

Idaho Technology Authority (ITA)

ENTERPRISE STANDARDS – S4000 – INFORMATION AND DATA

Category: S4229 – Idaho Airports Data Layer

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I. DEFINITION

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

II. RATIONALE

A statewide Airport layer 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 private sector and local, state, and federal government agencies have business needs for the Airport Framework Dataset.

III. APPROVED STANDARD(S)

See Attachment

IV. APPROVED PRODUCTS(S)

Any GIS Software, either desktop or online, capable of ingesting and displaying Open Geospatial Consortium (OGC) Web Map Standard (WMS) services.

V. JUSTIFICATION

A statewide Airport dataset is a critical source of information as stated under 'II Rationale' in this standard. A data exchange standard supports the use of the Airport Layer to facilitate a predictable format, improve collaboration and encourage use of this dataset.

VI. TECHNICAL AND IMPLEMENTATION CONSIDERATIONS

Any GIS Software, either desktop or online, capable of ingesting and displaying Open Geospatial Consortium (OGC) Web Map Standard (WMS) services.

VII. EMERGING TRENDS AND ARCHITECTURAL DIRECTIONS

Data will be shared in accordance with ITA Standard [S4250](#) –Geographic Information System (GIS) Data Sharing Standards.

VIII. PROCEDURE REFERENCE

The format, content, and development of this standard adhere to ITA Policy [P5030](#) - Framework Standards, ITA Standard [S4250](#) - Data Sharing Standards and ITA Standard [S4220](#) - Geospatial Metadata.

IX. REVIEW CYCLE

Review will occur at least annually.

X. CONTACT INFORMATION

For more information, contact the ITA Staff at (208) 605-4064.

REVISION HISTORY

07/20/2023 – Standard Presented to the IGC-EC



STATE OF IDAHO

Idaho Airports Data Standard

Part of the Transportation Theme

Version 1

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Developed by the Transportation Technical Working Group

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1. Introduction to the Airport Data Standard

A statewide Airport layer 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 private sector and local, state, and federal government agencies have business needs for the Airport Framework Dataset.

An Airport Standard is intended to facilitate integration and sharing of up-to-date spatial information about airports in Idaho and enhance the dissemination and use of airport information. This standard does not instruct on how airport databases are designed for internal use.

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

1.1. Mission and Goals of the Standard

The Airport Standard supports a statewide dataset that is consistent with applicable state and national standards. It establishes the minimum attributes and geospatial database schema for the Airport Framework. The Standard will communicate with, and may have similar attributes to, other Idaho Framework data standards. It encourages all Idaho-based agencies with geospatial Airport data to contribute to the Airport Framework.

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

1.2. Relationship to Existing Standards

This Airport Exchange Standard relates to existing standards as follows:

- Federal Geographic Data Committee (FGDC) Data Accuracy Standards
- FAA AC 150/5300-16 “General Guidance and Specifications for Aeronautical Surveys: Establishment of Geodetic Control and Submission to the National Geodetic Survey” (AC16)

- FAA AC 150/5300-17 “Standards for Using Remote Sensing Technologies in Airport Surveys” (AC17)
- FAA AC 150/5300-18 “General Guidance and Specification for Aeronautical Surveys: Airport Survey Data Collection and Geographic Information System Standards” (AC18)

1.3. Description of the Standard

This standard describes the vision and geospatial data structure of an Airport 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

1.4. Applicability and Intended Uses

This standard applies to the Airport element of the Transportation theme of The Idaho Map (TIM).

When implemented, it will enable access to geometry and attribute information about Idaho Airports. 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 Airport 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 Airport data.

1.5. Standard Development Process

The Airport Workgroup, a subgroup of the Transportation TWG, is a voluntary group of private, city, county, tribal, state, and federal representatives. In 2022 the Airport Lead began developing the standard for the Airport Framework using the standard development automation tools developed by the IGC-EC to generate the first draft of the Standard. This standard was then reviewed and edited by the members of the Transportation Technical

Working Group.

After initial development the draft standard document was shared with the IGC-EC and IGC in accordance with the review and approval process described in ITA Policy [P5030](#) - Framework Standards Development.

1.6. Maintenance of the Standard

This standard will be revised on an annual basis and in accordance with the ITA Framework Standards Development Policy ([P5030](#)).

2. Body of the Standard

2.1. Scope and Content

The scope of the Airport Data Exchange Standard is to describe a statewide layer which identifies the physical locations and attributes of Airports in Idaho.

2.2. Need

Airports are a key dataset needed for resource land management, community and economic development needs, infrastructure maintenance, research and analysis, homeland security, tourism, business development and public safety. This standard provides the foundation to aggregate Airport data for centralized access and stewardship information.

2.3. Participation in the Standard Development

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

2.4. Integration with Other Standards

The Airport Data Exchange Standard follows the same format as other Idaho geospatial framework data standards. The Airport 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.

Inclusion of Federal Information Processing Standards (FIPS) codes will allow this standard to be integrated with other standards that includes such codes, for example the Parcel Data Exchange standard. Future standards, such as for Counties, Census delineations and others will also include FIPS codes.

2.5. Technical and Operation Context

2.5.1. Data Environment

The data environment is a digital vector point with a specific, standardized set of attributes pertinent to the Airport Framework. Airport data shared under this standard must be in a format supporting vector point.

