access, or store personally identifiable information as part of the performance of a contract are required to safeguard this information and immediately notify the City of any breach or suspected breach in the security of such information. Consultants shall allow the City to both participate in the investigation of incidents and exercise control over decisions regarding external reporting. Consultants and their employees working on this project may be required to sign a confidentiality statement.

14.34. E-VERIFY PROGRAM

Pursuant to Code of Virginia, §2.2-4308.2., any employer with more than an average of 50 employees for the previous 12 months entering into a contract in excess of \$50,000 with any agency of the Commonwealth to perform work or provide services pursuant to such contract shall register and participate in the E-Verify program to verify information and work authorization of its newly hired employees performing work pursuant to such public contract. Any such employer who fails to comply with these provisions shall be debarred from contracting with the City of Chesapeake for a period up to one year. Such debarment shall cease upon the employer's registration and participation in the E-Verify program. If requested, the employer shall present a copy of their Maintain Company page from E-Verify to prove that they are enrolled in E-Verify.

14.35. CHESAPEAKE BUSINESS LICENSE

All firms doing business with the City are required to be properly licensed in accordance with the City of Chesapeake's "Business, Professional, and Occupational Licensing (BPOL) Tax" ordinance. Wholesale and retail merchants not located in Chesapeake are exempt from this requirement. For questions concerning the applicability of the BPOL tax, contact the Commissioner of the Revenue at 757-382-6738.

14.36. SMALL BUSINESS SUBCONTRACTING

Unless the bidders/offerors is registered as a DSBSD-certified small business and where it is practicable for any portion of the awarded contract to be subcontracted to other suppliers, the Consultant is encouraged to offer such subcontracting opportunities to DSBSD-certified small businesses. This shall not exclude DSBSD-certified women-owned and minority-owned businesses when they have received DSBSD small business certification. No offerors or subcontractor shall be considered a Small Business, a Women-Owned Business or a Minority-Owned Business unless certified as such by the Virginia Department of Small Business and Supplier Diversity (DSBSD) by the due date for receipt of bids/proposals. If small business subcontractors are used, the prime Consultant agrees to report the use of small business subcontractors by providing the Purchasing Division at a minimum the following information: name of small business with the DSBSD certification number, phone number, total dollar amount subcontracted, category type (small, women-owned, or minority-owned), and type of product/service provided.

14.37. SUBCONTRACTS

No portion of the work shall be subcontracted without prior written consent of the Purchasing Division. In the event that the Consultant desires to subcontract some part of the work specified

herein, the Consultant shall furnish the Purchasing Division the names, qualifications and experience of their proposed subcontractors. The Consultant shall, however, remain fully liable and responsible for the work to be done by its subcontractor(s) and shall assure compliance with all requirements of the contract.

14.38. NON-EXCLUSIVE RELATIONSHIP

Except as stated in a separate written agreement signed by the City and bidder/offeror, nothing in the in the solicitation shall prohibit the City from purchasing products and services similar to the products and services subject to this solicitation now or hereafter from other suppliers and/or contractors. In addition, the City retains the right to self-perform any or all services and work under the contract at any time.

14.39. ANNOUNCEMENT OF AWARD

Upon the award or the announcement of the decision to award a contract for all solicitations with an annual value of \$5,000.00 or more, the Purchasing Division will publicly post such notice on the Commonwealth of Virginia's eVA VBO (www.eva.virginia.gov) and the OpenGov e-procurement website (<https://procurement.opengov.com/portal/cityofchesapeakeva>) for a minimum of 10 days.

14.40. USE OF BRAND NAMES

Unless otherwise provided in this solicitation, the name of a certain brand, make or manufacturer does not restrict bidders/offerors to the specific brand, make or manufacturer named, but conveys the general style, type, character, and quality of the article desired. Any article which the City, in its sole discretion, determines to be the equal of that specified, considering quality, workmanship, economy of operation, and suitability for the purpose intended, shall be accepted. The bidder/offeror is responsible to clearly and specifically identify the product being offered and to provide sufficient descriptive literature, catalog cuts and technical detail to enable the City to determine if the product offered meets the requirements of the solicitation. This is required even if offering the exact brand, make or manufacturer specified. Normally in competitive sealed bidding only the information furnished with the bid will be considered in the evaluation. Failure to furnish adequate data for evaluation purposes may result in declaring a bid nonresponsive. Unless the bidder/offeror clearly indicates in its bid/proposal that the product offered is an equal product, such bid/proposal will be considered to offer the brand name product referenced in the solicitation.

14.41. METHOD OF AWARD

Unless otherwise stated in the solicitation, the following is the default method of award if the procurement method is an IFB: An award will be made to the lowest responsive and responsible bidder. Evaluation will be based on net prices. Unit prices, extensions and grand total must be shown. In case of arithmetic errors, the unit price will govern. If cash discount for prompt payment is offered, it must be clearly shown in the space provided. Discounts for prompt payment will not be considered in making awards. The City reserves the right to conduct any tests it may deem advisable and to make all evaluations. The City reserves the right to reject any and all bids in whole or in part, to waive any informality, and to delete items prior to making an award.

15. Special Terms and Conditions

15.1. AWARD

The City shall engage in individual discussions with two or more offerors deemed fully qualified, responsible, and suitable on the basis of initial responses and with emphasis on professional competence, to provide the required services. Repetitive informal interviews shall be permissible. Such offerors shall be encouraged to elaborate on their qualifications and performance data or staff expertise pertinent to the proposed project, as well as alternative concepts. At the discussion stage the public body may discuss non-binding estimates of total project costs, including, but not limited to, life-cycle costing, and, where appropriate, non-binding estimates of price for services. Proprietary information from competing offerors shall not be disclosed to the public or to competitors. At the conclusion of the informal interviews, on the basis of evaluation factors published in the Request for Proposals and all information developed in the selection process to this point, the purchasing agency shall select, in the order of preference, two or more offerors whose professional qualifications and proposed services are deemed most meritorious. Negotiations shall then be conducted, beginning with the offeror ranked first. If a contract satisfactory and advantageous to the purchasing agency can be negotiated at a price considered fair and reasonable, the award shall be made to that offeror. Otherwise, negotiations with the offeror ranked first shall be formally terminated and negotiations conducted with the offeror ranked second, and so on, until such a contract can be negotiated at a fair and reasonable price. The City reserves the right to make multiple awards as a result of this solicitation. Should the City determine in writing and in its sole discretion that only one offeror is fully qualified, or that one offeror is clearly more highly qualified and suitable than the others under consideration, a contract may be negotiated and awarded to that offeror.

15.2. WRITTEN EXCEPTIONS BY AN OFFEROR

After the submittal of proposals, the City shall not consider any modifications to any term, condition, or provision stated in the RFP for which the offeror did not expressly and specifically state alternative provisions in its written proposal except as required by Va. Code Section 2.2-4343(12) or other applicable law.

15.3. INSURANCE

By signing and submitting bids/proposals under this solicitation, the offeror certifies that if awarded the contract, it will have the following insurance coverage at the time the contract is awarded. For construction contracts, if any subcontractors are involved, the subcontractor will have workers' compensation insurance in accordance with §§ 2.2-4332 and 65.2-800 et seq. of the *Code of Virginia*. The offeror further certifies that it and any subcontractors will maintain these insurance coverages during the entire term of the contract and that all insurance coverage will be provided by insurance companies authorized to sell insurance in Virginia by the Virginia State Corporation Commission. The City must be named as an additional insured on the Acord insurance certificate reflecting Commercial General Liability and any other required insurance coverages. Coverages afforded under the required policies listed below shall not be cancelled by Consultant or allowed to lapse or expire. However, in the event that any insurance coverage required by this contract is canceled by the insurance company or lapses due to no fault of the Consultant, Consultant shall (i) provide the City with not less than thirty (30) calendar days prior written notice that said insurance policy has lapsed or has been canceled due to no fault of Consultant and (ii) restore said insurance policy with the same insurance

company or obtain a replacement insurance policy that satisfies the insurance obligations required in this contract within thirty (30) calendar days from the date of any notice to Consultant that its insurance policy has been canceled or has lapsed.

MINIMUM INSURANCE COVERAGES AND LIMITS REQUIRED FOR MOST CONTRACTS:

- A. Workers' Compensation - Statutory requirements and benefits. Coverage is compulsory for employers of three or more employees, to include the employer. Consultants who fail to notify the City of increases in the number of employees that change their workers' compensation requirements under the Code of Virginia during the course of the contract shall be in noncompliance with the contract.
- B. Employer's Liability \$100,000 each injury, \$100,000 each disease & \$500,000 disease policy limit.
- C. Commercial General Liability - \$1,000,000 per occurrence and \$2,000,000 in the aggregate. Commercial General Liability is to include bodily injury and property damage, personal injury and advertising injury, products and completed operations coverage. The City of Chesapeake must be named as an additional insured requiring a written endorsement from the policy carrier.
- D. Automobile Liability - \$1,000,000 combined single limit. (Required only if a motor vehicle not owned by the City is to be used in the contract. Consultant must assure that the required coverage is maintained by the Consultant (or third-party owner of such motor vehicle.)
- E. Specific Profession/Service Limits:
 - Accounting \$1,000,000 per occurrence, \$3,000,000 aggregate
 - Architecture \$2,000,000 per occurrence, \$6,000,000 aggregate
 - Asbestos Design, Inspection or Abatement Contractors \$1,000,000 per occurrence, \$3,000,000 aggregate
 - Licensed Health Care Practitioner or Institution \$2,150,000 per occurrence, \$4,250,000 aggregate
 - Limits increase each July 1 through fiscal year 2031 per *Code of Virginia* § 8.01-581.15.)
 - Insurance/Risk Management \$1,000,000 per occurrence, \$3,000,000 aggregate
 - Landscape/Architecture \$1,000,000 per occurrence, \$1,000,000 aggregate
 - Legal \$1,000,000 per occurrence, \$5,000,000 aggregate
 - Professional Engineer \$2,000,000 per occurrence, \$6,000,000 aggregate
 - Surveying \$1,000,000 per occurrence, \$1,000,000 aggregate
- F. Excess Liability, including Employer's Liability, Automobile Liability, and Commercial General Liability - \$5,000,000 aggregate. The City of Chesapeake must be named as an additional insured and so endorsed on the policy, requiring a documented endorsement from the insurance carrier.

15.4. CONTINUITY OF SERVICES

- A. The Contractor/Consultant recognizes that the services under this contract are vital to the City and must be continued without interruption and that, upon contract expiration, the City, a successor, or another contractor, may continue them. The Contractor/Consultant agrees:
1. To exercise its best efforts and cooperation to affect an orderly and efficient transition to a successor;
 2. To make all City-owned facilities, equipment, and data available to any successor at an appropriate time prior to the expiration of the contract to facilitate transition to successor; and
 3. That the Purchasing Administrator shall have final authority to resolve disputes related to the transition of services from the Contractor/Consultant to its successor.
- B. The Contractor/Consultant shall, upon written notice from the Purchasing Division, furnish phase-in/phase-out services for up to ninety (90) days after this contract expires and shall negotiate in good faith a plan with the successor to execute the phase-in/phase-out services. This plan shall be subject to the Purchasing Administrator's approval.
- C. The Contractor/Consultant shall be reimbursed for all reasonable, pre-approved phase-in/phase-out costs (i.e., costs incurred within the agreed period after contract expiration that result from phase-in, phase-out operations) and a fee (profit) not to exceed a pro rata portion of the fee (profit) under this contract. All phase-in/phase-out work fees must be approved by the Purchasing Division, in writing, prior to commencement of said work.

15.5. PRICE ESCALATION/DE-ESCALATION

Price adjustments may be permitted for changes in the contractor's cost of materials/labor not to exceed the increase in the following index: **CPI-U: Other Goods and Services**. No price increase will be authorized for the initial contract term. Price escalation may be permitted only at the end of the initial term and at the time of renewal and only where verified to the satisfaction of the Purchasing Administrator.

Contractor shall give not less than 90 days advance notice of any price increase to the Purchasing Division. Any approved price changes will be effective only at the beginning of the calendar month following the end of the full 90-day notification period. Documentation shall be supplied in general with the contractor's request for increase which will verify that the requested price increase is general in scope and not applicable just to the City of Chesapeake.

The Purchasing Division will notify the using department and contractor in writing of the effective date of any increase which it approves. However, the contractor shall fill all orders received prior to the effective date of the price adjustment at the old contract prices. **The contractor is further advised that decreases which affect the cost of materials are required to be communicated immediately to the Purchasing Division.**

15.6. COOPERATIVE PROCUREMENT:

Any resultant contract of this solicitation may be extended to any public agency or body in the Commonwealth of Virginia to permit those public agencies or bodies to purchase at contract prices, in accordance with the terms, conditions and specifications of this bid/proposal. The successful vendor/contractor shall deal directly with each public agency or body in regard to order placement, delivery, invoicing and payment.

15.7. BEST AND FINAL OFFER (BAFO)

- G. At the conclusion of negotiations, the offeror(s) may be asked to submit in writing, a Best and Final Offer (BAFO). After the BAFO is submitted, no further negotiations shall be conducted with the offeror(s). The offeror's proposal will be rescored to combine and include the information contained in the BAFO. The decision to award will be based on the final evaluation including the BAFO.



City of Chesapeake, VA

City Purchasing

Carol Robinson, Chief Procurement Officer

306 Cedar Road, Chesapeake, VA 23320

(757) 382-6359

Addendum No. 1

RFP No. 25-068-6328

Fiber Optic Network Asset Management Software

Issue Date: Tuesday, November 12, 2024

- 1. The City of Chesapeake is extending the due date for the above referenced RFP. Proposals were due 11/18/2024 and are now due by Friday, November 22, 2024, at 2:00 PM local time.**
- 2. The City of Chesapeake would like to respond to questions received and to provide additional information pertaining to this project:**

Q1: Could you please confirm whether the contact information the city requests will be protected and kept confidential if marked as such? Due to GDPR compliance, we would like to ensure contact information will remain secure and confidential.

A1: In order for the City to be able to exempt proprietary information, three conditions have to be met under Virginia Code Section 2.2-4342. The respondents have to:

- (i) Explicitly invoke the protections of Virginia Code Section 2.2-4342 before submitting, or when they submit, the materials they are trying to protect.
- (ii) Identify the data or other materials to be protected (cannot label the entire thing as proprietary/confidential and cannot exempt prices).
- (iii) State the reasons why protection is necessary.

Q2: Can you please list the systems (or other 3rd Party Systems) which need to be integrated with FSM /Field Automation module/ from the perspective of the City?

A2: The FSM must integrate with ArcGIS for geographical data visualization and management. The goal is to overlay fiber network details with existing GIS data. Integration with City's Asset Management System (currently using Cityworks) will be needed to manage and track network assets. Project Management Tools such as MS Project or other scheduling software to track project timelines and asset deployment.

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Q3: Can you please provide a description of 2-3 process flows that will be executed by users of the FSM /Field Automation module?

A3:

1. **Fiber Installation Process Flow:** The FSM should allow field technicians to receive work orders for new installations, log the installation status, and update the system in real-time with as-built data. Once complete, the data (including GPS coordinates and any annotations) should sync automatically with the GIS.
2. **Repair and Maintenance Workflow:** Field technicians should be able to view network trouble tickets, locate the affected segment on a GIS map, log repair notes, and close tickets after repair. Updates should immediately reflect in the FSM and ArcGIS systems.
3. **Inventory and Asset Management Flow:** Users should be able to track all fiber inventory, check out components for installation, log usage, and reorder stock when below threshold levels, all integrated with ArcGIS for location-based tracking.

Q4:

- a. Does the city have a preference on a SaaS solution vs On-Premise?
- b. Are their requirements on the location the solution is hosted for SaaS proposals?
- c. Private or public cloud?
- d. Should hardware costs be included in the proposal for on-premise offers?
- e. Will the city ensure the infrastructure?

A4:

- a. Preference for a SaaS solution for scalability, cost efficiency, and ease of updates. However, the city is open to reviewing on-premise options if they offer significant advantages.
- b. Data must be hosted within the United States due to compliance and security requirements.
- c. Public.
- d. Yes, please include hardware costs in your proposal for on-premise solutions to ensure comprehensive cost comparison between SaaS and on-premise options.
- e. The city will provide network connectivity and basic IT infrastructure. However, any specialized equipment or maintenance specific to the FSM should be outlined in your proposal.

Q5. Will mobile devices for field service be Android, IOS or both?

A5: Both are available.

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Q6: Is any data migration required?

A6: Yes, the inventory of endpoints will be pulled from the City's GIS system.

Q7: Does the 5 users indicated in the RFP include Field Technicians as well?

A7: Yes, depends on the licensing model of the proposed solution.

Q8: Apart of alerts within the field service mobile app do you require parallel notifications sent by e-mail or SMS?

A8: Yes, either parallel option would be accepted.

Q9: Do you have an expected implementation timeline in mind?

A9: A9: Our goal is to implement as soon as possible. We have assets in the ground with Fiber being activated by December 30. The entire project is 175 miles. To date, 155 miles of conduit has been installed. The remaining mileage is for laterals and railroad crossings. Fiber pulls have just been initiated for laterals and phased sections of the backbone.

Q10: Do you require access to a Customer Portal/Interface dedicated for Customers to be informed about e.g. visiting time?

A10: This functionality should be priced separately and optionally if it is not part of the base system as proposed.

Q11: We would like to understand and if possible, get more information on how you understand in the page 3 of the RFP document the requirement: "Annotation and handhole diagrams are automatically updated as data changes"

A11: This requirement implies that all annotations, labels, and diagrams associated with handholes and other network components should automatically update in real-time as changes are made in the FSM or ArcGIS. For instance, if a fiber segment is modified, related diagrams should reflect these changes without requiring manual updates.

Q12: Our understanding is we will need to integrate with ArcGIS, in the preferred scenario we will be the inventory, and the design management tool and ArcGIS will get the inventory information from our database. Is that right?

A12: City GIS will be the inventory, and the design management tool and ArcGIS will get the inventory information from the City's database.

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Q13:

- a. On page 3 “Annotation and handhole diagrams are automatically updated as data changes”, can you elaborate on this requirement a bit more?
- b. Do you need to import handhole diagrams in a specific format (AutoCAD, Visio, etc) or is any additional requirement needed?

A13:

- a. This requirement implies that all annotations, labels, and diagrams associated with handholes and other network components should automatically update in real-time as changes are made in the FSM or ArcGIS. For instance, if a fiber segment is modified, related diagrams should reflect these changes without requiring manual updates.
- b. AutoCAD and Visio formats are commonly used, so compatibility with these file types is preferred. If there are limitations, please specify supported formats and any additional file conversion tools required.

Q14: Related to Digital Image Management: We understand you need a repository to upload images (no size limitation), and any type of document. Therefore, the users can access immediately access information (Document Management system). Is this correct?

A14: Yes, that is correct.

Q15:

- a. On page 7: It is mentioned that we need to integrate with another network monitoring system. We want to understand if the main idea is to collect the network inventory alarms and show them in our platform together with the services impacted (we would need to add a Service Impact analysis component) and also, we would need a DB where the services are stored or somewhere the information would be available to correlate the information. Can you elaborate a bit more about this requirement? Is it mandatory in the proposal or an add-on?
- b. How many alarms should we process on a daily basis?
- c. Do you have a specific list of elements we need to integrate with (SW vendor, protocol available, technology (transport, fixed access, radio)?

A15:

- a. This functionality should be priced separately and optionally if it is not part of the base system as proposed. Integration may be accomplished by webhooks using JSON or SNMP. The network elements will include Cisco NCS and ASR components running IOS, Graylog, and Solar Winds for logging and monitoring.
- b. Less than 100.

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- c. Specific elements include fiber optic cables, access points, handholes, and power supplies. Protocols required will likely involve IP-based communication for transport and LoRaWAN for remote meter connectivity. Integrations will be needed with transport and fixed access technology for fiber management. Specific radio technologies may be relevant for any cellular network aspects of the project (e.g., CBRS LTE).

Q16: What types of coordinates should we support natively?

A16: Decimal degrees, Latitude/Longitude, NAD83 Virginia State Plane South US Survey Feet.

Q17: On page 8. Can you elaborate a bit more about the requirement "... assets from map regions to signals on a cable" so we can understand how information should be presented in our solution and the type of view the city wants?

A17: This requirement means that FSM should visually link physical assets (e.g., fiber optic cables, handholes, splicing points) to the signals traveling through those cables. The City wants a clear, map-based view where users can click on a map region, zoom into specific network assets, and view signal paths, strength, and connectivity status across cables. The interface should allow for tracing signal flow and quickly identifying points of failure or congestion.

Q18: Related to ISP (inside plant management), would you consider the following components? Floor plant view (tool for importing plant Cad, Visio files to manage the rooms). Rack Management (to manage all racks positions and visualization), Power and Cooling (assets and calculations related to them).

A18: This functionality should be priced separately and optionally if it is not part of the base system as proposed.

Q19: Which GIS solution will remain the master, ArcGIS or our GIS solution? Our current understanding is that we will provide our inventory information to ArcGIS, or will it be the other way around?

A19: The desired solution should use ESRI desktop or server components as the mapping components and the data will not get passed between platforms.

Q20: Related to alarms, should we assume that all the alarms already processed will be delivered to our platform from Juniper, SolarWinds, etc. and our responsibility will be to manage and centralize the alarms and show them in a centralized platform like ours OR we are intended to acquire the alarms from the mediation platforms, process and analyzed them as well? Can you please elaborate on this point?

