

Attachment 1



**PASTURE AND ALLOTMENT BOUNDARIES  
DATA STANDARD REPORT**

**December 28, 2009  
Version 2.3**

**United States Department of Interior  
Bureau of Land Management  
Program Management Office  
OC-120  
Denver Federal Center  
Denver, Colorado 80225**

## Table of Contents

|  |                                     |
|--|-------------------------------------|
| 1. Introduction.....                             | <b>Error! Bookmark not defined.</b> |
| 2. Data Steward/GIS Contact Identification ..... | <b>Error! Bookmark not defined.</b> |
| 3. Data Set Characteristics .....                | <b>Error! Bookmark not defined.</b> |
| 4. Data Model Characteristics.....               | 5                                   |
| 5. Business Rules .....                          | 10                                  |
| 6. Other Material.....                           | 10                                  |
| 7. Domains Specific to Grazing .....             | 10                                  |
| Appendix A – Data Categories .....               | 11                                  |
| Appendix B – Location.....                       | 12                                  |

|   |   |
|---|---|
| <b>1. Introduction:</b> <i>General Information about the standard (For more information see WO-IM-2003-125 attachment 2: Guidance for Managing BLM Data Standards: How to Adopt, Implement, and Maintain Data Standards, pages 17-20)</i>   |   |
| <b>Description of Standard</b><br>Grazing Allotments and Pasture Boundaries. An Allotment is an area of land designated and managed for grazing of livestock. It may include private, state, and public lands under the jurisdiction of the Bureau of Land Management and/or other federal agencies. An allotment is derived from its pastures. |   |
| <b>Affected Groups</b> (who is effected, who should care)   | Land Use Planners, GIS Specialists, Rangeland Management Specialists, Other BLM Specialists |
| <b>Sponsor</b> (business of sponsor)  | Rob Roudabush - Division Chief, WO220, Rangeland Resources                                  |

| <b>2. Data Steward/GIS Contact Identification:</b> <i>Include lead agency if appropriate; who is/are the data steward(s) and GIS Contact(s)</i> |                             |            |  |
|---|-----------------------------|------------|--|
| Office  | Role                        | Name       | Contact Information  |
| WO-220  | BLM Business Data Steward   | Bob Bolton | <a href="mailto:Robert_Bolton@blm.gov">Robert_Bolton@blm.gov</a><br>202-912-7204 |
| WO-210  | BLM Geospatial Data Steward | Bob Bewley | <a href="mailto:Bob_Bewley@blm.gov">Bob_Bewley@blm.gov</a><br>202 912-7213       |

|  |   |
|--|---|
| <b>3. Data Set Characteristics</b>   |   |
| <b>Overall Security:</b><br>Identify security level (e.g. public/ non-public)<br>If non-public state why | Public  |
| <b>Who has create, read, update, and/or delete privileges</b>  | GIS Specialists, Rangeland Management Specialists |

