

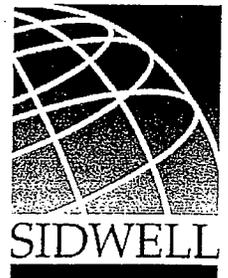
Contract



to provide
**Professional
GIS Services**

for
**Porter County,
Indiana**

submitted by



Contract for

Professional GIS Services between

Porter County, Indiana & Sidwell



Contract Agreement

THIS AGREEMENT entered into this 7th day of February, 2008 between THE SIDWELL COMPANY, St. Charles, Illinois, hereinafter called "Sidwell," party of the first part, and PORTER COUNTY, INDIANA, a government entity, hereinafter called "the County," party of the second part, WITNESSETH:

THAT WHEREAS, The Sidwell Company is in the business of providing Geographic Information Systems, Aerial Photography, Cadastral Mapping, and Web Site Provision Services for various governmental agencies in the United States; and

WHEREAS, the County is desirous of having The Sidwell Company provide Geographic Information Systems, Aerial Photography, Cadastral Mapping, and Web Site Provision Services.

NOW, THEREFORE, in consideration of the mutual agreements hereinafter made, the recitals of fact hereinabove set forth, and other good and valuable consideration, the receipt of which is hereby acknowledged, the parties agree as follows;

The Sidwell Company will perform the services described in the scope of work that follows.



Professional GIS Services *between*

Porter County, Indiana & Sidwell



GIS Project Background

In the summer of 1996 a Porter County GIS Committee was formed to define the county's needs for a geographic information system, investigate the technology, look for partnership, and funding opportunities, and evaluate potential GIS service providers. In March 1998, the Porter County Commissioners accepted the GIS Committee recommendation and selected The Sidwell Company to be their GIS provider. In late 1998, the Porter County Council allocated funds to begin development of the GIS. A contract was signed in February 1999.

The GIS Project was planned to be developed over a several year period. The GIS base map, consisting of digital orthophotography and cadastral mapping, was to be created first, a new permanent parcel numbering system would be introduced, the GIS was to be integrated with the County's tax system and CAMA system, a soils map layer would be added, and an agricultural land use layer would be created. From this beginning, the County also wanted to add many more layers such as economic development areas, zoning, highway infrastructure, topography, watershed boundaries, voting precincts, and school districts.

GIS Project work began in Spring 1999 with countywide aerial photography and digital orthophotography and GIS data conversion of cadastral map information. Unfortunately, the County began to experience loss of tax revenue and was forced to suspend the completion of the GIS project in 2001. Porter County is now ready to resume the GIS Project. The Sidwell Company welcomes the opportunity to work with Porter County once again and presents this contract for professional GIS services.

Digital Orthophotography Services

Countywide digital orthophotography was prepared for Porter County by The Sidwell Company in 1999. This imagery will be used as the base map for cadastral conversion.

Additional Digital Orthophotography Services

It is our understanding that Porter County is participating in the Indiana Statewide 2005 Color Orthophotography Project and will receive countywide color imagery at one-foot pixel resolution along with other orthophotography products. After the orthophotography products are delivered to Porter County, Sidwell can examine the orthophotography and make recommendations for its use. Sidwell has two certified photogrammetrists on staff and appropriate photogrammetry infrastructure to provide any additional services that Porter County may need in order to best utilize the color orthophotography products within the GIS project. Our services will be provided at our prevailing professional services rates at the time the service is provided. We reserve the right to modify these rates at any time.

Cadastral Mapping Services

Cadastral data conversion is process of creating a digital database delineating all real parcels of property within Porter County—which includes approximately 78,430 parcels. A portion of Porter County was converted by Sidwell in 2001. This area, comprising 2,460 parcels, exists in MicroStation Geographics format and has been maintained by the county ever since its delivery. This data will be converted into ESRI's Geodatabase format and re-delivered as a part of this project. Furthermore, this data will be edge matched to the surrounding areas of

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the cadastral database. The remainder of this section describes the workflow for the remaining 75,970 parcels in the county.

An integral component to the finished cadastral database will be the creation of a new, Permanent Parcel Numbering system for Porter County. The parcel number—which will be fully compliant with State of Indiana requirements—will serve as a key element through which further GIS functionality and analysis capabilities will be added. The entire process involves a variety of production steps, described below.

Data Collection

The existing Porter County tax maps will be used as one of the source documents for this project. Sidwell will collect copies of these maps as the project progresses to ensure that they are as up to date as possible. All information on the existing tax maps will be captured in the conversion process.

Sidwell will also collect copies of all subdivision plats in the county. These documents will be used as the primary source documents for subdivision information in platted areas. We will also inventory and collect right-of-way maps, strip maps, surveys and other documents that will be useful in the cadastral conversion process.

The necessary land record documents will either be microfilmed or scanned. This process allows us to have a copy of all documents in-house, available when they are needed. With respect to the thousands of documents to which we will need access, we do not wish to consume valuable staff time and labor for this process over the course of the project. Microfilming or scanning is easily performed and a very cost-effective approach for data capture.

A Sidwell Project Manager and/or a Land Records Specialist will conduct a site visit to review the existing maps, available plats; surveys and other land records and make plans for data collection activities. Once a determination has been made on what to capture, a session will be scheduled for completion of all microfilming or scanning. A small area in the county building will be required for several days to complete the data collection process. Sidwell labor will be used for most of this work with the intent on minimizing the disruption to daily activities at the county. However, some coordination assistance from county staff will be required.

All plats, surveys and other related documents at the county offices will be captured. The Land Records Specialist will establish procedures with county staff for ongoing transmittal of copies of subdivision plats that are recorded after the data collection visit, but prior to the start of cadastral data conversion for a particular geographic area or township.

