



**Avineon Response to  
Request for Proposal No. 5882 Z1:  
Quality Assurance/Quality Control  
(QA/QC) Services for  
Geographic Information Systems (GIS)  
Data**

**ORIGINAL**

**August 6, 2018**

**AVINEON, INC.**

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**1. ORIGINAL REQUEST FOR PROPOSAL FOR CONTRACTUAL SERVICES FORM**

**1.1 RFP FOR CONTRACTUAL SERVICES FORM**

**REQUEST FOR PROPOSAL FOR CONTRACTUAL SERVICES FORM**

**BIDDER MUST COMPLETE THE FOLLOWING**

By signing this Request for Proposal for Contractual Services form, the bidder guarantees compliance with the procedures stated in this Request for Proposal, and agrees to the terms and conditions unless otherwise indicated in writing and certifies that bidder maintains a drug free work place.

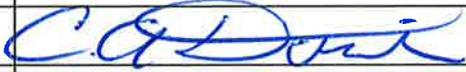
Per Nebraska's Transparency in Government Procurement Act, Neb. Rev Stat § 73-603 DAS is required to collect statistical information regarding the number of contracts awarded to Nebraska Contractors. This information is for statistical purposes only and will not be considered for contract award purposes.

\_\_\_\_\_ NEBRASKA CONTRACTOR AFFIDAVIT: Bidder hereby attests that bidder is a Nebraska Contractor. "Nebraska Contractor" shall mean any bidder who has maintained a bona fide place of business and at least one employee within this state for at least the six (6) months immediately preceding the posting date of this RFP.

\_\_\_\_\_ I hereby certify that I am a Resident disabled veteran or business located in a designated enterprise zone in accordance with Neb. Rev. Stat. § 73-107 and wish to have preference, if applicable, considered in the award of this contract.

\_\_\_\_\_ I hereby certify that I am a blind person licensed by the Commission for the Blind & Visually Impaired in accordance with Neb. Rev. Stat. §71-8611 and wish to have preference considered in the award of this contract.

**FORM MUST BE SIGNED USING AN INDELIBLE METHOD (NOT ELECTRONICALLY)**

FIRM:	Avineon, Inc.
COMPLETE ADDRESS:	1430 Spring Hill Road, Suite 300 McLean, Virginia 22102
TELEPHONE NUMBER:	703-671-1900
FAX NUMBER:	703-790-1286
DATE:	August 2, 2018
SIGNATURE:	
TYPED NAME & TITLE OF SIGNER:	Chadwick A. Davis, VP/General Counsel

**1.2 FORM A - BIDDER CONTACT SHEET**

**Form A  
Bidder Contact Sheet  
Request for Proposal Number 5882 Z1**

Form A should be completed and submitted with each response to this RFP. This is intended to provide the State with information on the bidder's name and address, and the specific person(s) who are responsible for preparation of the bidder's response.

Preparation of Response Contact Information	
Bidder Name:	Avineon, Inc.
Bidder Address:	1430 Spring Hill Road, Suite 300 McLean, Virginia 22102
Contact Person & Title:	Dan Brennan, Business Development Manager
E-mail Address:	dbrennan@avineon.com
Telephone Number (Office):	703-671-1900, ext. 281
Telephone Number (Cellular):	512-799-0630
Fax Number:	703-790-1286

Each bidder should also designate a specific contact person who will be responsible for responding to the State if any clarifications of the bidder's response should become necessary. This will also be the person who the State contacts to set up a presentation/demonstration, if required.

Communication with the State Contact Information	
Bidder Name:	Avineon, Inc.
Bidder Address:	1430 Spring Hill Road, Suite 300 McLean, Virginia 22102
Contact Person & Title:	Dan Brennan, Business Development Manager
E-mail Address:	dbrennan@avineon.com
Telephone Number (Office):	703-671-1900, ext. 281
Telephone Number (Cellular):	512-799-0630
Fax Number:	703-790-1286



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## 2. EXECUTIVE SUMMARY

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### 2.1 INTRODUCTION

For over 26 years, Avineon, Inc. (Avineon) has been a premier information technology (IT) services company with a long-standing and well-respected history in the geographical information system (GIS) industry. This work includes a full range of System Development Life Cycle (SDLC) projects using multiple technologies. We have been engaged in supporting federal, state, municipal, and utility customers with their data needs since our founding in 1992. Avineon offers customized and comprehensive solutions for our clients by leveraging our certified industry best practices and quality standards, while providing uncompromising value, minimal risk, and a rapid return on your investment.

With decades of experience in supporting government agencies, Avineon assists organizations with optimizing IT, GIS, and Quality Assurance/Quality Control (QA/QC) service delivery. Our consultants will guide the State of Nebraska (State) in optimizing your business processes and increasing the efficiency of your workforce. Our geospatial technicians can assist in enhancing the quality of your GIS data, collecting additional data, and leveraging the full functionality of your GIS. Finally, our integrated software solutions will provide your staff with better access to business-critical information and improved adherence to defined processes, thereby improving the quality of your services. Avineon's longstanding heritage provides governmental organizations with citizen-focused, results-oriented, and quality-based solutions.

### 2.2 PROPOSAL HIGHLIGHTS

Avineon has carefully reviewed the Request for Proposal (RFP) documentation (RFP 5882 Z1), the associated project requirements, and question and answer (Q&A) responses (and acknowledges receipt of Addenda 1 and 2). As such, we have a thorough understanding of the project. Our proposed solution offers the State Department of Administrative Services (DAS), Purchasing Bureau, Materiel Division numerous unique benefits, as demonstrated in this response. In particular, we bring our capabilities and experience to your attention in the following sections and throughout this proposal. As with all customer engagements, Avineon is dedicated to working closely with the State project teams to ensure that all project activities are executed in full conformance to specifications, on schedule, within cost, and to your complete satisfaction.

#### 2.2.1 Experience

Avineon is headquartered in McLean, Virginia and has work locations in the United States including Washington, DC; and St. Petersburg, Florida, as well as international offices in Europe, the Middle East, and Asia. We are capable of providing service anywhere in the U.S. with over 100 people nationwide and 1,000 globally. Avineon is appraised at Capability Maturity Model Integration Maturity Level 3 (CMMI ML3) for Development and Services (DEV/SVC), and is International Organization for Standardization (ISO) 9001:2015 registered. We have successfully delivered complex applications and quality solutions to the Department of Defense (DoD), Department Homeland Security (DHS), Housing and Urban Development (HUD), Department of Transportation (DOT), Department of Education, and the Department of the Treasury and its bureaus. Our GIS

customer base also includes state and local governments, as well as numerous commercial clients.

Avineon's approach to ensuring exceptional performance is based on proven, scalable management processes using industry best practice frameworks including IT Infrastructure Library (ITIL) v3, the Project Management Institute (PMI) Project Management Book of Knowledge (PMBOK), and Agile software development methods. Our management approach has the adaptability to align our customer's processes and provide tailored, cost effective processes improvements, resulting in successful execution of tasks on time and within budget.

Avineon's core GIS capabilities are described below.

- **GIS Technical Consulting** (including needs assessment, business process modeling, system development and design, applications development and integration). Avineon uses an assortment of tools to model, design, implement, and maintain a wide spectrum of GIS applications. Avineon creates GIS solutions for modeling, conversion, integration, and management that make the most effective use of clients' geospatial, facility, and business information. Avineon designs applications using Esri, ArcFM, GE Smallworld, Intergraph, Autodesk, and other GIS products.
- **GIS Data Processing Services.** Avineon has successfully completed numerous GIS data services projects for government agencies, large utility companies, and private sector enterprises to systems including Esri, Intergraph, Autodesk, GE Smallworld, MicroStation, and others. Specific service offerings include:
  - *Document Control.* Avineon has developed a document control system to monitor status and location, as well as maintain the security, of project documents.
  - *Records Preparation.* To meet specifications, we standardize sources, identify missing data, and research discrepancies as needed.
  - *Data Conversion and Migration.* Avineon uses the graphics/alphanumeric input methodology most suited to each project. Procedures may include scanning, heads-up digitizing, and software assisted or precision placement. For customers with existing GIS data, Avineon can assist with migration to a new GIS platform or upgrading to a new version of the current platform.
  - *Data Conflation.* Avineon utilizes a combination of automated tools and manual processes to conflate customer data to more accurate landbase data such as commercially available street centerline networks or custom orthophotography.
  - *Quality Control.* Avineon incorporates many quality control measures into our data services, ranging from manual comparison of map products and database reports to comprehensive automated processes. We have also performed acceptance testing on data and applications prepared by other contractors on behalf of our clients.
- **GIS Data Maintenance.** Changes to facility networks and landbase, whether from new construction or maintenance, require continuous updates to maintain the accuracy of your GIS. Avineon can help with eliminating an existing backlog

of work orders or assume full responsibility for your data maintenance operations. Maintenance services can be performed on-site at the customer location or remotely from one of Avineon's offices.

- **Photogrammetry.** Avineon's photogrammetric services include fully analytical aerial triangulation, landbase production, image interpretation, environmental resource inventory, digital terrain modeling (DTM) and digital elevation modeling (DEM), stereo compilation, planimetrics, hardcopy and softcopy orthophoto products, and volumetric computations.
- **Environmental and Resource Mapping.** Avineon offers extensive service and experience to clients in field reconnaissance, wetlands mapping, GPS survey, photogrammetry, environmental resource inventories, and geographic information systems. Avineon adapts mapping techniques and products to the specific needs of environmental clients such as federal, state, municipal, and county agencies. Clients such as utility companies, water management districts, and agricultural firms frequently rely on Avineon for wetland delineation, land use/cover, environmental impact analysis, delineation of critical habitats, soils, forestry, coastal and similar resource inventories. Interpretation has been accomplished using color infrared, black and white, and natural color photography.
- **Image Processing.** Avineon offers comprehensive digital image processing and analysis of remotely sensed data from multiple sources such as satellite, multi-spectral and hyperspectral airborne digital scanners and digital orthophotos. The imagery can be evaluated and enhanced to adjust and correct for sensor characteristics.

### 2.2.2 Quality

An ISO 9001:2015 registered company for *IT Services: Software Systems Design, Development, and Integration, CAD/GIS Development, and Engineering Services*, Avineon employs a variety of quality assurance techniques to monitor the effectiveness and efficiency of our production processes. When application development is required,

Avineon's Quality Management System incorporates the guidelines included in the Software Engineering Institute's Capability Maturity Model Integration (SEI-CMMI), an industry standard developed by SEI for assessing and improving software processes that result in higher quality and lower development times and costs. In March of this year, Avineon was independently assessed and recertified at CMMI ML3 (DEV/SVC). In complying with these standards, our skilled personnel routinely perform GIS data QA/QC services similar to the requirements of this solicitation.

- ISO 9001:2015 Registered
- CMMI Maturity Level 3 (DEV/SVC)

### 2.2.3 Security

Avineon has proven security measures in place at all of our facilities. We have satisfactorily secured customers' records and data without any loss of sensitive information since Avineon was founded, including extensive experience performing remote services for our customers. We also have experience in working with security consultants to ensure that any specific measures required

- ISO/IEC 27001:2005 Registered Information Security System

for a particular project are fully implemented. To further enhance security, Avineon's India facility has achieved independent certification of compliance with the ISO/IEC 27001 standard for information security management systems.

### 2.2.4 Capacity

Avineon employs over 1,000 well-trained staff members, some 500 of whom are dedicated to the performance of GIS-related services. We have previously mobilized a team of 300+ personnel for our projects. Our combined offices provide more than 40,000 square feet of production capacity and house hundreds of computer workstations and terabytes of network storage capacity. This capacity enables Avineon to assure the State of our ability to achieve the RFP schedule objectives. Avineon has successfully managed over \$200 million in federal work over the last 10 years, including significant prime contracts for DOD, DHS, Education, Treasury, and the Federal Aviation Administration (FAA).

- Over 1,000 Employees
- Over 150 Technicians Experienced with QA/QC of GIS Data

### 2.2.5 Supplier Diversity

Avineon is a minority-owned business and is a successful graduate of the U.S. Government's 8(a) Business Development Program for small disadvantaged businesses. We are certified as a minority business enterprise by the Supplier Clearinghouse of the California Public Utilities Commission (CHS Verification Order Number 99KN0015). In addition to being a certified MBE, Avineon is a U.S.-based company owned and operated by U.S. citizens.

- Successful 8(a) Program Graduate
- CPUC Certified Minority Business

### 2.2.6 Cost/Price

Avineon's price for this effort is detailed in *Section 6 Completed State Cost Proposal* of this document.

## 2.3 CONCLUSION

Avineon is confident in our ability to perform the GIS QA/QC services required by the State and we are committed to working closely with Department of Administrative Services (DAS), Materiel Division to ensure that the QA/QC with respect to GIS data will facilitate delivery of Next Generation (NG) 9-1-1 services. We will ensure that all tasks are executed in full conformance to specifications, at a competitive and reasonable cost, on schedule, and to your complete satisfaction. We look forward to the State Purchasing Bureau's (SPB) favorable review of our proposal, and to the opportunity develop a close working partnership with the State.



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### 3. COMPLETED CORPORATE OVERVIEW

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#### 3.1 BIDDER IDENTIFICATION AND INFORMATION

**Company Name:** Avineon Inc. (Avineon)

**Address of Company Headquarters:**

1430 Spring Hill Road, Suite 200

McLean, Virginia 22102

**Entity Organization:** Privately-held corporation

**State in which the bidder is incorporated:** Delaware

**Year in which the bidder first organized:** 1992

**Name and form of organization has changed since first organized:** Avineon was originally incorporated as Infotech Enterprises, Inc. The name was changed in 2002 as part of a corporate marketing initiative.

#### 3.2 FINANCIAL STATEMENTS

With 2017 annual revenues in excess of USD\$38 million, Avineon is a financially stable company. We have consistently achieved profitability each year since the company was founded in 1992 and we carry no debt. As a result, Avineon is a reliable firm with a strong Dun & Bradstreet rating (#78-218-4261) and sound financials.

As a privately held corporation, Avineon is not required to produce an annual report. Our annual financial statements are independently audited but are considered confidential. Avineon will consider client requests to review our financial statements upon execution of a nondisclosure agreement.

Avineon's banking reference is enclosed on the following page.

July 17, 2018

Annette Walton/ Jennifer Eloge  
Nebraska State Purchasing Bureau  
1526 K Street, Suite 130  
Lincoln, NE 68508

Re: Avineon, Inc. BB&T Banking Reference

To Whom It May Concern:

We at BB&T have the pleasure of working with Avineon, Inc. ("Avineon"). The company maintains a full banking relationship at BB&T, and we regard the company, and its management, highly. Based on an excellent track record of profitability and financial strength, Avineon has a \$5,000,000 line of credit with BB&T and significant borrowing capacity. There is currently no outstanding balance on the line of credit.

BB&T Corporation, headquartered in Winston-Salem, NC, is among the nation's top financial holding companies with more than \$223 billion in assets. Please reach out to myself or Lauren Shields (703-442-4033 or [Lauren.Shields@BBandT.com](mailto:Lauren.Shields@BBandT.com)) directly if any additional details are needed with regards to Avineon's banking relationship.

Sincerely,



Jessica Green  
Business Deposits Officer  
[jngreen@bbandt.com](mailto:jngreen@bbandt.com)  
703-442-4039

**3.3 CHANGE OF OWNERSHIP**

Avineon has no anticipated change in ownership or control of the company, nor is any anticipated during the twelve (12) months following the proposal due date.

**3.4 OFFICE LOCATION**

Headquartered in McLean, Virginia, Avineon also maintains domestic offices in Saint Petersburg, Florida; international offices in the United Kingdom, Canada, France, Belgium, Netherlands, United Arab Emirates, and India; and customer sites in Maryland, California, and Washington, D.C. Complete addresses for Avineon’s primary facilities are provided below.

Headquarters	Saint Petersburg, Florida
Avineon, Inc. 1430 Spring Hill Road, Suite 300 McLean, Virginia 22102, U.S.A. Phone 703-671-1900 Fax: 703-790-1286 Email: hrobertson@avineon.com Primary Contact: Heesun Robert- son	Avineon, Inc. 400 Carillon Parkway, Suite 200 St. Petersburg, Florida 77316 U.S.A. Phone: 727-539-1661 Fax: 727-530-0245 Email: jcampbell@avineon.com Primary Contact: Joel Campbell
Europe	Hyderabad, India
Avineon Europe Ltd. 83 Baker Street London, W1U 6AG United Kingdom Phone: +32 3 4882227 Email: pvanes@avineon.com Primary Contact: Peter Van Es	Avineon India Private Ltd. Cyber Gateway – Block A, 1st Floor HITEC City, Madhapur Hyderabad - 500081, India. Phone: 91.40.66632452 Fax: 91.40.66687399 Email: rganeshan@ avineonindia.com Primary contact: Raghu Gane- shan

Avineon’s Saint Petersburg, Florida office will have primary responsibility for manage-  
 ment of Nebraska’s QA/QC project.

**3.5 RELATIONSHIPS WITH THE STATE**

Avineon does not have any dealings with the State, nor have we ever worked on any  
 State contracts.

**3.6 BIDDER’S EMPLOYEE RELATIONS TO STATE**

None of the parties named in Avineon's proposal response is or was an employee of the  
 State within the past eighteen (18) months. We declare that no such relationship exists  
 or has existed. In addition, no employee of any agency of the State of Nebraska is em-  
 ployed by Avineon (nor as a subcontractor), as of the due date for proposal submission.  
 We declare that no such relationship exists.

### 3.7 CONTRACT PERFORMANCE

Avineon enjoys a 100% program and project success rate. In our corporate history, we have never had a contract terminated for default under any circumstance.

### 3.8 SUMMARY OF BIDDER’S CORPORATE EXPERIENCE

Avineon applies proven technical and business processes to support our customers. The following three project profiles demonstrate Avineon’s corporate experience of similar size, scope, and complexity as to this RFP.

#### 3.8.1 Avineon Reference Project 1 – Pacific Gas and Electric (PG&E) Pathfinder Gas Distribution Asset Management GIS Data Conversion

<b>Client:</b>	<b>Pacific Gas and Electric Company</b>
<b>Project:</b>	<b>Pathfinder Gas Distribution Asset Management GIS Data Conversion</b>
<b>Schedule:</b>	2013 - 2015
<b>Scope:</b>	Perform GIS data conversion for over 21,000 maps; 6,900 square miles; and 30,000 miles of pipeline.
<b>Customer Contact:</b>	Jesse Jennings Pacific Gas & Electric Company 375 North Wiget Lane Walnut Creek, California Tel: 707-797-1074 Email: <a href="mailto:JJJb@pge.com">JJJb@pge.com</a>
<b>Description:</b>	<p>Pacific Gas and Electric Company (PG&amp;E) provides natural gas and electric service to approximately 15 million people throughout a 70,000-square-mile service area in northern and central California. In 2012, PG&amp;E initiated the Pathfinder (Gas Distribution Asset Management) project and selected Avineon to support development of a GIS for gas distribution assets.</p> <p>As the prime contractor, Avineon converted gas distribution data from PG&amp;E’s MET maps to an Esri-based ArcFM GIS database (version 10.0.3). MET was PG&amp;E’s legacy electronic AutoCAD-based database of gas distribution plat maps. It included a combination of raster (TIF and PDF formats) and vector in AutoCAD format. In addition to the MET raster data, scanned images of original mylars were referenced when the MET raster data was illegible, thereby cutting down on the number of problem action reports requiring customer resolution. Landbase data compiled from TeleAtlas street centerline data, CoreLogic parcel data, and Esri’s StreetMap Pro was provided by PG&amp;E as background data for the placement of gas asset features.</p> <p>Data conversion was performed using Avineon’s Autodesk-based Data Conversion System (DCS). Once all of the map features were captured, Avineon performed internal QA/QC using ArcFM, GeoData Diagnostics, and a series of manual inspections. The reports from GeoData Diagnostics and GeoData Sentry were included with the converted data as part of each deliverable.</p>

	<p>Among the challenges encountered on the project were the differences in record-keeping practices between 16 divisions in a 40,000 square mile service area. Avineon provided on-site staff to assist PG&amp;E in reviewing all of the 16 divisions' source data, including a review and data model assessment for other potential data sources (e.g., gas service records, work orders, leak reports etc.) Where necessary, enhancements to the data model and data conversion specifications were made prior to division data conversion. This process was designed to help PG&amp;E ensure that data conversion was performed consistently system-wide.</p> <p>In addition to gas distribution conversion services, Avineon performed acceptance testing on electric distribution data converted by another contractor and on ArcFM data model modifications made by the software provider. The latter included both gas and electric models and involved testing conditions and functions to ensure all business requirements and functional specifications have been fulfilled.</p> <p>We have also supported PG&amp;E with Gas Service Record (GSR) linking (linking GSR records to services in GIS), review of ortho imagery for missing PG&amp;E gas facilities, capture of shared cross bore and cathodic protection riser data, and data acceptance testing for the Gas Distribution As-Built Records Collection (GD ARC) Project.</p> <p>The GD ARC project included development of a secure cloud portal for storing scanned records. This portal was accessible by everyone on the project team, including other contractors, and was maintained by Avineon for several months after conclusion of the main contract until PG&amp;E completed implementation of its local storage solution.</p>
<b>Budget:</b>	Confidential.