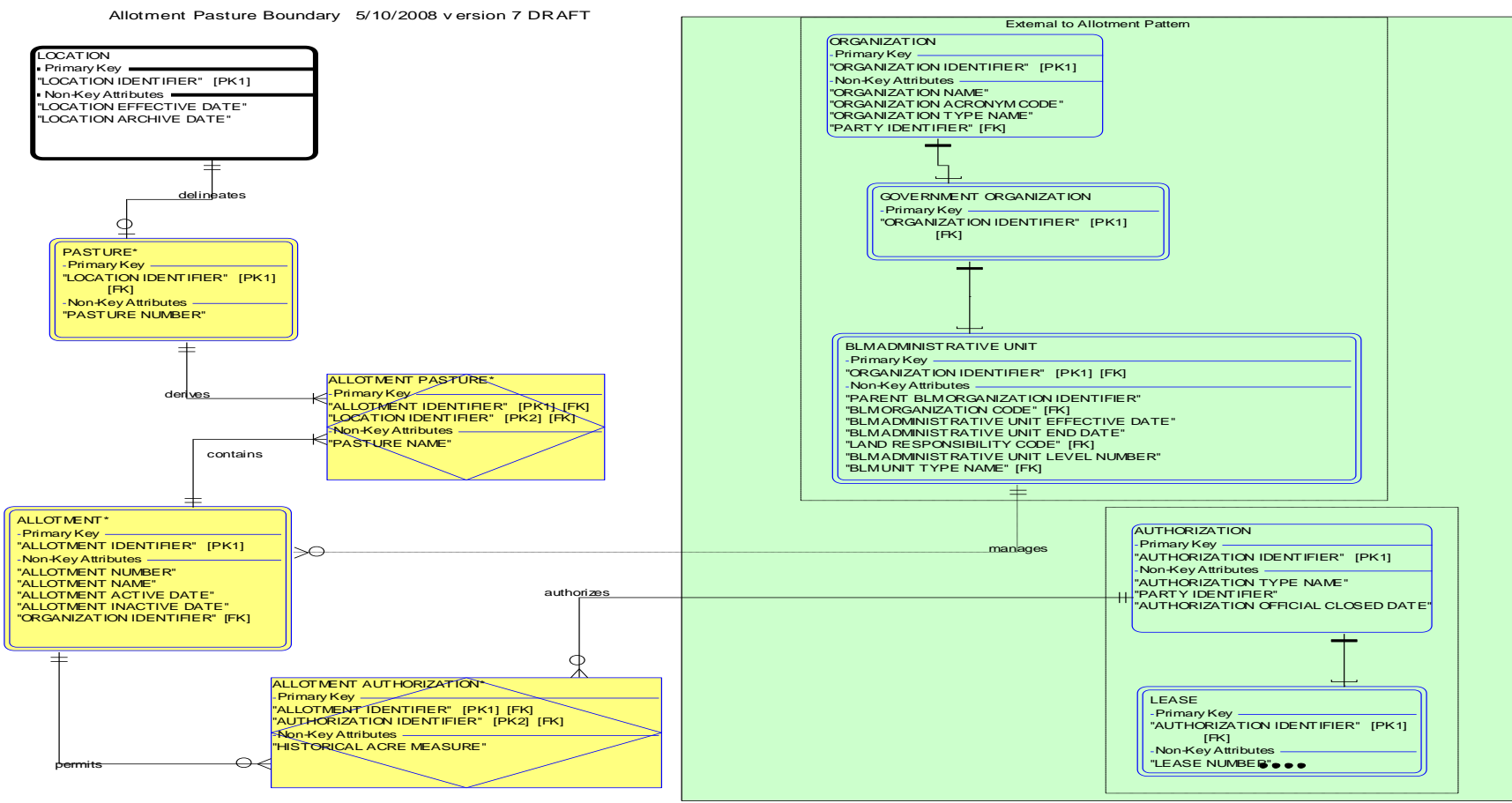
|  |  |  |
|--|--|--|
| <b>Data Collection &amp; Maintenance Protocols:</b> data collection and maintenance procedures that would apply  | a) Accuracy Requirements: what level is required?  | The expected spatial accuracy is approximately 40 feet. The actual measured spatial accuracy is located within the attributes of the data.<br>Spatial Accuracy:<br>ACCURACY MEASUREMENT IN FEET  |
|  | b) Collection & Input Protocols: what are approved methods?<br><br>For Geospatial Data the information relating to collection datum and projection should be included in this section. | There is currently no single method for data collection and input for this data set. Data may be collected and input from a variety of sources as long as the data are documented with metadata. BLM has not yet migrated enough of its existing data stores to any specific format to eliminate any methods for digital data collection.  |
|  | c) Update Procedures: On what basis are updates completed (e.g. township basis, case file basis); how often; by when?  | Field offices will update allotment/pasture geospatial data sets for their state as dictated by business needs.<br><br>Each State allotment/pasture geospatial data set will be provided to the NOC on a monthly basis.<br><br>During the process of updating the NOC version of the data set, any data quality issues which are identified (such as overlap of data between states) will be marked and returned to the states involved for resolution. This portion of the process is spelled out in more detail in the NOC National Geospatial Datasets compilation and replication documentation. |
| <b>Data Quality:</b> measures that will be applied to the data   | a) Transaction level data quality: how will the review of data quality take place during data entry  | Implementation will include domain value edits during data entry.  |
|  | b) Monitoring level data quality: what systematic review of data quality will take place and how will it be done?  | GIS Specialist and Range Specialist should both review the data for quality upon entry and then during at least annual reviews.  |
| <b>Relationship to Other Standards:</b> Identify any other data standards (or applications) that are related; these can include national, state, local, or other agencies/organizations Identify data elements that would tie them together. (e.g. RIPS by allotment number) |  | BLM IM- 2006-149 Livestock Grazing Allotment and Pasture Spatial Database Standards  |

**4. Data Model Characteristics:** Each data standard is to be supported by a data model which includes entities and relationships between entities

- a) **Logical Data Model** – a graphical depiction of logical data showing entities (tables) and how they relate to each other.
- a) **Data Dictionary** – entities, attributes and metadata

**Grazing (Allotment Pasture) Data Model**

The entities in the shaded area (green) are not part of this data standard (and do not need to be reviewed). They are provided to show context and provide relationships to other data only.



| Entity Name   | Entity Description | Logical Data Element Name | Type      | Size | Required? | Definition  |
|---|--------------------|---------------------------|-----------|------|-----------|---|
| <b>ALLOTMENT</b>  |                    |                           |           |      |           |   |
| Allotment is the basic geographic area used in administering BLM range land. An allotment is derived from its pastures. |                    |                           |           |      |           |   |
|   |                    | ALLOTMENT NAME            | character | 50   | Yes       | The name by which the allotment is commonly known.  |
|   |                    | ALLOTMENT NUMBER          | character | 5    | Yes       | The number that identifies an Allotment which is unique within the BLM administrative state. Note: An allotment number may never be reused. If an existing allotment is divided or combined, all changed allotments should be assigned a new allotment number.  |
|   |                    | ALLOTMENT IDENTIFIER      | integer   |      | Yes       | The designed primary key that will uniquely identify a single occurrence of the entity.   |
|   |                    | ALLOTMENT ACTIVE DATE     | date      |      | Yes       | The calendar date on which the boundary of an allotment is established and becomes effective. The date will be in FGDC standard format of YYYYMMDD, and will be entered only once for that polygon.   |
|   |                    | ALLOTMENT INACTIVE DATE   | date      |      | Opt       | The calendar date on which the boundary of an allotment is no longer effective because the external boundary of the allotment changed or it is no longer used as an allotment. Business Rules: Allotments with End Dates are a separate feature class from Active Allotments. The date will be in FGDC standard format of YYYYMMDD, and will be entered only once for that polygon. |
|   |                    | ORGANIZATION IDENTIFIER   | integer   |      | Yes       | The designed primary key that will uniquely identify a single occurrence of the entity.   |
| <b>ALLOTMENT AUTHORIZATION</b>  |                    |                           |           |      |           |   |
| The authorization that is associated with an allotment for a given time period.   |                    |                           |           |      |           |   |
|   |                    | HISTORICAL ACRE MEASURE   | decimal   |      | Yes       | The size of the allotment in acres that was associated with the lease, not necessarily the actual size of the allotment.  |
|   |                    | ALLOTMENT IDENTIFIER      | integer   |      | Yes       | The designed primary key that will uniquely identify a single occurrence of the entity.   |
|   |                    | AUTHORIZATION IDENTIFIER  | integer   |      | Yes       | The designed primary key that will uniquely identify a single occurrence of the entity.   |
| <b>ALLOTMENT PASTURE</b>  |                    |                           |           |      |           |   |

