Exhibit 5

Ballpark Estimate

Miscellaneous Requirements

Version 1.3

Prepared For:



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Work to be performed by









Table of Contents

1	Overview	v3
2	Ballpark	Estimates by Requirement4
	2.1 Imp	lementation of Graphic Work Design & Work Order Management System Integration4
	2.1.1	Anticipated Task List
	2.2 Inte	gration of Responder OMS to DME Community Relations Outage Application5
	2.2.1	Anticipated Task List
	2.3 Imp	rovement of Public Facing Outage Map6
	2.3.1	Anticipated Task List6
	2.4 Imp	lementation of GIS Management Dashboard7
	2.4.1	Anticipated Task List
	2.5 Rev	iew of Disaster Recovery & Backup Solutions for GIS, OMS and Related Systems9
	2.5.1	Anticipated Task List9
	2.6 Assi	stance with GIS Upgrade10
	2.6.1	Anticipated Task List11
	2.7 Imp	lementation of GIS-Based Asset Management Software13
	2.7.1	Anticipated Task List14
	2.8 Imp	lementation of Reporting Solution for Legacy OMS Data15
	2.8.1	Anticipated Task List15
	2.9 Imp	lementation of New DME Web-Based GIS Solution16
	2.9.1	Anticipated Task List
	2.10 GIS	Health Check-up17
	2.10.1	Anticipated Task List
	2.11 Dev	elopment of Custom DME GIS Training Materials18
	2.11.1	Anticipated Task List
	2.12 GIS-	Related Projects for Distribution Automation and Unmanned Aerial Vehicle Systems 19
	2.12.1	Anticipated Task List
	2.13 GIS	Support Retainer
	2.13.1	Anticipated Task List



1 Overview

Denton Municipal Electric ("DME") has provided an extensive list of various requirements to SSP Innovations ("SSP") around enhancing and/or improving the functionality of and around its GIS. In response to the list, this document provides rough order of magnitude cost estimates, and line-item task detail where possible, as to the work likely required to resolve each requirement.

All depictions of levels of effort, durations and/or costs within this document shall be considered nonbinding ballpark estimates for rough budgeting purposes only. SSP does not guarantee the success of any of the below solutions at the stated price.

In order to obtain a committed SOW with subtask-level detail, schedule and fixed costs, a scoping conversation would be required between the two entities for the corresponding requirement.

Prices included are using SSP rates and projected costs for projects signed in calendar year 2016. These rates are subject to change.

*A portion of the services described herein requires SSP's access to DME's Schneider Electric ArcFM Suite licensing. Per updated SSP internal technology policy, in order for SSP to utilize DME's Schneider Electric licensing for development and/or testing purposes, SSP will require DME to accommodate one of two activities for SSP's proper access:

- If permitted within its software license agreements and preferable to DME, DME will provide SSP the required Schneider Electric software installers via FTP or Sharefile for SSP's use on development machines. DME provides access to its network via VPN along with the IP address and machine name of its license server. SSP will reference the license server for the term of testing any code / processes only. The network access will support allowing SSP machines onto the DME network to reference the server.
- 2. Alternatively, DME will provide a desktop or server that SSP is provided login rights to, on DME's network. SSP will deploy our software development tools to this machine and use it to develop and test all new functionality. SSP will remote desktop to this environment to perform this work. This machine can be either physical or virtual. If virtual is preferred, SSP can provide the machine to DME. SSP's TFS source control can and will still be used for code control.



2 Ballpark Estimates by Requirement

2.1 Implementation of Graphic Work Design & Work Order Management System Integration

SSP is currently working with DME to document DME's workflow processes and potential system interfaces surrounding work order management and design. DME will utilize this project as an input into the decision-making process around a future purchase and installation of both a capital work order management system as well as a graphic work design tool.

Depending on the systems DME chooses for installation, SSP will handle the installation, configuration, and any customization of the applications to meet DME's requirements. A financial ballpark previously provided to DME has been included in this document as a placeholder for this work. A revised and detailed task order and project plan will be created and agreed upon with DME before any work commences.

Cost Estimate: \$600,000.00

2.1.1 Anticipated Task List

Not available at this time – scoping calls required.



2.2 Integration of Responder OMS to DME Community Relations Outage Application

DME is currently evaluating customer-facing applications that will allow customers to check their status within an outage event. This will work by allowing the third-party application to check for a customer's participation in a confirmed incident within Responder. Another option would be to allow customers to report an outage via the third-party application.

While DME has not selected a vendor or application for this functionality as of yet, SSP has previously implemented similar Responder-based functionality at other utilities and has used those projects to provide a ballpark for this project.

Cost Estimate: \$55,000.00

2.2.1 Anticipated Task List







2.3 Improvement of Public Facing Outage Map

This implementation will utilize the ArcGIS Online components that were installed via the previously scoped project *Installation of ArcGIS Online Public Streetlight Reporting Application* (SSP SOW #16-2-11) to provide secure access to GIS data via the internet. This will allow for the Responder data to be viewed via the public facing DME website.

DME has already experimented with creating an outage map, but the current map shows the individual responder incident locations (exact location of outage), which is not a recommended pattern.

SSP recommends usage of our standard approach for public facing responder outage maps. This approach utilizes an aggregation of the Responder incident data to various polygons covering the service territory. This data is then made available to a web map template <u>provided by Esri specifically for public facing outages</u>. This template will be installed and configured alongside the SSP NBS application for Responder aggregation.