A20: This functionality should be priced separately and optionally if it is not part of the base system as proposed. Integration may be accomplished by webhooks using JSON or SNMP. The network elements

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will include Cisco NCS and ASR components running IOS, Graylog, and Solar Winds for logging and monitoring.

Q21: Do you need a Trouble ticketing platform?

A21: Yes, a Trouble Ticketing platform is required. This system should enable users to log, track, and manage network issues efficiently. Ideally, it should integrate with other FSM functions for seamless updates on asset status and maintenance records.

Q22: Will the awardee be responsible for inputting data of the current fiber optic assets into the awarded software solution, initially and for the duration of the contract?

A22: Yes, the awardee will be responsible for the initial data entry of current fiber optic assets into the FSM.

Q23:

- a. Does an SaaS (Software as a Service) Delivery and Implementation model. comply with the OFF-PREMISES option?
- b. With the respect to RFP statement: "Contractor will deliver an on-premises Solution, all proposed software must integrate with the City's pre-existing geospatial platform, which includes the following...." QUESTION. Since this specifies ON-PREMISES, does it also apply to OFF-PREMISES? Or - can an Off-Premises delivery. more, precisely, SaaS, submit Exceptions where applicable?
- c. Kindly elaborate on TABLE 1 compliance parameters for OFF-PREMISES delivery. more precisely SaaS?
- d. Are the required - QUALS, References, Certificates of Compliance. Insurances, et al; required by Sub-Contractor (s) as well as the Prime/Consultant; or solely the Prime?
- e. Additionally, can documents required in numbers (i.e., 4 References, etc) be shared by Prime and Sub-Contractors or is it 4 per Team member?
- f. With an SaaS OFF-PREMISES delivery model, that may not require On-Site or Field presences - Training would be remote); what Liability, Insurance instruments would be required?

A23:

- a. Yes, a SaaS Delivery and Implementation model aligns with the OFF-PREMISES option and is preferable for streamlined maintenance, upgrades, and cost-effectiveness.
- b. Yes.
- c. Submit Exceptions where applicable.

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- d. Both Prime and Sub-Contractors must provide necessary qualifications, references, and certificates of compliance. Insurance requirements may vary by role but must ensure comprehensive coverage for all parties involved.
- e. Shared references are acceptable.
- f. For a SaaS model with remote training, general liability and cybersecurity insurance are essential. Additionally, errors and omissions insurance should cover potential data entry or system errors, given the critical nature of the FSM data.

Q24: What system of record does the City currently utilize to document fiber (example CAD, KMZ, GIS etc)?

A24: GIS (Magellan's)

Q25: Does the city have redline as-builts for any fiber that was currently built? If yes, what redline information was captured (offset and depth, cable sequential information, splicing schematics etc)

A25: Yes, the city has redline as-builts for some existing fiber installations. Captured information typically includes offset and depth, cable sequential information, and splicing schematics. Additional data, if available, will be shared with the awarded vendor.

Q26: What attribute information is captured in ArcGIS regarding the existing fiber (example, placement type aerial/underground, strand count, dark vs lit fiber etc.)

A26: Conduit attributes in Magellan's schema

Structures attributes

name
category
diameter
duct_count
depth
install_me
status
length
phase
area_name
material
inner_duct
inner_du_1
comments
existing_o

name
structure_
size
depth
status
phase
area_name
rating
ground
hierarchy
comments
existing_o



City of Chesapeake, VA

City Purchasing

Carol Robinson, Chief Procurement Officer

306 Cedar Road, Chesapeake, VA 23320

(757) 382-6359

Q27: What does the city currently utilize to capture / create splicing details?

A27: Greenfield project. No data has been collected at this time.

Q28: Does the city have any existing data diagrams regarding fiber strand utilization (ex: dark fiber vs lit fiber) If yes, what format is this data captured (ex: spreadsheet, GIS, CAD etc)?

A28: Yes, spreadsheets.

Q29: Does the City expect the winning contractor to perform field audit work to capture details of the existing fiber plant (sequential cable footage number, splice case audits, Fiber Term panel audits etc).

A29: No, this information will be provided by Construction crew.

Q30: What level of documentation does the city have regarding the current network architecture (link logical network diagrams, circuit diagrams etc).

A30: This is a greenfield network. Logical network documentation will be produced by the VAR who deploys the Cisco-based network.

Q31: Does this RFP require daily, weekly or monthly support once training has been completed?

A31: Monthly support is generally expected once training has been completed, with the flexibility to escalate support needs as required by system or network changes. The support should include ongoing software updates, maintenance, troubleshooting, and data management assistance.

Q32: Will this RFP to provide the solution and training only, does the City of Chesapeake require the bid winner to manage the fiber/cellular/wireless components in the asset management tool?

A32: No, City GIS and Outside Plant Manager will manage the software.



City of Chesapeake: FIBER NETWORK GIS
SOFTWARE RFP

EXECUTIVE SUMMARY

GEOGRAPH Technologies TO: CITY OF CHESAPEAKE, VA

To Whom it May Concern,

It is my pleasure to submit our proposal for a **Fiber Management System (FMS)**. We look forward to working with the evaluation team at the City of Chesapeake. GEOGRAPH™ Technologies, LLC provides GIS-based communications network management solutions for Fiber, Copper, and Coax networks in our product suite, CrescentLink®. We also provide a host of services through our internal, on-site Professional Services team. GEOGRAPH™ was founded in June 2018. CEO Bruce Smith was a partner at Palmetto Engineering and Consulting (PEC) where he managed the department that developed and sold CrescentLink® since its inception in 2010. Bruce Smith along with three other members of the CrescentLink® team bought the IP rights, and contracts of the CrescentLink® product from PEC. To date, we have 168 customers in 38 states, Canada, Guyana, Guam, Bahamas and the US Virgin Islands; With over 1,600 individual users.

The founders of GEOGRAPH™ have combined experience in Telecommunications Engineering, Service, Design, and Implementation covering all areas of network operations, and services. CrescentLink® was born by Engineers and Operators that saw firsthand the needs of the industry. ***We are not developers that found a problem for our software. We are engineers that created software for our problems.***

If you manage any of these networks or need to build one from scratch, our CrescentLink® software extensions make it possible to take your project from concept to completion. Utilizing GIS to design, build and manage a complete 360° view of your network down to a single strand of fiber or port on a piece of equipment. Built especially for Esri's ArcGIS Ecosystem, our suite of tools are strategically developed to fill the gaps left by other GIS software.

As a Gold Partner with ESRI, the global market leader and pioneer in problem-solving with GIS, we offer world-class solutions specific to your network needs, including consultation services and team training.

The GEOGRAPH™ approach to on-boarding a new customer is what we call a “Crawl, Walk, Run” approach. This means that we first take care in the very beginning to collaborate with all stakeholders to plan extensively, all facets of the project plan. Once a schedule and timeline has been established, we are sure to outline each party’s responsibilities throughout the plan, highlighting all milestones and ‘due dates’ for those milestones. From here, we can move with more efficiency and structure, through each step of the project plan.

Here at GEOGRAPH™, we pride ourselves on our Customer Support. We view our customers not as customers, but as Partners; Partners whom we feel an inherent responsibility to ensure that they are successful in all aspects. Our team is made up entirely of in-house staff, with a dedication to prompt and thorough support of our customers. We have, since our company’s founding, carried a 100% Support satisfaction rating and focus heavily on maintaining close, personal relationships with all stakeholders.

During the execution of this project, the City of Chesapeake would work with our Customer Experience, Professional Services and Development Teams. Our Customer Experience team will work with City of Chesapeake representatives from the very beginning, throughout the evaluation and decision-making process and into the post-sale. The post-sale phase is where the on-boarding project, outlined below, will be carried out.

For on-boarding, City of Chesapeake will work more closely with the GEOGRAPH™ Professional Services team, and with the GEOGRAPH™ Development team on occasion. Our Professional Services team executes all of the project management, and is responsible for coordinating and executing the entirety of the project, outside of any custom development or configuration. Any data migration required to convert City of Chesapeake’s legacy plant data, will be scoped, planned and executed by the GEOGRAPH™ Professional Services team, entirely in-house.

Any custom development, integration, deployment or configuration of GEOGRAPH's™ offerings, will be managed by both the GEOGRAPH™ Professional Services team and Development team. These teams, both fully in-house, will work hand-in-hand together with the applicable City of Chesapeake stakeholders to scope, plan and execute any custom development, integration, deployment and/or configuration of GEOGRAPH's™ offerings.

All of the above mentioned portions of the full on-boarding and deployment process, will be outlined in detail during the first series of kick-off meetings between GEOGRAPH™ and City of Chesapeake. A timeline for executing all phases of the on-boarding process will be created collaboratively with the City of Chesapeake and GEOGRAPH™ teams, after the initial kick-off call.

We thank you again for your consideration and the opportunity to participate in this RFP. We welcome any and all questions related to our proposal and other relevant matters. We look forward to working with you all and wish you the best of luck during your evaluation.

Sincerely,



Josh Crozier
Sales Manager
GEOGRAPH Technologies
229-254-4109
josh.crozier@geograph.tech

WHO WE ARE

Ideology & Vision

It should be our never-ending effort to continuously seek answers to the question “Why?” Curiosity to serve and solve problems should be our guiding principle in all that we do. The ideology to not only provide the best products, but also the best customer service and training, will create a company that grows and believes far beyond its own existence.

The value of GEOGRAPH will exist hand in hand with the value of its customers. Our value and worth is a direct correlation with that achieved and experienced by the customers that we serve.

As members of this organization, we must live and breathe by these standards. It is everyone’s mission to make sure that those within the organization take every opportunity to promote these ideologies, both intrinsically and extrinsically, so that this brand and this company can excel, both now and forever.

Customers

- ❖ Focus on outstanding customer support and training.
 - ❖ Provide state-of-the-art technologies and services that bring value and understanding to our customers and create long-term relationships that are mutually beneficial.
 - ❖ Stay educated on the latest trends and issues in the industries we serve so we can provide expertise in practice and support
-

Products & Services

❖ Provide advanced technologies that meet and exceed the expectations of our users. ❖ Create easy-to-use, functional tools that provide users with the necessary information to better do their jobs for the betterment of themselves and their organizations. ❖ Continually educate ourselves and our staff on the most up-to-date information to provide expertise in product and service.

Community

- ❖ Be in tune with the communities we work and live in.
- ❖ Be good stewards of our time and resources so that we are bettering the communities around us.
- ❖ Be aware of the communities of our customers. Through social media and personal interaction, we will connect with and promote our customers and their social impact within their communities.

BUSINESS PHILOSOPHY

At GEOGRAPH, we believe that you should have complete control over your network. This means not only being responsible for your network, but also being equipped with the necessary tools and technology, industry know-how, resources and knowledge share, and ongoing support to be successful.

Today, decisions are made at the speed of trust and knowledge. If you lag behind in either of those, there are many pitfalls standing in the way of your organization and achieving success. GEOGRAPH Technologies exists to bring you the tools and processes that allow you to “Take Control of Your Network,” and in today’s competitive and complex market, we all need all the help we can get!

At GEOGRAPH, what truly sets us apart is our commitment to service and support. Our philosophy is and will continue to be, that simply providing a toolset to organizations in the telecommunications industry isn't enough – organizations need trusted advisors and confidants they can rely on to guide them through their processes, who will answer the call in times of distress or emergency, and who serve as industry experts that our customers can lean on. We don't seek to be the hero for our customers; rather, we seek to empower and enable our customers to be the heroes.

With over 75+ years of experience, a fully on-site and U.S.-based Support and Accounts team, and over 165+ customers across North America and beyond, our sole purpose is to provide knowledge share and instruction, healthy and in-depth resources, and trusted service and support in furtherance of these goals.

TECHNICAL PROPOSAL

High-Level Overview and Introduction

CrescentLink by GEOGRAPH is a cutting-edge fiber network management software suite that integrates seamlessly with ESRI's ArcGIS Ecosystem, offering powerful tools for telecommunications network design, management, and analysis. It provides end-to-end solutions that empower network operators to streamline their workflows, improve accuracy, and enhance decision-making. The software is designed with the needs of both field technicians and office-based engineers in mind, enabling comprehensive management of fiber assets from the initial planning stages through operations and maintenance.

CrescentLink is complemented by the CrescentLink Web Experience that extends its capabilities to web-based, view-only, real-time management, offering accessibility, collaboration, and operational efficiency. Together, CrescentLink for ArcGIS Pro and the CrescentLink Web Experience provide a robust solution for modern telecommunications infrastructure projects.

FIBER MANAGEMENT SYSTEM: FUNCTIONALITY

OVERVIEW

CrescentLink for ArcGIS Pro: Overview

CrescentLink by GEOGRAPH is a cutting-edge fiber network management software suite that integrates seamlessly with ESRI's ArcGIS Ecosystem, offering powerful tools for telecommunications network design, management, and analysis. It provides end-to-end solutions that empower network operators to streamline their workflows, improve accuracy, and enhance decision-making. The software is designed with the needs of both field technicians and office-based engineers in mind, enabling comprehensive management of fiber assets from the initial planning stages through operations and maintenance.

CrescentLink for ArcGIS Pro: Key Features & Functionality

- | | |
|--|--|
| ❖ Fiber Network Design | ❖ Network Tracing & Analysis |
| ❖ Cable Network Capacity & Utilization | ❖ Asset & Connectivity Reporting |
| ❖ Outage Management & Response | ❖ Data Management & Asset Tracking |
| ❖ Work Order Management | ❖ Scalability & ArcGIS Ecosystem Integration |
| ❖ Asset Customization & Visualization | ❖ Spatial Reporting |
| ❖ Connectivity Building & Management | |

CrescentLink Web Experience: Overview

CrescentLink is complemented by the CrescentLink Web Experience that extends its capabilities to web-based, view-only, real-time management, offering accessibility, collaboration, and operational efficiency. Together, CrescentLink for ArcGIS Pro and the CrescentLink Web Experience provide a robust solution for modern telecommunications infrastructure projects.

CrescentLink Web Experience: Key Features & Functionality

- ❖ Real-Time Remote Data Access
- ❖ Mobile-friendly Map Interface
- ❖ Collaboration & Sharing
- ❖ Asset Search & Identification
- ❖ Sub-Spatial Asset Analysis
- ❖ Splicing Documentation
- ❖ Circuit & Connectivity Reporting
- ❖ Outage Management & Response
- ❖ Integration with Experience Builder Widgets

Integration and Compatibility with the ArcGIS Ecosystem

The CrescentLink Product Suite is built to seamlessly integrate with the ESRI ArcGIS Ecosystem, ensuring compatibility with a wide range of GIS tools and platforms. CrescentLink works natively within **ArcGIS Pro**, leveraging the full power of ESRI's advanced geospatial analysis and data management capabilities. It also allows for use with **ArcGIS Web Maps** and **ArcGIS Online (AGOL)**, allowing for easy sharing of data and network designs across distributed teams and between field and office environments.

Additionally, CrescentLink supports **ArcServer** and **ArcGIS Enterprise** environments, ensuring that organizations can host and manage their own fiber network data in a secure, scalable infrastructure. CrescentLink is further compatible with **ESRI's Experience Builder**, which allows users to create custom web applications that can include CrescentLink functionality (through the **CrescentLink Web Experience**), enabling a truly immersive, interactive experience. This deep integration ensures that CrescentLink users can take full advantage of the extensive suite of tools and functionality within the **ESRI ArcGIS Ecosystem**, leveraging the power of spatial data across multiple platforms and enhancing collaboration, accessibility, and operational efficiency throughout their fiber management workflows.

Summary

The CrescentLink suite of tools by GEOGRAPH, with its robust integration and compatibility with the ArcGIS Ecosystem, offers a comprehensive solution for managing and maintaining fiber optic networks. Whether you're planning a new-build, network expansion or remediation, designing a new network from the ground up, or managing existing plant, CrescentLink empowers teams to work efficiently and make informed decisions. With scalable features, real-time access, and deep GIS integration, CrescentLink is an essential tool for modern telecommunications network management.

Key Features and Functionalities:

1. Real-Time Data Access

- a. The CrescentLink Web Experience gives users view-only access to their plant records, to view and manage fiber network data in real time, through a live connection to the organization's Enterprise geodatabase. Changes made in the office are immediately reflected across the platform, ensuring all stakeholders have access to the latest information.

2. Interactive Map Interface

- a. The web-based interface allows users to interact with fiber network maps, zoom into specific assets, and access detailed information about cables, splice points, and equipment directly from the map. This is deployed by installing the CrescentLink Web Experience widget into any ESRI Experience Builder application.

3. Collaboration and Sharing

- a. Teams can collaborate more effectively by sharing maps and network designs with internal teams or external contractors. With role-based access control, administrators can manage who has access to specific network data.

4. Mobile-Friendly

- a. Designed with a responsive layout, the CrescentLink Web Experience is accessible from any web-enabled device, allowing personnel, either internal or external, to access critical network information while on-site, according to the wishes and preferences of your organization.
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5. Integration with CrescentLink for ArcGIS Pro

- a. The Web Experience is live-link to your CrescentLink enterprise geodatabase, built and maintained using ESRI's ArcGIS Pro application. This makes the connection between CrescentLink for ArcGIS Pro and the CrescentLink Web Experience seamless, for more efficient data exchange and access, and workflows between the desktop and web environments.
-

View-Only Functions (Also included in CrescentLink for ArcGIS Pro):

1. CrescentLink Search Function

- a. Enables users to search for locations using the CrescentLink StationID field (used to document addresses or access point naming conventions) or customer/terminating point information (i.e. names, addresses or phone numbers) imported from a CIS, to drill-down directly on relevant locations with ease.
- b. **Use case:** Ideal for quick searches to locate specific assets within your network digital twin, to initiate various workflows and processes for analyzing network assets, identifying network locations, and more.

2. Fiber Cables, Fiber Strands, Equipment, and Equipment Ports Analysis:

- a. Provides an in-depth view of the entire network infrastructure, helping users understand how assets are connected.
 - b. **Use case:** Useful for identifying and analyzing network circuits, lit customers/end points, cable routes, and more.
-
-

3. Splice Diagrams and Tabular Splice Reports:

- a. View and analyze access points in the network with detailed diagrams and tabular reports.
- b. **Use case:** Great for field technicians assessing splice point conditions, planning network maintenance, and performing outage response functions.

4. Fiber Cable Trace Reports:

- a. Allows users to view the results of fiber-strand and equipment port traces, showing all network elements that make up an individual circuit.
- b. **Use case:** Helps field teams identify customers impact during outages or maintenance.

5. Fiber Cable Summary Reports:

- a. Offers high-level summaries of fiber cable usage and condition, helping network administrators keep track of network health.
- b. **Use case:** Essential for regular reporting on network performance and capacity utilization.

6. Distance Trace Tool:

- a. Provides distance measurements between key network points and helps users assess network design parameters.

- b. **Use case:** Used during network design review to validate distances between planned infrastructure.

7. Fiber Cable/Fiber Equipment Port Tracing Functionality:

- a. Displays the signal paths and fiber port connectivity within the network for easy troubleshooting.
- b. **Use case:** Perfect for identifying physical and logical connection issues between equipment ports and cables.

Integration and Compatibility with the ArcGIS Ecosystem

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Summary

The CrescentLink suite of tools by GEOGRAPH, with its robust integration and compatibility with the ArcGIS Ecosystem, offers a comprehensive solution for managing and maintaining fiber optic networks. Whether you're planning a new-build, network expansion or remediation, designing a new network from the ground up, or managing existing plant, CrescentLink empowers teams to work efficiently and make informed decisions. With scalable features, real-time access, and deep GIS integration, CrescentLink is an essential tool for modern telecommunications network management.

IMPLEMENTATION PLAN

Phase 1: Discovery (Project Setup/Administration)

Steps Include:

- a. Project Organization
- b. Project Team Training
- c. Technical Environment Planning and Set-Up
- d. Deliverables

A. Project Organization

The purpose of this section is to outline the tasks by the GEOGRAPH operations team members and members of City of Chesapeake's teams that will complete initial set-up and planning of the overall project. Points of contact, timelines, milestone expectations and final deliverables will be established.

B. Project Team Training

The purpose of this section is to discuss CrescentLink training options and decide on the best

training option for the prospective customer. If the City of Chesapeake prefers to have a custom training on the CrescentLink software, GEOGRAPH operations team members who will be conducting that training, will be briefed on the new curriculum. Any and all training of the GEOGRAPH team members to ensure their adequacy in performing the training for the prospective customer will be done.

C. Technical Environment Planning/Setup

The purpose of this section is to outline the technical and system requirements needed to achieve the deployment desired by the prospect. The majority of the project will be taken care of by City of Chesapeake's own personnel, the prospect's ESRI representative and ESRI's professional services team. Here, discussions on how the network will be stored, shared and edited, whether an on-prem or cloud-based server will be deployed, what workstation machines will be utilized, whether AGOL and Arc Portal will be utilized and what database management system will be utilized. GEOGRAPH will be involved during the software configuration portion of this phase.

- **Sub-Categories:**

- Database Planning using Vendor Sizing Recommendations
- Assess Hardware and Related Software(s)
- Configure and/or Install Hardware and Related Software(s)
- Set-Up Remote Access for Applicable Resources (VPN to prospect's Desktops)

- **Sub-Category A: Database Planning using Vendor Sizing Recommendations**

This section is to outline the database and server needs of the prospect according to how they want to utilize the software and data (i.e. multi-user editing, web sharing, etc.). ESRI professional services team members will get involved to ensure that the prospect's team knows what hardware/software is needed to deploy everything as they wish to utilize it in the way in which they wish to utilize it.