**3.8.2 Avineon Reference Project 2 – Sempra Utilities GIS Data Conversion**

<b>Client:</b>	<b>Sempra Utilities – Southern California Gas Company</b>
<b>Project:</b>	<b>GIS Data Conversion / Data Acceptance Testing / Atlas Review</b>
<b>Schedule:</b>	December 2008 – Ongoing
<b>Scope:</b>	Conversion of over 50,000 miles of gas pipeline
<b>Customer Contact:</b>	<p>Debbie Booy                  GIS Project Manager OPEX 20/20                  555 W. 5th Street                  Los Angeles, California 90013                  213-244-5462 Office                  213-247-1922 Mobile  <a href="mailto:dbooy@semprautilities.com">dbooy@semprautilities.com</a></p>

<p><i>Description:</i></p>	<p>Southern California Gas Company (SCG) is the nation’s largest natural gas distribution company with 5.4 million accounts, representing over 18 million customers. The SCG service area encompasses over 50,000 miles of gas pipeline located in 23,000 square miles of diverse terrain throughout most of Central and Southern California, from Visalia to the Mexican border. Sempra selected Avineon to perform the SCG portion of an enterprise-wide GIS migration/conversion from various sources to multiple target Esri geodatabases.</p> <p>As the prime contractor, Avineon’s original scope addressed the enterprise GIS requirements for the following SCG components of the overall project: gas distribution, gas transmission integration, land base, and backlog conversion and maintenance.</p> <p>SCG requirements for conversion, migration, integration, and conflation are:</p> <ul style="list-style-type: none"><li>• Creating a seamless, connected GIS gas facility database within the target enterprise GIS from the company’s source data</li><li>• Developing a geometrically correct pipeline routing and configuration from the company’s source data</li><li>• Capturing gas facility detail and event information from the existing SCG Atlas Sheets</li><li>• Capture and maintain connectivity and attribution currently available in the SCG NASA system.</li><li>• Capture pipeline dimensioning annotation and placing it relative to commercial landbase and conflated gas facilities.</li><li>• Capture SCG service geometry and attributes from Atlas sheets and utilize a programmatic approach to capture SCG service geometry and attributes from the CMS database.</li><li>• Capturing limited landbase features from SCG Atlas Sheets that do not appear on the commercial landbase to include: street width annotation, company easements, private roads, alleys, and landmarks required to reference pipeline locations.</li></ul> <p>Since project inception, Avineon was awarded additional tasks covering:</p> <ul style="list-style-type: none"><li>• DAT (Data Acceptance Testing) for other ongoing Sempra Company conversion project covering San Diego Gas &amp; Electric (SDG&amp;E) systems – this requires up to five onsite and offsite staff to assist with DAT efforts. SDG&amp;E provides gas and electric service to 3.4 million consumers through approximately 1.4 million electric meters and approximately 830,000 natural gas meters in San Diego and southern Orange Counties.</li><li>• Atlas Review - Requires up to 12 staff to complete review of various aspects of Sempra Atlas sheets and related Baker landbase to ensure improved placement and minimize anomalies encountered during the conversion project.</li><li>• Application Development - Avineon developed three GIS applications to</li></ul>
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support the enterprise conversion project:

- The Avineon Merge Tool was developed to load and merge converted data from individual delivery areas with Sempra's production geodatabase after acceptance testing. This application facilitates loading large batches of data into an Esri geodatabase while retaining existing global IDs (GUID) in order minimize the need to rebuild relationships and improve data load performance. Data merging processes also perform automated edge matching between adjacent delivery areas.
- Avineon developed the Post Migration Tool to detect and resolve duplicate gas work order history records in the post-append production database. This post process tool performs automated removal of duplicate records located in the final GASWORKHISTORY table that are present in the original client source table or are introduced during conversion of separate delivery areas that share these records. This process also reassigns relationships that were tied to the duplicate records.
- Avineon developed the CMS Service Tool application to semi-automate service placement using geocoded data available from the Sempra customer management system (CMS). This application allows physical placement of service assembly features or creation of a 'breakout' service record that is required for "many to one" scenarios where multiple CMS records are related to the same customer service parcel/location. This tool is also being retrofitted to accommodate building relationships between existing services and customer records in another area of the Sempra service territory.
- SDG&E As-Built Backlog Service Orders: Captured approximately 6,000 orders, making additions and updates to the existing data based on as built sketches (scanned pdf files) and field work. Performed production and QA/QC review.
- SDG&E Cathodic Protection: Added and updated existing features to complete approximately 120 cathodic protection areas in current GIS data. Performed production and QA/QC review.
- SDG&E Service Customers: Placed 244,754 unplaced service customers in the GIS using plat sources and a database with customer points.
- SCG Cathodic Protection: Added and updated existing features to complete approximately 20,000 cathodic protection areas in current GIS data using scanned sources. Performed production and QA/QC review
- SCG Medium and High Pressure District Data: - Performed attribute update and trace validation for all features in approximately 1,000 areas.
- SCG Isolation Area Updates: Updated facilities to isolate gas in emer-

	<p>gencies for approximately 800 areas.</p> <ul style="list-style-type: none"> <li>• SCG Leak Reports: Added over one million leak report features to main and service pipes for SCG regulatory compliance.</li> <li>• SCG Leak Survey Cycle Lines: Performed a variety of different task for these features including adding missing features, verifying accuracy from MicroStation sources, updating data, and modifying leak areas boundaries for improved accuracy.</li> <li>• SCG Services: Added approximately 254,000 unplaced services to current GIS data, relating correct customer to existing service features and updating attributes.</li> <li>• SCG Transmission and High Pressure Update: Added features and updated existing features in current GIS data using MicroStation sources.</li> <li>• SCG Backlog: Updating work and service orders in current GIS using MicroStation sources and scanned pdf service orders. This has been an ongoing task, with Avineon providing spare capacity when SCG regional records operations cannot keep up with changes in the field.</li> <li>• BTU and Section Boundaries: Adjusted boundaries per customer placement requirements.</li> </ul>
<b>Budget:</b>	Confidential.

**3.8.3 Avineon Reference Project 3 – Consumer’s Energy Data Acceptance Testing (DAT) of Converted Data**

<b>Client:</b>	<b>Consumer’s Energy Corporation</b>
<b>Project:</b>	<b>Data Acceptance Testing (DAT) of Converted Data</b>
<b>Schedule:</b>	March 22, 2018 to March 31, 2019
<b>Scope:</b>	<p>Consumers Energy is migrating gas services features, gas service related features, building footprints, and addressing information from a legacy system and .pdf documents to an enterprise Esri GIS. The Esri GIS will become the system of record and it is essential that all the information contained in the legacy system is appropriately migrated to the GIS.</p> <p>Avineon was contacted to perform Data Acceptance Testing (DAT) on the migrated data to ensure that data is complete and accurate. In total there will be 1.7 million sets of building footprints, addresses, and gas service information migrated. As portion of the DAT process Avineon assisted Consumers Energy to identify data acceptance criteria, define specific match rates for acceptance, and establish testing methodologies to ensure data was fully compliant with standards.</p> <p>Each data record converted or created is reviewed by the Avineon team, errors and identified, and discrepancy reports provided to the conversion vendor for correction. When standards are not met for specific records</p>

	those are returned for correction even if the entire data set meets the acceptance match requirements.
<i>Customer Contact:</i>	<p>Paula Lowry                  Project Manager                  Consumers Energy                  One Energy Plaza, office EP4-449                  Jackson, Mississippi 49201                  123-456-7890 Office                  123-456-7890 Mobile  <a href="mailto:Paula.Lowry@cmsenergy.com">Paula.Lowry@cmsenergy.com</a></p>
<i>Description:</i>	<p>Consumers Energy asset information is recorded in a variety of systems. Gas and electric transmission and distribution asset records were maintained in MicroStation CAD maps and in ESRI ArcGIS. Gas and electric service asset records are currently maintained within SIMS. SIMS is a standalone Oracle database system and SIMS contains records of gas and electric underground services. Service record details include data fields and images that illustrate the trench route for each of the approximately 1.7 million active and abandoned gas and 630,000 electric customers fed by sub-surface lines.</p> <p>As a prime contractor, Avineon is responsible for performing data acceptance testing to ensure that the information provided in a newly created Esri geodatabase meets prescribed accuracy requirements. The data that are being reviewed include the creation of a building polygon and the placement of a gas service location based on an address of the location. Addressing information is confirmed via comparison of gas service record data and street centerline locations. Topological reviews of these data are complete using Esri Data Reviewer to ensure that their gas networks are contiguous, where all features have proper attribution, and that metadata for each feature is accurate.</p>
<i>Budget:</i>	Confidential.

### 3.9 SUMMARY OF BIDDER’S PROPOSED PERSONNEL/MANAGEMENT APPROACH

Avineon’s project management approach rigorously applies the PMI PMBOK model. Avineon understands that an upfront investment in planning results in the best outcome for the entire project lifecycle. The PMI PMBOK model encompasses the following knowledge areas and process phases:

- Integration
- Scope
- Time
- Cost
- Quality
- Human Resources



- Communications
- Risk
- Procurement

Avineon believes that the key to any successful project is continuous planning and robust customer communication. Immediately following contract award, Avineon will request a preliminary planning meeting to identify any specific items that may have arisen, which may not have been in the original RFP. Once this information is gathered and the project execution plan is complete, Avineon will request a “kickoff” meeting where Avineon’s management team and appropriate production staff will meet with the designated State staff to:

- Review the technical requirements of the project against the proposed technical plan contained in Avineon’s proposal.
- Review the sources that are to be supplied by the State against the requirements and expectations of Avineon’s proposed work plan.
- Review the estimated resource plan.
- Review the project-specific Quality Plan presented at the meeting by Avineon. Included will be a review the product acceptance procedures, methods and criteria that will be used by the State to determine product conformance with product specifications.
- Review the proposed project schedule and finalize interim and final delivery dates.
- Review the schedule requirements by specific work tasks and the interdependencies of the sources of information to be supplied by the State.
- Define the parameters of a pilot where the proposed procedures will be tested for their ability to meet product specifications and/or the ability of the product specifications to meet the needs of the State.
- Define a formal change management process designed to effectively and efficiently track proposed modifications to contracts and specifications. This process will allow the State to make cost and benefit tradeoffs based on an analysis of the requested changes. It allows for the design, development, and implementation of modifications to production processes and procedures to be made in a controlled manner.
- Define all communication protocols and procedures that are necessary for effectively ensuring that both parties to the contract are informed about the production departments’ progress on each project task, that the sources are effective for the purpose intended, and the status of deliverable product reviews by the State.

We anticipate that the kickoff meeting will be held at State offices, but we welcome a customer visit to our production facilities at any time throughout the course of the project.

**Production Schedule:** Avineon’s Program Manager will review the production schedule contained in Avineon’s proposal during the project initiation meeting. This draft schedule, based upon our review of the RFP, may be re-evaluated after the completion of the pilot or prototype project and before the balance of the project is started, depending upon comments received by the State, if they impact the scope of work. It is anticipated that the State will review the pilot deliverables and provide comments to Avineon within

five days of receipt. If necessary, the resource requirements will be revised at both of these milestones before production of the balance of the project commences.

**Project Definition:** At Avineon, this begins with the preparation of a project execution plan that encompasses all elements of the program. The project execution plan establishes the overall goals, vision, organizational structure, project structure, deliverables, management plans and approach, technical baseline, schedule, cost, subcontract management, quality, and other key elements of the program. All the methods used to plan, monitor, and control the project are also identified in the execution plan.

**Communications Management:** Customer communication and status reporting is the most important aspect of project management. The continuous communication between Avineon and CE will provide insight to the project process and eliminate gaps in communication on technical and schedule issues. Avineon has a proven method of communication with our customers, and will review with the State, the best method to ensure constant contact throughout the project lifecycle.

Communication requirements will be incorporated and documented in the work plan. The specific requirements for each project are unique; therefore, the tracking and reporting tools and procedures necessary for effectively managing the project are established specifically for the State's project and maintained throughout the term of the contract.

**Meetings and Conference Calls:** Meeting minutes from project team meetings and conference calls will be produced and distributed by Avineon's Program Manager. These minutes shall include descriptions of the issues discussed during the meeting, their resolutions, and the necessary follow-up. All project records, including correspondence, reports, invoices, and specifications, will be maintained in the project files.

**Status Reports, Work Products, and Deliverables:** Avineon is committed to successful internal performance management and to providing customers with easy access to the status of their projects. We accomplish this by using a variety of proven tools.

Project status reporting is one of the most critical aspects of communication for large projects with many players and variables. As a result, Avineon utilizes three primary technologies to provide update information about the project to the State, including real-time web-based tracking reports.

**Written Status Reports:** Avineon's Program Manager will submit a weekly project status report to provide project team members with a common understanding of the important issues, procedures, and goals associated with the project. The report summarizes project activities completed over the past reporting period and those planned over the next similar time period. Information addressed in the project status report includes the following:

- Major activities completed during the most recent reporting period.
- Summary of data production status, including but not limited to listing of data accepted by the State and the status of the State's review of delivered data.
- Description of current project issues and procedures.
- Activities to be completed over the next reporting period.
- Data production forecasts for the next reporting period.
- List of requested action items.

- List of outstanding issues and action items.

**Status Calls:** Weekly status calls can also be held with the State to coordinate project activities and to review open issues noted in the status report. Exact times will be established with the State during the project initiation meetings. It is the Avineon Project Manager's responsibility to facilitate this call, document new actions, address the status of open issues, and assign action items. A sample agenda is as follows:

Major issues and action items completed for a specified time period

Critical issues and actions not completed and their potential impacts including, but not limited to, the State's review of deliverables and the schedule for source data delivery

- Production status.
- Action items for next reporting period.
- Upcoming action items and questions.

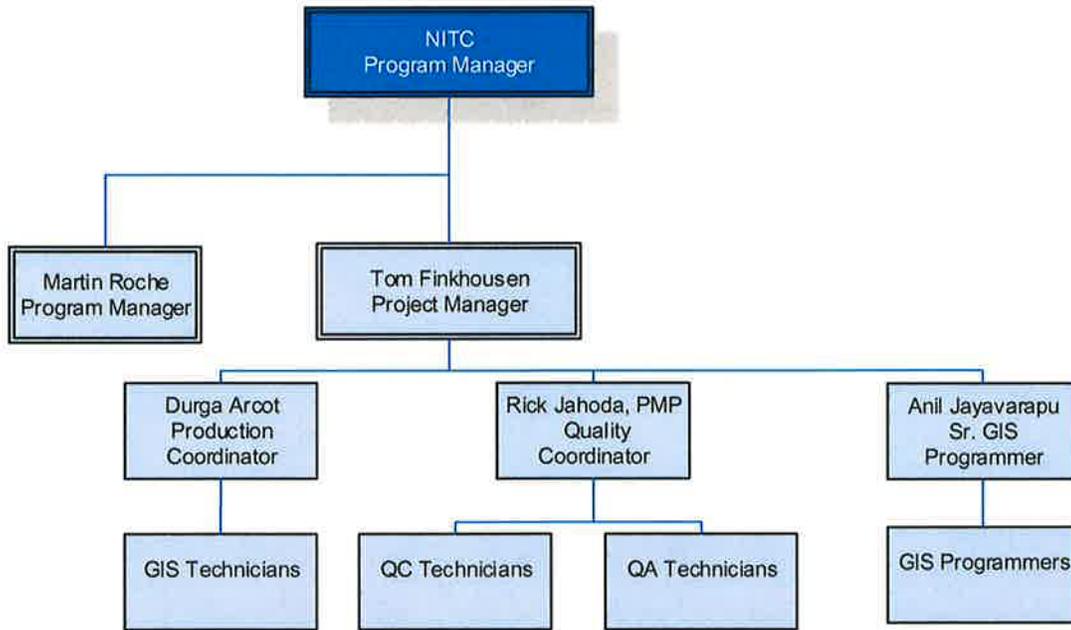
**Web Based Real-Time Status Reporting:** The Avineon Management Information System (AMIS) provides a real time dashboard function which will enable the State to view the current status of QA/QC and integration tool development efforts at any time.

**Bidder's Roles and Responsibilities:** Avineon staff members are aware of what they are authorized to undertake and responsible for achieving. This is ensured by documentation of responsibilities and authorities in specific procedures. All employees are responsible for following applicable policies, procedures, and work instructions. Additionally, every employee has the responsibility and authority to:

- Initiate action to prevent the occurrence of any nonconformities relating to product, process, and the QMS.
- Identify and record any problems relating to the product, process, and the QMS.
- Initiate, recommend, or provide solutions through designated channels.
- Control further processing and delivery of products until the deficiency has been corrected.
- Ensure that the State's source materials and other property, including intellectual property, is logged, utilized, stored, and returned in a controlled manner.

**Project Closeout:** Upon completion of the solution delivery, project closeout activities will commence. In addition to the *Project Closeout Report* and a "go live" status result, Avineon will ensure all deliverables, work products, training materials, audit reports, and final approvals have been executed and documented.

**Staffing Plan:** Avineon understands that a critical aspect of performance on any contract is the personnel assigned to support the program. In order to reduce risk, 100% of our staffing plan will be executed through incumbent Avineon employees. Our proposed organization structure is depicted in the graphic below.



Additionally the specific duties, functions, roles, and responsibilities of the personnel listed in the above organization chart are further detailed in the table below.

Labor Category	Position Description	Roles and Responsibilities
Program Manager	Project champion and serves as internal project oversight.	<ul style="list-style-type: none"> <li>• Customer advocate for the project.</li> <li>• Representative of Avineon senior management to ensure that resources are available to service project to successful conclusion.</li> </ul>
Project Manager	Day-to-day project execution and delivery.	<ul style="list-style-type: none"> <li>• Customer advocate for the project.</li> <li>• Responsible for project accomplishment on time and within budget.</li> <li>• Plans and documents weekly project status meetings and develop weekly status reports.</li> <li>• Prepares invoices and ensures compliance with ISO requirements.</li> </ul>
Production Coordinator	Overall coordination of project. Routine communications with PSAPs and NITC.	<ul style="list-style-type: none"> <li>• Leads customer service activities and daily report generation.</li> <li>• Provides coordination for the QA/QC team.</li> <li>• Prepares daily QA/QC progress reports for the PM.</li> <li>• Serves as the voice for coordination of the processes to ensure smooth communication with the team.</li> <li>• Responsible for ensuring additional resources are fully trained, follow project requirements, and perform work reviews of team products.</li> </ul>
Quality Coordinator	Overall responsibility for daily activities of the QA and QC teams.	<ul style="list-style-type: none"> <li>• Ensures the QA team is properly trained and operationally effective.</li> <li>• Responsible for review of training, performance of QA staff.</li> <li>• Assigns records to QA team members.</li> <li>• Responsible for signing off on QA team work products before reports are provided to the PM.</li> </ul>
Senior GIS Programmer	Overall responsibility for customized code and implementation of project portal.	<ul style="list-style-type: none"> <li>• Ensures that the application development team has firm understanding of program requirements.</li> <li>• Monitors portal performance to ensure suitable technical infrastructure in place to support requirements.</li> <li>• Responsible for testing plans, use case development, code documentation, training materials, etc.</li> </ul>

**Key Resumes:** Avineon is submitting the following resumes as key personnel to support this effort, it is understood that any changes in proposed personnel shall only be implemented after written approval from the State.

### 3.9.1 Program Manager – Martin Roche

#### Martin Roche, GISP – Avineon Director of GIS Services

##### Career Summary

Mr. Roche has been involved with GIS projects since 1990 and in a supervisory capacity since 1992. Mr. Roche currently serves as Avineon’s Director of GIS Services and Solutions holding responsibilities for the overall success of all GIS projects at the firm. Mr. Roche continues to serve as a Program Manager and SME for selected projects for municipal government, county government, and commercial customers.

With an academic background in urban planning and economic development, Mr. Roche has extensive experience in the application of GIS to asset management, data conversion, land use planning, comprehensive plan preparation, public participation, real estate, enterprise GIS design and implementation, transportation planning, plan implementation, land use controls, and zoning. He also has extensive experience in strategic and business planning surrounding the implementation and governance of enterprise GIS. Mr. Roche has directed several national, statewide or large regional data quality and addressing projects relevant to the Nebraska GIS QA/QC for NG9-1-1 requirements including:

- South Carolina statewide infrastructure GIS development;
- Michigan statewide spatial data framework (including road centerlines) implementation;
- Qatar national oil and gas infrastructure mapping and road navigation system implementation;
- Central Florida critical infrastructure multi-county data aggregation and normalization; and,
- City of Columbia 9-1-1 MSAG and centerline address unification project.

In addition to his duties at Avineon, Mr. Roche has been active in the Urban and Regional Information Systems Association (URISA) International, particularly on the task force creating standards. He serves as the President of the GIS Certification Institute, the organization that issues the GIS Professional (GISP) credential, and is on the board of the Coalition of Geospatial Organizations (COGO).

<b>Education and Certifications</b>	<ul style="list-style-type: none"> <li>• Master of City and Regional Planning, Clemson University</li> <li>• Bachelor of Arts, Urban Affairs, Virginia Polytechnic Institute and State University</li> <li>• GISP, GIS Certification Institute</li> <li>• Certified Economic Developer (CEcD), International Economic Development Council</li> <li>• Certificate in Government Management, South Carolina Executive Institute</li> </ul>	<b>Years of Experience</b>	28
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## Areas of Expertise

- Program and Project Management
- 3D Modeling
- Aerial Photography
- Asset Management
- Data management
- E-911
- Enterprise Data Management
- GIS Analysis
- Esri ArcGIS
- GIS Integration and Implementation
- Land Use Management
- Planning and Zoning
- President, GIS Certification Institute
- Treasurer, URISA

## Professional Experience

- Avineon, Inc.; Director of GIS Services; 2016 - Present
- GeoPlanning Services; Project Manager; 2008 - 2016
- Furgo EarthData; VP/General Manager, Solutions Division; 2004-2008
- Canin Associates; GIS Manager; 2003-2004
- South Carolina Department of Commerce; Director, IT; 1990-2003

## Selected Project Experience

- Qatar Petroleum - development of Esri geodatabase to support enterprise asset management of all above ground assets for the Qatar National Petroleum Corporation including aerial photography, compilation of features, field verification of feature attribution, 3D modeling, and in-car navigation system.
- State of Alaska Geospatial Strategic and Business Plans - for the Alaska Department of Transportation and Public Facilities completed a statewide GIS strategic and implementation plan.
- Central Florida Critical Infrastructure Mapping - under Federal grant developed ETL method and governance model for aggregation of GIS data from 16 counties with a population of over 6.9 million to be available for agencies responding to disasters
- State of Michigan Data Stewardship Plan - working with GIS community in Michigan to develop a shared model of data maintenance for critical statewide geospatial foundation data (roadways, parcels, geodetic control, etc.)
- State of Florida Aerial Photography Business Plan - completed an outreach and strategic planning activity to develop a unified aerial photography plan to best serve diverse users of these data at the state, county, and municipal levels.
- Orange County, FL Planning Data Management System - development of a system to allow the County Planning and Zoning Department to model compliance with development regulations and approvals including tracking of approved and constructed dwelling units, green space and public amenity acreage set-asides, on-site and off-site transportation improvements, and storm water management requirements.
- City of Columbia, SC Address Unification - completed project cleaning data issues with variable addressing systems in City and implement a master address system to ensure that databases from tax assessment, E-911, utility department, and others within municipal government did not become out of synch again.

- Orange County Public School District ArcGIS Server Design and Implementation— reviewed existing ESRI ArcSDE implementation for the 10th largest school district in the nation, recommended technical infrastructure and software for optimization of efforts for school assignment and bus routing, provided technical support for implementation of Esri's ArcGIS Server.
- Florida GIS Coordination Strategic Plan - working with Florida's GIS community through a structured outreach and strategic planning exercise developed a plan for Florida to coordinate GIS efforts at state, county, and municipal levels.
- Tampa Port Authority Enterprise GIS - a two-phase project to develop and implement an enterprise GIS for the port to manage environmental data and reporting, maintain real estate data, support asset management, and manage emergency response.
- Maryland Department of Natural Resources - modeled proposed electrical transmission lines to provide information to public meeting about visual impact of proposed transmission lines.
- South Florida Water Management District (SFWMD) - GIS application portal using ESRI technologies to access survey data such as bench markers and plat maps to aid in distribution of critical information and to help modernize access to these data.
- Richland County, SC Appraisal Data Viewer - a project to implement ArcGIS Server to allow the public to view property appraiser data in a GIS format
- Miami-Dade County Land Use Management Tool - reengineered the county's land-use maintenance function by exploring underlying assumptions and causes of bottlenecks and then rebuilding the workflow, preserving the organization's historic data
- Miami-Dade County Comprehensive Master Development Plan - migration of County's comprehensive planning related maps (land use, future land use, zoning) from paper to digital format and integration of these data with other GIS data
- MetroPlan Orlando, FL - for the regional Metropolitan Planning Organization in central Florida, updating their land use forecasting model and using the model to predict residential and commercial growth in support of long range transportation planning.
- South Carolina Department of Commerce - planned and implemented enterprise GIS to support economic development efforts of state and local agencies. GIS included available real estate (sites, buildings, and industrial parks), statewide water and sewer infrastructure, and critical workforce demographics.
- City of Clearwater, FL - implementation of an ArcGIS server based system to allow the generation of mailing labels and other mail-merged documents based on a user driven spatial query primarily used to support required legal notices for zoning changes and for mailing notices from the Department of Public Works.

