



April 6, 2015

William Rogers
Network Manager
City of Columbus, Department of Technology
1601 Arlingate Lane
Columbus, OH 43228-4117

RE: ArcFM Fiber Support and Maintenance

Dear Mr. Rogers:

T&M has successfully converted the existing Fiber Optic network for use in Schneider Electric's ArcFM application. As previously discussed we have developed a list additional support tasks to assist the maintenance and upkeep of the ArcFM geodatabase. Please review these tasks and feel free to contact me with any questions. A cost estimate table is also provided listing the total cost to complete each task.

TASK 1: Incorporate Recent Projects – Seven Weeks - \$24,383

T&M will work on site with DoT staff to identify, review, and convert recent fiber infrastructure projects into the enterprise ArcFM database. The infrastructure will be converted following all data conversion and quality assurance procedures and will provide a more complete inventory of fiber optic network features inside ArcFM.

Task 1: Assumptions

- T&M will work on-site at the City of Columbus and will require access to a PC with ArcFM installed.
- Newly completed fiber project information will be available digitally, either as a .PDF or .DWG CAD drawings. If paper as-built drawings are the only information T&M will scan and organize these files into a digital format (.TIFF & .PDF).
- T&M assumes that there are 11 recently completed projects which are available for incorporation.

Task 1: Deliverables

- Updated ArcFM database with recently completed projects incorporated into the enterprise ArcFM geodatabase.

Task 2: Utility Locate & Protection Tracking – 5 Weeks – \$13,043

T&M will create a new GIS layer within the ArcFM geodatabase and an associated business process to track and manage utility locate requests performed by DoT staff. At the completion of this task DoT staff will be able to quickly and efficiently access any existing utility locate request information and provide utility locate staff with the necessary information to identify City fiber infrastructure in the field.

Task 2: Assumptions

- T&M will work with DoT to establish the requirements of the utility locate tracking layer and the process used to update and modify the layer.
- T&M will coordinate with City of Columbus Department of Public Utilities (DPU) to transfer any existing tools or processes used to support the utility locate process.
- DoT Staff will be responsible for updating and maintaining this information.
- T&M can maintain this layer if necessary using general staff augmentation hours (Task 3).

Task 2: Deliverables

- Updated ArcFM database with utility locate tracking polygon.
- Formal utility locate procedures documentation.

Task 3: Staff Augmentation – 20 Weeks - \$18,109

After integrating the recent projects T&M GIS analysts will spend one day (8 hours) a week on-site, augmenting DoT staff. This work will include performing general updates and revisions to the ArcFM fiber geodatabase as changes are noted in the field or existing source data is revised. In addition to general data updates T&M can support DoT staff by performing analysis, generating maps and figures on an as needed basis to respond to questions and comments from external vendors and contractors.

Task 3: Assumptions

- T&M will work on-site at the City of Columbus and will require access to a PC with ArcFM installed.

Task 3: Deliverables

- Updated ArcFM database with general comments incorporated on an as needed basis.
- Additional ArcFM configuration to include custom favorites, stored displays, and analytical reports.



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Task 4: Implement Underground Facility Management – 6 Weeks – \$22,297

ArcFM provides the ability to model and manage individual components associated with underground facilities using their underground facility management configuration. T&M will generate underground facility diagrams for the existing underground structures. This will allow DoT staff to model which duct banks and conduits are associated and connected to each individual wall within a manhole or vault.

Task 4: Assumptions

- T&M will configure walls and floorplans for underground structures where the layout information is available. Additionally, if layout information is not available, T&M will place a “template” layout for the underground facility.

Task 4: Deliverables

- Updated ArcFM database with underground facility floorplans incorporated.
- Additional ArcFM configuration to include custom favorites, stored displays, and analytical reports.

COST & SCHEDULE

A cost table and schedule for completing the support services is provided in Table 1. Please note, all work will be completed within 12 months after receiving the certified PO.

Table 1: Cost & Schedule	Cost	Duration
Task 1: Incorporate Recent Projects	\$24,383	6 Weeks
Task 2: Utility Locate & Protection Tracking	\$13,043	5 Weeks
Task 3: Staff Augmentation	\$18,109	20 Weeks
Task 4: Implement Underground Facility Management	\$22,297	6 Weeks
Totals:	\$77,831	46 Weeks (11.5 Months)*

**All work will be completed during the contract term (12 Months).*

T&M appreciates the opportunity to work with you on this project and we look forward to working with you on future endeavors. If you have any questions regarding the proposal please feel free to contact me with any questions.

Sincerely,

T&M Associates

Erick Lobao, GISP
GIS Manager