



## **Metadata Standards**

**For geospatial data sets**

**For Record (as-built) drawings and documents**

## Document history

| revision letter | release date | major changes                         | approved by |
|-----------------|--------------|---------------------------------------|-------------|
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## Table of Contents

|  |           |
|--|-----------|
| <b>About this book</b> .....                                       | <b>1</b>  |
| Relation to existing standards.....                                | 1         |
| Who should read this book .....                                    | 1         |
| How this book is organized .....                                   | 1         |
| Related documents .....  | 2         |
| Abbreviations .....  | 2         |
| <b>Introduction</b> .....  | <b>3</b>  |
| <b>Standards in use at LAWA</b> .....                              | <b>4</b>  |
| LAWA Standards.....  | 4         |
| National and International Standards .....                         | 5         |
| Compliance .....   | 6         |
| Request of Variance .....  | 6         |
| <b>Metadata for Geospatial Data</b> .....                          | <b>8</b>  |
| Introduction .....   | 8         |
| Geospatial Data Organization.....                                  | 9         |
| <b>Metadata for Record (as-built) Drawings and Documents</b> ..... | <b>11</b> |
| Introduction .....   | 11        |
| Categories.....  | 12        |
| Metadata Fields.....   | 13        |
| Example .....  | 13        |
| Identification .....   | 18        |
| Significant Dates .....  | 20        |
| Description .....  | 21        |
| Originator .....   | 26        |
| Disposition.....   | 27        |
| Format.....  | 29        |
| Storage.....   | 31        |
| Workflow .....   | 33        |

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## About this book

The standards described in this document are provided to help LAWA staff, consultants and project partners prepare files for use in LAWA projects.

By using these standards, LAWA will achieve a standardized approach to spatial data management and related record document(s) that will bring many benefits to both the organization and its staff. These benefits include, but are not limited to:

- consistent and more reliable data that will lead to more informed decision making
- closer integration with other LAWA information systems and LAWA spatial data users
- portability of staff skills
- greater interoperability with organizations outside of LAWA

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### Relation to existing standards

The LAWA standards have adapted and extended a series of metadata standards already developed or approved by FGDC, including ISO standards, SDSFIE and Dublin core metadata

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### Who should read this book

These metadata standards are for use in-house by LAWA and for architects, engineers, surveys and consultants delivering information to LAWA. The purpose of these standards is to ensure all relevant digital and scanned documents, digital CAD or BIM data files and related geospatial datasets meet LAWA standards.

Within LAWA; AEGIS and DDMS are tools designed for users to create metadata that meets the LAWA Metadata Specification. These tools provide an interface that leads a user through dialog steps and options to create a metadata record. Users do not need to be familiar with the full LAWA Metadata Specification to create metadata that meets this specification

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### How this book is organized

After the introduction, this book contains the following sections:

- Metadata for geospatial data
- Metadata for record (as-built) drawings and documents

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## Related documents

CAD, BIM, GIS, Survey and EDI standards along with other documentation related to these standards are available on the LAWA website. [LAWA Standard Documents and Guidelines](#)

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## Abbreviations

|        |   |  |
|--------|---|--|
| AEGIS  | - | Airport Enterprise Geographical Information System                     |
| ANSI   | - | American National Standards Institute                                  |
| BIM    | - | Building Information Modeling  |
| CAD    | - | Computer Aided Design and Drafting                                     |
| CSDGM  | - | Content Standard for Digital Geospatial Metadata                       |
| DDMS   | - | Document & Drawing Management System                                   |
| CPPE   | - | Capital Planning, Programming and Engineering                          |
| EDI    | - | Electronic Data Interchange  |
| FAA    | - | Federal Aviation Administration  |
| FGDC   | - | The Federal Geographic Data Committee                                  |
| GIS    | - | Geographic Information System  |
| GISSSD | - | GIS Support Services Division  |
| IMTG   | - | Information Management Technology Group                                |
| ISO    | - | International Organization for Standardization                         |
| LAWA   | - | Los Angeles World Airports   |
| LAX    | - | Los Angeles International Airport                                      |
| ONT    | - | Ontario Airport  |
| PMD    | - | Palmdale Airport   |
| SDSFIE | - | Spatial Data Standards for Facilities, Infrastructure, and Environment |
| VNY    | - | Van Nuys Airport   |

## Introduction

Metadata is structured information that describes, explains, locates, or otherwise makes it easier to retrieve, use, or manage an information resource. Metadata is often called data about data or information about information.

Metadata allows data users to make informed decisions on the suitability of data for a given purpose, to understand how the data was captured and how up to date the data is.

Tools for capturing geospatial and document metadata are provided within LAWA by the AEGIS and DDMS applications. These applications allow users to create, view, and edit metadata records within a defined metadata structure.

- For geospatial data sets, metadata allows LAWA to share information throughout the enterprise primarily through the AEGIS system. The geospatial element sets include topographic and utility/facility data.
- For record (as-built) drawing and documents, metadata is used for a formal resource description that can apply to any type of document, digital or non-digital.