Cost Estimate: \$16,000.00

2.3.1 Anticipated Task List

				ep 10, '17 Sep 17, '17 Sep 24, '
	Task Name 👻	Start 👻	Finish 🚽	T W T F S S M T W T F S S M T W T
100	4 (6) Improve Public Facing Outage Map	Wed 9/13/17	Wed 9/27/17	¥ 1
101	▲ Development	Wed 9/13/17	Mon 9/18/17	
102	Remote - Kickoff	Wed 9/13/17	Wed 9/13/17	L SSP PM
103	NBS Application	Wed 9/13/17	Mon 9/18/17	↓
104	Architect Solution	Wed 9/13/17	Wed 9/13/17	SSP Senior
105	Create New Polygon Feature Class Based on Bookl	Thu 9/14/17	SSP Senior	
106	Code NBS App for Aggregation	Thu 9/14/17	Fri 9/15/17	SSP Senior
107	Unit Test with Responder @ SSP	Fri 9/15/17	Mon 9/18/17	SSP Senior
108	▲ Deployment	Mon 9/18/17	Wed 9/27/17	*
109	Install and Configure NBS Update Application	Mon 9/18/17	Mon 9/18/17	ر SSP Senior
110	Create Two ArcGIS Online WebMaps (Public and Edita	Mon 9/18/17	Mon 9/18/17	SSP Senior
111	Test & Validate Solution	Tue 9/19/17	Wed 9/20/17	SSP Senior
112	Remote Support	Thu 9/21/17	Wed 9/27/17	
			E 1 40 10 14 7	



2.4 Implementation of GIS Management Dashboard

DME would like to build a GIS dashboard that includes both statistical information extracted from GIS (e.g., miles of line for distribution primary overhead and underground, etc.), as well as general mapping tools for managing day-to-day operations. SSP is currently working on a similar project at another utility and has used this project to ballpark this effort at DME.

SSP would propose to create a standard ASP.Net website that is driven by two major functional tabs. The first (default) tab will contain the statistical key performance indicators (KPIs) that are extracted from the underlying data. Presentation of this data may include charts and graphs as needed. The second major tab will include an embedded web view of a configured <u>Esri Operations Dashboard</u> which will provide a mapping-based approach to locating specific assets, events, or work. Operations dashboard provides additional functionality for adding graphs and charts tied directly to the data on the map.

The combination of the statistical and map-based dashboard will provide DME with maximum flexibility for providing information to managers throughout the utility.

Cost Estimate: \$98,405.00





2.4.1 Anticipated Task List

	Fook Nomo	Start	Finish	en, note, no
442				₩ 1 F 3 5 M 1 W
113	() GIS Management Dashboard	Thu 9/28/17	Fn 12/8/17	
114	a Design	Thu 9/20/17	Thu 10/3/17	SCD Service SCD DB
115	A Operite Kinkeff & Deguirmente	Thu 9/20/17	Tue 10/2/17	33 Selidi, 33 F Selidi, 33 F Fi
110	Onsite Kickoff & Requirments	Thu 9/28/17	Tue 10/3/17	S CO Caralian SCO DIN DINE
11/	Rickoff & Work Review	Thu 9/26/17	Thu 9/26/17	
118	Review Details of All Data Sources from CIS	Thu 9/28/17	Fn 9/29/17	Ser Service Service Service
119	Establish Sample Data Sources for Development	Mon 10/2/17	Mon 10/2/17	
120	Review Dashboard Requirments (KPIs)	Mon 10/2/17	Mon 10/2/17	
121	Review AVL Usage/Access	Tue 10/3/17	Tue 10/3/17	S5P Senior, S5P PM,UME
122	A Dashboard Design	Tue 10/3/17	Thu 10/5/17	
123	Create Mockups of Dashboard - GIS View and Stan	Tue 10/3/17	Thu 10/5/17	
124	Review with DiviE For Confirmation	Thu 10/5/17	Thu 10/5/17	
125	Update As Needed	Thu 10/5/17	Thu 10/5/17	SAP SENO, SAP PM[23]
126	 Development 	Fri 10/6/17	rue 11/14/17	
127	A Asset Locator NBS	Fri 10/6/17	wed 10/11/17	
128	Determine Single Field Search Terms	Fn 10/6/17	Fn 10/6/17	Sof Senior
129	Build NBS App into DME for ReGen of Locators	Fri 10/6/17	Wed 10/11/17	s Sr Señor
130	Test Locator Publishing to ArcGIS Server, Use in Ac	Wed 10/11/17	VVed 10/11/17	SSP Senior
131	A NBS for CIS (APEX) Data Replication	Thu 10/12/17	Thu 10/19/17	
132	Load Sample CIS Data Source	Thu 10/12/17	Thu 10/12/17	SSP Senior
133	Design GIS Data Model for Dashboard Reporting	Thu 10/12/17	Fri 10/13/17	Sty Senior
134	Replicate Data from CIS (APEX)	Fri 10/13/17	Tue 10/17/17	SSP Senior
135	Load Spatial Data Stores for Dashboard	Tue 10/17/17	Thu 10/19/17	SSP Senior
136	AVL Integration	Thu 10/19/17	Mon 10/23/17	
137	Build Hooks for AVL Source by Crew Type To Enab	Thu 10/19/17	Mon 10/23/17	SP Senior
138	Create Operations Dashboard	Mon 10/23/17	Fri 10/27/17	
139	Install or Use Existing ArcGIS Server	Mon 10/23/17	Mon 10/23/17	SSP Senior
140	Create WebMap as Source	Mon 10/23/17	Tue 10/24/17	SSP Senior
141	Develop Aggregation Thresholds	Tue 10/24/17	Tue 10/24/17	+SSP Senior
142	Develop GIS Ops Dashboard With Data Sources + \	Tue 10/24/17	Fri 10/27/17	SSP Senior
143	Ops Dashboard - Export Premise Data in View	Fri 10/27/17	Wed 11/1/17	
144	Create Custom Dashboard Widget to Export Premis	Fri 10/27/17	Wed 11/1/17	SSP Senior
145	Develop Web Dasboard	Wed 11/1/17	Thu 11/9/17	
146	Develop Shell ASP.Net Web Application	Wed 11/1/17	Thu 11/2/17	SSP Senior
147	Create GIS Tab with Ops Dashboard	Fri 11/3/17	Fri 11/3/17	SSP Senior
148	Create Non-GIS Dasboard	Fri 11/3/17	Wed 11/8/17	SSP Senior
149	Test the Entire Solution	Wed 11/8/17	Thu 11/9/17	SSP Senior
150	Validate with DME	Thu 11/9/17	Tue 11/14/17	
151	Demonstrate to DME	Thu 11/9/17	Thu 11/9/17	SSP Senior, SSP PM,DME
152	Update Solution as Needed	Thu 11/9/17	Fri 11/10/17	SSP Senior, SSP PM[25%]
153	Create Solution Documentation	Fri 11/10/17	Tue 11/14/17	SSP Senior, SSP PM[25%]
154	▲ Deployment	Tue 11/14/17	Fri 12/8/17	
155	Onsite Visit	Tue 11/14/17	Tue 11/21/17	
156	Travel	Tue 11/14/17	Tue 11/14/17	Hotel[5 Night].Trajve][1 Trip].Meals[5.5 Meal Days]
157	Deploy To DME Environment	Tue 11/14/17	Thu 11/16/17	SSP Senior, DME
158	.Net Charting License	Thu 11/16/17	Thu 11/16/17	• Net Charting License[1]
159	Validate All Aspects with DME	Thu 11/16/17	Mon 11/20/17	SSP Senior,DME
160	Ad-Hoc Training on All Aspects of Solution	Mon 11/20/17	Tue 11/21/17	SSP Senior,DME
161	DME Testing	Tue 11/21/17	Tue 12/5/17	
162	Support DME Testing	Tue 11/21/17	Tue 12/5/17	s
400	Resolve Any Final Issues	Tue 12/5/17	Fri 12/8/17	



