



## OCS-04: Scan Drawing Archive – Phase 2

04/14/2022

### 1 Introduction:

#### 1.1 Point of Contacts:

##### Spatial Engineering, Inc.

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##### Effingham County, Georgia

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#### 1.2 Description

On April 5, 2022, Spatial Engineering, Inc (SPATIAL) met with Effingham County to review the findings and recommendations presented in the *Scan Drawing Archive Assessment, Project ID: 20017-OCS-01*. Section 4.2 recommends continuing the effort to scan the hardcopy drawing archives. The benefits include:

- ✓ Inventory and catalog of hardcopy drawing archive added to the current digital catalog (DC).
- ✓ New scans accessible via RightSpot™.
- ✓ Identifying the best available data for records retention (long term storage).
- ✓ Possibly replace unusable records with useable records. For example, replacing an existing project design with a project as-built.
- ✓ Identify excess hardcopy drawing sets.
- ✓ Identify possible historic drawing sets.

The current DC contains 718 projects with 14,240 drawing sheets. The preceding task order revealed the total number of drawings to be scanned was unknown. As a result, it was decided during the April 5<sup>th</sup> meeting to implement a second phase of the scanning effort. This effort will target an additional 12,000 sheets. The additional drawings will be scanned, cataloged, prepared for long term storage, and made available to County users via RightSpot.

The work will be executed under SPATIAL's current contract with the County, PID: 21010, On-Call Support. SPATIAL proposes to team with Clayton Digital Reprographics. This team has experience working together from the previous scanning task order.

**NOTE: THIS PROPOSAL DOES NOT INCLUDE DIGITIZING OR EXTRACTING DATA FROM SCANNED IMAGES.**

#### 1.3 Reference:

1. 03/30/2022 *Scan Drawing Archive Assessment, PID: 20017-OCS01*.
2. 04/05/2022 record of communication for review of Scan Drawing Archive Assessment report.

## 2 Scope of Work:

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The purpose of this effort is to 1) convert the hardcopy archive to digital for easy manageable access and 2) identify additional useable sources of utility infrastructure data. SPATIAL proposes to 1) update the Scan Data layer (Scanning Projects) layer, 2) scan hardcopy drawing sets, and 3) catalog scanned drawing sets.

### 2.1 Update Scan Data Layer

The Scan Data Layer (Scanning Projects) will include the projects identified in the digital catalog (DC) as presented in the assessment report. SPATIAL will update the scan data layer to include the 718 useable projects identified in the report. SPATIAL will add the following attribute to the data layer to track data processed between multiple scanning efforts.

1. SCANPROJECT (Char20) = The scanning project contract number. The 718 useable projects from the March 30, 2022 project will be attributed “20017-OCS01”. Future scanning efforts will be attributed the respective contract number.

Populating the ScanProject attribute prepares the DC for tracking future scanning records.

### 2.2 Scan Hardcopy Archives:

A Chain of Custody (CC) will be used to 1) track original hardcopy data removed from County storage and 2) returned original hardcopy data to the County storage. In general, SPATIAL will follow the process used during the last task order modified as follows: (adjustments in **bold**)

#### Step 1: Collect drawing sets:

1. The County will:
  - 1.1. Identify drawing sets for processing.
  - 1.2. Initiate the CC with the drawing set name, the number of sheets per set, media type per set, and any special comments relative to the project. There will be one CC per drawing set.
2. SPATIAL will:
  - 2.1. Coordinate a pick-up schedule with the County tentatively every other week.
  - 2.2. Assign the CC a unique number (CCID); and confirm the drawing set name, the number of sheets per set, media type per set, and any special comments relative to the project.
  - 2.3. Label the cover sheet of each drawing set with the CCID, format “CCID\_0000####”. The unique number shall start with the last CCID plus 1.
  - 2.4. Photograph the title block/cover page. The photo will include the CCID.
  - 2.5. Verify each released set of drawings has a CCID prior to removing from County storage.
3. The County will authorize the CC release.