These standards and specifications are intended to improve data consistency and availability of information, and facilitate spatial information dissemination and sharing within LAWA.



All files and documents submitted to LAWA must be accompanied by a transmittal form holding all required metadata.

Transmittal forms along with other documentation related to these standards are available on the LAWA website. [LAWA Standard Documents and Guidelines](#)

## Standards in use at LAWA

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### LAWA Standards

This section provides an overview of LAWA specific standards, plus related federal, local, and national standards. LAWA standards have been created to improve productivity and reliable information exchange through the full life-cycle of geospatial data, CAD and BIM files along with related documents.

#### **LAWA Metadata Standards**

Metadata is structured information that describes, explains, locates, or otherwise makes it easier to retrieve, use, or manage an information resource. Metadata is often called data about data or information about information.

#### **LAWA CAD Standards**

The LAWA CAD standards are based largely on the AIA CAD Layer Guidelines and the National CAD Standards (NCS), adapted where necessary to suit LAWA-specific requirements.

#### **LAWA GIS Standards**

The LAWA GIS standards are directly based on the ANSI Spatial Data Standard for Facilities Infrastructure and Environment (SDSFIE), Release 2.60, extended in certain areas to handle specific information relevant to LAWA. *GIS Standards for LAWA Projects* presents the most important aspects of SDSFIE as it applies to LAWA.

#### **LAWA Survey Standards**

The LAWA Survey and Remote Sensing Standards are based on requirements laid out in Airport Circulars published by the FAA, adapted where necessary to suit LAWA-specific requirements.

#### **LAWA BIM Standards**

These guidelines focus primarily on adaptation of standards for practical and efficient application of BIM, particularly at the handover (Record - As-Built) stage of a project. Based on USACE\_CAD-BIM\_Technology Center: version 1.1 and National BIM standard (United States): version2

#### **LAWA EDI (Electronic Data Interchange) Standards**

This Standard provides a framework for all data requests and all hard copy or electronic data submittals to or from LAWA, thus ensuring a streamlined data exchange process



These standards along with other documentation related to these standards are available on the LAWA website. [LAWA Standard Documents and Guidelines](#)



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## National and International Standards

### **ISO 19115 – 2: Geographic information - Metadata - Part 2**

Fully endorsed by the FGDC, ISO 19115-2 has become the preferred standard for LAWA as it includes all of the elements of ISO 19115 as well as additional elements that are relevant to many geospatial data sets (raster, imagery, GPS, monitor stations, instruments, etc.).

### **FGDC-STD-001 June 1998**

The Content Standard for Digital Geospatial Metadata (CSDGM) has been in use at LAWA for a long time, and legacy data will remain valid for many years.

### **SDSFIE 2.6**

The overall structure of LAWA current geospatial repository is based on SDSFIE 2.6.

SDSFIE organizes real world features such as runways, roads and water pipes into a hierarchical structure.

### **Dublin Core Metadata**

LAWA broadly follows International standards for metadata. National and international standards communities, especially ANSI (American National Standards Institute) and ISO (International Organization for Standardization)

The basic standard is Dublin Core Metadata element set (ISO standard 15836)



Check the ANSI and FGDC site for information on latest versions

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## Compliance

Having timely up to date, accurate, fully compliant data available to the LAWA community forms an integral part of planning within any project. The aim of these standards is to ensure a smooth data transfer of information into the LAWA geospatial data base and efficient data maintenance through the complete data lifecycle. Accordingly, the terms and conditions of a LAWA contract require compliance with these standards.

Failure to comply with these standards may result in organizations being back-charged for any financial costs incurred by LAWA for rectifying inconsistencies and errors



See EDI for standards governing data submitted to LAWA, this along with other documentation related to these standards are available on the LAWA website. [LAWA Standard Documents and Guidelines](#)

The individual or organization submitting the files is also responsible for ensuring that all links between non-graphic data and graphic data, and all relationships between database tables, shall be preserved or automatically reconstructed when data is transferred to the LAWA GIS environment.

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## Request of Variance

Compliance with the LAWA standards and data deliverables demands are the cornerstone of achieving trustworthy and relevant data.

Suggestions for improvements or extensions to these standards and demands are encouraged, to meet unforeseen requirements and as a way to improve effectiveness and clarify any ambiguities; any such deviation must be approved by LAWA, in advance and in writing. . Requests need to be submitted on the “Request for variance” form, this form along with other documentation related to these standards are available on the LAWA website. [LAWA Standard Documents and Guidelines](#)



## Metadata for Geospatial Data

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### Introduction

An important aspect of any Geographic Information System is the ability to classify and attribute any spatial entity (feature).

Within LAWA the AEGIS application provides a flexible, user-definable, hierarchical structure for classifying entities. The data administrator can also define attributes to be used for an entity type. A filtering mechanism provides the flexibility to activate only the entity types and attributes which are needed.

