

Appendix B

The Corporation of the City of London

Debt Management System

Business Requirements Document

Table of Contents

1	Glossary.....	3
2	Scope, Objectives and Benefits	6
3	Background	6
4	Approach	7
5	Business Level Requirements.....	7
5.1	<i>Related Strategic Goals.....</i>	<i>7</i>
5.2	<i>Related Tactical Goals.....</i>	<i>7</i>
5.3	<i>Related Operational Goals</i>	<i>7</i>
6	Regulatory Requirements	7
6.1	<i>External / Internal Program Regulations.....</i>	<i>7</i>
6.2	<i>Internal Technology Regulations</i>	<i>8</i>
7	Functional Requirements.....	8
7.1	<i>Debenture and Fund Allocation</i>	<i>8</i>
7.2	<i>Project Information Tracking.....</i>	<i>10</i>
7.3	<i>Payment Generation.....</i>	<i>10</i>
7.4	<i>Debt Forecasting and Projection</i>	<i>11</i>
7.5	<i>Financial Reporting.....</i>	<i>12</i>
7.6	<i>Reports</i>	<i>12</i>
7.7	<i>Audit and Control Functions</i>	<i>13</i>
7.8	<i>Systems Integration.....</i>	<i>13</i>
7.9	<i>Other System Functions</i>	<i>14</i>
8	Non-Functional Requirements	14
8.1	<i>Access Control / Security Requirements</i>	<i>14</i>
8.2	<i>Integration / Migration Requirements</i>	<i>15</i>
8.3	<i>Database Backup Requirements.....</i>	<i>15</i>
8.4	<i>Documentation Requirements</i>	<i>15</i>
8.5	<i>Training Requirements</i>	<i>15</i>
9	Assumptions, Dependencies and Constraints	16
9.1	<i>Assumptions</i>	<i>16</i>
9.2	<i>Constraints.....</i>	<i>16</i>
10	Notes to Appendix.....	17

1 Glossary

Accrued Interest	<p>A term used to describe an accrual accounting method when interest that is either payable or receivable has been recognized, but not yet paid or received. Accrued interest occurs as a result of the difference in timing of cash flows and the measurement of these cash flows.</p> <p>Also, the interest that has accumulated on a bond since the last interest payment up to, but not including, the settlement date.</p>
Amortizing	<p>Debentures for which total annual payments of principal and interest are even throughout the life of the debenture issue even though each component may vary. Payments can range from being made monthly to annually. A feature of amortizing debt is that although the payments are equal, the portion of each payment that is attributed to principal increases with each payment and typically has one coupon rate.</p>
Annual Repayment Limit (ARL)	<p>Under Ontario Regulation 403/02, municipalities in Ontario are restricted with respect to the amount of debt and other financial obligations they can incur. The amount of Total Financial Obligations the City assumes cannot exceed 25% of its own source of revenue.</p>
Bullet Debenture	<p>A debenture for which only interest payments are made during the term, with the repayment of the total principal occurring at the end of the term. Sinking fund debentures are a type of bullet debenture issued by municipalities.</p>
Callable Debenture	<p>A debenture that allows the issuer of the bond to retain the right of redeeming the bond before the bond matures. The issuer has the privilege to buy back the bonds from the bondholders typically at a predetermined rate or price.</p>
Capital Plan	<p>The Capital Plan illustrates the expenditures and the financing sources, including debt of all projects by service area within the City, which have budgeted capital expenditures on a multi-year basis, typically ten years.</p>
Cash Flow Projection	<p>Forecast of debt payments based on actual payment dates.</p>
Clients	<p>Payees of debentures, including, but not limited to Canadian Depository Service (CDS), Infrastructure Ontario (IO), Canada Mortgage and Housing Corporation (CMHC), and Federation of Canadian Municipalities (FCM).</p>
CUSIP	<p>Committee on Uniform Security Identification Procedures, this 9-character alphanumeric code identifies any North American security for the purposes of facilitating clearing and settlement of trades. The American Bankers Association owns the CUSIP distribution system however; Standard & Poor's operates it. The CUSIP Service Bureau acts as the National Numbering Association (NNA) for North America, and the CUSIP serves as the National Securities Identification Number for products issued from both the United States and Canada.</p>

