Oregon Cadastral Data Exchange Standard

Version 3.0

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Please address comments to the Oregon Department of Revenue at OR.MAP@state.or.us.

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1.0   Introduction

Under the direction of the Oregon Geographic Information Council (OGIC), the Oregon Framework Implementation Team (FIT) has delegated the development of a Cadastral Framework Implementation Plan and a Cadastral Data Exchange Standard to the FIT Cadastral Subcommittee. The Cadastral Framework theme is a collection of prioritized, spatially referenced digital representations of broadly defined cadastral feature sets for Oregon. The tax lot element includes all tax lots within the state of Oregon.

This document, the Oregon Cadastral Data Exchange Standard (CDES), is the third major iteration of the standard and incorporates several *de facto* standards related to various aspects of the Oregon cadastre that have been in place and used by the cadastral community in Oregon for some time. Future iterations of this standard will incorporate additional components, such as a logical data model, that are currently being pursued collaboratively by the cadastral community. This standard is a living document that will be updated periodically.

1.1   Mission and Goals of the Standard

The goals for the Cadastral Exchange Standard are:

- Provide common definitions for cadastral information found in public records, which will facilitate the effective use, understanding, and automation of land records,
- Provide consistent attribute definitions and value ranges to enhance data sharing,
- Resolve discrepancies related to the use of homonyms and synonyms in land record systems, which will minimize duplication within and among those systems,
- Provide guidance and direction for land records and land surveying professionals on standardized definitions, which will improve land records automation, management, and use, and
- Provide a standard for the definition and structure of cadastral data that facilitates data sharing and protects and enhances the investments in cadastral data at all levels of government and in the private sector

1.2   Background

The Oregon Department of Revenue (DOR) has overseen cadastral mapping standards since 1953. All 36 counties in Oregon actively follow the *Oregon Cadastral Map Manual*. This document is available by contacting the Department of Revenue at the following email address: map.manual@state.or.us. CDES integrates with existing standards as much as possible. The Oregon Cadastral Map System Manual has been reviewed and incorporated in this document. All geospatial data sets developed under CDES must adhere to adopted *Oregon Metadata Standard*.

Other interagency federal and State of Oregon standards, such as the Bureau of Land Management Public Land Survey System meridian definitions, were adopted where appropriate. Standards from many local and state governments were reviewed for inclusion. Furthermore, CDES was written with consideration of other standards being developed through the Oregon geospatial data standards development process. Specifically, these include the *Oregon Road Centerline Data Standard*, the *Oregon Address Standard,* and the *Governmental Unit Boundary Data Exchange Standard*. To find more information on Oregon geographic information systems (GIS) data standards and their development, please visit the Oregon Geospatial Enterprise Office standards page at:
www.oregon.gov/DAS/EISPD/GEO/pages/standards/standards.aspx.

CDES is an extension of the Federal Geographic Data Committee's *Cadastral Data Content Standard for the National Spatial Data Infrastructure* (version 1.3, May 2003). CDES incorporates modifications to the federal standard in accordance with cadastral mapping goals and practices in Oregon. The federal standard is posted at www.nationalcad.org.

1.3   Description of Standard

CDES forms the basis for automating the real property data found in public records. The standard defines attributes or elements that are in land transaction documents. It provides suggested domains for many elements and provides an interagency definition for each element. These two standardization efforts, domains and definitions, should increase the uniformity of cadastral records. CDES describes the essential elements and data structure necessary to adequately describe, produce, and use real property data in Oregon.

CDES does not limit or filter the information that can be included. Cadastral information in the public record is modeled, defined, and included. For example, many types of legal descriptions, such as metes and bounds, subdivision plats, and the Public Land Survey System (PLSS), are included in the model and definitions. This does not mean that every implementation of the standard has to include every entity and attribute; conversely, the standard provides relationships, definitions and attributes to be considered for automation.

