

Resolution 1-1

Whereas, Sangamon County has determined that the implementation of a Geographic Information System (GIS) is necessary for the effective administration of County functions; and

whereas, it is necessary for the GIS Division of the Sangamon County Information Systems department to acquire new aerial photography every four (4) years in the spring between March 15th and April 15th as specified in the various intergovernmental agreements that the County has entered into with the city of Springfield and other villages located within Sangamon County; and

Whereas, it is necessary to enter into a contract with Surdex Corporation of to perform said services in an amount not to exceed One Hundred Two Thousand Dollars (\$102,000.00); and

Whereas, when the budget was approved for the fiscal year beginning December 1, 2018 and ending November 30, 2019, funds were allocated for this project; and

NOW, THEREFORE, BE IT RESOLVED BY THE COUNTY BOARD MEMBERS OF SANGAMON COUNTY, in session this 5th day of March, 2019 A.D., that the Chairman of the County Board is hereby authorized to execute and adopt a contract agreement with the Illinois Department of Transportation to provide aerial photography for a total cost not to exceed \$102,000.00.

**FILED**

FEB 26 2019

*Don J. Hayes*  
Sangamon County Clerk

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FEB 21 2019

Andy Goleman  
SANGAMON COUNTY AUDITOR

Building & Grounds Committee

Jason Lee Chairman

Ram Depp

Yerand...

B. M. ...

Sangamon County Purchase Order Template  
(Pre-ERP Implementation)

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-- Purchase Orders are required for all Informal Quotes (>\$3,500) and Formal Solicitations (>\$30,000)

Department Information

Department Information Systems

Employee Contact Tracy Garrison

Purchase Request Information

Vendor Surdex Corporation

Purchase Description Digital Ortho-Photography

Quantity 1

Price Per Unit

Total Price \$102,000.00

G/L 041.010.541.000

Tracking

PO Number 2019-GIS-2

(Manually assigned by Department)

Date:

Legal Review (if applicable; see below) 2/21/2019

Sent to Auditor's Office for Review 2/21/2019

Note: PO request documents need to be to the Auditor's Office 5 business days prior to the oversight committee meeting.

Auditor's Office Review Completed

Approved by Oversight Committee

Approved by County Board (if applicable)

\*County Board Resolution Required

Note: Please attach all required documents such as quotes, bids, rfp's, evaluations, etc.

Legal Review is required for:

- All services being performed for or on behalf of the County
- All goods in excess of \$10,000 per year
- Any goods or services being procured through an RFP/Bid Process
- Intergovernmental/Interagency Agreements
- If a vendor or other agency requires a contract or written agreement.

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FEB 21 2019

Andy Goleman  
SANGAMON COUNTY AUDITOR

To: Sangamon County Board members, Buildings and Grounds Committee, Auditor's Office  
From: Tracy Garrison

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Re: Surdex Inc Aerial Photography contract.

Sangamon County's Intergovernmental Agreements with our GIS partners requires us to acquire aerial photography that meets or exceeds the specs of the first "GIS" aerial photography acquisition in spring of 2003. The main specification requirements at the time were:

- 1) leaf off non-flood conditions, free from cloud shadows and smoke, haze, snow, fog or excessive soil moisture.
- 2) No later than April 15<sup>th</sup> (leaves start to come out in abundance after this date)
- 3) 1-foot resolution (we now have moved this to 0.5' resolution)
- 4) 4 bands (Red, Green, Blue and Near Infrared)
- 5) Half mile extra aerial photography buffer around the county boundary
- 6) Minimal building lean and as close to true ortho as possible. (This is achieved by achieving at least a 40% side-lap and 60% end-lap in aerial acquisition along with extra cross flights over downtown Springfield for the taller buildings)
- 7) Horizontal accuracy not to exceed 3 feet NSSDA (National Standard for Spatial Data Accuracy) @ 95% confidence level.