Debenture Re-opening	<p>Refers to re-issuing an existing debenture to increase the total size outstanding, for example, the City could receive debt proceeds from issuing a debenture with a 10-year term, and six months later, re-open the debenture, receiving further funds under the original debenture instrument with a 9.5-year term.</p> <p>The payment of Accrued Interest can arise if the re-opening does not occur on a regular repayment date.</p>
Debt Management System (DMS)	A system that manages debt issuances and payments, manages financial records, and performs debt projections.
FP & P	Financial Planning & Policy service area within the City.
FIR	Financial Information Return , the Financial Information Return (FIR) is a standard set of year-end reports, which capture financial and statistical information for each Municipality in the Province. Every Municipality in the Province will complete and submit a Financial Information Return to the Ministry each year.
Interest rate SWAP Agreement	The interest rate swap agreement is a contract between two parties who agree to exchange fixed rate financing for floating rate interest payments on a principal amount.
Foreign Denominated Loans	Bonds denominated in foreign currencies issued in order to reach an expanded investor base and access to investment capital available in foreign markets. Annual payments of principal and interest can be hedged through foreign exchange agreements or swaps.
Full Commitment Payment Forecast	In addition to its actual debenture payments, the City also tracks its payments on a “full payment” basis. For example, if the City issues a debenture on July 1 st of a year, and the first payment is due six months after the issuance date, there will be no payment in the first year. However, the City is committed toward making the required payments in future years. The City adds this committed payment to the actual payments to arrive at the expected “full payments” relating to the debt the City has issued.
Funding Source	The City recovers debt repayments through various funding sources such as development charges, tax levy, user rates, provincial subsidy, rental revenue, or local municipalities.
Instalment debentures	Financial bonds that mature in instalments over a period, in effect, a \$100,000, 5-year serial bond would mature in a \$20,000 annuity over a 5-year interval. Bond issues consisting of a series of blocks of securities maturing in sequence, the coupon rate can be different.
Issue	Fixed corporate obligations, as bonds or debentures
JDE	JD Edwards EnterpriseOne is the cost accounting software used by the City.

ISIN	International Securities Identification Number is a code that uniquely identifies a specific securities issue. The organization that allocates ISINs in any particular country is the country's respective National Numbering Agency (NNA). The ISIN code is a 12-character alphanumerical code that does not contain information characterizing financial instruments but serves for uniform identification of a security at trading and settlement.
ITS	Information Technology service area within the City.
Other Debenture Type	Any debenture type for which the debenture to generate associated sub-issues calculation is not preset.
Project	Refers to a capital project partially or fully funded by debt and has a corporate project number.
Premium/Discount	Refers to the amount by which the purchase price of a bond is above (premium) or below (discount) its par value.
Refunding Debentures	Refers to debentures for which the term is shorter than the amortization period. For example, the City has issued debentures with a 10-year term and rate, with a 20-year amortization. At the end of the term, the balance of the debenture is repayable with a balloon payment. The source of funding for the balloon payment could be tax dollars, development charges collection, or some other source of funding or the issuance of a further debenture or some combination of the above.
Retirement Debenture	Debentures for which matching sinking fund contributions may not match the payment schedule of the corresponding debt. For example, a retirement debt could have contributions to a sinking fund for the last five years of its maturity period, even though the term of the debt might be ten years.
Serial (Instalment) Debentures	<i>Same as Instalment Debentures</i> Financial bonds that mature in instalments over a period, in effect, a \$100,000, 5-year serial bond would mature in a \$20,000 annuity over a 5-year interval. Bond issues consisting of a series of blocks of securities maturing in sequence, the coupon rate can be different.
Sinking Fund	A type of bullet debenture for which funds set aside, usually on an annual basis, as a legal requirement of the terms of a debenture issue. The contributed amounts are sufficient to repay the principal balance of the loan at the end of the term assuming an investment return on the funds. The funds are held and invested separately from the City's other assets.
Sub-issue	A sub-issue relates to the amount of predetermined principal that is required each year within a serial debenture issue.
Total Financial Obligations	The total debt obligation as well as other long-term financial obligations of the City including, long-term leases and capital grants.
Variable Interest Rate	An interest rate on a loan or debenture that fluctuates over time in accordance with an underlying benchmark interest rate or index that changes periodically as determined by the loan/debenture agreement or by-law.

2 Scope, Objectives and Benefits

The Corporation of the City of London (the City) requires a Debt Management System (DMS). The current system, which ITS designed in 1999, is an Oracle forms relational database system to track long-term debt. The City currently has approximately \$350 million of issued debt and approximately \$230 million of authorized but unissued debt. This system no longer meets the analytical demands required by Financial Planning & Policy.

2.1 Scope

The scope of this project includes collecting user requirements for a new DMS System, considering system integration between DMS and other City systems in order to automate business processes to the greatest extent possible, as well as performing business and system analysis of the new system. The City expects the solution to meet, at a minimum, the mandatory business requirements.

2.2 Objective

The objective of this project is for the City to have a system that is capable of storing, calculating, tracking and reporting debt in an accurate and efficient manner.

2.3 Benefits

A new DMS will facilitate the City's debt management by performing a range of functions such as tracking authorized and outstanding debt, maintaining adequate financial records, handling timely debt payments, analyzing and forecasting future debt needs and associated repayment, as well as tracking the City's debt levels in relation to the provincially mandated Annual Repayment Limit (ARL).

In addition, the new system would contribute to creating the following efficiencies:

Staff Efficiencies: A great deal of time goes into inputting new debt (currently a manual process subject to a high degree of human error), as well as reporting debt status for monitoring, financial statement reporting, budgeting and forecasting. A new system would alleviate this issue.

More efficient and accurate reporting: The current debt system is not able to report on specific time basis without manual calculations. A new debt system that has the capability of reporting on a real time basis would be a significant benefit; staff could accurately report debt to the Treasurer, the Director of FP&P, and the managers of FP&P in a timelier manner and with less staff effort.