The standard contains sufficient information to convert land records information to a common format. For example, while it is possible to automate distances that have any unit of measure, the original measurements units must be indicated in a legal cadastre. This requirement adds a significant number of attributes to the standard. Within these added attributes there is an attempt to provide suggested domains to support future data conversions and migrations. These suggested domains are by no means an exhaustive list, and additional or expanded domains are encouraged.

The term "suggested domain" does not intend to indicate that this is a standardized list of domains. The rules and specifications for automating cadastral information into CDES depend in part on the information contained in the real property records. That is, it is not possible to automate information that is not available, but all information that is available could be automated. For example, if a tax lot described in a deed as Lot 2 of Green Acre Subdivision in Marion County and the bearings and distances around the tax lot are not included in the deed, it is not possible to automate the perimeter measurements.

1.4   Applicability and Intended Use of Standard

CDES is intended to support the automation and integration of publicly available land records information. It is intended to be used at all levels of government and the private sector. The standard contains entity definitions and objects related to cadastral information, including survey measurements, transactions related to interests in land, general property descriptions, and boundary and corner evidence data. The standard supports the exchange of this information.

The intended geographic scope of the standard is the state of Oregon, including all onshore cadastral information, as well as marine cadastral information. Additions to this standard for other geographic areas and business processes shall be determined as the document and process evolve.

The standard is not intended to reflect an implementation design. An implementation design requires adapting the structure and form of these definitions to meet application requirements. The standard can be implemented as either a stand-alone data system for measurement-based systems, for transactional

information systems, or as an attribute data system connected to a geographic information system. The standard does not contain the spatial and topological linkages and spatial features required to build and maintain a land records based geographic information system at this time. Those linkages and features shall be incorporated in a subsequent version of this standard if the cadastral data community in Oregon agrees upon the need and form of those linkages and features.

1.5   Standard Development Procedures

Participants

The FIT Cadastral Subcommittee is centered in the Department of Administrative Services' Geospatial Enterprise Office and has relied on the cadastral mapping community for input. This community is composed of Oregon county assessment and taxation staff, county GIS and IT staff, county commissioners, Oregon Department of Revenue, Oregon Forest Industries Council, Department of Administrative Services, Department of Forestry, Bureau of Land Management, utility companies, title companies, and software and other vendors.

The Oregon surveying community has also contributed by assisting with the definition of accuracy as it relates to cadastral mapping. All of these participants have combined requirements and industry perspectives to assist in creating this document and the ORMAP product. For more information on participants in the construction of this document, contact the Department of Revenue at the email address on the title page.

Comment Opportunities and Reviews

CDES has been circulated throughout the community for review and comment. This distribution is done by public meetings, email list servers, the GIS Program Leaders group (GPL), the ORMAP Technical Group and Advisory Committee, and the Oregon Geospatial Enterprise Office website. The initial review began with the distribution of version 0.1 on May 6, 2003. Following the adoption of this standard, additional reviews and comments shall be incorporated on a timely basis contingent on community approval. To make a comment, send email to the Oregon Department of Revenue at the email address on the title page.

1.6   Maintenance of Standard

The Cadastral FIT Subcommittee is responsible for maintaining this standard. It exists in an environment of rapidly evolving user needs and mission requirements. This standard shall be revised to incorporate the additions and revisions that are evaluated and validated following publication. Any user of the standard may submit requests for change. Additions and suggestions are encouraged to make this a workable document; they should be sent to the email address on the title page.

2.0   Body of the Standard

2.1   Scope and Content of the Standard

CDES provides guidance for the development and integration of feature and attribute data of particular cadastre-related layers. Specifically, this document addresses accuracy, format, and content.

2.2   Need for the Standard

The development and implementation of this data standard is required to facilitate Oregon cadastral data compilation and sharing. All 36 Oregon counties are required to maintain cadastral data, so a standard is needed to assure data developed by different organizations can be shared easily among the data users throughout the state. This standard is needed so that geographical information, as well as attribute field names, definitions, and values codes, is similar across county data sets.

