PARCEL/CADASTRAL STANDARDS IN NEW ENGLAND

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Connecticut Metropolitan Council of Governments

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AGENDA

1. Agenda
2. Introduction
    1. Mark Goetz
    2. Why do we need standards?
3. Definitions
4. Industry and National Parcel / Cadastral Standards and Initiatives
5. New England State Parcel / Cadastral Standards and Initiatives
6. Connecticut in Detail
    a) Connecticut Assessment Map lineage examples
    b) Connecticut State Agency property mapping examples
7. Best Practices in maintaining parcel data

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INTRODUCTION

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WORK

- 19 years GIS experience
- Municipal
  - City of Milford, City of Hartford
- Regional
  - NECCOG, MetroCOG
- Consulting
  - Brodie Group, Fuss & O'Neill, Burns & McDonald

VOLUNTEER

- CT GIS Network
  - Past President – 2015-2017
  - Steering Committee Member – 2004-2005
  - Parcel Standard Committee Chair – 2005 on
  - Data Standards Committee Member -2015 on
- CT Geospatial Council (defunct)
  - Data Subcommittee – 2006 -2012

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WHY DO WE NEED STANDARDS?

ADMINISTRATIVE / LEGAL

- Long Term Investment
- Cost savings
  - Training.
    - Use, Analysis, Editing
  - Efficiencies.
    - Internal, External
- Economic Development / Conservation
- Transparency

TECHNICAL

- Quality
  - Enter once re-use many times
  - Supports organization Business Processes
- Efficiencies
  - Simple Roll-up local to state to federal
  - Internal / External Data Re-Development
- Data Distribution
  - Reduce data requests at the local level
  - Open Data

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DEFINITIONS

LEGAL/ADMINISTRATIVE

- Cadastral
- Parcel
- Subdivision
- Lot
- Right-of-Way (ROW)
- Deed
- CAMA
- Landuse
- Zoning

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TECHNICAL

- COGO – Coordinate Geometry
- Attribute
- Basemap
- CAD
- Public Land Survey System (PLSS)

INDUSTRY AND NATIONAL PARCEL / CADASTRAL STANDARDS AND INITIATIVES

Industry

- IAAO Standards
- ESRI Data Models
  - Standard Feature Classes
  - Parcel Fabric
- CAD Standards
  - Digital Submission
  - Design

National

- FGDC
  - FGDC Cadastral Subcommittee
- BLM – Manages Public Land Survey System (PLSS)
  - Cadastral Survey
  - General Land Office Records
- NSGIC
  - Land & Infrastructure Management

IAAO

Mapping Standards

- Standard on Manual Cadastral Maps and Parcel Identifiers (2016)
- Standard of Digital Cadastral Maps and Parcel Identifiers (2015)

Certification

- Cadastral Mapping Specialist

STANDARD ON MANUAL CADASTRAL MAPS AND PARCEL IDENTIFIERS (2016)

Pros

- Incorporates Standard on Digital Cadastral Maps and Parcel Identifiers
- Describes "Old School" process.
- References and Bibliography

Cons

- How many of you are manually (analog) editing maps?
- Confusing to have Manual and Digital standard
- Glossary Definition – diazo process

STANDARD OF DIGITAL CADASTRAL MAPS AND PARCEL IDENTIFIERS (2015)

Pros

- Great Overview of mapping processes and requirements
- Description and recommendations of Parcel Identifiers
- Great Definitions

Cons

- May not be totally applicable to New England.
  - PLSS References

IAAO Cadastral Mapping Specialist

Educational Requirements – IAAO Courses

- 101 – Fundamentals of Real Property Appraisal
- 600 – Principles and Techniques of Cadastral Mapping
- 601- Cadastral Mapping Methods & Applications
- 171 - Standards of Professional Practices and Ethics or IAAO online Standards of Practice and Professional Ethics Supplement
- 151- Uniform Standards of Professional Appraisal Practice (National)
- 8 Hour Case Problem on Cadastral Mapping
- 4 Hour CMS Master Examination

Work Experience

- High school graduate or equivalent
- IAAO Member
- 3 years experience in cadastral mapping

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IAAO Cadastral Mapping Specialist

Pros

- Professional Qualification
- Only Parcel mapping specific qualification
- Improved parcel data products

Cons

- When and where is the exam?
- IAAO membership required.