During startup data collection activities, procedures will also be established to acquire a digital copy of the Porter County tax assessment roll for use at Sidwell during cadastral data conversion. The tax roll will be requested in segments throughout the project so that Sidwell receives the most current data for a township or group of townships just prior to starting conversion for those same areas.



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Parcel Research

While the items listed above comprise the basic sources from which the cadastral database will be compiled, it is expected that some individual parcel research will be needed as conversion proceeds. The Sidwell Land Records Specialist assigned to this project will work with county staff to determine what is needed and the most effective and timely manner in which to acquire it during the conversion project.

Sidwell's approach will be to precisely construct all parcels using the tax roll descriptions as the primary data source. In cases where this information proves inadequate, parcel research will be performed. At this point, a determination will be made as to the resolution of the discrepancy. In all cases where parcel research has been performed, an entry will be made in a discrepancy report identifying the parcels affected, the nature of the problem, and the course of action taken to resolve the situation.

Sidwell will request copies of deeds, as they are needed during parcel construction. In situations where the deed book and page number is contained in the tax roll, this number will be listed in the deed request documentation.

Cadastral Database Production

The final cadastral database will contain information for one large contiguous area on the ground. To accurately reflect the same spatial relationships that exist on the ground, the individual contents of the database will be referenced to their relative position on the ground. This is accomplished by orienting all information to a known geographic coordinate system; in this case the Indiana State Plane Coordinate System. The digital orthophotos being created as a part of this project will already be oriented to this coordinate system. The digital orthophotos will provide the base framework upon which all other database information is built.

The software that will be used for compilation of the cadastral database will include Bentley Systems' Geographics, along with customized data input macros developed by Sidwell. Construction of parcels will be accomplished by using information from existing map sources and the legal description as taken from the current tax roll. Subdivision information will be gathered from the original subdivision plats.

Cadastral data will be constructed using a combination of input techniques, including coordinate geometry and precision placement for subdivided parcels, and precision placement and digitizing for non-platted metes and bounds parcel boundaries. The digital orthophotos will serve as a base to reconcile parcel boundaries against ground occupation (evidence). The actual mapping process includes the work phases summarized below:

The first phase includes complete planning of all operations necessary for delivery of the project. During this phase, digital orthophoto data is loaded onto our production system. Simultaneously, source records are obtained. They are sorted, first by township and then by section. Using the digital orthophotos, county tax roll, subdivision plats and survey copies, GIS technicians perform preliminary layout and initial digitization of physical features.



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Hydrological features are directly digitized as they appear on the digital orthophotography. These include all named bodies of water including rivers, creeks, streams, ditches, ponds, and lakes. These features will be placed either as single lines (centerlines) or double lines (banks), as they appear on the original cadastral maps. Boundaries and annotation from the Public Land Survey System are also placed, which include township, range, and section boundaries.

Next, right-of-way centerlines, boundaries, dimensions and annotation (names and symbols) are placed. Precise distances are keyed in and the right-of-way is expanded from the centerline as it appears on the digital orthophoto. The right-of-way will also serve as a control element when constructing metes and bounds parcels with limited dimensional information. For all right-of-ways, distances will be taken from the existing plats, ROW strip maps, existing tax parcel maps, and orthophoto occupation. Special care is taken to ensure that right-of-way boundaries are oriented to the digital orthophoto.

Next, all recorded subdivision data is entered, including subdivision boundary and original lot lines, and all text annotation. This information is created using a combination of coordinate geometry, precision input and digitizing techniques. Whenever possible, primary cadastral map features will be correlated with physical features on the orthophoto base map for proper registration and match to ground occupation. Permanent parcel block numbers are assigned at this stage of the mapping process.

Following that, non-platted and metes and bounds parcels are drawn into the GIS database with boundary dimensions and acreage from its tax roll description. For those parcels that lie outside of subdivisions, every attempt will be made to input by coordinate geometry or precision placement methodology. When distance information is not available and the parcel cannot be constructed, the orthophoto will be used as a base upon which to reconcile parcel boundaries.

Permanent parcel numbers will also be assigned and placed in the graphics database. This process is known as parceling and uncovers errors in descriptions and other problems. If necessary, the tax roll, deeds, subdivision plats or other records may be researched at this stage to resolve conflicts due to inadequate information on the existing maps.

A list of parcel discrepancies is created after all research has been completed. Interpretation of boundaries against the digital orthophoto must be performed in order to reconcile proper alignment when conflicts and gaps occur.

The parcel number will serve as the key element to ensure a one to one relationship between parcel polygons in the GIS and records in the attribute database. The cadastral database is now ready for quality control procedures and topological data structuring for delivery as an ESRI ArcGIS project.



Compilation Requirements

Edge Matching - All captured line features must be both visually and coordinate edge matched with features in adjacent files or other artificial boundaries within a file. No edge match tolerance will be allowed.

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Common Boundaries - All graphic features that share a common boundary, regardless of digital map layer, must have the exact same digital representation of that feature in all common layers.

Point Duplication - No duplication of points that occur within a data string is permitted.

Connectivity - Where graphic elements visually meet, they must also digitally meet. All confluence of line, area, tangent, and polygon data must be mathematically exact. No "overshoots", "undershoots", offsets, or "pseudo nodes" are permitted. Lines that connect polygons must intersect those polygons precisely; that is, every end point must be an intersection point of the respective polygon.

Line Quality - A high quality cartographic appearance shall be achieved. Transitions from straight line to curvilinear line segments shall be mathematically tangent, smooth, and without angular inflections at the point of tangency. No zero length line features shall be included. Curvilinear graphic features should be smooth with a minimum number of points. When appropriate, line-smoothing routines shall be used to minimize the angular inflection in curvilinear elements. The two terminus points shall define all straight lines.

Point Criteria - All point features shall be digitized as a single X, Y coordinate pair at the visual center of that graphic feature.

The structure of the parcel data will not inhibit the execution of GIS functions across boundaries or artificial discontinuities (file edges or other delimitation). All polygons and lines shall be verified prior to delivery for proper closure and connectivity as appropriate.