2.3   Participation in Standards Development

Members of the FIT Cadastral Subcommittee team have included the ORMAP community as much as possible. The ORMAP program fosters collaboration from different cadastral mapping programs and stakeholders throughout Oregon. The entities involved in ORMAP and this standard development process include; the Oregon Department of Revenue, Department of Administrative Services, Oregon Department of Forestry, Oregon Forest Industries Council, Oregon county commissioners, the Oregon GIS community, county assessor's offices and IT staff, title companies, select cities of Oregon, and other public and private organizations interested in the development of the statewide seamless property map. For more information, please visit www.ormap.net for ORMAP information, or http://www.oregon.gov/DAS/IRMD/GEO/standards/standards.shtml for a description of the standard development process.

2.4   Integration with Other Standards

The Department of Revenue has overseen the development of cadastral mapping standards since 1953. The *Oregon Cadastral Map System* is actively followed in all 36 counties as required by ORS 308.245. This has created a cadastral mapping system where the symbology representing cadastral information on assessor maps is uniform across the state. The *Oregon Cadastral Map System* is a critical standard that will work with the CDES. This document is available on the ORMAP website at www.ormap.net. For information about the *Oregon Cadastral Map System*, please contact the Department of Revenue at the email address on the title page.

CDES follows the same format as other Oregon Framework standards as identified on the GEO website, http://cms.oregon.gov/DAS/CIO/GEO/pages/fit/fit.aspx. The FIT effort is closely aligned with the national framework initiative led by the Federal Geographic Data Committee and the President's Office of Management & Budget (OMB). Hence, the initial text for CDES was taken from the *Cadastral Data Content Standard for the National Spatial Data Infrastructure, Version 1.3*. The FIT Cadastral Subcommittee modified that document to produce a standard specific to cadastral mapping in Oregon. These modifications pertain primarily to the attribute data structure.

2.5   Technical and Operational Context

2.5.1   Data Environment

The data environment for cadastral data in Oregon is a vector model comprised of points, lines, polygons, and the topological relationships among those features. The exchange medium for cadastral data files is the shapefile, which is a public domain data structure relating points, lines, polygons, and feature attribution. All known GIS software suites in use in Oregon support this exchange medium. Information about the technical specification for the shapefile can be found at www.esri.com/library/whitepapers/pdfs/shapefile.pdf.

2.5.2   Reference Systems

Reference systems are a critical component of cadastral mapping to assure accuracy to required levels. Cadastral reference systems include the Public Land Survey System (PLSS) locations, as

well as the development of geodetic control points. PLSS locations include township and range corners and section corners. From these locations, geodetic control points are developed that allow cartographers to tie tax lot boundaries to highly accurate locations. Another source of reference is the BLM's Geographic Coordinate Data Base (GCDB). The coordinates in the GCDB are widely used to aid in cadastral mapping in Oregon.

The coordinate reference systems typically used in Oregon are the Oregon State Plane system north and south, the custom Oregon Lambert projection, and Universal Transverse Mercator). The Oregon Lambert projection is preferred when shipping data for exchange with state agencies and is required for exchange between state agencies. Projection definitions must accompany all deliverables.

2.5.3 Survey Tools

Land surveyors use survey tools, such as the Global Positioning System (GPS), in the acquisition of control points. Cartographers use control points gathered and created by surveyors as reference points to tie tax lot boundaries to real-world locations. This has increased the speed at which highly accurate cadastral maps are produced. When necessary to gather control points in the field, a licensed land surveyor will determine the appropriate tool.