ESRI's web technology (Arc Portal, AGOL, etc), whether the prospect will deploy an on-prem server environment or utilize a cloud-based storage system and what database management system is right for the prospect. They will also assess any existing technology fitting within this purview to ascertain whether it can be used to achieve the prospect's ultimate goals for deployment and utilization.



• **Sub-Category B: Assess Hardware and Related Software(s)**

During this phase, ESRI professional service team members will work with the prospect personnel to decide whether the prospect will be utilizing ESRI's web technology (Arc Portal, AGOL, etc), whether the prospect will deploy an on-prem server environment or utilize a cloud-based storage system and what database management system is right for the prospect. They will also assess any existing technology fitting within this purview to ascertain whether it can be used to achieve the prospect's ultimate goals for deployment and utilization.

• **Sub-Category C: Configure and/or Install Hardware and Related Software(s)**

This section is to outline coordination between ESRI and the prospect's personnel to install all hardware and software (outside of CrescentLink) to prepare the prospect for a full CrescentLink deployment. This includes ESRI's AGOL and Portal, either an on-prem or cloud-based server, the proper database management system and the individual workstations the end-users will be utilizing.

• **Sub-Category D: Setup Remote Access for Applicable Resources (VPN to Prospect Desktops)**

This section describes establishing a process for GEOGRAPH personnel to VPN to the prospect's machines on-site to perform contracted services rather than performing the work on GEOGRAPH machines and delivering the finished product.

D. Deliverables

This section is to outline the scope of work that will be established during the kick-off meeting, but will become applicable during this time when all necessary hardware and software is being installed at the prospect's location.

Phase 2: Define & Design

Steps Include:

- a. Project Team Training
- b. Outline GEOGRAPH Business Processes
- c. Finalize Application Scope
- d. Setup Technical Environment(s)
- e. Design (Confirm) Application Setup/Configuration to Support Scope
- f. Design (Confirm) Conversion/Enrichment Processes (Including Data Clean-up)
- g. Complete GEOGRAPH Business Processes
- h. Confirm Standard Reports (Identify Custom Reports Needed)
- i. Confirm Test Plan
- j. Update Technical Requirements
- k. Deliverables

A. Project Team Training

This task will ensure that all GEOGRAPH personnel responsible for conducting training for the prospect's end-users are up-to-date on all applicable curriculum prior to training the prospect

end-users. The curriculum tested will be established in the scope of work, discussed in the kick-off meeting outlined above.

B. Outline GEOGRAPH Business Processes

This task is to outline what business processes and pertinent project management functions will be utilized by the GEOGRAPH team in performance of any and all data migration work, custom software configuration and/or other negotiated professional services project(s) per the GEOGRAPH scope of work.

C. Finalize Application Scope

The purpose of this task is to discuss and outline the scope of the final CrescentLink deliverable to the prospect. Whether the prospect will contract GEOGRAPH to do custom configuration of the software and/or network data delivered will be established and submitted as part of the final scope of work, as well as any task order for any individual project(s).



D. Setup Technical Environment(s)

This task will be coordinated between the prospect personnel and ESRI professional services team members. All of the database storage servers (whether on-prem or cloud-based), the database management system, ESRI's enterprise server software and the other hardware and software that will be deployed, will be set up during this time.

E. Design (Confirm) Application Setup/Configuration to Support Scope

During this task, the CrescentLink software (whether custom configured or out of the box) will be delivered, according to the GEOGRAPH scope of work.

F. Design (Confirm) Conversion/Enrichment Processes (Including Data Clean-Up)

If data migration work is to be done to bring existing prospect network plant data over into the CrescentLink platform, that project will be outlined and completed during this task. The purpose is to deliver a fully functioning geodatabase of connected network plant data.

G. Complete GEOGRAPH Business Processes

Any outstanding business processes that will be utilized by the GEOGRAPH team in the performance of contracted professional services will be outlined and agreed upon here.

H. Confirm Standard Reports (Identify Custom Reports Needed)

The CrescentLink software, coupled with ESRI's ArcMap for desktop, has very robust reporting functionality natively within the platforms. However, there are other custom reports that can be created. Any custom reports that the prospect would like for GEOGRAPH team members to create/prepare will be outlined here.

I. Confirm Test Plan

The prospect, during this step, will confirm all internal business processes and steps that will be utilized during the testing and implementation of the final CrescentLink deliverable.

J. Update Technical Requirements

Any updates, advancements or improvements that need to be made to the supporting hardware/software at the prospect's location will be completed during this step.

K. Deliverables

During this step, all supporting software and hardware will be defined in a scope of work and any outstanding pieces of such will be delivered to the prospect in preparation for deployment of the CrescentLink software and geodatabase.

Phase 3: Development & Configuration

Steps Include:

- a. Application Setup/Configuration
- b. Application Setup/Configuration Testing
- c. Existing Network Plant Data Migration
- d. Interface Program Development & Unit Testing

- e. Report Development
- f. Cutover Plan Development
- g. Deliverables

A. Application Setup/Configuration

Any customization or custom configuration of the CrescentLink software will be performed and part of the final CrescentLink deliverable to the prospect.

B. Application Setup/Configuration Testing

If any customization or custom configuration is done to the CrescentLink software, those changes will be tested both in-house by GEOGRAPH team-members and by the prospect's end-users to ensure it is adequate according to the scope of work.

C. Existing Network Plant Data Migration

This task is to complete any migration and enrichment of existing prospect network plant data into the CrescentLink data model. The migration will bring over all existing plant records and build in CrescentLink connectivity to create a fully functioning CrescentLink geodatabase of the prospect network plant records.

D. Interface Program Development & Unit Testing

The GEOGRAPH scope of work will include any interface program(s) that the prospect wants to be completed and if this is included in the scope of work, that work will be tested at this point.

E. Report Development

As stated previously, any custom reports that the prospect wishes to have GEOGRAPH create for them, will be done in this section as those reports will be tested here as well, preparing them for final delivery.

F. Cutover Plan Development

The prospect will create a plan internally to cutover all of their existing applications and system(s) of record over to utilizing the applicable ESRI technology and the CrescentLink software for network management.

G. Deliverables

The completed data migration geodatabase, along with any custom reports, will be part of the deliverable here.

Phase 4: Testing

Steps Include:

- a. City of Chesapeake-Specific Steps
- b. Training & Performance Support
- c. Define Deployment Support Procedures & Communications
- d. Deliverables

A. City of Chesapeake-Specific Steps

Internal testing of the new applications and software will be conducted here to ensure that installation and configuration were done correctly and the environment will support the workflows and processes that were desired at the onset of this process.

B. Training & Performance Support

The CrescentLink training (whether standard or custom configured curriculum) will be conducted for the prospect's end-users. During this phase, the location (whether on-site at the prospect's location or remotely) and the training data (whether the prospect's network data or the standard demo dataset) will be determined. All custom training data will be tested and put through a QA/QC process to ensure accuracy and effectiveness.

C. Define Deployment Support & Procedures & Communications

During this phase, final preparations and actions will be performed in order to set up a full deployment of the ESRI and CrescentLink technology. All last-minute assessments will be made and preparations for full deployment completed.

D. Deliverables

All remaining contract documents, task orders, and scope(s) of work will be delivered and

approved by all parties at this time, in preparation for full deployment in the next phase.

Phase 5: Deployment

Steps Include:

- a. Conduct End User Training
- b. Finalize Deployment Support Processes
- c. City of Chesapeake-Specific Steps
- d. Post Implementation Support & Audit

A. Conduct End User Training

CrescentLink training will be performed now in accordance with the agreed-upon location and training data outlined in the above section.

B. Finalize Deployment Support Processes

Coordination efforts will be made between the prospect and GEOGRAPH to finalize all points of contact, deployment dates, deliverables and deliverable dates, and other applicable matters.

C. City of Chesapeake-Specific Steps

The prospect will have most of the responsibility for these final steps. During this phase, the production environment will be finalized and assessed for completeness. The final version of the CrescentLink (and the prospect's data geodatabase) deliverable will be completed and approved. And preparations for a final cut-over will be made and vetted.

1. Production Environment Preparation

- a. Prepare Production Environment
- b. Develop Final Application Configuration
- c. Production Environment Test

2. Cut-Over

3. Readiness Assessment

D. Post Implementation Support & Audit

Final approval, resolution, implementation and deployment steps will be made during this

phase via a joint, coordinated effort by the prospect, GEOGRAPH and ESRI personnel.

*****PLEASE NOTE, THE IMPLEMENTATION PLAN ABOVE IS AN EXAMPLE IMPLEMENTATION PLAN. BEFORE EXECUTING THIS PLAN, A BUSINESS MEETING WILL BE HELD WITH City of Chesapeake TO WALK THROUGH EACH OF THESE STEPS, DETERMINE WHICH STEPS NEED TO BE INCLUDED IN THIS PLAN, ASSIGN STAKEHOLDERS AND RESPONSIBILITIES, AND FINALIZE SPECIFIC City of Chesapeake IMPLEMENTATION PLAN.**

COST PROPOSAL

CrescentLink Software Suite Costs

***The following cost information includes GEOGRAPH's costs for our Enterprise Site License option for software licensing, as well as a line item for our Standard Annual Support. As part of our RFP submission, GEOGRAPH is proposing an Enterprise Site License (ESL) for City of Chesapeake, which will give the organization unlimited licenses of both CrescentLink for ArcGIS Pro and the CrescentLink Web Experience. The cost listed for the ESL line item is a high-level cost. For a final, proposed cost for software, GEOGRAPH requests additional information from All Points pertaining to your anticipated userbase size (i.e. number of Edit users and number of Field users, etc.) as well as the size of City of Chesapeake (i.e. number of access points, subscriber count, route miles, etc.). GEOGRAPH has a tiered system for our ESL offerings. In order to ascertain which tier Chesapeake qualifies for, the above-mentioned information is necessary.

PRODUCT	LICENSE TYPE	LICENSE/SERVICE CONFIGURATION	PRICE (PER YEAR)
GEOGRAPH™ Standard Support	Standard Annual Support	Per Organization	20% of total annual software spend
GEOGRAPH™ On-Line Training	2-Day Instructor-led Training	One Time Cost (per session)	\$4,800
CrescentLink® Enterprise Site License*	Unlimited Licenses	Unlimited of any configuration of CrescentLink Network Manager Edit, View and Web Experience Licenses.	ESCALATED RAMP

	YEAR 1	ESL Tier 2 (Up to 5,000 miles, 10,000 subscribers)	\$25,000
	YEAR 2	ESL Tier 3 (Over 5,000 miles, Over 10,000 subscribers)	\$50,000

***As part of GEOGRAPH's submission, we are proposing an Enterprise Site License. This license model will allow Chesapeake to continue to grow as planned, without needing to renegotiate contracts or pricing. This Tier will afford Chesapeake unlimited licenses of both CrescentLink for ArcGIS Pro and the CrescentLink Web Experience. Our proposal also includes 20% of the software spend for our Annual Standard Support.**

GEOGRAPH Professional Services Costs

SERVICE	UNIT OF MEASURE
DATA CONVERSION	FIXED; LUMP SUM
DATA ENRICHMENT	FIXED; LUMP SUM
DATA MIGRATION	FIXED; LUMP SUM
DATA MIGRATION	HOURLY
DATA MIGRATION	UNIT-BASED

*****A cost for GEOGRAPH Professional Services will be defined once a complete project scope is completed by the GEOGRAPH Professional Services team. During this process, our team will assess the data, and complete a scope of work for the project to outline the timing for starting and completing the project, the level of effort required for completing the project, and the cost associated with this work.**

GEOGRAPH Professional Services: Services Defined

1. Data Conversion Services

This process is used to migrate data from existing customer supplied data into the CrescentLink Sabal Data Model. Conversion is typically programmatic but does require manual analysis of the data in order to set up the workflow for conversion. During this process, client interaction is sometimes needed to further understand the supplied data.

These services are administered and completed entirely in-house by our on-site, direct employed team of GIS technicians and analysts. Our billing and invoicing for Data Conversion services is a Fixed Cost, Lump sum expenditure.

2. Data Enrichment Services

Data enrichment of converted data includes adding geometric network connectivity in order to model the behavior of common network infrastructure. During this process, we clean up spatial inaccuracies to ensure proper feature location. In addition to this, we also attribute feature data, create connectivity via splicing, attribute counts, and add passive and active equipment (if known and supplied).



In order to ensure that the enrichment of the data is translated correctly and meets customer expectations, we may request the customer provide periodic access to qualified personnel to assist in the reconciliation of ambiguous or inconsistent data.

These services are administered and completed entirely in-house by our on-site, direct employed team of GIS technicians and analysts. Our billing and invoicing for Data Enrichment services is either a Fixed Cost, Lump sum expenditure, or an Hourly/Unit-Based measure. The invoicing and billing procedure would be defined during our scoping of the project.

3. Data Migration Services

Data Migration services are a combination of the Data Conversion and Data Enrichment services outlined above.

These services are administered and completed entirely in-house by our on-site, direct employed team of GIS technicians and analysts. Our billing and invoicing for Data Migration services is either a Fixed Cost, Lump

sum expenditure, or an Hourly/Unit-Based measure. The invoicing and billing procedure would be defined during our scoping of the project.

NEW CUSTOMER ONBOARDING: PROJECT REFERENCES

Client Reference 1: Contact Information
Sam Newman Cobb Electric Membership Corporation (Cobb County, GA) Sr. Mgt., Enterprise Systems & Apps (770) 490-4435 sam.newman@cobbemc.com
Project Description
<u>Project Purpose:</u> The client began evaluations for a robust, GIS-based desktop platform that could handle the build-out and

documentation of their growing fiber network from the design/engineering phase, through construction and for the maintenance of the network long-term. Upon selection, the GEOGRAPH Professional Services team was contracted to migrate their existing network records into our software's proprietary data model, and customize the client's map space and database to help with their deployment.

Our team performed an initial data conversion to transfer their spatial records into ArcGIS and the CrescentLink Data Model. We then enriched the data to include all of the plant attribute information, equipment data, and network connectivity data. These two phases were part of project 20-COB-01.

GEOGRAPH was also contracted for a custom configuration of their database and map space. Our team customized their database to include fields and information specific to their equipment and plant facilities vendors, design/engineering/construction contractors, and their internal accounting and warehousing personnel. We then set up their map space so that their symbology matched what their contractors were already accustomed to using and seeing.

Services Provided:

- 1) Legacy spatial and excel spreadsheet data conversion and enrichment into the CrescentLink data model
- 2) Custom software (map space and geodatabase) configuration
- 3) Two-day, Instructor-led, on-site training and consultation of the customer and their workforce

Project Milestones & Details

20-COB-01 (Legacy Data Migration)

- 1) Full conversion of the customer supplied network data into the CrescentLink data model, complete with feature attribute information.
- 2) Full enrichment of those converted records, to build in network equipment and CrescentLink level connectivity (equipment port level and fiber strand level connectivity)
- 3) QA/QC and Delivery of the fully migrated data to the customer.

20-COB-04 (System Custom Configuration)

- 1) Compilation of all equipment types and configurations, all outside plant types and configurations (fiber cable, access points, etc.), and all of the requested customizations and configurations to be done on the database.
- 2) Creation of all fiber network equipment templates, including equipment port configurations and information, as well as equipment type properties and attributes.
- 3) Creation of all Outside Plant feature templates, including feature level attributes, feature subtypes and feature symbology.
- 4) QA/QC and Delivery of the fully configured database and map space to the client.

Project Deliverables

20-COB-01 Deliverables:

- 1) Fully migrated legacy network system of record in a file geodatabase in the CrescentLink data model and schema.

20-COB-04 Deliverables:

- 1) Full set of custom configured equipment and feature templates, including all attribute information and properties.
- 2) Full custom configured symbology package to model their Inside Plant and Outside Plant features in their map space.
- 3) Custom configured data schema to properly document and maintain all Inside Plant and Outside Plant attribute information and properties.

Other Deliverables (Software)

- 1) CrescentLink Desktop Software; Annual Subscription - Enterprise Site License; Tier 1
- 2) GEOGRAPH Standard Support - Annual Subscription

Client Reference 2: Contact Information
Karen Rossmeier ENTRUST Communications (Engineering & Consulting) Director, Detailed Design (256) 244-0159 karen.rossmeier@entrustsol.com
Project Description
Project Purpose: The client needed a robust, GIS-based desktop platform that could handle the build-out and documentation of their customers' growing fiber network from the design/engineering phase. They also desired a platform that they could recommend to their customers, and easily deliver the completed network designs to the customer, for the customer to take over long-term maintenance. Lastly, they desired to also have a tool in which to provide View-access to the network designs, to their customers, during the design/build-out process. To facilitate this, our team was also contracted to migrate their existing customers' network design records into our software's data model, so that

Fiber-Rise could continue designing in the new tool. All “in-progress” designs were converted into CrescentLink as separate projects.

Our team developed a custom migration tool that would programmatically convert all spatial network records from the VETRO platform into CrescentLink, as well as programmatically reference all associated connectivity records to build-out complete strand and port-level network connectivity. As a result, GEOGRAPH was able to convert (7) Fiber-Rise customers’ engineering designs from VETRO into CrescentLink, complete with full feature attribution and network connectivity, in approximately (8) weeks.

Services Provided:

- 1) Programmatic conversion and enrichment of legacy spatial and spreadsheet data from VETRO platform into the CrescentLink data model
- 2) Two-day, Instructor-led, on-site training and consultation of the customer and their workforce
- 3) Assistance with deployment and configuration of (7) individual CrescentLink Web Experience instances for Fiber-Rise customer viewing of ‘in-progress’ network designs.
- 4) Consultation time with (7) individual customers on how to use the CrescentLink Web Experience tools to view ‘design in-progress’ network data.

Project Milestones & Details

22-FBR-01 (Data Migration)

- 1) Custom tool development to be used in-house by GEOGRAPH Professional Services personnel for the programmatic data migration of VETRO spatial and connectivity records, into the CrescentLink Data Model
- 2) Coordination with Fiber-Rise team members to schedule the pause in production-level design, consolidation of all replicated database versions (for each of the seven customers) into a single database, and delivery of legacy (VETRO) OSP/ISP plant and network connectivity records to GEOGRAPH Professional Services personnel.
- 3) Programmatic migration of legacy (VETRO) OSP/ISP plant and connectivity records into the CrescentLink data model, for each of the (7) individual datasets.
- 4) Internal QA/QC of migrated data and subsequent delivery of fully migrated legacy network system of record (VETRO) in (7) distinct file geodatabases in the CrescentLink data model and schema. These (7) individual file geodatabases were representative of the (7) ‘design in-progress’ customers that Fiber-Rise was currently designing for.

Project Deliverables

- 5) Assistance with deploying and configuring an individual CrescentLink Web Experience instance for each of the (7) customers, in order for Fiber-Rise to provide Viewing access to the records throughout the remainder of the design process.

22-FBR-01 (Data Migration)

- 1) (7) distinct CrescentLink geodatabases representing the programmatically migrated legacy (VETRO) ISP/OSP plant and network connectivity records for all of the Fiber-Rise 'design in-progress'

Other Deliverables (Software)

- 1) CrescentLink Desktop Software; Annual Subscription - Enterprise Site License; Tier 1
- 2) GEOGRAPH Standard Support - Annual Subscription
- 3) CrescentLink Web Experience; Annual Subscription - Enterprise Site License (Internal-use)
- 4) CrescentLink Web Experience; Quarterly Subscription - 'Bucketed' license approach for all Fiber-Rise customers to provide Viewing access to network records during design process

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Project Description

Project Purpose:

The client needed a robust, GIS-based desktop platform that could handle the build-out and documentation of their growing Hybrid-Fiber-Coax (HFC) network from the design/engineering phase, through construction and for the maintenance of the network long-term.

Our team first conducted a Data Discovery (**20-CCP-02**) which is a general assessment of the customer-provided network records. The point of this assessment is to first, assess the overall completeness and accuracy of the existing records, and second, measure the level of effort and timetable that would be required to migrate the data into CrescentLink, with all feature attribution and

network connectivity. Then, our team performed an initial data conversion to transfer their spatial records into ArcGIS and the CrescentLink Data Model. Lastly we enriched the data to include all of the plant attribute information, equipment data, and network connectivity data. These two phases were for project 20-CCP-03.

As part of our deliverables for the migration project, our team conducted a custom setup and configuration of their database and map space, to include all existing custom fields, domains, subtypes, etc., and to prepare the database/map for maintenance of the fiber, coax, and HFC networks, all in the same platform and system of record. Our team customized their database to include fields and information specific to their existing plant assets. We then set up their map space so that all of their symbology matched what their contractors were already accustomed to using and seeing.

Services Provided:

- 1) Programmatic conversion and enrichment of legacy spatial and spreadsheet data from VETRO platform into the CrescentLink data model
- 2) Two-day, Instructor-led, on-site training and consultation of the customer and their workforce
- 3) Assistance with deployment and configuration of (7) individual CrescentLink Web Experience instances for Fiber-Rise customer viewing of 'in-progress' network designs.
- 4) Consultation time with (7) individual customers on how to use the CrescentLink Web Experience tools to view 'design in-progress' network data.