| Entity Name   | Entity Description | Logical Data Element Name | Type      | Size | Required? | Definition   |
|---|--------------------|---------------------------|-----------|------|-----------|--|
| The association of which pastures belong to a given allotment. Business Rule: if the internal boundaries of pastures change, the allotment does not change. If the allotment size changes for administrative reasons, a new allotment number is created and the old allotment becomes inactive. |                    |                           |           |      |           |  |
|   |                    | PASTURE NAME              | character | 50   | Yes       | A pasture name is given to an area that is a subset area of an allotment. Some allotments may have multiple pastures where a name would be appropriate while some allotments may have no pastures delineated in which case the default value should be 'NA'. |
|   |                    | ALLOTMENT IDENTIFIER      | integer   |      | Yes       | The designed primary key that will uniquely identify a single occurrence of the entity.  |
|   |                    | LOCATION IDENTIFIER       | integer   |      | Yes       | The designed primary key that will uniquely identify a single occurrence of the entity.  |
| <b>PASTURE</b><br>A pasture is an area that is a subset area of an allotment. Allotments may have one or more pastures.   |                    |                           |           |      |           |  |
|   |                    | PASTURE NUMBER            | character | 2    | Yes       | The number that identifies a specific pasture within one Allotment. Note: numbering usually starts at 1 for each allotment.  |
|   |                    | LOCATION IDENTIFIER       | integer   |      | Yes       | The designed primary key that will uniquely identify a single occurrence of the entity.  |

The following entities shown on the logical data model are not part of this standard but are here for informational purposes.

| Entity Name  | Entity Description | Logical Data Element Name | Type      | Size | Required? | Definition  |
|--|--------------------|---------------------------|-----------|------|-----------|---|
| <b>AUTHORIZATION</b><br>Documentation of a management decision allowing a request, application or proposal and/or granting the right to use, enjoy, remove, or occupy the land, resources, or real property. |                    |                           |           |      |           |   |
|  |                    | AUTHORIZATION IDENTIFIER  | integer   |      | Yes       | The designed primary key that will uniquely identify a single occurrence of the entity. |
|  |                    | PARTY IDENTIFIER          | integer   |      | Yes       | The designed primary key that will uniquely identify a single occurrence of the entity. |
|  |                    | AUTHORIZATION TYPE NAME   | Character | 10   | Yes       | The name that indicates the type of authorization being provided. (lease, permit, etc.) |

| Entity Name   | Entity Description | Logical Data Element Name              | Type      | Size | Required? | Definition  |
|---|--------------------|--|-----------|------|-----------|---|
|   |                    | AUTHORIZATION OFFICIAL CLOSED DATE     | Date      |      | Opt       | The date the authorization was officially closed after permit conditions are fulfilled and accepted by the BLM. (DS Report 1993).   |
| <b>BLM ADMINISTRATIVE UNIT</b>  |                    |  |           |      |           |   |
| An organizational unit within BLM which has distinct jurisdictional responsibility for all activities in a geographic area. The formal grouping of positions into designated units and the assignment of functions and responsibilities to those units. This also includes the identification of supervisory/subordinate relationships and the interdependent activity between units. |                    |  |           |      |           |   |
|   |                    | ORGANIZATION IDENTIFIER                | integer   |      | Yes       | The designed primary key that will uniquely identify a single occurrence of the entity.   |
|   |                    | PARENT BLM ORGANIZATION IDENTIFIER     | character | 10   | Opt       | The identifier for the administrative unit that has responsibility for other units. For example, the Administrative Office is responsible for the Administrative State Office, which is responsible for District Offices. District Offices are responsible for Field Offices. |
|   |                    | BLM ORGANIZATION CODE                  | character | 10   | Yes       | The code that indicates the formal grouping of positions into designated units and the assignment of functions and responsibilities to those units based on the DOI FBMS structure.   |
|   |                    | BLM ADMINISTRATIVE UNIT END DATE       | date      |      | Yes       | The date on which a BLM Administrative unit ends.   |
|   |                    | BLM ADMINISTRATIVE UNIT EFFECTIVE DATE | date      |      | Yes       | The date on which a BLM Administrative unit begins.   |
|   |                    | LAND RESPONSIBILITY CODE               | character | 10   | Yes       | A code that indicates if the BLM administrative unit is responsible for an area of BLM land.  |
|   |                    | BLM ADMINISTRATIVE UNIT LEVEL NUMBER   | number    | 2    | Yes       | A number that indicates the level of the organization for the BLM administrative unit.  |
|   |                    | BLM UNIT TYPE NAME                     | character | 20   | Yes       | A name that indicates the type of BLM organizational unit.  |
| <b>GOVERNMENT ORGANIZATION</b>  |                    |  |           |      |           |   |
| A type of organization that is a governmental unit, at any level of the government, including state, federal, local.  |                    |  |           |      |           |   |
|   |                    | ORGANIZATION IDENTIFIER                | integer   |      | Yes       | The designed primary key that will uniquely identify a single occurrence of the entity.   |
| <b>LEASE</b>  |                    |  |           |      |           |   |
| An authorization (usually long term) to use public lands or resources for a fixed period of time.   |                    |  |           |      |           |   |
|   |                    | LEASE NUMBER                           | character | 15   | Yes       | The number associated with a specific authorization to use public lands or resources.   |
|   |                    | AUTHORIZATION IDENTIFIER               | integer   |      | Yes       | The designed primary key that will uniquely identify a single occurrence of the entity.   |