An important aspect of LAWA spatial data standards is the integration of CAD, BIM and GIS standards. GIS relies on attributes and thematic rendering to distinguish different items of information about the same feature. In CAD, each entity type (for example water pipe) is generally created on several CAD layers (for example abandoned, main, fire, potable, and non-potable).

Spatial data in CAD is created in separate layers distinguishable by color and/or line style. The LAWA spatial data standards allow defining discriminators (CAD layers) for each entity type. Each discriminator of an entity type is assigned a CAD layer and block (for point entity types) conforming to the LAWA CAD standards.

Metadata on utilities and infrastructure is managed on the basis of SDSFIE structures, while taking into account the current FAA requirements. The purpose of the SDSFIE classification scheme is to allow drilldown from entity sets to detailed information on a single entity.

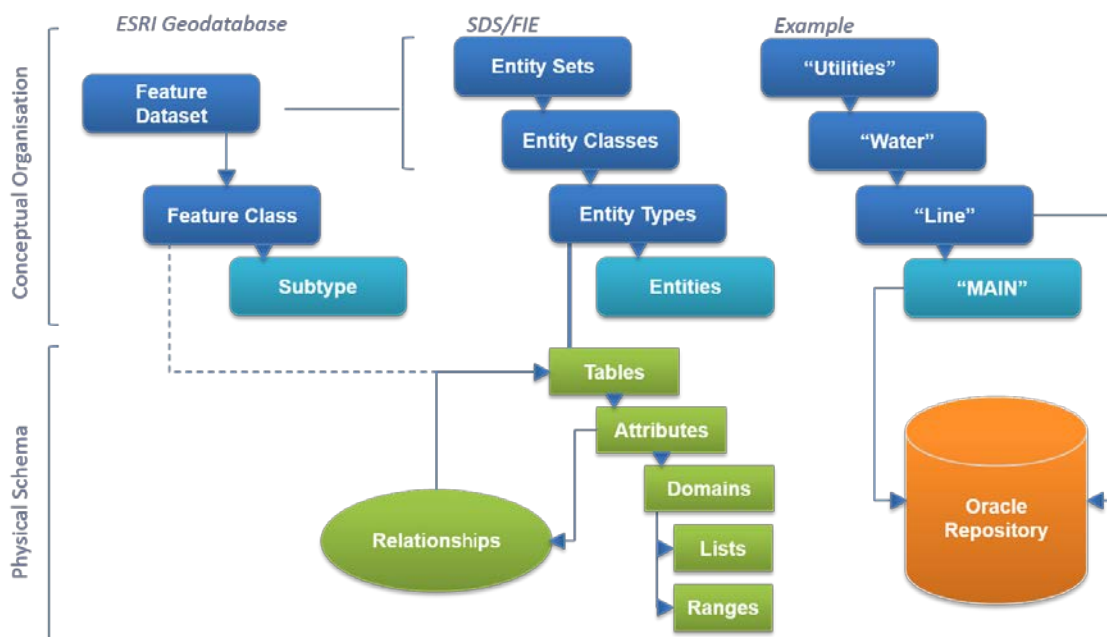


GIS standards including all geospatial metadata, along with other documentation related to these standards are available on the LAWA website. [LAWA Standard Documents and Guidelines](#)

## Geospatial Data Organization

The data organization described in this standard is based upon the ANSI standard Spatial Data Standards for Facilities, Installations and Environment (SDSFIE), Release 2.60.

The SDSFIE standard organizes real world features such as runways, roads and water pipes into a hierarchical structure. The data model for SDSFIE consists of five basic levels of hierarchy:



*SDSFIE data organization*

**Entity Sets** group data by function, in line with SDSFIE

**Entity Classes** group data within each entity sets

**Entity Types** group entities – individual, real world features (such as runways, roads and water pipes) represented on a map or drawing

**Attribute** tables contain non-graphic information, or attribute data, used to describe entities

**Relationships** define which attributes may be used to describe a given entity type

**Domains** limit possible values for a particular attribute; list domains define a list of valid values for text attributes, range domains set upper and lower limits for numeric attributes.



Note on terminology: CAD sources tend to prefer the term entity, while GIS sources prefer feature. The two are essentially interchangeable



## Metadata for Record (as-built) Drawings and Documents

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### Introduction

Metadata provides vital information about each of the Record (as-built) drawings and documents stored in DDMS. Metadata allows LAWA staff and contractors to be able to quickly retrieve relevant drawings or documents from DDMS.

These standards focus on storing and organizing the following data to support technical document management within LAWA.

- record (as-built) drawings and documents, normally stored at project close-out
- as-constructed surveys
- design and construction drawings
- Certificate of Occupancy (C of O)
- geotechnical reports
- O&M Manuals
- facility inspection Reports and Pictures
- facility Asset Inventory(ies)

Relevant metadata about each drawing or document is stored in the DDMS database.