Project Milestones & Details

20-CCP-02 (Data Discovery)

- 1) Coordination with client to schedule delivery of all existing, legacy plant spatial, attribute and network connectivity records
- 2) Weeklong assessment of the data for completeness, accuracy, errors and required information
- 3) Delivery of report detailing any missing features, associations, attributes or connectivity information, as well as the level of effort/timetable for completion of the migration project.

20-CCP-03 (Data Migration)

- 1) Full conversion of the customer supplied network data into the CrescentLink data model, complete with feature attribute information.
- 2) Full enrichment of those converted records, to build in network equipment and CrescentLink level connectivity (equipment port level and fiber strand level connectivity)
- 3) QA/QC and Delivery of the fully migrated data to the customer.

Project Deliverables

20-CCP-02 (Data Discovery)

- 1) Report detailing missing features, associations, attributes or connectivity information, as well as the level of effort/timetable for completion of the migration project.

20-CCP-03 (Data Migration)

- 1) Delivery of fully migrated HFC network data, complete with connectivity, to customers' in a CrescentLink GDB.
- 2) Consultation and assistance with loading migrated database onto Conway Corp's Enterprise GIS system.

Other Deliverables (Software)

- 1) CrescentLink Desktop Software; Annual Subscription - Stand-Alone, Single-Use CrescentLink Desktop Licenses
- 2) GEOGRAPH Standard Support - Annual Subscription

RESUMES OF KEY PERSONNEL WHO WILL BE INVOLVED IN THE PROJECT.

Geograph Key Project Personnel

DJ Henrique

Director, Professional Services (PM & Lead)

Dianna Targett

Senior GIS Analyst (Technical Lead)

Tim Sexton

Product Manager - CrescentLink

Grey Pittman

Director, Customer Experience - Project Team

Josh Crozier

Sales Manager - Sales/Onboarding Support

References from at least three clients with a similar network to City of Chesapeake who have implemented Geograph solution.

1. City of Georgetown, Texas

a. Danny Theile

mparsell@kamopower.com

(918) 256-5551 ext. 2161

2. Cobb EMC

a. Sam Newman

sam.newman@cobbemc.com

(770) 490-4435

3. City of Hamilton

a. Cody Turnmin

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SECURITY & COMPLIANCE

1. Data Encryption Standards & Key Management

CrescentLink for ArcGIS Pro is an add-in for ESRI's ArcGIS Pro Platform. As such, data encryption and key management follow the industry-leading security protocols established by ESRI within the ArcGIS Pro Environment.

Encryption Standards:

- **Data at Rest:** ESRI's ArcGIS Pro supports encryption of data at rest using AES-256, a highly secure encryption standard.
- **Data in Transit:** CrescentLink leverages the encryption standards provided by ArcGIS Pro, which uses TLS (Transport Layer Security) 1.2 or higher to secure data as it moves between the client (ArcGIS Pro) and any ArcGIS Servers or databases.

Key Management:

- **Key Storage and Access:** Key management for data encryption follows the protocols defined within ArcGIS Pro's secure environment. ESRI handles the generation, storage, and management of encryption keys via secure servers, ensuring that no unauthorized access can occur.
- **User Authentication:** ArcGIS Pro integrates with enterprise-level identity management solutions such as SAML and OAuth, further ensuring secure access to encrypted data through role-based access control.

Additional Security Measures:

- **Compliance:** ESRI's ArcGIS Pro complies with major security standards such as FISMA, FedRAMP, and SOC 2. This means that CrescentLink, as an add-in, benefits from the rigorous encryption and key management practices in place.
 - **Custom Encryption:** If additional encryption or key management is required for specific data types within CrescentLink, such measures can be implemented through external encryption mechanisms or the ArcGIS Enterprise's security settings.
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2. User Authentication and Permissions Reporting & Auditing

For User Authentication, CrescentLink utilizes a user-based licensing model that is associated with a user's email and password. This account credentialing may also be deployed using the organization's existing SSO infrastructure. In addition to this credentialing, users still need to be authenticated through ESRI's named user account infrastructure. Again, these can be deployed using the organization's existing SSO infrastructure. Being an add-in for the ArcGIS Ecosystem, the CrescentLink suite utilizes the user authentication, permissions reporting, and auditing features built into the ArcGIS platform. These features ensure that access to data and tools within CrescentLink is governed by ArcGIS Pro's secure environment.

User Authentication:

- ArcGIS Pro integrates with enterprise identity management systems such as **Active Directory, LDAP, SAML, and OAuth**, supporting Single Sign-On (SSO) and multi-factor authentication (MFA). This can be integrated into CrescentLink's user-based licensing authentication as well.
- This ensures that all access to CrescentLink tools within ArcGIS Pro is controlled by the same secure authentication mechanisms that protect the rest of your ArcGIS environment, helping to enforce organizational security policies. CrescentLink also utilizes a user-based licensing and authentication protocol. This too can be deployed through All Points' preferred Active Directory method.

Permissions Reporting:

- Though GEOGRAPH does allow for some permissions and role-based organization of users and user types, the real controls for edit and access-level permissions are managed through the ArcGIS environment. CrescentLink for ArcGIS Pro users utilize ESRI's named user credentials and this is managed through ArcGIS Pro's role-based access controls (RBAC). Users can be assigned different roles (e.g., Viewer, Editor, Administrator), and these roles dictate the permissions they have to access, edit, or manage data.
 - Permissions reporting is conducted within the ArcGIS Enterprise framework, where detailed reports can be generated on user access levels, including which users have access to specific datasets and tools, and how permissions are applied across various roles.
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Auditing:

- ArcGIS Enterprise includes auditing features that track user activity and changes within the platform. CrescentLink, as an add-in, benefits from this auditing system, allowing administrators to view detailed logs of actions taken by users, such as data edits, trace executions, and access to sensitive network information.
- These logs are essential for compliance and security monitoring, providing a transparent view of who accessed what data and when, and offering insights into any unauthorized attempts or security breaches.

Reporting and Auditing Tools:

1. ArcGIS Pro's integration with **ArcGIS Monitor** allows for detailed monitoring and reporting of user actions. Administrators can access reports on system usage, performance, and user activity, ensuring that CrescentLink operations are fully auditable.
 2. Auditing features can be extended by integrating third-party security monitoring tools or leveraging ArcGIS Enterprise's capabilities to schedule and automate reporting on user access and permissions.
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3. Application and Host-Related Security Scanning, Testing & Validation Practices

CrescentLink operates as an add-in within the **ESRI ArcGIS Pro** and **ArcGIS Enterprise** environments. As such, we leverage and defer to ESRI's industry-leading security standards, validation, and testing processes for the underlying platform. ESRI's security framework, built into both ArcGIS Pro and ArcGIS Enterprise, ensures that the host environment is secure, regularly tested, and validated against a wide range of threats.

ESRI Security Standards:

- **Host Security:** ArcGIS Pro and ArcGIS Enterprise employ regular **vulnerability scanning**, **penetration testing**, and **compliance validation** in alignment with industry standards such as **FedRAMP**, **FISMA**, and **SOC 2**.
- **Application Security:** The security architecture in ArcGIS includes automated **patch management**, **code reviews**, and continuous **security updates**, ensuring the platform remains secure against emerging threats.

CrescentLink-Specific Practices:

- **Integration Testing:** CrescentLink undergoes regular compatibility and integration testing within the ESRI environment to ensure it conforms to ESRI's security requirements. This includes testing for proper functionality and security interactions with the ArcGIS ecosystem. As a Gold Level ESRI Business Partner, we also maintain 'release-ready' status with our offerings, staying in-line with ESRI's release and update schedule.
 - **Validation:** We validate CrescentLink's integration with ESRI's security mechanisms, ensuring that all security features (such as role-based access control and encryption) operate as intended when CrescentLink is used.
 - **Deferment to ESRI Best Practices:** As a lightweight add-in, CrescentLink does not handle independent hosting or data storage, thus fully leveraging the secure environment provided by ESRI. We follow ESRI's best practices and recommendations for application security and testing protocols, ensuring our add-in conforms to their rigorous security standards.
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Regular Updates and Auditing:

- **Patch Management:** CrescentLink is regularly updated in conjunction with ArcGIS updates, ensuring that any potential vulnerabilities addressed in ArcGIS Pro/Enterprise are also covered in our add-in.
- **User Feedback:** We also respond to user feedback and perform internal audits to ensure continued compliance with ESRI's security framework. With every release we put out, we communicate the changes/updates in the release in multiple ways; 1) through your dedicated account manager, 2) through a marketing update and announcement, and 3) through the release notes that are available from within the CrescentLink software to all users.

By leveraging ESRI's extensive security scanning, testing, and validation infrastructure, CrescentLink ensures secure integration within the ArcGIS Pro and ArcGIS Enterprise platforms, offering users the same level of security provided by the ESRI ecosystem.



4. Industry Security & Compliance Standards

CrescentLink is built as an add-in for **ESRI's ArcGIS Pro and ArcGIS Enterprise**, which means we align our security practices with **ESRI's industry-leading standards**. The ESRI platform complies with several recognized security and compliance frameworks, ensuring that CrescentLink operates within a highly secure and compliant environment.

ESRI Compliance with Industry Standards:

- **FedRAMP (Federal Risk and Authorization Management Program):** ArcGIS Enterprise has achieved FedRAMP authorization, meeting stringent U.S. government security standards for cloud service providers.
 - **FISMA (Federal Information Security Management Act):** ESRI adheres to FISMA security standards, ensuring that its systems meet the necessary federal requirements for information security.
 - **SOC 2 (System and Organization Controls):** ESRI follows SOC 2 standards for managing customer data, ensuring that CrescentLink users benefit from a platform that handles data securely.
 - **ISO 27001:** ESRI's information security management system is certified to ISO 27001, which outlines best practices for securing data and managing risks.
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CrescentLink's Alignment with ESRI Standards:

- Since CrescentLink operates within the **ArcGIS Pro** and **ArcGIS Enterprise** environments, it automatically benefits from the security and compliance measures built into these platforms.
- CrescentLink does not introduce independent hosting or data management components, which means we fully **defer to ESRI's compliance** with these industry standards for managing data, user authentication, encryption, and security auditing.

Adherence to Best Practices:

- **Continuous Updates:** CrescentLink is updated in alignment with ArcGIS updates to ensure compatibility with the latest security and compliance enhancements.
- **Compliance Inheritance:** By embedding CrescentLink within ESRI's platforms, our users automatically inherit the **compliance certifications** that ESRI maintains, ensuring data security and regulatory compliance across multiple industries, including government, utilities, telecommunications, and more.

Key Compliance Areas:

- **Data Protection:** CrescentLink utilizes the **encryption standards** and access controls provided by ArcGIS, ensuring compliance with major data protection regulations such as **GDPR** (General Data Protection Regulation) and **HIPAA** (Health Insurance Portability and Accountability Act) where applicable.
 - **Access Control & Auditing:** The role-based access control (RBAC) features, user authentication, and detailed audit logging provided by ArcGIS are fully integrated with CrescentLink, ensuring compliance with security best practices and industry standards.
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5. Data Retention & Recovery Policies

CrescentLink operates as an add-in for **ESRI's ArcGIS Pro** and **ArcGIS Enterprise**, meaning that data retention and recovery policies are primarily governed by the **ESRI platform**. CrescentLink does not independently manage or store data; instead, it operates within the secure data management framework provided by ESRI.

ESRI's Data Retention Policies:

- **Retention and Archiving:** ArcGIS Pro and ArcGIS Enterprise allow organizations to configure their data retention policies to comply with internal or regulatory requirements. These policies can specify how long data is stored, archived, and eventually deleted.
- **Data Ownership:** As CrescentLink users manage their own data within ArcGIS, it is up to the organization using CrescentLink to establish and enforce data retention policies in compliance with their specific needs.
- **Backup and Archival Features:** ESRI's platforms support robust backup and archival processes, ensuring that data can be preserved for long-term storage or compliance purposes.

Data Recovery:

- **ESRI's Recovery Mechanisms:** CrescentLink benefits from the data recovery capabilities of ArcGIS Pro and ArcGIS Enterprise. In the event of data loss or system failure, ESRI's platforms offer robust disaster recovery solutions, including:
 - **Automated Backups:** Configurable automatic backups to ensure that critical data is preserved and recoverable in the event of a failure.
 - **Versioning and Snapshots:** The ability to maintain multiple versions of datasets, enabling the recovery of previous states in case of accidental modifications or deletions.
 - **Disaster Recovery:** ArcGIS Enterprise supports disaster recovery configurations across multiple environments, ensuring that systems and data can be quickly restored in the event of an outage.

CrescentLink's Role:

- **Data Handling:** CrescentLink itself does not handle data storage or backup directly but operates within the ArcGIS environment, ensuring that data processed through CrescentLink adheres to the retention and recovery policies set within the ESRI platform.
- **Compliance Inheritance:** Since CrescentLink functions within ESRI's ecosystem, it inherits the compliance with industry standards for data retention and recovery, including **ISO 27001**, **FedRAMP**, and other relevant frameworks.

Customization and Flexibility:

- Users of CrescentLink can configure their data retention schedules and backup strategies using ArcGIS's tools, ensuring that they meet both operational and regulatory requirements.
 - **Recovery Testing:** ESRI provides tools to test recovery processes, allowing organizations to regularly validate their data backup and recovery procedures.
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6. Incident Response Plans, Overall Risk Mitigation Strategy and History of Testing or Vulnerability Exposure

CrescentLink is an add-in designed to function within **ESRI's ArcGIS Pro** and **ArcGIS Enterprise** environments. As such, we rely heavily on ESRI's industry-leading security practices, including incident response, risk mitigation, and vulnerability management, while ensuring that CrescentLink remains fully compliant with these processes.

Incident Response Plans:

- **ESRI's Incident Response:** ESRI maintains a comprehensive **Incident Response Plan (IRP)** to detect, investigate, and respond to potential security incidents affecting ArcGIS Pro and ArcGIS Enterprise. This plan includes predefined steps for identifying breaches, mitigating threats, notifying affected users, and resolving issues promptly.
- **CrescentLink's Role:** Since CrescentLink operates within the ArcGIS environment, any incident affecting the platform as a whole would fall under the jurisdiction of ESRI's IRP. CrescentLink undergoes continuous testing and monitoring to ensure no vulnerabilities are introduced that could impact ESRI's security posture.

Overall Risk Mitigation Strategy:

- **ESRI's Mitigation Practices:** ArcGIS Pro and ArcGIS Enterprise employ multiple layers of security, including:
 - **Regular patch management** to address security vulnerabilities.
 - **Penetration testing** and **vulnerability scanning** to identify potential threats before they impact users.
 - **Role-based access controls (RBAC), encryption, and audit logs** to protect sensitive data.
- **CrescentLink's Compliance:** We align our risk mitigation strategy with ESRI's practices, ensuring that our tool remains compatible and does not introduce additional risk. We conduct regular testing to confirm that CrescentLink integrates securely within the ArcGIS framework.

History of Testing or Vulnerability Exposure:

- **ESRI's Testing and Vulnerability Management:** ArcGIS Pro and ArcGIS Enterprise undergo continuous testing and are frequently audited for security vulnerabilities. ESRI ensures that vulnerabilities are quickly identified, tested, and mitigated through patch releases and updates.
 - **CrescentLink Testing:** CrescentLink is regularly tested in conjunction with ESRI updates to ensure compatibility and security. We perform integration testing with each new ArcGIS release, and any vulnerabilities identified in our add-in are promptly addressed in line with ESRI's update cycle.
 - **Exposure History:** CrescentLink has not been associated with any known security vulnerabilities or breaches, as our development process adheres strictly to ESRI's security protocols.
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Collaboration with ESRI:

- We maintain close communication with ESRI to ensure that our add-in adheres to all security standards and remains compatible with their incident response and risk mitigation processes.
 - In the event of a security issue or vulnerability affecting the CrescentLink add-in, we would work in concert with ESRI to ensure a swift resolution, leveraging their incident response framework.
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7. Software Change Management & Update/Roadmap Planning

CrescentLink operates as an add-in within **ESRI's ArcGIS Pro** and **ArcGIS Enterprise**, and our software change management and update processes are closely aligned with ESRI's roadmap and update cycles. We ensure that our tools remain compatible with each release of ArcGIS and that changes are carefully managed to maintain security, stability, and performance.

Change Management Process:

- **Alignment with ESRI Updates:** CrescentLink is updated in conjunction with new releases of ArcGIS Pro and ArcGIS Enterprise to ensure continued compatibility and integration. Our team monitors ESRI's development roadmap and beta releases to proactively prepare for upcoming changes.
- **Version Control:** We utilize strict version control and testing protocols to ensure that any changes or updates made to CrescentLink are thoroughly tested within the ESRI environment before being released to users.
- **Communication with Users:** Any significant changes or updates are communicated to users via release notes and documentation, marketing announcements and notifications, and in-person from your dedicated account manager, ensuring that users are aware of new features, fixes, and enhancements.

Update and Roadmap Planning:

- **Regular Updates:** CrescentLink follows a structured update cycle that aligns with ESRI's release schedule. Minor updates are released as needed, while major updates are planned accordingly, around any major platform updates announced or scheduled by ESRI.
- **Feature Enhancements:** Our roadmap is shaped by both customer feedback and emerging needs within the telecommunications and utility sectors. Feature enhancements are prioritized based on user demand, industry trends, and the evolving capabilities of the ArcGIS platform. We also maintain and monitor our Product Ideas page, that allows customers to submit feature enhancement requests and ideas.
- **Security Patches:** Any vulnerabilities identified in CrescentLink or the underlying ArcGIS platform are addressed promptly. Security patches are released as needed to ensure the tool remains secure in accordance with ESRI's security standards.

Testing and Validation:

- **Integration Testing:** All CrescentLink updates are rigorously tested within the ArcGIS ecosystem to ensure compatibility and minimize disruptions for users. This includes both functional testing and performance validation.
- **User Acceptance Testing (UAT):** Before releasing significant updates, we work with select customers to perform UAT, allowing for feedback and validation in real-world scenarios.

Roadmap Transparency:

- We provide users with visibility into our development roadmap through regular updates, ensuring that they are aware of upcoming features, improvements, and critical patches.
- **User Feedback:** We actively seek feedback from our users, integrating their suggestions into our roadmap to continuously improve our offerings.

Collaboration with ESRI:

- CrescentLink's roadmap is designed with ESRI's long-term development plans in mind, ensuring that our tool continues to leverage new capabilities introduced in the ArcGIS ecosystem.
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APPENDIX

FIBER NETWORK PLANNING:

- Tools for planning fiber optic network routes and layouts.
- Ability to design fiber pathways, ducts, and conduits.
- Capacity planning tools to determine the availability of fibers in cables.
- Integration with GIS for route visualization and analysis.

CrescentLink, integrated within **ArcGIS Pro** and extended through the **CrescentLink Web Experience**, offers a suite of powerful tools designed specifically for fiber optic network planning, design, and capacity management. By leveraging the full capabilities of ESRI's GIS platform and CrescentLink's custom tools, our solution provides comprehensive support for every stage of fiber network planning and visualization.

The CrescentLink Tool supports telecommunications network processes throughout the entire lifespan of the project. This includes taking the network from pre-design and engineering, into the construction and as-building process, through network operation and maintenance, all within the same GIS platform and system of record. The database created with the CrescentLink suite of tools will serve as the centralized, master system of record for all network features, records, attributes, etc.

Fiber Optic Network Planning and Layout Design

- **ArcGIS Pro** offers robust GIS-based tools for visualizing and analyzing potential routes and layouts for fiber optic networks. By utilizing **CrescentLink Network Manager**, users can efficiently design fiber pathways, duct systems, and conduits, while integrating existing GIS data to ensure accuracy in route selection.
 - **Route Visualization & Analysis:** ArcGIS Pro's deep spatial analysis capabilities allow users to visualize fiber routes in conjunction with critical geographic features like terrain, property boundaries, and utility easements. CrescentLink's add-in enhances this by enabling detailed tracing, route mapping, and pathway analysis for fiber infrastructure.
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Fiber Pathway and Conduit Design

- **CrescentLink Network Manager** allows for precise design and management of fiber pathways, ducts, and conduits. This tool enables users to map out both aerial and underground routes while visualizing how fiber cables will traverse through these pathways. Additionally, it supports the tracking of assets such as manholes, poles, and junction boxes, providing a detailed layout of the physical network infrastructure.
- **Project Planner:** This tool integrates with the network design process, allowing planners to schedule, track, and manage tasks related to the construction and maintenance of fiber routes. The **Project Planner** streamlines the project lifecycle, from initial planning to implementation. This tool also allows users to export staking sheets, generate BOMs and cost estimates, and do vendor comparisons to better understand project costs.

Capacity Planning and Fiber Availability

- **Fiber Cable Fill Tool:** A key feature of CrescentLink, the **Fiber Cable Fill Tool** provides capacity management. This tool allows users to assess the available fiber strands within existing cables, facilitating efficient capacity planning for network expansions and service provisioning. This also allows users to set symbology for their cables that reflect the capacity, which can be configured to show the cable capacity according to your preferences.
- **Capacity Analysis:** Users can determine available fibers, assign strands, and track usage across the entire network. This helps avoid overuse of specific fibers and optimizes the network for future growth.

