Idaho Technology Authority (ITA)

ENTERPRISE STANDARDS – S4000 – INFORMATION AND DATA

Category: S4232 – Idaho Parcel Data Exchange Standard

CONTENTS:

I. DEFINITION

See ITA Guideline [G105](#) (ITA Glossary of Terms) for definitions.

II. RATIONALE

A statewide Parcel Framework is a critical source of information for resource land management, community and economic development needs, infrastructure maintenance, research and analysis, homeland security, business location intelligence, public safety, and more. Many private sector and public sector entities have business needs for Parcel Framework.

III. APPROVED STANDARD(S)

See Attachment

IV. APPROVED PRODUCT(S)

Please refer to S4250

V. JUSTIFICATION

Experience in other states and countries have demonstrated that accessiblestatewide cadastral information is key to realizing gains in economic development, public safety, government efficiency, and citizen empowerment. This standard is to aggregate this data to the State level.

VI. TECHNICAL AND IMPLEMENTATION CONSIDERATIONS

This standard requires a minimum of information to share and integrate parcel information. This standard provides for two levels of sharing: basic information to the public and enhanced information to governments. Few jurisdictions will have difficulty implementing the standard if they have GIS capability.

VII. EMERGING TRENDS AND ARCHITECTURAL DIRECTIONS

Data will be shared in accordance with ITA Standard S4250 – Geographic Information System (GIS) Data Sharing Standards. Furthermore, with continued use and improvements to "Open Data Portals" it will be easier to publish parcels as an Esri Map, or REST service through an Open Data Portal

VIII. PROCEDURE REFERENCE

The format, content and development of this standard adhere to Policy P5030 - Framework Standards, ITA Standard S4250 – GIS Data Sharing Standards and ITA Standard S4220 - Geospatial Metadata.

IX. REVIEW CYCLE

Review of this standard will occur at least annually.

X. CONTACT INFORMATION

For more information, contact the ITA Staff (208) 605-4000.

REVISION HISTORY

11/21/2024 – Standard Presented to the IGC-EC; Updated Standard to reflect new attributes.

07/22/2021 – Updated Standard to reflect new standard attributes and new processes.

05/06/2019 – Removed individual definitions and replaced with reference to ITA Guideline G105 (ITA Glossary of Terms)

07/01/2013 – Changed "ITRMC" to "ITA".

Effective Date: May 1,2011

STATE OF IDAHO

Idaho Parcels Data Standard

Part of the Parcels Theme

Version 2.3
Effective November 20, 2024

Developed by the Parcels Technical Working Group

CONTENTS

1. Introduction to the Parcel Data Exchange Standard

A statewide Parcel Framework is a critical source of information for resource land management, community and economic development needs, infrastructure maintenance, research and analysis, homeland security, business development, public safety, and more. Many local, state, and federal government agencies and private sector companies have business needs for Parcel data.

A Parcel standard is intended to facilitate integration and sharing of up-to-date parcel data and enhance the dissemination and use of parcel information. This standard does not instruct on how parcel databases are designed for internal use.

This standard was developed by the Parcel Technical Working Group (TWG), a subgroup of the Idaho Geospatial Council – Executive Committee. This standard will be reviewed on a annual basis and updated as needed.

1.1. Mission and Goals of the Standard

The Idaho Parcel Data Exchange Standard supports a statewide Parcel Framework dataset that is consistent with applicable state and national standards. It establishes the minimum attributes and geospatial database schema for the Parcel Framework Layers that will be part of The Idaho Map (TIM). This standard encourages all Idaho-based agencies with geospatial parcel data to contribute to the Parcel Framework.

The Parcel Framework will be appropriately shared and beneficial to all. The fields in the Parcel Data Exchange Standard will be general enough to incorporate basic information without requiring major changes in internal data models. This standard allows for expansion into a more complex data structure and schema.

1.2. Relationship to Existing Standards

This Parcel Data Exchange Standard relates to various other current standards as follows: The Parcel Data Exchange standard follows the same format as other Idaho geospatial framework data standards. The Parcel Data Exchange standard may contain some of the same attributes as other framework standards and may adopt the field name, definition, and domain from the other standards to promote consistency.

- ITA Standard S4231 – Structures and Landmarks Data Exchange. Structures and Landmarks are tied to a specific parcel.

- ITA Standard [S4233](#) – Hydrography Data Exchange. Many parcel boundaries are delineated by rivers or streams.
- ITA Standard [S4234](#) – Control Point Standard. Control points support mapping the true location of parcel polygons.

1.3. Description of the Standard

This standard describes the vision and geospatial data structure of a Parcel Framework in the state of Idaho. This standard is devised to be:
- Simple, easy to understand, and logical
- Uniformly applicable, whenever possible
- Flexible and capable of accommodating future expansions
- Dynamic in terms of continuous review

This standard acknowledges the fact that there is a balance between the effort and technological skill to collect and standardize parcel data, versus the number and types of attributes available in it for use by parcel data consumers.

