

Project: *Municipal Financial System and CAMA Interface*

Tax Data Load - XML File Specifications

Description

This document describes the structure of the XML interface file used for importing assessment data into the CAMA (Computer Assisted Mass Appraisal) system from municipal financial systems. The document also describes the business rules applied to the attributes in the Tax XML interface file.

This interface file imports information required by CAMA to prepare data submissions for export to ASSET - Assessment Shared Services Environment. This standard is recommended to facilitate easy exchange of information between the municipal financial and CAMA systems.

In the term Tax Data Load the word 'TAX' is in reference to the colloquial term 'tax system'.

Identification

Project Name:	CAMA Tax Load	Approved:
DMR Project Manager:	Mark Ethier	_____
AMA Project Manager:	Bruce Ney	_____

DRAFT

History

Version	Author	Date	Description
0.1	John Scott/Bruce Ney	Aug 1, 2002	Initial Draft Document
0.2	John Scott/Bruce Ney	Aug 5, 2002	Edit based on John's feedback
0.3	John Scott	Aug. 7, 2002	Edited based on feedback from Rosina Rosselli
0.4	John Scott	Aug 8, 2002	Edited based on feedback from Rosina Rosselli
0.5	John Scott	November 11, 2002	Add RequisitionBodyPct and drop PublicSchoolPct, SeperateSchoolPct, UndeclaredSchoolPct
0.6	John Scott	January 27, 2003	Add the previously missed AssessablePartyCode to the XML sample.
0.7	John Scott	June 11, 2003	Correct the spelling of Requisition in the RequisitionBody element and the RequisitionBodyCode and RequisitionBodyType attributes in <i>Table 3- TAX XML File Detail Definition</i> Add MunicipalityDataLoad as the parent element of AssessableProperty in <i>Table 3- TAX XML File Detail Definition</i> Add Neighborhood to example in section 2.0 XML File Terminology
0.8	Andrew Lerohl	September 4, 2003	Changed datatype for RequisitionBodyPct from Number(3) to Number(6,3) to allow for decimal places in the liability percent.
0.9	Sandy Husar	January 6, 2004	Changed Requisition Body child elements from 2 or many to 1 or many. Added: At least 1 requisitioning body type that starts with 'S' must be supplied in the TAX XML file in <i>section 3.0 Tax XML File Schema Relationship</i> .

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TAX XML FILE STRUCTURE

The W3C (World Wide Web Consortium) standards are used in the development of the XML schema for the Tax XML file.

A variety of codes are used in the Tax XML submission. Assessment Services Branch has distributed a document a containing the standard code sets. The codes are as of document date and ASB should be contacted for updates.

1. TAX FILE – STANDARDS

This specification is for non-integrated CAMA and tax systems only where the volume of transactions per year warrants an electronic exchange of information. For many municipalities, the transfer of tax information to the assessor and the CAMA system is most effectively handled by data re-entry.

The information being extracted from the Tax system is based on the following assumptions about division of responsibility:

- Assessment Roll to Legal Land parcel association is the responsibility of the municipality. In some instances this has been delegated to the Designated Assessor.
- A cross-reference may be required in CAMA to translate the Assessor version of the Assessment Roll Number to the Municipality version of the Roll Number. This is purely an internal record number and is never shared outside the CAMA system.
- The municipality is responsible for Municipal Address and its association to the assessable parcel.
- The Municipality is responsible for the Requisition Body and School Support association to the assessable parcel.
- The Appointed Assessor is responsible for breaking down the assessed value by into amounts corresponding to the liability codes.
- The Appointed Assessor ensures that the Tax & Assessment views balance.

1.1 FILE NAMING STANDARDS

Each Tax XML file name will consist of the following three (3) components (in the order presented). Each component will be separated by an underscore.

- 1) Tax Year - four digits representing the taxation year for which information is being submitted.
- 2) TAX – these three characters identify this file as containing the financial system/CAMA system interface information.
- 3) Municipality Code - the four digits representing the municipality assigned by Alberta Municipal Affairs, Local Government Services Division. The Assessment Services Branch provides these codes.