2.5 Review of Disaster Recovery & Backup Solutions for GIS, OMS and Related Systems

DME would like to have their current DR and backup solutions reviewed by an expert in the field.

An SSP enterprise architect will travel to DME to work with them to review all current procedures for disaster recovery, optionally high availability, and backups. The architect will then draft a recommendations document covering all recommended changes including potential usage of additional database and/or other software applications to increase the redundancy of the system.

SSP will then lead the implementation of the changes and provide support surrounding the new software/procedures. SSP has provided a ballpark for this effort based on experience at other utilities.

Cost Estimate: \$33,235.00

2.5.1 Anticipated Task List

				7 Dec 10, '17 Dec 17, '17 Dec 24, '17
	Task Name 👻	Start 👻	Finish 🚽	F S S M T W T F S S M T W T F S S M T W T F
164	4 (8) Disaster Recovery & Backup Solutions for GIS, OMS, and Related Systems	Fri 12/8/17	Fri 12/29/17	
165	Internal Kickoff	Fri 12/8/17	Fri 12/8/17	SSP DBA/Architect, SSP PM
166	Kickoff with DME	Fri 12/8/17	Mon 12/11/17	SSP DBA/Architect, SSP PM
167	⊿ Design	Fri 12/8/17	Mon 12/18/17	•
168	Onsite Consult	Fri 12/8/17	Wed 12/13/17	
169	Travel	Fri 12/8/17	Fri 12/8/17	Meals[3.5 Meal Days], Travel[1 Trip], Hotel[3 Night]
170	Onsite Consultation	Fri 12/8/17	Wed 12/13/17	SSP DBA/Architect
171	Draft Recommendations Documentation	Wed 12/13/17	Fri 12/15/17	SSP DBA/Architect
172	Review with DME	Fri 12/15/17	Fri 12/15/17	SSP DBA/Architect
173	Update as Needed	Mon 12/18/17	Mon 12/18/17	SSP DBA/Architect
174	Design Accepted	Mon 12/18/17	Mon 12/18/17	₹ 12/18
175	Implementation	Fri 12/8/17	Fri 12/29/17	
176	TBD	Fri 12/8/17	Fri 12/15/17	SSP DBA/Architect
177	Support	Fri 12/15/17	Fri 12/29/17	



2.6 Assistance with GIS Upgrade

Every other year, DME performs upgrades for the GIS and the related application extensions (ArcFM, OMS, etc.). DME is already underway with an upgrade to Esri 10.2.1, which will be the standardized version for usage within ArcGIS Desktop until the newer Esri Utility Network (UN) is ready for usage by the industry.

This may or may not be within the three-year suggested timeframe of this proposed agreement. Therefore, SSP has included a ballpark for supporting various upgrade activities during this time. This may be related to implementation of the new UN and/or may be used to update/upgrade other supporting application components within the context of DME GIS.

A key suggestion for this work would be an Oracle upgrade to version 12c, which is heavily tied to several DME custom Responder integrations for SCADA and IVR. Per DME recommendations, these Responder integrations should be upgraded and/or replaced for better Oracle compliance prior to upgrading Oracle. The time and budget allotted to this task will be evaluated closer to the time when an upgrade is requested/required by DME.