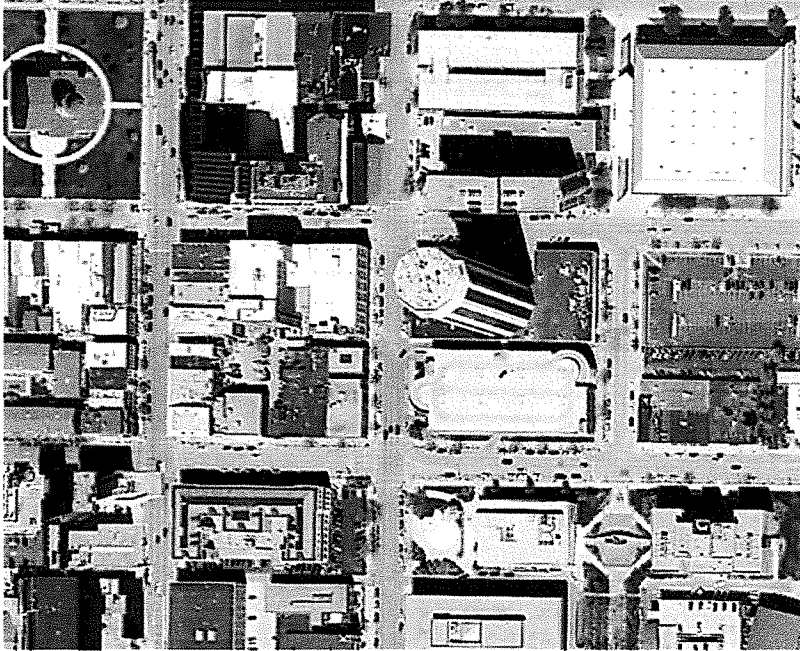
I selected the Surdex Corporation proposal with a contract amount of \$102,000 based on their past history with Sangamon County and for meeting or exceeding the specifications. (see attached for an example of an aerial image with too much building lean and one that is very acceptable).

Sangamon County used the States "Pre-Qualified" Aerial photography vendor list and contacted the vendors on that list to submit a proposal and quote for the aerial acquisition. We were wanting three quotes but after 3 weeks I had only received one from the Surdex Corporation. I sent the request to the firms twice. I knew that Surdex and another firm Aerial Services were going to be at the Land Surveyors Conference in Springfield on February 6<sup>th</sup> through the 8<sup>th</sup> so I met up with Walter Ertz the Vice President of Aerial Services and asked him if he was going to submit a proposal and quote and he said that they were too busy. I gave him my card and asked him to please email me the reason why he was not submitting a proposal for my records. The next day I got an email from him stating that they would submit one on February 12<sup>th</sup>. Aerial Services proposal arrived on February 12<sup>th</sup> and the quote for the acquisition was for \$68,000 but they were proposing 30% side-lap (not as many flight lines) and no cross flights over downtown to remove the building lean which does not meet the specifications for the acquisition that was sent out. The \$102,000 price in the enclosed Surdex Corporation Contract is in line with the 2011 and 2015 acquisitions that we acquired through partnership with the State of Illinois.

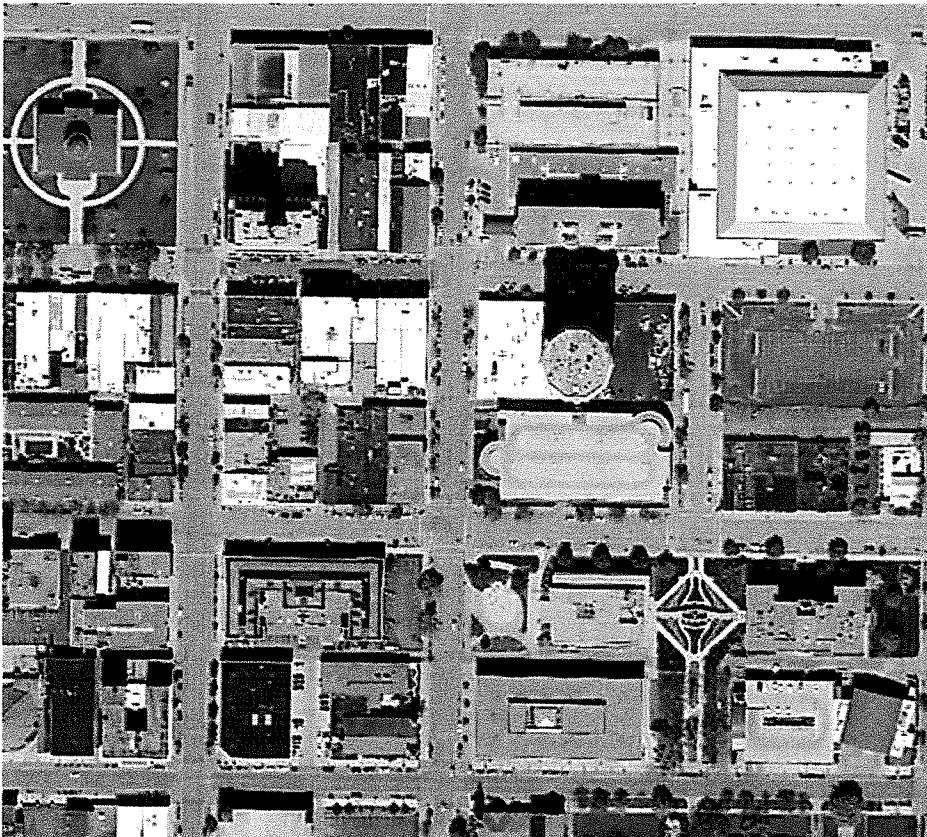
Tracy L. Garrison

Sangamon County GIS Manager

Unacceptable Building Lean. In 2011 we tried a 30% side-lap and without cross flights over downtown Springfield and the following is the result. The Sangamon County GIS Users Advisory Board decided that we needed increased side-lap (40%) and cross flights over the tall buildings of downtown area.