Performing Calculations: The current system does not perform calculations, such as allocation of interest costs and principal costs. As a result, the user calculates interest and principal costs and subsequently manually inputs the data into the system. This process is time consuming and is subject to a high degree of human error.

2.4 Timing

The outcome of this initiative is to implement the DMS solution within three months of the project start date.

3 Background

The current DMS is an Oracle forms database application used to store, manage, and report on the City's debt obligations. The City's ITS area developed the system in 1999 and it was last updated in 2005. The DMS is a standalone system that staff in FP&P use.

Listed below are some of the limitations of the current system.

1. Recording of Debenture Information
 - Critical functions not currently available include:
 - Calculation of principal and interest payments for all debenture types
 - Calculation functions to allocate funds received to projects are done off-system and then involve cumbersome input
 - Refunding debenture calculations
 - Retirement debenture calculations
 - Accommodation of re-opening of debenture issues
 - Calculation and allocation of premium and discounts
2. Payment Functions
 - No alerts to users for upcoming debt payments
3. Reporting Functions
 - Preset reports that are not easily adjusted to fulfil current needs
 - No functions to easily allow users to generate reports subject to selected parameters
4. Analysis and Tracking
 - No capacity to track authorized debt

-
5. Forecasting and Projections
 - No ability to perform forecasting of future debt (10-year forecast), manual reconciliations must be performed between the debt projection model and DMS
 6. Financial Reporting
 - No ability to import or export to Excel, manually input data from DMS to JDE accounting software
 7. No system or data integration with the City's Financial Reporting System (JDE)

4 Approach

To develop the City's business needs, a review of the existing system functionality was completed by ITS and FP&P. In addition, FP&P analyzed the City's current business operations related to debt management to develop business requirements for the upgraded DMS that will support the City's current operations.

5 Business Level Requirements

The City's (DMS) is a system that manages issued debentures and facilitates the development of debt level and payment forecasts based on capital plans and budgets.

- The system shall track debenture information from budget approval through to maturity.
- The system shall manage debenture-funding allocations to projects and service areas.
- The system shall manage issued debentures.
- The system shall manage debenture payment schedules and status.
- The system shall perform debt projections based on capital plans and budgets.
- The system shall be able to present information in graphical form.
- The system shall define user access privileges.

5.1 Related Strategic Goals

One of the City's strategic goals is to achieve and sustain a healthy financial position and debt management is a key component. An upgraded DMS will contribute to providing accurate and timely information allowing our leaders to make important budgetary decisions.

5.2 Related Tactical Goals

The ability to analyze and forecast debt financing is an integral part of the City's budget process as our debt grows and the City encounters challenging budgetary constraints. Additionally, the increasing complexity of debt instruments and associated methods of repayment have made the task of recording and analyzing debt more difficult. As such, the new DMS will be useful in linking the authorizing process for the financing portion of the budget and capital plans with the issued debt. The enhanced linkages within and among areas will help minimize efforts to manually manipulate information, significantly reducing the potential for errors and improving quality of reports.

5.3 Related Operational Goals

Staff will manage debt repayment and perform analysis on debt requirements and debt limits more efficiently with improved information at project, service and corporate levels. Reports generated from DMS will require minimal manipulation to serve regular business needs. Staff will be able to generate ad hoc reports with specific data requirements with less effort and time. The City will be able to save staff time and resources from compiling, reconciling and reformatting information used for analysis as well as provide meaningful presentation of information.

6 Regulatory Requirements

The business rules implemented in the new system must comply with all relevant regulatory requirements. The following list of regulatory acts and agreements should be considered:

6.1 External / Internal Program Regulations

- Municipal Act
- Municipal Freedom of Information and Protection of Privacy Act (MFIPPA)
- The Corporation of the City of London Records Retention By-law A.-4640-291

6.2 Internal Technology Regulations

- The Corporation of the City of London IT Security and Technology Standards
- Software Acquisition Policies
- Legal Approval of Purchasing Agreement

7 Functional Requirements

Functional requirements for the Debt Management System are detailed in the following sections.

7.1 Debenture and Fund Allocation

The system shall support the business process outlined in Note 1 of Appendix A, Debenture and Fund Allocation Business Process. This is a primary business flow only alternative flows will be defined during system development.

