THE CITY OF WINNIPEG

REQUEST FOR PROPOSAL

RFP NO. 784-2009

APPENDIX D – VALCURA TECHNICAL OVERVIEW

Valcura

Valcura is customized NovaLis software which is developed and maintained by CriticalControl Solutions. Valcura is to implement the market value approach via the regression method in Oracle, while making it fast, convenient, secure and fully audited. The solution is a syntax-based approach that extends Oracle's view technology, and layers over structures of summarized Valuation data; i.e. the Valuation Data Store or "VDS".

Valuation processing generates Valuation Model views that apply Model-specific Coefficients, Transformation Variable SQL and Stratification criteria SQL to VDS data. Model views know their own rules, so users, interfaces and tools need only specify columns and selection criteria.

The four stages of Models approval are as follows
- Data extract to SPSS; regression model is done using SPSS software and it is not part of the Valcura component.
- Convert SPSS regression model to Oracle Model view. These views are directly queryable using standard reporting tools.
- Update the Model links with recalculated dollar amounts.
- Apply Parcel-specific adjustments, and post the dollar amounts to individual Parcel. The Model viewer's "bulk run" feature currently both updates the links and posts to Parcels.

The Source code (Models, Variables and Stratifications) of Valcura is stored in a central repository with versioning. A Model is the "main" routine, with "includes" to common code.

Valcura uses the NovaLIS Software as base software and the customization is applied based on the customer's requirements. The NovaLIS Software has four major components, they are: Model Viewer, Stratification Viewer, Variable Viewer, Variable Template Viewer.

HOW IT WORKS

A list of pre-defined VDSs is implemented based on the user's requirement; currently we have Residential VDS, Condo VDS, Lease VDS and Rent VDS. The pre-defined VDS is a Oracle view which gathers common attributes from various tables via the Oracle "Inner Join" operator, such as Parcel Year, Parcel Id, Parcel Use Code, address etc. The user has the ability to add more attributes into his/her model if required.
- To extract the data, the user may create the stratification to filter the data based on the requirement. The filter may be parcel year, parcel use code, living area range, etc; for example, extract a list of residential parcels via parcel use code with parcel year=2010 and the living area is between 1000 square feet to 1500 square feet, etc.
- To create the regression model, the user will create the model (VDS) using the pre-defined VDS as a base; apply Coefficients, transform variables and apply stratification into the new model (VDS); .e.g. the user create the commercial model of assessment year 2010 based on the base view of the pre-defined commercial VDS; i.e. apply stratification of parcel year=2010 and a list of parcel use codes. Note: VDS is a Oracle view
- To apply the new model to parcel, the user will link the new model to parcels via the stratification; e.g. link all residential model of region 5 of assessment year 2010 to the new model.

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CAMA INTERFACE

The Interface allows one Inventory or Sales Parcel to be passed into the Oracle stored procedure and returns the new Regression Values of Land, Building, Total and Model Name.

Valcura (NovaLIS) Framework