Annotation - The orientation and display of annotation shall follow accepted rules for cartographic production to ensure high quality; readable, and aesthetic map products for display and plotting. Annotations shall be placed:

- To obscure the minimum amount of other map features
- Along linear features
- To be uniform in orientation throughout the data base
- To be correct in regard to grammar and spelling
- Once for identical features that occur in close proximity to each other

Quality Control

At Sidwell, quality control is an integral component of our production environment. As such, it is both an informal process, and a formal set of procedures. Informally, each Sidwell technician, regardless of their position or level of experience, has the authority and is expected to question work performed by others when questions arise. As a given area moves through the production process, several technicians review it. This process maximizes product quality while enhancing staff development.

Formally, all converted data is checked prior to topological data structuring. Experienced cadastral mapping technicians, including managers and their assistants, perform quality control.



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Every compiled feature is checked by these high-level technicians against the original source documents to ensure accuracy and adherence to Sidwell map product standards. All data is checked against the digital orthophoto imagery on-line at the GIS workstation to verify registration and alignment. Then corrections are made to the database (usually by the technician who originally compiled the area). These corrections are then checked to ensure that they were done properly. If additional corrections are required, the process is repeated.

Processed data is checked via automated software routines that ensure a one-to-one correspondence between polygons and centroids. Errors are immediately highlighted and corrected by the GIS data technician. The process is repeated until no errors are found. After all map checking is performed, routines are run to create shapes out of all parcels. This serves as another check for polygon closure and creates shape representations of the parcels, which are useful in using low-end GIS viewer software packages such as ESRI's ArcView.

Technical Quality Assurance

Map quality and data integrity result from years of collective experience. At Sidwell this experience comes from our mapping technicians, analysts and managers - many of whom have been at Sidwell for more than a decade. These mapping experts have refined their drafting and communication skills to deliver to our client's projects that continually surpass their expectations.

Sidwell has been dedicated to the performance of quality services for more than 76 years. This dedication has been recognized as an important factor in establishing us as a GIS leader in the Midwest. Our quality control mechanisms outlined below allow Sidwell to deliver to our clients, products with the highest degree of accuracy and integrity.

Quality Control Mechanisms

Quality control mechanisms exist at every stage of a mapping project. Through a series of checking and re-checking work, high map accuracy and data integrity is achieved. Checking initially takes place in our GIS production department by staff solely devoted to data compilation and checking.

Quality control mechanisms include:

- Map Compilation Check
- First Map Check
- Digital Verification
- Database Processing and Linkage Check
- Data Discrepancy Research
- Post Delivery Quality Assurance

Map Compilation Check

Map compilers have digital software tools, developed internally by our Information Systems (IS) department, that give them the ability to check their work and fix any errors quickly. These digital tools also give the compiler the ability to perform automated tasks that can build components of the mapping system more efficiently while also removing some of the human error that would have resulted using older methods.



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First Map Check

After all of the data has been compiled and the first maps are created, measures are taken to ensure that each map depicts the original data legibly, logically and accurately. It is the job of the checker to determine that:

- Map elements are represented correctly and are geographically accurate
- Data is accounted for and there is no missing information
- Parcel information is correctly placed and cross-referenced to the appropriate tabular records in the database(s)
- Every map and/or digital file conforms to the current procedures of aesthetic uniformity and consistency

Digital Verification

Topology of all line work related to parcel boundaries must be extremely precise when delivered in a digital format. Sidwell uses the mapping software's existing tools, as well as several tools developed internally, that clean and validate topology while also making the checking of individual features more efficient. A few very important routines used for more automated quality control are described below.

Feature Checking - Sidwell has tools in place that can rapidly display map elements with the same feature assignments to see that all features are assigned correctly. Feature Checker quickly allows the user to toggle between features to visually check individual features

Topology Cleaning/Validation - Digital routines are in place that find topology errors from the most obvious to the most minute. These routines will flag the user as to how many errors are found in the map and where they are located. During topology cleaning and topology validation routines, technicians use customized tools to check for linework that dangles, overshoots, coincident lines, missing centroids, multiple centroids and unclosed polygons. Errors are quickly highlighted that allow technicians or easily review and correct their work.

Plot Tag Validation - For digital files intended for plotting, a routine is in place that will validate plot tags. The routine will flag elements without plot tags by highlighting the element with a distinct color.

Corrections are made when this information is provided.

Database Processing and Linkage Check

Original data, provided by the client, is used to verify each record in the database, and to make certain they are assigned to parcels in the correct location. Parcel numbers are entered into the system, and linking is performed during compilation. Databases are then consolidated into one master file. The most important tool used to analyze linkages between the database and the maps is a tool called an orphan finder. An orphan refers to a database record that has not been assigned to a parcel number on the map, and vice versa. The orphan finder will flag parcel numbers or records that have not been given an assignment, and the checker will fix those mistakes. The orphan finder is run until no orphans are found.



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Data Discrepancy Research

Discrepancies in data received for the project will surface at any given stage of production. Our experienced technicians will often resolve these discrepancies using several forms of evidence and common logic. When there are data discrepancies that cannot be resolved in-house, the client is notified through the Land Records Specialist to get more information on these issues.

Research Questions - Any discrepancy discovered that cannot be resolved is immediately researched. The client will be contacted to provide information and knowledge regarding these problems. Sidwell will use this approved information to make changes that agree with the client's data.

Discrepancy Reports - A discrepancy report that enumerates all of the significant errors found in their data are provided upon delivery and discussed with the client.

Post Delivery Assurance

If errors arise after final delivery, it is our policy to ensure that any and all mistakes caused by oversight are rectified quickly and correctly. We stand by our products as they leave our facility, and we can guarantee that all products are constructed using every quality control mechanism described above.