Cost Estimate: \$156,620.00





2.6.1 Anticipated Task List

	Task Name 👻	Start 🗸	Finish 🗸	January February March 12/24 12/31 1/7 1/14 1/21 1/28 2/4 2/11 2/18 2/25 3/4 3/11 3/18 3/25 4	4/1 4/8
178	▲ (9) Assist with GIS Upgrades	Fri 12/29/17	Fri 4/13/18		_
179	⊿ Kickoff	Fri 12/29/17	Mon 1/1/18		
180	Internal Kickoff & Planning	Fri 12/29/17	Fri 12/29/17	SP PM,SSP Senior,SSP DBA/Architect	
181	Remote Project Kickoff Meeting	Mon 1/1/18	Mon 1/1/18	SSP PM, SSP Senior, SSP DBA/Architect	
182	Project Planning & Review of Deliverables, Timelines, &	Mon 1/1/18	Mon 1/1/18	SSP PM, SSP Senior, SSP DBA/Architect	
183	Review Architecture & Environments, Establish VPN A	Mon 1/1/18	Mon 1/1/18	SSP PM,SSP Senior	
184	SSP Test Environment	Mon 1/1/18	Thu 2/15/18		
185	Establish Test Environment	Mon 1/1/18	Wed 1/3/18		
186	Deliver Oracle Backups for Current Environment	Mon 1/1/18	Mon 1/1/18	<u>↑</u> 1/1	
187	Build Dedicated VMWare Test Server	Mon 1/1/18	Tue 1/2/18	SSP Senior	
188	Restore All Oracle Backups	Tue 1/2/18	Wed 1/3/18	SSP DBA/Architect	
189	Load Core 10.2.1a Software (ArcGIS, ArcFM, etc)	Wed 1/3/18	Wed 1/3/18	SSP Senior	
190	▲ Upgrade Databases	Wed 1/3/18	Tue 1/9/18		
191	Upgrade Esri SDE Databases to 10.2.1	Wed 1/3/18	Thu 1/4/18	SSP Senior	
192	Upgrade ArcFM/PX Databases to 10.2.1	Thu 1/4/18	Fri 1/5/18		
193	lest basic ArcFM Functionality	Fn 1/5/18	Mon 1/8/18	SSP Senior	
194	Upgrade Responder Database	Mon 1/8/18	Tue 1/9/18	SSP Senior	
195	ArcGIS/FM Server + Silverlight Viewer Upgrade	Tue 1/9/18	Thu 1/11/18		
196	Validate/Test/Document Opgrade Steps (Incl new pr	Tue 1/9/18	True 4/40/48		
197	ArcFM Replication/Viewer Opgrade	Thu 1/11/18	Tue 1/16/18	L SSD Service	
190	Review Usage of ArcFW Replication	Thu 1/11/10	Fri 1/12/18	SSP Senior	
200	Validate/Cest/Decument Lingrade Steps	Fri 1/12/19	FII 1/12/10		
200	Validate/Test/Document Opgrade Steps	Tuo 1/16/19	Tue 1/10/10	33F Senior	
201	Install Personder 10.2.1a	Tue 1/16/18	Tue 1/16/19	L SSD Senior	
202	Compare eld ve new configuration	Tuo 1/16/18	Wed 1/17/18	SSI Senior	
203	Configure Responder10.2.1a	Wod 1/17/18	Fri 1/19/18		
204	Test basic Responder Functionality	Fri 1/19/18	Tue 1/23/18	SSP Senior	
205	Fiber Manager Ungrade	Tue 1/23/18	Wed 1/24/18		
200	Validate Steps (not inclusive of WDM model change	Tue 1/23/18	Wed 1/24/18	SSP Senior	
208	Ingrade Customizations	Wed 1/24/18	Wed 2/7/18		
209	Establish Upgrade Code Machines with VS2010/12	Wed 1/24/18	Thu 1/25/18	SSP Senior	
210	Load DME Custom Code & Baseline into TES	Thu 1/25/18	Thu 1/25/18	SSP Senior	
211	✓ ArcFM Tools	Thu 1/25/18	Wed 1/31/18		
212	Reference New Esri / M&M Assemblies and Rec	Thu 1/25/18	Fri 1/26/18	SSP Senior	
213	Test Basics of Customizations Coordinated with .	Fri 1/26/18	Tue 1/30/18	SSP Senior	
214	Recreate MSI's As Needed	Tue 1/30/18	Wed 1/31/18	SSP Sehior	
215	CIS Integration	Wed 1/31/18	Fri 2/2/18		
216	Reference New Esri / M&M Assemblies and Rec	Wed 1/31/18	Thu 2/1/18	SSP Senior	
217	Vadliate Basics of CIS Integration (CIS Not Prese	Thu 2/1/18	Fri 2/2/18	SSP Senior	
218	✓ Upgrade SCADA Interface	Fri 2/2/18	Mon 2/5/18		
219	Upgrade SCADA Integration Code	Fri 2/2/18	Fri 2/2/18	L SSP Senior	
220	Test SCADA Integration	Fri 2/2/18	Mon 2/5/18	SSP Senior	
221	▲ IVR Interface	Mon 2/5/18	Wed 2/7/18		
222	Upgrade IVR Integration Code	Mon 2/5/18	Tue 2/6/18	\$SP Senior	
223	Unit Testing	Tue 2/6/18	Wed 2/7/18	SSP Senior	
224	Feeder Manager 2.0	Wed 2/7/18	Tue 2/13/18		
225	Implement and Document FM 2.0 Changes	Wed 2/7/18	Thu 2/8/18	SSP Senior	
226	Test FM 2.0 & Validate Results	Thu 2/8/18	Tue 2/13/18	S\$P Senior	
227	Deployment Preparation	Tue 2/13/18	Thu 2/15/18		
228	Create Upgrade Deployment Plan	Tue 2/13/18	Thu 2/15/18	SSP Senior	
229	Upgrade DME Test Environment	Thu 2/15/18	Tue 3/20/18	▼	
230	Remote Validation of Environment Preparedness with [Thu 2/15/18	Thu 2/15/18	SSP Senior, SSP PM[25%]	
231	Restore All Oracle Databases	Thu 2/15/18	Fri 2/16/18	SSP DBA/Architect, SSP PM[25%]	
232		Fri 2/16/18	Mon 2/26/18		
233	Travel	Fri 2/16/18	Fri 2/16/18	Travel[2 Trip],Hotel[10 Night],Meals[10 Meal Days]	
234	Upgrade Databases	Fri 2/16/18	Mon 2/19/18	SSP Senior, SSP DBA/Architect[10%], SSP PM	
235	Install Core Software	Mon 2/19/18	Lue 2/20/18	SSP Senior, SSP DBA/Architect[10%], SSP PM	
236	Install Custom Software	Tue 2/20/18	Wed 2/21/18	SSP Senior, SSP DBA/Architect[10%], SSP PM	
237	Install Application Server(s)	VVed 2/21/18	Thu 2/22/18	SSP Senior, SSP DBA/Architect 10%], SSP PM	DM
238	Lest/Validate All Application/DB Components	Thu 2/22/18	Mon 2/26/18	SSP Senior, SSP DBA/Architect[10%], SSP I	~ IVI
239	User Acceptance Testing	Mon 2/26/18	Mon 3/19/18		
240	DME Runs Test Cases	Mon 2/26/18	Mon 3/19/18		
241	SSP Supports & Provides Fixes on Scheduled Rele	Mon 2/26/18	Mon 3/19/18	\$SP Senior[50%].	,55P UBA/Ai
242	Finalize Deployment Plan	Mon 3/19/18	Tue 3/20/18		DMI2601
243	Reline Opgrade Deployment Plan - Any Final Revisit	Tuo 2/20/40	Tue 3/20/18	SSP Senior, SSP	0 DM CCD D
244	A Upgrade DME Prod Environment	Tue 3/20/18	Tue 3/20/18	SP Senior, SP	-w,35" U
245	opgrade DME Prod EnVironment Dependence with 5	Tue 3/20/18	FIT 4/13/18		P PM[25%]
240	Post as Many Versions as Possible	Tue 3/20/18	Wed 3/20/10		1 m[23/0]
241	Backup Current Databases	Wed 3/21/18	Thu 3/22/18	DME	
240	Restore All Oracle Databases	Thu 3/22/18	Fri 3/23/18		chitect.SSP
243		110 3/22/10	111 3723710		