Work Order and Project Management

- **Work Order Manager:** This tool ensures that fiber optic projects, from route planning to actual construction and deployment, are managed effectively. It tracks progress, logs maintenance activities, and ensures that tasks related to network expansion or repair are properly assigned and completed. This ensures seamless integration of fiber design and construction workflows.
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- **CrescentLink Web Experience:** Users can extend their planning and management capabilities via the CrescentLink Web Experience, which provides view-only access to fiber networks, equipment ports, and route tracing. This allows stakeholders to visualize and analyze the fiber network without needing to access full ArcGIS Pro functionality.

Integration with GIS for Route Visualization and Analysis

- **GIS Integration:** CrescentLink takes full advantage of **ArcGIS Pro's** mapping capabilities, providing high-precision geospatial tools to analyze the best fiber routes based on geography, land ownership, existing infrastructure, and environmental factors.
- **Network Manager:** This tool offers advanced fiber network analysis, enabling planners to run downstream and upstream traces, analyze network impact, and optimize route layouts based on fiber capacity and demand.
- **Spatial Data Analysis:** Users can overlay fiber network plans with GIS data layers, providing critical insights such as population density, distance to key facilities, and optimal routing across difficult terrains.

INVENTORY MANAGEMENT:

- Centralized database for managing fiber optic cables, conduits, and network equipment.
- Tools for tracking fiber strands, patch panels, splice points, and distribution hubs.
- Support for managing asset lifecycle from installation to decommissioning.
- Real-time inventory updates based on field operations and work orders.

CrescentLink, integrated with **ESRI's ArcGIS Pro**, offers robust tools for managing fiber optic networks and related assets. The centralized database management, real-time inventory tracking, and lifecycle management capabilities ensure that your fiber optic infrastructure is accurately tracked and maintained from installation through decommissioning.

Centralized Database for Managing Fiber Optic Cables, Conduits, and Network Equipment

- **Standard ESRI Schema:** CrescentLink operates within a completely open and customizable **ESRI data schema**. This enables organizations to manage fiber optic cables, conduits, and network equipment in a centralized database that can be easily modified to suit specific requirements.
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- **Custom Configurations:** Users have the flexibility to configure the database schema to include custom attributes, asset types, and relationships, allowing full integration with your organization's workflow and data model requirements.

Tracking Fiber Strands, Patch Panels, Splice Points, and Distribution Hubs

- **CrescentLink Network Manager:** This tool provides advanced tracking and management of fiber strands, patch panels, splice points, and distribution hubs. It ensures that all key assets in the fiber network are documented, tracked and monitored, with the ability to track usage, capacity, and connectivity across the entire network.
- **Splice Analysis Tool:** The **Splice Analysis Tool** provides detailed insight into splice points and network equipment, allowing users to visualize and manage fiber splicing and connectivity, and operations. This includes the ability to generate and export splice reports for record-keeping and operational analysis.
- **Cable Summary & Trace Reports:** These reports provide a high-level overview and detailed analysis of fiber cable utilization, condition, and capacity. The **Cable Trace Reports** help track the exact paths and connections of fiber strands, including all cables, access points and network equipment included in the circuit trace, making it easy to analyze network topology and troubleshoot issues.

Asset Lifecycle Management from Installation to Decommissioning

- **Asset Lifecycle Tracking:** CrescentLink's integration with ArcGIS Pro supports the entire lifecycle of fiber assets—from initial installation and deployment, through active use and maintenance, to eventual decommissioning or replacement. Users have the ability to add or manipulate CrescentLink's default attributes, to track the most critical information on your assets. Users can also integrate this into **ESRI's Dashboards** for better visualization, analytics capabilities, and real-time insight.
 - **ESRI's Attribute Assistant:** Using **ESRI's Attribute Assistant**, organizations can establish **attribute rules** to maintain data integrity and accuracy throughout the asset lifecycle. This includes automating data population for new assets, updating records based on field operations, and validating data changes in real-time.
 - **Work Order and Plant Records Reports:** CrescentLink's Work Order Manager and the Plant Records Reports that can be generated from this module, provide seamless tracking of assets as they move through different stages of their lifecycle. These tools support comprehensive documentation of work orders related to installations, repairs, and decommissioning.
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Real-time Inventory Updates Based on Field Operations and Work Orders

- **ESRI's Mobile Web Apps for Field Data Collection:** CrescentLink takes full advantage of **ESRI's mobile web apps**, which allow field technicians to collect and update inventory data in real time. These apps enable field personnel to capture changes, notations, and updates to network assets as part of daily operations.
- **Real-time Synchronization:** Changes made in the field—such as installations, repairs, or adjustments to fiber pathways—are synchronized with the centralized database in real time. This ensures that inventory records remain up-to-date, providing accurate asset management and reporting.
- **Work Order Integration:** CrescentLink's Work Order Manager can be integrated with real-time data collection, ensuring that inventory changes driven by field operations and work orders are automatically reflected in the system, keeping the asset management database accurate and current.

Conclusion

CrescentLink, in conjunction with ArcGIS Pro and the CrescentLink Web Experience, provides a comprehensive, customizable solution for managing fiber optic network inventory. By leveraging **ESRI's open data schema, mobile tools for field operations**, and advanced tracking features like the **Network Manager, Splice Analysis Tool**, and **Cable Summary Reports**, CrescentLink ensures that your network assets are accurately tracked, from installation through decommissioning, with real-time updates and seamless lifecycle management.

FIBER CIRCUIT AND CONNECTIVITY MANAGEMENT:

- Tools to manage physical fiber connectivity between points.
- Circuit design and documentation (e.g., A-to-B connection paths, splice details).
- Visual representation of fiber connections, splitters, and active/passive devices.
- Optical path tracing to track signal flow and identify potential faults.

CrescentLink, built on the **ArcGIS Pro** platform and extended through the **CrescentLink Web Experience**, provides robust, user-friendly tools to manage and document fiber optic circuit connectivity, from the physical connections between points to circuit design and fault tracing.\

Managing Physical Fiber Connectivity Between Points

- **CrescentLink Splice Analysis and Connector Tool:** CrescentLink's **Splice Analysis Tool** offers detailed management of splicing operations and fiber connections between physical points, such as splice enclosures and patch panels. The **Connector Tool** simplifies the creation and tracking of fiber strand connections between different network elements, enabling clear, organized visualization of how fibers are connected at each point.

Circuit Design and Documentation (A-to-B Connection Paths, Splice Details)

- **CrescentLink Design Layout Record (DLR) Report:** For precise circuit documentation, CrescentLink provides the **Design Layout Record (DLR) report**, which documents all A-to-B connection paths, including all splice details. This report allows users to generate a comprehensive layout of the physical fiber network, including key details about the circuit from source to destination, ensuring thorough and organized documentation for operational and planning needs.
- **CrescentLink Reports:** Additional reports, such as **Circuit Reports** and **Cable Summary Reports**, offer insights into how fibers are allocated across the network, providing both high-level and detailed views of circuit paths and connectivity.

Visual Representation of Fiber Connections, Splitters, and Active/Passive Devices

- **ESRI Feature Templates and Symbolology:** CrescentLink leverages **ESRI's feature templates and symbolology** to visually represent network assets. This ensures that all components—such as fiber cables, network equipment and access points—are easy to identify and distinguish within the map-based interface of ArcGIS Pro.
- **CrescentLink Equipment Display:** The **Equipment Display** tool allows users to visualize network devices, including splitters and other active or passive equipment.

Optical Path Tracing to Track Signal Flow and Identify Potential Faults

- **CrescentLink Network Manager:** The **Network Manager** enables users to track and manage fiber circuits, ensuring accurate documentation of physical paths and logical circuit routes across the network.
 - **Circuit Tracing:** CrescentLink's **Circuit Tracing** tool enables users to trace circuits from fiber strands or equipment ports, one point to another, ensuring full visibility into how circuits are laid out across the network. This tool is crucial for identifying the specific path a signal takes and is helpful in both planning and troubleshooting.
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- **CrescentLink Distance Trace Tool:** The **Distance Trace Tool** allows users to input OTDR readings at a given point, to trace up or downstream and determine, with pinpoint accuracy, the likely fault location.

WORK ORDER MANAGEMENT:

- Create, assign, and track work orders for fiber installation, maintenance, and repair tasks.
- Status tracking and priority assignment for ongoing tasks.
- Integration with mobile devices for field updates on work orders.
- Notifications and alerts for scheduled or overdue work.

CrescentLink provides robust tools that streamline the management of work orders for fiber installation, maintenance, and repairs, leveraging both desktop and mobile solutions to ensure real-time updates and tracking. Our solutions integrate seamlessly with ESRI's ArcGIS platform, ensuring efficient workflows for field teams and project managers alike.

Creating, Assigning, and Tracking Work Orders for Fiber Installation, Maintenance, and Repair Tasks

- **CrescentLink Work Order Manager:** This tool enables users to easily create, assign, and track work orders across the network. Users can create work orders for specific tasks, including fiber installations, routine maintenance, and emergency repairs, ensuring that all jobs are clearly documented and assigned to the appropriate teams.
- **CrescentLink Project Planner:** The **Project Planner** compliments the Work Order Manager to provide a high-level view of ongoing projects. Users can manage all tasks within a project, ensuring that work orders are created and tracked in alignment with project milestones.
- **Work Order Tracking:** CrescentLink's tools enable teams to track the status of each work order in real time, from creation through completion, ensuring that all tasks are accounted for and nothing is missed.

Status Tracking and Priority Assignment for Ongoing Tasks

- **Priority Assignment:** CrescentLink allows users to assign priorities to work orders, ensuring that critical tasks such as emergency repairs or high-priority installations are handled first. Users can set deadlines and track progress, ensuring that the most important tasks are completed on time.
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- **Status Tracking:** With real-time status updates, teams can monitor the progress of each work order, from "Open" to "In Progress" to "Completed" (or other statuses specific to All Points business processes. This enables project managers to maintain visibility on all active tasks and respond quickly to any delays or issues.

Integration with Mobile Devices for Field Updates on Work Orders

- **CrescentLink Web Experience:** The **CrescentLink Web Experience** allows users to access network records remotely via any web-enabled device. Field technicians can view assigned tasks, submit updates, and mark work orders as completed, ensuring that progress is documented as it happens.
 - **ArcGIS Experience Builder:** Through integration with **ArcGIS Experience Builder**, the CrescentLink Web Experience can be customized to provide intuitive dashboards and work order interfaces for both field and office teams. This allows users to interact with their network records in a visual and dynamic format, giving them real-time insight.
 - **ArcGIS Dashboards:** **ArcGIS Dashboards** provides a centralized view of work order statuses, task progress, and team performance. It enables real-time tracking of work orders, allowing managers to visualize critical tasks, overdue assignments, and ongoing projects in an easy-to-read dashboard format. This empowers decision-makers with up-to-date insights for better task management.
 - **ArcGIS Field Maps:** **Field Maps** allows field technicians to receive work orders, access asset data, and submit real-time updates while out in the field. This ensures that work order progress is continuously updated and synchronized with the central database, keeping the office and field teams aligned.
 - **ArcGIS Collector:** **Collector** allows technicians to capture and update GIS data in real-time, such as verifying asset locations, inspecting conditions, or adding new infrastructure. This data is automatically linked to related work orders, providing updated information for the ongoing tasks.
 - **ArcGIS QuickCapture:** **QuickCapture** simplifies the process of collecting data and updating work orders by allowing field technicians to log task completion or status changes with a single tap. This speeds up the reporting process, ensuring that work order statuses are always current.
 - **ArcGIS Workforce:** With **Workforce**, work orders can be assigned to specific team members, and technicians can receive notifications on their mobile devices. Workforce tracks task assignments and enables managers to monitor which jobs are being handled in real-time, enhancing task coordination and field team productivity.
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- **Survey123:** **Survey123** is ideal for gathering detailed information from the field. Technicians can complete custom forms or surveys related to work orders, such as inspection reports or task completion details. This data is submitted directly to the central system, ensuring that all aspects of the work order are well-documented.

Notifications and Alerts for Scheduled or Overdue Work

- **Notifications and Alerts:** CrescentLink's work order tools include automated notifications to keep teams informed of upcoming or overdue tasks. Alerts can be set for scheduled tasks, ensuring that field technicians and project managers are reminded of critical deadlines, and warnings are triggered for tasks that may be running behind schedule.
- **Escalation Protocols:** If a task is overdue, CrescentLink can trigger escalation protocols, ensuring that critical tasks are prioritized and resources are reallocated as necessary to prevent delays in the network.

NETWORK OPERATIONS AND MONITORING:

- Real-time monitoring of fiber network health and performance.
- Integration with Network Management Systems (NMS) for alarm and fault detection.
- Performance metrics tracking (e.g., signal strength, latency).
- Automated fault detection and isolation using spatial and network analysis.
- Network outage visualization and resolution tracking.

CrescentLink, integrated with **ArcGIS Pro** and the **CrescentLink Web Experience**, provides comprehensive tools for managing fiber optic networks and supporting key network operations functions. While CrescentLink does not have APIs or native integrations with real-time monitoring systems, it can work alongside third-party solutions and leverage ESRI's powerful spatial analysis and visualization tools.

Real-time Monitoring of Fiber Network Health and Performance

- **EXFO Integration:** CrescentLink has established an integration with **EXFO**, a leading solution for real-time monitoring and alarming. Through this integration, network operators can track fiber network performance, monitor health, and detect alarms related to fiber issues in real-time. EXFO handles the collection of performance metrics and alarm triggers, while CrescentLink manages the spatial representation and documentation of the network.
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- **ESRI Dashboards:** By utilizing **ArcGIS Dashboards**, users can visualize real-time data from EXFO or other monitoring systems in conjunction with fiber network health. Dashboards can provide a snapshot of the network's current performance, offering insight into key metrics like signal strength, connection status, and alarm events.

Integration with Network Management Systems (NMS) for Alarm and Fault Detection

- While CrescentLink does not provide native APIs or direct integration with **Network Management Systems (NMS)**, it can work in parallel with NMS solutions. The integration with **EXFO** allows CrescentLink users to incorporate real-time alarms and fault detection into their fiber network management workflows.
- **CrescentLink Web Experience** with **ESRI Experience Builder** can be used to design custom interfaces that display network performance data from NMS solutions, providing users with a comprehensive view of network health.

Performance Metrics Tracking (e.g., Signal Strength, Latency)

- **ESRI Spatial Analyst:** For tracking performance metrics such as signal strength and latency, **ESRI's Spatial Analyst** tools can be leveraged in conjunction with CrescentLink. Spatial Analyst can be used to map wireless network propagation and signal tracking across the fiber network, helping identify areas where performance might degrade.
- **CrescentLink Design Layout Record (DLR) Report:** CrescentLink's **Design Layout Record (DLR) report** can document key performance metrics related to the fiber network, allowing operators to log performance benchmarks and track changes over time.

Automated Fault Detection and Isolation Using Spatial and Network Analysis

- **CrescentLink Distance Trace Tool:** CrescentLink's **Distance Trace Tool** allows users to perform network analysis that can help detect and isolate faults. By tracing fiber routes, users can pinpoint where signal issues or breakages occur and isolate problematic sections of the network.
 - **ESRI Business Analyst:** Through the use of **ESRI Business Analyst**, operators can perform in-depth planning and fault detection analysis. Business Analyst helps identify spatial patterns and infrastructure vulnerabilities that could lead to outages or performance degradation. It also supports capacity planning, ensuring the network is resilient to faults.
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- **CrescentLink Cable Summary Report:** The **Cable Summary Report** provides detailed insights into fiber strand usage and network health. It can be used to track fiber capacity, connections, and signal flow, offering valuable information for isolating faults in the network.

Network Outage Visualization and Resolution Tracking

- **ArcGIS Dashboards:** **ArcGIS Dashboards** can be used to visually represent network outages, combining data from the CrescentLink system and third-party monitoring tools. Users can visualize outage areas in real time and track resolution progress directly from the dashboard interface.
- **CrescentLink Distance Trace and Circuit Tracing Tools:** The **Distance Trace** and **Circuit Tracing** tools in CrescentLink can be employed to visualize the paths affected by an outage and to identify the specific cables, fibers, or devices impacted by the fault. This helps network operators quickly respond to outages and track the resolution process.
- **CrescentLink Design Layout Record (DLR) Report:** For documenting and resolving network outages, the **DLR report** provides a detailed record of the fiber network's layout, including circuit paths and fiber assignments. This helps operators visualize network infrastructure during outages and ensures that all resolution steps are documented.

SPLICING AND ROUTE MANAGEMENT:

- Tools to document splice locations and configurations.
- Route management to track fiber paths and link capacity.
- Visual representation of splice trays and fiber connections within ducts and cables.
- Documentation of fiber utilization, availability, and future capacity.

CrescentLink, integrated with **ArcGIS Pro**, provides a suite of tools for documenting and managing fiber networks, ensuring efficient operations and monitoring.

Splice Documentation and Configuration

- **ESRI Feature Templates and Feature Layers:** These are used to model splice locations and configurations, enabling accurate spatial representation within the GIS environment.
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- **CrescentLink Connector Tool:** This tool is designed to build and manage fiber connectivity, allowing users to model and document splice points and fiber connections easily.
 - **Splice Analysis Tool:** Provides detailed reporting and analysis of splicing and connectivity, allowing users to assess and export splice configurations and fiber connections.

Route Management and Fiber Path Tracking

- **CrescentLink Network Manager:** Tracks fiber paths and port assignments, ensuring proper documentation of fiber routes and link capacity. Port naming and assignment can also be managed within the tool.
- **Cable Trace and Cable Summary Reports:** These tools analyze and trace fiber paths, providing an overview of fiber routes and their connections. The **Design Layout Record (DLR) Report** offers detailed connectivity documentation and network visualization.

Visual Representation of Splice Trays and Fiber Connections

- **CrescentLink Equipment Display:** Visualizes equipment such as splice trays, cabinets, and fiber connections within ducts and cables, providing users with a clear and organized view of network infrastructure.

Fiber Utilization, Availability, and Future Capacity

- **Fiber Cable Fill Tool:** Visualizes network-wide capacity and usage, helping network operators monitor current fiber utilization and plan for future capacity requirements.

REPORTING AND ANALYTICS:

- Customizable dashboards for monitoring network performance and fiber usage.
- Tools for generating reports on fiber capacity, connectivity, and fault history.
- Predictive analytics for proactive maintenance and network expansion planning.
- Automated reporting for regulatory compliance and audits.

CrescentLink, integrated with **ArcGIS Pro** and extended through the **CrescentLink Web Experience**, offers robust tools for proactive network management and compliance reporting.

Predictive Analytics for Proactive Maintenance and Network Expansion

- **ESRI's Experience Builder:** Enables customizable applications for visualizing network expansion and maintenance needs using real-time data.
- **ArcGIS Monitor:** Monitors data integrity and performance metrics, providing insights for predictive maintenance and expansion planning based on fiber health and usage trends.

Automated Reporting for Regulatory Compliance and Audits

- **CrescentLink Web Experience:** Provides access to real-time network data and automated reporting capabilities, supporting compliance with regulatory requirements and audits.
- **Cable Summary, DLR, and Cable Trace Reports:** Automate the generation of reports on fiber capacity, connectivity, and fault history, ensuring transparency and traceability for audits and compliance checks.

Customizable Dashboards for Monitoring Network Performance and Fiber Usage

- **ESRI Dashboards:** Create real-time dashboards to monitor network performance, fiber usage, and overall health, providing visual feedback on key metrics.
- **Fiber Cable Fill Tool:** Visualizes network capacity and usage across all fiber assets, assisting with ongoing performance monitoring and future capacity planning.

Tools for Generating Reports on Fiber Capacity, Connectivity, and Fault History

- **Connector Tool & Splice Analysis Tool:** Provide insights into network connectivity and splicing configurations, supporting detailed reporting on fiber network health and connectivity.
 - **CrescentLink Reports:** Automatically generate reports that provide insights into fiber strand availability, usage patterns, and fault history to ensure operational transparency and support decision-making.
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INTEGRATION AND INTEROPERABILITY:

- Interoperability with NMS for real-time network status and alerts.
- REST APIs for reading and writing data to and from the FMS with other enterprise systems (e.g., ERP, billing).
- Support for integration with fiber testing equipment for performance validation.

CrescentLink, built on **ArcGIS Pro** and extended via the **CrescentLink Web Experience**, supports network operations and monitoring with the potential for third-party integration, while offering tools for visualizing and managing fiber networks.

Interoperability with NMS for Real-Time Network Status and Alerts

- **EXFO Integration:** While CrescentLink lacks native real-time monitoring capabilities, we have developed an integration with **EXFO**, a third-party network monitoring and alarming system, allowing users to receive real-time alerts and track network status.

REST APIs for Reading and Writing Data to and from FMS with Other Enterprise Systems (e.g., ERP, Billing)

- **CrescentLink Web Experience:** Deploying the **CrescentLink Web Experience** enables limited **REST API** functionality, allowing for certain API calls to read and write data, supporting integration with enterprise systems like ERP and billing. This provides flexibility to connect CrescentLink to your broader enterprise architecture.

Support for Integration with Fiber Testing Equipment for Performance Validation

- **EXFO Integration:** Through the EXFO integration, CrescentLink users can interface with fiber testing equipment for performance validation and monitoring, allowing for more comprehensive fiber network health assessments and real-time performance validation.

USER MANAGEMENT AND SECURITY:

- Role-based access control to limit access to critical network information.
- Data encryption to ensure the security of sensitive network data.
- Audit logs to track user activities and changes in the fiber network.