The image below is from the 2015 aerial photography acquisition with the require cross flights over downtown Springfield.



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# PROPOSAL



January 25, 2019

Tracy Garrison  
GIS Manager, PLS, GISP  
Sangamon County GIS  
200 S. 9<sup>th</sup> St., Room 312  
Springfield, IL 62701

**Regarding: Sangamon County, Illinois Digital Ortho Photography**

Dear Mr. Garrison and Sangamon County GIS staff,

Surdex is pleased to provide this fully-compliant response to the Digital Ortho Photography for Sangamon County, Illinois. We believe there are compelling reasons why Surdex should be strongly considered for this project:

Surdex is one of the premier aerial mapping companies in the United States, under continuous operation by the same ownership since 1954. Our headquarters and production facility are based in the greater metropolitan St. Louis, Missouri, area. Approximately 100 employees work at our headquarters building and hangar complex at the Spirit of St. Louis Airport in Chesterfield, Missouri. Our clientele includes federal, state, and local government as well as private engineering, defense mapping, and Homeland Security.

Our success can be attributed to our robust quality control measures, experienced and skilled staff, equipment, orthoimagery processing software and our production procedures. As a Midwest firm, we have extensive experience acquiring and processing imagery in the region.

Surdex is pre-qualified with the Illinois DOT and we successfully performed the Sangamon County project in 2015. We have 60+ years' experience producing orthoimagery in Illinois. Our experience in 2015 has given us ideas to offer added strategies for reducing building lean.

If you have any questions or if I may assist you in any way, please do not hesitate to contact me.

Sincerely,

Tim Donze  
Vice President, Business Development  
Direct: (314) 422-7616 | Office: (636) 368-4400  
TimD@surdex.com

Ronald C. Hoffmann  
President, Authorized Agent  
Office: (636) 368-4400

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FEB 21 2019

Andy Goleman  
SANGAMON COUNTY AUDITOR



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## ABOUT SURDEX

<b>Company Name</b>	Surdex Corporation
<b>Business Address and Production location</b>	520 Spirit of St. Louis Blvd. Chesterfield, MO 63005-1002
<b>Website</b>	<a href="http://www.surdex.com">www.surdex.com</a>
<b>Year Established</b>	Est. 1954, Missouri, S-Corporation
<b>Phone / Facsimile</b>	636-368-4400 / 636-368-4401
<b>Industries Served</b>	Governments (federal, state, county, municipal), private engineering, transportation, and energy

## PROJECT SCOPE

The following table provides our understanding of the project requirements.

Overview of Project		
Parameter	Value	Comments
Area in Square Miles	945 square miles (including 2600' buffer)	
Requested Acquisition Timeframe	No later than April 15, 2019	
Ground Conditions	Leaf-off, non-flood conditions, 30° minimum sun angle, free from clouds/cloud shadows, smoke, haze, light streaks, snow, fog, and excessive soil moisture	Surdex will coordinate start and stop of acquisition with Sangamon County, based on actual ground conditions
Resolution	0.15 m (nominal 6 inch) GSD	
Bands	4-band (Red, Green, Blue, Near Infrared)	
Imagery Formats	Image files will be provided in uncompressed, untiled, ArcGIS readable, GeoTIFF file format	
Flight Lines	27-34 flight lines (see diagram later in this document)	
Project Buffer	2600 feet	
Notification to Fly	Surdex will notify County 24 hours prior to acquisition	
Reduced Building Lean	40% sidelap (see narrative below for description)	
Digital Orthorectified Image Datum	<ul style="list-style-type: none"> <li>• North American Datum 1983, UTM meters, Zone 15 or 16 as appropriate</li> <li>• Illinois State Plane, East and West Zones as appropriate, US survey foot (tiles falling in both zones will be delivered in both projections)</li> </ul>	
Metadata	Federal Geographic Data Committee (FGDC) compliant metadata in .xml format	
Digital Orthorectified Image Tile Size	5000 ft x 5000 ft Coordinates based on IL State Plane coordinate system East and West Zones	
Horizontal Accuracy	Not to exceed 0.76-meters NSSDA 95% Confidence (0.44-meters Root Mean Squared (RMSE) Error XY (0.31 meter RMSE X or Y))	