7.1.1	Debenture Issue Generation and Input Requirement	Priority M – Mandatory P – Preferred
1	The system shall support four debenture types including 1) Serial (Instalment), 2) Amortization, 3) Bullet (with and without sinking fund offsets), and 4) Other Debenture Type.	M
2	The system shall support and keep track of Clients such as Public Market Debentures (e.g. Canadian Depository Service), Federal and Provincial Lending Agencies (e.g. CMHC, FCM and Infrastructure Ontario).	M
3	The system shall allow users to record additional information related to the debentures such as related by-Laws. Detailed record structure shall be defined during software development.	M
4	In addition to fixed rate debentures, the system shall support variable interest rate debentures. The system shall be able to handle one or more variations in the rate of interest payable on the principal of the debenture debt.	M
5	The system shall support reopening of prior debentures, calculating premiums, discounts, and payments on revised terms.	M
6	The system shall support payments of accrued interest to debenture holders if required, upon the reopening of prior debenture issues.	M
7	The system shall be able to handle callable debentures to allow pay off principal and end the debentures before maturities. Users are able to enter pertinent information into the system.	M
8	The system shall support any refunding requirement that may arise, including structuring debenture repayments to amortize over a longer period than the term of the debenture. Therefore, at the time of maturity of the debenture, the outstanding principal may require refinancing by way of a source of revenue available to the City or through a new debenture issue or through a combination of both.	M

7.1.2	Sub-issue Generation and Calculation by Debenture Type Requirement	Priority M – Mandatory P – Preferred
1	The system shall provide a sub-issue calculator for instalment/serial debenture issues generated by given parameters including annual Interest rate (variable or fixed), term, pay frequency, price, commission, first Payment due date, and subsequent due dates.	M
2	Amortization calculations shall be generated by given parameters including annual interest rate (variable or fixed), term, pay frequency, price, commission, first payment due date, and subsequent due dates.	M
3	<p>Bullet debenture calculations shall be generated by given parameters including annual interest rate (variable or fixed), term/amortization, pay frequency, price, commission, first payment due date, subsequent due dates, assumed actuarial rate of return, sinking fund start date (if applicable), and sinking fund end date (if applicable).</p> <p>The system shall provide users an option to manually enter or import actual interest accruing on invested Sinking Funds to reflect actual sinking fund returns</p>	M
4	Refunding debenture calculations shall be generated by given parameters including annual interest rate (variable or fixed), term/amortization, pay frequency, price, commission, first payment due date, subsequent due dates, assumed actuarial rate of return, sinking fund start date (if applicable), and sinking fund end date (if applicable).	M
5	Users shall be able to manually enter all parameters or override generated calculations.	M

7.1.3	Fund Allocation to Projects Requirement	Priority M – Mandatory P – Preferred
1	The system shall allow for allocation of all or part of the proceeds of a debenture issue/sub-issue to single or multiple projects at a single point of input. The allocations shall be either defined percentages or absolute dollar amounts.	M
2	Debt repayments of allocations of proceeds to each project shall be determined at a single point of input on a multi-year basis from the point of issue to the point of final payment from one or more determined funding sources. The allocations of funding source repayments shall be either defined percentages or absolute dollar amounts.	M
3	Users shall be able to adjust the generated values manually.	M

7.1.4	Debenture Reconciliation and Activation Requirement	Priority M – Mandatory P – Preferred
1	The system shall alert the user to project allocations that exceed estimated annual budgeted or approved debt either on an annual estimated basis and/or within the total project budget approved by Council.	M
2	Users shall activate the debenture if no discrepancy found. Once confirmed, only the administrator, not the general user, shall make changes to the created debenture, if necessary. The issue and its sub-issues shall be considered “Activated”.	M
3	Users shall be able to adjust the generated values manually.	M

7.2 Project Information Tracking

7.2	Requirement	Priority M – Mandatory P – Preferred
1	The system shall create project records and store debenture related assigned project information. The system shall be capable of querying and sorting project numbers.	M
2	Authorized Debt Tracking - The system shall track the addition, usage, and other changes of authorized debt arising from prior year budget processes and in-year approvals assigned to projects, and determine remaining authorized debt.	M
3	The system shall support the business process defined in Note 2 of Appendix A, Project Information Management Business Process. This is the primary business process flow only. Alternative flows shall be defined during system development.	M

7.3 Payment Generation

7.3	Requirement	Priority M – Mandatory P – Preferred
1	User shall generate payment of an activated issue/sub-issue for a specific payment due date.	M
2	Once payment is confirmed, the system shall not allow further changes on payment record, unless the user is the administrator.	M
3	No payment will be allowed on projects after the maturity date of a debenture issue.	M
4	The system shall provide a payment search function to look up future actual payments and/or projected payments based on user given criteria such as date range or next coming payment.	M
5	The system may alert user through email prior to a payment being due.	M
6	The system shall support the business process defined in Note 3 of Appendix A, Payment Generation Business Process. This is the primary business process flow only. Alternative flows will be defined during system development.	M

