



PROPERTY DIGITIZATION & VERIFICATION

County-Wide Property Digitization & Verification

From legacy paper sketches to verified, imagery-based digital property records — a structured three-stage methodology for modernizing property data at county scale.

 3-STAGE MODERNIZATION LIFECYCLE ~98% ACCURACY ACROSS SERVICES 800,000+ SKETCHES AT COUNTY SCALE

DETROIT, MI • CLARK COUNTY, NV

CORE TECHNOLOGY

SyGIS • Proprietary Software

PROVEN AT

Detroit, MI • Clark County, NV

PREPARED BY

SYSH Innovations

EXECUTIVE SUMMARY

A structured methodology for modernizing property records at county scale

Modernizing property records across an entire county is far more complex than simply converting paper documents into digital files. Hundreds of thousands of properties must be processed accurately, consistently, and within demanding schedules, while the resulting information must ultimately reflect actual property conditions.

SYSH has developed a structured approach to county-wide property digitization and verification, combining property assessment expertise, specialized production teams, proprietary software, GIS technology, measurable aerial imagery, and multiple layers of quality control.

The process begins with the most demanding stage — Paper-to-Digital Sketch Conversion — and progresses through imagery-based verification, discrepancy reporting, county review, and sketch modification. Each stage builds upon the previous one, creating a controlled modernization lifecycle from legacy property records to verified and updated digital assessment information.



This methodology has evolved through major U.S. property assessment programs, including Detroit, Michigan and Clark County, Nevada, and has enabled SYSH to successfully deliver large-scale projects while maintaining approximately 98% accuracy across its services and meeting committed project schedules.

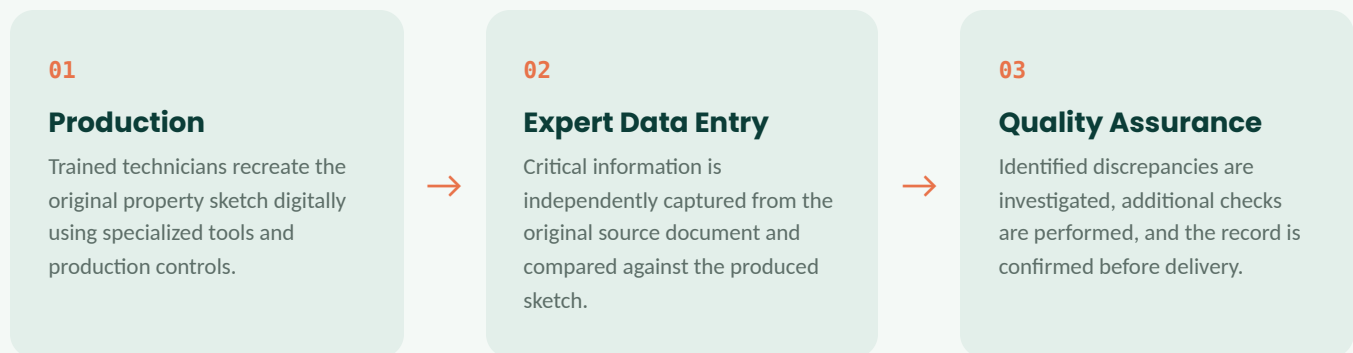
STAGE ONE — BUILDING THE DIGITAL FOUNDATION

Paper-to-Digital Sketch Conversion

Paper-to-digital conversion is the foundation of the entire modernization process — and often its most challenging stage.

Legacy property sketches contain much more than building outlines. Dimensions, sections, area classifications, annotations, and other assessment information must be correctly interpreted and recreated within the required digital sketching environment. At county scale, even a small error rate can result in thousands of incorrect property records.

SYSH developed a structured Three-Stage Process:



This creates multiple independent layers of control:



Purpose-built software and plug-ins developed from actual production experience further assist technicians by detecting measurement, area-code, file, and other data inconsistencies during the workflow — a production model designed specifically for accuracy and scalability across very large property datasets.

STAGE TWO — SEEING WHAT HAS CHANGED

Sketch Verification Over Current Aerial Imagery

Digitizing the historical sketch establishes the digital record. The next question is more important:

"Does that record still represent what exists on the property today?"

SYSH uses its SyGIS platform to systematically verify existing property sketches against recent aerial imagery. Relevant parcel and property information required by the county is brought into the verification environment so technicians can evaluate the property within the context of the county's assessment rules and project requirements.

The digital sketch is compared with visible site conditions to identify potential:

- ◆ Additions
- ◆ Modifications
- ◆ Demolitions
- ◆ Footprint differences

Where a potential mismatch is identified, it is classified and reported to the county. Rather than requiring county personnel to independently rediscover every difference, SYSH provides a structured discrepancy dataset for review — county personnel verify the reported findings and determine which properties require modification according to their own assessment policies and business rules.

Our consistently high level of accuracy — approximately 98% across services — has helped establish confidence in this process, enabling the county to concentrate its professional resources on review and decision-making. The approved results are then returned to SYSH for the next stage.