Database Content

The following information will be contained in the GIS cadastral database:

- County, township, corporate, and section boundary lines with designations
- Public streets, roads, and highway rights-of-way with designations
- Railroad and public rights-of-way with designations
- Right-of-way centerlines
- Rivers, streams, ponds, canals, and lakes with designations
- Parcel boundary lines, dimensions, and assessed acreage
- Subdivision lot and boundary lines, polygons and sub name
- Lot and block numbers plus dimensions
- Parcel lines, dimensions, block numbers and PIN numbers
- Parcel polygons, unique identification number with parcel centroids

Parcel Polygon Topology

After all spatial adjustments are completed; the process of creating intelligent parcel polygons begins.

The first step is to create and associate a row in the parcel table for each graphic parcel on the map. This intelligence is added to each parcel number and is used as the parcel centroid in the GIS project. In cases where the original parcel number did not reside inside the parcel boundary, the number is moved inside the parcel.

The second step is to ensure that all graphic line work associated with parcel features is clean. This means that all parcel lines must meet at exactly coincident coordinates.



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Next, a comparison is run to ensure that there is one and only one parcel centroid within each parcel shape.

Finally, a shape is created for each parcel and the parcel intelligence is transferred from the centroid to the shape. These intelligent parcel shapes are the basis for all subsequent parcel related GIS analysis.

Discrepancy Report

These reports identify parcels that could not be confidently mapped because of conflicting, or missing, source documents. Each discrepancy note lists the parcel involved and contains a description of the discrepancy. The parcels included in these reports have been mapped according to the best available information, and the report identifies the action taken with each parcel in question.

The conversion effort cannot solve all parcel discrepancies, as some will require legal or professional surveying services to resolve them. The conversion effort uncovers these problems, and the discrepancy report indicates the nature of the problem along with the action taken during the conversion effort. Ultimately, it is up to the County as to whether to accept Sidwell's mapping decision or to apply a different solution.

Parcel Number Definition

Sidwell will create a new uniform permanent parcel numbering system in accordance with the former Indiana State Board of Tax Commissioners' (presently the Department of Local Government Finance, or DLGF) adopted uniform Property Tax Assessment Computer Standards, adopted March 26, 1998. The parcel number will serve as a means of identification and organization of records covering all real property. The various parts of the property index system combine to form the property identification number (PIN). The component parts are always listed in the same sequence.

The parcel number or PIN is a combination of the county code, governmental survey township, section, quarter section or block number, parcel number, and the taxing district code as assigned by the DLGF. The 18 digits of the permanent parcel number are for the purpose of geographical location and identification.

The permanent parcel number consists of 18 digits as follows:

XX	XX	XX	XXX	XXX.XXX	XXX
Group 1	Group 2	Group 3	Group 4	Group 5	Group 6

Group 1: Two (2) digits designate the county. There are 92 counties in Indiana; therefore the first county will be 01, and the last county will be 92.

Group 2: Two (2) digits designate a survey township, also known as a congressional township.



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- Group 3: Two (2) digits designate the survey section number. Section 1 will be 01, and Section 36 will be assigned 36.
- Group 4: Three (3) digits designate block numbers and quarter sections.
- Group 5: Three (3) digits, decimal point, three (3) digits designate the parcel numbers.
- Group 6: Three (3) digits designate the taxing district as assigned by the DLGF.

Subdivision Index

Sidwell will also create a new subdivision index for Porter County at no additional cost. This index will be delivered in digital format.

Delivery Format

Sidwell will deliver the cadastral database in an ESRI Geodatabase format and in Sidwell's linear tagged data model. More information on the data model can be found in the appendix at the end of this document.

Scanning Plats

All subdivision plats will be scanned and stored as individual image files with one file per page. A database table will be created which relates each scanned plat page to the appropriate subdivision. The attribute table will be delivered as part of the Geodatabase. An ArcMap MXD file will be delivered containing the necessary table relationships and hotlink definitions necessary to display the appropriate plat by identifying the associated subdivision polygon.

GIS Based Farmland Assessment

The Sidwell Company will develop and implement a Farmland Assessment and Report Management System (FARMS™) for Porter County. FARMS™ is a proprietary Sidwell software product developed to operate in conjunction with the ArcGIS based platform. It includes the ability to export data for direct loading into the County's tax cycle system. Sidwell will utilize digitized soils data of Porter County available from the Natural Resources Conservation Service (NRCS), perform land use classification data conversion, and perform soils computations through to assessed valuation for all agricultural tax parcels. The FARMS software will be installed on County computer(s) in the County Assessment Official's office for continued use and maintenance of the agricultural assessment database.

Soils Mapping Services

The county is responsible for providing Sidwell with a copy of the most current Porter County Soil Survey in digital form for conversion.

Using GIS projection management software, Sidwell will refine and project the digital soil maps to overlay the cadastral database files. Soil lines, soil type identifiers, spot symbols and drainage lines will exist in the final soils database provided they are a part of the original soil survey. The digital soils data will be topologically structured with appropriate attribute linkages.



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Porter County will be responsible for interpreting and delineating land use boundaries for all agricultural parcels. It is understood that this work has already been performed county-wide, in a proprietary CAD system developed by Manatron, Inc. Sidwell will work with the county to extract this data and utilize it as a part of the GIS project. At a minimum, this data will need to be reprojected to fit the orthophoto base, edge matched, converted to the Geodatabase, and refined to function properly in a modern GIS. The extent to which this creates additional work for Sidwell beyond analysis, consultation and the scope of this agreement, that work will be billable at our current professional service rates.

The land use data will be formatted to overlay the digital orthophoto and cadastral database files. Sidwell will work with the county to develop specific standards for determining how land use categories will be determined from the digital orthophotography. The process of creating land use boundaries is simple and provides an excellent training vehicle for understanding the GIS and farmland assessment process in general. Sidwell will provide all data model set-up, software conversion tools and hands-on instruction to county staff. After land use has been delineated, Sidwell will process the raw graphic data files to ensure that the digital land use data is also topologically structured with attribute linkages.