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ESRI DATA MODELS

Standard Feature Classes

- Lines and Polygons
- Topology
- Custom Features, Attributes
- Pros: Highly flexible and customizable, standard editing tools, no technology changes
- Cons: Highly flexible and customizable

Parcel Fabric

- Points, Lines and Polygons
- Elements
  - Survey Control, PLSS, Subdivisions, Lots and Easements
  - Historic Features
  - Adjustments and Linked Features
  - Standard Attributes
- Pros: Total Solution, standardized attributes and Tools, Land Record perspective
- Cons: Only somewhat flexible and customizable, Newer, Requires change, still need custom attributes

CAD STANDARDS

- Public Organization
  - State DOT's
  - State Facilities/Construction Agencies
  - State Financial Agencies
- Digital Submission
  - Update parcel data
  - Update planimetrics
  - Update Utilities
  - Through Regulatory Process (ie Permit)

NATIONAL CADASTRAL STANDARDS

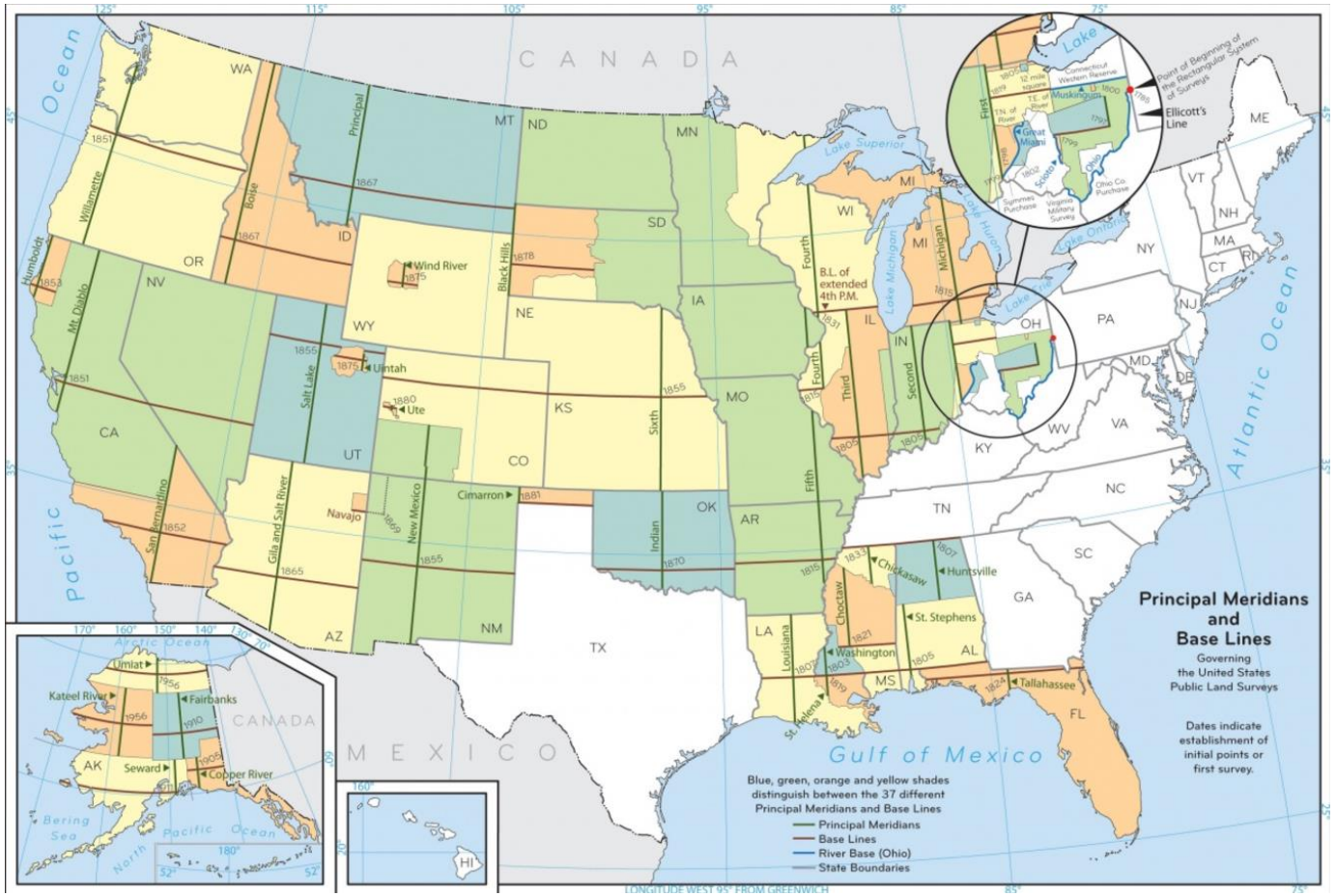
Federal Geographic Data Committee (FGDC)

Cadastral Subcommittee (National CAD)