STAGE THREE — TURNING VERIFICATION INTO UPDATED RECORDS

Sketch Modification Using Measurable Imagery

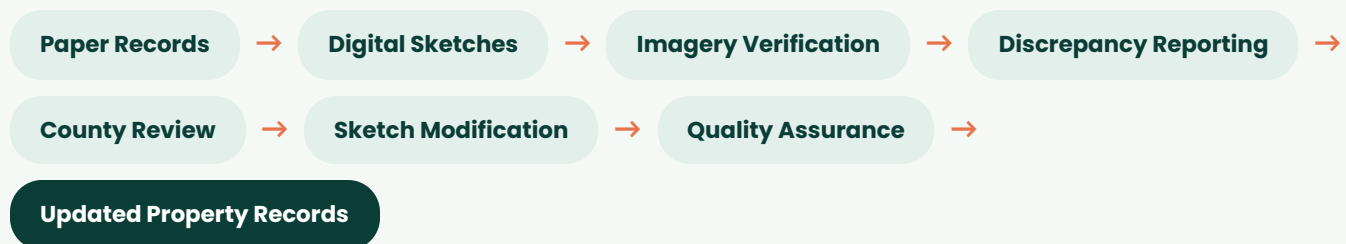
Once discrepancies have been reviewed and accepted by the county, the modernization process moves from identifying change to correcting the property record.

Approved sketches are modified using measurable aerial imagery, allowing technicians to reconstruct additions, altered building sections, and other required geometry using imagery-based measurements.

A conventional approach would require a quality-control technician to manually remeasure and visually verify every modification — across tens or hundreds of thousands of corrected sketches, this can become extremely time-consuming. SYSH addresses this through internally developed software tools, workflow controls, and specialized sketching plug-ins that assist both modification and quality assurance, so human QC can concentrate on exceptions and situations requiring professional interpretation.

This combination of measurable imagery, specialized software, experienced technicians, and targeted quality control has been fundamental to executing large modification programs while maintaining accuracy and meeting project schedules.

The complete modernization lifecycle:



TECHNOLOGY BUILT AROUND THE WORK

Specialized software developed from real production experience

One of the distinguishing characteristics of SYSH's approach is that its technology has evolved alongside its property assessment operations.

Rather than adapting generic software to every problem, engineering teams have developed specialized applications, plug-ins, validation tools, and workflow systems around challenges encountered during actual large-scale production.



SyGIS

Geospatial environment for imagery-based verification



Internal QA Tools

Productivity & quality-control technologies for conversion and modification

SyGIS provides the geospatial environment for imagery-based property verification, bringing sketches, imagery, parcel information, and relevant assessment data together within a structured production workflow. Internal productivity and quality-control technologies support paper-to-digital conversion and subsequent sketch modification, helping identify discrepancies earlier and reducing repetitive manual verification.

"Technology does not replace property assessment expertise within this model. It allows that expertise to be applied where it matters most."

PROVEN AT SCALE

Detroit, Michigan & Clark County, Nevada

Detroit, Michigan — Establishing the Model

The Detroit project was an important milestone in the development of SYSH's large-scale property digitization capabilities, converting a substantial volume of legacy paper building sketches into structured digital property records under demanding production and quality requirements. SYSH combined trained production teams with specialized software developed in C++ and C#, independent data validation, and systematic quality controls.

"Hard work, dedication and attention to detail" — Apex Software, 2015 appreciation letter recognizing the Detroit project team.

Clark County, Nevada — County-Wide Modernization at Scale

Clark County represented a major expansion of this model. Approximately 800,000 legacy paper building sketches formed part of a large-scale property modernization initiative, supported by SYSH across the full lifecycle from paper-to-digital conversion through imagery-based verification, discrepancy reporting, and subsequent sketch correction.

800,000+

Properties digitized and reviewed against current aerial imagery.

163,000+

Sketches ultimately corrected using measurable imagery following county review.

A REPEATABLE MODEL

A repeatable methodology for county-wide modernization

The experience gained through Detroit, Clark County, and subsequent U.S. property assessment projects has enabled SYSH to develop a repeatable methodology for large-scale modernization. The strength of the approach comes from connecting capabilities that are often treated separately:

Property Assessment Expertise

Paper-to-Digital Conversion

Software Engineering

GIS

Aerial Imagery

Data Validation

Sketch Modification

Quality Assurance

For counties, this creates a practical path from aging legacy records to a digital property dataset that can support assessment operations, GIS, CAMA environments, future imagery programs, reappraisal initiatives, and continued property-data maintenance.

"Transform an entire county's legacy property information into accurate, verified, and actionable digital assessment data — at scale."

FROM DIGITIZATION

To property intelligence — digitized, compared, questioned, and continuously improved.

PROVEN METHODOLOGY

Refined through Detroit, Clark County, and subsequent U.S. property assessment projects.

HUMAN + TECHNOLOGY

Purpose-built software applied where property assessment expertise matters most.

Let's discuss your county's modernization program

SYSH Innovations · Property Assessment & GIS Solutions

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