## DIGITAL AERIAL PHOTOGRAPHY

Surdex aircraft will capture aerial photography of your area of interest. Each aircraft is equipped with high-precision digital aerial mapping sensors. The acquisition plan will be designed to achieve photogrammetric accuracies based on the known requirements requested by the County and generally accepted industry practice. Suredex's image sensors are equipped with forward motion compensation and gyro-mount sensor leveling features. To supplement the required photogrammetric ground control, all aircraft and sensors are equipped with Global Positioning System (GPS) Navigation, Airborne Global Positioning System (ABGPS) survey and Inertial Measurement Unit (IMU) technology. Suredex's direct digital sensors capture Panchromatic (PAN), Red, Green, Blue (RGB) and near Infrared (IR) bands simultaneously. Processing and delivery of supplemental image bands is available upon request for an additional charge.

**ACQUISITION CONDITIONS:** Suredex will take vertical aerial photographs using a precision aerial mapping camera, free of clouds, cloud shadows and atmospheric haze, generally between 10:00 a.m. and 2:00 p.m., or when the sun angle is greater than 30 degrees.

Your project manager, Jim Gottgetreu, will keep you updated regularly especially during acquisition and throughout the project. We will make sure that you are notified within 24 hours of the start of acquisition.

## SCHEDULE

Flight/imagery acquisition will be complete no later than April 15, 2019. A preliminary schedule will be finalized upon your authorization to proceed. The Suredex Project Manager, Jim Gottgetreu, will coordinate the production and scheduling of this project. Services will be provided on a mutually agreeable schedule after receipt of the signed copy of this proposal / contract. Both seasonal and daily weather conditions dictate when acceptable data can be captured. Our Flight Control Manager will consider these factors when planning the schedule.

## REDUCING BUILDING LEAN

For highly built-up urban areas at higher resolutions, strategies are undertaken to ensure building and elevated feature lean are minimized:

- Additional flight lines are designed to align with the major streets/avenues.
- Sidelap is increased, generally by inserting intermediate lines between the existing lines to double the sidelap.

These steps provide additional imagery for our technicians to use during the mosaicking process, in most cases resulting in varying views to select from. The graphic on the following page shows an example from the St. Louis area. In this case, the baseline north-south design (red) was augmented by diagonal flight lines (yellow/tan) and decreased line spacing to increase the sidelap. As in our 2015 project, Suredex will add extra flight lines over the tall building areas in Springfield in order to reduce building lean.

Suredex will increase side lap project-wide to reduce building lean for the full extent of the County. In order to reduce building lean for the Sangamon County project, Suredex is increasing the density of flight lines to 40% sidelap.