2.5.2. Reference Systems

The Airport 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 ITDM coordinate system but must have a defined coordinate system clearly described in the metadata.

2.5.3. Global Positioning Systems (GPS)

Some data provided might contain geometry from 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

Airport geometry may be coincident with other framework data, such as parcels, runways. Currently there is no enforcement of coincidence or topology relationships between Airport Framework and other Idaho Framework elements.

2.5.5. Encoding

When data is imported into and exported from the Airport 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

Each feature class in this standard specifies a required accuracy level. The accuracies indicated represent maximum horizontal distance the feature should be from the actual physical location of the object it represents in the real world, or absolute horizontal positional accuracy. Accuracies are indicated at the 95% confidence level, meaning that statistically 95% of the features within the feature class shall be at or better than the accuracy indicated. The FGDC Data Accuracy Standards describe how to confirm and the report that features meet this accuracy level.

2.5.8. Edge Matching

No edge matching is required between jurisdictions, or between this and other framework layers

2.5.9. Unique Identifier

All Airports should have a Federal Aviation Administration airport FAA Code which is a unique combination of three letters and numbers to identify an airport.

2.5.10. Attributes

Attributes for public and intergovernmental distribution are described in Section 3 of this standard.

2.5.11. Stewardship

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

2.5.12. Records Management and Archiving

Internal web service maintenance

2.5.13. Metadata

The Airport Framework metadata will describe the methods used to update and aggregate the individual Airport data contributions, processes or crosswalks performed, definition of attributes, and other required information. This metadata will conform to the metadata standards as set out in ITA Standard [S4220](#) – Geospatial Metadata

3. Data Characteristics

3.1. Minimum Graphic Data Elements

The geometry of the features in Airport Framework is vector point

3.2. Optional Graphic Data Elements

Not applicable.

3.3. Standard Attribute Schema

Field Name	Alias	Data Type	Length	Description
FAA	FAA Code	Text	3	The unique identifier for each airport
IATA	IATA Code	Text	3	
AirfieldName	Airfield Name	Text	50	Name of the Airfield
OperationalStatus	Airport Operational Status	Text	20	Airport Operational Status
RunwaySurfaceTypeList	Runway Surface Type List	Text	20	Runway Surface Type List
RunwayDesignationList	Runway Designator List	Text	20	Runway Designator List
RunwayLengthList	Runway Length List (Feet)	Text	20	Runway Length List (Feet)
CityServed	City Served	Text	20	
AirportElevation	AD Elevation	Double		Elevation above mean sea level in feet.
CoordX	Northing in IDTM83	Double		Latitude, or Northing expressed in the Idaho Transverse Mercator 83
CoordY	Easting in IDTM83	Double		Longitude, or Easting expressed in the Idaho Transverse Mercator 83
Latitude_DD	Latitude	Double		Latitude in Decimal Degrees
Longitude_DD	Longitude	Double		Longitude in Decimal Degrees
CityName	City Name	Text	255	City Name
CityFIPS	City FIPS Code	Text	255	City Census FIPS Code
CountyName	County Name	Text	255	County Name
CountyFIPS	County FIPS Code	Text	255	County Census FIPS Code
FAA_OpenDataGUID	FAA Open Data GUID			Unique identifier to tie airport back to FAA airport and runway datasets

3.4. Data Quality

Data quality considerations for the Airports dataset include:

- All Airports should have a Federal Aviation Administration airport code which is a unique combination of three letters and numbers to identify an airport.
- All data must be edited and collected utilizing the Idaho Department of Transportation data and applications.
- All data must be collected and edited in ways that conform to the standards set out in:
 - FAA AC 150/5300-16B “General Guidance and Specifications for Aeronautical Surveys: Establishment of Geodetic Control and Submission to the National Geodetic Survey” (AC16).

- FAA AC 150/5300-17 “Standards for Using Remote Sensing Technologies in Airport Surveys” (AC17).
- Federal Aviation Administration (FAA). FAA AC 150/5300-18B “General Guidance and Specification for Aeronautical Surveys: Airport Survey Data Collection and Geographic Information System Standards” (AC18)

Appendix A: References

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>

Federal Aviation Administration (FAA). *FAA AC 150/5300-16B “General Guidance and Specifications for Aeronautical Surveys: Establishment of Geodetic Control and Submission to the National Geodetic Survey” (AC16)*.
https://www.faa.gov/airports/resources/advisory_circulars/index.cfm/go/document.current/documentNumber/150_5300-16

Federal Aviation Administration (FAA). *FAA AC 150/5300-17 “Standards for Using Remote Sensing Technologies in Airport Surveys” (AC17)*.
https://www.faa.gov/airports/resources/advisory_circulars/index.cfm/go/document.current/documentNumber/150_5300-17

Federal Aviation Administration (FAA). *FAA AC 150/5300-18B “General Guidance and Specification for Aeronautical Surveys: Airport Survey Data Collection and Geographic Information System Standards” (AC18)*
https://www.faa.gov/regulations_policies/advisory_circulars/index.cfm/go/document.information/documentid/74204

Federal Geographic Data Committee (FGDC). *FGDC Data Accuracy Standards*.
<https://www.fgdc.gov/standards/projects/accuracy>

Appendix B: Glossary

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