Sidwell will create non-graphic database linkages (pointers) for each agricultural tax parcel contained in the cadastral mapping database. The non-graphic database will contain the full 18-digit parcel number and assessed acreage for each parcel processed (as contained in the county's tax system database). Sidwell will also create a single label (identifier) for each final soils shape in the soils mapping files and for each land use shape in the land use mapping files. These identifiers will carry a linkage from that label to a non-graphics database with soil and land use types. It will be necessary for Porter County to provide a listing of all agricultural tax parcels showing the parcel number and assessed acreage for each parcel. This listing will be provided in digital form.

Soils Computation Services

All agricultural parcels, soils and land use polygons will be topologically structured, so that these parcels can be analyzed for farmland assessment purposes. The end result is a graphic property ownership data set with spatial relationships. A linkage (data pointer) will be attached to the parcel number text and/or a parcel centroid for all parcels, and the parcel number will serve as the conduit through which analysis will be performed.

Polygon overlay processing will be performed to compute acreages for each agricultural tax parcel contained in the cadastral database. The acreage computations will be further described by individual land use type for each agricultural tax parcel. Each individual land use type will be further described by individual soil type for each agricultural tax parcel. The final computations will be contained in the non-graphic database described above. Additionally, once the acreage computations are completed, the resulting database table is then input to a computation program that references soil productivity indexes. They will be compared to the productivity tables and final assessment values will be calculated and recorded.



A final report will be prepared listing each agricultural tax parcel in numerical order by permanent parcel number, summarizing acreage per land use per soil type for that parcel along with

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extended values based on productivity tables. Sidwell will provide this report in digital form for loading into your tax cycle system.

For computed parcel acreages that fall within the tolerances listed below when compared to the assessed acreage for that parcel (as provided by the county), the parcel and individual soil type results will be proportionally adjusted to match the assessed acreage. For those parcels where the computed acreage exceeds the tolerance limits, the computed acreage will be listed (unadjusted) and a discrepancy note for that parcel will be contained in the report.

Total Acreage Tolerance Limits *

For parcels 1 to 5 acres in size, discrepancies over 10 percent will be reported.

For parcels 5 to 20 acres in size, discrepancies over 8 percent will be reported.

For parcels 20 to 50 acres in size, discrepancies over 6 percent will be reported.

For parcels over 50 acres in size, discrepancies over 4 percent will be reported.

* Please Note: These tolerances can be modified at the county's discretion.

Software and Training

The following Sidwell software will be delivered as a part of this project.

- One copy of Sidwell's Parcel Builder™ software (full suite)
- One single-user copy of the FARMS™ (Farmland Assessment and Report Management System) polygon on polygon overlay processing module for ArcGIS.
- One single-user copy of the FARMS™ database calculation and reporting module for ArcGIS.

Parcel Builder™

Sidwell has made the decision to bring our own parcel map maintenance software product to market instead of working as a subcontractor to third party organizations. Parcel Builder™ pulls together several existing and well tested applications into one integrated product suite. Parcel Builder is now available, and is being successfully used by numerous counties throughout the Midwest and beyond.

Parcel Builder includes a software dependency on a licensed copy of ArcGIS 9.0 at the ArcEditor or ArcInfo licensing level. This product loads as an ArcMap extension. Map data must reside within a personal or enterprise geodatabase. Windows 2000 and XP operating systems are supported.

Parcel Builder™ is composed of four modules:

Parcel Builder-Administrator™

Administrator manages the parcel number inventory for the land records management workflow. It provides tools for creating, incrementing, retiring, and reporting upon parcel numbers within the county. Parcel numbers are dragged onto the map residing within ArcMap to eliminate any data entry duplication while ensuring that the data sets are in synch. The map will automatically navigate to a selected parcel in Administrator, or a parcel selected on the map can be used to



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navigate Administrator to a parcel. All relevant tabular data is presented to the user to perform map maintenance, while providing real time access to related data residing within any of several supported CAMA and tax administration systems. Parcel number creation, modification, and deletion actions can be automatically sent to these CAMA and tax applications to ensure parcel number synchronization across the enterprise.

Parcel Builder-MapEditor™

MapEditor adds over 30 tools and commands to ArcMap that are specifically designed to streamline cadastral map maintenance tasks. These tools include:

- Management of cadastral specific cartographic symbols (e.g. ownership hooks).
- Productivity tools for creating several sets of geometry unique to cadastral mapping (e.g. cul-de-sac or block subdivide).
- Management of a multiple tag environment wherein common geometries are drawn once and carry multiple definitions (e.g. coincident lot, parcel, and subdivision boundary).
- Drawing productivity tools (e.g. show all vertices or direction of selected elements)
- A workflow manager with sharable defined workflows

Parcel Builder-MapPlotter™

MapPlotter provides a tool for creating consistent sets of printed "plat book" style maps. It operates outside of the ArcMap layout window, performs automated "on the fly" re-symbolization of map components, and automatically populates map page specific title components. It operates independently from the current data frame, current ArcMap table of contents, and outside of the layout view. All maps that are created from Geodatabases at Sidwell are created using this tool.

Sidwell's Parcel Builder-MapView™

MapView is a set of inquiry routines that permit maps to be accessed from parcel records in the appraisal and tax system. They also permit direct access to a parcel record in the tax cycle and appraisal software systems for the parcel identifier contained in the GIS environment. Users can use any search criteria supported by the appraisal or tax cycle software to isolate a parcel (searches by owner name, site address, etc.).

FARMS™

FARMS™ is a true GIS application, a comprehensive collection of programs designed to serve as a tool for determining agricultural assessments. The FARMS mapping module will enable Porter County to query, manipulate, display and print the digital parcel and soils mapping information, and to graphically portray soil types as a thematic map. FARMS will also allow you to generate reports detailing computed valuations of farm parcels based on soil types and acreages.