Example:

Taking the town of Athabasca Annual Assessment Submission for Taxation Year 2002 as an example, the XML would be named as follows:

2002_TAX_0011.XML

Each Tax XML file must be submitted in a zip file format. The standard naming convention for the zip file is the same as the Tax XML file with a file extension of .zip. For example:

2002_TAX_0011.ZIP

1.2 ELEMENT AND ATTRIBUTE NAMING STANDARDS

- Abbreviations are used in naming attributes.
- Abbreviations are not used in naming elements (parent or child). Please refer to *section 3.0 XML File Terminology* for a definition of elements and attributes.
- *Table 2 - Attributes Standard Abbreviations for ASSET data load files and Tax Data Load Files* contains a list of standard abbreviations used in naming attributes.

Table 2 - Attribute Standard Abbreviations for ASSET data load files and Tax Data Load Files

Name	Abbreviated Name
1. Adjustment, Adjusted	Adj
2. Amount	Amt
3. Assessment	Asmnt
4. Alberta Township System	ATS
5. Count	Cnt
6. Description	Desc
7. Improvement	Imprv
8. Indicator of Value	IOV
9. Land Identification Number Code	LINC
10. Number	Nbr
11. Percent	Pct
12. Sequence	Seq

- Element and attribute names are case sensitive. They must appear in the Tax XML file using mixed case (sentence case style), where the first character of a word is in uppercase and the remaining characters of a word are in lowercase. For example:
 - AssessableProperty
 - ImprovementType
 - MunicipalityName
- Underscores are not used to separate words in an element or attribute name.
- For optional attributes - if no data exists for that attribute, the attribute name must still exist in the Tax XML file with a null/blank indicator. The null/blank indicator is two double quotes (“”). For example: If there is no data for Parcel Size then the attribute will appear in the file as **ParcleSize=""**.
- For optional elements - the element name and any of its child elements should not exist in the Tax XML file. For example, if there are no Legal Land

Parcels, then the ATS and PlanBlockLot elements would not exist in the Tax XML file

2. XML FILE TERMINOLOGY

An awareness of the following terminology may help with the understanding of the description of the Tax XML file. The following sample of an XML file is used to illustrate terminology definitions.

Here is a partial example of an XML file created using a schema that follows W3C conventions. Notice the naming standards used, along with the empty attribute `ParcelSize= ""` which indicates that the attribute called `ParcelSize` for this `AssessableProperty` record has a content of null/blank.

Please note: The purpose of this example is to help explain the XML terminology and description of the TAX XML file; attributes may not contain valid data.

```
<?xml version="1.0" encoding="UTF-8" ?>
<MunicipalityDataLoad MunicipalityCode="9999" TaxYear="2003" >
  <ZoningCode ZoningCode="A" ZoningLabel="Label for Zone Code A"
    ZoningDesc="Description for Zoning Code A"/>
  <ZoningCode ZoningCode="B" ZoningLabel="Label for Zone Code B"
    ZoningDesc="Description for Zoning Code B" />
  <ZoningCode ZoningCode="C" ZoningLabel="Label for Zone Code C"
    ZoningDesc="Description for Zoning Code C" />
  <AssessableProperty RollNbr="136294007" ParcelSize="156.46"
    UnitOfMeasure="AC" Neighborhood="1000"
    AssessablePartyCode="I">
    <RequisitionBody RequisitionBodyCode="6"
      RequisitionBodyType="A" RequisitionBodyPct="100"/>
    <RequisitionBody RequisitionBodyCode="S6"
      RequisitionBodyType="SS" RequisitionBodyPct="75"/>
    <RequisitionBody RequisitionBodyCode="P6"
      RequisitionBodyType="SP" RequisitionBodyPct="25"/>
    <RequisitionBody RequisitionBodyCode="ASFF"
      RequisitionBodyType="SU" RequisitionBodyPct="0" />
    <LegalLandIdentifier LincNbr="21669734" >
      <PlanBlockLot Plan="" Block="" Lot="" />
      <ATS Meridian="4" Range="13" Township="46"
        Section="29" QuarterSection="SW"
        LegalSubdivision="" SurveyLotNbr=""
        SurveyLotType="" />
    </LegalLandIdentifier>
    <Zoning ZoningCode="A" />
  </AssessableProperty>
</MunicipalityDataLoad>
```

- An XML file consists of a number of elements.