4. The original CC will remain with the released drawing set. SPATIAL will provide the County a copy of the CC.
5. **SPATIAL will return released drawing sets within two release dates.**

Step 2: Scanning:

1. SPATIAL will perform the scanning process at the team facilities. SPATIAL will scan each drawing to produce clear, clean, legible images up to the quality of source drawing. Scans will be 300 dpi, minimum. Sheet protectors will be used, as necessary, to minimize damage to original media.
2. The original drawing media may be paper, vellum, sepia, blue-line, etc.
3. Individual drawings within a set will be combined into a single PDF. For example: 35 sheets for Blue Moon subdivision will be delivered as a single PDF.
4. The combined PDF will be labeled NAME\_DATE\_CCID as defined below.
  - a. NAME = Project name of set. For example, "Blue Moon" subdivision or project.
  - b. DATE = Date of the drawings. Generally, the date is on cover sheet or title block. The date format will be YYYYMMDD.
  - c. CCID = Unique chain of custody number assigned when the drawing set was picked up at the County.
5. **SPATIAL will conduct a 25% eyes-on quality check for clarity, readability, rotation, and coverage.** Unacceptable images will be rescanned or documented as to why they cannot produce a quality scan.

Step 3: Return drawing sets:

1. SPATIAL will return original drawing sets in resealable containers suitable for permanent storage. Drawing containers will be permanently labeled with the CCID.
2. A CC CANNOT be closed until the drawing set is returned and accepted by the County.
3. If the drawing set is acceptable, the County will sign the CC and approve closing the CC.
4. SPATIAL will provide the County the original CC and retain a copy.
5. SPATIAL will deliver one copy of the scanned PDF images on CD/DVD.

### ***2.3 Catalog Scanned Images***

SPATIAL will catalog the scanned PDF drawing sets and import the images and data into RightSpot as follows:

1. SPATIAL will capture attributes listed in Appendix A for each drawing set and populate SCANPROJECT = '21010-OCS04'.

2. If the project name, number, firm, date, status, and number of sheets match a record in the DC, the PDF will be flagged as a duplicate.
  - a. If the quality of the duplicate PDF is equal to or less than the existing record:
    - (1) The duplicate CC will be annotated a “DUPLICATE, TO BE DISPOSED”.
    - (2) The duplicate will be returned to the County for final disposition.
  - b. If the quality of the duplicate is better than the existing record:
    - (1) The existing record will be flagged as a duplicate, removed from the DC, and reported to the County.
    - (2) The County will make the final determination for disposition of the hardcopy archive.
    - (3) The new PDF will remain in the DC as the best available data for that project.
3. SPATIAL will upload each scanned PDF drawing set into RightSpot > Scanning Project layer as a point feature in the project area.
4. If a set of hardcopy drawings appear to have historic value, SPATIAL will annotate on the CC “POSSIBLE HISTORIC VALUE”. The determination of historic value will be based on drawing date (pre-1980), hand drawn, and media type (vellum, acetate, linen, etc.). The County will make the final determination of historic value.

### 3 Deliverables:

1. Scanned image of each drawing set.
2. Original drawing sets in sealable containers suitable for long term storage.
3. Updated digital catalog of scanned drawing sets.
4. Projects added to RightSpot Scanned Project layer.
5. Access to scanned drawings via RightSpot.
6. List of as-built projects for future digitizing/extracting.

### 4 Cost Estimate:

Item	Task	Estimate
2.2	Scan Hardcopy Archives	\$28,879.00
2.3	Catalog Scanned Images	\$21,481.00
	<b>SubTotal (2)</b>	<b>\$50,360.00</b>
	<b>Total</b>	

Notes:

1. The total cost to complete this task is \$50,360.00.
2. The cost is based on 12,000 drawing sheets.

3. This is a firm fixed price quote based on SPATIAL's contract rate schedule.
4. The cost quote is valid for 60 days.

## 5 Schedule:

Item	Milestone	Start	Duration (1)
0	Notice to Proceed (NTP)	NTP	0
1	Kickoff Meeting	NTP + 5d	1
2.2	Scan Hardcopy Archives	Item 1	180
2.3	Catalog Scanned Images	Item 1	210
	Total Project Duration	NTP	210

Notes:

- (1) Duration presented in calendar days.