### Personal References

1. Bill Shinar, Former State of Virginia GIS Coordinator; 2614 Thurloe Dr., Richmond, VA 23235; 804-323-0334
2. Darren Venn, GIS Lead, Alameda County, CA; 1106 Madison St., Oakland, CA 94607; 415-676-8056
3. Anne Miglarese, CEO Radiant.Earth; 5 Town Gate Ct, Bethesda, MD 20817; 240- 285-1584

### 3.9.2 Project Manager – Tom Finkhousen

#### Tom Finkhousen – Avineon Project Manager

##### Career Summary

Mr. Finkhousen has been involved with GIS projects since 1987 and in a supervisory capacity since 1989. As Project Manager, Mr. Finkhousen is responsible for the overall management of projects assigned to him. This includes developing a complete understanding of project specifications; allocating and managing project staff to meet individual client needs; resolving clarification issues; preparing and updating project manuals and all other project related documents; preparing time estimates and work allocation; conducting weekly review and feedback sessions with the project staff; determining programs to be developed and conducting reviews with programmers to assess pilot/prototype studies and related cost-benefit analyses; collecting data required for quality objectives to ensure compliance with project specifications and acceptance criteria. Mr. Finkhousen works closely with clients to develop suitable delivery schedules and progress status reporting systems.

In his previous role as Technical Project Coordinator, Mr. Finkhousen was responsible for project-specific start-up tasks such as the training and supervision of records technicians and workstation operators, working with software development staff to implement new applications, assisting in troubleshooting, setting up new projects, writing/revising documentation for GIS projects, and performing quality control inspections by running automated validation and verification processes against converted data prior to its delivery to the client.

Additionally, Mr. Finkhousen assists with benchmark studies of production methodologies; plans and assists in conducting research and development analyses; assists in the collection, input and compilation of corporate historical data; and provides support for sales activities and presentations, as required. Mr. Finkhousen also provides continuing technical support, as needed, throughout the duration of all projects to which he is assigned. Mr. Finkhousen has a thorough knowledge of graphics workstation operations, and is knowledgeable and experienced in the use of major software packages, including ESRI, GE Smallworld, MicroStation, and Intergraph.

<b>Education and Certifications</b>	<ul style="list-style-type: none"> <li>• Associates Degree in Applied Science - Architectural Drafting and Design</li> <li>• ESRI ArcGIS Training - 2005, Tampa, Florida</li> <li>• Smallworld GIS Training - 1995, Denver, Colorado</li> </ul>	<b>Years of Experience</b>	31
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##### Areas of Expertise

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| <ul style="list-style-type: none"> <li>• Project Management</li> <li>• CAD and GIS platforms</li> <li>• GIS Data Analysis</li> <li>• GIS Training</li> <li>• Graphic Workstation Operations</li> </ul> | <ul style="list-style-type: none"> <li>• LIDAR</li> <li>• Esri ArcFM and ArcGIS</li> <li>• GE SmallWorld</li> <li>• MicroStation</li> <li>• Intergraph FRAMME</li> </ul> |
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## Professional Experience

- Avineon, Inc.; Project Manager; 2013 - Present

## Selected Project Experience

- National Grid - Migration of gas utility and landbase data from National Grid's Rhode Island SmallWorld GIS, downstate New York NRG GIS, and upstate New York SmallWorld GIS, to ArcGIS/ArcFM.
- DTS - Extraction of graphic and attribute data to analyze the condition of features visible in still and video imagery, along with a variety of GPS and other spatial data, captured by mobile street survey vehicles. Activities include capture and evaluation of data related pavement quality, street sign inventory and condition, and utility inventory and condition.
- Pickett & Associates - Support for aerial digital photo and LiDAR production. Services include orthophoto production, DEM/DSM production from LiDAR, and other GIS-related services. Classifications captured from LiDAR data vary depending on end user requirements and may include water, vegetation, buildings, etc.
- Pacific Gas and Electric - Spatially adjusted 62,000 GEMS maps containing landbase, gas, and electric facilities for PG&E's 70,000 square mile service territory to match the accuracy of a commercial landbase product.
- Hawaii Electric Company - Correction of errors in HECO's G/Technology database as identified by Intergraph's Spatial Data Upgrade tool.
- iFactor - Supported iFactor in development and execution of test scripts for software testing of custom Small world GTO applications.
- Pasadena Water and Power - Conversion, quality control, and backlog maintenance of city-wide electric facility data from hard copy maps in an ESRI ArcGIS 9.3.1 SDE geodatabase environment.
- Chicago Department of Water Management/Chicago Water Partners - GIS data model review and updates; conversion of city-wide water facility data from multiple data sources to ArcGIS.
- San Antonio Water - Update and enhance water infrastructure topology data previously migrated from MicroStation DGN files to ArcSDE 9.2.
- Omaha Public Power District - Migration of electric utility data from FRAMME to G/Tech.
- GE Energy - Working with GE Energy performing data mapping for the migration of Duke Energy Smallworld data from 2 disparate Smallworld 3.1 and 3.2 models to new Smallworld 4 product suite model.
- NorthWestern Energy - GIS data clean-up and realignment services for NWE's underground electric facilities, gas facilities, and landbase information.
- Kansas City Power & Light - Developed the data migration design and coded the KCPL data model, performed migration of KCPL's electric facility and landbase data from Smallworld to G/Technology.

- City of Richmond Department of Public Utilities - Conversion of city-wide water facility data from Atlas Maps, Service Plats and Break & Leak data using ESRI ArcGIS 9.2 and migrated into ArcSDE, which included GIS data model review & updates.
- El Paso Electric - Integration of electric facilities data from field survey data (OH) and scanned image conversion (UG) for final delivery of ArcGIS/ArcFM geodatabase.
- Greenville Utilities - Conversion and migration of electric utility asset information from underground raster maps and vector data into an intelligent ArcGIS geodatabase.
- Wisconsin Public Service - Conversion of electric distribution system to GENS Smallworld GIS.
- Snohomish Public Utilities District - Migration of existing electric facilities data from a cadastral landbase to a landbase incorporating new digital orthophotography and new cadastral data (Intergraph FRAMME).
- Baltimore Gas & Electric Company - Conversion of hard copy electric feeder maps to MicroStation 8.x.
- Baltimore Gas & Electric Company - Development and conversion of landbase data to the Smallworld platform.
- Michigan Consolidated Gas Company - Conversion of 1,548 square miles of gas main and service facilities to Intergraph FRAMME format.
- Copenhagen Energy - Conversion of underground electric utility features to Smallworld.
- NV PNEM Electric & Gas - Conversion Pilot project for electric and gas facilities to Smallworld format. Full conversion for electric facilities model.
- Commonwealth Gas Company - Landbase development and conversion of facilities for entire 1090 square mile service area.
- Southern California Gas - Network Analysis System Map Conversion and hybrid raster/vector mapping.

### Personal References

1. Robert W. Dorau, Eversource Project Manager; 107 Selden St, Berlin, CT 06037; 860-665-5820; [robert.dorau@eversource.com](mailto:robert.dorau@eversource.com)
2. Mike Chiasson, GIS Coordinator, Pasadena Water and Power; 1055 E Colorado Blvd, Suite 350 Pasadena, CA 9110; 626-744-7169 [mchiasson@cityofpasadena.net](mailto:mchiasson@cityofpasadena.net)
3. Joe Sanzo; 555 W. 5th Street; Office GT10A9; Los Angeles, CA 90013; 727-420-5623; [JSanzo@seucontractor.com](mailto:JSanzo@seucontractor.com)

### 3.9.3 Quality Coordinator – Rick Jahoda

#### Rick Jahoda – Avineon Project Manager

##### Career Summary

Mr. Jahoda has over 25 years of experience in the GIS industry, specializing in utility data con-version. As technical coordinator for GIS data services, he is highly instrumental in the creation, conversion, and maintenance of records for electric, gas, water, and sewer utilities; municipalities and government agencies; and private sector companies.

Mr. Jahoda has been involved in all phases of project execution including prototype pilot studies, cost-benefit analyses, and full conversion efforts. His experience in project implementation includes specifications development, internal staff and client training, and software development. He has also been responsible for the direct supervision of project staff, and budget and schedule adherence for Avineon’s GIS activities.

<b>Education and Certifications</b>	<ul style="list-style-type: none"> <li>• A.A., Structural Drafting Design</li> <li>• Certificate of Completion in two-year Computer Science Program</li> <li>• Certificate in Project Management, Saint Petersburg Jr. College</li> <li>• Certified Project Management Professional (PMP)</li> <li>• Intergraph Registered Consultant for A-E-C Training</li> <li>• Intergraph Registered Consultant for FRAMME Implementation</li> <li>• Completed the NIMS ICS 100, and 200 training courses</li> </ul>	<b>Years of Experience</b>	25
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##### Areas of Expertise

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| <ul style="list-style-type: none"> <li>• AutoCAD</li> <li>• Budgeting and Scheduling</li> <li>• Database Management and Conversion</li> <li>• Digital Orthophotography</li> <li>• Esri ArcGIS, ArcFM, and ArcInfo</li> <li>• EZ Centricity</li> </ul> | <ul style="list-style-type: none"> <li>• GIS Data Services and Management</li> <li>• Intergraph A-C-E and FRAMME</li> <li>• Program and Project Management</li> <li>• Smallworld</li> <li>• Topographic Solutions</li> <li>• Utilities: electric, gas, water, and sewer</li> </ul> |
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##### Professional Experience

- Avineon, Inc.; Project Manager
- City of Dunedin, Florida, Public Works Department; GIS Maintenance Division

##### Selected Project Experience

- Technical Support Manager, Pacific Gas & Electric – Data acceptance testing on Gas Service Records which were scanned and processed by another vendor. The

total number of scanned GSR's was over 14 million, representing over 3.3 million gas distribution services.

- Technical Support Manager, Sempra Utilities (San Diego Electric) – Data acceptance testing on electric utility GIS data converted by another contractor. The converted data represents 41,331 square miles of service territory, over 3 million electric customers.
- Technical Coordinator, Southern California Edison Company – Pilot consolidation of existing electric primary circuit data and electric secondary / streetlight data into Autodesk Topobase from Smallworld and AutoCAD sources.
- Technical Coordinator, Sempra Energy – Conversion, conflation, and backlog work order posting of gas utility data in ArcGIS.
- Technical Coordinator, Northwestern Energy – GIS data clean-up and realignment services for NWE's underground electric facilities, gas facilities, and landbase information.
- Project Manager, Snohomish Public Utilities District – Migration of existing electric facilities data from a cadastral landbase to a landbase incorporating new digital orthophotography and new cadastral data (Intergraph FRAMME).
- Project Manager, CES/Bermuda Electric Light Company – Conversion/migration in support of the implementation of CES's EZ Centricity software.
- Project Manager, California Water Company- Conversion of water facilities data to ESRI's ArcInfo GIS platform.
- Project Manager, Helix Water District – Conversion of water facilities data to the Smallworld GIS platform.
- Project Manager, Questar Regulated Services – Gas pipeline transmission data conversion to the Intergraph FRAMME platform.
- Project Manager, Southern California Gas Company – Conversion of gas facilities features to the Intergraph FRAMME format.
- Project Manager, National Fuel Gas – Consulting, scanning and vectorization of landbase and gas transmission and distribution facilities to Intergraph FRAMME format.
- Project Manager, CSX Real Property, Inc. - Conversion of railway company property records to the Intergraph MGE platform.

### Personal References

1. Dave Ridderikhoff, Ram Tech Senior Account Manager; 813-503-3675;  
[dridderikhoff@gmail.com](mailto:dridderikhoff@gmail.com)
2. Kyle Oedewaldt, Principal Consultant @ MagikMinds; 309-208-4656;  
[kyle.oedewaldt@eversource.com](mailto:kyle.oedewaldt@eversource.com)
3. Ken Lenser, GD GIS Solutions Power Engineering; 414-350-8286;  
[Ken.lenser@powereng.com](mailto:Ken.lenser@powereng.com)

### 3.9.4 Production Coordinator – Durga Arcot

Durga Arcot – Avineon Senior Project Manager			
Career Summary			
<p>Mr. Arcot is a Senior Project Manager at Avineon. He is responsible for the management, development, and implementation of engineering projects for Avineon’s North American clients. He has more than 18 years of technical experience in domains including gas, electric, water and telecom utilities, which includes 14 years of management experience. He began working for Avineon in 1998 as a CAD/GIS engineer and was promoted to Project Lead based on his outstanding performance in 2001. He was again promoted to Project Manager in 2002 and became a Senior Project Manager in 2006.</p>			
<b>Education and Certifications</b>	<ul style="list-style-type: none"> <li>Bachelor’s Degree in Sociology, Osmania University, Hyderabad, India (2002-2005)</li> <li>PG Diploma in Computer Applications – (1996-1997)</li> <li>Diploma in Civil Engineering, Hyderabad, India – (1993 – 1996)</li> <li>Advanced AutoCAD and Auto lisp Programming, ESCI – Hyderabad (Feb - Apr 1997)</li> <li>LRQA- ISO Internal Auditor Training, Hyderabad – Jan 2003</li> <li>Leadership and Organizational Development – ASCI, Hyderabad, Jan 2005</li> <li>MicroStation Essentials and Applying Geographics, Mar 2005</li> <li>Certified Prince2 practitioner (Project Management Course) – APMG, London UK May 2009 and April 2014</li> </ul>	<b>Years of Experience</b>	19
Areas of Expertise			

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>Program and Project Management</li> <li>CAD and GIS Platforms</li> <li>QA/QC</li> <li>Gas, Electric, Water, and Telecom Utilities</li> <li>End-user Training</li> </ul> | <ul style="list-style-type: none"> <li>AutoCAD</li> <li>ArcFM / ArcGIS</li> <li>MicroStation</li> <li>MS Office / MS Access / MS Project</li> <li>Microsoft Dynamics AX</li> <li>Visio</li> </ul> |
|--|---|

#### Professional Experience

- Avineon, Inc.; Senior Project Manager; 1998 - Present

#### Selected Project Experience

In his current role, Mr. Arcot provides management support for major customers and projects. For instance, he traveled to the United Kingdom for a long term assignment with a major European client. He led a large onshore team of 70+ people in the UK as well as 350+ people at Avineon’s India facility during this period.

He has successfully executed numerous multi-year contracts from project initiation stage through to the final delivery and deployment. This includes overall responsibility for account management, project management, budgeting, resource management, designing and benchmarking work flows, methodology development, customer relationship management, internal training, and end user training.

Mr. Arcot is highly knowledgeable and has extensive experience in managing projects using the Prince2 methodology. Mr. Arcot was Prince2 Practitioner Certified initially in 2009 and was re-registered as Practitioner again in 2014. His technical skills include software platforms such as AutoCAD, MicroStation, Telcordia Network Engineer, ArcGIS, ArcFM, MS Office, MS Access, MS Project, Visio, Salesforce Professional, and Microsoft Dynamics AX.

Additional work history includes:

- 19 years of overall experience, including 14 years of Project Management.
- Managed multiple large project teams in excess of 350 (offshore) and in excess of 70 onshore (UK) and in the USA.
- Project management and vendor management for British Telecommunications in the UK.
- 14 successful years of management experience, project planning, setup, execution, delivery and deployment of large offshore and onshore contracts.
- Full end to end involvement in project life cycle with both utilities and telecom domain projects.
- Standardizing quality benchmarks and coordinating quality audits.

### Personal References

1. Mr. Rajesh Belde; 1420 Thunder Gulch Pass, Suwanee, GA 30024; 408-368-2048
2. Mr. Sudhakar Vegesna; 44 Albert Ct, Randolph, NJ 07869; 732-277-7053
3. Mr. Kishore Bagam; 179 Bright Poppy, Irvine, CA 92618; 714-768-0617

### 3.9.5 Senior GIS Programmer – Anil Jayavarapu

#### Anil Jayavarapu – Avineon Principal Consultant

##### Career Summary

Mr. Jayavarapu joined Avineon in 1997 and has over 22 years of enterprise software implementation and consulting services experience including technical delivery management, program management, project management, product development, sales engineering and technical support. He is a certified project management profession (PMP) and certified process professional (CPP), specializes in configuration and customization of multiple GIS, BPM, BI, CAD, CRM technology platforms to roll out desktop, web, and mobile applications for automating and improving business processes.

He facilitates and coordinates technical workshops, orientation sessions, and training sessions to achieve a common understanding on the vision, solution, and change for technology deployments. He successfully managed scope, quality, schedule, and customer satisfaction on many complex and multi-year projects. He oversees the compliance of projects to Avineon’s CMMI and ISO processes. He is formally trained and experienced in multiple technology platforms including ArcGIS, ArcFM, Appian BPM, Microstrategy, Microsoft Dynamics, Maximo, AutoCAD, MicroStation, Smallworld, associated SDKs and APIs. He is also trained in FEMA’s Incident Command System (ICS) and Business Continuity Framework (BS25999) from British Standards Institute.

Mr. Jayavarapu led teams comprised for employees, contractors and offshore resources through various life cycles including Rational Unified Process, Agile, and DevOps for U.S. and international customers from electric, gas, water utilities, banking, local and federal government organizations. He delivered presentations at multiple conferences and published white papers.

<b>Education and Certifications</b>	<ul style="list-style-type: none"> <li>• Certificate in Business Administration, Georgetown University</li> <li>• Master of Science in Civil, Environmental and Infrastructure Engineering, George Mason University</li> <li>• Bachelor of Science in General Studies, Southeastern University</li> <li>• Diploma in Mechanical Engineering, Jawaharlal Nehru Government University</li> </ul>	<b>Years of Experience</b>	23
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##### Areas of Expertise

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• Applications Development</li> <li>• RUP, Agile, and DevOps</li> <li>• Business Continuity Framework</li> <li>• CAD and GIS platforms</li> <li>• CMMI (DEV/SVC)</li> <li>• ISO Processes</li> <li>• FEMA ICS</li> </ul> | <ul style="list-style-type: none"> <li>• Appian BPM</li> <li>• Avineonics</li> <li>• AutoCAD</li> <li>• Esri ArcFM and ArcGIS</li> <li>• Maximo</li> <li>• Microsoft Dynamics</li> <li>• MicroStation</li> </ul> |
|---|--|

## Professional Experience

- Avineon, Inc.; Principal Consultant; 1997 - Present

## Selected Project Experience

- Director, Software Solutions - Manage software product road maps, product development teams, product implementation teams, product support teams in working with customers, prospects, and partners. Also support business development team with win strategies, sales engineering activities, demonstrations, proof of value initiatives, marketing campaigns, technical proposals, and pricing.
- Director, BPM Practice - Led the piloting, prototyping, and development of licensable process based web/mobile applications on BPM and GIS technologies. Evaluated the suitability of several customer use cases for engineering and productizing solutions using BPM technology. Also responsible for developing and sustaining the operational capability for delivering BPM services.
- Technical Delivery Manager, City of Henderson, NV - Led the implementation of Avineon's product Metrics Extension to ArcGIS Server to automate data intelligence and reporting from ArcGIS enterprise Geodatabase.
- Technical Delivery Manager, City of Pasadena, CA - Led the implementation of Avineon's product Metrics Extension to ArcGIS Server to automate data intelligence and reporting from ArcGIS enterprise Geodatabase.
- Product Manager, Metrics Extension to ArcGIS Server - Led the team through the architecture, design, development, and testing of four software releases.
- Technical Delivery Manager, Emirates Nuclear Energy Corporation - Led the team through the implementation of web/mobile solution to track and manage the regulation compliance for emergency preparedness, eight year drills and exercise cycle.
- Technical Delivery Manager, Piedmont Natural Gas - Led the team through the implementation and two upgrades of GE Geospatial Analytics product for Spatial Lead Analysis, Spatial Data Warehouse, Enterprise Web Viewing and integration with Microsoft Dynamics CRM.
- Technical Delivery Manager, US West Bank - Led the team through the prototyping of process driven web application for new customer onboard and check book printing.
- Technical Delivery Manager, ITC Holdings - Led the team through the implementation and two upgrade projects of a web/mobile solution to track resources and logistics across 9 states during emergency activations.
- Technical Delivery Manager, Central Hudson Gas and Electric - Led the team through the implementation, OMS integration, cloud hosting, and upgrade projects of a web/mobile solution to dispatch, asses, and track field resources to respond to wire down events. The solution involved the integration of Appian BPM and Esri ArcGIS Online.
- Management Consultant, El Paso Electric – Led the team through the development of Incident Management Plan, Crisis Management Plan and Crisis Communication Plan.

- Management Consultant, Cleco - Led the team through the update of existing Incident Management Plan for implementing Incident Command System.
- Principal Consultant, Dubai Electric Water Authority - Facilitated meetings and workshops with business and IT departments to gather requirements, analyze gaps, identify improvement opportunities and delivered a multi-year GIS road map. The road map included prioritization and scope of multiple projects for software functionality (ArcGIS/ArcFM), data enrichment, process improvement, and systems integration.
- Technical Delivery Manager, DC Public Service Commission - Led the team through the development, implementation and upgrade of web based solution for consumer complaints management, adherence of business rules from consumer bill of rights and automated quarterly and annual reporting.
- Technical Delivery Manager, Pepco Holdings, Inc. - Led the team through the piloting of a web based escalated complaints management system.
- Product Manager, Avineonics Outage Restoration Management Suite - Led the team through the architecture, design, and development of five releases. The solution is focused on emergency preparedness and incident management functionality and is to enable organizations institutionalize the practice of FEMA's Incident Command System.
- Consultant – Business Process Outsourcing, Center Point Energy - Led the training and mobilization of off-shore team to as-built data in Enterprise GIS through Citirx.
- Consultant, Social Security Administration – Developed specifications for automation and productivity tools to improve standardization of multi-disciplinary engineering drawings -structural, architectural, electric, plumbing, HVAC, etc. in AutoCAD.
- On-Site Project Manager, Pepco Holdings, Inc. - Managed the Avineon's on-site team of programmers, analysts, technicians supporting enterprise deployment of ArcGIS, ArcFM, ArcFM Designer with integrations to Logica's Work Management System, IBM's Maximo, Customer Information System, Outage Management System, Mobile Dispatch System and Energy Management System.
- Data Model and Configuration Lead, Pepco Holdings, Inc. - Served as data model lead to solicit user requirements and configure, customize ArcFM/ArcGIS to address the requirements for mapping, symbology, data editing, and engineering design.
- Web Developer, Pepco - Developed several J2EE and .NET web applications for querying and reporting.
- Project Coordinator, City of Hartford, CT - Coordinated the conversation of delivery of maps for water, sanitary and sewer from paper to ArcGIS.