- some of these metadata elements are automatically populated by DDMS
- other metadata elements have to be added by hand; to ensure consistency when these elements are entered, the DDMS includes pick-lists of metadata values

All new documents introduced into the system must follow these standards and include metadata attributes



Other documentation related to these standards is available on the LAWA website. [LAWA Standard Documents and Guidelines](#)

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## Categories

Drawing metadata attributes are divided into eight categories, each of which is described in more detail in the sections that follow.

### **identification**

Identification metadata covers information that identifies drawings and documents, plus any qualifiers for that information.

### **dates**

Date metadata identifies significant dates that apply to a record.

### **description**

Description metadata specifies the discipline, utility, drawing or document type and airport location documented in the record.

### **originator**

Originator metadata identifies people, work group/s or organization/s who:

- were involved in creating a record
- are responsible for a record or a group of records

### **disposition**

Disposition metadata identifies the origin, status and version of a document.

### **format**

Format metadata provides information about a record's format, which in turn indicates the technology required to read/edit the record.

### **storage**

Storage metadata identifies the location of active records stored by LAWA, using a path name for electronic records or a location name for physical records.

### **workflow**

A sequence of connected steps for document notification, review or approval.



## Metadata Fields

The table below shows all metadata field names and labels available at LAWA, which may or may not be currently active.

### field name

identifies a field in the AEGIS database

### field label

human-readable label identifying a field in the user interface

### is active

Identifies which fields are currently (at time of standards) active within the AEGIS and DDMS applications

### Look Up Table (LUT)

list of valid values used to guarantee consistent input values: only values already in the list can be selected

### category

category of information the metadata belongs to

## Example

The table gives an example of metadata for a drawing

| <i>metadata</i> |                 |           |                   |                |                            |
|-----------------|-----------------|-----------|-------------------|----------------|----------------------------|
| field name      | Field label     | Is Active | Look Up Table LUT | Category       | <u>Example</u>             |
| ddms_doc_id     | Bar Code No.    | Y         |                   | Identification | 0081992                    |
| airport_code    | Airport Code    | Y         | d_ddms_air_code   | Description    | LAX                        |
| drawing_no      | Drawing No      | Y         |                   | Identification | 20110045-2                 |
| project_title   | Project Title   | Y         |                   | Identification | LAX AIRPORT LAYOUT PLAN    |
| discipline_code | Discipline Code | Y         | d_ddms_discipline | Description    | CIVIL                      |
| sheet_no        | Sheet No        | Y         |                   | Identification | 2 OF 2                     |
| sheet_title     | Sheet Title     | Y         |                   | Identification | EXISTING LAYOUT PLAN SHEET |
| document_date   | Document Date   | Y         |                   | Date           | 09/05/2012                 |

| <i>metadata</i>   |                   |           |                      |                |  |
|-------------------|-------------------|-----------|----------------------|----------------|--|
| field name        | Field label       | Is Active | Look Up Table LUT    | Category       | <u>Example</u>                               |
| rev_no            | Rev No            | Y         | d_ddms_air_code      | Identification |  |
| rev_date          | Rev Date          | Y         |                      | Date           | 07/18/2013                                   |
| drawing set       | Drawing Set       | Y         |                      | Identification | 2000015                                      |
| media_sub_loc.    | Media Sub-Loc.    | Y         | d_ddms_media_sub loc | Storage        | F023A  |
| util_dwg          | Util Dwg          | Y         | d_ddms_util_dwg      | Description    | NO   |
| comments          | Comments          | Y         |                      | Description    | FAA APPROVED ON 7/18/13;<br>PREPARED BY HNTB |
| alias             | Alias             | Y         |                      | Identification |  |
| drawing type code | drawing type code | Y         | d_ddms_dct_code      | Description    | ALP  |
| media_loc.        | Media Loc.        | Y         | d_ddms_media_loc     | Storage        | FLAT   |
| dwg._media        | Dwg. Media        | Y         | d_ddms_drw_media     | Format         | PAP  |
| doc_status        | Doc. Status       | Y         | d_ddms_dph_code      | Disposition    | AS   |
| airport_loc_code  | Airport Loc. Code | Y         | d_ddms_pri_code      | Description    | AS   |
| sheet_type        | Sheet Type        | Y         | d_ddms_sheet_typ     | Identification | OT   |
| project_id        | Project Id        | Y         |                      | Identification |  |
| film date         | film date         | Y         |                      | Date           |  |
| expire date       | expire date       | Y         |                      | Date           |  |
| image destr date  | image destr date  | Y         |                      | Date           |  |
| design code       | design code       | Y         |                      | Origination    |  |
| filename          | filename          | Y         |                      | Identification | 0081992.pdf                                  |
| file_size         | File Size         | Y         |                      | Storage        | 7295960                                      |