1.4. Applicability and Intended Uses

This standard applies to the Parcels element of The Idaho Map (TIM).

When implemented, it will enable access to geographic and attribute information about Idaho parcels and improvements built on those parcels. It will increase interoperability between automated geographic information systems and enable sharing and efficient transfer of information for aggregation. Further, it will encourage partnerships between government, the private sector, and the public to avoid duplication of effort and ensure effective management of information resources. It will help improve parcel data quality as errors are identified and resolved.

This standard does not consider data sharing agreements, contracts, transactions, privacy concerns, or any other issues relating to the acquisition and dissemination of Parcel data.

1.5. Standard Development Process

The Parcel Technical Workgroup, a sub-committee under the IGC-EC, is a voluntary group of private, city, county, tribal, state, and federal representatives. In 2020, the Parcel Chair called for a few volunteers to work on updating the 2012 Parcel Exchange Standard.

To assess parcel use in Idaho, as well as capabilities and attributes of parcel producers, a survey was sent out. As part of the survey 25 respondents identified themselves as "parcel consumers" and used the survey to gauge the need for various attributes associated with parcel data. Feedback and ratings collected were used to update the 2012 Parcel Data Exchange Standard.

Additionally, reflection on the 2012 standard, and how it may have contributed to the lack of progress in the development of a statewide parcel dataset resulted in some of the attributes being simplified in the 2021 standard and additional attributes being added in the 2024 updated standard.

1.6. **Maintenance of the Standard**

This standard will be revised as needed and in accordance with ITA Policy (P5030) - Framework Standards Development.

2. **Body of the Standard**

2.1. **Scope and Content**

The scope of the Parcel Data Exchange Standard is to describe a statewide layer which identifies the physical locations and attributes of parcels in Idaho. This standard describes three different layers: a polygon layer depicting parcel boundaries, point depicting parcel centroids and a table displaying Improvements from the Counties Computer Assisted Mass Appraisal System(s). Both polygon and point layer have associated attributes that apply to the parcel layer. In contrast, one parcel can contain many improvements and to facilitate the one-to-many relationship, attributes associated with a single improvement are stored separately in an improvements table.

2.2. **Need**

Parcels are a key dataset needed for resource land managers, community and business development needs, infrastructure maintenance, research, homeland security, public safety, and more. This standard provides the foundation to aggregate parcel data for centralized access and stewardship information.

2.3. Participation in Standard Development

The development of the Parcel Data Exchange Standard adheres to ITA Policy ([P5030](#)) - Framework Standards Development. The Parcel Standard Team tasked with developing this standard represents private, county, state, and federal organizations. As the standard is reviewed in accordance with ITA Policy ([P5030](#)) requirements, there will be an opportunity for broad participation and input by stakeholders in the development of this standard. The process will be equally broad for input on updates and enhancements to the standard. As with all Idaho Framework standards, public review and comments on the Parcel Data Exchange Standard are encouraged.

2.4. Integration with Other Standards

The Parcel Data Exchange Standard follows the same format as other Idaho geospatial framework data standards. The parcel standard may contain some of the same attributes as other framework standards and may adopt the field name, definition, and domain from the other standards to promote consistency. However, because parcel data is created by county assessors to aid the valuation of properties, its attributes such as addresses may not be consistent with address fields in other standards.

2.5. Technical and Operation Context

2.5.1. Data Environment

The data environment is a digital model, containing closed vector polygons and vector points with a specific, standardized set of attributes pertinent to the Parcel Framework. Parcel data shared under this standard must be in a format supporting closed vector polygons.

2.5.2. Reference Systems

The Parcel Framework will be published in the Idaho Transverse Mercator (IDTM) NAD83 coordinate system, which is the State of Idaho's single zone coordinate system. Data is not required to be submitted in the IDTM coordinate system but must have a defined coordinate system clearly described in the metadata.

2.5.3. **Global Navigation Satellite System (GNSS)**

Some data provided might contain data collected using GNSS methods such as GPS methods, and the provided metadata should describe this, if applicable. However, geometry from a GPS is not required to meet this standard.

2.5.4. **Interdependence of Themes**

Parcel geometry may be coincident with other framework data, such as cadastral reference, hydrography, roads, and structures. Currently there is no enforcement of coincidence or topology relationships between Parcel Framework and other Idaho Framework elements.

2.5.5. **Encoding**

When data is imported into and exported from the Parcel Framework, encoding will take place to convert data formats and attributes.

2.5.6. **Resolution**

No specific requirements for resolution are specified in this standard. Resolution will be documented in the metadata.