## Personal References

1. Aries Page, Software Developer, Sempra Utilities, 213-231-9162;  
[apage@semprautilities.com](mailto:apage@semprautilities.com)
2. David Plemons, Supervisor - GIS Spatial Analytics, Piedmont Natural Gas; 704-731-4514; [david.plemons@piedmontng.com](mailto:david.plemons@piedmontng.com)
3. David Derasavage, Manager of GIS, Pepco Holdings; (302) 379-5095;  
[david.derasavage@pepcoholdings.com](mailto:david.derasavage@pepcoholdings.com)

### 3.10 SUBCONTRACTORS

Avineon is making this offer on the strength of our capabilities alone. We do not anticipate the need for any subcontractor support. We will oblige should the State have a unique need and direct us to bring a specific vendor as a subcontractor. Conversely we may reach out to a vast network of prospective business partners to meet any future requirement in order to best meet the needs of the State.



**4. COMPLETED RFP SECTIONS II THROUGH VI**

**4.1 RFP SECTION II TERMS AND CONDITIONS**

Bidders should complete Sections II through VI as part of their proposal. Bidder is expected to read the Terms and Conditions and should initial either accept, reject, or reject and provide alternative language for each clause. The bidder should also provide an explanation of why the bidder rejected the clause or rejected the clause and provided alternate language. By signing the RFP, bidder is agreeing to be legally bound by all the accepted terms and conditions, and any proposed alternative terms and conditions submitted with the proposal. The State reserves the right to negotiate rejected or proposed alternative language. If the State and bidder fail to agree on the final Terms and Conditions, the State reserves the right to reject the proposal. The State of Nebraska is soliciting proposals in response to this RFP. The State of Nebraska reserves the right to reject proposals that attempt to substitute the bidder's commercial contracts and/or documents for this RFP.

The bidders should submit with their proposal any license, user agreement, service level agreement, or similar documents that the bidder wants incorporated in the contract. The State will not consider incorporation of any document not submitted with the bidder's proposal as the document will not have been included in the evaluation process. These documents shall be subject to negotiation and will be incorporated as addendums if agreed to by the Parties.

If a conflict or ambiguity arises after the Addendum to Contract Award have been negotiated and agreed to, the Addendum to Contract Award shall be interpreted as follows:

- If only one Party has a particular clause then that clause shall control;
- If both Parties have a similar clause, but the clauses do not conflict, the clauses shall be read together;
- If both Parties have a similar clause, but the clauses conflict, the State's clause shall control.

**A. GENERAL**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CP			

The contract resulting from this RFP shall incorporate the following documents:

- Request for Proposal and Addenda;
- Amendments to the RFP;
- Questions and Answers;
- Contractor's proposal (RFP and properly submitted documents);
- The executed Contract and Addendum One to Contract, if applicable; and,
- Amendments/Addendums to the Contract.

These documents constitute the entirety of the contract.

Unless otherwise specifically stated in a future contract amendment, in case of any conflict between the incorporated documents, the documents shall govern in the following order of preference with number one (1) receiving preference over all other documents and with each lower numbered document having preference over any higher numbered document: 1) Amendment to the executed Contract with the most recent dated amendment having the highest priority, 2) executed Contract and any attached Addenda, 3) Amendments to RFP and any Questions and Answers, 4) the original RFP document and any Addenda, and 5) the Contractor's submitted Proposal.

Any ambiguity or conflict in the contract discovered after its execution, not otherwise addressed herein, shall be resolved in accordance with the rules of contract interpretation as established in the State of Nebraska.

**B. NOTIFICATION**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
			

Contractor and State shall identify the contract manager who shall serve as the point of contact for the executed contract.

Communications regarding the executed contract shall be in writing and shall be deemed to have been given if delivered personally or mailed, by U.S. Mail, postage prepaid, return receipt requested, to the parties at their respective addresses set forth below, or at such other addresses as may be specified in writing by either of the parties. All notices, requests, or communications shall be deemed effective upon personal delivery or three (3) calendar days following deposit in the mail.

**C. GOVERNING LAW (Statutory)**

Notwithstanding any other provision of this contract, or any amendment or addendum(s) entered into contemporaneously or at a later time, the parties understand and agree that, (1) the State of Nebraska is a sovereign state and its authority to contract is therefore subject to limitation by the State's Constitution, statutes, common law, and regulation; (2) this contract will be interpreted and enforced under the laws of the State of Nebraska; (3) any action to enforce the provisions of this agreement must be brought in the State of Nebraska per state law; (4) the person signing this contract on behalf of the State of Nebraska does not have the authority to waive the State's sovereign immunity, statutes, common law, or regulations; (5) the indemnity, limitation of liability, remedy, and other similar provisions of the final contract, if any, are entered into subject to the State's Constitution, statutes, common law, regulations, and sovereign immunity; and, (6) all terms and conditions of the final contract, including but not limited to the clauses concerning third party use, licenses, warranties, limitations of liability, governing law and venue, usage verification, indemnity, liability, remedy or other similar provisions of the final contract are entered into specifically subject to the State's Constitution, statutes, common law, regulations, and sovereign immunity.

The Parties must comply with all applicable local, state and federal laws, ordinances, rules, orders, and regulations.

**D. BEGINNING OF WORK**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
			

The bidder shall not commence any billable work until a valid contract has been fully executed by the State and the successful Contractor. The Contractor will be notified in writing when work may begin.

**E. CHANGE ORDERS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CP			

The State and the Contractor, upon the written agreement, may make changes to the contract within the general scope of the RFP. Changes may involve specifications, the quantity of work, or such other items as the State may find necessary or desirable. Corrections of any deliverable, service, or work required pursuant to the contract shall not be deemed a change. The Contractor may not claim forfeiture of the contract by reasons of such changes.

The Contractor shall prepare a written description of the work required due to the change and an itemized cost sheet for the change. Changes in work and the amount of compensation to be paid to the Contractor shall be determined in accordance with applicable unit prices if any, a pro-rated value, or through negotiations. The State shall not incur a price increase for changes that should have been included in the Contractor's proposal, were foreseeable, or result from difficulties with or failure of the Contractor's proposal or performance.

No change shall be implemented by the Contractor until approved by the State, and the contract is amended to reflect the change and associated costs, if any. If there is a dispute regarding the cost, but both parties agree that immediate implementation is necessary, the change may be implemented, and cost negotiations may continue with both Parties retaining all remedies under the contract and law.

**F. NOTICE OF POTENTIAL CONTRACTOR BREACH**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CP			

If Contractor breaches the contract or anticipates breaching the contract, the Contractor shall immediately give written notice to the State. The notice shall explain the breach or potential breach, a proposed cure, and may include a request for a waiver of the breach if so desired. The State may, in its discretion, temporarily or permanently waive the breach. By granting a waiver, the State does not forfeit any rights or remedies to which the State is entitled by law or equity, or pursuant to the provisions of the contract. Failure to give immediate notice, however, may be grounds for denial of any request for a waiver of a breach.

**G. BREACH**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
		CP	Avineon proposes deletion of the language that indicates non-payment by the State is not a breach. Payment is the State's primary obligation under the agreement and failure to pay should be a breach of the agreement.

Either Party may terminate the contract, in whole or in part, if the other Party breaches its duty to perform its obligations under the contract in a timely and proper manner. Termination requires written notice of default and a thirty (30) calendar day (or longer at the non-breaching Party's discretion considering the gravity and nature of the default) cure period. Said notice shall be delivered by Certified Mail, Return Receipt Requested, or in person with proof of delivery. Allowing time to cure a failure or breach of contract does not waive

the right to immediately terminate the contract for the same or different contract breach which may occur at a different time. In case of default of the Contractor, the State may contract the service from other sources and hold the Contractor responsible for any excess cost occasioned thereby.

~~The State's failure to make payment shall not be a breach, and the Contractor shall retain all available statutory remedies and protections.~~

**H. NON-WAIVER OF BREACH**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CD			

The acceptance of late performance with or without objection or reservation by a Party shall not waive any rights of the Party nor constitute a waiver of the requirement of timely performance of any obligations remaining to be performed.

**I. SEVERABILITY**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CD			

If any term or condition of the contract is declared by a court of competent jurisdiction to be illegal or in conflict with any law, the validity of the remaining terms and conditions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the contract did not contain the provision held to be invalid or illegal.

**J. INDEMNIFICATION**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CD			

**1. GENERAL**

The Contractor agrees to defend, indemnify, and hold harmless the State and its employees, volunteers, agents, and its elected and appointed officials ("the indemnified parties") from and against any and all third party claims, liens, demands, damages, liability, actions, causes of action, losses, judgments, costs, and expenses of every nature, including investigation costs and expenses, settlement costs, and attorney fees and expenses ("the claims"), sustained or asserted against the State for personal injury, death, or property loss or damage, arising out of, resulting from, or attributable to the willful misconduct, negligence, error, or omission of the Contractor, its employees, subcontractors, consultants, representatives, and agents, resulting from this contract, except to the extent such Contractor liability is attenuated by any action of the State which directly and proximately contributed to the claims.

**2. INTELLECTUAL PROPERTY**

The Contractor agrees it will, at its sole cost and expense, defend, indemnify, and hold harmless the indemnified parties from and against any and all claims, to the extent such claims arise out of, result from, or are attributable to, the actual or alleged infringement or misappropriation of any patent, copyright, trade secret, trademark, or confidential information of any third party by the Contractor or its employees, subcontractors, consultants, representatives, and agents; provided, however, the State gives the Contractor prompt notice in writing of the claim. The Contractor may not settle any infringement claim that will affect the State's use of the Licensed Software without the State's prior written consent, which consent may be withheld for any reason.

If a judgment or settlement is obtained or reasonably anticipated against the State's use of any intellectual property for which the Contractor has indemnified the State, the Contractor shall, at the Contractor's sole cost and expense, promptly modify the item or items which were determined to be infringing, acquire a license or licenses on the State's behalf to provide the necessary rights to the State to eliminate the infringement, or provide the State with a non-infringing substitute that provides the State the same functionality. At the State's election, the actual or anticipated judgment may be treated as a breach of warranty by the Contractor, and the State may receive the remedies provided under this RFP.

**3. PERSONNEL**

The Contractor shall, at its expense, indemnify and hold harmless the indemnified parties from and against any claim with respect to withholding taxes, worker's compensation, employee benefits, or any other claim, demand, liability, damage, or loss of any nature relating to any of the personnel, including subcontractors and their employees, provided by the Contractor.

**4. SELF-INSURANCE**

The State of Nebraska is self-insured for any loss and purchases excess insurance coverage pursuant to Neb. Rev. Stat. § 81-8,239.01 (Reissue 2008). If there is a presumed loss under the provisions of this agreement, Contractor may file a claim with the Office of Risk Management pursuant to Neb. Rev. Stat. §§ 81-8,829 – 81-8,306 for review by the State Claims Board. The State retains all rights and immunities under the State Miscellaneous (Section 81-8,294), Tort (Section 81-8,209), and Contract Claim Acts (Section 81-8,302), as outlined in Neb. Rev. Stat. § 81-8,209 et seq. and under any other provisions of law and accepts liability under this agreement to the extent provided by law.

5. The Parties acknowledge that Attorney General for the State of Nebraska is required by statute to represent the legal interests of the State, and that any provision of this indemnity clause is subject to the statutory authority of the Attorney General.

**K. ATTORNEY'S FEES**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
C.D.			

In the event of any litigation, appeal, or other legal action to enforce any provision of the contract, the Parties agree to pay all expenses of such action, as permitted by law and if order by the court, including attorney's fees and costs, if the other Party prevails.



**L. ASSIGNMENT, SALE, OR MERGER**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

Either Party may assign the contract upon mutual written agreement of the other Party. Such agreement shall not be unreasonably withheld.

The Contractor retains the right to enter into a sale, merger, acquisition, internal reorganization, or similar transaction involving Contractor's business. Contractor agrees to cooperate with the State in executing amendments to the contract to allow for the transaction. If a third party or entity is involved in the transaction, the Contractor will remain responsible for performance of the contract until such time as the person or entity involved in the transaction agrees in writing to be contractually bound by this contract and perform all obligations of the contract.

**M. CONTRACTING WITH OTHER NEBRASKA POLITICAL SUB-DIVISIONS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

The Contractor may, but shall not be required to, allow agencies, as defined in Neb. Rev. Stat. §81-145, to use this contract. The terms and conditions, including price, of the contract may not be amended. The State shall not be contractually obligated or liable for any contract entered into pursuant to this clause. A listing of Nebraska political subdivisions may be found at the website of the Nebraska Auditor of Public Accounts.

**N. FORCE MAJEURE**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

Neither Party shall be liable for any costs or damages, or for default resulting from its inability to perform any of its obligations under the contract due to a natural or manmade event outside the control and not the fault of the affected Party ("Force Majeure Event"). The Party so affected shall immediately make a written request for relief to the other Party, and shall have the burden of proof to justify the request. The other Party may grant the relief requested; relief may not be unreasonably withheld. Labor disputes with the impacted Party's own employees will not be considered a Force Majeure Event.

**O. CONFIDENTIALITY**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
<i>AS</i>			

All materials and information provided by the Parties or acquired by a Party on behalf of the other Party shall be regarded as confidential information. All materials and information provided or acquired shall be handled in accordance with federal and state law, and ethical standards. Should said confidentiality be breached by a Party, the Party shall notify the other Party immediately of said breach and take immediate corrective action.

It is incumbent upon the Parties to inform their officers and employees of the penalties for improper disclosure imposed by the Privacy Act of 1974, 5 U.S.C. 552a. Specifically, 5 U.S.C. 552a (i)(1), which is made applicable by 5 U.S.C. 552a (m)(1), provides that any officer or employee, who by virtue of his/her employment or official position has possession of or access to agency records which contain individually identifiable information, the disclosure of which is prohibited by the Privacy Act or regulations established thereunder, and who knowing that disclosure of the specific material is prohibited, willfully discloses the material in any manner to any person or agency not entitled to receive it, shall be guilty of a misdemeanor and fined not more than \$5,000.

**P. EARLY TERMINATION**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
<i>AS</i>			

The contract may be terminated as follows:

The State and the Contractor, by mutual written agreement, may terminate the contract at any time.

The State, in its sole discretion, may terminate the contract for any reason upon thirty (30) calendar day's written notice to the Contractor. Such termination shall not relieve the Contractor of warranty or other service obligations incurred under the terms of the contract. In the event of termination the Contractor shall be entitled to payment, determined on a pro rata basis, for products or services satisfactorily performed or provided.

The State may terminate the contract immediately for the following reasons:

if directed to do so by statute;

Contractor has made an assignment for the benefit of creditors, has admitted in writing its inability to pay debts as they mature, or has ceased operating in the normal course of business; a trustee or receiver of the Contractor or of any substantial part of the Contractor's assets has been appointed by a court;

fraud, misappropriation, embezzlement, malfeasance, misfeasance, or illegal conduct pertaining to performance under the contract by its Contractor, its employees, officers, directors, or shareholders;

an involuntary proceeding has been commenced by any Party against the Contractor under any one of the chapters of Title 11 of the United States Code and (i) the proceeding has been pending for at least sixty (60) calendar days; or (ii) the Contractor has consented, either expressly or by operation of law, to the entry of an order for relief; or (iii) the Contractor has been decreed or adjudged a debtor;

a voluntary petition has been filed by the Contractor under any of the chapters of Title 11 of the United States Code;

Contractor intentionally discloses confidential information;

Contractor has or announces it will discontinue support of the deliverable; and,

In the event funding is no longer available.

**Q. CONTRACT CLOSEOUT**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

Upon contract closeout for any reason the Contractor shall within 30 days, unless stated otherwise herein:

- Transfer all completed or partially completed deliverables to the State;
- Transfer ownership and title to all completed or partially completed deliverables to the State;
- Return to the State all information and data, unless the Contractor is permitted to keep the information or data by contract or rule of law. Contractor may retain one copy of any information or data as required to comply with applicable work product documentation standards or as are automatically retained in the course of Contractor's routine back up procedures;
- Cooperate with any successor Contractor, person or entity in the assumption of any or all of the obligations of this contract;
- Cooperate with any successor Contractor, person or entity with the transfer of information or data related to this contract;
- Return or vacate any state owned real or personal property; and,
- Return all data in a mutually acceptable format and manner.

Nothing in this Section should be construed to require the Contractor to surrender intellectual property, real or personal property, or information or data owned by the Contractor for which the State has no legal claim.

**4.2 RFP SECTION III CONTRACTOR DUTIES**

**A. INDEPENDENT CONTRACTOR / OBLIGATIONS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

It is agreed that the Contractor is an independent contractor and that nothing contained herein is intended or should be construed as creating or establishing a relationship of employment, agency, or a partnership.

The Contractor is solely responsible for fulfilling the contract. The Contractor or the Contractor's representative shall be the sole point of contact regarding all contractual matters.

The Contractor shall secure, at its own expense, all personnel required to perform the services under the contract. The personnel the Contractor uses to fulfill the contract shall have no contractual or other legal relationship with the State; they shall not be considered employees of the State and shall not be entitled to any compensation, rights or benefits from the State, including but not limited to, tenure rights, medical and hospital care, sick and vacation leave, severance pay, or retirement benefits.

By-name personnel commitments made in the Contractor's proposal shall not be changed without the prior written approval of the State. Replacement of these personnel, if approved by the State, shall be with personnel of equal or greater ability and qualifications.

All personnel assigned by the Contractor to the contract shall be employees of the Contractor or a subcontractor, and shall be fully qualified to perform the work required herein. Personnel employed by the Contractor

tor or a subcontractor to fulfill the terms of the contract shall remain under the sole direction and control of the Contractor or the subcontractor respectively.

With respect to its employees, the Contractor agrees to be solely responsible for the following:

- Any and all pay, benefits, and employment taxes and/or other payroll withholding;
  - Any and all vehicles used by the Contractor's employees, including all insurance required by state law;
  - Damages incurred by Contractor's employees within the scope of their duties under the contract;
  - Maintaining Workers' Compensation and health insurance that complies with state and federal law and submitting any reports on such insurance to the extent required by governing law; and
  - Determining the hours to be worked and the duties to be performed by the Contractor's employees.
- All claims on behalf of any person arising out of employment or alleged employment (including without limit claims of discrimination alleged against the Contractor, its officers, agents, or subcontractors or subcontractor's employees)

If the Contractor intends to utilize any subcontractor, the subcontractor's level of effort, tasks, and time allocation should be clearly defined in the bidder's proposal. The Contractor shall agree that it will not utilize any subcontractors not specifically included in its proposal in the performance of the contract without the prior written authorization of the State.

The State reserves the right to require the Contractor to reassign or remove from the project any Contractor or subcontractor employee.

Contractor shall insure that the terms and conditions contained in any contract with a subcontractor does not conflict with the terms and conditions of this contract.

The Contractor shall include a similar provision, for the protection of the State, in the contract with any subcontractor engaged to perform work on this contract.

**B. EMPLOYEE WORK ELIGIBILITY STATUS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

The Contractor is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of employees physically performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of an employee.

If the Contractor is an individual or sole proprietorship, the following applies:

The Contractor must complete the United States Citizenship Attestation Form, available on the Department of Administrative Services website at <http://das.nebraska.gov/materiel/purchasing.html>

The completed United States Attestation Form should be submitted with the RFP response.

If the Contractor indicates on such attestation form that he or she is a qualified alien, the Contractor agrees to provide the US Citizenship and Immigration Services documentation required to verify the Contractor's lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.

The Contractor understands and agrees that lawful presence in the United States is required and the Contractor may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. §4-108.

**C. COMPLIANCE WITH CIVIL RIGHTS LAWS AND EQUAL OPPORTUNITY EMPLOYMENT / NONDISCRIMINATION (Statutory)**

The Contractor shall comply with all applicable local, state, and federal statutes and regulations regarding civil rights laws and equal opportunity employment. The Nebraska Fair Employment Practice Act prohibits Contractors of the State of Nebraska, and their subcontractors, from discriminating against any employee or applicant for employment, with respect to hire, tenure, terms, conditions, compensation, or privileges of employment because of race, color, religion, sex, disability, marital status, or national origin (Neb. Rev. Stat. §48-1101 to 48-1125). The Contractor guarantees compliance with the Nebraska Fair Employment Practice Act, and breach of this provision shall be regarded as a material breach of contract. The Contractor shall insert a similar provision in all subcontracts for services to be covered by any contract resulting from this RFP.

**D. COOPERATION WITH OTHER CONTRACTORS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

Contractor may be required to work with or in close proximity to other contractors or individuals that may be working on same or different projects. The Contractor shall agree to cooperate with such other contractors or individuals, and shall not commit or permit any act which may interfere with the performance of work by any other contractor or individual. Contractor is not required to compromise Contractor's intellectual property or proprietary information unless expressly required to do so by this contract.

**E. PERMITS, REGULATIONS, LAWS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

The contract price shall include the cost of all royalties, licenses, permits, and approvals, whether arising from patents, trademarks, copyrights or otherwise, that are in any way involved in the contract. The Contractor shall obtain and pay for all royalties, licenses, and permits, and approvals necessary for the execution of the contract. The Contractor must guarantee that it has the full legal right to the materials, supplies, equipment, software, and other items used to execute this contract.

**F. OWNERSHIP OF INFORMATION AND DATA / DELIVERABLES**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
		CA	Avineon has proposed revisions intended to protect our ownership interest in our tools of the trade and know-how that will be used on the project so that we may indemnify future clients against third party intellectual property infringement as we are doing for the State in <i>Section 4.1.J</i> above.

The State shall have the unlimited right to publish, duplicate, use, and disclose all information and data developed or obtained by the Contractor on behalf of the State pursuant to this contract.

The State shall own and hold exclusive title to any data deliverable developed as a result of this contract. Contractor shall have no ownership interest or title, and shall not patent, license, or copyright, duplicate, transfer, sell, or exchange, the design, specifications, concept, or data deliverables. Contractor shall retain ownership of all custom software applications and documented processes used on the project and all modifications thereto. Contractor shall provide the State a perpetual license to use executable versions of such tools as required. No ownership of third party applications used on the project is transferred hereunder.

**G. INSURANCE REQUIREMENTS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
			Avineon has reduced the coverage amounts to reflect our existing levels of coverage. Avineon's price proposal is based on the State's acceptance of these levels of coverage.

The Contractor shall throughout the term of the contract maintain insurance as specified herein and provide the State a current Certificate of Insurance/Acord Form (COI) verifying the coverage. The Contractor shall not commence work on the contract until the insurance is in place. If Contractor subcontracts any portion of the Contract the Contractor must, throughout the term of the contract, either:

- Provide equivalent insurance for each subcontractor and provide a COI verifying the coverage for the subcontractor;
- Require each subcontractor to have equivalent insurance and provide written notice to the State that the Contractor has verified that each subcontractor has the required coverage; or,
- Provide the State with copies of each subcontractor's Certificate of Insurance evidencing the required coverage.