| <i>metadata</i>  |                  |           |                   |                |                |
|------------------|------------------|-----------|-------------------|----------------|----------------|
| field name       | Field label      | Is Active | Look Up Table LUT | Category       | <u>Example</u> |
| file_date        | File Date        | Y         |                   | Date           | 10/11/2012     |
| drawing_set_desc | Drawing Set Desc | Y         |                   | Identification |                |
| user_name        | User Name        | Y         |                   | Identification | rita           |
| time_stamp       | Time Stamp       | Y         |                   | Date           | 08/08/2013     |
| archive_level    | Archive          | Y         |                   | Storage        | 0              |
| is_published     | Is Published     | Y         | d_ddms_yes_no     | identification | Y              |
| grid_code        | Grid Code        | Y         |                   | Description    | ALL GRIDS      |
| file_path        | File Path        | Y         |                   | Storage        |                |
| file_ext         | File Ext         | Y         |                   | Format         |                |
| application_code | application code | Y         |                   | Format         |                |
| wflow user       | wflow user       | Y         |                   | Workflow       |                |
| Filename         | Filename         | Y         |                   | identification |                |
| docid            | Docid            | Y         |                   | Disposition    |                |
| sec_code         | Sec Code         | N         |                   | Disposition    |                |
| scan_oper_id     | scan oper. id    | N         |                   | Origination    |                |
| scan_device_id   | scan device id   | N         |                   | Origination    |                |
| indx_oper_id     | Indx Oper Id     | N         |                   | Origination    |                |
| wflow_step       | Wflow Step       | N         |                   | Workflow       |                |
| rec              | Rec              | N         |                   | Identification |                |
| recepient        | Recepient        | N         |                   | Workflow       |                |

| <i>metadata</i>   |                    |                  |                          |                 |                       |
|-------------------|--------------------|------------------|--------------------------|-----------------|-----------------------|
| <b>field name</b> | <b>Field label</b> | <b>Is Active</b> | <b>Look Up Table LUT</b> | <b>Category</b> | <b><u>Example</u></b> |
| division_code     | Division Code      | N                |                          | Origination     |                       |
| originality       | Originality        | N                |                          | Format          |                       |
| type_id           | Type Id            | N                |                          | Description     |                       |
| dss_code          | Dss code           | N                |                          | identification  |                       |
| superseded_doc    | Superseded Doc     | N                |                          | Disposition     |                       |
| cont_sht_no       | Cont Sht No        | N                |                          | identification  |                       |
| company_code      | Company Code       | N                |                          | Origination     |                       |
| dwg_scale         | Dwg Scale          | N                |                          | Format          |                       |
| dwg_size          | Dwg Size           | N                |                          | Format          |                       |
| scaling_ratio     | Scaling Ratio      | N                |                          | Format          |                       |
| print_disp        | Print Disp         | N                |                          | Disposition     |                       |
| page_orient       | Page Orient        | N                |                          | Format          |                       |
| plan_set_total    | Plan Set Total     | N                |                          | Format          |                       |
| pm_initial        | Pm Initial         | N                |                          | Origination     |                       |
| sign_status       | Sign Status        | N                |                          | Disposition     |                       |
| Designer          | Designer           | N                |                          | Origination     |                       |
| search_context    | Search Context     | N                |                          | Disposition     |                       |
| Revno             | Revno              | N                |                          | Identification  |                       |
| doctypeid         | Doctypeid          | N                |                          | Identification  |                       |

| <i>metadata</i>   |                    |                  |                          |                 |                       |
|-------------------|--------------------|------------------|--------------------------|-----------------|-----------------------|
| <b>field name</b> | <b>Field label</b> | <b>Is Active</b> | <b>Look Up Table LUT</b> | <b>Category</b> | <b><u>Example</u></b> |
| creationdate      | Creationdate       | N                |                          | Date            |                       |
| description       | Description        | N                |                          | Identification  |                       |
| authorname        | Authorname         | N                |                          | Identification  |                       |
| last_edit_by      | Last Edit By       | N                |                          | Origination     |                       |
| last_edit_date    | Last Edit Date     | N                |                          | Date            |                       |
| Project           | Project            | N                |                          | identification  |                       |

## Identification

Identification metadata covers information that identifies drawings and documents, plus any qualifiers for that information.