2.5.7. **Accuracy**

No specific requirements for accuracy are specified in this standard. Accuracy will be documented in the metadata.

2.5.8. **Edge Matching**

No edge matching between jurisdictions is required

2.5.9. Unique Identifier

There is no requirement for a permanent unique identifier specific to each parcel feature. However, it is recommended that users use the Parcel Identification Number in combination with the Steward, i.e., County name.

2.5.10. Attributes

Attributes for parcel point and polygon layers, as well as the improvement table are described in Section 3 of this standard.

2.5.11. Stewardship

Perpetual maintenance and other aspects of lifecycle management are essential to Parcel Framework. Details of stewards, their roles and responsibilities, and processes are set forth in a Parcel Framework Stewardship Plan and related documents.

2.5.12. Records Management and Archiving

Details of records management and archiving for Parcel Framework should be set forth in a Parcel Framework Stewardship Plan and related documents.

2.5.13. Metadata

The Parcel Framework metadata will describe the methods used to aggregate the individual parcel data contributions, processes or crosswalks performed, definition of attributes, and other required information. This metadata will conform to metadata standards as set out in ITA Standard S4220 - Geospatial Metadata) and accompany any files exchanged under this Standard.

3. Data Characteristics

3.1. Minimum Graphic Data Elements

The parcel standard consists out of three separate datasets described as follows:

1. Closed vector polygon dataset referred to as "Parcels Layer" that reflect the parcel boundary and includes attributes that apply to the entire parcel.

2. A point vector dataset, referred to as "Parcel Centroids Layer" reflect the calculated centroid of a vector parcel boundary polygon. Centroids are calculated mathematically using Esri software. For those polygons whose centroid falls outside the parcel polygon, the centroid has been forced to move inside the parcel using the "Inside" option in the tool (for more information see [Feature To Point (Data Management)—ArcGIS Pro | Documentation](#)). The Parcel Centroids datasetincludes attributes that apply to the entire parcel.

3. A non-spatial table with improvement information referred to as "Improvement Table".

3.2. Optional Graphic Data Elements

Not applicable.

3.3. Standard Attribute Schema

3.3.1 Attributes for Parcel Polygon and Parcel Centroid Layers

Field Name	Alias	Data Type	Length	Description	Examples
PARCEL_ID	Parcel Identification Number	Text	50	The unique identifier for that parcel is used by the source.	R3085100110
STEWARD	Data Steward	Text	20	The source that created the polygon and can answer questions about the history, geometry and attribution of it.	Canyon County
UPDATED	Data Extract Date	Date		The data the data was shared (i.e., data is corrected as of…)	5/5/2021
WEBSITE	Website	Text	255	The URL for public internet site for further information, if available	https:// adacountyid.g ov/assessor/
FIPS	FIPS Code	Text	5	The Federal Information Processing Standards (FIPS) code for State and County.	16001
ASR_ACRRES	Legal Acres	Double	Prec: 12 Scale: 4	Acreage as determined by deed or another instrument that describes the outside of a parcel.	10.5

LAT_DD	Latitude	Double	Prec: 8 Scale: 5	Latitude of the centroid, in WGS84 expressed in decimal degrees	42.15685
LONG_DD	Longitude	Double	Prec: 10 Scale: 6	Longitude of the centroid, in WGS84 expressed in decimal degrees	-116.12545
IDTM_N	Northing	Integer		Y Coordinate of the Centroid. Northing expressed in IDTM 83 (Meters)	1219601
IDTM_E	Easting	Integer		X Coordinate of the Centroid. Easting expressed in IDTM 83 (Meters)	2327704
OWNER1	Owner	Text	100	Owner of Parcel	John Smith
OWNER2	Owner	Text	100	Owner of Parcel	Mary Smith
PUBLIC_STD	Standardized Public Agency	Text	7	Standardized name of public agency, e.g. BLM becomes Bureau of Land Management	Bureau of Land Management
MAIL_ADD1	Mailing Address 1	Text	100	Mailing Address of Owner	1234 S Paper Road
MAIL_ADD2	Mailing Address 2	Text	100	Additional Mailing address of owner	APT 5C
MAIL_CITY	Mailing City	Text	100	Mailing City of Owner	Anaktuvuk Pass
MAIL_STATE	Mailing State	Text	2	Mailing State of Owner	AK
MAIL_ZIP	Mailing Zip	Text	10	Mailing U.S. zip code of owner	99721
MAIL_CNTRY	Mailing Country	Text	100	Mailing Country of Owner	USA
SITE_ADD	Situs Address	Text	100	Site Address of Property	6789 W Stapler Ave
SITE_CITY	Situs City	Text	100	City of Property	Boise
SITE_ZIP	Situs Zip Code	Text	10	Zip Code of Property	83702
ASR_CATS	Assessment Categories	Text	5	Categories of Property used for assessment and taxation.	12,18,34
LGL_DESCR	Legal Land Description	Text	512	Property Description	LT 3, BLK 5 COPPER SUB
VAL_LAND	Value of Land	Long Integer		Gross Land Value of all land inside a parcel (i.e., before the deductions of any exemptions)	100,000
VAL_IMPVTS	Value of All Improvements	Long Integer		Gross Value Combined value of all improvements inside a parcel (i.e., before the deductions of any exemption)	200,000
VAL_TOTAL	Total Value	Long Integer		Gross Total Value (i.e., before the deduction of any exemption)	300,000