The Contractor shall not allow any subcontractor to commence work until the subcontractor has equivalent insurance. The failure of the State to require a COI, or the failure of the Contractor to provide a COI or require subcontractor insurance shall not limit, relieve, or decrease the liability of the Contractor hereunder.

In the event that any policy written on a claims-made basis terminates or is canceled during the term of the contract or within (two (2) years of termination or expiration of the contract, the Contractor shall obtain an extended discovery or reporting period, or a new insurance policy, providing coverage required by this contract for the term of the contract and two (2) years following termination or expiration of the contract.

If by the terms of any insurance a mandatory deductible is required, or if the Contractor elects to increase the mandatory deductible amount, the Contractor shall be responsible for payment of the amount of the deductible in the event of a paid claim.

Notwithstanding any other clause in this contract, the State may recover up to the liability limits of the insurance policies required herein.

**6. WORKERS' COMPENSATION INSURANCE**

The Contractor shall take out and maintain during the life of this contract the statutory Workers' Compensation and Employer's Liability Insurance for all of the contractors' employees to be engaged in work on the project under this contract and, in case any such work is sublet, the Contractor shall require the subcontractor similarly to provide Worker's Compensation and Employer's Liability Insurance for all of the subcontractor's employees to be engaged in such work. This policy shall be written to meet the statutory requirements for the state in which the work is to be performed, including Occupational Disease. **The policy shall include a waiver of subrogation in favor of the State. The COI shall contain the mandatory COI subrogation waiver language found hereinafter.** The amounts of such insurance shall not be less than the limits stated hereinafter. For employees working in the State of Nebraska, the policy must be written by an entity authorized by the State of Nebraska Department of Insurance to write Workers' Compensation and Employer's Liability Insurance for Nebraska employees.

**7. COMMERCIAL GENERAL LIABILITY INSURANCE AND COMMERCIAL AUTOMOBILE LIABILITY INSURANCE**

The Contractor shall take out and maintain during the life of this contract such Commercial General Liability Insurance and Commercial Automobile Liability Insurance as shall protect Contractor and

any subcontractor performing work covered by this contract from claims for damages for bodily injury, including death, as well as from claims for property damage, which may arise from operations under this contract, whether such operation be by the Contractor or by any subcontractor or by anyone directly or indirectly employed by either of them, and the amounts of such insurance shall not be less than limits stated hereinafter.

The Commercial General Liability Insurance shall be written on an **occurrence basis**, and provide Premises/Operations, Products/Completed Operations, Independent Contractors, Personal Injury, and Contractual Liability coverage. **The policy shall include the State, and others as required by the contract documents, as Additional Insured(s).** This policy shall be primary, and any insurance or self-insurance carried by the State shall be considered secondary and non-contributory. **The COI shall contain the mandatory COI liability waiver language found hereinafter.** The Commercial Automobile Liability Insurance shall be written to cover all Owned, Non-owned, and Hired vehicles.

<b>REQUIRED INSURANCE COVERAGE</b>	
<b>COMMERCIAL GENERAL LIABILITY</b>	
General Aggregate	\$2,000,000
Products/Completed Operations Aggregate	\$2,000,000
Personal/Advertising Injury	\$1,000,000 per occurrence
Bodily Injury/Property Damage	\$1,000,000 per occurrence
Medical Payments	\$10,000 any one person
Damage to Rented Premises (Fire)	\$300,000 each occurrence
Contractual	Included
Independent Contractors	Included
<i>If higher limits are required, the Umbrella/Excess Liability limits are allowed to satisfy the higher limit.</i>	
<b>WORKER'S COMPENSATION</b>	
Employers Liability Limits	\$500K/\$500K/\$500K
Statutory Limits- All States	Statutory - State of Nebraska
Voluntary Compensation	Statutory
<b>COMMERCIAL AUTOMOBILE LIABILITY</b>	
Bodily Injury/Property Damage	\$1,000,000 combined single limit
Include All Owned, Hired & Non-Owned Automobile liability	Included
Motor Carrier Act Endorsement	Where Applicable
<b>UMBRELLA/EXCESS LIABILITY</b>	
Over Primary Insurance	\$54,000,000 per occurrence
<b>PROFESSIONAL LIABILITY</b>	
All Other Professional Liability (Errors & Omissions)	\$1,000,000 Per Claim / Aggregate
<b>COMMERCIAL CRIME</b>	
Crime/Employee Dishonesty Including 3rd Party Fidelity	\$1,000,000
<b>CYBER LIABILITY</b>	
Breach of Privacy, Security Breach, Denial of Service, Remediation, Fines and Penalties	\$102,000,000
<b>MANDATORY COI SUBROGATION WAIVER LANGUAGE</b>	
"Workers' Compensation policy shall include a waiver of subrogation in favor of the State of Nebraska."	
<b>MANDATORY COI LIABILITY WAIVER LANGUAGE</b>	
"Commercial General Liability & Commercial Automobile Liability policies shall name the State of Nebraska as an Additional Insured and the policies shall be primary and any insurance or self-insurance carried by the State shall be considered secondary and non-contributory as additionally insured."	

If the mandatory COI subrogation waiver language or mandatory COI liability waiver language on the COI states that the waiver is subject to, condition upon, or otherwise limit by the insurance poli-

cy, a copy of the relevant sections of the policy must be submitted with the COI so the State can review the limitations imposed by the insurance policy.

**8. EVIDENCE OF COVERAGE**

The Contractor shall furnish the Contract Manager, with a certificate of insurance coverage complying with the above requirements prior to beginning work at:

911 Director  
 Nebraska Public Service Commission  
 300 The Atrium, 1200 N Street  
 P.O. Box 94927  
 Lincoln, NE 68509

These certificates or the cover sheet shall reference the RFP number, and the certificates shall include the name of the company, policy numbers, effective dates, dates of expiration, and amounts and types of coverage afforded. If the State is damaged by the failure of the Contractor to maintain such insurance, then the Contractor shall be responsible for all reasonable costs properly attributable thereto.

Reasonable notice of cancellation of any required insurance policy must be submitted to the contract manager as listed above when issued and a new coverage binder shall be submitted immediately to ensure no break in coverage.

**9. DEVIATIONS**

The insurance requirements are subject to limited negotiation. Negotiation typically includes, but is not necessarily limited to, the correct type of coverage, necessity for Workers' Compensation, and the type of automobile coverage carried by the Contractor.

**H. ANTITRUST**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

The Contractor hereby assigns to the State any and all claims for overcharges as to goods and/or services provided in connection with this contract resulting from antitrust violations which arise under antitrust laws of the United States and the antitrust laws of the State.

**I. CONFLICT OF INTEREST**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

By submitting a proposal, bidder certifies that there does not now exist a relationship between the bidder and any person or entity which is or gives the appearance of a conflict of interest related to this RFP or project.

The bidder certifies that it shall not take any action or acquire any interest, either directly or indirectly, which will conflict in any manner or degree with the performance of its services hereunder or which creates an actual or an appearance of conflict of interest.

The bidder certifies that it will not knowingly employ any individual known by bidder to have a conflict of interest.

The Parties shall not knowingly, for a period of two years after execution of the contract, recruit or employ any employee or agent of the other Party who has worked on the RFP or project, or who had any influence on decisions affecting the RFP or project.

**J. STATE PROPERTY**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

The Contractor shall be responsible for the proper care and custody of any State-owned property which is furnished for the Contractor's use during the performance of the contract. The Contractor shall reimburse the State for any loss or damage of such property; normal wear and tear is expected.

**K. SITE RULES AND REGULATIONS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

The Contractor shall use its best efforts to ensure that its employees, agents, and subcontractors comply with site rules and regulations while on State premises. If the Contractor must perform on-site work outside of the daily operational hours set forth by the State, it must make arrangements with the State to ensure access to the facility and the equipment has been arranged. No additional payment will be made by the State on the basis of lack of access, unless the State fails to provide access as agreed to in writing between the State and the Contractor.

**L. ADVERTISING**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

The Contractor agrees not to refer to the contract award in advertising in such a manner as to state or imply that the company or its services are endorsed or preferred by the State. Any publicity releases pertaining to the project shall not be issued without prior written approval from the State.

**M. NEBRASKA TECHNOLOGY ACCESS STANDARDS (Statutory)**

Contractor shall review the Nebraska Technology Access Standards, found at <http://nitc.nebraska.gov/standards/2-201.html> and ensure that products and/or services provided under the contract are in compliance or will comply with the applicable standards to the greatest degree possible. In the event such standards change during the Contractor's performance, the State may create an amendment

to the contract to request the contract comply with the changed standard at a cost mutually acceptable to the parties.

**N. DISASTER RECOVERY/BACK UP PLAN**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
<i>CP</i>			

The Contractor shall have a disaster recovery and back-up plan, of which a copy should be provided upon request to the State, which includes, but is not limited to equipment, personnel, facilities, and transportation, in order to continue services as specified under the specifications in the contract in the event of a disaster.

**O. DRUG POLICY**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
<i>CP</i>			

Contractor certifies it maintains a drug free work place environment to ensure worker safety and workplace integrity. Contractor agrees to provide a copy of its drug free workplace policy at any time upon request by the State.

**4.3 RFP SECTION IV PAYMENT**

**A. PROHIBITION AGAINST ADVANCE PAYMENT (Statutory)**

Payments shall not be made until contractual deliverable(s) are received and accepted by the State.

**B. TAXES (Statutory)**

The State is not required to pay taxes and assumes no such liability as a result of this solicitation. Any property tax payable on the Contractor's equipment which may be installed in a state-owned facility is the responsibility of the Contractor.

**C. INVOICES**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
<i>CP</i>			

Invoices for payments must be submitted by the Contractor to the Commission with sufficient detail to support payment at the following address: Nebraska Public Service Commission, Attention: Business Manager, P.O. Box 94927, Lincoln, NE 68509. The terms and conditions included in the Contractor's invoice shall be deemed to be solely for the convenience of the parties. No terms or conditions of any such invoice shall be binding upon the State, and no action by the State, including without limitation the payment of any such invoice in whole or in part, shall be construed as binding or estopping the State with respect to any such term



or condition, unless the invoice term or condition has been previously agreed to by the State as an amendment to the contract.

**D. INSPECTION AND APPROVAL**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

Final inspection and approval of all work required under the contract shall be performed by the designated State officials.

**E. PAYMENT**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

State will render payment to Contractor when the terms and conditions of the contract and specifications have been satisfactorily completed on the part of the Contractor as solely determined by the State. (Neb. Rev. Stat. Section 73-506(1)) Payment will be made by the responsible agency in compliance with the State of Nebraska Prompt Payment Act (See Neb. Rev. Stat. §81-2401 through 81-2408). The State may require the Contractor to accept payment by electronic means such as ACH deposit. In no event shall the State be responsible or liable to pay for any services provided by the Contractor prior to the Effective Date of the contract, and the Contractor hereby waives any claim or cause of action for any such services.

**F. LATE PAYMENT (Statutory)**

The Contractor may charge the responsible agency interest for late payment in compliance with the State of Nebraska Prompt Payment Act (See Neb. Rev. Stat. §81-2401 through 81-2408).

**G. SUBJECT TO FUNDING / FUNDING OUT CLAUSE FOR LOSS OF APPROPRIATIONS**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

The State's obligation to pay amounts due on the Contract for a fiscal years following the current fiscal year is contingent upon legislative appropriation of funds. Should said funds not be appropriated, the State may terminate the contract with respect to those payments for the fiscal year(s) for which such funds are not appropriated. The State will give the Contractor written notice thirty (30) calendar days prior to the effective date of termination. All obligations of the State to make payments after the termination date will cease. The Contractor shall be entitled to receive just and equitable compensation for any authorized work which has been satisfactorily completed as of the termination date. In no event shall the Contractor be paid for a loss of anticipated profit.

**H. RIGHT TO AUDIT (First Paragraph is Statutory)**

Accept (Initial)	Reject (Initial)	Reject & Provide Alternative within RFP Response (Initial)	NOTES/COMMENTS:
CA			

The State shall have the right to audit the Contractor's performance of this contract upon a 30 days' written notice. Contractor shall utilize generally accepted accounting principles, and shall maintain the accounting records, and other records and information relevant to the contract (Information) to enable the State to audit the contract. The State may audit and the Contractor shall maintain, the Information during the term of the contract and for a period of five (5) years after the completion of this contract or until all issues or litigation are resolved, whichever is later. The Contractor shall make the Information available to the State at Contractor's place of business or a location acceptable to both Parties during normal business hours. If this is not practical or the Contractor so elects, the Contractor may provide electronic or paper copies of the Information. The State reserves the right to examine, make copies of, and take notes on any Information relevant to this contract, regardless of the form or the Information, how it is stored, or who possesses the Information. Under no circumstance will the Contractor be required to create or maintain documents not kept in the ordinary course of Contractor's business operations, nor will Contractor be required to disclose any information, including but not limited to product cost data, which is confidential or proprietary to Contractor.

The Parties shall pay their own costs of the audit unless the audit finds a previously undisclosed overpayment by the State. If a previously undisclosed overpayment exceeds one percent (.1%) of the total contract billings, or if fraud, material misrepresentations, or non-performance is discovered on the part of the Contractor, the Contractor shall reimburse the State for the total costs of the audit. Overpayments and audit costs owed to the State shall be paid within ninety days of written notice of the claim. The Contractor agrees to correct any material weaknesses or condition found as a result of the audit.

**4.4 RFP SECTION V PROJECT DESCRIPTION AND SCOPE OF WORK**

The bidder should provide the following information in response to this RFP

**A. PROJECT OVERVIEW**

The Commission is seeking a Contractor to provide Quality Assurance/Quality Control (QA/QC) services with respect to Geographic Information Systems (GIS) datasets in order to verify that GIS data used by Public Safety Answering Points (PSAPs) in Nebraska complies with the National Emergency Number Association (NENA) NG9-1-1 data model.

As more fully described below, the Contractor's role will be to analyze GIS data uploaded by local agencies in order to confirm compliance with Nebraska Information Technology Council (NITC) and NENA standards for use in NG9-1-1 applications.

**B. PROJECT ENVIRONMENT**

The Commission is the statewide implementation and coordinating authority for 911 service in the State of Nebraska, with the statutory responsibility to plan, implement, coordinate, manage, maintain, and provide funding assistance for a cost-efficient 911 service system pursuant to the Nebraska 911 Service System Act, Local governing bodies are responsible for the dispatch and provision of emergency services within their respective jurisdictions. However, the Commission provides funding and other assistance to PSAPs across the state.

Some Nebraska PSAPs serve a single city or county, while others serve multiple counties or parts of counties. Some PSAPs are governed by local boards, while others are operated by local law enforcement. Some PSAPs operate independently, while others are organized into cooperative regions to share resources and provide mutual back-up. Currently, the local governing bodies that operate the PSAPs throughout the State are responsible to maintain GIS data for each PSAP at the local level. Although a few Nebraska PSAPs use in-house personnel to maintain GIS data, most PSAPs contract for 911-related GIS services from approved "vendors of choice" selected through an earlier RFP process. Nebraska PSAPs are respon-

sible for uploading copies of their most recent GIS datasets on a monthly basis to an online GIS repository maintained by the Commission. Presently, there is no single authoritative statewide 9-1-1 GIS dataset.

To prepare for next generation 911, the Commission is undertaking a quality assurance/quality control project to confirm that the GIS data used by Nebraska PSAPs comply with NITC and NENA standards and is appropriate to support the spatial routing of 911 calls in the NG9-1-1 environment.

### C. PROJECT REQUIREMENTS

The Contractor will be required to maintain a secure web portal through which Nebraska PSAPs or their representatives will upload GIS data to be analyzed by the Contractor. Access to the portal must be limited to authorized users via login and password or other similar secure authentication. The portal must require each person authorized to upload GIS datasets to identify the applicable jurisdiction, geographic area and type of dataset before a file will be accepted for uploading.

The portal must be capable of accepting GIS data in any ESRI format. The portal should automatically reject GIS datasets that are incomplete or defective and immediately notify the local agency if an attempted upload was unsuccessful. The portal should return, prior to QA/QC review, GIS datasets having any of the following characteristics, and provide notice to the uploading party to correct any such errors:

1. **No data in the file**
2. **Incompatible dataset due to improper or missing field names**
3. **Lack of defining information, e.g., county name, dataset**
4. **Improper file format**
5. **MSAG not included with Street Centerline file**
6. **Missing or improperly formatted FDGC metadata**
7. **Incorrect data naming convention**

Datasets that do not have any of the above-referenced errors should automatically be accepted for QA/QC review by the Contractor's secure portal.

### D. SCOPE OF WORK

The Contractor will analyze each GIS dataset uploaded to the portal to identify any errors and discrepancies based on NITC and NENA standards. After review, the Contractor will return datasets that are shown to have errors and/or discrepancies to the uploading agency, along with a discrepancy report listing the items that need to be corrected in order to achieve compliance with the standards. Each such discrepancy report must be accompanied by a shapefile of areas where the topology is incorrect. The local PSAP or its representatives will be responsible to correct all the items listed in the discrepancy report. After correction, the local PSAP or its representative will be expected to resubmit the revised GIS dataset via the Contractor's dedicated portal for further QA/QC review.

GIS data that is confirmed by the Contractor to meet all required standards will be accepted for provisioning to the NG9-1-1 environment and uploaded by the Contractor to the Commission's GIS repository. The Contractor will also notify the Commission's GIS Specialist and the PSAP responsible for uploading the file that the dataset meets all required standards and is ready for use.

### E. TECHNICAL REQUIREMENTS

The specific NITC and NENA standards that apply to this project are the following:

1. **NITC Standards & Guidelines**
  - a. **3-201. Geospatial Metadata Standard**
  - b. **3-202. Land Record Information and Mapping Standard**
  - c. **3-205. Street Centerline Standard**
  - d. **3-206. Address Standard**

2. **NENA Standards**
  - a. **NENA 02-014**
  - b. **NENA 71-501**
  - c. **NENA REQ-002.1-2016**
  - d. **NENA STA-005.1.1-2017**
  - e. **NENA STA-006 NG9-1-1 Data Model**

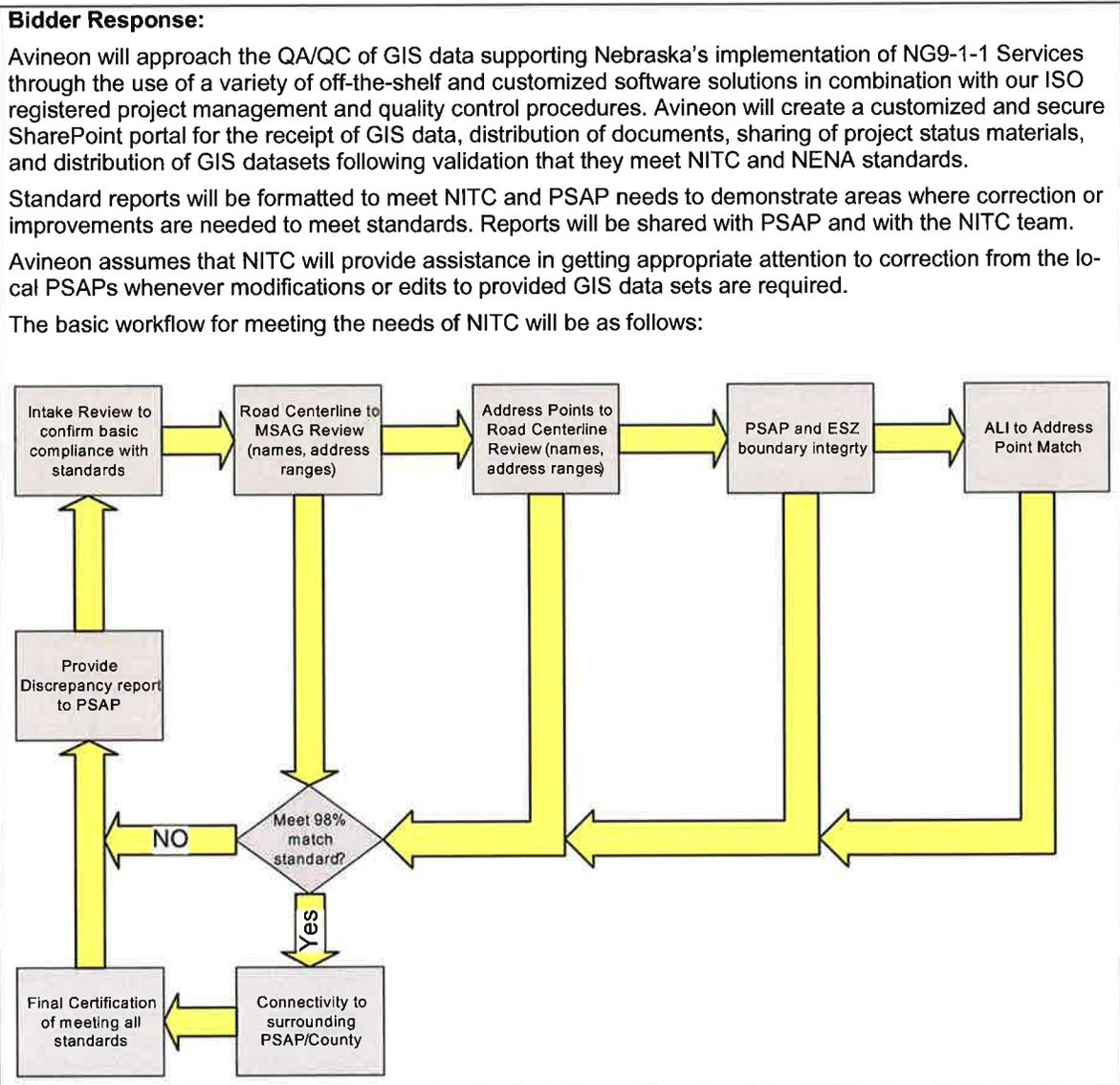
In the event of any conflict between NITC standards and NENA standards, NITC standards shall control.