*Excerpt of flight plan addressing the built-up areas in downtown St. Louis.*



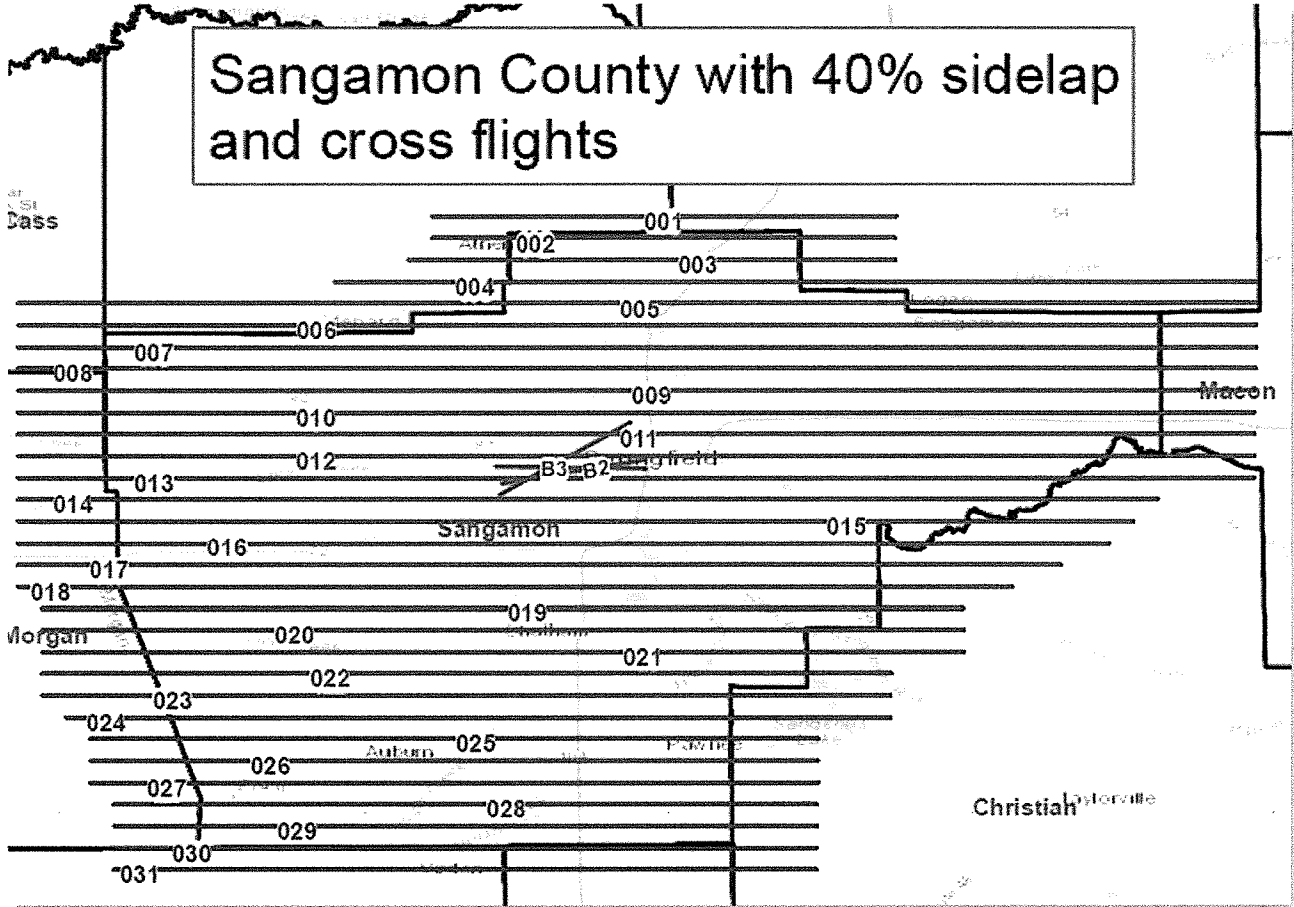
### FLIGHT DIAGRAMS

We have generated flight diagrams for 2 options. The following table indicates the number of flight lines and the total number of flight line miles for each option. Diagrams for these options are on the following page. The higher the percentage of sidelap, the lesser the effect of visual building lean; however, this means an increase in the number of flight lines and flight time, resulting in an increase in price. We are providing these options for the County to evaluate the cost/benefit of the options.

Flight Plan Options		
Description of Plan	Number of Flight Lines	Total Flight Line Miles (Nautical Line Miles)
40% sidelap with extra cross flights for downtown Springfield	34	1004.26

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Sangamon County with 40% sidelap and cross flights



## PROJECT MANAGEMENT

Surdex has assigned Mr. Jim Gottgetreu, ASPRS Certified Photogrammetrist, as the project manager for this project; he will serve as the primary point of contact to your designated representative(s), at all times. Jim has thirty-seven years of professional experience. He was a project manager for the 2015 Illinois Statewide project for the Illinois Department of Transportation, and has also managed projects for several counties in Illinois. Jim will be the direct point of contact, being responsible for managing in-house communications regarding all aspects of project execution including client communication, project planning, surveying, aerial photography acquisition, aerial triangulation, and digital ortho-imagery production. He reports to the Program Manager for this effort, Mr. Wade Williams, Surdex's Director of Project Management.

## PERSONNEL

Surdex staff consists of 100 highly-qualified, highly-trained personnel. We also have an excellent retention rate; of our 25 people in leadership positions, they average over 25 years in the mapping profession and over 15 years employment by Surdex. This longevity equates to higher levels of experience, resulting in an extremely high level of productivity and fewer mistakes – and consequently higher adherence to schedules and quality. Our staff includes:

- 8 ASPRS Certified Photogrammetrists.
- 2 registered professional land surveyors.
- 1 Project Management Professional (PMP) certification.

## MIDWEST EXPERIENCE





As a Midwest firm, Surdex has extensive experience in Illinois and the region. We are an approved vendor with the Illinois DOT; we also conducted a project to map 53,200 square miles of the State of Illinois in 2015 / 2017 at 12" GSD, plus multiple LiDAR projects for the IL State Geological Survey. In the past few years we have completed projects for Jo Daviess, Whiteside, Carroll, Kendall, and St. Clair Counties. Most of our projects are for repeat customers. We also have numerous county / municipal projects in Missouri (MARC in 2018), Boone County Consortium, Laclede, Caldwell, the City of Maryland Heights, the St. Louis County Image Consortium and many more.