4 Onsite Prod Upgrade + Support Fri 3/23/18 Fri 3/23/18 251 Travel Fri 3/23/18 Fri 3/23/18 252 Upgrade Databases Fri 3/23/18 Fri 3/23/18 253 Install Core Software Fri 3/23/18 Mon 3/26/18 254 Install Core Software Mon 3/26/18 Mon 3/26/18 255 Install Custom Software Mon 3/26/18 Tue 3/27/18 256 Smoke Testing Tue 3/27/18 Wed 3/28/18 257 Production GO LIVE Wed 3/28/18 Wed 3/28/18 258 Onsite Production Support as needed Wed 3/28/18 Fri 3/30/18 259 Offsite Production Support as needed Fri 3/30/18 Fri 4/13/18				
Travel Fri 3/23/18 Fri 3/23/18 251 Upprade Databases Fri 3/23/18 Fri 3/23/18 252 Upprade Databases Fri 3/23/18 Fri 3/23/18 253 Install Core Software Fri 3/23/18 Fri 3/23/18 254 Install Custom Software Mon 3/26/18 Mon 3/26/18 255 Install Application Sever(s) Mon 3/26/18 Tue 3/27/18 256 Smoke Testing Tue 3/27/18 Wed 3/28/18 257 Production GO LIVE Wed 3/28/18 Wed 3/28/18 258 Onsite Production Support as needed Wed 3/28/18 Fri 3/30/18 259 Offsite Production Support as needed Fri 3/30/18 Fri 4/13/18	250	Onsite Prod Upgrade + Support	Fri 3/23/18	Fri 3/30/18
252 Upgrade Databases Fri 3/23/18 Fri 3/23/18 253 Install Core Software Fri 3/23/18 Mon 3/26/18 254 Install Custom Software Mon 3/26/18 Mon 3/26/18 255 Install Application Server(s) Mon 3/26/18 Zerver 3/27/18 256 Smoke Testing Tue 3/27/18 Wed 3/28/18 257 Production GO LIVE Wed 3/28/18 Wed 3/28/18 258 Onsite Production Support as needed Wed 3/28/18 Fri 3/30/18 259 4 Offsite Support Fri 3/30/18 Fri 3/13/18 260 Offsite Production Support as needed Fri 3/30/18 Fri 3/13/18	251	Travel	Fri 3/23/18	Fri 3/23/18
253 Install Core Software Fri 3/23/18 Mon 3/26/18 254 Install Custom Software Mon 3/26/18 Mon 3/26/18 255 Install Application Server(s) Mon 3/26/18 Tur 3/27/18 256 Smoke Testing Tur 3/27/18 Wed 3/28/18 257 Production GO LIVE Wed 3/28/18 Wed 3/28/18 258 Onsite Production Support as needed Wed 3/28/18 Fri 3/30/18 259 Offsite Support Fri 3/30/18 Fri 3/13/18 260 Offsite Production Support as needed Fri 3/30/18 Fri 4/13/18	252	Upgrade Databases	Fri 3/23/18	Fri 3/23/18
Install Custom Software Mon 3/26/18 Mon 3/26/18 255 Install Application Server(s) Mon 3/26/18 Tue 3/27/18 256 Smoke Testing Tue 3/27/18 Wed 3/28/18 257 Production GO LIVE Wed 3/28/18 Wed 3/28/18 258 Onsite Production Support as needed Wed 3/28/18 Fri 3/30/18 259 4 Offsite Support Fri 3/30/18 Fri 4/13/18 260 Offsite Production Support as needed Fri 3/30/18 Fri 4/13/18	253	Install Core Software	Fri 3/23/18	Mon 3/26/18
Install Application Server(s) Mon 3/26/18 Tue 3/27/18 256 Smoke Testing Tue 3/27/18 Wed 3/28/18 257 Production GO LIVE Wed 3/28/18 Wed 3/28/18 258 Onsite Production Support as needed Wed 3/28/18 Fri 3/30/18 259 4 Offsite Support Fri 3/30/18 Fri 4/13/18 260 Offsite Production Support as needed Fri 3/30/18 Fri 4/13/18	254	Install Custom Software	Mon 3/26/18	Mon 3/26/18
Smoke Testing Tue 3/27/18 Wed 3/28/18 257 Production GO LIVE Wed 3/28/18 Wed 3/28/18 258 Onsite Production Support as needed Wed 3/28/18 Fri 3/30/18 259 4 Offsite Support Fri 3/30/18 Fri 4/13/18 260 Offsite Production Support as needed Fri 3/30/18 Fri 4/13/18	255	Install Application Server(s)	Mon 3/26/18	Tue 3/27/18
Production GO LIVE Wed 3/28/18 Wed 3/28/18 258 Onsite Production Support as needed Wed 3/28/18 Fri 3/30/18 259 J Offsite Support Fri 3/30/18 Fri 4/13/18 260 Offsite Production Support as needed Fri 3/30/18 Fri 4/13/18	256	Smoke Testing	Tue 3/27/18	Wed 3/28/18
Onsite Production Support as needed Wed 3/28/18 Fri 3/30/18 259 J Offsite Support Fri 3/30/18 Fri 4/13/18 260 Offsite Production Support as needed Fri 3/30/18 Fri 4/13/18	257	Production GO LIVE	Wed 3/28/18	Wed 3/28/18
259 Image: Offsite Support Fri 3/30/18 Fri 4/13/18 260 Offsite Production Support as needed Fri 3/30/18 Fri 4/13/18	258	Onsite Production Support as needed	Wed 3/28/18	Fri 3/30/18
260 Offsite Production Support as needed Fri 3/30/18 Fri 4/13/18	259		Fri 3/30/18	Fri 4/13/18
	260	Offsite Production Support as needed	Fri 3/30/18	Fri 4/13/18