| Entity Name   | Entity Description | Logical Data Element Name | Type      | Size | Required? | Definition   |
|---|--------------------|---------------------------|-----------|------|-----------|--|
| <b>LOCATION</b>   |                    |                           |           |      |           |  |
| A defined place that requires a way to locate it by some means. Note: Entities linked to Location have the potential for a geospatial aspect. |                    |                           |           |      |           |  |
|   |                    | LOCATION ARCHIVE DATE     | date      |      | Opt       | The date which is the calendar year, month, and day when the position of the Location is considered no longer valid, but has historical value.       |
|   |                    | LOCATION EFFECTIVE DATE   | date      |      | Yes       | The date which is the calendar year, month, and day when the position of the Location was produced.  |
|   |                    | LOCATION IDENTIFIER       | integer   |      | Yes       | The designed primary key that will uniquely identify a single occurrence of the entity.  |
| <b>ORGANIZATION</b>   |                    |                           |           |      |           |  |
| A formal group of people organized for a purpose.   |                    |                           |           |      |           |  |
|   |                    | ORGANIZATION IDENTIFIER   | integer   |      | Yes       | The designed primary key that will uniquely identify a single occurrence of the entity.  |
|   |                    | ORGANIZATION NAME         | character | 100  | Yes       | The official name by which the organization is known. An organization may include businesses, agencies, or corporations, but not individual persons. |
|   |                    | ORGANIZATION TYPE NAME    | character | 20   | Yes       | A name that describes the type of organization that is being described.  |
|   |                    | ORGANIZATION ACRONYM CODE | character | 10   | Opt       | The code that indicates the preferred acronym for an organization.   |
|   |                    | PARTY IDENTIFIER          | integer   |      | Yes       | The designed primary key that will uniquely identify a single occurrence of the entity.  |

|  |        |   |  |  |             |    |
|--|--------|---|--|--|-------------|----|
| <b>5. Business Rules:</b> Rules under which data is used and modified (See WO-IM 2003 247 Attachment 1: Business Rules Collection) |        |   |  |  |             |    |
| <b>Rule Name</b>   |        | Allotment Data Collection   |  |  |             |    |
| Rule source (e.g. handbook, guidance, directive)   |        | Taylor Grazing Act  |  |  |             |    |
| Source Description (brief explanation of where the rule comes from)  |        | Taylor Grazing Act directs BLM to collect information on Grazing Allotments |  |  |             |    |
| Rule Statement (what is the rule?)   |        | BLM is authorized to collect information on Grazing                         |  |  |             |    |
| Type of Rule (e.g. Business Term, Standard, Guideline)   |        |   |  | Standard   |             |    |
| Is it Mandatory, Optional, or Not Applicable because it is a Business Term?  |        | Mandatory   |  | Automation Restriction? (Yes, No – <i>caused by the limits of technology</i> ) |             | No |
| How is Rule Implemented? (Manual Process, Computer Application, Not Applicable)  |        |   |  | Manual and Computer Application  |             |    |
| Name of Application or Manual Process  |        | RAS and Grazing Processes   |  |  |             |    |
| Rule Status (Active, Inactive)   | Active | Rule Effective Dates (rules kept for historical purposes)                   |  | Beginning Date   | Ending Date |    |

**6. Other Material:** Any other supporting material that aids in the understanding or use of the data standard; include specific geographic, organizational, or applicability constraints for non-national standards

- Pasture and Allotment Boundaries Data Standard Proposal
- Pasture and Allotment Polygons Implementation Guidelines
- Pasture and Allotment Domain Values Document

