Scope of Work #16-2-11

Implementation of

ArcGIS Online Public Streetlight Reporting Application

Version 1.1

Prepared For:

March 7, 2016

Work to be performed by

ssp innovations

esri Partner Network Silver

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1 Overview

Denton Municipal Electric ("DME") has experimented with ArcGIS Online and has communicated its wish to configure an enterprise level solution that will allow them to expose and collect data from the public. In order to resolve this requirement, SSP Innovations ("SSP") will work with DME to install all required components to securely expose data from the back office to the internet via our standard recommended architecture. This will provide the foundation for this specific streetlight reporting effort as well as all future ArcGIS Online projects including customer engagement, field inspections, public outage maps, and many other implementation use cases.

Specifically within this project, SSP will work with DME to install and configure a template to collect streetlight outages from the public. The outages will be used to drive automatic notifications of other systems and/or individuals within DME (TBD). Additionally, a public facing streetlight outage map will be created to inform customers as to current outages and potentially restored outage locations.

At times this project may require several different SSP and DME resources. However, throughout the entirety of the project, the selected SSP Project Manager (TBD dependent on start date) will be the sole person responsible for executive project communication, issue resolution, resource management & scheduling, and ultimately, an on-time delivery of the stated solution. Additionally, the SSP Account Manager (Dean Perry) will be available to DME throughout the project duration to discuss any nontechnical or personnel-specific concerns or questions.

The following section describes the tasks required to perform this implementation in detail.

1.1 Design Phase

To begin the project, SSP will host a remote web session, up to four hours, to kick off the project and understand any work DME has done to date related to the streetlight outage reporting effort. This will also provide DME IT an opportunity to review the recommended architecture and to ask questions relating to the proposed solution. Additionally, DME should be prepared to represent what types of notifications are required for a streetlight outage, within this meeting. SSP will support email notifications and/or a call into a 3rd party system via a web service, if this functionality already exists.

Next, SSP will draft a high-level document showing the approach to the required ArcGIS Online informational map products, as well as the notifications. This document will be reviewed with DME, updated per any client feedback, and finally submitted & accepted as the design for the project.

1.2 Development Phase

To begin the development phase, SSP will develop the code for the notification functionality using a standard SSP Nightly Batch Suite (NBS) application. An NBS application decreases the time required to develop custom applications by providing standardized approaches for application scheduling notifications, logging, and geodatabase access.

An application will be developed matching the requirements from the design document.

1.3 Deployment Phase

To deploy the solution, SSP will travel onsite to DME for a full week. The week will include installation and configuration of an enterprise-ready ArcGIS Online configuration including secure access of mapping services via the internet.

SSP will then install and validate the NBS automation application for consuming streetlight outages entered via ArcGIS Online. SSP will also create the various web maps to be used in collecting the outages and for displaying the outage map to the public via the DME website.

SSP will conclude the week by fully training DME administrative personnel on the solution, to allow them to deploy similar solutions on their own in the future. The goal is to enable DME to be as self-sufficient with the technology as possible.

Finally, immediately upon conclusion of the onsite week, SSP will provide a remote support period for DME's production usage of the application, up to five business days or 10 hours of labor, whichever occurs first. Should additional support be required, a change order may be necessary, or the DME-SSP retainer may be used.

2 Assumptions

The following assumptions have been made regarding the description of this work:

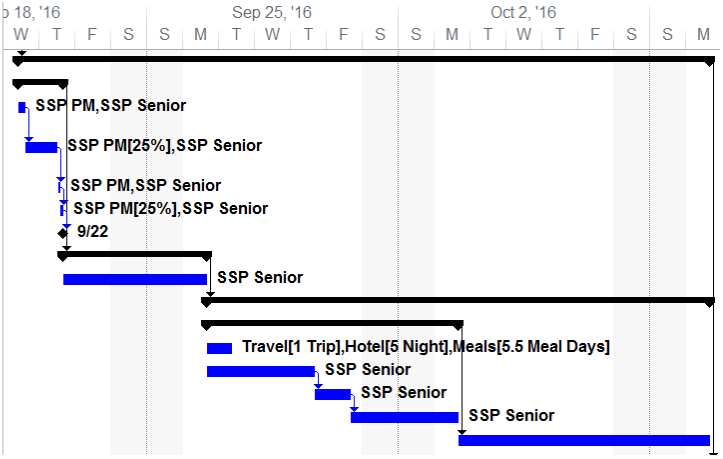
- DME IT will provide all servers and will install all core Operating Systems.
- DME IT will be available to support any environmental, system access, or operating systems issues throughout the project.
- DME IT will provide all required environmental access in a timely manner (response time within 24 hours of request).
- DME will provide appropriate staff commitment levels to ensure the success of the project.
- DME owns or will purchase all of the necessary Esri licensing for the software used for this project, including the required ArcGIS Server and ArcGIS Online subscription licensing (named users).
- DME will provide a dedicated server (either physical or VM Ware) to host the Esri ArcGIS Server application.
- DME will OPTIONALLY provide a dedicated server (either physical or VM Ware) to host Microsoft IIS and ArcGIS Web Adaptor within their DMZ.
- DME will be responsible for purchasing an SSL certificate and installing it within Microsoft IIS on the DMZ server if https is used (recommended).
- DME will allow the ArcGIS Server rest services to be made accessible to the internet via a DMZ web server and will open the required ports as shown in the diagram in this SOW.
- The post-deployment remote support included in this project is for up to 10 hours of work or 5 days of duration, whichever comes first. If further support is deemed necessary, a change order or follow-on support contract may be required.

3 Project Plan

The detailed project plan that was used to scope and budget this project has been included below. It can be reviewed for additional information on tasks and duration.

Dates depicted in the project plan are tentative and subject to change dependent on actual project start date and other factors; they're included here to communicate duration of tasks.

	Task Name	Start	Finish
58	**(3) Public AGOL Streetlight Reporting**	**Wed 9/21/16**	**Mon 10/10/16**
59	**Design**	**Wed 9/21/16**	**Thu 9/22/16**
60	Remote Session To Understand What Has Been Done vs. What is Needed	Wed 9/21/16	Wed 9/21/16
61	High Level Document on Approach for Map and Notifications	Wed 9/21/16	Thu 9/22/16
62	Review with DME	Thu 9/22/16	Thu 9/22/16
63	Update as Required	Thu 9/22/16	Thu 9/22/16
64	Design Approved	Thu 9/22/16	Thu 9/22/16
65	**Development**	**Thu 9/22/16**	**Mon 9/26/16**
66	Code SSP NBS Application for Automation	Thu 9/22/16	Mon 9/26/16
67	**Deploy**	**Mon 9/26/16**	**Mon 10/10/16**
68	**Onsite Install**	**Mon 9/26/16**	**Mon 10/3/16**
69	Travel	Mon 9/26/16	Tue 9/27/16
70	Install / Configure AGOL for Internet Consumption	Mon 9/26/16	Thu 9/29/16
71	Install & Validate NBS Automation App	Thu 9/29/16	Fri 9/30/16
72	Train DME on Solution	Fri 9/30/16	Mon 10/3/16
73	Offsite Support	Mon 10/3/16	Mon 10/10/16



4 Quote

This quote is tied directly to the scope of work detailed within this document. Any changes to the scope of work before or during the project would result in a change order.

This quote is provided as a fixed priced number inclusive of all expenses and is good for 90 days from the date listed on this SOW.

Upon completion of this project, a single invoice will be provided to DME for its entirety.

Project Task	Est. Duration*	Subtotal
DME ArcGIS Online Public Streetlight Reporting Application Implementation		
Design Phase	***2 bus days***	***$4,000.00***
Project Management		
Kickoffs & Workshops		
Documentation		
Development Phase	***2 bus days***	***$4,000.00***
Project Management		
SSP NBS App Code Development		
Deployment Phase	***10 bus days***	***$20,005.00***
Project Management		
Onsite Install/Configure Solution		
SSP Nightly Batch Suite Framework Product Purchase		
Offsite Support		
Grand Total	**14 bus days**	**$28,005.00**

*Duration estimates are subject to many project factors, some of which are outside of SSP's control. Therefore, all durations depicted are non-binding estimates only.

Note: All travel costs are included in the above quote.