3. **The GIS datasets to be reviewed by Contractor after being uploaded by to the secure portal will consist of the following GIS layers:**
  - a. **Street Centerlines (with accompanying MSAG);**
  - b. **Street/Structure address points (with accompanying ALI);**
  - c. **PSAP boundaries;**
  - d. **Emergency service zones (police, fire, EMS); and,**
  - e. **Political boundaries (used to define the provisioning of GIS data).**
  
4. **The Contractor shall review Street Centerline Layer data to identify, at a minimum, the following items:**
  - a. **Comparison of MSAG vs. Street Centerline segments to minimum 98% match;**
  - b. **Comparison of ALI to Street Centerline to minimum 98% match with road name;**
  - c. **Overlapping address ranges between jurisdictions;**
    - i. **Region free of overlaps: 98% unique ranges;**
  
  - d. **Misalignments;**
    - i. **Overlaps**
    - ii. **Gaps**
    - iii. **Overhangs**
    - iv. **Duplicate features**
    - v. **Incorrectly named road segments**
  - e. **Road segments running the wrong direction;**
  - f. **Road segments not broken at intersections and/or ESZ boundaries;**
  - g. **Road name consistency;**
  - h. **Misaligned road segments at county and jurisdictional boundaries;**
  - i. **Required metadata; and,**
  - j. **General compliance with applicable NITC and NENA standards.**
  
5. **The Contractor shall review jurisdictional boundary Polygon Layers to identify, at a minimum, the following items:**
  - a. **Redundancy, misalignment and others errors in topology;**
    - vi. **Overlaps**
    - vii. **Gaps**
  - b. **Duplication of features between PSAPs;**
    - viii. **ESZ numbers match**
    - ix. **ESZ numbers do not match**
  - c. **County boundaries alignment to neighboring counties;**
  - d. **Correct boundaries (police, fire, EMS) included in the ESZ boundary;**
  - e. **Fields within each layer conform to NITC and NENA standards for names, content, and format;**
  - f. **Required metadata; and,**
  - g. **General compliance with applicable NITC and NENA standards.**

6. The Contractor shall review Address Point Layers to identify, at a minimum, the following items:
- Placement of Address Points on Street Centerline address ranges;
  - Comparison of ALI to Address Points to minimum 98 percent match to full address;
  - Discrepancies between the telephone number (TN) list and site/structure address point layer;
  - Multi-address structure address formats;
  - Fields within each layer conform to NITC and NENA standards for names, content, and format;
  - Required metadata; and,
  - General compliance with applicable NITC and NENA standards.

In addition to the foregoing, the Contractor will also review each uploaded dataset to determine compatibility with GIS data provided by adjoining counties. Adjoining county data will be reviewed to identify any overlaps and gaps, Street Centerline alignments, stacked roads and inconsistent road names. Resolution of inconsistencies in adjoining counties' datasets will be the responsibility of the counties involved.

Please describe how your company will meet all of the above requirements.



**Validation of Initial Submission**

A secure portal will be established with a login for each individual PSAP and the NITC staff working on the project. The specific details of the distribution of the login credentials will be determined jointly between Avineon and NITC at project kick off. Avineon will provide on-line training for the PSAP staff if required to bring them up to speed on requirements for access the portal, verifying contact information for PSAP project team members, downloading project documents, and uploading GIS data sets for review.

The data sets to be reviewed include:

- Street centerlines (with associated MSAG),
- Street/Structures address points (with ALI),
- PSAP boundary polygons,
- Emergency service zone polygons (police, fire, EMS), and
- Political boundaries.

Political boundaries are understood to be used to identify the source of the GIS data for a specific geography.

Once the data sets have been uploaded to the portal, Avineon will implement a script to exercise Esri's Data Reviewer extension to ensure that the minimum standards of NITC and NENA for the dataset have been attained prior to more complete analysis. These checks will focus on the following fundamental requirements for the initial submission and will not yet address data quality:

- Metadata is provided and is complete;
- Databases include required fields and those fields are in the proper format and domains;
- The data sets are provided in the appropriate projection;
- Spatial accuracy is within 1-3 meters; and,
- Street naming standards are maintained.

If the datasets submitted do not meet the minimum standards, they will be returned to the PSAP for correction in areas where topology is incurred or other basis standards have been violated. The Data Review extension will allow Avineon and the PSAP to maintain a comprehensive listing of items that required correction. This will ease the review of these data on the part of the PSAP and re-review of the data once resubmitted. Avineon anticipates providing the standard Esri Data Reviewer report to each PSAP so they have direction on the specific items that need to be corrected. If necessary, Avineon will make available a two-hour web training exercise for the PSAP GIS staff to assist them in understanding the reports and how to best utilize them in their correction of the data.

An example of the basic information returned by the Esri Data Reviewer extension can be found in the table below.

REC ORD ID	OB- JEC T ID	RE- VIEW ER CAT E GO RY	CAT- EGO- RY	RE- VIEW ER CO DE	S E S I O N ID	CHECK TITLE	ORIGIN TABLE	ORIG- INCHE CK	NOT ES	PARAMETERS	SE- VER- ITY	RE- VIEWST ATUS
2442	814	1	Feature Record	227	13	Building Addition Unnecessary Polygon Boundary	BUILD- ING_ADDITIONS	Unnecessary Polygon Boundaries Check	If all attributes are the same, consider merging	[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (BUILD-ING_ADDITIONS), Ignore Metadata:false]	5	Polygon has unnecessary boundaries
2443	872	1	Feature Record	227	13	Building Addition Unnecessary Polygon Boundary	BUILD- ING_ADDITIONS	Unnecessary Polygon Boundaries Check	If all attributes are the same, con-	[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (BUILD-ING_ADDITIONS), Ignore Metadata:false]	5	Polygon has unnecessary boundaries

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2450	335	1	Feature Record	182	13	Building Below Threshold	BUILDINGS	Polygon Sliver Check		[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (BUILDINGS), Minimum Width Threshold:1, Area:150, Units: Feet]	5	Sliver Polygon Found
2455	31	1	Feature Record	74	13	Hydro Area contains non Center-line	HYDRO_AREAS	Geometry on Geometry Check		[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (HYDRO_AREAS), Connection2: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (HYDRO_EDGES), Param Query Filter Set: SQL Query 1 (SELECT * F...	5	Polygon contains polyline
2456	340	1	Feature Record	167	13	Hydro Edge Length	HYDRO_EDGES	Evaluate Polyline Length Check		[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (HYDRO_EDGES), Units: Feet, Evaluate:Line, Length Parameters: Search Goal: Minimum (1), Exclude Bounds]	5	Line length under minimum
2457	98	1	Feature Record	182	13	Major Transportation Sliver	MAJOR_TRANSPORTATION_AREAS	Polygon Sliver Check		[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (MAJOR_TRANSPORTATION_AREAS), Minimum Width Threshold:1, Area:10, Units: Feet]	5	Sliver Polygon Found
2458	141	1	Feature Record	182	13	Major Transportation Sliver	MAJOR_TRANSPORTATION_AREAS	Polygon Sliver Check		[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (MAJOR_TRANSPORTATION_AREAS), Minimum Width Threshold:1, Area:10, Units: Feet]	5	Sliver Polygon Found
2459	369	3	Feature Record	167	13	Major Transportation Edge Length	MAJOR_TRANSPORTATION_EDGES	Evaluate Polyline Length Check		[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (MAJOR_TRANSPORTATION_EDGES), Units: Feet, Evaluate:Line, Length Parameters: Search Goal: Minimum (1), Exclude Bounds]	5	Line length under minimum
2462	14	1	Feature Record	358	13	Major Hidden Edge doesn't contain Minor Hidden Edge	MAJOR_TRANSPORTATION_EDGES	Geometry on Geometry Check		[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (MAJOR_TRANSPORTATION_EDGES), Param Query Filter Set: SQL Query 1 (SELECT * FROM MAJOR_TRANSPORTATION_EDGES	5	Polyline does not contain polyline

2463	15	1	Feature Record	358	13	Major Hidden Edge doesn't contain Minor Hidden Edge	MA-JOR_TRANSPORTATION_EDGES	Geometry on Geometry Check	[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (MA-JOR_TRANSPORTATION_EDGES), Param Query Filter Set: SQL Query 1 (SELECT * FROM MA-JOR_TRANSPORTATION_EDGES WHERE EDGE = 'HIDDEN EDGE' ), Connection2: N:\Deliveries...	5	Polyline does not contain polyline
2781	391	3	Feature Record	358	13	Major Hidden Edge doesn't contain Minor Hidden Edge	MA-JOR_TRANSPORTATION_EDGES	Geometry on Geometry Check	[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (MA-JOR_TRANSPORTATION_EDGES), Param Query Filter Set: SQL Query 1 (SELECT * FROM MA-JOR_TRANSPORTATION_EDGES WHERE EDGE = 'HIDDEN EDGE' ), Connection2: N:\Deliveries...	5	Polyline does not contain polyline
2782	391	4	Feature Record	358	13	Major Hidden Edge doesn't contain Minor Hidden Edge	MA-JOR_TRANSPORTATION_EDGES	Geometry on Geometry Check	[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (MA-JOR_TRANSPORTATION_EDGES), Param Query Filter Set: SQL Query 1 (SELECT * FROM MA-JOR_TRANSPORTATION_EDGES WHERE EDGE = 'HIDDEN EDGE' ), Connection2: N:\Deliveries...	5	Polyline does not contain polyline
2783	136	6	Feature Record	207	13	Minor Transportation Edge Cut-back	MI-NOR_TRANSPORTATION_EDGES	Cut-backs Check	[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (MI-NOR_TRANSPORTATION_EDGES), Degrees:30]	5	Cutback Error
2785	193	5	Feature Record	207	13	Minor Transportation Edge Cut-back	MI-NOR_TRANSPORTATION_EDGES	Cut-backs Check	[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (MI-NOR_TRANSPORTATION_EDGES), Degrees:30]	5	Cutback Error
2786	259	3	Feature Record	167	13	Minor Transportation Edge Length	MI-NOR_TRANSPORTATION_EDGES	Evaluate Polyline Length Check	[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (MI-NOR_TRANSPORTATION_EDGES), Units: Feet, Evaluate:Line, Length Parameters: Search Goal: Minimum (1), Exclude Bounds]	5	Line length under minimum

2788	301	1	Feature Record	207	13	Minor Transportation Edge Cut-back	MI-NOR_TRANSPORTATION_EDGES	Cut-backs Check	[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (MI-NOR_TRANSPORTATION_EDGES), Degrees:30]	5	Cutback Error
2789	83	1	Feature Record	359	13	Taxmap Missing Man-hole	TAX_MAP	Geometry on Geometry Check	[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (TAX_MAP), Connection2: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (MANHOLES), Spatial Relationship: Contains, Check Attributes:false...]	5	Polygon does not contain point
2794	123	1	Feature Record	359	13	Taxmap Missing Man-hole	TAX_MAP	Geometry on Geometry Check	[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (TAX_MAP), Connection2: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (MANHOLES), Spatial Relationship: Contains, Check Attributes:false...]	5	Polygon does not contain point
2795	124	1	Feature Record	359	13	Taxmap Missing Man-hole	TAX_MAP	Geometry on Geometry Check	[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (TAX_MAP), Connection2: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (MANHOLES), Spatial Relationship: Contains, Check Attributes:false...]	5	Polygon does not contain point
2796	396	1	Feature Record	359	13	Taxmap Missing Man-hole	TAX_MAP	Geometry on Geometry Check	[Connection1: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (TAX_MAP), Connection2: N:\Deliveries from AIPL\Pilot-2_Tile30-2_07062018\Pilot-2_Planimetric.gdb (MANHOLES), Spatial Relationship: Contains, Check Attributes:false...]	5	Polygon does not contain point

**Review of Street Centerline Data**

A review of street centerline data will have a dual focus: attribution and the required match to MSAG and ALI; and, spatial topology and connectivity. The review of attribution will require a match of street names and address ranges in both the street centerline data and the MSAG. Initially the comparison will be done to road names. As shown in the table below it may not be clear if the MSAG, ALI, or the centerline street name is actually correct. This table, taken from a MSAG and centerline unification project undertaken for the City of Columbia, South Carolina, demonstrates that the type of name inconsistencies typically seen with a possible road name from the other data source shown. Without local knowledge, it is not possible to identify which is correct. A table like the one represented below will be provide to each PSAP for review on street name inconsistencies.

MSAG Street Name	Centerline Street Name	In_MSAG	In_CL	In_ALI
ADRAHAM STREET		Y	N	Y

	Abraham Street	N	Y	Y
ARUDEL LANE		Y	N	N
	Arundel Lane	N	Y	Y
ASHEWOOD LACKE DR		Y	N	N
	Ashewood Lake Dr	N	Y	Y
AUSTEN SMITH RD		Y	N	Y
	Austin Smith Rd	N	Y	N
AVENUE B NORTH BUIDLING		Y	N	N
	Avenue B	N	Y	Y
AYSHIRE AVE		Y	N	N
	Ayrshire Ave	N	Y	Y
BACHELOR STREET		Y	N	Y
	Batchelor Street	N	Y	N
BARHAMBILLE RD		Y	N	N
	BARNHAMVILLE ROAD	N	Y	Y

Following name comparisons, an analysis of the address ranges will be conducted. For most centerline GIS data, a hypothetical address range per segment is provided. This data will be compared to the address number in the MSAG and the ALI. Address numbers that are found to be out of range for the street name will be identified and provided in a table to the PSAP staff for review and correction. Again, it will not be possible without local research to determine which of the addresses are correct.

The acceptance criterion for these data is a 98% match. If this threshold is attained in initial submission the data will be accepted but the PSAP will be provided with the results tables showing the mismatches so they may ultimately improve these data source to beyond a 99% accuracy level.

As a seamless road centerline, MSAG, and ALI for the entire state is built from data provided by individual PSAP, a review will be completed that compares names and address ranges by jurisdiction to ensure that there are not duplications of address ranges within a PSAP or other jurisdiction.

The topological review of the street centerline data will be undertaken simultaneously to the review of the attribute data. These reviews will review the geometry of the road segments using Esri's Data Reviewer to identify any overlaps, gaps, overhangs, duplicate features, etc. This review will also make certain that road segments are broken at intersections and all jurisdiction (ESZ) boundaries.

Avineon will use proprietary code, that will be licensed to NITC with a unlimited license to use within Nebraska, that will "walk" each roadway to identify:

- Road name inconsistencies where road names change inappropriately at nodes,
- Address range overlaps where address ranges do not reset at an intersection (segment one has address range from 101 to 201 and an adjacent segment has an address range from 200-299),
- Continuity issues with gaps in address ranges (segment one has range from 101 to 199 and segment two has range from 210 to 299) where it is possible that addresses have been missed,
- Problems with address ranges that are out of sequence,
- Address ranges on wrong side of the street (addresses running the wrong direction), and
- Connectivity issues with adjoining jurisdictions (counties, PSAPs, ESZ).

Each PSAP will be provided with a detailed report that identified all potential errors identified by this review. This report will list the road name, road address range, and unique segment id. Since it is possible that the apparent errors identified in fact reflect the correct situation, those potential errors can be flagged in the tool provided as correct so future analysis of road centerlines will not identify these instances as errors again.

A relatively larger number of connectivity issues are expected at the edges of jurisdictions. This in part will be due to the spatial accuracy standards that permit variability of 1-3 meters horizontal accuracy of features. This effectively means that the variability between adjoining counties on the road centerlines could be up to 6 meters off (each at the extreme of the acceptable +/- 3 meter standard). With most data set corrections, it is expected that the data will be returned to the local PSAP for correction. However, Avineon recommends that the snapping of roadways between jurisdictions be done by the selected contractor once all other data

in the centerline has been found to meet the required standards. This is because the data submitted actually already meets standard even though it is not fully fit for the purpose of having a statewide seamless centerline dataset. The effort for this manual snapping is included in the Avineon price proposal for year one.

Finally, the metadata and overall compliance with NITC and NENA standards will be reviewed and if all other items meet the standards the data will be validated for use.

#### **Review of Jurisdictional Boundaries**

Jurisdictional boundaries must be reviewed to ensure that there are no misalignments or other errors in topology including overlaps and gaps. Further, a series of spatial rules will be established during project initiation to ensure full coverage of all jurisdictional boundaries. Adjoining polygons must be contiguous with no gaps and overlaps. A single recognized set of county polygons should be identified and their sub-units of ESZs (police, fire, EMS) will be reviewed to ensure that they are correct.

The topology of these polygons will be reviewed using the Esri Data Reviewer. The resolution of discrepancies between PSAP areas will need to be resolved through joint discussion between the PSAPs. Avineon's project coordinator will work with the relevant PSAP representatives to assign responsibility for resolution of spatial conflicts. In these cases, there is little to be gained by each PSAP making corrections because they are unlikely to result in a suitable result if they are undertaken independently. Avineon will view working with PSAPs to assist in resolving these overlaps and gaps as within the scope of the project.

As with all data sets, Avineon will confirm that the appropriate metadata is complete and that the applicable NITC and NENA standards have been applied.

#### **Review of Address Points**

Submitted address points will be reviewed relative to the road centerline data to make certain that they are properly placed relative to road names and address ranges. Since the placement of address points may vary from PSAP to PSAP (selecting driveway intersection with roadway, centroid of parcel, or centroid of structure being the most common), the proximity of the point to the nearest roadway will be used for this comparison.

Individual circumstances where the address point street name or address range do not match the nearest roadway name or address range will be reviewed to determine if they are valid exceptions. These cases could be corner lots or large rural parcels where access to a structure may not be from the spatially nearest roadway. If the 98% acceptance level is achieved, the data set will be accepted but those that appear to be non-compliant will be provided to the PSAP for review and correction if appropriate.

Each address point will then be spatially joined with the variety of jurisdictional polygons to determine which service providers would be expected to respond to a 9-1-1 call from the location. These data will then be compared to ALI data tables provided for each phone number and associated address. The service provider identified based on geographic location of the address point and the ALI (TN list) will be compared and any discrepancies will be identified. All discrepancies will be provided via a data report to the PSAP for review and potential correction. The discrepancy report will be provided even if the 98% acceptance threshold is attained so these data may be further improved in the future.

Multi-address circumstances will need to be reviewed on a PSAP basis to determine how these are handled in the point data. Examples of these circumstances may be individual unit numbers in an apartment building or lot numbers within a mobile home park. In these cases, the nature of the address points provided will have a large impact on the match between address points and the ALI. Records in the ALI that do not have a specific address point assigned to them will be provided to the PSAP for address point creation and these records will be included in the base for calculation of the 98% match requirements. To achieve a 100% match, there must be an address point for every record in the ALI. If only the address points are used as the basis of this calculation, it is possible to appear to reach 98% when significant numbers of structures or TN entries are not located as a point.

#### **Review of Consistency Across County Datasets**

Once the adjoining PSAP data sets have been determined to meet NITC and NENA standards and are thus considered fit to support NG9-1-1 applications, the consistency of the data across county boundaries will be reviewed. This review will focus on the suitability of the data to be merged to create a seamless road centerline data set for the State. Overlaps, gaps, and other topological issues once these data are merged will be examined and identified. While the RFP places the resolution of these inconsistencies on the counties involved, Avineon expects that the coordination of this resolution will be within the scope of the project.

#### **Overall Project Workflow**

The anticipated workflow of the project is presented in *Section 5.3* of our proposal.

**F. CONTRACTOR REQUIREMENTS**

**1. QA/QC PROJECT METHODOLOGY**

Contractor shall deliver a QA/QC Project Plan proposing Contractor’s methodology for accomplishing the Project and satisfying all requirements in this RFP.

**Bidder Response:**

Avineon will perform the QA/QC of the data in a two-step process. Initially, an Avineon QC technician will review the data to determine if the data meets the standards for acceptance into the statewide dataset to support NG9-1-1. Once the PSAP area has been initially accepted, a final QA is performed by a supervisor or senior technician before the delivery to ensure that the data passes the final QA acceptance criteria.

Initially, Avineon’s QC team will work with the production team to understand/review the process and identify opportunities for errors. The QC team will then prepare a detailed QC checklist for all such possible errors that can occur during the production. The checklist will include all the manual and automated checks that need to be performed on the data. These checks are performed on a batch/area and all errors are reported in the QA database to collect all the detailed information of the defects reported (e.g., type of defects, severity ratings, operator information, task information, batch information, etc.).

The QA database is used to review and track improvements of the quality of the data and feedback to QC technicians. It also helps to quickly identify any systemic issues, training issues, specification issues, and whether it pertains of set of people or the specification, etc.

The work of each QC technician is initially 100% reviewed. Once the QA Supervisor has a high level of confidence in the performance of an individual technician but after no less than five batches per technician, subsequent work is then subjected to a statistically valid random sampling in compliance with ISO standards.

This second level of verification is used to ensure that the stated accuracy rate of 98% as required by the project specifications can be fully documented and assured.

Samples sizes for QC shall be based on ISO standards and will be variable dependent on the size of each batch. Compliance with ISO recognized sampling standards ensures the quality metrics are statistically valid. For each batch, the minimum number to be reviewed shall be based on the following ISO standard table:

Batch Size	Sample Size
2 to 8	2
9 to 15	3
16 to 25	5
26 to 50	8
51 to 90	13
91 to 280	32
281 to 1,200	80
1,201 to 3,200	125
3,201 to 10,000	200
10,001 to 35,000	315
35,001 to 150,000	500
150,001 to 500,000	800
500,001 over	1,250

**2. DETAILED ACTION PLAN**

Please provide a detailed action plan that includes specifics on how implementation will be accomplished.

**Bidder Response:**

At the highest level Avineon views this project as having the following phases which will be fully documented in a Project Execution Plan:

1. Kick-Off Meeting
2. Pre-Pilot Activities
3. Pilot
4. Production
5. Knowledge Transfer

**1.0 Kick Off Meeting**

The kick-off meeting will be held with the Avineon project team and the NITC project team as soon as possible following contract award. A detailed agenda will be provided in advance of the meeting, but essentially this meeting will be used to introduce team members, finalize project schedule, identify responsibilities of each team member, and develop a project communications matrix.

**2.0 Pre-Pilot Activities**

Immediately following the kick-off meeting, the Avineon staff will initiate the pre-pilot activities. These activities will involve all required steps to ensure project success, including a complete review of data, workshops to support the QA/QC of existing data, review of QA/QC methodologies, and a review of data acceptance criteria.

Avineon finds it valuable to conduct a review of existing data prior to bringing the team on-site for a review of the data.

This is also the phase that will feature the development of the Project Execution Plan or "Detailed Action Plan." The plan will generally follow the outline below, subject to modifications discussed with NITC at the kick-off meeting:

- A. PROJECT OVERVIEW
  - a. Project Background
  - b. Project Purpose, Scope, and Objectives
  - c. Project Assumptions
  - d. Project Constraints
  - e. Project Deliverables
    - i. Project Plan
    - ii. Data Discovery Summary
      1. To include: Meeting minutes, data source matrix, summary analysis
    - iii. Program Guide (production detailed instructional guide)
    - iv. Draft Data Delivery Schedule
    - v. Final Approval of Documents
  - f. Project Schedule and Budget
  - g. Project Development Plan Evolution
  - h. Project Development Plan Structure
  - i. Project Development Plan References
  - j. Glossary
- B. PROJECT ORGANIZATION
  - a. External Interfaces
  - b. Internal Structure
  - c. Roles and Responsibilities (including a RACI chart)
  - d. Point(s) of Contact (including organization chart for both parties)
- C. MANAGEMENT PROCESS
  - a. Project Initiation
  - b. Staffing
  - c. Resource Acquisition

- d. Training
  - e. Work Planning
  - f. Work Activities (including a RACI chart)
  - g. Schedule Allocation
  - h. Resource Allocation
  - i. Budget Allocation
  - j. Project Control
  - k. Requirements Control
  - l. Schedule Control
  - m. Budget Control
  - n. Quality Control Activities and Delivery Acceptance Criteria
  - o. Project Reporting and Communication
  - p. Metrics Collection
  - q. Risk Management
  - r. Project Close-Out
- D. SUPPORTING PROCESSES
- a. Configuration Management
  - b. Independent Verification and Validation
  - c. Documentation
  - d. Quality Assurance
  - e. Reviews and Audits
  - f. Problem Resolution
  - g. Sub-Contractor Management
  - h. Process Improvement
- E. ADDITIONAL PLANS
- F. APPENDICES
- a. Communication Matrix
  - b. Risk Assessment Matrix
  - c. Data Management Matrix
  - d. Work Breakdown Structure

### **3.0 Pilot**

In Avineon's experience, for large multi-source projects like the one outlined in this RFP, it is best to undertake a pilot where a sample of the digital source data can be fully processed before full production. Generally 5-10% of an area is appropriate. The areas to be used for the pilot can be identified during the project kick-off meeting and should reflect a sample of the quality of the data we can expect to receive during production. There should also be some adjoining counties or PSAP areas to ensure that the tools for comparing jurisdiction geography and cross boundary connectivity can be tested. Customized software, QA/QC steps, and automation will be fine-tuned prior to the initial deliveries of the production phase.