### 7. Domains Specific to Grazing

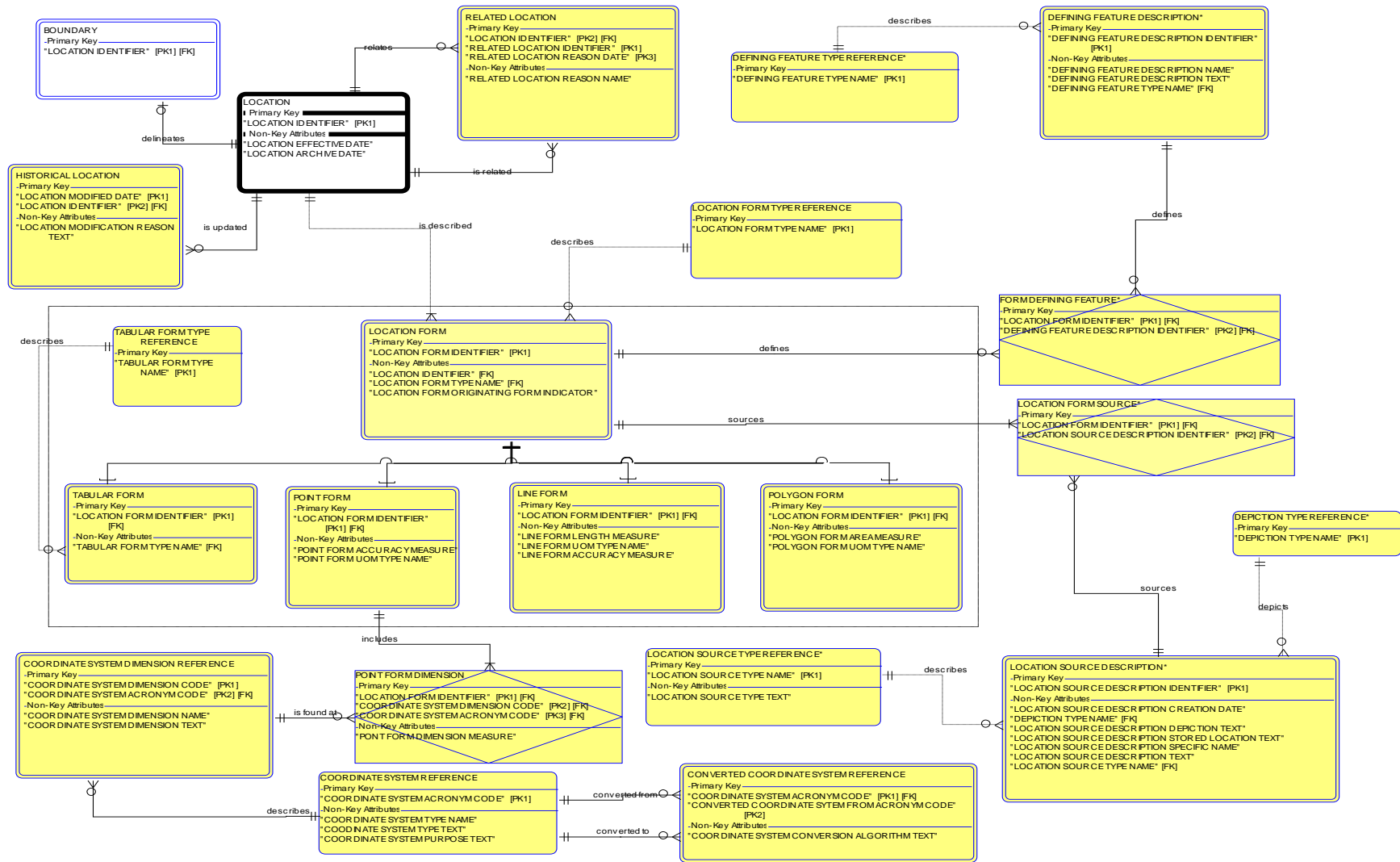
No domain values are specific to the Grazing Data Standard.

## Appendix A – Data Categories

|  |  |
|--|--|
| <i>How this standard fits into/supports the Bureau Enterprise Architecture.</i>  |  |
| What DOI Subject Areas and Information Classes does this standard cover?   |  |
| <u>Subject Area</u> : A collection of data classifications representing broad categories of information that support a line of business.   |  |
| <u>Information Class</u> : A logical grouping of entities that are subcategories of the subject areas.   |  |
| For the full list of Subject Areas and their Information Classes please see<br><a href="http://web.blm.gov/data_mgt/guidelines/DOI_SubjectArea_InfoClass.doc">http://web.blm.gov/data_mgt/guidelines/DOI_SubjectArea_InfoClass.doc</a> |  |
| <b>Geospatial and Geography Map</b> (Subject Area)   | Information about data that includes a terrestrial coordinate system or geographic reference. This includes geospatial data sets, mapping, imagery, coverage's, elevations, and features.  |
| <ul style="list-style-type: none"> <li>• Map (Information Class)</li> </ul>  | A graphic depiction on a flat surface of the physical features of the whole or a part of the earth or other body, or of the heavens, using shapes to represent objects and symbols to describe their nature. Maps generally use a specified projection and indicate the direction of orientation.  |
| <ul style="list-style-type: none"> <li>• Spatial Data Set (Information Class)</li> </ul>   | A collection of spatial data and its related descriptive data, organized for efficient storage and retrieval. A simple data set might be a single file with many records, each of which references the same set of fields. A more robust spatial data set includes data about the spatial locations and shapes of geographic features, recorded as points, lines, areas, pixels, grid cells, or TIN (Triangulated Irregular Network) sample points, as well as their attributes. |

## Appendix B – Location

Data Model that provides information on standard attributes for feature level metadata. It is not part of this data standard and does not need to be reviewed for the data standard; it merely provides more information and relationships.



| Entity Name   | Entity Description | Logical Data Element Name                           | Type      | Size | Req'd? | Key*      | Definition  |
|---|--------------------|---|-----------|------|--------|-----------|---|
| <b>BOUNDARY</b>   |                    |   |           |      |        |           | DRAFT ENTITY  |
| The edge of a location that demarks the change from one location to another location.         |                    |   |           |      |        |           |   |
|   |                    | LOCATION IDENTIFIER                                 | integer   |      | Yes    | PK        | The designed primary key that will uniquely identify a single occurrence of the entity.         |
| <b>CONVERTED COORDINATE SYSTEM REFERENCE</b>  |                    |   |           |      |        |           | DRAFT ENTITY  |
| The domain of values for the algorithm used to convert from one coordinate system to another. |                    |   |           |      |        |           |   |
|   |                    | COORDINATE SYSTEM<br>CONVERSION ALGORITHM<br>TEXT   | character | 60   | Yes    |           | The text that contains the algorithm used to convert from one coordinate system to another.     |
|   |                    | COORDINATE SYSTEM<br>ACRONYM CODE                   | character | 10   | Yes    | PK,<br>FK | The code that is considered the acronym for the coordinate system type.                         |
|   |                    | CONVERTED COORDINATE<br>SYSTEM FROM ACRONYM<br>CODE | character | 10   | Yes    | PK        | The code for the coordinate system that is being converted from (to another coordinate system). |
| <b>COORDINATE SYSTEM DIMENSION REFERENCE</b>  |                    |   |           |      |        |           | DRAFT ENTITY  |