- All elements (except the first element in an XML file) can be child elements. This means that there is a higher level element (the parent). A child element cannot exist without its parent element.
- Elements are identified by tags: Examples are:
 - Parent elements with attributes

After the last attribute in the parent a greater than sign is placed >. For example:

```
<MunicipalityDataLoad MunicipalityCode="9999" TaxYear="2003">
  <ChildElements />
</MunicipalityDataLoad>
```

In this example, the MunicipalityDataLoad element's Opening Tag has attributes. The list of attributes is ended with a greater than sign, which indicates the end of the Opening Tag, and that child elements should follow.

 - Elements with child elements

Opening Tags: <AssessableProperty and Closing Tags: </AssessableProperty>. (Note: the colons are not part of the tags)

 - Elements without child elements

Opening Tags: <ZoningCode and Closing Tags: />

(Note: the colons are not part of the tags)
 - Child elements are enclosed within the Opening and Closing Tags of the Parent Element: In the above example: <AssessableProperty>. is a Parent Element of <RequisitionBody />.
 - Parent and child elements also consist of attributes.
 - Attributes DO NOT have child elements but do hold data. In the above Example: MunicipalityCode="9999" is an attribute of <MunicipalityDataLoad. All of the attributes of MunicipalityDataLoad and its Child Elements are enclosed within the Opening and Closing Tags of MunicipalityDataLoad.
 - Attributes that have a content of null/blank must be present in the XML file with the empty attribute indicator. For example ParcelSize="" indicates that the ParcelSize attribute is null/blank. The empty attribute indicator is two double quotes ("").
 - Parent and Child elements have relationships. A parent element can have one occurrence of a child element (one record), multiple occurrences of the child element (records), or no occurrence of a child element (the tag will not exist). Section 3.0 TAX XML File Schema Relationship illustrates these relationships.

3. TAX XML FILE SCHEMA RELATIONSHIP

The following diagram illustrates the general structure and relationships (cardinalities) of the Tax XML file. Section 4.0 *TAX XML File Detail Definition* provides a detailed description of each element and attribute of the Tax XML file.

<i>Element</i>	<i>Number of child elements in the parent elements</i>
MunicipalityDataLoad (parent tag)	1
ZoningCode	0 or many
AssessableProperty	1 or many
RequisitionBody	1 or many
MunicipalAddress	0 or 1
LegalLandIdentifier	0 or many
PlanBlockLot	0 or many
ATS	0 or many
Zoning	1 or many

The following notes further describe the diagram above.

- All child attributes that are mandatory must have values only if the parent element exists.
- Each XML file must have one and only one MunicipalityDataLoad parent element.
 - The MunicipalityDataLoad parent element must consist of the following mandatory attributes. Refer to section 4.0 *TAX XML File Detail Definition* for a detail description of the attributes.
 - MunicipalityCode
 - TaxYear
- Each Municipality Data Load parent element must have zero (0) or many ZoningCode child elements. ZoningCode child elements consist of the ZoneCode (and corresponding description) established in the municipal bylaw. These are the code table values that make up the Municipalities valid list of zoning (or land use) codes.
- Each Municipality Data Load parent element must have one (1) or many AssessableProperty child element(s).
- Each AssessableProperty parent element must have one (1) or many RequisitionBody child element(s). At least 1 requisitioning body type that starts with 'S' must be supplied in the TAX XML file.
- The Requisition Body Code(s) that represents School and the ASFF (Undeclared) must be supplied in the TAX XML file. The *RequisitionBodyPct* attribute in this element will capture the percentage declared for the separate and/or public school support as well as the undeclared percentage of school support for *RequisitionBodyType*

attributes of SS (School Separate); SP (School Public), and SU (School Undeclared). The separate, public, and undeclared percentage must be supplied in the TAX XML file and the sum must equal 100 percent. For all other requisition body types (not SS - School Separate; SP - School Public, or SU - School Undeclared) the percentage supplied in the TAX XML file must be defaulted to 100.