| <i>Identification metadata</i> |            |                    |                     |  |
|--------------------------------|------------|--------------------|---------------------|--|
| field name                     | field type | Is Active in AEGIS | look-up table (LUT) | Description  |
| ddms_doc_id                    | identifier | Y                  |                     | Primary key unique to each entry (same as bar code id for hard copies) |
| drawing_no                     | identifier | Y                  |                     | drawing number   |
| rev_no                         | identifier |                    |                     | revision number  |
| sheet_title                    | identifier | Y                  |                     | individual drawing sheet title   |
| sheet_no                       | identifier | Y                  |                     | individual drawing sheet number  |
| project_id                     | identifier | Y                  |                     | project number   |
| project_title                  | identifier | Y                  |                     | project title  |
| sheet_type                     | filter     | Y                  | d_ddms_sheet_type   | index sheet, title sheet, other  |
| drawing_set                    | system     | Y                  |                     | system generated unique ID to link drawings in the same set together   |
| user_name                      | system     | Y                  |                     | System generated user name   |
| filename                       | identifier | Y                  |                     | Name given by LAWA to file   |
| drawing_set_desc               | identifier | Y                  |                     | Description of drawing set   |
| alias                          | identifier | Y                  |                     | Add key words or alternative title for the document                    |
| is_published                   | identifier | Y                  | d_ddms_yes_no       | Document or drawing is ready for end user viewing                      |
| revno                          | identifier | N                  |                     | See rev_no above   |
| rec                            | identifier | N                  |                     | Record   |

| <i>Identification metadata</i> |            |                    |                     |                       |
|--------------------------------|------------|--------------------|---------------------|-----------------------|
| field name                     | field type | Is Active in AEGIS | look-up table (LUT) | Description           |
| dss_code                       | identifier | N                  |                     | Dss code              |
| cont_sht_no                    | identifier | N                  |                     | Continue sheet number |
| doctypeid                      | identifier | N                  |                     | Document type ID      |
| description                    | identifier | N                  |                     | Document description  |
| authorname                     | identifier | N                  |                     | Document author       |
| Project                        | identifier | N                  |                     | Project description   |

#### Look-up tables for identification metadata

| <i>d_ddms_sheet_typ (sheet types)</i> |                           |
|---------------------------------------|---------------------------|
| value                                 | description               |
| IS                                    | index sheet               |
| OT                                    | other sheet               |
| SOS                                   | flag for further research |
| TS                                    | title sheet               |

| <i>d_ddms_yes_no (release status)</i> |  |
|---------------------------------------|--|
| value                                 | description                                |
| yes                                   | document is ready for end user viewing     |
| no                                    | document is not-ready for end user viewing |

## Significant Dates

Date metadata identifies significant dates that apply to a record.

| <i>Date metadata</i> |            |                    |                     |  |
|----------------------|------------|--------------------|---------------------|--|
| field name           | field type | Is Active in AEGIS | look-up table (LUT) | description  |
| document_date        | date       | Y                  |                     | Date on document or, in the case of source data sets, the date when the data is published or otherwise made available for release. |
| rev_date             | date       | Y                  |                     | revision date  |
| file_date            | system     | Y                  |                     | date of electronic media   |
| film_date            | date       | Y                  |                     | the date drawing was microfilmed   |
| last_edit_date       | system     | Y                  |                     | date last edited   |
| expire_date          | date       | Y                  |                     | date after which the document is invalid   |
| time_stamp           | system     | Y                  |                     | date of entry into system  |
| image_destr_date     | date       | Y                  |                     | date the document can be purged from system  |
| creationdate         | date       | N                  |                     | the date a record or group of records was first created  |



## Description

Description metadata specifies the discipline, utility, drawing or document type and airport location documented in the record.

| <i>Description metadata</i> |             |       |                     |   |
|-----------------------------|-------------|-------|---------------------|---|
| field name                  | field type  | AEGIS | look-up table (LUT) | description   |
| airport_code                | filter      | Y     | d_ddms_air_code     | airport codes   |
| grid_code                   | description | Y     |                     | airport property address grid tiles described by document |
| airport_loc_code            | filter      | Y     | d_ddms_pri_code     | locations within the airport                              |
| drawing_type_code           | filter      | Y     | d_ddms_dct_code     | type of drawing or map                                    |
| discipline_code             | filter      | Y     | d_ddms_discipline   | architecture and engineering discipline                   |
| comments                    | description | Y     |                     | free form comments  |
| util_dwg                    | filter      | Y     | d_ddms_util_dwg     | utility drawing type                                      |
| type_id                     | filter      | N     |                     | general document type                                     |

### Look-up tables for description metadata

| <i>d_ddms_air_code (airport code)</i> |                                   |
|---------------------------------------|-----------------------------------|
| value                                 | description                       |
| LAX                                   | Los Angeles International Airport |
| ONT                                   | LA Ontario International Airport  |
| PMD                                   | Palmdale                          |
| VNY                                   | Van Nuys                          |

| <i>d_ddms_pri_code (airport locations code)</i> |             |
|---|-------------|
| value   | description |
| AS  | Airside     |

|     |                           |
|-----|---------------------------|
| BR  | Bradley International     |
| CG  | Cargo                     |
| IM  | Imperial Terminal         |
| LS  | landside                  |
| SOS | flag for further research |
| T1  | Terminal 1                |
| T2  | Terminal 2                |
| T3  | Terminal 3                |
| T4  | Terminal 4                |
| T5  | Terminal 5                |
| T6  | Terminal 6                |
| T7  | Terminal 7                |
| T8  | Terminal 8                |

| <i>Table 9: d_ddms_dct_code (drawing/map type)</i> |                              |
|--|------------------------------|
| <b>value</b>                                       | <b>description</b>           |
| AIRF   | airline facility             |
| ALP  | airport layout plan drawings |
| AP   | aerial photos                |
| APR  | apron                        |
| AST  | airside                      |
| CCTV   | closed circuit TV            |
| DM   | district/cadastral map       |
| EX   | exhibits                     |
| FAA  | FAA facility drawings        |
| FIS  | federal inspection services  |