| Entity Name  | Entity Description | Logical Data Element Name               | Type      | Size                        | Req'd? | Key*   | Definition   |
|--|--------------------|---|-----------|-----------------------------|--------|--------|--|
| The dimensions that are part of given coordinate system type.  |                    |   |           |                             |        |        |  |
|  |                    | COORDINATE SYSTEM DIMENSION TEXT        | character | 100                         | Yes    |        | The text that further describes the dimension for a given coordinate system type.  |
|  |                    | COORDINATE SYSTEM DIMENSION CODE        | character | 10                          | Yes    | PK     | The code that is used to designate a dimension for a coordinate system type.   |
|  |                    | COORDINATE SYSTEM DIMENSION NAME        | character | 10                          | Yes    |        | The name associated with a code that is used to designate a dimension for a coordinate system type.  |
|  |                    | COORDINATE SYSTEM ACRONYM CODE          | character | 10                          | Yes    | PK, FK | The code that is considered the acronym for the coordinate system type.  |
| <b>COORDINATE SYSTEM REFERENCE</b>   |                    |   |           | <b>DRAFT ENTITY</b>         |        |        |  |
| A reference framework consisting of a set of points, lines and/or surfaces; including a set of rules used to define the positions of points in space in either two or three dimensions.    |                    |   |           |                             |        |        |  |
|  |                    | COORDINATE SYSTEM TYPE TEXT             | character | 100                         | Yes    |        | The text that describes the particular coordinate system type.   |
|  |                    | COORDINATE SYSTEM TYPE NAME             | character | 40                          | Yes    |        | The name given to a particular coordinate system type.   |
|  |                    | COORDINATE SYSTEM ACRONYM CODE          | character | 10                          | Yes    | PK     | The code that is considered the acronym for the coordinate system type.  |
|  |                    | COORDINATE SYSTEM PURPOSE TEXT          | character | 100                         | Yes    |        | The text that describes the purpose or purposes of a given coordinate system type.   |
| <b>DEFINING FEATURE DESCRIPTION*</b>   |                    |   |           | <b>APPROVED ENTITY: BLM</b> |        |        |  |
| The values associated with second level of detail that can be used to define / create the location, based on the Defining Feature Type Name. There is not a finite set of values for this. |                    |   |           |                             |        |        |  |
|  |                    | DEFINING FEATURE DESCRIPTION NAME       | character | 40                          | Opt    |        | The name that identifies a more specific description of the feature from which the arcs are derived to create polygon boundaries. This information further describes the physical or mapping feature that makes up the polygon boundary. |
|  |                    | DEFINING FEATURE DESCRIPTION TEXT       | character | 200                         | Yes    |        | The text that provides further details on the Defining Feature Description.  |
|  |                    | DEFINING FEATURE DESCRIPTION IDENTIFIER | integer   |                             | Yes    | PK     | The designed primary key that will uniquely identify a single occurrence of the entity.  |
|  |                    | DEFINING FEATURE TYPE NAME              | character | 30                          | Yes    |        | The name that identifies the high-level category for the actual physical or mapping characteristics (features) from which the arcs are derived.  |

| Entity Name  | Entity Description | Logical Data Element Name               | Type      | Size | Req'd? | Key*   | Definition  |
|--|--------------------|---|-----------|------|--------|--------|---|
| <b>DEFINING FEATURE TYPE REFERENCE*</b>  |                    |   |           |      |        |        | APPROVED ENTITY: BLM  |
| A domain for the description of the characteristic (feature) constructed from a geographic feature that was used to create the location boundary.  |                    |   |           |      |        |        |   |
|  |                    | DEFINING FEATURE TYPE NAME              | character | 30   | Yes    | PK     | The name that identifies the high-level category for the actual physical or mapping characteristics (features) from which the arcs are derived. |
| <b>DEPICTION TYPE REFERENCE*</b>   |                    |   |           |      |        |        | APPROVED ENTITY: BLM  |
| The domain of values for the way a location is depicted either in scale or resolution.   |                    |   |           |      |        |        |   |
|  |                    | DEPICTION TYPE NAME                     | character | 10   | Yes    | PK     | The name that designates the detail with which the location is depicted, either in resolution or scale.   |
| <b>FORM DEFINING FEATURE*</b>  |                    |   |           |      |        |        | APPROVED ENTITY: BLM  |
| The defining features associated with a specific location form.  |                    |   |           |      |        |        |   |
|  |                    | LOCATION FORM IDENTIFIER                | integer   |      | Yes    | PK, FK | The designed primary key that will uniquely identify a single occurrence of the entity.   |
|  |                    | DEFINING FEATURE DESCRIPTION IDENTIFIER | integer   |      | Yes    | PK, FK | The designed primary key that will uniquely identify a single occurrence of the entity.   |
| <b>HISTORICAL LOCATION</b>   |                    |   |           |      |        |        | DRAFT ENTITY  |
| The date and reason why a location's information has changed. Business Rule: this is for administrative changes, not necessarily for corrections to data.  |                    |   |           |      |        |        |   |
|  |                    | LOCATION MODIFICATION REASON TEXT       | character | 200  | Yes    |        | The text which is the explanation for why data about a location has changed for administrative reasons.   |
|  |                    | LOCATION MODIFIED DATE                  | date      |      | Yes    | PK     | The date which is the calendar year, month, and day when the position of the Location was last modified.  |
|  |                    | LOCATION IDENTIFIER                     | integer   |      | Yes    | PK, FK | The designed primary key that will uniquely identify a single occurrence of the entity.   |
| <b>LINE FORM</b>   |                    |   |           |      |        |        | DRAFT ENTITY  |
| A series of connected, co-ordinate points forming a simple linear feature. It is used to represent rivers, and roads, or to form the boundary of polygons. (GIS dictionary) Note: In our current physical environment this includes all types of straight and curved lines including ones that intersection. |                    |   |           |      |        |        |   |
|  |                    | LOCATION FORM IDENTIFIER                | integer   |      | Yes    | PK, FK | The designed primary key that will uniquely identify a single occurrence of the entity.   |
|  |                    | LINE FORM LENGTH MEASURE                | decimal   |      | Yes    |        | The measure of the length of the line described in the Line Form UOM Type Name.   |
|  |                    | LINE FORM UOM TYPE NAME                 | character | 20   | Yes    |        | The domain value associated with the Unit of Measure used for the Line Form Length Measure.   |
|  |                    | LINE FORM ACCURACY MEASURE              | decimal   |      | Yes    |        | The measure that describes how close, in Line Form UOM Type Name the actual location is to the spatial depiction.                               |
| <b>LOCATION</b>  |                    |   |           |      |        |        | DRAFT ENTITY  |
| A defined place that requires a way to locate it by some means. Note: Entities linked to Location have the potential for a geospatial aspect.  |                    |   |           |      |        |        |   |
|  |                    | LOCATION ARCHIVE DATE                   | date      |      | Opt    |        | The date which is the calendar year, month, and day when the position of the Location is considered no longer valid but has historical value.   |
|  |                    | LOCATION EFFECTIVE DATE                 | date      |      | Yes    |        | The date which is the calendar year, month, and day when the position of the Location was produced.   |