CrescentLink, integrated with ArcGIS Pro, ensures robust user management and security by leveraging ESRI's technology while incorporating key tools for audit logging and role-based access.

Role-Based Access Control (RBAC)

- **User-Based Licensing & SSO Integration:** CrescentLink utilizes user-based licensing that can be integrated with an organization's **SSO setup**, ensuring seamless management of user credentials and roles.
- **ESRI Access Control: ESRI versioning** and **Geodatabase (GDB) management** enable role-based access, allowing administrators to quarantine users to specific data layers and limit access to critical network information. Privileges and permissions can be set at the database level to control who can view, edit, or manipulate fiber network data.

Data Encryption

- **ESRI Encryption:** GEOGRAPH defers to **ESRI technology** for data encryption, ensuring that all sensitive network data is protected using industry-standard encryption methods both at rest and in transit.

Audit Logs to Track User Activities

- **CrescentLink Work Order Manager: CrescentLink's Work Order Manager** allows for tracking user activities, providing audit logs for changes made to the network. This ensures traceability and accountability for actions related to network operations.
- **ESRI Editor Tracking: Editor tracking** within ArcGIS enables automatic logging of who made specific changes, when those changes were made, and what was altered, providing comprehensive auditing functionality.

MOBILE ACCESS:

- Mobile access for field technicians to view and update fiber routes, splices, and circuits.
- Offline access for field operations with synchronization once reconnected.
- GPS integration to provide accurate location-based updates for fiber assets.

CrescentLink provides mobile access for field technicians to manage fiber network operations, leveraging **ESRI's mobile apps** and **CrescentLink Web Experience** for real-time data and field updates.

Mobile Access for Field Technicians

- **CrescentLink Web Experience:** Accessible from any web-capable device, the **CrescentLink Web Experience** allows field technicians to **view fiber routes, splices, and circuits** in a mobile-friendly, view-only format. It provides real-time access to network data for reference during field operations. The CrescentLink Web Experience does not currently support offline, web-based or mobile editing of the data.
- **ESRI Mobile Apps:** For field editing, **ESRI's mobile apps** like **Collector**, **Field Maps**, and **QuickCapture** offer editing functionality, allowing technicians to update fiber routes and assets directly from the field.

Offline Access with Synchronization

- **GDB Replication:** For users requiring full editing capabilities while offline, **Geodatabase (GDB) replication** allows field teams to work with a copy of the network data offline and **synchronize updates** once reconnected to the network.
- **ESRI Mobile Apps:** Apps like **Field Maps** offer offline capabilities, allowing field personnel to perform operations without connectivity and sync changes once back online.

GPS Integration for Location-Based Updates

- **ESRI GPS Integration:** ESRI's mobile apps integrate with **GPS** to provide accurate, location-based updates for fiber assets, ensuring precise data collection and verification during field operations.
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DATA MANAGEMENT AND INTEGRATION:

- **Geodatabase Management:**

- Advanced tools for managing and maintaining enterprise geodatabases, including detailed schema management, version and modification tracking, and historical replication and restoration options.

- **Data Interchange:**

- Support for a wide range of data formats and direct connections to other data sources, including cloud storage and big data platforms.

- **Data Driven Mapping:**

- Generate multiple map layouts from a single map document, useful for creating map books or reports with multiple pages.

CrescentLink operates as an **add-in for ArcGIS Pro**, utilizing **ESRI's technology** for database management and advanced data integration, while offering full flexibility for users to manage and visualize their fiber networks.

Enterprise Geodatabase Management

- **ArcGIS Monitor:** Provides comprehensive tools for **database administration**, including schema management, version tracking, and modification history. It also supports **historical replication and restoration** options to maintain data integrity.
- **ESRI Technology:** All enterprise geodatabase maintenance, including **detailed schema management** and version control, is handled through ESRI's suite of tools, ensuring data accuracy and operational efficiency.

Support for Data Formats and Sources

- **ArcGIS Pro:** Supports a wide range of data formats and allows **direct connections** to other data sources, including cloud storage and big data platforms.
- **Third-Party and Organizational Data:** Users can source data from **third-party platforms**, data owned or procured by the organization, or from ESRI's **Living Atlas** for additional datasets.

Multiple Map Layouts

- **ArcGIS Pro Layout Tools:** CrescentLink users can leverage ArcGIS Pro's ability to **configure multiple map layouts** within a single project, providing flexibility for creating map books or multi-page reports. Users can toggle between layouts to suit specific project needs or preferences.
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USER INTERFACE AND EXPERIENCE:

- **Customizable Interface:**

- Tailor the user interface with custom ribbons, toolbars, and shortcuts to fit specific workflows and preferences.
- Customize the layout with dockable panels and views for improved workflow efficiency and multi-tasking.

CrescentLink operates as an **add-in for ArcGIS Pro**, which allows users to benefit from the full customization capabilities of ESRI's technology while enhancing the user interface and experience for fiber network management.

Customizing the User Interface

- **ArcGIS Pro:** Users can tailor the interface by **customizing ribbons, toolbars, and shortcuts** to fit specific workflows. This flexibility allows users to place CrescentLink tools where they are most efficient within their projects.
- **Dockable Panels:** ArcGIS Pro offers **dockable panels** and views that can be moved, resized, and arranged according to individual preferences, enhancing workflow efficiency and allowing for multitasking within the platform.

CrescentLink Web Experience

- **Experience Builder Customization:** With the **CrescentLink Web Experience** embedded in **ESRI's Experience Builder**, users can fully customize the dashboard by adding **widgets, maps, and functions** tailored to their specific needs. This enables users to create a personalized and highly functional interface for viewing network data.

ADVANCED FIBER NETWORK DESIGN:

- **Fiber Design Optimization:**

- Tools for optimizing fiber network design, including automated route planning and design recommendations based on current network usage and future needs.
- Capacity Planning and Forecasting:
 - Advanced tools for capacity planning, allowing for detailed forecasting of fiber utilization and future network expansion needs.

- **Automated Fiber Routing:**

- Features for automated fiber routing, helping to streamline the design process and reduce manual input errors.

While there are no automated design functions within CrescentLink or the **ArcGIS environment**, CrescentLink offers tools that improve efficiency, accuracy, and speed in fiber network design.

Tools for Fiber Network Design Optimization

- **ESRI's Route Planner and Trace Route Tools:** These tools help streamline fiber network planning by identifying optimal routes based on geography, existing infrastructure, and spatial data.
- **Attribute Assistant and Contingent Attribute Values:** In **ArcGIS Pro**, these features automate data entry and validation, reducing manual input errors and ensuring design accuracy.
- **CrescentLink Project Planner:** This tool facilitates drafting fiber designs, customizing plans, and producing construction packets, **staking sheets**, unit summaries, and **BOMs**, allowing for efficient planning and execution of network projects.

Capacity Planning and Network Expansion

- **Fiber Cable Fill Tool:** Provides insights into current fiber capacity, helping with detailed **capacity planning** and forecasting for future expansion needs. Users can visualize, analyze, and manage fiber utilization across the network to prevent over-utilization and plan effectively for growth.
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Efficient Design and Workflow Management

- **CrescentLink Work Order Manager:** Streamlines project management by allowing users to organize and group jobs, make bulk changes, and produce reports, ensuring that fiber network designs are efficient and aligned with operational goals.

Collaboration with Third-Party Automated Design Tools

CrescentLink is fully committed to working with customers and third-party organizations that specialize in **automated design and construction management tools**, such as **Biarri**, **Render**, **Vitruvi**, and **SiteTracker**. We understand the value these tools bring to optimizing network design and automating construction workflows, and we are dedicated to supporting their integration with CrescentLink.

We have developed a **geoprocessing tool** that ingests deliverables from **Biarri's FOND planner tool** into the CrescentLink schema, ensuring that all attributes, connectivity information, and spatial data are preserved. This allows for a seamless transition from automated design tools into CrescentLink for further network management and operational workflows.

ENHANCED INVENTORY AND ASSET MANAGEMENT:

- **Asset Lifecycle Management:**
 - Comprehensive tools for managing the entire lifecycle of fiber assets from installation through to decommissioning, including maintenance schedules and asset health monitoring.
- **Detailed Asset Documentation:**
 - Extensive documentation capabilities for fiber network components, including detailed specifications, maintenance records, and historical data.

CrescentLink, built on **ArcGIS Pro**, offers comprehensive tools for managing the entire lifecycle of fiber network assets, from installation through decommissioning, along with detailed asset documentation and monitoring capabilities.

Lifecycle Management of Fiber Assets

- **Attribute Assistant and Contingent Attribute Values:** In **ArcGIS Pro**, users can implement **Attribute Assistant** and **Contingent Attribute Values** to automate data entry and ensure data integrity across the lifecycle of assets, from installation to decommissioning. This aids in tracking asset health and scheduling maintenance.
- **Customizable Schema Structure:** CrescentLink operates within an **open schema** that allows for full customization, enabling users to tailor the database to suit specific asset management needs, such as tracking maintenance schedules and asset condition over time.

Comprehensive Asset Documentation

- **ESRI Reporting Tools:** Native **ESRI reporting tools** allow for the generation of detailed reports, including asset specifications, maintenance records, and historical data on fiber components.
- **Symbology and Feature Layers:** **ESRI's symbology** and feature layers help visualize fiber network components, providing clear documentation and differentiation of asset types.
- **Definition Queries:** Users can apply **definition queries** in ArcGIS Pro to filter and visualize network assets based on specific lifecycle criteria, such as age, maintenance status, or asset health.
- **Attachment Manager:** The **Attachment Manager** in ArcGIS Pro enables the storage of key documents, images, and data related to assets, providing a comprehensive record of maintenance activities and historical performance.

NETWORK OPERATIONS AND PERFORMANCE MONITORING:

- **Real-Time Network Visualization:**
 - Real-time visualization of network performance and health, including dynamic updates and interactive maps for monitoring live network status.
- **Advanced Fault Detection and Diagnostics:**
 - Enhanced tools for fault detection, diagnostics, and resolution, including automated alerts and system notifications.
- **Performance Metrics and Reporting:**
 - Detailed performance metrics and customizable reporting tools for analyzing network performance, signal strength, and other key indicators.

CrescentLink, in conjunction with **ArcGIS Pro** and ESRI's tools, supports network operations and monitoring through enhanced visualizations and tools for diagnostics. While **CrescentLink** and **ArcGIS** do not have native live monitoring or alarming capabilities, our integration with **EXFO** enables real-time network performance monitoring, fault notifications, and alarming.

Real-Time Network Visualization

- **ESRI Experience Builder and Dashboards:** Users can create **real-time performance dashboards** and health monitoring views using **Experience Builder** and **ArcGIS Dashboards**. These tools provide interactive maps with dynamic updates for monitoring the network's live status using CrescentLink data.
- **ArcGIS Field Maps and Native ESRI Apps:** **ArcGIS Field Maps** and other ESRI apps enable field technicians to interact with live maps and update network data in real-time, providing dynamic network status updates directly in the field.

Fault Detection, Diagnostics, and Resolution

- **EXFO Integration:** Through integration with **EXFO**, users gain access to advanced **fault detection, diagnostics, and automated alerts**, enabling proactive network monitoring and fault isolation.
- **CrescentLink Distance Trace Tool:** The **Distance Trace Tool** helps identify network faults by tracing signal paths and isolating issues along fiber routes.
- **DLR, Network Manager, Cable Summary, and Cable Tracer Reports:** These tools provide comprehensive insights into fiber connectivity and cable health, aiding in **outage response** and diagnostics to resolve network faults efficiently.

Performance Metrics and Customizable Reporting Tools

- **EXFO Integration:** With EXFO, detailed **performance metrics** such as signal strength, latency, and network health can be monitored in real-time, allowing for proactive monitoring of key indicators.
- **ESRI Dashboards:** Through **ArcGIS Dashboards**, users can visualize and analyze performance metrics and customize reports to track signal strength and other critical network health indicators.
- **CrescentLink Reporting Tools:** The **Cable Summary Report, DLR Report, and Cable Trace Reports** can be customized to analyze and export data related to fiber capacity, connectivity, and performance, ensuring that users have access to detailed reporting for network diagnostics.

INTEGRATION AND INTEROPERABILITY:

- **Integration with Other Network Systems:**

- Seamless integration with other network management systems (NMS) and enterprise systems for enhanced interoperability and data synchronization.

- **Support for Fiber Testing Equipment:**

- Integration with fiber testing and monitoring equipment for performance validation and real-time diagnostics.

CrescentLink provides tools for managing fiber networks while leveraging **ArcGIS Pro** and **ESRI technology** for enhanced integration and interoperability with third-party systems.

Integration with Network Management Systems (NMS) and Enterprise Systems

- **No Native Integration with NMS:** CrescentLink does not natively integrate with Network Management Systems (NMS) or enterprise systems like ERP. However, we have developed an integration with **EXFO**, a third-party provider of live network monitoring and alarming, allowing for real-time diagnostics and performance monitoring.
- **ArcGIS Interoperability:** ArcGIS offers robust **data synchronization** capabilities, enabling users to integrate third-party data and systems into the ArcGIS platform. Through tools like **ArcGIS Dashboards**, **Experience Builder**, and **Web Maps**, CrescentLink data can be visualized and monitored alongside other network management systems, facilitating a unified view of network health and operations.

Integration with Fiber Testing and Monitoring Equipment

- **EXFO Integration:** Through our partnership with **EXFO**, CrescentLink supports integration with **fiber testing and monitoring equipment**, providing real-time performance validation and diagnostics. EXFO handles live monitoring, alerting, and testing, while CrescentLink helps manage the spatial representation and operational data for network infrastructure.
 - **ArcGIS Field Apps:** **ArcGIS Field Maps** and other mobile apps can be used to gather and synchronize field data related to fiber testing and equipment diagnostics, ensuring accurate field data collection and integration into the enterprise system for comprehensive network management.
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MISCELLANEOUS ITEMS:

- Utility mapping or utility data ingestion for route planning/permit creation.

CrescentLink, built on **ArcGIS Pro**, allows for seamless integration of fiber network data with utility data from other mediums, enabling efficient route planning, permit creation and other functions.

Utility Mapping and Data Ingestion

- **Third-Party Tools:** CrescentLink supports the integration of other **third-party tools** and data for utility mapping, including **oil & gas, water, electric power**, and other network mediums, ensuring interoperability across multiple industries. For example organizations who own, operate, build or manage other network mediums, they have the ability to run other tools like Futura/Meridian (electric power network management solutions) or Cellular Expert's CE RCP tool for wireless and radio communications networks management, alongside the CrescentLink add-in, in the same ArcGIS Pro project. Users can even utilize ESRI's Utility Network with other network mediums, again, in the same ArcGIS Pro Project.
- **Multiple Data Sources:** Users can source data from **third-party providers, internally collected and curated data**, and **ESRI's Living Atlas**, providing a robust set of layers to aid in route planning, utility mapping, and permit creation alongside CrescentLink fiber network data.

ArcGIS Ecosystem Tools

- **ArcGIS Pro:** Offers powerful GIS tools for **visualizing, analyzing, and integrating utility data**, ensuring a comprehensive view of the network infrastructure. Tools like **Trace Network** help map routes and identify the best paths for network expansion or utility deployment.
 - **ArcGIS Web Maps & Experience Builder:** These tools allow users to create customized maps and dashboards that integrate various utility datasets, providing an interactive, real-time interface for planning and permit applications.
 - **ESRI's Geoprocessing Tools:** Can be utilized for data conversion and ingestion, transforming different data formats into usable GIS layers for integrated route planning.
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CERTIFICATION OF COMPLIANCE WITH IMMIGRATION LAWS AND REGULATIONS

Section 54-72.2 of the Chesapeake City Code requires that any person or entity doing business with the City of Chesapeake, including its boards and commissions, shall include a sworn certification by the contractor or vendor of compliance with all federal immigration laws and regulations. These laws include the Federal Immigration Reform and Control Act, which makes it unlawful for a person or other entity to hire, recruit or refer for a fee for employment in the United States, an alien knowing the alien is unauthorized, and Section 40.1-11.1 of the Code of Virginia, which makes it unlawful for any employer to knowingly employ an alien who cannot provide documents indicating that he or she is legally eligible for employment in the United States. The state law, in particular, places an affirmative duty on employers to ensure that aliens have proof of eligibility for employment.

Accordingly, this certification shall be completed and attached to all contracts and agreements for goods and services made by the City of Chesapeake or any of its boards and commissions. Failure to attach a completed certification shall render the contract or agreement void. A copy of the fully executed certification may be attached if an original certification is on file with Procurement for the current fiscal year.

Type or print legibly when completing this form.

1. Legal Name of Contractor or Vendor:

(Note: This is your name as reported to the IRS. This should match your Social Security card or Federal ID number.)

Geograph Technologies, LLC

2. Type of Business Entity:

A. Sole proprietorship (Provide full name and address of owner):

B. Limited Partnership (Provide full name and address of all partners):

C. General Partnership (Provide full name and address of all partners):

☒ D. Limited Liability Company (Provide full name and address of all managing members):
Abingdon Software Holdings Inc - 103 W Main St Easley, SC 29640-2038

E. Corporation (Provide full name and address of all officers):

3. Doing Business As:

If Applicable (Note: This is the name that appears on your invoices but is not used as your reporting name.)

4. Name and Position of Person Completing this Certificate:

Joseph Caldwell - Accounting Manager

5. Physical Business Address:

103 West Main Street STE A Easley, SC 29640

6. Primary Correspondence Address (If different from physical address):

7. Number of Employees:

20

8. Are all Employees Who Work in the United States Eligible for Employment in the United States?

Yes ☒

No ☐

Under penalties of perjury, I declare on behalf of the contractor/vendor listed above that to the best of my knowledge and based upon reasonable inquiry, each and every one of the contractor's/vendor's employees who work in the United States are eligible for employment in the United States as required by the Federal Immigration Reform and Control Act of 1986 and Section 40.1-11.1 of the Code of Virginia. I further declare on behalf of the contractor/vendor that it shall use due care and diligence to ensure that all employees hired in the future who will work in the United States will be eligible for employment in the United States. I affirm that the information provided herein is true, correct, and complete.

Sworn this 21 day of November, 2024 on behalf of Geograph Technologies as

evidenced by the following signature and seal:

Name of Contractor/Vendor: Geograph Technologies LLC

Printed Name of Signatory: Joseph Caldwell

Signature: [Signature]

Date: 11.21.2024

STATE OF South Carolina :

CITY / COUNTY OF Pickens, to-wit:

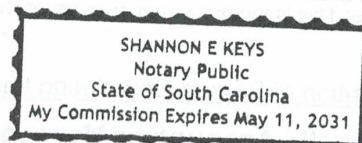
The foregoing instrument was acknowledged before me this 21 day of November, 2024, by

Joseph Caldwell He/She ☐ is personally known to me or ☒ has produced South Carolina Drivers License as identification.

Shannon E. Keys
Notary Public

Registration No.: N/A.

My commission expires: May 11 2031



GEOGRAPH

City of Chesapeake, VA - ESL Deal (2024-2025)

Quote created: November 11, 2024 Reference: 20241111-121946358

City of Chesapeake, VA
300 Shea Drive
Chesapeake, VA 23322
United States

Harvey Miller
hcmiller@cityofchesapeake.net
757-870-4594

Josh Crozier - "Sales Manager " GeoGraph Technologies LLC



Products & Services

Item & Description	Start Date	Quantity	Unit Price	Total
ESL-Tier 1 Unlimited GEOGRAPH Users for Desktop and Web Experience for Networks up to 2000 Plant mile or under 10,000 Customers		1	\$15,000.00 / year	\$15,000.00 / year for 1 year
Standard Support Unlimited Access to the Support Portal, Trouble Ticket System, Resources, and Personal Account Manager		1	\$3,000.00 / year	\$3,000.00 / year for 1 year
Online Training Two-day, virtual, instructor-led CrescentLink training. Session for up to (10) people.		1	\$4,800.00	\$4,800.00

Annual subtotal	\$18,000.00
One-time subtotal	\$4,800.00
Total	\$22,800.00

This quote expires on January 10, 2025

Purchase terms

All quotes and contracts are governed by GEOGRAPH's Terms & Conditions. These Terms & Conditions can be found at the link below. Note, any and all Professional Services will be governed under a separate Scope of Work and Task Order.

[GEOGRAPH Terms & Conditions](#)

Questions? Contact me



Josh Crozier

"Sales Manager "

josh.crozier@geograph.tech

GeoGraph Technologies LLC

103 West Main St,

Easley, SC 29640

United States

**CITY OF CHESAPEAKE
ADDENDUM TO CONTRACTOR'S STANDARD FORM**

NAME: CITY OF CHESAPEAKE, (CITY)

ADDRESS: 306 Cedar Road, Chesapeake Virginia 23322

CONTRACTOR NAME: Geograph Technologies, LLC ("Contractor")

EIN: 82-5526557

ADDRESS: 103 W. Main Street, Easley, SC 29640

TITLE OF ATTACHED FORM: Geograph Terms and Conditions, Last Updated June 1, 2024

The City of Chesapeake and the Contractor are this day entering into a contract, and for their mutual convenience, the parties are using the attached form agreement provided by the Contractor. Nevertheless, the parties agree that this Addendum is incorporated into and amends the form agreement, as provided below.