## AIRCRAFT / SENSORS

Surdex owns and operates the equipment necessary to acquire the data:

- A fleet of ten aircraft that host a variety of sensors.
- Five Leica ADS100 pushbroom digital sensors ideally suited for orthoimagery, topographic mapping, and planimetric mapping.

Imagery acquisition is the most critical phase of the project. Surdex brings over a half-century of experience collecting image data and understands the limited opportunities for image acquisition. With our proximity to the project site, we will be able to collect the imagery with ease.

Surdex's Acquisition Aircraft			
Number, Make and Model of Aircraft	Category	Specifications	Image
(4) Cessna 441 Conquest II-10 (with RVSM*)	Twin-Turbine Pressurized	Flight Range: 2,193 nm Altitude: 1,200 - 35,000 AGL Certified Altitude: 35,000 MSL Cruise Speed: ~310 knots	
(1) Cessna 414A Chancellor III	Twin-Piston Pressurized	Flight Range: 900 nm Altitude: 1,200 - 25,000 AGL Certified Altitude: 30,200 MSL Cruise Speed: ~235 knots	
(1) Cessna 335 II	Twin-Piston	Flight Range: 928 nm Altitude: 1,200 - 18,000 AGL Certified Altitude: 26,800 MSL Cruise Speed: ~215 knots	
(4) Cessna TU-206F Turbo Stationair	Single-Engine	Flight Range: 720 nm Altitude: 1,000 - 10,000 AGL Certified Altitude: 26,300 MSL Cruise Speed: ~148 knots	

\* RVSM: Reduced Vertical Separation Module. This FAA-certified equipment allows operation above 28,000' (MSL).

Surdex's Image Sensors				
Sensor Make/Model	Serial #	Purchase Date	Calibration Date	IMU Make
Leica ADS100	10510	12/27/2012	06/21/2013	SPAN uIRS
	10515	12/27/2012	07/02/2013	
	10522	12/12/2013	12/16/2013	
	10531	05/14/2014	6/12/2014	
	10552	03/31/2016	04/30/2015	

### GROUND CONTROL SURVEYS

When required, Surdex will perform ground surveys to support geospatial data production projects. Surdex places two GNSS base stations on the ground when flying aerial missions, and we do utilize surrounding CORS sites too. This surveying will be performed to an accuracy and density required to support the mapping project. The American Society of Photogrammetry and Remote Sensing (ASPRS) Positional Accuracy Standards for Digital Geospatial Data defines the accuracy of ground survey points used in the generation of geospatial data products. These accuracy standards are listed on the following page.



Accuracy of Ground Control Used in Aerial Triangulation:

- Accuracy of ground control designed for planimetric data or orthophotography production only:
  - $RMSE_x$  or  $RMSE_y = \frac{1}{4} * RMSE_{MAPX}$  or  $RMSE_{MAPY}$
  - $RMSE_z = \frac{1}{2} * RMSE_{MAPX}$  or  $RMSE_{MAPY}$
- Accuracy of ground control designed for elevation data or planimetric data and elevation data production:
  - $RMSE_x$  or  $RMSE_y = \frac{1}{4} * RMSE_{MAPX}$  or  $RMSE_{MAPY}$
  - $RMSE_z = \frac{1}{4} * RMSE_{MAPX}$  or  $RMSE_{MAPY}$

Surdex will follow these standards when performing ground surveying in support of geospatial data production.

**AEROTRIANGULATION**

Analytical aerotriangulation may be used to establish supplemental horizontal and vertical control for stereoscopic models.

**ORTHOPHOTO MAPPING**

Surdex will produce digital orthorectified aerial image tiles consistent with the shapefile area of interest (AOI) and the 5000' x 5000' tile layout provided by the County. The orthoimage tiles will be provided at a horizontal scale of 1"=100' at a ground resolution of 0.5' / 15 cm. Unless specifically requested in writing, Surdex reserves the right to utilize, if available, any existing elevation model deemed suitable for orthorectification to meet the contractual accuracy requirements as stated. If suitable elevation data is not available, Surdex will generate a new elevation model using manual and automated photogrammetric techniques. If requested, Surdex will deliver the elevation model used in the orthorectification process. To improve efficiency of client acceptance, Surdex may provide, at its discretion, seamline data for reference. Standard image format shall be tiff and tiff world (.tif/.tfw) and will be delivered on external hard drive. Additional image formats are available. An additional charge may be required for additional formatting or processing.

**MAPPING ACCURACY**

Unless otherwise requested, the photogrammetric mapping provided under this proposal will meet or exceed American Society for Photogrammetry and Remote Sensing (ASPRS) Accuracy Standards for Digital Geospatial Data, horizontal and/or vertical accuracies as listed below. Table accuracy values below are RMSE in centimeters.