7.4 Debt Forecasting and Projection

7.4	Requirement	Priority M – Mandatory P – Preferred
1	Users will be able to enter projected new issues based on the 10-year Capital Plan at project level and by funding level to the system for analysis and budgeting purposes.	M
2	Users are able to conduct sensitivity analysis at the project or funding level by assuming different debt levels, funding splits, interest rates, terms, and other parameters subject to users' choice.	M
3	The projected issues should not affect real data (existing debt) in the system.	M
4	Users may manually enter or import budgeting information from excel. (Import from JDE preferred but not mandatory)	M
5	The system shall generate analytical reports that append projected new issues to the existing issues.	M
6	The system shall provide forecast of existing debt and or projection of future debt of various scenarios subject to user's choice.	M
7	<u>Cash Flow Projection</u> - The system shall provide projection on a cash-flow basis. (E.g. there may only be one interest payment and no principal payment in the first year the debt is issued)	M
8	<u>Full Commitment Projection</u> - The system shall provide "full commitment" projection for the purposes of ARL calculation. Unlike budgetary payment forecast that is on a cash-flow basis, the payment forecast for ARL is on a full commitment basis. For new debenture issues, depending on the timing of issuance, only part of the interest may incur in the first calendar year for cash-flow purposes. Under the full commitment scenario, the full interest and principal payments, which usually only incur from second year, on will be taken into account.	M
9	<u>ARL Comparison Information</u> - The system shall compare projected or historical Total Financial Obligations or debt repayment with ARL.	M
10	<u>ARL Tracking and Projection</u> - The system shall provide function to input historical and forecast of ARL based on input of 25% Tax Revenue with or without 80% rolling average of Development Charges. The system allows users to change the percentages whenever regulation is changed.	M
11	<u>Other Financial Obligation Tracking</u> - The system shall track and allow input for forecast of other non-debt financial obligations of the City such as financial leases and capital grant commitments. These obligations shall be added to the debt repayment as Total Financial Obligations to compare to ARL.	M
12	User shall have an option to generate reports based on ARL, other financial obligations, issued debt and projected debt.	M
13	The system shall support the business process defined in Note 4 of Appendix A, Debt Forecasting and Projection Business Process. This is the primary business process flow only. Alternative business processes will be defined during system development.	M

7.5 Financial Reporting

7.5	Requirement	Priority M – Mandatory P – Preferred
1	The system will link with our accounting system to update the Corporation's financial records at the time of debt issuance, payment and debt retirement.	P
2	Year-end reports will be generated by the DMS to allow for ready reconciliation to the City's accounting system.	M

7.6 Reports

7.6.1	Standard Reports Requirement	Priority M – Mandatory P – Preferred
1	The system shall be able to generate reports for basic information including but not limited to issues & sub-issues, clients, projects, functions, and funding sources.	M
2	The standard reports the system shall generate may reflect information of either existing debt or debt projection, or the combination of both, subject to user's choice.	M
3	The system shall have the ability to report on a specific time basis without manual calculations.	M
4	The system shall have the ability to filter all reports.	M
5	The system shall have the ability to report on debt status (i.e. authorized as well as issued debt) by project.	M
6	The system shall have the ability to generate reports on 100% of Joint Water Board debt as well as the City's share of Joint Water Board Debt (see Note 5, Appendix A for additional information).	M
7	The system shall generate debt payment reports, including interest and discount costs.	M
8	The system shall generate long-term liability reports	M
9	The system shall generate cash flows reports.	M
10	The system shall generate Full Commitment Payment reports	M
11	The system shall calculate interest accrual for year-end reports	M
12	The system shall generate analytical reports including projected new issues.	M
13	The system shall generate charts including but not limited to sample shown in Note 6, Appendix A.	P
14	The system shall allow for the user to create ad hoc reports and for the user to adjust/amend standard reports.	M

7.6.2	Report Formats Requirement	Priority M – Mandatory P – Preferred
1	The system shall accept user-defined criteria for report contents and layouts. For example, total or sub-total calculation & display, sorting orders and filters.	M
2	Reports shall be saved in MS Excel (spreadsheet), PDF, HTML, or CSV format.	M

7.6.3	User-defined Reports Requirement	Priority M – Mandatory P – Preferred
1	The system shall provide a tool to allow users to dynamically modify existing report templates or define new reports.	M

7.7 Audit and Control Functions

7.7	Requirement	Priority M – Mandatory P – Preferred
1	The system shall provide a function to reconcile payments against payment schedules as well as exception reports.	M
2	Audit trail shall be provided to record updates.	M
3	Exception reports will be sent via e-mail to management staff when system shows debt allocations at the project level exceed in-year budget estimations or total authorized project budget.	P
4	User Accessibility - The system shall be accessible by appropriate staff with legitimate uses for the information to eliminate any bottleneck within the process. For example, administrators have full access to system. Detailed user roles shall be defined during system development.	M

7.8 Systems Integration

7.8	Requirement	Priority M – Mandatory P – Preferred
1	The system shall have an import function to allow debt requirements per the 10-year Capital Plan into DMS for debt projection purposes.	M
2	The system shall have the ability to import data from JDE.	P
3	The system shall have the ability to import and export to MS excel.	M
4	The system shall have the ability to interface with MS office (word, excel, etc) and have word processor functionality.	M
5	The system shall have the ability to export a journal entry to JDE.	P

7.9 Other System Functions

7.9.1	Search and Sort Functions Requirements	Priority M – Mandatory P – Preferred
1	The system shall provide search and filter functions to help users to look up and/or edit records by user-defined criteria.	M
2	The system shall provide a function to sort information displayed on screen.	M

7.9.2	Printing/Copying/Exporting	Priority M – Mandatory P – Preferred
1	The system shall provide function to print data on screen including search and sorting results.	M
2	The system shall allow users to copy & paste screen data to external applications such as MS Excel.	M
3	The system shall allow users to export screen data or reports to external systems such as in excel or CSV formats.	M

8 Non-Functional Requirements

8.1 Access Control / Security Requirements

Security requirements identify the security, confidentiality, integrity and privacy issues affecting access to the DMS, use of the DMS, and protection of the data the system uses or creates.