*Table 9: d\_ddms\_dct\_code (drawing/map type)*

| <b>value</b> | <b>description</b>           |
|--------------|------------------------------|
| LAWA         | LAWA facility                |
| LE           | lease exhibit                |
| LST          | landside street              |
| MLE          | Master Lease Exhibit         |
| MP           | Master Plan Drawings         |
| RM           | reference map                |
| RW           | runway                       |
| SOS          | flag for further research    |
| TC           | tenant construction drawings |
| TM           | tract map                    |
| TPD          | third party drawing          |
| TW           | taxiway                      |
| WIRE         | wireless                     |
| WM           | WYE map                      |

*Table 10: d\_ddms\_discipline (discipline code)*

| <b>value</b> | <b>description</b>                      |
|--------------|---|
| ARCH         | architectural, interiors and facilities |
| CIVIL        | civil and site work                     |
| ELEC         | electrical                              |
| ENV          | environmental                           |
| FIRE         | fire and life safety                    |
| GEO          | geotechnical                            |
| LAND         | landscape architecture                  |

*Table 10: d\_ddms\_discipline (discipline code)*

| <b>value</b> | <b>description</b>        |
|--------------|---------------------------|
| MECH         | mechanical                |
| PLUM         | plumbing                  |
| SEC          | security                  |
| SOS          | flag for further research |
| STRUC        | structural                |
| SVY          | survey                    |
| TLCM         | telecommunications        |

*Table 11: d\_ddms\_util\_dwg (utility drawing type)*

| <b>value</b> | <b>description</b>                  |
|--------------|-------------------------------------|
| C            | communications                      |
| F            | fuel                                |
| G            | gas                                 |
| INSIDE       | interior utilities                  |
| L            | electrical                          |
| M            | composite utilities                 |
| NO           | not a utility drawing               |
| SOS          | flag for further research           |
| T            | storm sewer                         |
| W            | water                               |
| X            | other utilities                     |
| YES          | this is a utility drawing (outside) |
| Z            | sanitary sewer                      |



## Originator

Originator metadata identifies people, work group/s or organization/s who:

- were involved in creating a record
- are responsible for a record or a group of records

| <i>Originator metadata</i> |             |                     |                     |  |
|----------------------------|-------------|---------------------|---------------------|--|
| field name                 | field type  | Is Active in AE-GIS | look-up table (LUT) | description  |
| design_code                | origination | Y                   |                     | name/code of design company  |
| last_edit_by               | system      | Y                   |                     | ID of user who edited document last  |
| scan_device_id             | system      | Y                   |                     | ID of scan device  |
| scan_oper_id               | system      | Y                   |                     | ID of scan operator  |
| division_code              | filter      | N                   |                     | LAWA division responsible for drawing or map   |
| company_code               | origination | N                   |                     | company code of the organization responsible for the record, usually the organization who created the record |
| pm_initial                 | origination | N                   |                     | initials of LAWA project engineer  |
| designer                   | origination | N                   |                     | initials of designer   |
| indx_oper_id               | system      | N                   |                     | audit trail of operators populating DDMS attribute fields  |

## Disposition

Disposition metadata identifies the origin, status and version of a document.

*Table 13: Disposition*

| field name     | field type  | Is Active in AEGIS | look-up table (LUT) | description  |
|----------------|-------------|--------------------|---------------------|--|
| doc_status     | description | Y                  | d_ddms_dph_code     | document status code (i.e., as-built - original or scanned)  |
| docid          | filter      | Y                  |                     | Flag to establish level of archive document (0 is most recent)                                     |
| sign_status    | description | N                  |                     | signed/not signed (approved LAWA signature)  |
| sec_code       | description | N                  |                     | security code  |
| superseded_doc | description | N                  |                     | document this document replaces  |
| print_disp     | description | N                  |                     | indicates the disposition of the drawing (i.e., 30%, 60%, 90%, engineer stamped as-built, etc...). |
| search_context | description | N                  |                     | Used for fuzzy searches  |

### Look-up tables for disposition metadata

*d\_ddms\_dph\_code (document source status)*

| value | description                    |
|-------|--------------------------------|
| ABE   | as built (electronic original) |
| ABS   | as built (digitised/scanned)   |
| AE    | other electronic               |
| AS    | other scanned                  |
| BAD   | bad / unreadable original      |
| SOS   | flag for further research      |

| <i>document security</i> |  |
|--------------------------|--|
| <b>value</b>             | <b>description</b>                                 |
| secret                   | approval from Police Chief required before release |
| classified               | LAWA badged  |
| public                   | public access allowed                              |
| SOS                      | flag for further research                          |