- Cadastral Data Content Standard

Other Initiatives

- National Geospatial Data Asset Management Plan
- National Address Database



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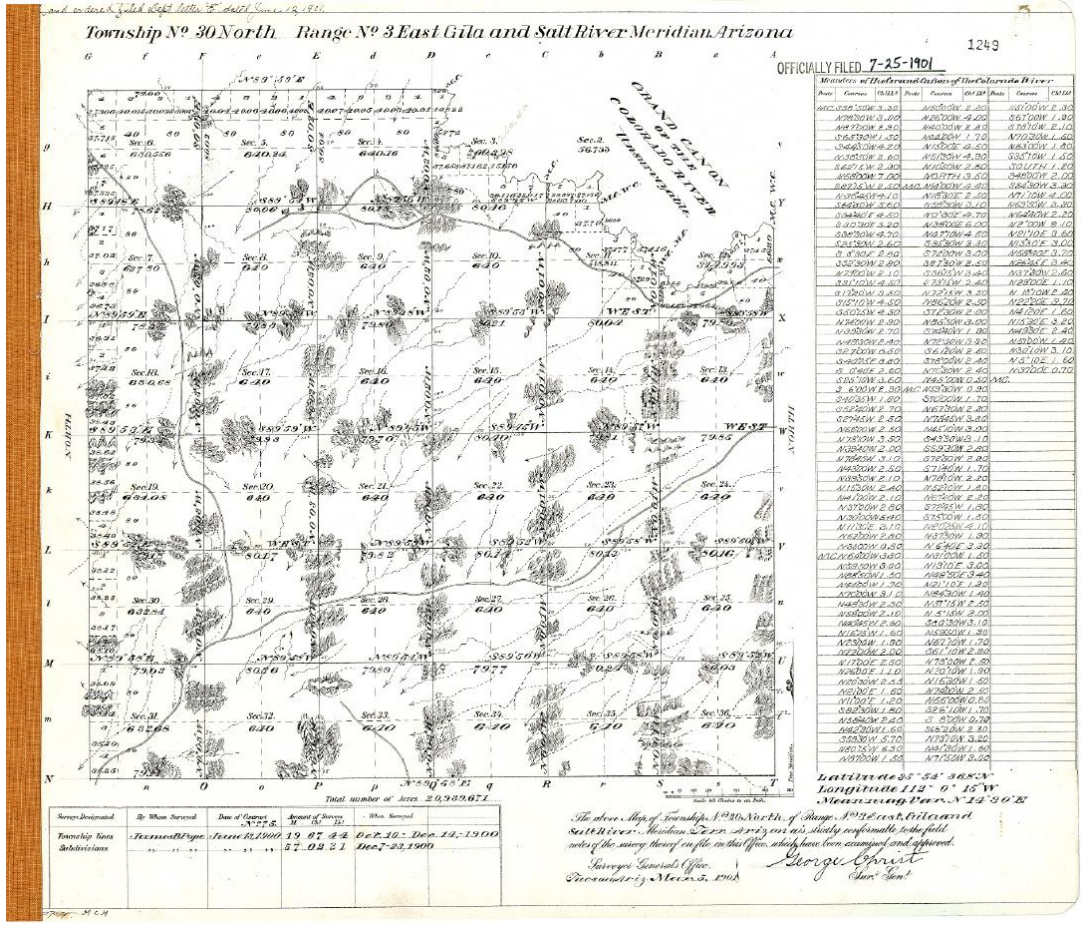
FGDC CADASTRAL DATA CONTENT STANDARD

Pros

- Wide support: IAAO, NACo, NSGIC, Federal Agencies, States
- Nation wide parcel dataset
- PLSS showcases benefits of Geodetic / Survey Control

Cons

- PLSS
- In General, survey control lacking in New England



NEW ENGLAND STATE PARCEL STANDARDS AND INITIATIVES

- Connecticut
- Maine
- Massachusetts
- New Hampshire
- Rhode Island
- Vermont

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CONNECTICUT

Standards

Cadastral & Parcel Data Standards and Guidelines 1.0

Publication Data Dictionary

Guidelines

Town Boundary Research

Quality Control Procedures

Data Attribute Audits

Pros

- Levels of Quality
- Feature Level metadata
- State Adopted 2012.

Cons

- No State Funding
- Easements and other Land Record Elements

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MASSACHUSETTS

Standards

[Cadastral & Parcel Data Standards and Guidelines 1.0]

[Publication Data Dictionary]

Guidelines

[Town Boundary Research]

[Quality Control Procedures]

[Data Attribute Audits]

Pros

- Levels of Quality
- Feature Level metadata
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Cons

- No State Funding
- Easements and other Land Record Elements

MAINE

Standards

Cadastral & Parcel Data Standards and Guidelines 1.0

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NEW HAMPSHIRE

Standards

[Cadastral & Parcel Data Standards and Guidelines 1.0]

[Publication Data Dictionary]

Guidelines

[Town Boundary Research]

[Quality Control Procedures]

[Data Attribute Audits]

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RHODE ISLAND

Standards

[Cadastral & Parcel Data Standards and Guidelines 1.0]

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VERMONT

Standards

[Cadastral & Parcel Data Standards and Guidelines 1.0]

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CONNECTICUT IN DETAIL

- Brooklyn
- Hartford

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CONNECTICUT ASSESSOR MAPPING EXAMPLES

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CONNECTICUT STATE AGENCY MAPPING EXAMPLES

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BEST PRACTICES IN PARCEL / CADASTRAL MAPPING

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