Accuracies by GSD for ASPRS Standard Mapping and GIS Work				
GSD	Limiting $RMSE_{x,y}$	$RMSE_z$	CE95	Allowable Seamline Mismatch
0.5'/6"/15.2cm	1.0'/30.5cm	1.41'/43.1cm	2.45'/74.6cm	2.0'/61.0cm



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### MAP TESTING PROCEDURES

Standard procedure requires that photogrammetric maps be field-checked prior to use. Obtaining field survey information for map check purposes will be the sole responsibility of the County. Failure to perform field tests and notify Surdex of non-compliance with the map accuracy standards previously stated within 90 days of delivery shall be deemed an acceptance of the maps and any claims whatsoever as a result of such non-compliance are waived.

Surdex recommends map testing follow FGDC-STD-007.3-1998, Geospatial Positioning Accuracy Standards, Part 3: National Standard for Spatial Data Accuracy (NSSDA) guidelines.

<http://www.fgdc.gov/standards/projects/FGDC-standards-projects/accuracy/part3/chapter3>

### FEE SCHEDULE

Fee Schedule,		
Services	Specifications and Deliverables	Price
Digital Aerial Photography	40% sidelap for reduced building lean project-wide <ul style="list-style-type: none"> <li>3 additional flight lines over downtown Springfield</li> </ul>	
Ground Control Survey		
Digital Orthophotos	1"=100' .5' resolution (15cm) 4-Band Orthoimagery	
<b>TOTAL</b>		<b>\$102,000</b>

Proposal is good for Sixty (60) days from date of proposal.

### DELIVERY ITEMS

The following delivery items are included in the fees above:

- Calibration Report, Survey Report
- Digital data in uncompressed-geotiff, MrSID in UTM meters as well as IL State Plane
- Project Level & Tile Level Metadata

**SURDEX CORPORATION**

**SANGAMON COUNTY**

*R. C. Hoffmann*  
Signature

\_\_\_\_\_  
Signature

Date: February 18, 2019

Date: \_\_\_\_\_

**HELP US PREVENT PAYMENT FRAUD** – Surdex will adhere to the original payment processing method in our contract. Surdex will not contact you to change payment processing methods. Surdex requests all questions or concerns be directed to Surdex Corporation, Accounting.



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## TERMS AND CONDITIONS

The following terms and conditions are incorporated in and together with the proposal become a part of the contract between Client and Surdex Corporation ("Surdex"). Both parties agree as follows:

### ACCESS

Client shall arrange for access to and make all provisions for Surdex to enter upon all public and private lands as required for Surdex to perform its services.

### INVOICES / PAYMENT SCHEDULE

Client is solely responsible for payment of services; payment will in no way be conditional upon Client receipt of payment from another party. Payment schedule is to be:

- 60% due upon completion of acquisition, 40% due upon final delivery.

### TERMS / INTEREST / LATE PAYMENT

Payment shall be due 30 days after receipt of an invoice. Interest shall accrue on past due invoices at the rate of 1½ percent per month (18% per annum), or the maximum rate allowed by law, whichever is less, from the date that payment was first due.

Payments shall be applied first to accrued interest and then to unpaid principal. Client agrees to pay Surdex's fees, costs, and other reasonable expenses, including attorney's fees, incurred in any efforts to enforce any provision of this Agreement, including efforts to compel payment of past due amounts.

If a project is inactive for more than 45 days, Surdex may suspend the services and bill Client for all services performed to date.

### TAXES

If Client does not provide evidence of tax exempt status prior to commencement of any services by Surdex, then Client shall be responsible for any and all taxes in connection with such services.

### SURDEX'S INSURANCE REQUIREMENTS

Surdex shall maintain in force throughout the term of this Agreement insurance of the types and in the minimum amounts set forth below.

- 1) WORKERS COMPENSATION: Statutory Coverage, including Employer's Liability with minimum limits of \$1,000,000.
- 2) COMMERCIAL GENERAL LIABILITY: \$2,000,000 Combined Single Limit per occurrence for Bodily Injury, Personal Injury, and Property Damages,

including Contractual Liability covering Surdex's indemnification obligations in this Agreement.

- 3) COMPREHENSIVE AUTOMOBILE LIABILITY: \$1,000,000 Combined Single Limit per accident including any auto, all owned autos, hired autos and non-owned autos.
- 4) PROFESSIONAL LIABILITY: \$2,000,000.
- 5) AIRCRAFT LIABILITY: \$10,000,000, if aircraft are employed.
- 6) VALUABLE PAPERS: \$150,000.