2.7 Implementation of GIS-Based Asset Management Software

DME uses a Microsoft Access Database application to manage their assets today. The asset data is stored directly in their GIS database and there is custom functionality in place to allow the asset data to be linked to GIS asset records. The current solution is not a centrally managed application, utilizes VBA - which has been scheduled by Microsoft for deprecation - and lacks enterprise level security.

SSP is proposing to work with DME to develop a custom implementation of SSP's asset management project-ware which will move the asset management functionality into an enterprise-level intranet website using the latest recommended development platforms. This new implementation will give DME thorough confidence in the enterprise security by integrating it with Microsoft Active Directory for authentication along with a flexible role-based authorization model.

SSP's project-ware also includes best practices for integrating this data into the GIS within an ArcFM data model. SSP will review and make use of the asset management and GIS integration developed at DME today where possible to ensure the new solution meets the business needs of the organization. A ballpark for this work has been included based on a prior asset management statement of work provided to DME.

Cost Estimate: \$263,490.00





2.7.1 Anticipated Task List

				Aviil 4 Mar 4 June 4 July 4 Avenue 4 Construct 4 Only 1 Avenue 4	Nim
	Task Name 🗸	Start 🗸	Finish 🚽	Aprili i mayi Junei Junei Junyi Augusti Septemberi Octoberi r 4/8 4/22 5/6 5/20 6/3 6/17 7/1 7/15 7/29 8/12 8/26 9/9 9/23 10/7 10/21 11	1/4
261	 4 (10) Implement GIS-Based Asset Management Software 	Fri 4/13/18	Mon 11/12/18		
262	✓ Design Phase	Fri 4/13/18	Mon 5/14/18		
263	Travel	Fri 4/13/18	Fri 4/13/18	Hotel[5 Night],Meals[5 Meal Days],Travel[1 Trip]	
264	Requirements Workshop	Fri 4/13/18	Fri 4/20/18	SSP PM	
265	Follow Up Remote Workshops	Fri 4/20/18	Wed 4/25/18	SSP PM	
266	Requirements Documentation	Wed 4/25/18	Wed 5/2/18	SSP PM	
267	Review with Client	Wed 5/2/18	Thu 5/3/18	Š SSP PM	
268	Client Independent Review	Thu 5/3/18	Thu 5/10/18	Me , SSP PM[25%]	
269	Finalize Documentation	Thu 5/10/18	Mon 5/14/18	SSP PM	
270	Develop Phase	Mon 5/14/18	Mon 10/15/18	¥	
271	Initialize Environment	Mon 5/14/18	Wed 5/16/18		
272	Provide Backup of GIS & Current Asset Mgt DBs	Mon 5/14/18	Mon 5/14/18	♦ 5/14	
273	Build Dedicated VMWare Server	Mon 5/14/18	Tue 5/15/18	SP Senior	
274	Load Database Backups	Tue 5/15/18	Wed 5/16/18	SSP DBA	
275	Create Dedicated Code/Build Machine with Appropri	Wed 5/16/18	Wed 5/16/18	SSP Senior	
276	Asset Manager Development	Wed 5/16/18	Thu 9/20/18		
277	▲ Web/GIS Development	Wed 5/16/18	Mon 7/30/18		
278	Init Baseline WFM/Asset Mar Website & DB	Wed 5/16/18	Fri 5/18/18	SSP Senior	
279	Update Core Project-ware for Oracle Usage (curre	Fri 5/18/18	Wed 5/23/18	SSP Senior	
280	Develop Menus & Pages Tied to Security Permis	Wed 5/23/18	Mon 5/28/18	SSP Senior	
281	Create Generic / Specific Asset Header Screens	Mon 5/28/18	Mon 6/11/18	SSP Senior	
282	Create Fiber-related Asset Header Screens	Mon 6/11/18	Mon 6/18/18	SSP Senior	
283	Create Transmission Asset Header Screens	Mon 6/18/18	Fri 6/22/18	SSP Senior	
284	Develop Workflow With Wizards	Fri 6/22/18	Fri 6/29/18	SSP Senior	
285	Develop/Update GIS Integration	Fri 6/29/18	Fri 7/13/18	SSP Senior	
286	Unit Testing	Fri 7/13/18	Fri 7/20/18	SSP Senior	
287	Review with Client	Fri 7/20/18	Mon 7/23/18	SSP Senior.SSP PMI80%	
288	Revise as Needed	Mon 7/23/18	Mon 7/30/18	SSP Senior	
289	A Data Conversion	Mon 7/30/18	Wed 8/15/18		
290	Script Migration of Current Data into New Model	Mon 7/30/18	Mon 8/13/18	SSP Senior	
291	Test the Migration	Mon 8/13/18	Wed 8/15/18	SSP Senior	
292	CIS Meter Integration	Wed 8/15/18	Thu 8/23/18		
293	Work Through Example CIS Extract File	Wed 8/15/18	Thu 8/16/18	b. SSP Senior	
294	Develop NBS App to Update AM Data from CIS	Thu 8/16/18	Thu 8/23/18	SSP Senior	
295	4 Reporting	Thu 8/23/18	Thu 9/20/18		
200	Daurian Custom Departs	Thu: 0/02/40	Thu: 0/12/19		÷
207	Text Depending	Thu 0/23/10	Mar 0/17/10		
208	Periow with Client	Mon 9/17/19	Tuo 9/18/19		
200	Review with Client	Tuo 9/18/18	Thu 9/20/18		
200	4 Client Testing	The 9/20/19	Mon 10/15/19		
201	Travel	Thu 9/20/18	Thu 9/20/19	Travell4 Trial Maalefa Maal Davel Hotelfa M	liat
202	Installation and Configuration	Thu 9/20/18	Fri 0/21/19		'9'
302	Bosic Validation	Eri 9/21/19	Wod 9/26/18	Science and Scienc	
204	DASIC Validation	FII 3/21/10	Wed 5/20/10		
304	SSD Support of DME Tacting	Wod 9/26/19	Wod 10/10/10		150
200	Desets Any First Jeause	v/eg 3/20/18	Map 10/15/12		100
300	Acceptance of Solution	Weg 10/10/18	Mon 10/15/18	2 57 5 5 Mile 3 4 Mile	203
202	Acceptance of Solution	Mon 10/15/18	Mon 11/15/18		_
200	* Deploy Plase	Mon 10/15/18	Mon 10/15/10	Taural 14 Tain Mandat	
309	Installation and Configuration	Mag 10/15/18	Tue 10/15/18	cereamatin i provinci a construction a construction a construction a construction a construction a construction	, M
310	Instantion and Configuration	Tue 10/15/18	Tue 10/16/18		120
311	Onsite Support	TUE 10/16/18	Man 44/42/18	55 PM/55 3	en
312	Remote Support	won 10/22/18	11/12/18		-