The FARMS database application incorporates code and measurement data derived from the graphics files along with known assessment information to manage and report on acreage and assessment values. Special attention has been given to providing the user with utilities for viewing, printing, validating, controlling and modifying the calculated results used in determining

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parcel value. The FARMS reporting application provides several opportunities at which control and customizing of derived data can be applied.

Warranty

Sidwell warrants that all Sidwell software products included in this agreement will perform as designed, provided the county uses it for its intended purposes. To the extent that Sidwell software products do not perform as designed, Sidwell's liability is limited to the cost the software products. Sidwell shall not be liable for direct, indirect, special, incidental, or consequential damages related to or arising from the County's use of Sidwell software and related materials.

Data Integration

Porter County currently uses a tax cycle administration software system that was originally created by Porter County, and ecama (Plexis Group - now Manatron) as its computer assisted mass appraisal (CAMA) system. Sidwell will install a real-time interface between the tax and CAMA systems and the cadastral database in the GIS project if the tax cycle and CAMA data resides in an ODBC-compliant database. The cadastral database will be interfaced to these systems through the use of a parcel number linkage. The linkage (data pointer) will be attached to the parcel number text and/or a parcel centroid, and the parcel number will serve as the conduit through which inquiries and searches may be conducted.

Areal time interface to the Tax and ecama systems at the county is a mutual software development effort. Sidwell has developed the interface and data exchange routines needed from the GIS side. However, Porter County may need to purchase software development services for their tax system and from Manatron to develop the interface and data exchange routines from the tax cycle and CAMA systems. The county may incur additional expenses for this interface and should plan accordingly. Sidwell will coordinate the development of the interface directly with the tax system programmer and / or Manatron at the county's direction.

Software Maintenance

This contract includes purchase of Sidwell software and software maintenance for a period of two years for installed Sidwell software products. This support provides automatic upgrades to Sidwell software products delivered and new releases of software.

Unlimited telephone support and troubleshooting from our software support staff and Project Management department is also included. The initial term of the support agreement is for 24 months and immediately after initial software and data installation. The software support agreement is renewable at one-year intervals at the County's option.

Training and Professional Services

15 days of on-site professional services time will be provided for installation, configuration and training in the use of GIS application software. Sidwell's project manager will assist Porter County with the review of the functionality of various GIS software that may be implemented on this project. Sidwell recommends practical demonstrations and technical discussions to assist the various participants in their decision. Software may include desktop "casual user" products such as ESRI's ArcView. This product enables users to query and analyze existing data. High-end spatial analysis, data input, manipulation, and data maintenance software may include ESRI's



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ArcGIS. Sidwell will consult with the county to make the appropriate recommendations.

Formal software training will consist of on-site instruction broken into separate visits spanning three to four days each. Emphasis will be placed on procedures for loading data deliveries, inquiry access of the digital data, software operation, and basic digital data maintenance.

It is important to note that training will focus on using the new software tools provided on this project. It is expected that recipients of the training are already well versed in legal descriptions, map maintenance fundamentals, drafting and geometry principles, and are familiar with general land record systems in place at the county today. Those elements require significantly more time to learn and are not a part of a formal training program.

Sidwell training will use Porter County project data and software. Sidwell project managers will work through workflows that are of priority to the county. Commonly, these include the input of new plats and the creation of thematic maps based on live data. All training will be scheduled to coincide with initial deliveries. Subsequent data deliveries will be made as townships or partial townships are completed.

Map Plotting Services

Plotting Setup

Sidwell will prepare the cadastral database for plotting. This service includes:

- Establishment of a countywide framework identifying all map sheet boundaries and page identifiers.
- Determination of appropriate plot scales for all areas of the county.
- Creation of plot frames for each formatted map sheet.
- Each plot frame will include the following information, which will be on each plot produced:
 - County name
 - Page number
 - Scale reference
 - Disclaimer statement (Sidwell will work with the county on the appropriate wording of this statement)
 - Plot date

Sidwell will prepare the cadastral data for the production of 1" = 400' (large format) map plots covering the entire county. Each plot frame will cover one survey section and contain an area one-mile wide east-west and one mile wide north-south.

We will also prepare the cadastral data for the production of 1"=100' (large format) map plots for the urbanized (subdivided) areas of the county. Each plot frame will cover one quarter-quarter of a survey section and contain an area one-quarter-mile east-west by one-quarter-mile north-south. The actual number of 1" = 100' maps will be determined as the GIS project proceeds based on where they are required in order to adequately display the cadastral information.



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The county has expressed an interest in the inclusion of a 1"=200' map plotting scale for certain areas of the county. The Sidwell project manager will discuss this matter with the Porter County project manager during project startup meetings. If the county determines that certain areas are to be prepared for this plotting scale, this work will be performed by Sidwell at no additional cost. Sidwell will work directly with the county to determine which areas will be prepared for this plotting scale.

Project Management

One contractual project manager each from the county and Sidwell will serve as the authorized representative of their respective organization to direct activities on this project. It is the responsibility of these project managers to coordinate efforts and activities on the project to meet delivery schedules, control project costs, accomplish project objectives and adjust this implementation plan as needed. Any changes to the implementation plan which effect cost, time frames, or products can only be approved by official correspondence signed by the project managers.

Sidwell will also assign a technical project manager to act as the principal liaison between Sidwell and Porter County. This individual will be responsible for managing data collection, product deliveries, training, installation and other professional services. In addition to the support listed above, The Sidwell Company will provide speakers to address County departments, and taxpayer and civic groups regarding the new geographic information system. This includes providing information to the local news media to aid in the understanding of the program by the general public.

Ownership

The cadastral-based GIS data is the property of the county and will be delivered to the county.