- Each AssessableProperty parent element must have zero (0) or one MunicipalAddress child element(s).
- Each AssesableProperty parent element must have zero (0) or many LegalLandIdentifier child element(s).
- Each LegalLandIdentifier parent element must have zero (0) or many PlanBlockLot child element(s),
- Each LegalLandIdentifier parent element must have zero (0) or many ATS child element(s).
 - If PlanBlockLot exists it is not necessary to provide the ATS.
- Each AssessableProperty parent element must have one (1) or many Zoning child element(s). The zone is specific to the assessable property.

4. TAX XML FILE DETAIL DEFINITION

The following table identifies in detail the elements (parent, child), and attributes in the Tax XML file.

Note:

- 1) For optional attributes - if no data exists for that attribute, the attribute name must still exist in the Tax XML file with a null/blank indicator. The null/blank indicator is two double quotes (“”). For example: If there is no data for Parcel Size then the attribute will appear in the file as **ParcelSize= ""**
- 2) For optional elements - the element name and any of its child elements should not exist in the Tax XML file. For example, if there are no Legal Land Parcels, then the ATS and PlanBlockLot elements should not exist in the Tax XML file.

Table 3- TAX XML File Detail Definition

Element Name	Parent Element	Attribute Name	Description	Datatype Format	Requirements
MunicipalityDataLoad			Header record. Each XML file must have one Header record that contains municipality specific information, and information about the type of assessment submission in the XML file.		Mandatory Tax Data Load process will not proceed if this element is not present in the TAX XML file.
		MunicipalityCode	A Unique Code that represents the Municipality for which the assessment submission is loaded.	Number(4)	Mandatory Tax Data Load process will not proceed if this attribute is null/blank Must be a valid code.
		TaxYear	The Taxation Year the assessment submission is for.	Number(4) Format - YYYY.	Mandatory Tax Data Load process will not proceed if this attribute is null/blank.
ZoningCode	MunicipalityDataLoad		Contains the Municipality Zoning attributes.		Optional For many small municipalities

Table 3- TAX XML File Detail Definition

Element Name	Parent Element	Attribute Name	Description	Datatype Format	Requirements
					this may be loaded into the CAMA system manually. Since this is optional the CAMA system will require processing rules.
		ZoningCode	The zoning (land use) code established in the municipal bylaw.	Varchar2(10)	Mandatory if zoning code element exists
		ZoningLabel	A short description of the zoning code.	Varchar2(30)	Mandatory if zoning code element exists
		ZoningDesc	A long description of the zoning code.	Varchar2(1000)	Optional
AssessableProperty	MunicipalityDataLoad		Contains the AssessableProperty (parcel) attributes and child elements.		Mandatory
		RollNbr	Municipality Roll Number. Must be unique for each property on the roll.	Varchar2(30)	Mandatory
		ParcelSize	The land area of the whole parcel. This is provided for all but manufactured homes on lease lots.	Number(12,3)	Optional
		UnitOfMeasure	Standard assessment audit unit of measure code.	Varchar2(2)	Optional
		Neighborhood	The name of the neighborhood that the assessable property is located in.	Varchar2(40)	Optional
		AssessablePartyCode	A unique code that identifies the type of assessable party (from the standard liability codes, for example: Individual,	Varchar2(4)	Mandatory Must be a valid code