Avineon expects for NITC to review these pilot data over a 10 day period following delivery. Five days after these pilot data are delivered, we expect to conduct an on-site joint review of the pilot data. This on-site joint review is always beneficial in project communications and to make certain that Avineon's production, QA/QC, and project management teams are fully in synch with Nebraska's project team.

### **4.0 Production**

Immediately following NITC approval to move from the initial pilot to production, Avineon will initiate training of the full production staff. The staff will be trained on the production materials as tested, reviewed, and approved during the initial pilot phase.

### **5.0 Knowledge Transfer**

Once all PSAP areas have been completed and the data for the initial year is available for statewide use, Avineon will schedule a series of meetings with the NITC staff and other key GIS data providers to transfer knowledge gained during the initial review of these data. This knowledge transfer will include training on: code created and used to identify discrepancies in initial source data, Esri Data Reviewer extension and the specific parameters used to identify errors, and the used PAR system that tracked questions on issues arising during the project.

**3. CONTRACTOR REPORTS TO PSAPs**

Upon completion of its review of any GIS dataset uploaded by a PSAP or its representative, the Contractor will create and deliver a report in electronic format to both the PSAP responsible for uploading the file and the Commission's GIS Specialist.

**Please submit a copy of your proposed form of the report with your response.**

A report will be provided via e-mail to each PSAP whenever there has been change to the status of a GIS dataset uploaded. These e-mails will be generated from the production status tracking database and will be automatically sent on a daily basis to the PSAP contact from a project specific e-mail account. A copy of these e-mails will be forwarded to the Commission GIS Specialist, Avineon Project Manager, Avineon Project Coordination, and a project communications folder for the PSAP. This report is provided as a draft and the specific text can be modified by NITC during the kick-off meeting.

[Contact\_Name]  
 [PSAP Name]

RE: Status of Data Submitted to NITC for Quality Control

Dear [Contact\_Name]:

Thank you for submitting your GIS data for inclusion in the Nebraska Information Technology Commission (NITC) NG9-1-1 dataset.

The table below summarizes the status of your submission:

Dataset	Current Status	Date of Status	Match rate
Jurisdiction Boundaries	[insert current status]	[insert status date change]	N/A
Street Centerlines	[insert current status]	[insert status date change]	[insert match % to MSAG]
Address Points	[insert current status]	[insert status date change]	[insert match % to ALI]

The review of each of these data sets is subject to a series of quality control steps. The steps are defined in the project documentation available on the project web portal: [http://\[portal web address\]](http://[portal web address]).

A discrepancy report for each data set is attached to this e-mail. That report lists all of the circumstances where compliance with standards or the lack of a street name or address range match did not occur. You are requested to review these discrepancies, correct those that can be corrected, and resubmit the data set via the project portal.

You are also requested to provide updated data via the project portal on a monthly basis to ensure that the data available for use with the NG9-1-1- system is up to date.

Thank you for your cooperation in providing this critical data.

Regards,  
 Avineon Nebraska NG9-1-1 Data QA/QC Project Team  
 Attachments: List all files attached

**4. DISCREPANCY REPORT**

In the case of an uploaded GIS dataset that contains errors or discrepancies, the Contractor’s report shall be a Discrepancy Report in tabular format, organized by unique object identifiers, listing all errors, discrepancies and other items of note that require correction in order to achieve compliance with applicable NITC and NENA standards. Each Discrepancy Report shall also be accompanied by a shapefile of any areas where the topology in the related dataset is incorrect. In addition, the Discrepancy Report for each dataset that includes a Street Centerline layer shall state the match rate percentage between the Street Centerline layer and the MSAG.

**Please submit a copy of your proposed form of the report with your response.**

A discrepancy report will be provided via e-mail to each PSAP and the NITC for all submitted datasets. Datasets which meet the minimum requirement for acknowledgement of compliance with standards will likely still on attain a 100% match for addresses and topology. As such it is Avineon’s intension to provide a discrepancy report for each dataset so gradual improvement over time of the data can be attained. Discrepancy reports will be digital tables in a format to be determined during kick-off discussions (Access, Excel, .txt, etc.) outlining address and street name mismatched records. For spatial topological discrepancies the report will be the table created by the Esri Data Review extension or as a .txt file with this information.

[Contact\_Name]

[PSAP Name]

RE: Discrepancy Report for Data Submitted to NITC NG9-1-1 Program for Quality Control

Dear [Contact\_Name]:

Thank you for submitting your GIS data for inclusion in the Nebraska Information Technology Commission (NITC) NG9-1-1 dataset. The attached files represent a comprehensive listing of discrepancies creating mismatched records in street centerlines, address points, MSAG, or ALI. Also attached is a discrepancy report identifying any topological or other spatial issues associated with the geographic information provided.

The table below summarizes the discrepancies found:

Dataset	Current Status	Date of Status	Discrepancy Occurrences
Jurisdiction Boundaries	[insert current status]	[insert status date change]	XXX,XXX
Street Centerlines	[insert current status]	[insert status date change]	XXX,XXX
Address Points	[insert current status]	[insert status date change]	XXX,XXX

A discrepancy report for each data set is attached to this e-mail. That report lists all of the circumstances where compliance with standards or the lack of a street name or address range match did not occur. You are requested to review these discrepancies, correct those that can be corrected, and resubmit the data set via the project portal.

Thank you for your cooperation in providing this critical data.

Regards,  
 Avineon Nebraska NG9-1-1 Data QA/QC Project Team  
 Attachments: List all files attached

**5. COMPLIANCE REPORT**

In the case of an uploaded GIS dataset that is determined by the Contractor to be in compliance with all applicable NITC and NENA standards, the Contractor shall deliver to the related PSAP a report stating that the dataset is ready for use and has been accepted for inclusion in the Commission's GIS Repository, along with any additional information the Contractor deems appropriate. In addition, the Compliance Report for each accepted dataset that includes a Street Centerline layer shall state the match rate percentage between (i) the Street Centerline layer and the MSAG and (ii) the Address Points layer and the ALI.

**Please submit a copy of your proposed form of the report with your response.**

A compliance report will be provided via e-mail to each PSAP and the NITC for all submitted datasets once they have been found to meet all applicable NITC and NENA standards. This e-mail will indicate that these data have been accepted for inclusion in the NITC GIS Repository.

[Contact\_Name]

[PSAP Name]

RE: Compliance Report for Data Submitted to NITC NG9-1-1 Program for Quality Control

Dear [Contact\_Name]:

Congratulations. Your GIS datasets have been found to be in compliance with NITC and NENA standards and are now considered fit for use in the NG9-1-1 system. These datasets have been accepted for inclusion in the NITC GIS Repository.

Since data continues to change over time you are requested to periodically submit updated data through the NITC web portal.

As you know, no dataset is ever 100% correct or compliant. As such, you have been provided a discrepancy report under a separate communication for these data. It is our hope that this discrepancy report will assist you in improving the already high quality of your data.

The final dataset is available for your download from the project portal: [http://web\\_portal\\_address](http://web_portal_address).

The match rates for you address data sets are:

Datasets	Match Rate
Street Centerlines and MSAG	[xx.xx]%
Address Points and ALI	[xx.xx]%

Regards,

Avineon Nebraska NG9-1-1 Data QA/QC Project Team  
 Attachments: List all files attached

**6. CONTRACTOR REPORTS TO COMMISSION**

The Contractor shall provide the Commission with a copy of each Discrepancy Report, Compliance Report, and a monthly summary of other communications the Contractor delivers to any PSAP. In addition, The Contractor will be required to deliver periodic reports to the Commission's GIS Specialist on a monthly basis, listing by jurisdiction each GIS dataset reviewed by the Contractor in the prior period, including the results of each review. Each periodic report shall also include a list of all GIS datasets currently undergoing QA/QC review, organized by PSAP. In addition, each periodic report shall also include the completion date of the most recent QA/QC review conducted for each PSAP in Nebraska, along with a list of each PSAP, if any, for which no GIS dataset was submitted to the Contractor for review. The Commission must also be notified in the event any PSAP fails to make necessary changes within thirty (30) days to a GIS dataset that has been rejected for uploading or has been the subject of a Discrepancy Report.

**Please submit a copy of your report with your response.**



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 Suite 200  
 St. Petersburg, FL 33716  
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 FAX 727-539-6954

<b>Subject:</b>	Weekly Status Report		
<b>Status date:</b>		<b>REPORTING PERIOD:</b>	
<b>Project Name:</b>	GIS QA/QC Services for PSAP Data		
<b>Prepared By:</b>	Avineon, Inc.		

**Current Status Summary (By County):**

Status	All Data	Centerlines	Address Points	Jurisdiction Bounds
<b>Approved</b>	<b>7</b>	<b>10</b>	<b>16</b>	<b>21</b>
<b>Final</b>	<b>9</b>	<b>9</b>	<b>9</b>	<b>9</b>
<b>In Process</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>10</b>
<b>No Submission</b>	<b>45</b>	<b>45</b>	<b>45</b>	<b>45</b>
<b>Rejected</b>	<b>13</b>	<b>10</b>	<b>7</b>	<b>4</b>
<b>Waiting</b>	<b>9</b>	<b>9</b>	<b>6</b>	<b>4</b>
<b>Total</b>	<b>93</b>	<b>93</b>	<b>93</b>	<b>93</b>

County	Status	Initial Submission		Centerlines			Address Points			Jurisdiction Boundaries		
		Date	Review	Status	Sub-mitted	Review	Status	Sub-mitted	Review	Status	Sub-mitted	Review
Adams	Approved	1-Oct	2-Oct	Approved	15-Oct		Approved	1-Oct	4-Oct	Approved	1-Oct	4-Oct
Antelope	Final	1-Oct	2-Oct	Approved	1-Oct	12-Oct	Approved	1-Oct	12-Oct	Approved	1-Oct	12-Oct
Arthur	In Process	1-Oct	2-Oct	Approved	1-Oct		In Process	1-Oct	10-Oct	Approved		
Banner	No Submission											
Blaine	Rejected	1-Oct	2-Oct	Rejected	1-Oct	1-Oct	Rejected	1-Oct	1-Oct	Pending	1-Oct	4-Oct
Boone	Waiting	1-Oct	2-Oct	Waiting	1-Oct		Waiting	1-Oct	9-Oct	Approved	1-Oct	3-Oct

Will be a line in table for each County

STATUS REPORT

Avineon, Inc.

**Accomplishments:**

- Summary of Items that were completed during the report period

**Upcoming Activities:**

- Activities that are expected to be completed during the next report period

**Overdue Items:**

- List of Counties/PSAPs with data pending over 30 days

**Issues/Risks:**

- List of issues or project risks

**7. PERIODIC REMINDERS TO UPLOAD GIS DATA**

Local agencies will be expected to upload revised GIS datasets to the secure portal for review on at least a monthly basis. The Contractor will be required to send reminder notices via e-mail to each PSAP that has gone 85 or more days without uploading a new or revised dataset for QA/QC review. Each such reminder must include a hyperlink to the Contractor's secure portal, along with the dates and a general description of the PSAP's previous uploads to the portal.

As a portion of all Avineon data projects a production status database will be created to meet the needs of the project to manage and track all data submissions from the PSAPs. This database will be used to drive all e-mail correspondence with the PSAPs including the variety of reports to PSAPs described in earlier sections of this document.

This database will be used to generate reminder e-mails to the PSAP GIS contacts every 30 days to provide the data required. This e-mail system will have a template that will include a link to the web portal to upload data and basic information regarding the last submission received from the PSAP.

**8. CUSTOMER SERVICE RESPONSIBILITIES**

The Contractor must support various methods by which local agencies and the Commission can raise questions and concerns or access information about the Contractor's QA/QC process. At a minimum, such methods must include a dedicated customer service telephone number and e-mail address. The Contractor must also maintain a User Guide and Frequently Asked Questions page dedicated to the GIS QA/QC portal on its website.

The Contractor must also provide a designated person for the Commission to contact in the event of system problems or operational questions from Commission staff. In addition, the Contractor must maintain a responsive trouble ticket system designed to direct system issues to the person who can most efficiently obtain a resolution.

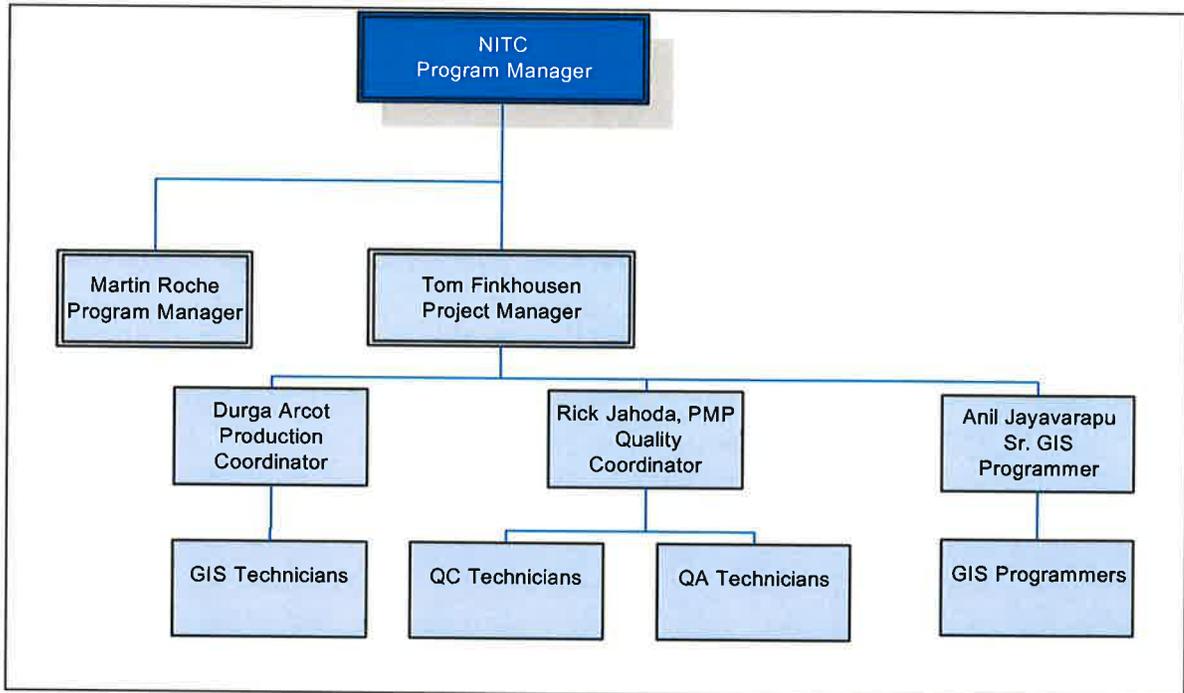
**a. Please describe how you will meet the requirements for customer service.**

**Bidder Response:**

Avineon believes that communication is the key to superior customer service. In addition to providing full project documentation on the SharePoint portal, a project specific telephone and e-mail group will be created to ensure seamless communications. Project specific e-mail account will be created and all incoming e-mail to this account will be forwarded to each of the key project staff identified in the project organization table below. This communication will ensure that all key members of the project team are informed of daily activities in the project.

A key part of the Project Execution Plan defines the project organization and clearly spells out responsibilities and roles of the entire Avineon team. The key members of the team are described in the project organization chart below. Mr. Martin Roche, Avineon's Director of GIS Services and Solutions will serve as the executive sponsor for the program and will be available to the NITC team whenever required.

The Project Manager, Mr. Tom Finkhousen, and the Production Coordinator, Mr. Durga Arcot, will be available to provide direct responses to the NITC or any of the PSAPs as needed.



Training must also be made available to local agencies and designated Commission personnel on the Contractor's QA/QC process.

**b. Please describe how you will approach and accomplish training local agencies and Commission personnel.**

**Bidder Response:**

There are three areas where training will be required for local agencies and NITC personnel: interaction with the project portal, use of Esri Data Reviewer results to address discrepancies, and maintenance of data on an ongoing basis using the tools developed for the project.

Training on the project portal and the Esri Data Reviewer will be conducted as web based activities. The project portal training will be offered early in the project tenure and be offered up to 5 times over several weeks to maximize the possibility of all interested to participate. A user manual and a video of the training session will be made available via the project portal and instructions to access them will be provided via e-mail to everyone involved in the project.

The Esri Data Reviewer training will be customized to the specific needs of the GIS staff at PSAPs and the NITC. All examples will be drawn from road centerlines, jurisdiction polygons, and address points/ANI. This training will be offered on-line and will also be offered several times to ensure maximum participation. Training materials will also be made available via the web portal including instruction manuals, user guides, and videos of the training sessions.

Finally, the NITC staff will require a complete knowledge transfer as the project completes the first statewide data set. This training will be done on-site and will be designed to enable NITC to be fully self-sufficient with the tools, techniques, and reporting mechanisms to support the ongoing effort. This training will be focused on experienced GIS staff and system/data administrators while earlier training will be primarily focused on supporting the most basic level of users.

Fully documented scripts and tools will be provided to NITC. The program guide defining the history of the effort will be produced and provided.

**G. DELIVERABLES**

Please see Cost Proposal Template.

#### 4.5 RFP SECTION VI PROPOSAL INSTRUCTIONS

There are no vendor-compliant forms in Section VI so it has not been included.



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## 5. COMPLETED TECHNICAL APPROACH

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### 5.1 UNDERSTANDING OF THE PROJECT REQUIREMENTS

Avineon is proposing an approach for the QA/QC of GIS data to meet the State's requirements in support of GIS datasets in order to verify that GIS data used by PSAPs within Nebraska complies with the NENA NG9-1-1 data model. We will analyze GIS data uploaded by local agencies in order to confirm compliance with Nebraska Information Technology Council (NITC) and NENA standards for use in NG9-1-1 applications.

Avineon's solution will use of a variety of off-the-shelf and customized software solutions in combination with our ISO-certified project management, project communications, and quality control procedures. Avineon will build a customized and secure SharePoint portal for the receipt of GIS data, the distribution of documents, sharing of project status materials, and the distribution of GIS datasets following validation they meet NITC and NENA standards. Avineon will maintain this portal for Nebraska PSAPs, NITC staff, or their representatives will upload GIS data to be analyzed by our staff. Access to the portal will be limited to authorized users via login and password, or other secure authentication factor. The specific details of the distribution of the login credentials will be determined jointly between Avineon and NITC at project kick off. Avineon will provide on-line training for the PSAP staff if required to bring them up to date on requirements for access the portal, verifying contact information for PSAP project team members, downloading project documents, and uploading GIS data sets for review. The portal will enable authorized personnel to upload GIS datasets to identify the applicable jurisdiction, geographic area, and type of dataset before a file will be accepted for system use.

The Avineon-developed SharePoint portal will be capable of accepting GIS data in any Esri format. This portal will automatically reject incomplete or defective GIS datasets and immediately notify the local agency if an attempted upload was unsuccessful. The portal will return GIS datasets prior to QA/QC review, which have the any of the faults noted in *RFP Section V*, and will notify to the individual attempting to upload data uploading to make appropriate corrections.

### 5.2 PROPOSED DEVELOPMENT APPROACH

Avineon is proposing the following five development phases for the execution of this project:

1. Kick-Off Meeting
2. Pre-Pilot Activities
3. Pilot
4. Production
5. Knowledge Transfer

#### 5.2.1 Phase 1 - Kick-Off Meeting

The kick-off meeting will be held with the Avineon project team and the NITC project team as soon as possible following contract award. A detailed agenda will be provided in advance of the meeting, but essentially this meeting will be used to introduce team members, finalize project schedule, identify responsibilities of each team member, and to develop a project communications matrix.

## 5.2.2 Phase 2 - Pre-Pilot Activities

Immediately following the kick-off meeting the Avineon staff will initiate the pre-pilot activities. These activities will involve all required steps to ensure project success, including a complete review of data, workshops to support the QA/QC of existing data, review of QA/QC methodologies, and review of data acceptance criteria.

Avineon finds it valuable to conduct a review of existing data prior to bringing the team on-site for a review of the data.

This is also the phase that will feature the development of the **Project Execution Plan** or **Detailed Action Plan**. The plan will generally follow the outline below, subject to modifications discussed with NITC at the kick-off meeting:

### A. PROJECT OVERVIEW

- a. Project Background
- b. Project Purpose, Scope, and Objectives
- c. Project Assumptions
- d. Project Constraints
- e. Project Deliverables
  - i. Project Plan
  - ii. Data Discovery Summary
    1. To include: Meeting minutes, data source matrix, summary analysis
  - iii. Program Guide (production detailed instructional guide)
  - iv. Draft Data Delivery Schedule
  - v. Final Approval of Documents
- f. Project Schedule and Budget
- g. Project Development Plan Evolution
- h. Project Development Plan Structure
- i. Project Development Plan References
- j. Glossary

### B. PROJECT ORGANIZATION

- a. External Interfaces
- b. Internal Structure
- c. Roles and Responsibilities (including a RACI chart)
- d. Point(s) of Contact (including organization chart for both parties)

### C. MANAGEMENT PROCESS

- a. Project Initiation
- b. Staffing
- c. Resource Acquisition
- d. Training

- e. Work Planning
  - f. Work Activities (including a RACI chart)
  - g. Schedule Allocation
  - h. Resource Allocation
  - i. Budget Allocation
  - j. Project Control
  - k. Requirements Control
  - l. Schedule Control
  - m. Budget Control
  - n. Quality Control Activities and Delivery Acceptance Criteria
  - o. Project Reporting and Communication
  - p. Metrics Collection
  - q. Risk Management
  - r. Project Close-Out
- D. SUPPORTING PROCESSES
- a. Configuration Management
  - b. Independent Verification and Validation
  - c. Documentation
  - d. Quality Assurance
  - e. Reviews and Audits
  - f. Problem Resolution
  - g. Sub-Contractor Management
  - h. Process Improvement
- E. ADDITIONAL PLANS
- F. APPENDICES
- a. Communication Matrix
  - b. Risk Assessment Matrix
  - c. Data Management Matrix
  - d. Work Breakdown Structure

### **5.2.3 Phase 3 - Pilot**

In Avineon's experience, large multi-source projects like the one outlined in this RFP it is appropriate to undertake a pilot where a sample of the digital source data can be fully processed before initiating full production. Generally, 5-10% of an area is appropriate for a pilot. The specific areas to be used for the pilot can be identified during the project kick-off meeting but Avineon recommends that the PSAPs selected represent a decent sample of the quality of the data we can expect to receive. There should also be some adjoining counties or PSAP areas to ensure that the tools for comparing jurisdiction geography and cross boundary connectivity can be tested. Customized software, QA/QC

steps, and automation will be fine-tuned prior to the initial deliveries of the production phase.

