

L.A. County Building Representations Project Kickoff Meeting

June 30, 2009

Presented by: Karen Adkins, Sanborn Project Manager

Agenda

- Project Overview
- Technical Specifications
- Collection methodology
- Acceptance Criteria
- Pilot Project
- Schedule
- Project Management
- Additional Services

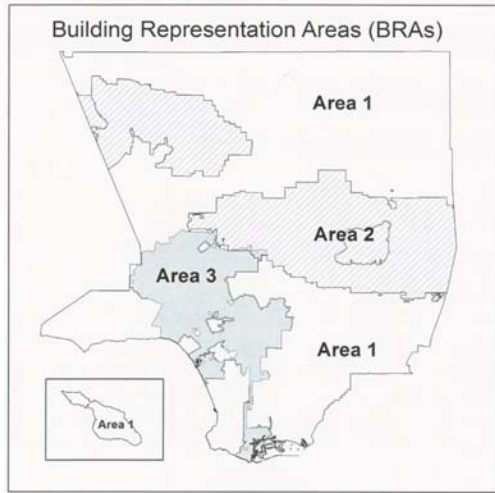
Project Overview

- Stereo compilation of building outlines
- Source:
 - 2008 Pictometry imagery (4-inch and 1-foot)
 - 2008 Pictometry AT solutions
- Capture not to exceed 3,125,000 buildings
- Delivery of 2-D building outlines with attribution:
 - Building Identification Number (BIN)
 - Building Height

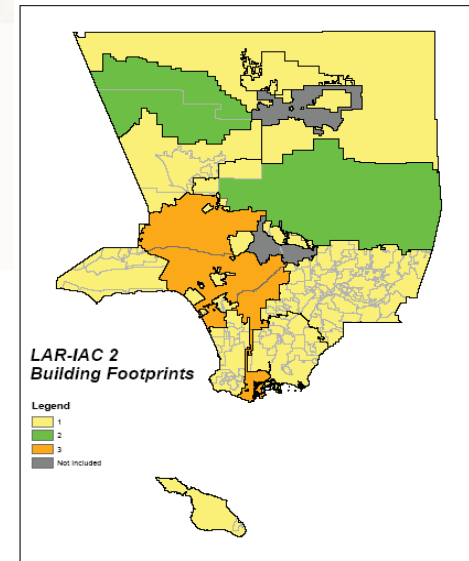
Building Representations

Building Representation(s) means planimetric representation of an erect building (not under construction or ruin) that serves a primary business, government or residential function.

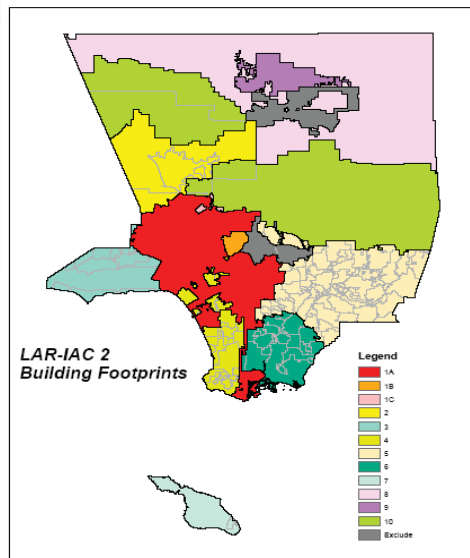
Project Areas



Project Areas



Priorities



Specifications

Urban Areas (Areas 1 and 3)	
Area (sq. mi)	Approx. 2,809
Map Scale	1"=100'
Imagery GSD	4-inch
Accuracy Standard	American Society for Photogrammetry and Remote Sensing (ASPRS) Class 1 for 1"=100' map scale RMSEr =2.0 ft and Accuracyr = 3.46 ft at 95% confidence level
Projection	California Coordinate System of 1983, Zone 5
Datum	Longitude and latitude will be based on the North American Datum of 1983 (NAD83). Vertical datum shall be NAVD88
Units	U.S. Survey Feet

Specifications

SANBORN

National Forest (Area 2)	
Area (sq. mi)	Approx. 1,131
Map Scale	1"=200'
Imagery GSD	1-foot
Accuracy Standard	American Society for Photogrammetry and Remote Sensing (ASPRS) Class 1 for 1"=200' map scale RMSEr = 4.0 ft and Accuracyr = 6.92 ft at 95% confidence level
Projection	California Coordinate System of 1983, Zone 5
Datum	Longitude and latitude will be based on the North American Datum of 1983 (NAD83). Vertical datum shall be NAVD88
Units	U.S. Survey Feet

© 2008, The Sanborn Map Company, Inc. Privileged and confidential information. Distribution or copying prohibited unless approved in writing.