2.5.4 Integration of Themes

The cadastral theme is often used as a base layer for many mapping applications. It is imperative that the cadastral theme be both accurate and complete to enable integration of other Framework themes. Other Framework themes that rely on accurate and complete cadastral data as a foundation include Administrative Boundaries, Cultural, Land Cover/Use, Utilities, and Transportation. By following these recommendations, cadastral data can be used for the widest array of functions. Tax lot boundaries are often coincident with administrative boundaries and with changes in land use, so the cadastral theme must integrate spatially with both. Address points, building outlines, and most other features that comprise the Cultural Framework theme lie within the boundaries of individual tax lots, so these features must integrate spatially with the cadastral theme. Many features of the Utilities Framework are components of systems that are intended to provide products and services to individual tax lots. As such, the Utilities Framework must integrate spatially with the cadastral theme.

The primary Framework data themes required by the Cadastral theme are Geodetic Control and Orthoimagery. Geodetic control provides the key to integrating the cadastral and orthoimagery themes, as well as all other themes. As noted in 2.5.2 above, geodetic survey control points provide highly accurate locations to which tax lot boundaries must be tied. Similarly, the Orthoimagery Framework theme is used to portray approximate boundary locations for tax lots.

2.5.5 Encoding

Cadastral boundaries are encoded in points, lines, polygons, and attributes. These convey information about the location and descriptions of each feature. To date, no specific encoding scheme for cadastral data has been adopted. However, it is intended that this standard be in alignment with the encoding schema(s) developed through the FGDC's *Cadastral Data Content Standard* and the cadastral initiative being pursued by OMB's Geospatial One-Stop Initiative.

2.5.6 Accuracy

Accuracy refers to the location of the tax lot boundaries in relation to control points identified by licensed surveyors. Cadastral tax lot line accuracy is not intended to represent positional accuracy. A licensed surveyor must be consulted if statements about positional accuracy need to be made.

Content accuracy of the cadastral data is also important. Content accuracy has to do with the correctness and completeness of the attribute data associated with the points, lines, and polygons that comprise the cadastral database. There are three aspects of content correctness:

- The attribute data must be correct for the tax lot in question.
- The attribute data must contain all of the elements specified in Section 3.0 of this standard.
- The individual components of the attribute data elements must be complete, as appropriate, and contain the correct information.

2.5.7 Edge Matching

Edge matching is a critical component of cadastral mapping and has traditionally been one of the most difficult challenges. Agreed tax lot boundaries must be established within county boundaries, as well as between neighboring counties, to ensure seamless coverage and unique ownership. Tax lots shall be edge matched to a common boundary despite varying relative accuracy levels.

2.5.8 Feature Identification Code

Features shall be identified by a unique number. The number must be unique, not only within a county, but also within the state, in order to make a statewide cadastral theme useful. The unique identifier shall be used to link cadastral attributes and indexes with geospatial features, such as tax lot polygons, fire district polygons, or geodetic control points. A statewide unique tax lot identifier has been defined and is named *ORTaxLot* (see Section 3.4 of this standard). Tax lot numbers are related to map scale and are subject to change as updating and remapping occur. They are unique and never reused, but they are not a permanent identifier. See Attachment A, Cadastral Exchange Standard Data Model.

2.5.9 Map Features

Map feature types are point, linear, and polygon features, each with associated attributes.

a) **Point**: Point features are geospatial objects that represent point map elements such as control, stationing, or landmarks.

b) **Linear:** Linear features are geospatial objects that represent single-line map elements such as historical lines. Linear features are not included in the Cadastral Data Exchange Standard at this time.

c) **Polygon:** Polygons are geospatial objects that represent features such as tax lots, school districts, fire districts, or tax code areas.

d) **Attributes:** Attributes are any of the additional information that is collected and shared about a cadastral feature.

2.5.10 Metadata

Minimum FGDC-compliant metadata shall be produced and maintained for each county's tax lot data. Tax lot data that follows CDES will be able to use a single set of metadata applicable to all 36 counties, with the exception of bounding coordinates, publish date, and developer contact information. The unique information will be customized for each county. Discussions are underway to post metadata on the OGIC website for review and query. This is in line with other statewide metadata available on that site. The stewardship of each tax lot layer shall reside with the counties who created it. Metadata must provide sufficient information to allow the user to determine whether the data will meet an intended purpose, as well as inform the user of how to access the data.