Avineon expects for NITC to review these pilot data over a 10-day period following delivery. Five days after these pilot data are delivered we expect to conduct an on-site joint review of the pilot data. This on-site joint review is always beneficial in project communications and to make certain that Avineon’s production, QA/QC, and project management teams are fully in synch with Nebraska’s project team.

**5.2.4 Phase 4 - Production**

Immediately following NITC approval to move from the initial pilot to the production, Avineon will initiate training of the full production staff. The staff will be trained on the production materials as tested, reviewed, and approved during the initial pilot phase.

**5.2.5 Phase 5 - Knowledge Transfer**

Once all PSAP areas have been completed and the data for the initial year is available for statewide use, Avineon will schedule a series of meetings with the NITC staff and other key GIS data providers to transfer knowledge gained during the initial review of these data. This knowledge transfer will include training on code created and used to identify discrepancies in initial source data, Esri Data Reviewer extension and the specific parameters used to identify errors, and the PAR system used to track questions on issues arising during the project.

**5.2.6 Proposed Schedule**

A preliminary project schedule is presented below. This schedule outlines the major tasks Avineon views as essential to conducting this project successfully.

The proposed schedule anticipates breaking Nebraska into four regions during the initiation of production activities. This regional approach will ensure that the GIS professionals in the PSAPs have access to Avineon support personnel during the initial review of their data. The schedule also allows for a timely review of submitted data since the entire statewide dataset will not be address at one time. Each region will be offered training sessions on portal access, use of the Esri Data Reviewer, and how to review the provided discrepancy tables at the appropriate time to their region. The training will be implemented using a “just in time” philosophy. In other words, users will be able to put the training into use as an important element to the phasing of production. Phasing will also enable the cleanup of road centerlines and jurisdiction polygons along edges of PSAP areas to be completed easily.

A more detailed discussion of program scheduling will be a key discussion point at the kick-off meeting agenda. The final schedule will be included in the *Project Execution Plan*.

Avineon’s preliminary project schedule is as follows:

Task Name	Duration	Start	Finish
<b>NITC GIS QA/QC Project Award</b>		<b>10/1/2018</b>	<b>10/1/2018</b>
<b>Kick-Off Meeting</b>	<b>15 days</b>	<b>10/4/2018</b>	<b>10/24/2018</b>
Agenda Draft to NITC	1 day	10/4/2018	10/4/2018
Finalize Meeting Date	1 day	10/4/2018	10/4/2018

Task Name	Duration	Start	Finish
Finalized Agenda	5 days	10/5/2018	10/11/2018
Meeting	1 day	10/19/2018	10/19/2018
Meeting Minutes	3 days	10/22/2018	10/24/2018
<b>Pre-Pilot Activities</b>	<b>20 days</b>	<b>10/25/2018</b>	<b>11/21/2018</b>
<b>Project Execution Plan Document</b>	<b>18 days</b>	<b>10/25/2018</b>	<b>11/19/2018</b>
Draft Project Execution Plan	5 days	10/25/2018	10/31/2018
NITC Review of Project Execution Plan	5 days	11/1/2018	11/7/2018
Revisions to Project Execution Plan	3 days	11/8/2018	11/12/2018
NITC Review and Approval of Project Execution Plan	5 days	11/13/2018	11/19/2018
<b>Prepare Production Tools and Environment</b>	<b>20 days</b>	<b>10/25/2018</b>	<b>11/21/2018</b>
Establish and test project web portal	15 days	10/25/2018	11/14/2018
Configure production and data tracking database	15 days	10/25/2018	11/14/2018
Finalize and implement topological review rules	15 days	10/25/2018	11/14/2018
Configure attribute mismatch tools	15 days	10/25/2018	11/14/2018
Develop portal user training and documentation	10 days	11/8/2018	11/21/2018
Develop Esri Data Reviewer training and documentation	20 days	10/25/2018	11/21/2018
Finalize PSAP contact database	5 days	10/25/2018	10/31/2018
<b>Pilot</b>	<b>45 days</b>	<b>11/22/2018</b>	<b>1/23/2019</b>
Provide portal user training to pilot PSAP	1 day	11/22/2018	11/22/2018
<b>PSAP Upload of initial data</b>	<b>3 days</b>	<b>11/23/2018</b>	<b>11/27/2018</b>
Intake testing of PSAP Data	2 days	11/23/2018	11/26/2018
Generate and e-mail Contractor Report to PSAP	1 day	11/27/2018	11/27/2018
Centerline-MSAG Review	5 days	11/27/2018	12/3/2018
Centerline-Address Point Review	5 days	12/4/2018	12/10/2018
Jurisdiction Boundary Review (PSAP, ESZ, etc.)	5 days	12/11/2018	12/17/2018
ALI-Address Point Review	5 days	12/18/2018	12/24/2018
Generate and e-mail Discrepancy Report to PSAP, NITC	1 day	12/18/2018	12/18/2018
Review connectivity to adjacent PSAP	5 days	12/25/2018	12/31/2018
Report on connectivity to PSAP, NITC	1 day	1/1/2019	1/1/2019
Pilot Results Review On-site meeting (NITC, Avineon, PSAP)	2 days	1/8/2019	1/9/2019
<b>Post-Pilot Revisions</b>	<b>10 days</b>	<b>1/10/2019</b>	<b>1/23/2019</b>
Revisions to Project Execution Plan	5 days	1/10/2019	1/16/2019
Revisions to All Reports	5 days	1/10/2019	1/16/2019
Revisions to Topology Rules	5 days	1/10/2019	1/16/2019
Revisions to Attribute Checks	5 days	1/10/2019	1/16/2019
Revisions to Discrepancy Data Tables	10 days	1/10/2019	1/23/2019
<b>Production Phase</b>	<b>148 days</b>	<b>1/31/2019</b>	<b>8/26/2019</b>
<b>Production Block 1 (Approx. 25% of State)</b>	<b>76 days</b>	<b>1/31/2019</b>	<b>5/16/2019</b>
Provide portal users training to PSAPs in block	1 day	1/31/2019	1/31/2019
PSAP Upload of initial data	10 days	2/1/2019	2/14/2019

Task Name	Duration	Start	Finish
Intake testing of PSAP Data	12 days	2/5/2019	2/20/2019
Generate and e-mail Contractor Report to PSAP	12 days	2/6/2019	2/21/2019
Centerline-MSAG Review	15 days	2/7/2019	2/27/2019
Centerline-Address Point Review	15 days	2/8/2019	2/28/2019
Jurisdiction Boundary Review (PSAP, ESZ, etc.)	15 days	2/11/2019	3/1/2019
ALI-Address Point Review	15 days	2/12/2019	3/4/2019
Connectivity to adjacent PSAP Review	2 days	3/1/2019	3/4/2019
Discrepancy Report to PSAP and NITC	1 day	3/5/2019	3/5/2019
<b>Revised PSAP Data Cycle</b>	<b>47 days</b>	<b>3/6/2019</b>	<b>5/9/2019</b>
PSAP Response to Discrepancy Report	30 days	3/6/2019	4/16/2019
PSAP Upload of revised data	30 days	3/13/2019	4/23/2019
Centerline-MSAG Review	35 days	3/14/2019	5/1/2019
Centerline-Address Point Review	35 days	3/14/2019	5/1/2019
Jurisdiction Boundary Review (PSAP, ESZ, etc.)	35 days	3/14/2019	5/1/2019
ALI-Address Point Review	35 days	3/14/2019	5/1/2019
Connectivity to adjacent PSAP Review	5 days	5/2/2019	5/8/2019
Discrepancy Report to PSAP and NITC	1 day	5/9/2019	5/9/2019
Certification of PSAP Data Sets	5 days	5/10/2019	5/16/2019
<b>Production Block 2 (Approx. 25% of State)</b>	<b>76 days</b>	<b>3/6/2019</b>	<b>6/19/2019</b>
Provide portal users training to PSAPs in block	1 day	3/6/2019	3/6/2019
PSAP Upload of initial data	10 days	3/7/2019	3/20/2019
Intake testing of PSAP Data	12 days	3/11/2019	3/26/2019
Generate and e-mail Contractor Report to PSAP	12 days	3/12/2019	3/27/2019
Centerline-MSAG Review	15 days	3/13/2019	4/2/2019
Centerline-Address Point Review	15 days	3/14/2019	4/3/2019
Jurisdiction Boundary Review (PSAP, ESZ, etc.)	15 days	3/15/2019	4/4/2019
ALI-Address Point Review	15 days	3/18/2019	4/5/2019
Connectivity to adjacent PSAP Review	2 days	4/4/2019	4/5/2019
Discrepancy Report to PSAP and NITC	1 day	4/8/2019	4/8/2019
<b>Revised PSAP Data Cycle</b>	<b>47 days</b>	<b>4/9/2019</b>	<b>6/12/2019</b>
PSAP Response to Discrepancy Report	30 days	4/9/2019	5/20/2019
PSAP Upload of revised data	30 days	4/16/2019	5/27/2019
Centerline-MSAG Review	35 days	4/17/2019	6/4/2019
Centerline-Address Point Review	35 days	4/17/2019	6/4/2019
Jurisdiction Boundary Review (PSAP, ESZ, etc.)	35 days	4/17/2019	6/4/2019
ALI-Address Point Review	35 days	4/17/2019	6/4/2019
Connectivity to adjacent PSAP Review	5 days	6/5/2019	6/11/2019
Discrepancy Report to PSAP and NITC	1 day	6/12/2019	6/12/2019
Certification of PSAP Data Sets	5 days	6/13/2019	6/19/2019
<b>Production Block 3 (Approx. 25% of State)</b>	<b>76 days</b>	<b>4/9/2019</b>	<b>7/23/2019</b>
Provide portal users training to PSAPs in block	1 day	4/9/2019	4/9/2019
PSAP Upload of initial data	10 days	4/10/2019	4/23/2019

Task Name	Duration	Start	Finish
Intake testing of PSAP Data	12 days	4/12/2019	4/29/2019
Generate and e-mail Contractor Report to PSAP	12 days	4/15/2019	4/30/2019
Centerline-MSAG Review	15 days	4/16/2019	5/6/2019
Centerline-Address Point Review	15 days	4/17/2019	5/7/2019
Jurisdiction Boundary Review (PSAP, ESZ, etc.)	15 days	4/18/2019	5/8/2019
ALI-Address Point Review	15 days	4/19/2019	5/9/2019
Connectivity to adjacent PSAP Review	2 days	5/8/2019	5/9/2019
Discrepancy Report to PSAP and NITC	1 day	5/10/2019	5/10/2019
<b>Revised PSAP Data Cycle</b>	<b>47 days</b>	<b>5/13/2019</b>	<b>7/16/2019</b>
PSAP Response to Discrepancy Report	30 days	5/13/2019	6/21/2019
PSAP Upload of revised data	30 days	5/20/2019	6/28/2019
Centerline-MSAG Review	35 days	5/21/2019	7/8/2019
Centerline-Address Point Review	35 days	5/21/2019	7/8/2019
Jurisdiction Boundary Review (PSAP, ESZ, etc.)	35 days	5/21/2019	7/8/2019
ALI-Address Point Review	35 days	5/21/2019	7/8/2019
Connectivity to adjacent PSAP Review	5 days	7/9/2019	7/15/2019
Discrepancy Report to PSAP and NITC	1 day	7/16/2019	7/16/2019
Certification of PSAP Data Sets	5 days	7/17/2019	7/23/2019
<b>Production Block 4 (Approx. 25% of State)</b>	<b>76 days</b>	<b>5/13/2019</b>	<b>8/26/2019</b>
Provide portal users training to PSAPs in block	1 day	5/13/2019	5/13/2019
PSAP Upload of initial data	10 days	5/14/2019	5/27/2019
Intake testing of PSAP Data	12 days	5/16/2019	5/31/2019
Generate and e-mail Contractor Report to PSAP	12 days	5/17/2019	6/3/2019
Centerline-MSAG Review	15 days	5/20/2019	6/7/2019
Centerline-Address Point Review	15 days	5/21/2019	6/10/2019
Jurisdiction Boundary Review (PSAP, ESZ, etc.)	15 days	5/22/2019	6/11/2019
ALI-Address Point Review	15 days	5/23/2019	6/12/2019
Connectivity to adjacent PSAP Review	2 days	6/11/2019	6/12/2019
Discrepancy Report to PSAP and NITC	1 day	6/13/2019	6/13/2019
<b>Revised PSAP Data Cycle</b>	<b>47 days</b>	<b>6/14/2019</b>	<b>8/19/2019</b>
PSAP Response to Discrepancy Report	30 days	6/14/2019	7/25/2019
PSAP Upload of revised data	30 days	6/21/2019	8/1/2019
Centerline-MSAG Review	35 days	6/24/2019	8/9/2019
Centerline-Address Point Review	35 days	6/24/2019	8/9/2019
Jurisdiction Boundary Review (PSAP, ESZ, etc.)	35 days	6/24/2019	8/9/2019
ALI-Address Point Review	35 days	6/24/2019	8/9/2019
Connectivity to adjacent PSAP Review	5 days	8/12/2019	8/16/2019
Discrepancy Report to PSAP and NITC	1 day	8/19/2019	8/19/2019
Certification of PSAP Data Sets	5 days	8/20/2019	8/26/2019
<b>Monthly Update of Certified Data by PSAP</b>	<b>411 days</b>	<b>3/6/2019</b>	<b>9/30/2020</b>
Monthly Updates of Certified Data in PSAP in Block #1	411 days	3/6/2019	9/30/2020
Monthly Updates of Certified Data in PSAP in Block #2	387 days	4/9/2019	9/30/2020

Task Name	Duration	Start	Finish
Monthly Updates of Certified Data in PSAP in Block #3	363 days	5/13/2019	9/30/2020
Monthly Updates of Certified Data in PSAP in Block #4	339 days	6/14/2019	9/30/2020
<b>Project Close</b>	<b>20 days</b>	<b>9/3/2020</b>	<b>9/30/2020</b>
Knowledge Transfer	20 days	9/3/2020	9/30/2020
Project Close Out Report	5 days	9/24/2020	9/30/2020

### 5.3 TECHNICAL REQUIREMENTS

The SharePoint portal developed by Avineon will be utilized for receiving GIS data, distribution of documents, sharing of project status materials, and delivery of GIS datasets following validation that they meet NITC and NENA standards. Avineon will maintain this portal for Nebraska PSAPs, NITC staff, or their representatives to upload GIS data into the system.

The portal will be capable of accepting GIS data in all Esri formats. The portal should automatically reject GIS datasets that are incomplete or defective and will immediately notify the local agency if an attempted upload was unsuccessful. Prior to QA/QC review the portal will return GIS datasets having any of the following invalid characteristics.

- No data in the file;
- Incompatible dataset due to improper or missing field names;
- Lack of defining information, e.g., county name, dataset;
- Improper file format;
- MSAG not included with Street Centerline file;
- Missing or improperly formatted FDGC metadata; and
- Incorrect data naming convention.

The system will notify the individual attempting to upload the data, to correct any such errors. Datasets that do not have any of the above-referenced errors will be automatically accepted for QA/QC review via the Avineon-developed secure SharePoint portal.

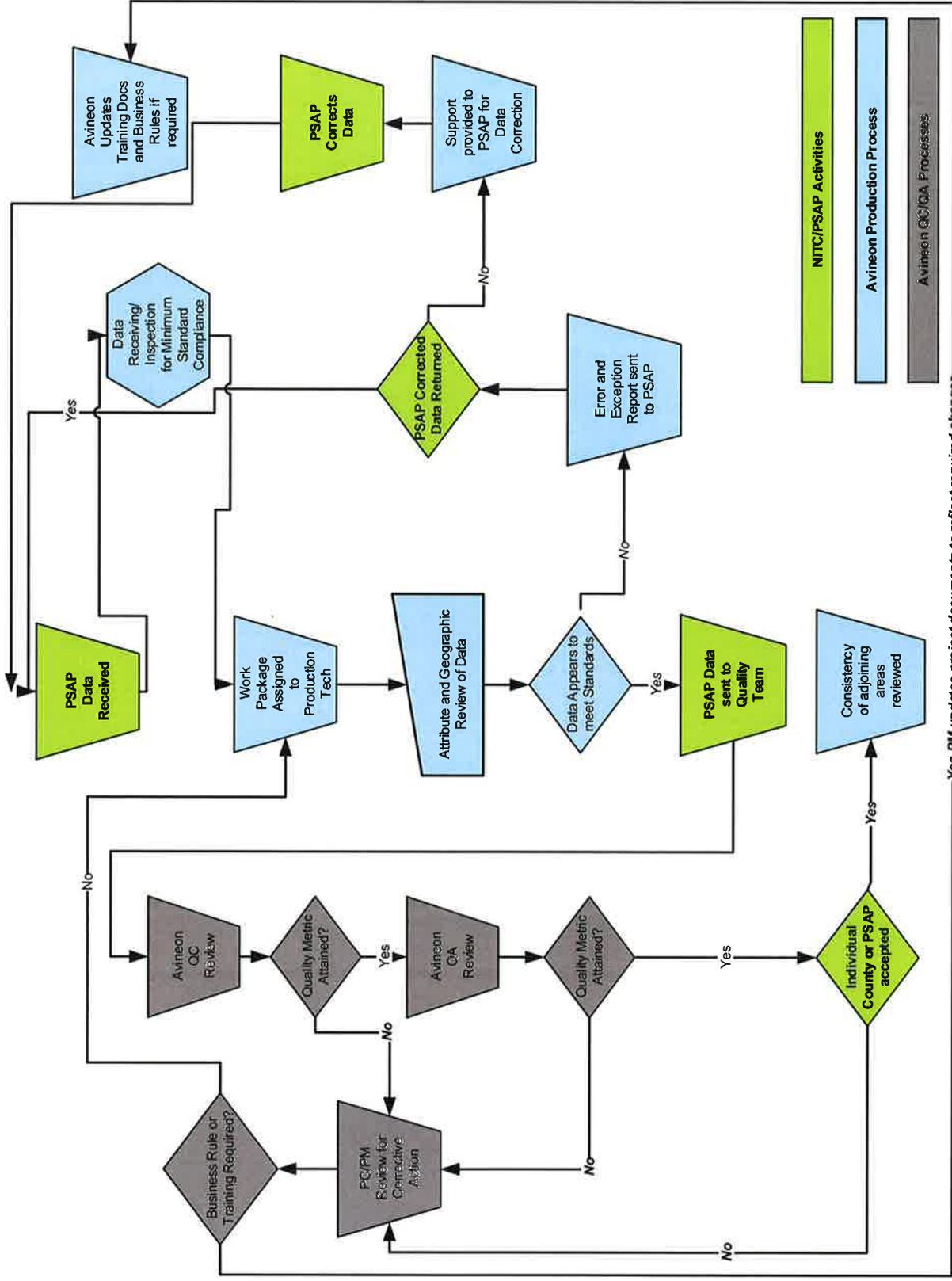
If the datasets submitted to not meet the minimum standards, they will be returned to the PSAP for correction. In areas where topology is incurred or other basis standards have not been met, the Data Review extension will allow Avineon and the PSAP to maintain a comprehensive listing of items that required correction. This will ease the review of these data on the part of the PSAP and re-review of the data once resubmitted. Avineon anticipates providing the standard Esri Data Reviewer report to each PSAP so they have direction on the specific items that need to be corrected. Avineon will provide a two hour online training exercise for the PSAP GIS staff to assist them in understanding the reports and how to best utilize them in their correction of the data. This training will include requirements for access the portal, verifying contact information for PSAP project team members, downloading project documents, and uploading GIS data sets for review.

Data sets for review will include the following.

- Street Centerlines (with associated MSAG),
- Street/Structures address points (with ALI),
- PSAP boundary polygons,
- Emergency service zone polygons (police, fire, EMS), and

- Political and jurisdictional boundaries.

Once the data sets have been uploaded to the portal, Avineon will implement a script to enable Esri's Data Reviewer extension to ensure compliance of NITC and NENA basic standards for the dataset have been attained prior to more complete analysis. These checks will focus on the following fundamental requirements for the original submission and will not initially address data quality. The anticipated workflow of the project is depicted in the diagram on the following page.



NITC/PSAP Activities
Avineon Production Process
Avineon QC/QA Processes

#### 5.4 CONTRACTOR REQUIREMENTS

Avineon will perform the QA/QC of the data in a two-step process. Initially, an Avineon QC technician will review the data to determine if the data meets the standards for acceptance into the statewide dataset to support NG9-1-1. Once the PSAP area has been initially accepted, a final QA is performed by a supervisor or senior technician before the delivery to ensure that the data passes the final QA acceptance criteria.

Avineon’s QC team will work with the production team to understand and review the process while identifying opportunities for errors. The QC team then prepares a detailed QC checklist for all such possible errors that can occur during the production. Checklist will include all the manual and automated checks that need to be performed on the data. These checks are performed on a batch/area and all errors are reported in the QA database to collect all the detailed information of reported defects, for example type of defects, severity ratings, operator information, task information, batch information, etc.

The QA database is used to review and track improvements of the quality of the data and feedback to QC technicians. It also helps to quickly identify any systemic issues, training issues, specification issues and whether it pertains of set of people or the specification etc.

The work of each QC technician is initially 100% reviewed. Once the QA Supervisor has a high level of confidence in the performance of an individual technician but after no less than five batches per technician, subsequent work is then subjected to a statistically significant random sampling in compliance with ISO standards. This second level of verification is used to ensure that the stated accuracy rate of 98% as required by the project specifications can be fully documented and assured.

Samples sizes for QC shall be based on ISO standards and will be variable dependent on the size of each batch. Compliance with ISO recognized sampling standards ensures the quality metrics are statistically valid. For each batch, the minimum number to be reviewed shall be based on the following ISO standard table:

Batch Size	Sample Size
2 to 8	2
9 to 15	3
16 to 25	5
26 to 50	8
51 to 90	13
91 to 280	32
281 to 1,200	80
1,201 to 3,200	125
3,201 to 10,000	200

Batch Size	Sample Size
10,001 to 35,000	315
35,001 to 150,000	500
150,001 to 500,000	800
500,001 and over	1,250

**5.5 DELIVERABLES**

Avineon will fully document all work in a **Project Execution Plan**. A key part of the Project Execution Plan defines the project organization and clearly spells out responsibilities and roles of the entire Avineon team. Additional deliverables as required by the RFP include:

- Contractor Reports to PSAP
- Discrepancy Reports
- Compliance Report
- Contractor Reports to Commission

Examples of the above documents are included in *Section 4.F* of this proposal.