Capture Specifications

SANBORN

- Capture utilizing stereo imagery
 - Extraction without radial displacement
 - Delineation of features obstructed by building lean
- Areas 1 & 2: 20' x 20' (or 400 sq. ft.) or larger
- Area 3: 8' x 8' (or 64 sq. ft.) or larger
- *Each enclosed Building Representation polygon shall contain a single "z" (elevation) attribute representing the highest point on the building, excluding flagpoles, chimneys, and other features smaller than 4 square feet.*

© 2008, The Sanborn Map Company, Inc. Privileged and confidential information. Distribution or copying prohibited unless approved in writing.

Stereocompilation

SANBORN

- Digitize visible outline at roof edge
- Collect visible detail of permanent structure features
- Place spot height on highest point of feature (elevation)
- Differentiate between features
 - Corridors, covers, walkways
 - Firewalls?
- Outline areas where obscured

© 2008, The Sanborn Map Company, Inc. Privileged and confidential information. Distribution or copying prohibited unless approved in writing.

Editing and Attribution

SANBORN

- Build topologically correct polygons
- Classification
 - Structure
 - Courtyard
- Attribution
 - Building Identification Number (BIN) – numeric, 7 digits
 - Building Height – calculated from spot elevation to surface in feet
 - Interpreted (partially obscured)

© 2008, The Sanborn Map Company, Inc. Privileged and confidential information. Distribution or copying prohibited unless approved in writing.

Data Sample: Stereo Digitizing vs. Ortho Digitizing

SANBORN

- Orange: Building outline was digitized from 2006 ortho imagery
- Green: Building outline was digitized from 2007 stereo imagery



2006 Ortho Imagery



2007 Ortho Imagery
(LAR-IAC2 Pilot)

© 2008, The Sanborn Map Company, Inc. Privileged and confidential information.
Distribution or copying prohibited unless approved in writing.

Example

SANBORN



© 2008, The Sanborn Map Company, Inc. Privileged and confidential information.
Distribution or copying prohibited unless approved in writing.

Example

SANBORN



© 2008, The Sanborn Map Company, Inc. Privileged and confidential information.
Distribution or copying prohibited unless approved in writing.

Example

SANBORN



© 2008, The Sanborn Map Company, Inc. Privileged and confidential information.
Distribution or copying prohibited unless approved in writing.

Example

SANBORN



© 2008, The Sanborn Map Company, Inc. Privileged and confidential information. Distribution or copying prohibited unless approved in writing.

Example

SANBORN



© 2008, The Sanborn Map Company, Inc. Privileged and confidential information. Distribution or copying prohibited unless approved in writing.

Acceptance Criteria

SANBORN

Vertical Datum	NAVD88
Projection	NAD 1983 State Plane – California Zone V
Horizontal Datum	NAD83 reference datum
Units	U.S. Survey Feet
Spatial accuracy standards	ASPRS Accuracy Standards for Large Scale Maps Class 1 Maps 1"=100' and 1"=200' (national forest areas)
Feature	Features captured will represent Building Representations for permanent structures that meet the minimum size requirements. This excludes RV parks.
Feature Types	Polygon enclosing all erect buildings (not under construction or ruin) that serve primary business and residential functions (i.e., houses, apartments, commercial facilities). Includes attached covered porches, permanent overhangs, carport roofs, covered sidewalks, etc. as part of the building. Include secondary buildings (not attributed as such) such as garages, smokestacks, silos, bins, storage tanks, water towers. Do not show common rooflines (e.g., between town homes, or interior sections/firewalls in commercial buildings). Do not capture temporary structures such as construction trailers or tool storage sheds. Courtyard or Atrium – Polygon created inside a primary building that is fully encompassing of an open area.
Vector data	Features should be closed polygons that are snapped and joined to create continuous segments without overruns and gaps.

© 2008, The Sanborn Map Company, Inc. Privileged and confidential information. Distribution or copying prohibited unless approved in writing.