Table 3- TAX XML File Detail Definition

Element Name	Parent Element	Attribute Name	Description	Datatype Format	Requirements
			Corporate, Municipal Property, Provincial Property, etc.)		
RequisitionBody	AssessableProperty		Contains the requisitioning bodies jurisdiction the property is in (attributes), excluding school.		Mandatory
		BodyCode	A code that identifies the requisitioning bodies including the school(s) that the property is in.	Varchar2(6)	Mandatory Must be a valid code
		BodyType	A code that identifies the type of requisition body.	Varchar2(6)	Mandatory Must be a valid code
		RequisitionBodyPct	An apportionment amongst school requisition bodies. For Requisition Body Type of SS (School Separate), SP (School Public), and SU (School Undeclared); contains the percentage of public, separate, and undeclared school support. For all other Requisition Body Types - must be defaulted to 100.	Number(6,3)	Mandatory Percentage of separate, and/or public, and undeclared school support must exist and the sum of school support must equal 100%. For Requisition Body Type of SS (School Separate); SP (School Public), and SU (School Undeclared) can be Zero (0). For all other Requisition Body Types - must be defaulted to 100 (supplied in CAMA file). Refer to Note: 3) Above.

Table 3- TAX XML File Detail Definition

Element Name	Parent Element	Attribute Name	Description	Datatype Format	Requirements
MunicipalAddress	AssessableProperty		Contains the Municipality Address attribute		Optional
		MunicipalAddress	housesbr, suite,street,street type (on one line).	Varchar2(100)	Optional
LegalLandIdentifier	AssessableProperty		Contains the linc number and legal land description assigned to the assessable property (parcel) attribute. Does not need to be provided for manufactured homes on leased lots.		Optional
		LincNbr	Land Titles' Linc Number of the property.	Number(10)	Mandatory, if LegalLandIdentifier Element exists.
PlanBlockLot	LegalLandIdentifier		Contains the Land Titles' Plan, Block, Lot attributes of the assessable property (parcel).		Optional
		Plan	Legal description (standard or nonstandard).	Varchar2(8)	Optional
		Block	Legal description (standard or nonstandard).	Varchar2(6)	Optional
		Lot	Legal description (standard or nonstandard).	Varchar2(7)	Optional
ATS	LegalLandIdentifier		Contains the Land Titles' Standard or non-standard ATS address attributes.		Optional
		Meridian	Standard or non-standard ATS Meridian.	Number(1)	Optional
		Range	Standard or non-standard ATS Range.	Number(2)	Optional

Table 3- TAX XML File Detail Definition

Element Name	Parent Element	Attribute Name	Description	Datatype Format	Requirements
		Township	Standard or non-standard ATS Township.	Number(3)	Optional
		Section	Standard ATS Section.	Number(2)	Optional
		QuarterSection	Standard ATS Quarter Section	Varchar2(2)	Optional If not null then LegalSubdivision, SurveyLotNbr and SurveyLotType must be null
		LegalSubdivision	Standard ATS Legal Subdivision	Number(2)	Optional If not null then QuarterSection, SurveyLotNbr and SurveyLotType must be null
		SurveyLotNbr (survey lot number)	Non-Standard ATS Survey lot number.	Number(3)	Optional If not null then QuarterSection, and LegalSubdivision must be null and SurveyLotType is mandatory
		SurveyLotType	Non-Standard ATS Survey lot type.	Varchar2(2)	Optional If not null then QuarterSection, and LegalSubdivision must be null and SurveyLotNbr is mandatory.
Zoning	AssessableProperty		Contains the zoning (land use) code specific to the assessable property.		Mandatory
		ZoningCode	The zoning (land use) code established in the municipal bylaw that pertains to the	Varchar2(10)	Mandatory Must be in a valid code as part

Table 3- TAX XML File Detail Definition

Element Name	Parent Element	Attribute Name	Description	Datatype Format	Requirements
			assessable property.		of the ZoningCode component of the Tax XML file or already loaded into the CAMA system

APPENDIX - XML File Samples

To be developed (this section will include xml file samples). , Volunteer Tax System Provider needed

END OF DOCUMENT