3.0   Data Attributes

The attributes for tax lots are presented here. The attributes specified are subject to revision based on the data modeling exercise currently underway by the Oregon cadastral community. Several related standards (for example, Oregon Administrative Boundaries Data Content Standard, Oregon Geodetic Control Data Content Standard, and others) may supersede some of the existing attributes. The attributes listed in section 3.4 represent the minimum set required to comply with this standard.

3.1   History

During the years of 1995-1998 the Oregon GIS Association (OGISA), in partnership with the assessors' county cartographers, OGIC, and the Oregon Association of County Engineers and Surveys (OACES), developed a conceptual framework for land information and explored how a simple interchange standard could be established for sharing base property records.

A technical committee was formed to prototype the interchange format consisting of state, local and county government representatives. The committee developed the data standard, tested it using land records from several counties, and developed several simple demonstrations using the information.

3.2   Design Issues

The exchange data structure has to be:

- flexible;
- simple;
- easily made from any GIS software;
- minimalist and agreeable to almost everyone;
- able to support basic viewing, querying and GIS/LIS functionality; and
- inclusive of enough attributes to be useful but not so many as to be controversial.

During the design process, several data structures became too complex or exceeded the scope, including:

- map annotation because it was too complex and variable;
- map control as it would not be very meaningful and could be easily misinterpreted; and
- large tabular datasets because this information is available from other sources and is too difficult to standardize.

3.3   Conceptual Framework

The Cadastral Data Exchange Standard has three components:

- Shapefiles of tax lots, tax codes, and map indexes,
- Digital images of the standard assessor's tax lot map, and
- Real Property table

Sections 3.4 through 3.8 describe these components
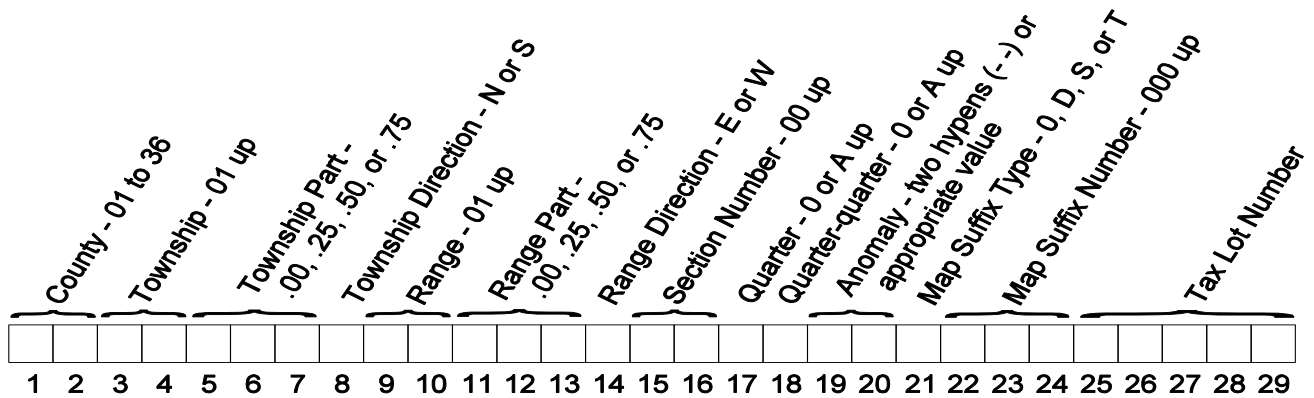
3.4   Tax lot Shapefile

The tax lot shapefile contains polygons that describe real property as maintained by the county cartographer following DOR guidelines. Shapefiles are countywide and must contain basic attributes that identify and describe each tax lot. The shapefile can serve as a set of primary keys to link the tax lots with other tax lot account information. Use the following file naming convention for the shapefile: "taxlot[*countynumber*]" (for example, taxlot03.shp for Clackamas County). Tax lot geometry will extend only to the accepted county taxing district boundary.