Complimentary Web Hosting Program

Sidwell is offering complimentary Web hosting to Porter County, Indiana. Should the county choose to accept this offer, a letter of authorization must be sent to Sidwell prior to project completion, and the terms will include the following:

Sidwell will post the mapping data set created as a part of this project by Sidwell on an Internet site accessible to the public through the World Wide Web. The Web site will be available to the public 30 days after final delivery of digital data to Porter County and receipt of pertinent site data from the county. The Web site will be hosted at Sidwell for a period of one year at no charge to the County.

Orthophotography

The digital orthophotography will be posted to the Web site.



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Tabular Data

Tabular attribute data will be posted to the Web site and associated with parcels on the cadastral map. The following columns of tabular data will be included on the Web site if they are provided to Sidwell by Porter County:

- Parcel Number
- Land Assessed Value
- Improvement Assessed Value
- Total Assessed Value
- Market Price (if different from Assessed value)
- Owner Name
- Owner Address
- Site Address
- Last Sale Date
- Last Sale Amount

Approximately three months prior to final delivery of the data conversion project, Sidwell will provide the county with a Microsoft Access MDB file containing a table, which includes columns for each of these data items. The county will be responsible for populating this table with the appropriate data and providing it to Sidwell. Sidwell is happy to advise the county on this matter.

Map Display

Basic map navigation functionality will be incorporated in the site. Features displayed will be automatically turned on and off depending upon the scale at which a map is viewed.

- Zoom in
- Zoom out
- Pan East / West / North / or South
- Zoom to full extent
- Enable or disable display of any Individual map layer
- Enable or disable the display or aerial photography
- Measure
- Enable or disable display of an overview map

Reports

An end-user will be able to request a report for any selected parcel. The report will be an HTML document containing the framed map and aerial photograph for the selected map area. The HTML report can be saved to disk by the end-user or printed using the basic print functions of their browser.

Query Capability

The Web site will contain the ability to query the attribute data based on either parcel number or address. The address search will be based solely on data provided by the county. Upon initiating a search, candidate parcel numbers will be displayed in a list box. The user will then be prompted to click on a specific parcel to locate and zoom in on the selected parcel on



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the map. All tabular data associated with the selected parcel will also be displayed.

Data Accuracy

Sidwell does not guarantee the accuracy or currency of any data provided to Sidwell for inclusion on the Web site. The Web site will include a statement to this effect. We will include a statement indicating the date upon which we last received data from the county.

Additional Services

Sidwell has the expertise, infrastructure, and experience necessary to expand upon this complimentary Web site in a variety of ways. Also, extension of the hosting period of the Web site beyond the complimentary one-year period can be provided at additional cost. All additional services will be provided at our prevailing professional services rates at the time the service is provided. We reserve the right to modify these rates at any time.

Currently, our monthly GIS Web site hosting fees range from approximately \$500 to \$900 per month, depending on the specific services being provided and the complexity of the Web site.

Ownership

Sidwell retains full ownership of all software, source code and site configuration files that are used as part of the complimentary Web hosting program. All Sidwell components of the Web site can be provided to the county at the close of the complimentary hosting period for a negotiated fee. This fee will provide the county with a non-transferable and non-distributable license to Sidwell source code and site configurations. Installation and training can be provided at our prevailing rates at the time the service is provided. ESRI ArcIMS software, which is the backbone of our Web site implementation scheme, can also be purchased directly from Sidwell.

Data Update Procedures

Data updates can be provided to Sidwell at a frequency of up to once per month for display on the Web site. These updates must be available to Sidwell in the same format and structure as the original data sets. Data can be provided to us on a CD or by posting it on our secure FTP Web site.

GIS Project Delivery Items

- Research, design, and development of a contiguous cadastral-based geographic information system (GIS) delivered in ESRI Geodatabase format. Approximately 75,970 parcels in Porter County will be compiled, converted and mapped, including GIS data structuring. Previously, approximately 2,460 parcels were converted in Pleasant Township. These parcels will be converted from MicroStation format to the Geodatabase format and re-delivered at part of this project.

- Soils and agricultural land use data will be overlaid with the parcel base. Porter County will provide the digital soils data and compile the agricultural land use areas.



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- Digital report of all agricultural parcels summarizing acreage per land use per soil type along with extended values based on productivity tables. The agricultural parcels report will be set up for printing using the FARMS reporting module.
- Digital map plotting templates for 1" = 400' scale and 1" = 100' scale maps. Each plot template will include county name, page number, scale reference, plot date, and a disclaimer statement.
- Digital alphabetical subdivision index referencing subdivision plat to map page, including condominiums. The subdivision index will be set up for printing using Crystal Reports for ArcMap or Microsoft Excel.
- Digital report on any apparent erroneous legal descriptions and other discrepancies. This discrepancy report will be set up for printing using Crystal Reports for ArcMap or Microsoft Excel.
- One copy each of Sidwell software products:
 - Sidwell's Parcel Builder Suite (full suite)
 - Sidwell's FARMS overlay processing for ArcGIS
 - Sidwell's FARMS database calculation and reporting module for ArcGIS
- All cadastral database files on CD-ROM or other suitable media.
- All original source materials used in the creation of the GIS database. These will be returned to the county at the conclusion of all work and services on this project.
- On-site database installation and data integration services.
- 15 days of on-site training and professional services.
- Optional one-year complimentary GIS website hosting.

Delivery Schedule

All parcel database conversion work will be delivered on a survey township by survey township basis, or in smaller increments as mutually agreed upon by the project managers. The project is scheduled to be completed in 18 to 24 months following contract execution. Software installation and training for the various project components will commence with initial deliveries.

Deliveries will be made in a sequence established by the project managers. As the parcel data conversion is completed, digital products will be delivered. The actual timing of township deliveries will be jointly agreed to during an initial project management meeting in Porter County.