| Entity Name  | Entity Description | Logical Data Element Name                        | Type      | Size | Req'd? | Key*   | Definition   |
|--|--------------------|--|-----------|------|--------|--------|--|
|  |                    | LOCATION IDENTIFIER                              | integer   |      | Yes    | PK     | The designed primary key that will uniquely identify a single occurrence of the entity.  |
| <b>LOCATION FORM</b>   |                    |  |           |      |        |        | DRAFT ENTITY   |
| The form in which the location is described such as the description, shape, or appearance of the location.   |                    |  |           |      |        |        |  |
|  |                    | LOCATION FORM IDENTIFIER                         | integer   |      | Yes    | PK     | The designed primary key that will uniquely identify a single occurrence of the entity.  |
|  |                    | LOCATION IDENTIFIER                              | integer   |      | Yes    | FK     | The designed primary key that will uniquely identify a single occurrence of the entity.  |
|  |                    | LOCATION FORM TYPE NAME                          | character | 10   | Yes    | FK     | The type of form in which the location is described or appears. point, line, polygon, tabular  |
|  |                    | LOCATION FORM ORIGINATING FORM INDICATOR         | character | 3    | Yes    |        | The value that indicates if this is the way in which the location was first drawn/described. (yes, no)   |
| <b>LOCATION FORM SOURCE*</b>   |                    |  |           |      |        |        | APPROVED ENTITY: BLM   |
| The actual origin of the location sources that were used to create a specific location form.   |                    |  |           |      |        |        |  |
|  |                    | LOCATION FORM IDENTIFIER                         | integer   |      | Yes    | PK, FK | The designed primary key that will uniquely identify a single occurrence of the entity.  |
|  |                    | LOCATION SOURCE DESCRIPTION IDENTIFIER           | integer   |      | Yes    | PK, FK | The designed primary key that will uniquely identify a single occurrence of the entity.  |
| <b>LOCATION FORM TYPE REFERENCE</b>  |                    |  |           |      |        |        | DRAFT ENTITY   |
| The domain for the type of form in which the location is described or appears whether in words, numbers of features (point line, polygon). This has been called feature in geospatial communities. |                    |  |           |      |        |        |  |
|  |                    | LOCATION FORM TYPE NAME                          | character | 10   | Yes    | PK     | The type of form in which the location is described or appears. point, line, polygon, tabular  |
| <b>LOCATION SOURCE DESCRIPTION*</b>  |                    |  |           |      |        |        | APPROVED ENTITY: BLM   |
| The values that provide a second level of detail about the location (coordinate) source origin. Note: there is not a finite set of these values.   |                    |  |           |      |        |        |  |
|  |                    | LOCATION SOURCE DESCRIPTION CREATION DATE        | date      |      | Yes    |        | The date on which the location source was originally created. This could just be a year (ccyy).  |
|  |                    | LOCATION SOURCE DESCRIPTION STORED LOCATION TEXT | character | 100  | Yes    |        | The text that provides the additional description of where the coordinate source can be found  |
|  |                    | LOCATION SOURCE DESCRIPTION DEPICTION TEXT       | character | 20   | Yes    |        | The text that describes the actual resolution or scale in which the location is depicted. Examples for Resolution: 1 meter, 10 feet. Examples for Scale: 1 in 10,000, 1 in 100. This does not have a domain or list of valid values. |
|  |                    | DEPICTION TYPE NAME                              | character | 10   | Yes    | FK     | The name that designates the detail with which the location is depicted, either in resolution or scale.  |
|  |                    | LOCATION SOURCE DESCRIPTION IDENTIFIER           | integer   |      | Yes    | PK     | The designed primary key that will uniquely identify a single occurrence of the entity.  |
|  |                    | LOCATION SOURCE DESCRIPTION TEXT                 | character | 200  | Yes    |        | The text that provides further details on the Location (coordinate) Source Description.  |