Following is a list of fields (attributes) used to describe each tax lot polygon; all fields must contain a value (no blanks). If no value exists, use the null value [*value*].

County	(Integer, Length = 2) County number (for example, Gilliam County = 11)[1]
Town	(Integer, Length = 2) Township number
TownPart	(Double, Length = 3) Partial township ([.00], .25, .50 or .75)
TownDir	(Text, Length = 1) Township direction (N or S)
Range	(Integer, Length = 2) Range number
RangePart	(Double, Length = 3) Partial range ([.00], .25, .50 or .75)
RangeDir	(Text, Length = 1) Range direction (E or W)
SecNumber	(Integer, Length = 2) Section number ([00] to 37)
Qtr	(Text, Length = 1) Quarter section ([0] or alpha character)
QtrQtr	(Text, Length = 1) Quarter-Quarter section ([0] or alpha character)
Anomaly	(Text, Length = 2) For irregular situations that are not otherwise categorized (for example, split Townships, split sections) ([--], TN, TS, SN, SS,)
MapSufType	(Text, Length = 1) [0], Detail (D), Supplemental (S) or multi-sheet maps (T)
MapSufNum	(Integer, Length = 3) Sheet number for D, S, or T maps, [000]
MapNumber	(Text, Length = 20) Must use map number as stored in the County's Assessor's database
ORMapNum	(Text, Length = 24) Statewide standard map number[2]
Taxlot	(Text, Length = 5) Tax lot number padded with leading zeros (00100, 00200, etc., or, for polygons without tax lot numbers, the allowable values are, ROADS, RAILS, WATER or [NONTL])
SpecialInt	(Text, Length = 1): Does a Special Interest tax lot number tie to the primary tax lot number? (Y, N, or [U] for unknown)
MapTaxlot	(Text, Length = 25) Map and tax lot number as stored in the assessor's database
ORTaxlot	(Text, Length = 29) Statewide standard map and tax lot number[3]
TaxlotFeet	(Long Integer, Length = 9) Legal area of the tax lot in square feet[4]
TaxlotAcre	(Double, Length = 9) Legal area of the tax lot in acres to the nearest hundredth[4]
ReliaCode	(Integer, Length = 2) Left blank, as a place holder
MapClass	(Text, Length = 1) Map Classification reflecting the typical scale of the Assessor's taxmap used to map a region, as determined by the Cartographer. (U, R, or F).[5]
MapRelCode	(Text, Length = 2) Identifies the relationship between the tax map and the current *ORMAP Technical Specifications* (01, 02, or 03).[5]
REFLink	(Text, Length=255) A link to web services provided by the county.

[1] The county numbers as defined by DOR are: 01-Baker, 02-Benton, 03-Clackamas, 04-Clatsop, 05-Columbia, 06-Coos, 07-Crook, 08-Curry, 09-Deschutes, 10-Douglas, 11-Gilliam, 12-Grant, 13-Harney, 14-Hood River, 15-Jackson, 16-Jefferson, 17-Josephine, 18-Klamath, 19-Lake, 20-Lane, 21-Lincoln, 22-Linn, 23-Malheur, 24-Marion, 25-Morrow, 26-Multnomah, 27-Polk, 28-Sherman, 29-Tillamook, 30-Umatilla, 31-Union, 32-Wallowa, 33-Wasco, 34-Washington, 35-Wheeler, and 36-Yamhill. To convert these numbers to Federal Information Processing Standards (FIPS) codes, multiply the number by two and subtract one. To convert FIPS codes to Oregon codes, add one to the FIPS code and divide by two.