## Format

Format metadata provides information about a record's format, which in turn indicates the technology required to read/edit the record.

| <i>Format metadata</i> |             |                     |                     |  |
|------------------------|-------------|---------------------|---------------------|--|
| field name             | field type  | Is Active in AE-GIS | look-up table (LUT) | description  |
| dwg_media              | description | Y                   | d_ddms_drw_media    | Information about the media in which a record is stored  |
| application_code       | system      | Y                   |                     | software application which generated document (the name of the vendor, software name and version number should be applied) |
| file_ext               | system      | Y                   |                     | file extension   |
| originality            | origination | N                   |                     | drawing medium considered as original, for legal purposes  |
| dwg_scale              | description | N                   |                     | primary scale as shown in the title box or on the drawing (excluding details).   |
| scaling_ratio          | description | N                   |                     | enlargement or reduction ratio   |
| dwg_size               | description | N                   |                     | closest size to the cut size of the physical drawing, for storage location purposes.                                       |
| page_orient            | description | N                   |                     | orientation of scanned image   |
| plan_set_total         | description | N                   |                     | total number of drawing sheets within drawing set  |

### Look-up tables for format metadata

| <i>d_ddms_drw_media (drawing media)</i> |             |       |             |
|---|-------------|-------|-------------|
| value                                   | description | value | description |
| BRF                                     | brown film  | PAP   | bond/paper  |

| <i>d_ddms_drw_media (drawing media)</i> |                         |              |                           |
|---|-------------------------|--------------|---------------------------|
| <b>value</b>                            | <b>description</b>      | <b>value</b> | <b>description</b>        |
| DISK                                    | optical media           | PHO          | photo                     |
| ELC                                     | electronic              | SEP          | sepia                     |
| LIN                                     | linen                   | SOS          | flag for further research |
| MIC                                     | microfilm/aperture card | VEL          | vellum                    |
| MYL                                     | mylar                   | POL          | polyester film            |

## Storage

Storage metadata identifies the location of active records stored by LAWA, using a path name for electronic records or a location name for physical records.

*Table 18: Storage*

| field name    | field type  | Is Active in AEGIS | look-up table (LUT) | description                                      |
|---------------|-------------|--------------------|---------------------|--|
| file_path     | system      | Y                  |                     | file path  |
| file_size     | system      | Y                  |                     | file size  |
| media_loc     | description | Y                  | d_ddms_media_loc    | location of the original hard copy media at LAWA |
| media_sub_loc | description | Y                  | d_ddms_media_subloc | sub-location                                     |
| Archive       |             | Y                  |                     | Archive level                                    |
| file_name     | system      |                    |                     | file name  |

### Look-up tables for storage metadata

*Table 19: d\_ddms\_media\_loc (physical location)*

| value    | description                       |
|----------|-----------------------------------|
| BLD_MECH | Building Mechanical Section       |
| BLD_REP  | Building Repair Section           |
| CADD_REP | EPMD CADD Group                   |
| CUP      | Central Utility Plant             |
| ELEC     | Electrical                        |
| FLAT     | Flat Files - Admin West 7th Floor |
| INSTR    | Instrument Shop                   |
| PLUMB    | Plumbing                          |
| SOS      | flag for further research         |
| STEEL    | Steel shelf                       |

*Table 19: d\_ddms\_media\_loc (physical location)*

| <b>value</b>  | <b>description</b>                       |
|---------------|--|
| STEEL_CAB     | Steel Cabinet - Admin West 7th Floor     |
| STICK_ADMIN   | Stick File Number - Admin West 7th Floor |
| STICK_OFFSITE | Stick File Number – Off-Site Storage     |
| TELE          | Telephone                                |
| WOOD          | Wood Cabinet - Admin West 7th Floor      |

*Table 20: d\_ddms\_media\_subloc (sub-location for physical records)*

| <b>value</b> | <b>description</b>        |
|--------------|---------------------------|
| E0001        | Flat File Cabinet 1       |
| E0002        | Flat File Cabinet 2       |
| E0003        | Flat File Cabinet 3       |
| E0004        | Flat File Cabinet 4       |
| E0005        | Flat File Cabinet 5       |
| SOS          | flag for further research |

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## Workflow

A sequence of connected steps for document notification, review or approval

*Table 21: Workflow*

| field name | field type | Is Active in AEGIS | look-up table (LUT) | description                |
|------------|------------|--------------------|---------------------|----------------------------|
| wflow_user | system     | Y                  |                     | AutoEDMS workflow user     |
| recipient  | system     | N                  |                     | user who receives the work |
| wflow_step | system     | N                  |                     | AutoEDMS workflow step     |