| Entity Name  | Entity Description | Logical Data Element Name                 | Type      | Size | Req'd? | Key*   | Definition  |
|--|--------------------|---|-----------|------|--------|--------|---|
|  |                    | LOCATION SOURCE DESCRIPTION SPECIFIC NAME | character | 40   | Opt    |        | The name that identifies a more specific description of the location (coordinate source).   |
|  |                    | LOCATION SOURCE TYPE NAME                 | character | 40   | Yes    | FK     | The name that identifies the general category for the origin of the location coordinate, representing a compilation of the state adopted source codes. The domain contains those values that would most likely be used in the determination of source codes for the data set. |
| <b>LOCATION SOURCE TYPE REFERENCE*</b>   |                    |   |           |      |        |        | APPROVED ENTITY: BLM  |
| The domain for the types of sources for the original location description / form.  |                    |   |           |      |        |        |   |
|  |                    | LOCATION SOURCE TYPE NAME                 | character | 40   | Yes    | PK     | The name that identifies the general category for the origin of the location coordinate, representing a compilation of the state adopted source codes. The domain contains those values that would most likely be used in the determination of source codes for the data set. |
|  |                    | LOCATION SOURCE TYPE TEXT                 | character | 100  | Yes    |        | The text that describes the Location Source Type.   |
| <b>POINT FORM</b>  |                    |   |           |      |        |        | DRAFT ENTITY  |
| A zero-dimensional abstraction of an object, with its location specified by a set of coordinates. (GIS dictionary)   |                    |   |           |      |        |        |   |
|  |                    | LOCATION FORM IDENTIFIER                  | integer   |      | Yes    | PK, FK | The designed primary key that will uniquely identify a single occurrence of the entity.   |
|  |                    | POINT FORM ACCURACY MEASURE               | decimal   |      | Yes    |        | The measure that describes how close the spatial depiction of the point is to the actual location.  |
|  |                    | POINT FORM UOM TYPE NAME                  | character | 20   | Yes    |        | The name of the domain value associated with the Unit of Measure used for the Point Form Accuracy Measure.  |
| <b>POINT FORM DIMENSION</b>  |                    |   |           |      |        |        | DRAFT ENTITY  |
| The measure associated with each dimension of a Coordinate System.   |                    |   |           |      |        |        |   |
|  |                    | PONT FORM DIMENSION MEASURE               | decimal   |      | Yes    |        | The measure that is associated with a specific coordinate system dimension.   |
|  |                    | LOCATION FORM IDENTIFIER                  | integer   |      | Yes    | PK, FK | The designed primary key that will uniquely identify a single occurrence of the entity.   |
|  |                    | COORDINATE SYSTEM DIMENSION CODE          | character | 10   | Yes    | PK, FK | The code that is used to designate a dimension for a coordinate system type.  |
|  |                    | COORDINATE SYSTEM ACRONYM CODE            | character | 10   | Yes    | PK, FK | The code that is considered the acronym for the coordinate system type.   |
| <b>POLYGON FORM</b>  |                    |   |           |      |        |        | DRAFT ENTITY  |
| An area bounded by a closed line. It is used to describe spatial elements, such as administrative and political boundaries and areas of homogeneous land use and soil types. (GIS dictionary).<br>Note: In our physical environment, this includes all types of polygons, including ones that overlap. |                    |   |           |      |        |        |   |
|  |                    | LOCATION FORM IDENTIFIER                  | integer   |      | Yes    | PK     | The designed primary key that will uniquely identify a single occurrence of the entity.   |
|  |                    | POLYGON FORM UOM TYPE NAME                | character | 20   | Yes    |        | The name of the domain value associated with the Unit of Measure used for the Polygon Form Length Measure.  |
|  |                    | POLYGON FORM AREA MEASURE                 | decimal   |      | Yes    |        | The area of the polygon described in the Polygon Form UOM Type Name.  |

| Entity Name   | Entity Description | Logical Data Element Name    | Type      | Size | Req'd? | Key*   | Definition  |
|---|--------------------|------------------------------|-----------|------|--------|--------|---|
| <b>RELATED LOCATION</b>   |                    |                              |           |      |        |        | DRAFT ENTITY  |
| A valid relationship between two LOCATIONs for a specific reason.   |                    |                              |           |      |        |        |   |
|   |                    | RELATED LOCATION IDENTIFIER  | integer   |      | Yes    | PK     | The designed primary key that will uniquely identify a single occurrence of the entity. The first location that has a relationship with another location. |
|   |                    | RELATED LOCATION REASON NAME | character | 40   | Yes    |        | The name that indicates the reason why two locations are related. Possible values: multi-part polygon, polygon lines, overlapping polygons.               |
|   |                    | RELATED LOCATION REASON DATE | date      |      | Yes    | PK     | The date when two locations became related for the reason stated.   |
|   |                    | LOCATION IDENTIFIER          | integer   |      | Yes    | PK, FK | The designed primary key that will uniquely identify a single occurrence of the entity.   |
| <b>TABULAR FORM</b>   |                    |                              |           |      |        |        | DRAFT ENTITY  |
| Descriptive information about a location, usually alphanumeric. This can be a single name or a combination of attributes that make up an address. |                    |                              |           |      |        |        |   |
|   |                    | LOCATION FORM IDENTIFIER     | integer   |      | Yes    | PK, FK | The designed primary key that will uniquely identify a single occurrence of the entity.   |
|   |                    | TABULAR FORM TYPE NAME       | character | 20   | Yes    | FK     | The name of the sub-category of the location form type which is true for tabular or alphanumeric descriptions of a location.                              |
| <b>TABULAR FORM TYPE REFERENCE</b>  |                    |                              |           |      |        |        | DRAFT ENTITY  |
| The domain for the type of tabular form that is being used to describe the location.  |                    |                              |           |      |        |        |   |
|   |                    | TABULAR FORM TYPE NAME       | character | 20   | Yes    | PK     | The name of the sub-category of the location form type which is true for tabular or alphanumeric descriptions of a location.                              |

\*Key (PK: Primary Key) (FK: Foreign Key which is PK of related entity) (PK, FK: Foreign Key part of PK)