[2] The *ORMapNum* field is the first 24 characters in the illustration below. Each position must be filled with the appropriate character or zeros (or hyphens in the case of *Anomaly*).

County - 01 to 36 | Township - 01 up | Township Part - .00, .25, .50, or .75 | Township Direction - N or S | Range - 01 up | Range Part - .00, .25, .50, or .75 | Range Direction - E or W | Section Number - 00 up | Quarter - 0 or A up | Quarter-quarter - 0 or A up | Anomaly - two hypens (- -) or appropriate value | Map Suffix Type - 0, D, S, or T | Map Suffix Number - 000 up | Tax Lot Number

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |

[3] The *ORTaxlot* field includes the *tax lot* number at the end padded with leading zeros if it is less than five characters. In *ORTaxlot*, the *MapSufType* and *MapSufNum* fields are always zeros unless the county includes the supplemental map number as part of the tax lot number. In that case, S plus the *MapSufNum* is appropriate (S001, S002, etc.).

[4] One or the other of these fields is used depending on how the assessor maintains the information for the tax lot. If there is no legal area measurement, as in the case of lot and block descriptions, both remain zero.

[5] This table provides the possible values and definitions for MapClass and MapRelCode attributes for the tax lot shapefile. These will be determined by the professional judgment of a County Cartographer.

MapClass	MapRelCode
U = Urban R = Rural F = Farm/Forest (resource lands)	01= Meets or exceeds ORMAP Technical Specifications 02 = Technical Specifications not met 03 = Excepted from Technical Specifications

3.5   Tax Codes Shapefile

Tax codes are maintained as part of the assessor's map and can be used to derive important information about the boundaries of taxing districts. Tax codes can be used to generate taxing districts. One of the uses of cadastral data is providing better information for tax districts.

The tax code shapefile represents polygons that describe each tax code area within a county as defined by the DOR map guidelines, when naming this shapefile use the following format: "TXCode[*countynumber*]" (for example , TXCode12 for Grant County). Tax codes are used by the assessor's office to manage overlapping taxing districts. Each tax code area represents one or many taxing districts. The fields (attributes) used to describe each tax code polygon are as follows:

County   (Integer, Length = 2) County number (for example, Gilliam County = 11)
Taxcode   (Text, Length = 8) Tax code value (for example 4-4)

3.6   Map Index Shapefile

Many Counties have already created map index polygons, or can generate them as part of the exchange process. Use the following file naming convention for the shapefile: "mapindex[*countynumber*]" (for example , mapindex03.shp for Clackamas County).
The map index shapefile contains polygons that represent the map area that is the boundary of a group of tax lots. These polygons should be countywide and must contain basic attributes, which identify and describe each map index polygon. Many of the field definitions are in section 3.4 of this standard.

County   (Integer, Length = 2) County number (for example, Gilliam County = 11)
MapScale   (Long Integer) Scale of map[1]
MapNumber   (Text, Length = 20) The map number as used in the assessor's database
ORMapNum   (Text, Length = 24) Statewide standard map number
CityName   (Text, Length = 50) Name of incorporated city in which the map falls, when maintained.
PageNumber (Long Integer) optional field for those that want to control page numbers in a map series
MapRelCode (Text, Length = 2) Identifies the relationship between the tax map and the current *ORMAP Technical Specifications* (01, 02, or 03).
MapClass   (Text, Length = 1) Map Classification reflecting the typical scale of the Assessor's taxmap used to map a region, as determined by the Cartographer. (U, R, or F).

[1]MapScale values are: 10 Scale, 20 Scale, 30 Scale, 40 Scale, 50 Scale, 100 Scale, 200 Scale, 400 Scale, 800 Scale, 1000 Scale, 2000 Scale, such that 10 Scale is 1"=10', 20 Scale is 1"=20', etc.