2.8 Implementation of Reporting Solution for Legacy OMS Data

DME relies on legacy OMS data from a previous installation of Milsoft (prior to Responder). Currently the only method of viewing the data is via usage of Milsoft's reporting tool. DME no longer wants to rely on the Milsoft reporting tool for access to this data and has requested that new independent reports be created to replicate the data that they need for ongoing operational management.

SSP's DBA will work with DME to review the Oracle storage for the underlying data. This data will then be replicated at SSP's offices where the DBA will work to design and build reports conveying the information that DME requires. These reports may utilize an out-of-the-box software package like SQL Server Reporting or Microsoft Access (TBD) to render the report format.

The resulting reports will be reviewed with DME and subsequently updated as needed. The final solution will then be deployed to DME, at which time the Milsoft application can be retired. SSP has included a ballpark for this work based on the requirements available at this time.

Cost Estimate: \$18,900.00

2.8.1 Anticipated Task List

				Nov 11, '18 Nov 18, '18
	Task Name 👻	Start 👻	Finish 🚽	M T W T F S S M T W T F
313	(11) Reporting Solution for Old OMS Data	Mon 11/12/18	Fri 11/23/18	¥
314	Internal Kickoff	Mon 11/12/18	Mon 11/12/18	SSP DBA/Architect, SSP PM
315	Implementation	Mon 11/12/18	Fri 11/23/18	•
316	Work with DME to Review DB Backups	Mon 11/12/18	Tue 11/13/18	SSP DBA/Architect
317	Design & Build Reports	Tue 11/13/18	Tue 11/20/18	SSP DBA/Arc
318	Review with DME	Tue 11/20/18	Tue 11/20/18	SSP DBA/Arc
319	Update as Needed	Tue 11/20/18	Wed 11/21/18	SSP DB4
320	Implement at DME	Wed 11/21/18	Fri 11/23/18	
321	(12) Now DME Web Record CLS Solution	Eri 11/22/18	Mon 12/17/18	



2.9 Implementation of New DME Web-Based GIS Solution

This implementation will utilize the ArcGIS Online components that were installed via the previously scoped project *Installation of ArcGIS Online Public Streetlight Reporting Application* (SSP SOW #16-2-11).

DME desires to move off of the legacy ArcFM Silverlight Viewer that is in use today to a newer HTML5 / JavaScript API viewer. Based on conversations with DME, SSP is recommending moving to an ArcGIS Online-based map viewer. This will provide DME with an industry-standard viewer without any customization required. The one key item that is not readily available in ArcGIS Online is ArcFM tracing, however DME has indicated that this functionality is not heavily used, and is therefore not imperative.

As part of this effort, SSP will also work with DME to replace their current ArcGIS Engine Inspector usage with an ArcGIS Online Collector installation. This will include configuring collection templates for field users to capture inspections including attribute data, GPS location, and optionally pictures. This data will then be available in the back office.

SSP has also included some (TBD) NBS automation to utilize the inspection data to drive notifications or other related reporting. SSP has included a ballpark for this work.

Cost Estimate: \$24,900.00

2.9.1 Anticipated Task List





2.10 GIS Health Check-up

DME has requested a health check-up for all GIS systems that DME uses. This will cover an entire review of all core GIS, GIS customizations, and integrations in place.

SSP will send both an enterprise architect and a senior consultant onsite to work with DME to review usage of the various systems. The architect will focus on usage of the database and hardware sizing, while the senior consultant will review the software, customization, and integration usage. The senior consultant will include a review all custom code to ensure it is operating correctly and efficiently.