### INDEMNITY

Surdex agrees to indemnify, defend and hold Client harmless from and against any and all claims, demands, suits, damages, and costs (including attorney' fees and cost of defense) due to bodily injury or property damages arising directly out of Surdex's negligence, but only to the extent that such indemnity is covered by Surdex's CGL or Professional Liability insurance.

As a material part of the consideration to Surdex, Surdex assumes all risk of damage to its property or injury to persons, including its agents, contractors and employees in performance of Services hereunder, and Surdex hereby waives all claims in respect thereof against Client, except for any claim arising out of Client's negligence or willful misconduct. As used in this Section, the term "Client" shall include Client's employees, agents and contractors, if applicable, and "Surdex" shall include Surdex's employees, agents and contractors, if applicable.

Client agrees to indemnify, defend and hold Surdex harmless from and against any and all claims, demands, suits, damages, and costs (including attorney' fees and cost of defense) due to bodily injury or property damages arising directly out of Client's negligence.

### TESTING

Client shall independently verify the accuracy of Surdex's services prior to using or relying on the same (or providing the same to others for any reason), and in an event no later than six (6) months after completion of the services (the "Claim Period").

If Client fails to take commercially reasonable efforts to verify the accuracy of Surdex's services as required herein, then Client shall be deemed to have waived all claims and rights of recovery against Surdex.

### RIGHT TO CURE

If Client discovers errors in the deliverables within the Claim Period, Client shall promptly notify Surdex, and Surdex shall have the right to correct or repair for ninety



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(90) days after receipt of Client's notice (or such longer period if 90 days is insufficient) at Surdex's sole cost.

**LIMITATION OF LIABILITY**

To the fullest extent permitted by law, Surdex's total aggregate liability to the Client arising out of this Agreement, whether arising in contract, warranty, tort (including negligence), strict liability, or otherwise, is limited to the Total Price paid to Surdex for this contract.

In the event of timely notice of any deficiencies, Surdex's liability extends only to correcting Surdex-related deficiencies and will in no case exceed the original fee, nor will it include any subsequent costs incurred by the client or others; said warranty does not extend to services, data, or control information provided by the client.

NOTWITHSTANDING ANYTHING TO THE CONTRARY, NEITHER CLIENT NOR SURDEX SHALL BE LIABLE TO THE OTHER FOR, AND EACH EXPRESSLY WAIVES THE RIGHT TO RECOVER, CONSEQUENTIAL, INDIRECT, PUNITIVE, SPECIAL OR EXEMPLARY LOSSES OR DAMAGES, WHETHER ARISING IN CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR OTHERWISE, INCLUDING BUT NOT LIMITED TO LOSSES OF USE, PROFITS, BUSINESS, REPUTATION OR FINANCING.

**OTHER**

Any services being provided to Client by Surdex may be terminated by either party upon ten (10) business days' prior written notice, and in such event Surdex shall be paid by Client for all services performed up to and including the termination date, including reimbursable expenses.

**FORCE MAJEURE**

Neither Client nor Surdex shall be liable to the other for damages or delay in performance caused by acts of God, weather, strikes, labor disputes, accidents or any other event beyond the control of the other or its employee's and agents.

**ARBITRATION**

All disputes arising out of or relating to this Agreement shall be decided by arbitration, in accordance with the rules of the American Arbitration Association. The prevailing party shall be awarded attorneys' fees and costs.

**OWNERSHIP OF WORK PAPERS**

Surdex agrees that all materials, reports, drawings, studies, specifications, estimates, maps, computer data tapes, computations and other materials prepared by or for Client under the terms of this Agreement shall upon proper payment by Client to Surdex become the property of the Client. However, any processes, procedures, programs, software, or similar practices of Surdex,

whether developed prior to or during the project, shall remain the property of Surdex until sold or licensed to Client for its use or use by others for separate compensation. Client shall not alter the same in any manner and shall waive any claim against Surdex and shall, to the fullest extent permitted by law, indemnify, defend, and hold Surdex harmless from any claim or liability for injury or loss arising from unauthorized alteration of Surdex's work product.

**CONFIDENTIALITY**

Surdex shall keep confidential all information obtained from and designated as confidential by Client and shall not divulge any confidential information concerning the Project to any person or entity (other than Surdex's subcontractors, employees or other persons or entities to the extent necessary to complete the services) unless written approval is granted by the Client or as ordered by a court of competent jurisdiction.

**GOVERNING LAW**

This Agreement shall be governed by and construed in accordance with the laws of the State of Missouri. Should a conflict of terms arise from agreed to provisions, the terms of this agreement shall prevail.

**EXECUTION**

Upon signing of this document, this Agreement shall be binding upon and inure to the benefit of the parties hereto, their successors and assigns.