3.7   Real Property Table

The real property file contains information about land transactions. This file may contain single or multiple records for each tax lot. The *MapTaxlot* field connects the real property table to the tax lot shapefile. The primary account number (*PrimAccNum*) is the primary key for this file and could be used to link to other assessment information at the county. When exchanging this data use a DB IV format and the following naming convention: "RProp[*countynumber*].dbf" (for example, RProp36.dbf for Yamhill County).

County   (Integer, Length = 2) County number (for example, Gilliam County = 11)
MapTaxlot   (Text, Length = 25) See section 3.4 for a description of this field
SIMapTax   Text, Length = 28) *MapTaxlot* plus *SpecialInt* (A01, M01 and U01)
PrimAccNum   (Text, Length = 30) Assessor's primary account or serial number for tax lot (for example, 313300)
OwnerLine1   (Text, Length = 255) Primary owner's name
OwnerLine2   (Text, Length = 255) Secondary owner's name
OwnerLine3   (Text, Length = 255) Third owner's name
AgentName   (Text, Length = 255) Agent name for the tax lot
MailAdd1   (Text, Length = 40) Full mailing address (for example, 123 NW Main Street)
MailAdd2   (Text, Length = 40) Second mailing address to support non-standard addresses
MailCity   (Text, Length = 40) City for mailing address

MailState	(Text, Length = 40) State for mailing address
MailCntry	(Text, Length = 40) Country for mailing
MailZip	(Text, Length = 10) Zip code for mailing address
SiteAddNam	(Text, Length = 40) Full situs address including building number and street name (for example, 123 NW Main Street)
SiteAddCty	(Text, Length = 40) City name for situs address
SiteZip	(Text, Length = 10) Zip code for situs address
InstYear	(Integer, Length = 4) Year last sold
InstMonth	(Integer, Length = 2) Month last sold
InstID	(Text, Length = 24) Instrument number of last sale such as book and page
InstType	(Text, Length = 16) Type of instrument
Dwelling	(Text, Length = 1) Occupied structure on tax lot (Y or N)
PrpClass	(Text, Length = 8) Property class number
PrpClsDsc	(Text, Length = 32) Property class description

4.0   References

Cadastral Data Content Standard for the National Spatial Data Infrastructure Version 1.3 – Public Review Draft Subcommittee on Cadastral Data, Federal Geographic Data Committee, January 2003.

Oregon Cadastral Map System, Oregon Department of Revenue, Cartographic Unit, 1981, Revised 2002.

ORMAP Data Exchange Standard, ORMAP Technical Group, 1/13/2003, *www.ormap.net*

Attachment A: Data Model Diagram

Tax Lot shapefile contains
geometry and database

Tax Lots	
PK	**MapTaxlot: [Set]**
	County : [List]
	Town
	TownPart
	TownDir
	Range
	RangePart
	RangeDIR
	SecNumber
	Qtr
	QtrQtr
	Anomaly
	MapSufType
	MapSufNum
	MapNumber
	ORMapNum: [Set]
	Taxlot
	SpecialInt
	ORTaxlot: [Set]
	TaxlotFeet
	TaxlotAcre
	ReliaCode
	MapClass
	MapRelCode

Real Property	
FK1,U1 **U1**	**MapTaxlot: [Set]** **PrimAccNum: [Set]**
	County
	SIMapTax
	OwnerLine1
	OwnerLine2
	OwnerLine3
	AgentName
	MailAdd1
	MailAdd2
	MailCity
	MailState
	MailCntry
	MailZip
	SiteAddNam
	SiteAddCty
	SiteZip
	InstYear
	InstMonth
	InstID
	InstType
	Dwelling
	PrpClass
	PrpClsDes

one to many

one
to
one

Tax Codes shapefile contains
geometry and database

Tax Codes	
	County **Taxcode**

Other County Data	
PK	**PrimAccNum: [Set]**
	Attribute1
	Attribute2
	Attribute3