The senior consultant and the architect will work together to create a recommendations guide covering all aspects of the GIS implementation. This document will be presented to DME, updated and finalized. It should be noted that this effort does not include the *implementation* of any recommendations. SSP has included a ballpark for this effort which may be revised closer to the project.

Cost Estimate: \$30,870.00

2.10.1 Anticipated Task List

								Dec 16, 16 Dec 23, 16
	Task Name 👻	Start 👻	Finish 🚽	leces 👻	Cost 🚽	Duration 👻	Work	M T W T F S S M T W T F S S M
334	⊿ (13) Health Check	Mon 12/17/18	Mon 12/31/18	321	\$30,870.00	9.88 days	137 I	V
335	Internal Kickoff	Mon 12/17/18	Mon 12/17/18		\$400.00	1 hr	21	SSP DBA/Architect, SSP PM
336	Kickoff with DME	Mon 12/17/18	Mon 12/17/18	335	\$800.00	0.25 days	41	SSP DBA/Architect, SSP PM
337	⊿ Design	Mon 12/17/18	Mon 12/31/18	336	\$29,670.00	9.5 days	131 I	*
338	Onsite Consult	Mon 12/17/18	Thu 12/20/18		\$13,070.00	3 days	48 I	
339	Travel	Mon 12/17/18	Mon 12/17/18		\$3,470.00	0.25 days	01	Meals[7 Meal Days],Travel[2 Trip],Hotel[6 Night]
340	Onsite Consultation	Mon 12/17/18	Thu 12/20/18		\$9,600.00	3 days	48	SSP DBA/Architect, SSP Senior
341	Review All Code	Thu 12/20/18	Thu 12/27/18	338	\$8,000.00	5 days	40 (SSP Senior
342	Draft Recommendations Documentation	Thu 12/27/18	Fri 12/28/18	341	\$3,200.00	1 day	16 I	SSP DBA/Ar
343	Review with DME	Fri 12/28/18	Fri 12/28/18	342	\$800.00	0.25 days	41	SSP DBA/A
344	Update as Needed	Fri 12/28/18	Mon 12/31/18	343	\$800.00	0.25 days	41	
345	Design Accepted	Mon 12/31/18	Mon 12/31/18	344	\$0.00	0 days	01	4
				1	1			•





2.11 Development of Custom DME GIS Training Materials

DME desires customized training materials for onboarding new GIS personnel and/or regression training of existing personnel.

SSP will work with DME to create custom course presentation content and exercises for ArcFM, Responder, whatever graphic work design tool is chosen, and any related applications. SSP will deliver the custom materials and then travel onsite to teach the course(s) during two separate visits.

The training materials will be owned by DME and can be used for subsequent internal training sessions as needed. Either DME staff or SSP staff can be used for future training as desired (not included in this estimate).

SSP has included a ballpark for this effort which may be revised based on changes in the systems at the time the training materials are developed. DME will be responsible for providing access to the DME environment for development of the materials.

Cost Estimate: \$75,610.00

2.11.1 Anticipated Task List

				January February
	Task Name 🗸	Start 👻	Finish 🚽	12/30 1/6 1/13 1/20 1/27 2/3 2/10 2
346	4 (14) DME Custom GIS Training Materials	Mon 12/31/18	Mon 2/18/19	
347	Internal Kickoff	Mon 12/31/18	Mon 12/31/18	SSP PM,SSP Senior
348	Kickoff with DME	Mon 12/31/18	Mon 12/31/18	SSP PM,SSP Senior
349	▲ Work	Mon 12/31/18	Mon 2/18/19	× • • • • • • • • • • • • • • • • • • •
350	Develop Course Materials	Mon 12/31/18	Mon 2/4/19	SSP Senior
351	Travel	Mon 2/4/19	Mon 2/4/19	Meals[5.5 Meal Day:
352	Onsite Training	Mon 2/4/19	Mon 2/11/19	SSP Senic
353	Travel	Mon 2/11/19	Mon 2/11/19	Meals[5.5
354	Onsite Training	Mon 2/11/19	Mon 2/18/19	





2.12 GIS-Related Projects for Distribution Automation and Unmanned Aerial Vehicle Systems

DME has requested assistance with future GIS-related projects including the integration and development needed for implementation of Distribution Automation systems and an Unmanned Aerial Vehicle system.

The requirements for these systems are unknown at this time so a simple placeholder for 130 days of work has been included in this document, to provide a general ballpark.

This item will need to be estimated once requirements are known.

Cost Estimate: \$260,000.00

2.12.1 Anticipated Task List

Not available at this time – scoping calls required.



2.13 GIS Support and Additional Projects

DME desires a contractual mechanism to request ad hoc services for small jobs and/or issue/bug resolution from a qualified GIS consultant over the course of this PSA.

This will be a time & materials (T&M) rate for custom support on all GIS, OMS, and related custom components owned by DME. This includes all existing asset management auto-updaters, inspector auto-updaters and Responder custom pieces & integrations. This also includes any other GIS related projects or integrations that are identified including further customizations for any GIS products or integrations to other systems at DME. This could also include development of any applications needed for the DME GIS group.

In order to project a not-to-exceed cost for this task order, SSP has provided an estimate of 12% of a full time consultant to help with these miscellaneous activities over the course of a three-year time period. This work will be invoiced every thirty days ONLY for the work completed in the previous thirty days. SSP tracks T&M work down to the quarter-hour and provides timesheet log-level detail for all time worked under a T&M agreement. Any approved expenses would be reimbursed by DME.

The not-to-exceed cost and level of effort for this estimate can be increased or decreased by DME prior contracting for the work, based on DME's needs. SSP will work at the direction of DME until the allotted funds are exhausted, at which time a change order will be required to allocate additional funds.

Cost Estimate: Not-to-Exceed \$241,360.00

Hourly Rate: \$200.00

*In the event SSP must travel to DME to provide support services, all pre-approved travel expenses will be reimbursed by DME at cost.

2.13.1 Anticipated Task List

As-needed support and services for duration of PSA.