Acceptance Criteria

SANBORN

Buildings/townhouses and parcels	Features will be cut by parcel lines (eg. Downtown core buildings) only at visible fire wall junctions. Townhouses and contiguous buildings crossing parcel lines will not be cut.
Buildings connected by corridors, covers, and walkways	Each building portion shall be created or digitized as a separate polygon (when possible).
Building generalization	Building shapes can be "interpreted" (and attributed as such) when factors such as shadows or occlusions exist.
Vertical or "Z" value	Z-value will be gathered from the highest point of the roof. This excludes non-structural features such as chimneys, air conditioning units, antennas, and flag poles.
Minimum building size	Building shapes (polygons) should be created for all structures 20' x 20' (or 400 sq. ft.) or larger in size in Areas 1 & 2, or 8' x 8' (or 64 square feet) in Area 3.
Minimum segment length	1.5' excluding awnings

© 2008, The Sanborn Map Company, Inc. Privileged and confidential information. Distribution or copying prohibited unless approved in writing.

Pilot Area(s)

SANBORN

- Representative area
- Test production process
- Establish parameters for compilation
- Confirm final data deliverable
- Ensure understanding of acceptance criteria and QA/QC process
 - Sanborn production
 - County review

© 2008, The Sanborn Map Company, Inc. Privileged and confidential information.
Distribution or copying prohibited unless approved in writing.

Schedule

SANBORN

- Pilot production: 2-4 weeks (depending on size)
- Pilot review: 1-2 weeks
- Project: 6-8 months
 - Start upon pilot approval
 - Follow priorities, concurrent production where needed
 - Structure to support customer review
 - How long will it take you to review each area?
 - How much data can you review at one time?
 - How will you review? Random sampling, full review?

© 2008, The Sanborn Map Company, Inc. Privileged and confidential information.
Distribution or copying prohibited unless approved in writing.

Project Management

SANBORN

- Documentation
 - Project Work Plan
 - Status reports and schedule updates
 - Change control
 - Invoicing
- Communication
 - Kickoff
 - Conference calls
 - Pilot review
- Tools
 - FTP
 - Other?

© 2008, The Sanborn Map Company, Inc. Privileged and confidential information.
Distribution or copying prohibited unless approved in writing.

Deliverables

SANBORN

- Project Work Plan – updated (after Pilot)
 - Building Representation production methodology
 - Schedule
- Building representations in shapefile format
- FGDC Compliant Metadata

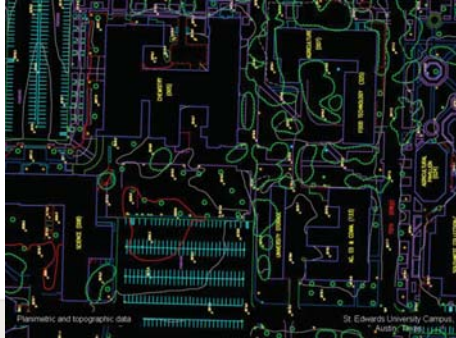
© 2008, The Sanborn Map Company, Inc. Privileged and confidential information.
Distribution or copying prohibited unless approved in writing.

Additional Services - Planimetric Features

For 1"=100' and 1"=200' Map Scales

SANBORN

- Paved and Unpaved Surfaces
- Land Marks (Parks, Golf Courses)
- Rail Roads
- Barriers
- Disturbed Areas
- Water Feature
- Water Structures
- Water Utilities (Man holes)
- Electrical Utilities



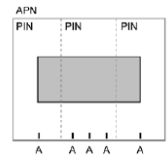
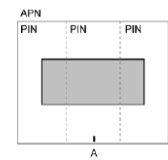
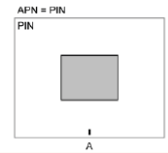
© 2008, The Sanborn Map Company, Inc. Privileged and confidential information. Distribution or copying prohibited unless approved in writing.

Additional Services

City of Los Angeles

SANBORN

- Building Outline and Landbase Integration
 - Address integration from PIN/APN parcel overlay
 - Automated conflation
- Non-Photogrammetric Data Manipulation
 - Building outline adjustment for minor spatial discrepancy (e.g., 1-2 feet)
 - Building outline split by APN or PIN for commercial developments



© 2008, The Sanborn Map Company, Inc. Privileged and confidential information. Distribution or copying prohibited unless approved in writing.

Questions?

SANBORN

© 2008, The Sanborn Map Company, Inc. Privileged and confidential information. Distribution or copying prohibited unless approved in writing.