Security configuration and management will be the responsibility of internal ITS staff. System security will be defined throughout the course of the project. The specifics for providing security access and data usage within the system will be determined as the project progresses.

Network environment security: This function is ensured by the ITS staff who will also be consulted prior to the installation and configuration of the application environment.

Application Security: The new system should allow for different types of data access based on users' assigned roles.

The type of access (Create, Read, Update, and Delete) for each business entity identified as part of the application and associated to the role will be clearly specified as part of the project implementation.

At least two staff will receive formal vendor training in managing application security, and will be assigned the role of System Administrator for the application. This will include managing user accounts, profiles and permissions

Database Security: The Database Administrator(s) assigned to the project will ensure security at the database level along with database restores and backups according to ITS procedures. The system should have the appropriate audit functionality.

8.1	Requirement	Priority M – Mandatory P – Preferred
1	The system shall accommodate differing levels of security i.e. system administrator, read, read/write and full access.	M
2	Vendor must attest to their security practices in application security and in securing access to sensitive information. Validation of these claims can be conveyed in the form of 3rd party security assessment reports, or, in absence of 3 rd party validation, a written statement from the vendor	M

8.2 Integration / Migration Requirements

8.2	Requirement	Priority M – Mandatory P – Preferred
1	The system shall be able to migrate and convert data from existing system to the new system.	M

8.3 Database Backup Requirements

8.3	Requirement	Priority M – Mandatory P – Preferred
1	The system shall provide a data and system backup solution to restore data or complete system from hardware or software failure.	M

8.4 Documentation Requirements

8.4	Requirement	Priority M – Mandatory P – Preferred
1	A user manual will be delivered indicating all the available functions and how to perform them. Screen captures demonstrating the “how-to” would be beneficial. The manual shall be delivered as a soft editable copy.	M
2	A technical manual will be delivered indicating the application architecture, code, comments and data dictionary. The manual is to include installation, configuration and any pertinent support issues. The manual is to be delivered as a soft editable copy.	M
3	A detailed description of the data model, application business rules and database integrity constraints and relationships should be provided with the application. This will be required during implementation to help understand and populate the data correctly and also for future development of required reports.	M

8.5 Training Requirements

8.5	Requirement	Priority M – Mandatory P – Preferred
1	Training sessions shall be provided for the staff using this application and will be included in the implementation plan for the project.	M
2	Separate training sessions should be considered for a technical audience and system administrators to review the application architecture and all administrative functions of the application.	M

9.0 Assumptions, Dependencies and Constraints

9.1 Assumptions

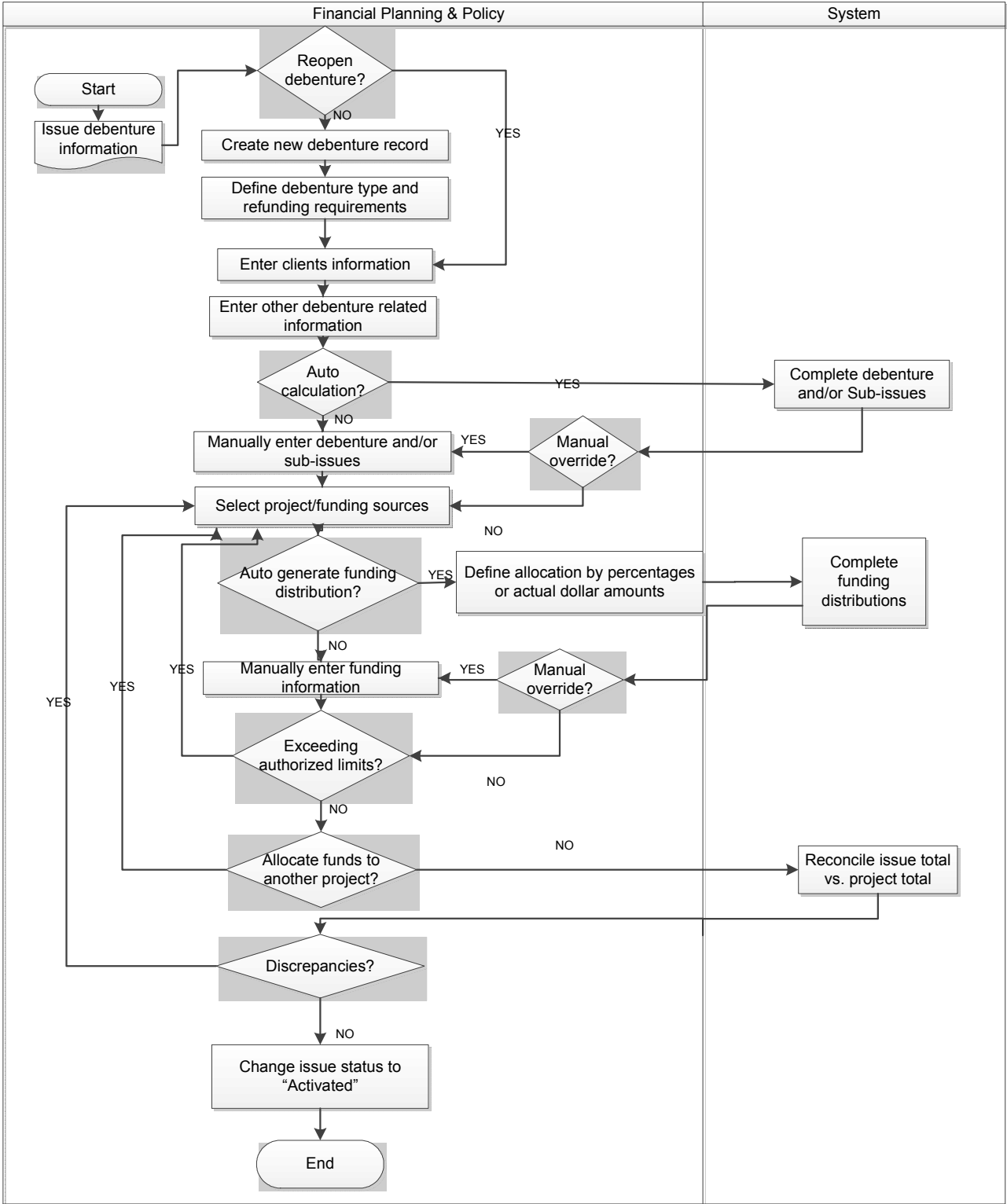
The developer of this system should collect detailed user requirements based on this BRD to build detailed functional requirements, non-functional requirements, Graphical User Interfaces (GUI) and data model.