Field Name	Alias	Data Type	Length	Description	Examples
HOME_EXMPT	Homeowners Exemption	Boolean		Is there a homeowner's exemption on this property?	True
GIS_ACRES	Computed Acres	Double	Prec: 12 Scale: 2	Acreage as calculated by GIS using the parcel polygon boundary	11

3.3.2 **Attributes for Improvement Information Table**

Field Name	Alias	Data Type	Length	Description	Examples
PARCEL_ID	Parcel Identification Number	Text	50	The unique identifier for that parcel is used by the source.	R2085100110
STEWARD	Data Steward	Text	20	The source that created the polygon and can answer questions about the history, geometry and attribution of it.	Canyon County
UPDATED	Data Extract Date	Date		The date the data was shared (i.e., data is correct as of…)	5/5/2021
WEBSITE	Website	Text	255	The URL for public internet site for further information, if available	https://adacountyid.gov/assessor/
YEAR_BLD	Year Built	Integer		Year Built	1992
IMP_TYPE	Improvement Type	Text	2	Improvement Type (i.e., LR, MH, RP, etc.)	RP
IMP_DESCR	Improvement Description	Text	100	Improvement Description (i.e., Dwelling, Mobile Home, Pavement, etc.)	Mobile Home
EFF_YR_BLD	Effective Year Built	Integer		Effective Year Built	1955
TOT_SQFT	Total Square Feet	Integer		Total Square Feet	2,100
EST_VAL	Estimated Value	Integer		Estimated Value	1,250,000
NUM_STORY	Number of Stories	Double		Number of Stories	2
NUM_BATH	Number of Bathrooms	Double		Number of Bathrooms	2.5
NUM_BED	Number of Bedrooms	Double		Number of Bedrooms	2.5
GARAGE_Y_N	Presence of a Garage	Text	1	Presence of a Garage	Y
SQFT_FLR_1	Square Feet First Floor	Integer		Square Feet First Floor	1500
SQFT_FLR_2	Square Feet Second Floor	Integer		Square Feet Second Floor	600

SQFT_BSMNT	Square Feet Basement	Integer		Square Feet Basement	1100
HEAT_TYPE	Type of Heating	Text	50	Type of Heating	Central Gas
FIRPLC_Y_N	Presence of a Fireplace	Text	5	Presence of a Fireplace	Y
NUM_FIREPL	Number of Fireplace(s)	Integer		Number of Fireplaces	2

3.4. **Data Quality**

Data quality considerations for Parcels include:

a) All attribute tables, i.e., those included with the polygon and centroid parcel layers, as well as the improvement table should at the very least include a PARCEL_ID, STEWARD and UPDATED date. The attributes for WEBSITE and FIPS will be added by data aggregator.

b) All parcel polygons should close.

c) All centroids should be located into the polygon on which the centroid is based.

d) Parcel boundary shapes are generated by individual counties and the data quality depends on the procedures in place at the county where a parcel resides.

e) Topology rules, either within a county or between counties, are encouraged but not enforced. Therefore, it is possible that parcels overlap within or between counties.

Appendix A: References

Federal Geographic Data Committee (FGDC), Subcommittee on Cadastral Data, May 2008. *Cadastral Data Content Standard for the National Spatial Data Infrastructure*, Version 1.4. https://www.fgdc.gov/standards/projects/cadastral/cadastral-data-standard-v1-4.pdf

Environmental Systems Research Institute (ESRI). Internet. http://www.esri.com

Idaho Technology Authority (ITA). *Information and Data Policy P5000, Category: P5030 Framework Standards Development Policy.* https://ita.idaho.gov/psg/p5030.pdf

Idaho Technology Authority (ITA). *Enterprise Standards S4000 Geographic Information Systems (GIS) Data, Category: S4220 Geospatial Metadata.* https://ita.idaho.gov/psg/s4220.pdf

FGDC Cadastral Subcommittee Outreach Web site. *Cadastral Data Standards and Guidelines.* Cadastral Subcommittee — Federal Geographic Data Committee (fgdc.gov)

Appendix B: Glossary

See ITA Guideline G105 - (ITA Glossary of Terms) for definitions.