Notwithstanding anything in the attached form agreement, the payments to be made by the City of Chesapeake for all goods, services and other deliverables under this contract shall not exceed \$_____ ; payments will be made only upon the City's receipt of a proper invoice detailing the goods/services provided. The total cumulative liability of the City of Chesapeake, its officers, employees and agents in connection with this contract or in connection with any goods, services, actions or omissions relating to the contract, shall not under any circumstance exceed payment of the above maximum purchase price. All actions of the Contractor relating in any way to City shall be as an independent contractor, and not as an agent or employee of the City.

The Contractor's form agreement is, with the exceptions noted herein, acceptable to the City of Chesapeake. Nonetheless, because certain standard clauses that may appear in the Contractor's form agreement cannot be accepted by the City of Chesapeake, and in consideration of the convenience of using that form, and this form, without the necessity of specifically negotiating a separate contract document, the parties specifically agree that, notwithstanding any provisions appearing in the attached form agreement, none of the following shall have any effect or be enforceable against the City of Chesapeake:

1. Requiring the City of Chesapeake to obtain or maintain any type of insurance;
2. Renewing or extending the agreement beyond the initial term or automatically continuing the contract period from term to term;
3. Requiring or stating that the terms of the Contractor's form agreement, statement of work, service order, or change order shall prevail over this Addendum;
4. Requiring the City of Chesapeake to defend, indemnify or to hold the Contractor harmless for any act or omission of any kind;
5. Imposing interest charges exceeding those permitted by *Code of Virginia*, § 2.2-4347 through 2.2-4354, Prompt Payment;

6. Requiring the application of law other than Virginia law in interpreting or enforcing the contract, or requiring or permitting that any dispute under the contract be resolved in any court other than an appropriate state circuit court in the City of Chesapeake, Virginia;
7. Requiring the City of Chesapeake to pay liquidated damages, or requiring the City of Chesapeake to make any payment for lost revenue or profits, or for any work not actually performed by Contractor, if the contract is terminated before its ordinary period;
8. Requiring that the contract be accepted or endorsed by the home office or by any other person subsequent to execution by the undersigned City representative before the contract is considered in effect, or otherwise delaying the formation or effective date of the contract to a time later than execution of the contract by the undersigned City representative;
9. Requiring the City to agree to or be subject to any form of equitable relief not authorized by the Constitution or laws of Virginia;
10. Limiting or adding to the time period within which claims can be made or actions can be brought;
11. Limiting the liability of the Contractor for property damage or personal injury;
12. Permitting unilateral modification of this contract by the Contractor, or deeming the City of Chesapeake to agree to a modification by means other than affirmatively signing a modification agreement on paper. This provision expressly applies to Contractor's unilateral modification of prices or rates;
13. Binding the City of Chesapeake to any arbitration process or decision of any arbitration board, commission panel or other entity;
14. Requiring the waiver of a jury trial;
15. Obligating the City of Chesapeake to pay costs of collection or attorney's fees;
16. Granting the Contractor a security interest in property of the City of Chesapeake.
17. Granting any right or incurring any obligation that is beyond the legal authority of the undersigned City to empower its contract officers to grant or incur on behalf of the City of Chesapeake, or requiring the City of Chesapeake to violate any applicable law or regulation.
18. Binding City funds in any way other than only to the extent of the funds that are available or which may hereafter become available for the purpose of this agreement.
19. Requiring termination by any other means other than termination by either party giving written notice to the other party at least 30 days prior to the effective date of such termination.
20. Prohibiting the City from disclosing any document or information which it is obligated to disclose pursuant to the Virginia Freedom of Information Act, Va. Code § 2.2-3700 *et seq.*

In addition, the parties agree that the contract between them shall be deemed to incorporate provisions that the Virginia Public Procurement Act requires to be included in City of Chesapeake contracts. These can be found in the following Sections of the *Code of Virginia*: § 2.2-4363 (procedure for filing claims); § 2.2-4354 (requirement to pay subcontractors); § 2.2-4311 (non-discrimination in contracts above \$10,000); §

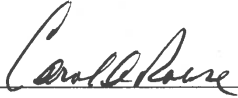
2.2-4312 (drug-free workplace in contracts above \$10,000); § 2.2-4311.1 (compliance with federal immigration law); and § 2.2-4311.2 (authorization to transact business in Virginia, if legally required).

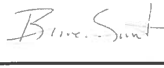
Notwithstanding anything contained in the Contractor's terms or conditions to the contrary, the terms of this agreement shall supersede any subsequent or conflicting terms or conditions included in any standard click-through or shrink-wrap end user license agreement that may accompany a purchase. Any click-through agreement shall not bind the City of Chesapeake.

IN WITNESS WHEREOF, the parties have caused this contract to be duly executed, intending thereby to be legally bound.

CITY OF CHESAPEAKE

CONTRACTOR

By 

By 

Title Procurement Administrator

Title CEO

Date 1-29-25

Date 1/29/2025

The City of Chesapeake does not discriminate against faith based organizations in accordance with Code of Virginia Section 2.2-4343.1 or against any contractor, bidder, or offeror because of race, religion, color, sex, national origin, age, disability or any other basis prohibited by State law relating to discrimination in employment.

When Used: For contracts valued at less than \$50,000 and it is not feasible to award a contract without using the contractor's form, and clauses which are not in the best interest of the City of Chesapeake cannot be crossed out, then use this Addendum form after it has been filled in and signed by the contractor, with contractor's form attached. If the contractor wants signatures to both this form and the contractor's form agreement that is attached to this form, then both forms should be signed by contractor before submittal to the City for signing of both forms. For contracts over \$50,000, your legal advisor should be consulted prior to using this form. **THIS FORM IS NOT TO BE USED FOR ANY OTHER CONTRACT CHANGES, ADDITIONS OR MODIFICATIONS BETWEEN THE CITY AND THE CONTRACTOR.**

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Terms and Conditions

Last updated: June 1, 2024

Please read these terms and conditions carefully before using Our Service.

Interpretation and Definitions

Interpretation

The words of which the initial letter is capitalized have meanings defined under the following conditions.

The following definitions shall have the same meaning regardless of whether they appear in singular or in plural.

Definitions

For the purposes of these Terms and Conditions:

- **Application** means the software program provided by the Company downloaded by You on any electronic device, named CrescentLink Desktop, CrescentLink WebExperience, CrescentLink Server Object Extension (SOE), or FourSevens
- **Application Store** means the digital distribution service operated and developed by Environmental Systems Research Institute, Inc. (ArcGIS Marketplace) in which the Application has been downloaded.
- **Affiliate** means an entity that controls, is controlled by or is under common control with a party, where “control” means ownership of 50% or more of the shares, equity

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Account means a unique account created for You to access our Service or parts of our Service.

- **Company** (referred to as either “the Company”, “We”, “US” or “Our” in this Agreement) refers to GEOGRAPH Technologies LLC, 105 Wall Street Suite 8 Clemson, SC 29631.
- **Country** refers to: South Carolina, United States
- **Device** means any device that can access the Service such as a computer, a cellphone or a digital tablet.
- **Feedback** means feedback, innovations or suggestions sent by You regarding the attributes, performance or features of our Service.
- **Service** refers to the Application or the Website or both.
- **Subscriptions** refer to the services or access to the Service offered on a subscription basis by the Company to You.
- **Free Trial** refers to a limited period of time that may be free when purchasing a Subscription.
- **Terms and Conditions** (also referred as “Terms”) mean these Terms and Conditions that form the entire agreement between You and the Company regarding the use of the Service.
- **Third-party Social Media Service** means any services or content (including data, information, products or services) provided by a third-party that may be displayed, included or made available by the Service.
- **Website** refers to Geograph, accessible from geographstag.wpengine.com
- **You** means the individual accessing or using the Service, or the company, or other legal entity on behalf of which such individual is accessing or using the Service, as applicable.

Acknowledgement

These are the Terms and Conditions governing the use of this Service and the agreement that operates between You and the Company. These Terms and Conditions set out the rights and obligations of all users regarding the use of the Service.

Your access to and use of the Service is conditioned on Your acceptance of and compliance with these Terms and Conditions. These Terms and Conditions apply to all visitors, users and others who access or use the Service.

By accessing or using the Service You agree to be bound by these Terms and Conditions. If You disagree with any part of these Terms and Conditions then You may not access the Service.

GEOGRAPH

(800) 674-4803

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Your access to and use of the Service is also conditioned on Your acceptance of and compliance with the Privacy Policy of the Company. Our Privacy Policy describes Our policies and procedures on the collection, use and disclosure of Your personal information when You use the Application or the Website and tells You about Your privacy rights and how the law protects You. Please read Our Privacy Policy carefully before using Our Service.

Subscriptions

Subscription period

The Service or some parts of the Service are available only with a paid Subscription. You will be billed in advance on a recurring and periodic basis (such as daily, weekly, monthly or annually), depending on the type of Subscription plan you select when purchasing the Subscription.

At the end of each period, Your Subscription will automatically renew under the exact same conditions unless You cancel it or the Company cancels it.

Subscription cancellations

You may cancel Your Subscription renewal either through Your Account settings page or by contacting the Company.

You will not receive a refund for the fees You already paid for Your current Subscription period and You will be able to access the Service until the end of Your current Subscription period.

Billing

You shall provide the Company with accurate and complete billing information including full name, address, state, zip code, telephone number, and a valid payment method information.

Should automatic billing fail to occur for any reason, the Company will issue an electronic invoice indicating that you must proceed manually, within a certain deadline date, with the full payment corresponding to the billing period as indicated on the invoice.

Fee Changes

The Company, in its sole discretion and at any time, may modify the Subscription fees. Any Subscription fee change will become effective at the end of the then-current Subscription period.

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terminate Your Subscription before such change becomes effective.

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You will continue use of the Service after the Subscription fee change comes into effect constitutes Your agreement to pay the modified Subscription fee amount.

Refunds

Except when required by law, paid Subscription fees are non-refundable.

Certain refund requests for Subscriptions may be considered by the Company on a case-by-case basis and granted at the sole discretion of the Company.

Free Trial

The Company may, at its sole discretion, offer a Subscription with a Free trial for a limited period of time.

You may be required to enter Your billing information in order to sign up for the Free trial.

If You do enter Your billing information when signing up for a Free Trial, You will not be charged by the Company until the Free trial has expired. On the last day of the Free Trial period, unless You cancelled Your Subscription, You will be automatically charged the applicable Subscription fees for the type of Subscription You have selected.

At any time and without notice, the Company reserves the right to (i) modify the terms and conditions of the Free Trial offer, or (ii) cancel such Free trial offer.

User Accounts

When You create an account with Us, You must provide Us information that is accurate, complete, and current at all times. Failure to do so constitutes a breach of the Terms, which may result in immediate termination of Your account on Our Service.

You are responsible for safeguarding the password that You use to access the Service and for any activities or actions under Your password, whether Your password is with Our Service or a Third-Party Social Media Service.

You agree not to disclose Your password to any third party. You must notify Us immediately upon becoming aware of any breach of security or unauthorized use of Your account.

You may not use as a username the name of another person or entity or that is not lawfully available for use, a name or

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name that is otherwise offensive, vulgar or obscene.

Intellectual Property

The Service and its original content (excluding Content provided by You or other users), features and functionality are and will remain the exclusive property of the Company and its licensors.

The Service is protected by copyright, trademark, and other laws of both the Country and foreign countries.

Our trademarks and trade dress may not be used in connection with any product or service without the prior written consent of the Company.

Your Feedback to Us

You assign all rights, title and interest in any Feedback You provide the Company. If for any reason such assignment is ineffective, You agree to grant the Company a non-exclusive, perpetual, irrevocable, royalty free, worldwide right and licence to use, reproduce, disclose, sub-licence, distribute, modify and exploit such Feedback without restriction.

Links to Other Websites

Our Service may contain links to third-party web sites or services that are not owned or controlled by the Company.

The Company has no control over, and assumes no responsibility for, the content, privacy policies, or practices of any third party web sites or services. You further acknowledge and agree that the Company shall not be responsible or liable, directly or indirectly, for any damage or loss caused or alleged to be caused by or in connection with the use of or reliance on any such content, goods or services available on or through any such web sites or services.

We strongly advise You to read the terms and conditions and privacy policies of any third-party web sites or services that You visit.

Termination

We may terminate or suspend Your Account immediately, without prior notice or liability, for any reason whatsoever, including without limitation if You breach these Terms and Conditions.

Upon termination, Your right to use the Service will cease immediately. If You wish to terminate Your Account, You may simply discontinue using the Service.

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liability of the Company and any of its suppliers under any provision of this Terms and Your exclusive remedy for all of the foregoing shall be limited to the amount actually paid by You through the Service or 100 USD if You haven't purchased anything through the Service.

To the maximum extent permitted by applicable law, in no event shall the Company or its suppliers be liable for any special, incidental, indirect, or consequential damages whatsoever (including, but not limited to, damages for loss of profits, loss of data or other information, for business interruption, for personal injury, loss of privacy arising out of or in any way related to the use of or inability to use the Service, third-party software and/or third-party hardware used with the Service, or otherwise in connection with any provision of this Terms), even if the Company or any supplier has been advised of the possibility of such damages and even if the remedy fails of its essential purpose.

Some states do not allow the exclusion of implied warranties or limitation of liability for incidental or consequential damages, which means that some of the above limitations may not apply. In these states, each party's liability will be limited to the greatest extent permitted by law.

“AS IS” and “AS AVAILABLE” Disclaimer

The Service is provided to You “AS IS” and “AS AVAILABLE” and with all faults and defects without warranty of any kind. To the maximum extent permitted under applicable law, the Company, on its own behalf and on behalf of its Affiliates and its and their respective licensors and service providers, expressly disclaims all warranties, whether express, implied, statutory or otherwise, with respect to the Service, including all implied warranties of merchantability, fitness for a particular purpose, title and non-infringement, and warranties that may arise out of course of dealing, course of performance, usage or trade practice. Without limitation to the foregoing, the Company provides no warranty or undertaking, and makes no representation of any kind that the Service will meet Your requirements, achieve any intended results, be compatible or work with any other software, applications, systems or services, operate without interruption, meet any performance or reliability standards or be error free or that any errors or defects can or will be corrected.

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warranty of any kind, express or implied. (i) as to the operation or availability of the Service, or the information, content, and materials or products included thereon; (ii) that the Service will be uninterrupted or error-free; (iii) as to the accuracy, reliability, or currency of any information or content provided through the Service; or (iv) that the Service, its servers, the content, or e-mails sent from or on behalf of the Company are free of viruses, scripts, trojan horses, worms, malware, timebombs or other harmful components.

Some jurisdictions do not allow the exclusion of certain types of warranties or limitations on applicable statutory rights of a consumer, so some or all of the above exclusions and limitations may not apply to You. But in such a case the exclusions and limitations set forth in this section shall be applied to the greatest extent enforceable under applicable law.

Governing Law

The laws of the Country, excluding its conflicts of law rules, shall govern this Terms and Your use of the Service. Your use of the Application may also be subject to other local, state, national, or international laws.

Disputes Resolution

If You have any concern or dispute about the Service, You agree to first try to resolve the dispute informally by contacting the Company.

For European Union (EU) Users

If You are a European Union consumer, you will benefit from any mandatory provisions of the law of the country in which you are resident in.

United States Federal Government End Use Provisions

If You are a U.S. federal government end user, our Service is a “Commercial Item” as that term is defined at 48 C.F.R. §2.101.

United States Legal Compliance

You represent and warrant that (i) You are not located in a country that is subject to the United States government embargo, or that has been designated by the United States government as a “terrorist supporting” country, and (ii) You are not listed on any United States government list of prohibited or restricted parties.

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If any provision of these Terms is held to be unenforceable or invalid, such provision will be changed and interpreted to accomplish the objectives of such provision to the greatest extent possible under applicable law and the remaining provisions will continue in full force and effect.

Waiver

Except as provided herein, the failure to exercise a right or to require performance of an obligation under this Terms shall not effect a party's ability to exercise such right or require such performance at any time thereafter nor shall be the waiver of a breach constitute a waiver of any subsequent breach.

Translation Interpretation

These Terms and Conditions may have been translated if We have made them available to You on our Service.

You agree that the original English text shall prevail in the case of a dispute.

Changes to These Terms and Conditions

We reserve the right, at Our sole discretion, to modify or replace these Terms at any time. If a revision is material We will make reasonable efforts to provide at least 30 days' notice prior to any new terms taking effect. What constitutes a material change will be determined at Our sole discretion.

By continuing to access or use Our Service after those revisions become effective, You agree to be bound by the revised terms. If You do not agree to the new terms, in whole or in part, please stop using the website and the Service.

Contact Us

If you have any questions about these Terms and Conditions, You can contact us:

- By email: legal@geograph.tech
- By mail: 103 W Main Street, Easley, SC 29640

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(800) 674-4803

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Our Team

Community Involvement

GEOGRAPH Gives

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Remote GIS Management

Training & Support



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Corporate Campuses

Electric Cooperatives

Engineers & Consultants

G & T Power

HFC Networks

Middle Mile Fiber Providers

Municipal Government

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PURCHASING

December 20, 2024

Mr. Josh Crozier
Geograph Technologies, LLC
103 West Main St.
Easley, SC 29640
Email: josh.crozier@geograph.tech

SENT VIA EMAIL

SUBJECT: RFP 25-068-6328 Fiber Optic Network Asset Management Software

Dear Mr. Crozier,

Thank you for responding to the City of Chesapeake's RFP 25-068-6328 Fiber Optic Network Asset Management Software, dated October 24, 2024. After the oral presentation round, the selection committee is pleased to notify you that Geograph Technologies, LLC has been selected as a finalist, as set forth in the subject Request for Proposal.

The City is inviting Geograph Technologies, LLC to the negotiations phase. Please provide an initial response to the below no later than 2:00 P.M., Monday, December 30, 2024.

1. Please confirm that Geograph takes no exceptions to the requirements of the RFP to include the City's General and Special Terms and Conditions.
2. The Cost Proposal section of your submission states the cost listed for the ESL line item is a high-level cost, and for a final proposed cost pertaining to our anticipated userbase size, data would be required. Below please find our anticipated userbase data. If you can, please provide the refined pricing and applicable tiered structures for our evaluation purposes.
Less than 2,000 miles; five edit users; four field users; 210 endpoints.
3. The solicitation requested the pricing for the 'initial term (5-years)', as such, what would be the pricing for the optional five one-year renewal periods?
4. The Cost Proposal section includes Purchase Terms link <https://geograph.tech/terms-of-use/> to Geograph's Terms and Conditions, last updated June 1, 2024. As outlined in the RFP, our Terms and Conditions will govern this contract. While Geograph has provided its own T&Cs, we would require the attached sample Addendum to Contractors Form to

be executed. Please review and let us know if this would be acceptable, should your firm be selected.

5. Are there any other contractual or service level type agreement documents, not provided in your proposal package, that we need to consider in our evaluation?

If you should have any questions or need additional time to respond, please do not hesitate to contact me at klwhite1@cityofchesapeake.net.

Sincerely,
Kimberly L. White
Procurement Specialist I
Procurement Division, City of Chesapeake

GEOGRAPH Technologies

103 W Main Street
Easley, SC 29640
800-674-4803



TO: CITY OF CHESAPEAKE, VA

306 Cedar Road
Chesapeake, VA 23322

% Kimberly L. White
Procurement Specialist I
Procurement Division, City of Chesapeake
klwhite1@cityofchesapeake.net

SUBJECT: RFP 25-068-6328 Fiber Optic Network Asset Management Software

NEGOTIATIONS LETTER RESPONSE

Please confirm that Geograph takes no exceptions to the requirements of the RFP to include the City's General and Special Terms and Conditions.

A. Points of consideration: based on the City's "[Procurement Ordinance](#)"

1. Auto-Renewal Clause:

(REF: GEOGRAPH Terms of Use; Subscriptions; Subscriptions Period)

The standard GEOGRAPH Terms of Use references that "Your Subscription will automatically renew under the same conditions unless You cancel it or the Company cancels it." GEOGRAPH is willing to alter this clause to remove this 'auto-renewal' provision.

Our standard renewal process consists of direct communication with Customer at least (90) days before the anniversary date of their contract term. No renewal will be completed or invoicing processed without first getting explicit permission from the City of Chesapeake, consenting to the terms of the subsequent renewal.

2. Fee Changes:

(REF: GEOGRAPH Terms of Use; Fee Changes)

The standard GEOGRAPH Terms of Use references that “The Company (GEOGRAPH), in its sole discretion and at any time, may modify the Subscription fees”

In our proposal for a fiber management system submitted to the City of Chesapeake, GEOGRAPH agrees that our contractual relationship, including pricing and fee adjustments, will be governed by the official quotation provided. Furthermore, GEOGRAPH commits that no changes to the software pricing will occur without prior explicit consent from the City of Chesapeake. Additionally, any modifications will not take place until after the completion of the current contract term

If the City prefers to enter into a multi-year subscription agreement, in order to lock in pricing for the contracted software offerings, GEOGRAPH is willing to accommodate this.

3. Governing Law:

(REF: GEOGRAPH Terms of Use; Governing Law)

The standard GEOGRAPH Terms of Use, references “**Governing Law**,” stating, “*The laws of the Country, excluding its conflicts of law rules, shall govern this Terms and Your use of the Service. Your use of the Application may also be subject to other local, state, national, or international laws.*”

Per the City of Chesapeake’s Purchasing guidelines and procedures, and as outlined in the City of Chesapeake’s RFP documentation (*Secion14.8 Applicable Laws and Courts*), GEOGRAPH agrees that all contracted products and services, and all contracted subscription terms, will be subject to the laws of the Commonwealth of Virginia.