## 6 Assumptions:

1. THIS TASK IS FOR SCANNING, CATALOGING, AND LOADING SCANNED DATA INTO THE RIGHTSPOT SCANNING PROJECT DATA LAYER. IT DOES NOT INCLUDE DIGITIZING/EXTRACTING DATA FROM SCANNED IMAGES.
2. The County is responsible for permanent storage of original drawings.
3. The County will provide access to the hardcopy drawing archive.
4. The County will provide personnel authorized to release drawings and accept returned drawing.

## 7 Task Acceptance

If the tasks, schedule, and cost are acceptable, please sign, date, and return a copy to Spatial Engineering.

For: Spatial Engineering, Inc.	For: Effingham County, GA
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<b>Date: April 14, 2022</b> Rebecca F. Truluck President O: 912-826-6688 <a href="mailto:btruluck@spateng.com">btruluck@spateng.com</a>	<b>Date:</b> _____  
	<b>Name:</b> _____ <b>Title:</b> _____

## 8 Appendix A – Scan Drawing Set Attributes (layer = Scanning Project)

ID	Attribute Name	Type	Definition
1.	CCID	NVARCHAR2 (20)	Unique Chain of Custody ID
2.	PROJ_NAME	NVARCHAR2 (300)	Project name as shown on cover sheet
3.	PROJ_NUM	NVARCHAR2 (40)	Project number
4.	PROJ_FIRM	NVARCHAR2 (80)	Engineering firm who created the drawing set.
5.	PROJ_DATE	NVARCHAR2	Drawing set date as shown on the cover sheet/title block. Format YYYYMMDD.
6.	PROJ_STATUS	NVARCHAR2 (100)	{As-built, Construction, Design, Concept}
7.	SHEETS	NUMBER (22 5 0)	Total number of sheets in drawing set
8.	SCANPROJECT	NVARCHAR2 (20)	Scan project contract number.
9.	DATERELEASED	TIMESTAMP ((6) 11 6)	Date County released to SPATIAL
10.	DATESCANNED	TIMESTAMP ((6) 11 6)	Date drawing set scanned
11.	DATEUPLOADED	TIMESTAMP ((6) 11 6)	Date scan PDF uploaded for QC
12.	DATECATALOGUED	TIMESTAMP ((6) 11 6)	Date scan PDF QC'd and cataloged
13.	DATERETURNED	TIMESTAMP ((6) 11 6)	Date drawing set returned to County
14.	STATUSPCT	NUMBER (22 5 0)	Percent complete – Release = 20%, Scanned = 40%, Uploaded = 60%, Cataloged = 80%, Returned = 100%
15.	SEWER	NVARCHAR2 (6)	True/False available data
16.	STORM	NVARCHAR2 (6)	True/False available data
17.	WATER	NVARCHAR2 (6)	True/False available data
18.	REUSE	NVARCHAR2 (6)	True/False available data
19.	EASEMENT	NVARCHAR2 (6)	True/False available data
20.	UTIL_SOURCE	NVARCHAR2 (100)	{County, Private}
21.	POTENTIALDUPE	NVARCHAR2 (40)	True/False
22.	NOTES	NVARCHAR2 (510)	Free form notes, comments
23.	EDITOR	NVARCHAR2 (100)	User ID of last person editing record (auto populated)
24.	DATEEDITED	TIMESTAMP ((6) 11 6)	Date record was last edited (auto populated)
25.	CREATOR	NVARCHAR2 (100)	User ID of individual creating record (auto populated)
26.	CREATEDATE	TIMESTAMP ((6) 11 6)	Date record created (auto populated)