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Project Fees

Cadastral Mapping Services \$ 1,369,775.00

This fee is based on a parcel count of 75,970. In the event that the total parcels compiled exceeds 77,500, the fee for parcels compiled in excess of 77,500 will be \$ 18.03 per parcel. It should be noted that this is not a total countywide parcel count, as a total of 2,460 parcels were previously converted under a separate agreement.

Soils Mapping Services \$ 18,000.00

Map Plotting Services *set up only* \$ 10,000.00

Software *as prints included* \$ 3,990.00

- One license of Parcel Builder™ software (full suite)
- One license of FARMS™ for ArcGIS
- One year of software maintenance included with each license

Software Maintenance \$ 2,395.00
Second year total for each Sidwell Software product

Training and Professional Services \$ 19,010.00
15 days on-site

Data Integration \$ 11,950.00

Total Fee \$ 1,435,120.00

Project Funding

It is understood that \$ 450,000.00 is currently budgeted for this project, and that additional moneys will need to be allocated to fund the total fee for this project. As such, Sidwell is only authorized to perform work and services valued up to but not exceeding the amount currently budgeted. Porter County will notify Sidwell in writing as additional funds are allocated to this project. Such notification will constitute a notice to proceed and perform work and services up to but not exceeding total amounts budgeted and allocated. Sidwell will not perform any work or services beyond amounts budgeted without official, written notice and authorization to proceed from the county.

Invoicing

The services performed for this project will be invoiced as project components are completed. Invoicing terms will be agreed to by Porter County's project manager and by Sidwell's project manager and will be paid in accordance with the Auditor's current fiscal year's cut-off dates for all purchase orders, claims, and mileage.



Each invoice submitted will be accompanied by supporting documentation and is payable net 30 days in accordance with the Auditor's schedule of cut-off dates.

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Additional Provisions

A. The Sidwell Company agrees to commence the work under this Contract Agreement immediately upon its execution by Porter County and to continue diligently thereafter until all work, services and materials as covered under this contract are completed. The overall completion date for the project covered under this contract is eighteen to twenty-four (18 to 24) months following contract signing, provided that the timing and amounts of project funding does not inhibit production and delivery activities.

B. IT IS AGREED by and between the parties that Porter County agrees to pay The Sidwell Company a total fee of one million four hundred thirty-five thousand one hundred twenty dollars (\$ 1,435,120.00) as compensation for the work, services and materials as described and provided for under this Contract Agreement, provided that funds for the total project fee are allocated as described in the above section entitled, "Project Funding."

C. IT IS FURTHER AGREED by and between the parties that Porter County agrees to pay The Sidwell Company a fee of eighteen dollars and three cents (\$ 18.03) per parcel for every parcel mapped in excess of 77,500 parcels.)

actual 78,430 Arletta's contract ask Jennifer about diff on invoice

D. IT IS FURTHER AGREED by and between the parties that The Sidwell Company will submit progress billings for portions of the work and materials as they are completed and delivered to Porter County. It is understood that Porter County will make payments to The Sidwell Company within 30 days of the receipt of a billing invoice, or in accordance with the schedule of payments for purchase orders and claims as determined by the Porter County Auditor.

E. IT IS FURTHER AGREED that either party may terminate this Contract Agreement by giving written notice to the other party thirty (30) days prior to termination. In the event of termination, The Sidwell Company will be paid the earned value of the work performed prior to the date of termination.

$$\begin{array}{r} 77500 \\ - 5970 \\ \hline 71530 \end{array}$$
not part of 2460 previously done in Plant Twp

$$\begin{array}{r} 78,430 \\ - 2460 \\ \hline 75,970 \end{array}$$
parcels / Arletta's contract copy

$$\begin{array}{r} 77,500 \\ - 75,970 \\ \hline 1530 \end{array}$$
per our contract before we have to start overage cost

3986



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This Contract Amendment as heretofore described and governed by the laws of the State of Indiana, made and entered into on this 7th day of February, 2006.

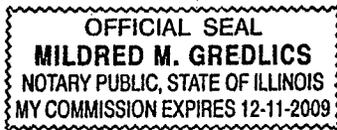
THE SIDWELL COMPANY

By *Neal Carpenter*
Neal Carpenter, President, CEO

NEAL CARPENTER personally appeared and signed before me as an officer and agent of said corporation this 3rd day of February, 2006

Notary

Mildred M. Gredlics



PORTER COUNTY, INDIANA

By *Robert Harper*
Robert Harper, Commissioner

By _____
Carole Knoblock, Commissioner

By *John A. Evans*
John Evans, Commissioner

Attest *Sandra Vuko*
By _____
Sandra Vuko, Auditor



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AFFIDAVIT OF EQUAL OPPORTUNITY

It is hereby certified that this contractor or contracting organization agrees to provide equal employment opportunity to all employees and applicants, and will not discriminate against any employee or applicant for employment because of race, color, religion, sex (except where sex is a bona fide occupational qualification), or national origin. This shall include handicapped persons, disabled veterans, Viet Nam veterans and persons of any political affiliation. Such action shall include but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rate of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this non-discrimination policy.

In signing this affidavit, the bidder or contractor further certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He certifies further that he will not maintain or provide for his employees any segregated facilities at any of his establishments; and that he will not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained.

The bidder, offeror, applicant, or subcontractor agrees that a breach of this certification is a violation of this Equal Opportunity Affidavit. As used in his certification, the term "segregated facilities" means any waiting room, work areas, rest rooms and wash rooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, creed, color, sex (except where sex is a bona fide basis for segregated facilities), or national origin, including handicapped persons, disabled veterans, Viet Nam veterans and persons of any political affiliation, because of habit, local custom or otherwise.

On behalf of this organization, I hereby certify that compliance with the above equal opportunity policy is now and will continue to be maintained.

THE SIDWELL COMPANY

A handwritten signature in black ink, appearing to read "Neal Carpenter".

Neal Carpenter
PRESIDENT AND CHIEF EXECUTIVE OFFICER