In light of the proposed compromise by GEOGRAPH, it is requested that the City of Chesapeake formally seek a revision to GEOGRAPH’s standard Terms of Use. This modification is essential for explicitly detailing the aforementioned agreement in the legally binding documents associated with this RFP response between GEOGRAPH and the City of Chesapeake, Virginia.

The Cost Proposal section of your submission states the cost listed for the ESL line item is a high-level cost, and for a final proposed cost pertaining to our anticipated userbase size, data would be required. Below please find our anticipated userbase data. If you can, please provide the refined pricing and applicable tiered structures for our evaluation purposes.

a. Less than 2,000 miles; five edit users; four field users; 210 endpoints.

A. GEOGRAPH Proposed Pricing:

As part of GEOGRAPH's formal RFP submission, we propose the following subscription type, license configuration and cost, as well as our Standard Annual Support subscription, and cost, and our standard, 2-day, instructor-led CrescentLink FMS training. Please see below for a more detailed explanation.

PRODUCT	LICENSE TYPE	LICENSE/SERVICE CONFIGURATION	PRICE (PER YEAR)
GEOGRAPH™ On-Line Training	2-Day Instructor-led Training	One Time Cost (per session)	\$4,800
GEOGRAPH™ Standard Support	Standard Annual Support	Per Organization	20% of total annual software spend (\$3,000)
CrescentLink® Enterprise Site License*	Unlimited Licenses	Unlimited of any configuration of CrescentLink Network Manager Edit, View, and Web Experience Licenses.	\$15,000
TOTAL ANNUAL SUBSCRIPTION AMOUNT (SOFTWARE & SUPPORT)		\$18,000	
TOTAL FIRST YEAR ONE-TIME COST (TRAINING)		\$4,800	

The solicitation requested the pricing for the ‘initial term (5-years)’, as such, what would be the pricing for the optional five one-year renewal periods?

B. GEOGRAPH Proposed Contract Term:

As part of GEOGRAPH’s formal submission to the City of Chesapeake’s RFP for a Fiber Management Solution, and per the pricing and subscription tier itemized above, GEOGRAPH is proposing a year-to-year contract term for the CrescentLink software subscription and the Annual Standard Support line item. Traditionally, all of our customers execute single-year, year-to-year contracts for all subscription products.

In response to the City of Chesapeake’s request for a 5-year, multi-year agreement, and if the City prefers, GEOGRAPH is proposing a 3-year contractual term for all subscription products. Please note that there is no pricing difference between a single-year contract term, a 3-year multi-year contract term, and a 5-year multi-year contract term. There are no discounts for a multi-year contract and the City of Chesapeake will realize no pricing benefit by executing a multi-year agreement.

GEOGRAPH requests the City of Chesapeake’s response to our 3-year subscription term rebuttal to the City’s requested 5-year subscription term.

The Cost Proposal section includes a Purchase Terms link (<https://geograph.tech/terms-of-use/>) to Geograph’s Terms and Conditions (last updated June 1, 2024). As outlined in the RFP, our Terms and Conditions will govern this contract. While Geograph has provided its own T&Cs, we would require the attached sample Addendum to Contractors Form to be executed. Please review and let us know if this would be acceptable, should your firm be selected.

As part of GEOGRAPH’s official submission to the City of Chesapeake’s Fiber Optic Network Asset Management system, we agree to provide an executed copy of the *City of Chesapeake Addendum to Contractor’s Standard Form*, provided to us by the City of Chesapeake. Any revisions or requested changes to this, or any other legally binding document provided by the City of Chesapeake (i.e. City of Chesapeake Terms & Conditions), will be appropriately documented in our submitted, executed copy. No requests by GEOGRAPH pertaining to any documentation, terms or clauses will be considered legally binding, these are mutually and explicitly agreed upon by both parties.

Are there any other contractual or service level type agreement documents, not provided in your proposal package, that we need to consider in our evaluation?

As part of GEOGRAPH's official submission to the City of Chesapeake's Fiber Optic Network Asset Management system, we are not proposing any additional goods or services that would be governed by an additional or separate contract document(s), outside of the software and support subscription quotation, that also includes a line item for our standard training.

Additional Topics of Note:

1. City of Chesapeake RFP, Section 14.10, A. "To Consultant.", 1:

The official RFP provided by the City of Chesapeake, references (cited above) a requirement by all contractors to include, 1) City Contract Number and/or Purchase Order Number, and 2) the Federal Employer Identification number, be included on all invoices and contract documents.

GEOGRAPH requests confirmation of this requirement, so that we can ensure all of our submissions and proposals conform to the requirements of this RFP, as set by the City of Chesapeake. Please advise as to whether any previously submitted documents need to be revised to include this information, on how/where this information needs to be included on any and all future documentation submissions.

GEOGRAPH Technologies

103 W Main Street
Easley, SC 29640
800-674-4803



TO: CITY OF CHESAPEAKE, VA

306 Cedar Road
Chesapeake, VA 23322

% Kimberly L. White
Procurement Specialist I
Procurement Division, City of Chesapeake
klwhite1@cityofchesapeake.net

SUBJECT: RFP 25-068-6328 Fiber Optic Network Asset Management Software

NEGOTIATIONS LETTER RESPONSE

Please confirm that Geograph takes no exceptions to the requirements of the RFP to include the City's General and Special Terms and Conditions.

A. Points of consideration: based on the City's "[Procurement Ordinance](#)"

1. Auto-Renewal Clause:

(REF: GEOGRAPH Terms of Use; Subscriptions; Subscriptions Period)

The standard GEOGRAPH Terms of Use references that "Your Subscription will automatically renew under the same conditions unless You cancel it or the Company cancels it." GEOGRAPH is willing to alter this clause to remove this 'auto-renewal' provision.

Our standard renewal process consists of direct communication with Customer at least (90) days before the anniversary date of their contract term. No renewal will be completed or invoicing processed without first getting explicit permission from the City of Chesapeake, consenting to the terms of the subsequent renewal.

2. Fee Changes:

(REF: GEOGRAPH Terms of Use; Fee Changes)

The standard GEOGRAPH Terms of Use references that “The Company (GEOGRAPH), in its sole discretion and at any time, may modify the Subscription fees”

In our proposal for a fiber management system submitted to the City of Chesapeake, GEOGRAPH agrees that our contractual relationship, including pricing and fee adjustments, will be governed by the official quotation provided. Furthermore, GEOGRAPH commits that no changes to the software pricing will occur without prior explicit consent from the City of Chesapeake. Additionally, any modifications will not take place until after the completion of the current contract term

If the City prefers to enter into a multi-year subscription agreement, in order to lock in pricing for the contracted software offerings, GEOGRAPH is willing to accommodate this.

3. Governing Law:

(REF: GEOGRAPH Terms of Use; Governing Law)

The standard GEOGRAPH Terms of Use, references “**Governing Law**,” stating, “*The laws of the Country, excluding its conflicts of law rules, shall govern this Terms and Your use of the Service. Your use of the Application may also be subject to other local, state, national, or international laws.*”

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CrescentLink® Enterprise Site License*	Year 1	Unlimited Licenses	Unlimited of any configuration of CrescentLink Network Manager Edit, View, and Web Experience Licenses.	\$15,000	\$3,000
CrescentLink® Enterprise Site License*	Year 2	Unlimited Licenses	SEE ABOVE DESCRIPTION	\$15,000	\$3,000
CrescentLink® Enterprise Site License*	Year 3	Unlimited Licenses	SEE ABOVE DESCRIPTION	\$16,500	\$3,300
CrescentLink® Enterprise Site License*	Year 4	Unlimited Licenses	SEE ABOVE DESCRIPTION	\$18,000	\$3,600
CrescentLink® Enterprise Site License*	Year 5	Unlimited Licenses	SEE ABOVE DESCRIPTION	\$20,000	\$4,000

TOTAL ANNUAL SUBSCRIPTION AMOUNT (SOFTWARE & SUPPORT) - Year 1	\$18,000
TOTAL ANNUAL SUBSCRIPTION AMOUNT (SOFTWARE & SUPPORT) - Year 2	\$18,000
TOTAL ANNUAL SUBSCRIPTION AMOUNT (SOFTWARE & SUPPORT) - Year 3	\$19,800
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As part of GEOGRAPH’s formal submission to the City of Chesapeake’s RFP for a Fiber Management Solution, and per the pricing and subscription tier itemized above, GEOGRAPH is proposing a year-to-year contract term for the CrescentLink software subscription and the Annual Standard Support line item. Traditionally, all of our customers execute single-year, year-to-year contracts for all subscription products.

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GEOGRAPH requests the City of Chesapeake's response to our 3-year subscription term rebuttal to the City's requested 5-year subscription term.

The Cost Proposal section includes a Purchase Terms link

(<https://geograph.tech/terms-of-use/>) to Geograph's Terms and Conditions (last updated June 1, 2024). As outlined in the RFP, our Terms and Conditions will govern this contract. While Geograph has provided its own T&Cs, we would require the attached sample Addendum to Contractors Form to be executed. Please review and let us know if this would be acceptable, should your firm be selected.

As part of GEOGRAPH's official submission to the City of Chesapeake's Fiber Optic Network Asset Management system, we agree to provide an executed copy of the *City of Chesapeake Addendum to Contractor's Standard Form*, provided to us by the City of Chesapeake. Any revisions or requested changes to this, or any other legally binding document provided by the City of Chesapeake (i.e. City of Chesapeake Terms & Conditions), will be appropriately documented in our submitted, executed copy. No requests by GEOGRAPH pertaining to any documentation, terms or clauses will be considered legally binding, these are mutually and explicitly agreed upon by both parties.

Are there any other contractual or service level type agreement documents, not provided in your proposal package, that we need to consider in our evaluation?

As part of GEOGRAPH's official submission to the City of Chesapeake's Fiber Optic Network Asset Management system, we are not proposing any additional goods or services that would be governed by an additional or separate contract document(s), outside of the software and support subscription quotation, that also includes a line item for our standard training.

Additional Topics of Note:

1. City of Chesapeake RFP, Section 14.10, A. “To Consultant.”, 1:

The official RFP provided by the City of Chesapeake, references (cited above) a requirement by all contractors to include, 1) City Contract Number and/or Purchase Order Number, and 2) the Federal Employer Identification number, be included on all invoices and contract documents.

GEOGRAPH requests confirmation of this requirement, so that we can ensure all of our submissions and proposals conform to the requirements of this RFP, as set by the City of Chesapeake. Please advise as to whether any previously submitted documents need to be revised to include this information, on how/where this information needs to be included on any and all future documentation submissions.

Kimberly L. White

From: Josh Crozier <josh.crozier@geograph.tech>
Sent: Monday, January 13, 2025 9:35 AM
To: Kimberly L. White
Subject: Re: Chesapeake RFP 25-068-6328

ALERT:External E-mail. Use caution when opening attachments or clicking links.

Good morning Kimberly! Geograph agrees to all terms and conditions



Josh Crozier

Sales Manager
GEOGRAPH

 (800)-674-4803 x701
 josh.crozier@geograph.tech
 geograph.tech
 103 W Main St, Easley, SC, 29640

On Fri, Jan 10, 2025 at 3:52 PM Kimberly L. White <klwhite1@cityofchesapeake.net> wrote:

Hello Josh,

The City has nothing further to negotiate.

To conclude negotiations, can you please confirm the following?

This is to summarize what was agreed upon from our letter dated 12/20/2024, Geograph's response dated 12/27/2024, and our Teams call on 01/06/2025.

If awarded the contract:

- Geograph agrees to a 5-year initial term (paid annually) with five 1-year renewals.
- Pricing for the initial 5-year term will be pursuant to corrected Geograph Proposed Pricing dated 01/06/2025.
- Pricing for renewal terms will be subject to 15. Special Terms and Conditions .5 Price Escalation/De-Escalation clause from Chesapeake's RFP 25-068-6328.
- Geograph takes no exceptions to the requirements of the RFP to include the City's General and Special Terms and Conditions.
- Geograph agrees to sign Chesapeake's Addendum to Contractor's Form with no exceptions and that will take precedence over Geograph's Standard Terms of Use.

If I am mistaken or if you need more information, please let me know.

Thank you and have a good weekend,

Kim



Kimberly L. White, VCA

Procurement Specialist I

Purchasing Division

Office (757) 382-6359

Direct (757) 382-6923

www.CityofChesapeake.net

From: Josh Crozier <josh.crozier@geograph.tech>

Sent: Thursday, January 9, 2025 12:51 PM

To: Kimberly L. White <klwhite1@cityofchesapeake.net>

Subject: Re: Chesapeake RFP 25-068-6328

ALERT: External E-mail. Use caution when opening attachments or clicking links.

yes ma'am



Josh Crozier

Sales Manager
GEOGRAPH



(800)-674-4803 x701



josh.crozier@geograph.tech



geograph.tech



103 W Main St, Easley, SC, 29640

On Thu, Jan 9, 2025 at 12:50 PM Kimberly L. White <klwhite1@cityofchesapeake.net> wrote:

Hi Josh,

Yes, sorry for the delay.

I am waiting on one thing (on my end) and then I will be able to get back to you to continue negotiations or conclude them with a summary.

Thank you,

Kim



Kimberly L. White, VCA

Procurement Specialist I

Purchasing Division

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From: Josh Crozier <josh.crozier@geograph.tech>
Sent: Thursday, January 9, 2025 12:37 PM
To: Kimberly L. White <klwhite1@cityofchesapeake.net>
Subject: Re: Chesapeake RFP 25-068-6328

ALERT:External E-mail. Use caution when opening attachments or clicking links.

Do you guys have everything you need?



Josh Crozier
Sales Manager
GEOGRAPH

 (800)-674-4803 x701
 josh.crozier@geograph.tech
 geograph.tech
 103 W Main St, Easley, SC, 29640

On Tue, Jan 7, 2025 at 10:18 AM Kimberly L. White <klwhite1@cityofchesapeake.net> wrote:

Good morning Josh,

Thank you for sending this so quickly.

Have a good day,

Kim



Kimberly L. White, VCA

Procurement Specialist I

Purchasing Division

Office (757) 382-6359

Direct (757) 382-6923

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From: Josh Crozier <josh.crozier@geograph.tech>
Sent: Monday, January 6, 2025 2:51 PM
To: Kimberly L. White <klwhite1@cityofchesapeake.net>
Subject: Re: Chesapeake RFP 25-068-6328

ALERT:External E-mail. Use caution when opening attachments or clicking links.

Attached with 5 year pricing



Josh Crozier

Sales Manager
GEOGRAPH

 (800)-674-4803 x701
 josh.crozier@geograph.tech
 geograph.tech
 103 W Main St, Easley, SC, 29640

On Fri, Jan 3, 2025 at 3:35 PM Kimberly L. White <klwhite1@cityofchesapeake.net> wrote:

Hi Josh,

Great, thank you.

I'll make it for 2:00 on Monday 1/6/2025.

I don't think I ever had Grey's email.

Is it grey.pittman@geograph.tech?

Thank you,

Kim



Kimberly L. White, VCA

Procurement Specialist I

Purchasing Division

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Direct (757) 382-6923

www.CityofChesapeake.net

From: Josh Crozier <josh.crozier@geograph.tech>

Sent: Friday, January 3, 2025 3:15 PM

To: Kimberly L. White <klwhite1@cityofchesapeake.net>

Subject: Re: Chesapeake RFP 25-068-6328

ALERT:External E-mail. Use caution when opening attachments or clicking links.

Hey Kimberly

Grey and I could do Monday or Tuesday after 1:30 pm. Either day for the entire afternoon

Josh Crozier
Sales Manager



Phone [800-674-4803 x701](tel:800-674-4803) Mobile [229-254-4109](tel:229-254-4109)

Website geograph.tech

Email josh.crozier@geograph.tech

Address [103 W Main St, Easley, SC, 29640](#)

GEOGRAPH Academy
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On Fri, Jan 3, 2025 at 12:58 PM Kimberly L. White <klwhite1@cityofchesapeake.net> wrote:

Good afternoon Josh,

We have reviewed Geograph's Negotiations Letter Response from 12/27/2024 and believe it might be easier and more effective to schedule a Teams call to discuss.

Just an informal meeting including Procurement (Christine and I) and Geograph (you and whomever you feel needs to attend).

Are you available Monday 1/6 afternoon or Tuesday 1/7?

I'll probably make the invite for one hour just in case.

On the very unlikely chance that we have severe weather on Monday, Tuesday might be safer.

Thank you,

Kim



Kimberly L. White, VCA

Procurement Specialist I

Purchasing Division

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Direct (757) 382-6923

www.CityofChesapeake.net

From: Josh Crozier <josh.crozier@geograph.tech>
Sent: Friday, December 27, 2024 2:00 PM
To: Kimberly L. White <klwhite1@cityofchesapeake.net>
Subject: Re: Chesapeake RFP 25-068-6328

ALERT: External E-mail. Use caution when opening attachments or clicking links.

Yes ma'am! Thanks for the clarification. I'll be waiting on your response

Josh Crozier
Sales Manager



Phone [800-674-4803](tel:800-674-4803) x701 **Mobile** [229-254-4109](tel:229-254-4109)

Website geograph.tech

Email josh.crozier@geograph.tech

Address [103 W Main St, Easley, SC, 29640](#)

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On Fri, Dec 27, 2024 at 1:59 PM Kimberly L. White <klwhite1@cityofchesapeake.net> wrote:

No signatures necessary right now.

Depending on what's negotiated, and if awarded the contract, we'll create a negotiations summary document with signature lines for both Geograph and the City or it'll be signed as part of the final complete contract.



Kimberly L. White, VCA

Procurement Specialist I

Purchasing Division

Office (757) 382-6359

Direct (757) 382-6923

www.CityofChesapeake.net

From: Josh Crozier <josh.crozier@geograph.tech>
Sent: Friday, December 27, 2024 1:43 PM
To: Kimberly L. White <klwhite1@cityofchesapeake.net>
Subject: Re: Chesapeake RFP 25-068-6328

ALERT: External E-mail. Use caution when opening attachments or clicking links.

Do you need that signed as well with the submission for today?

Josh Crozier
Sales Manager



Phone [800-674-4803 x701](tel:800-674-4803) Mobile [229-254-4109](tel:229-254-4109)

Website geograph.tech

Email josh.crozier@geograph.tech

Address [103 W Main St, Easley, SC, 29640](#)

GEOGRAPH Academy
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On Fri, Dec 27, 2024 at 1:34 PM Kimberly L. White <klwhite1@cityofchesapeake.net> wrote:

Hi Josh,

Confirming receipt of your response—thank you.

My Christmas was quiet, but very relaxing.

Hope you had a great holiday.

We will review and get back to you next week.

Saw your second message about contractor signatures.

If I have any questions about that after reading your response, I'll let you know.

Thanks and have a good weekend!

Kim



Kimberly L. White, VCA

Procurement Specialist I

Purchasing Division

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Direct (757) 382-6923

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From: Josh Crozier <josh.crozier@geograph.tech>
Sent: Friday, December 27, 2024 12:24 PM
To: Kimberly L. White <klwhite1@cityofchesapeake.net>
Subject: Re: Chesapeake RFP 25-068-6328

ALERT:External E-mail. Use caution when opening attachments or clicking links.

Kimberly,

Good Friday afternoon! I hope you and yours had a Merry Christmas! Attached is the RFP negotiation letter. Please let me know if you have any questions or concerns or if I missed anything.

Look forward to your reply

Happy New Years!!

Josh Crozier
Sales Manager



Phone [800-674-4803 x701](tel:800-674-4803) Mobile [229-254-4109](tel:229-254-4109)

Website geograph.tech

Email josh.crozier@geograph.tech

Address [103 W Main St, Easley, SC, 29640](#)

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Coming Soon!

[Learn More](#)

On Fri, Dec 20, 2024 at 12:27 PM Kimberly L. White <klwhite1@cityofchesapeake.net> wrote:

Good afternoon Josh,

Thank you again for Geograph's RFP response and oral presentation.

Congratulations, I am pleased to inform you that the Evaluation Committee has selected Geograph Technologies, LLC as a finalist for RFP 25-068-6328 Fiber Optic Network Asset Management Software.

See attached letter regarding negotiations and referenced documents.

Please reply no later than Monday, December 30, 2024, at 2:00 p.m. EST.

That deadline is for your initial response, we do not expect negotiations to be concluded by that time.

Scheduling around the holidays is difficult.

If you need additional time to respond or have any questions, please let me know.

Thank you and have a great holiday,

Kim



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As part of GEOGRAPH's formal RFP submission, we propose the following subscription type, license configuration and cost, as well as our Standard Annual Support subscription, and cost, and our standard, 2-day, instructor-led CrescentLink FMS training. Please see below for a more detailed explanation.

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TOTAL FIRST YEAR ONE-TIME COSTs (TRAINING)	\$4,800

The solicitation requested the pricing for the ‘initial term (5-years)’, as such, what would be the pricing for the optional five one-year renewal periods?

B. GEOGRAPH Proposed Contract Term:

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In response to the City of Chesapeake’s request for a 5-year, multi-year agreement, and if the City prefers, GEOGRAPH is proposing a 3-year contractual term for all subscription products. Please note that there is no pricing difference between a single-year contract term, a 3-year multi-year contract term, and a 5-year multi-year contract term. There are no discounts for a