9.2 Constraints

There is no tool to export the complete database data from current system. Developer may need to develop programs to migrate data from current system to new system. An external system integrator may be required to build the system.

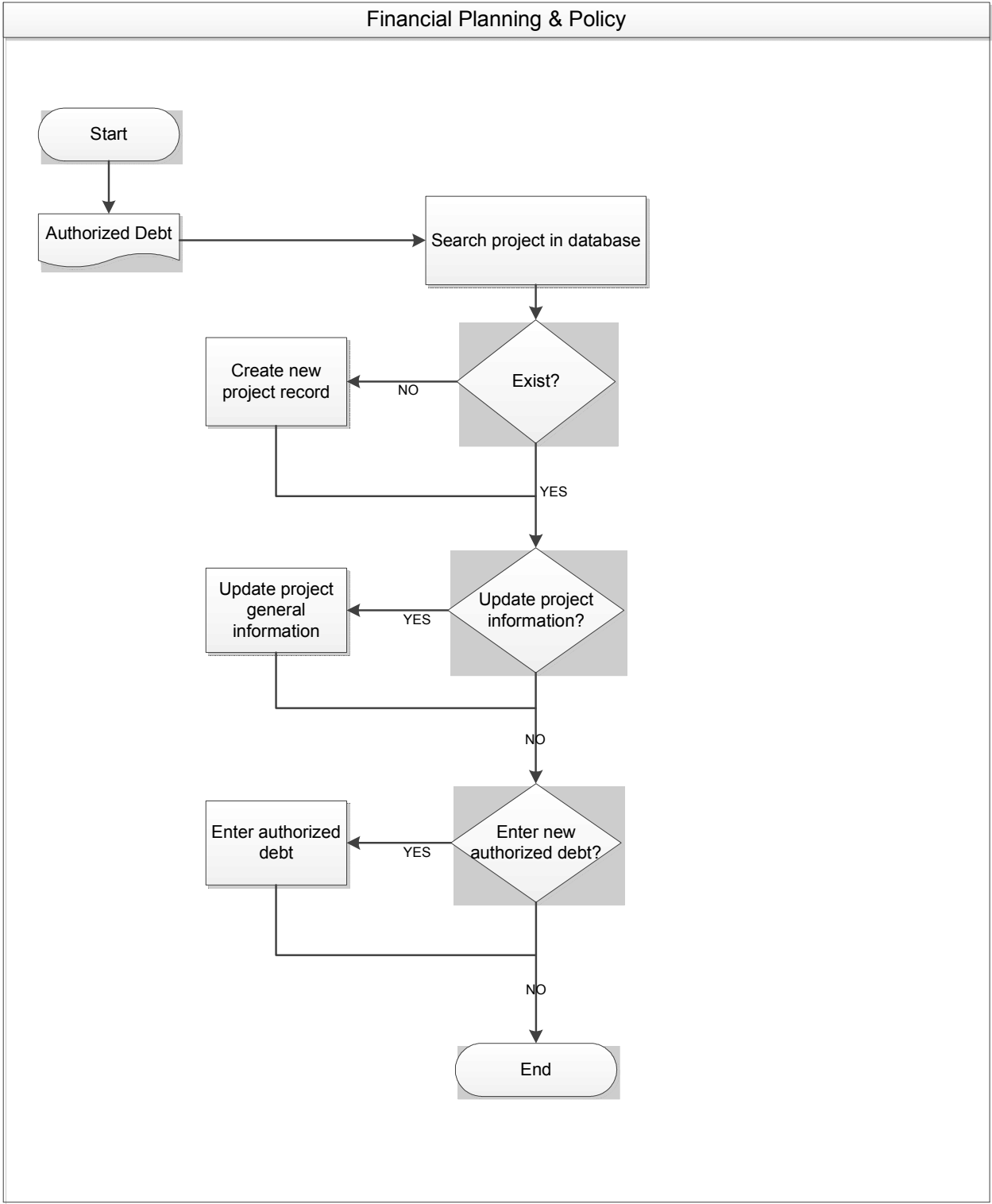
10.0 Notes to Appendix

Note 1 – Debenture and Fund Allocation Business Process



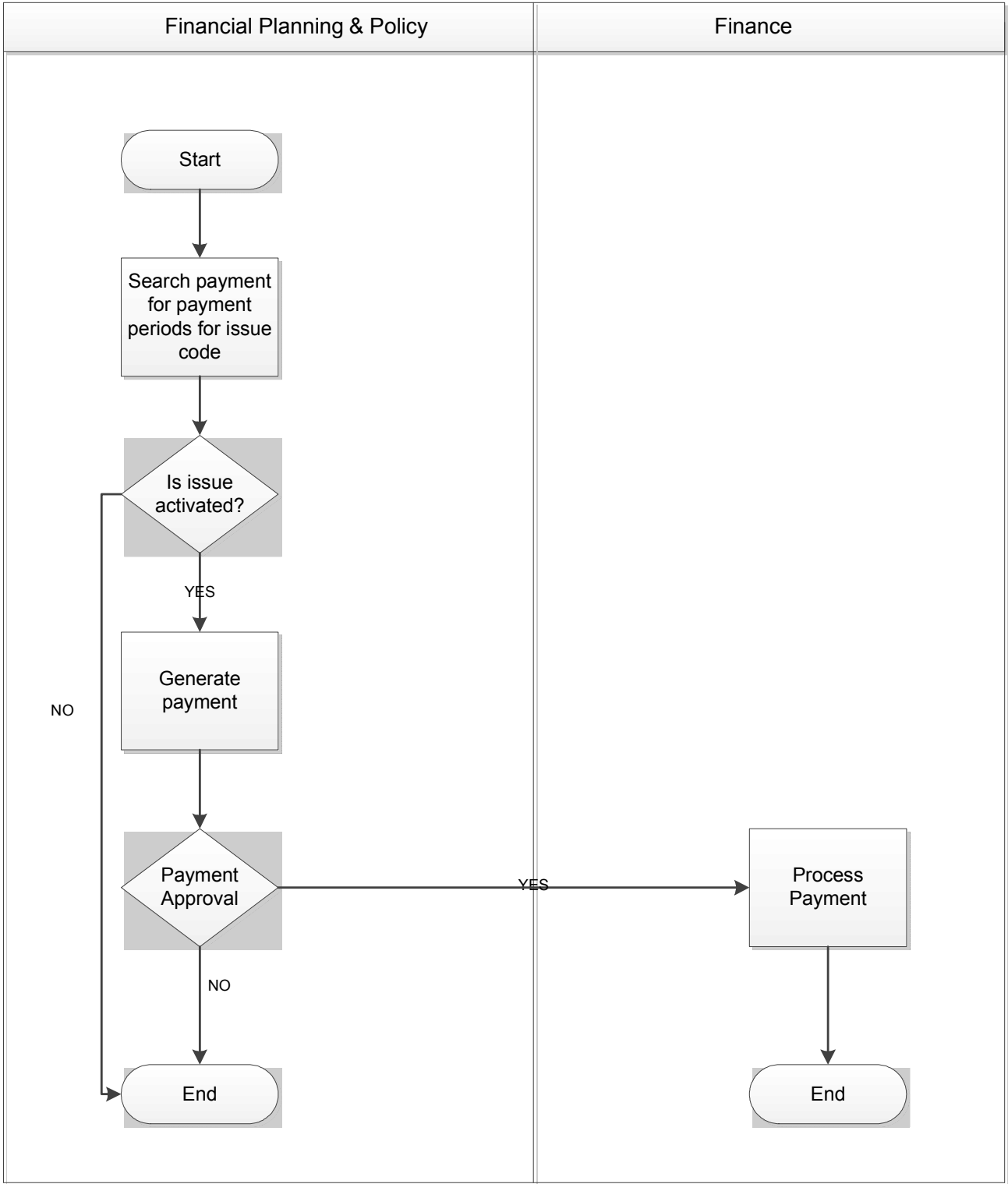
10.0 Notes to Appendix - continued

Note 2 – Project Information Management Business Process



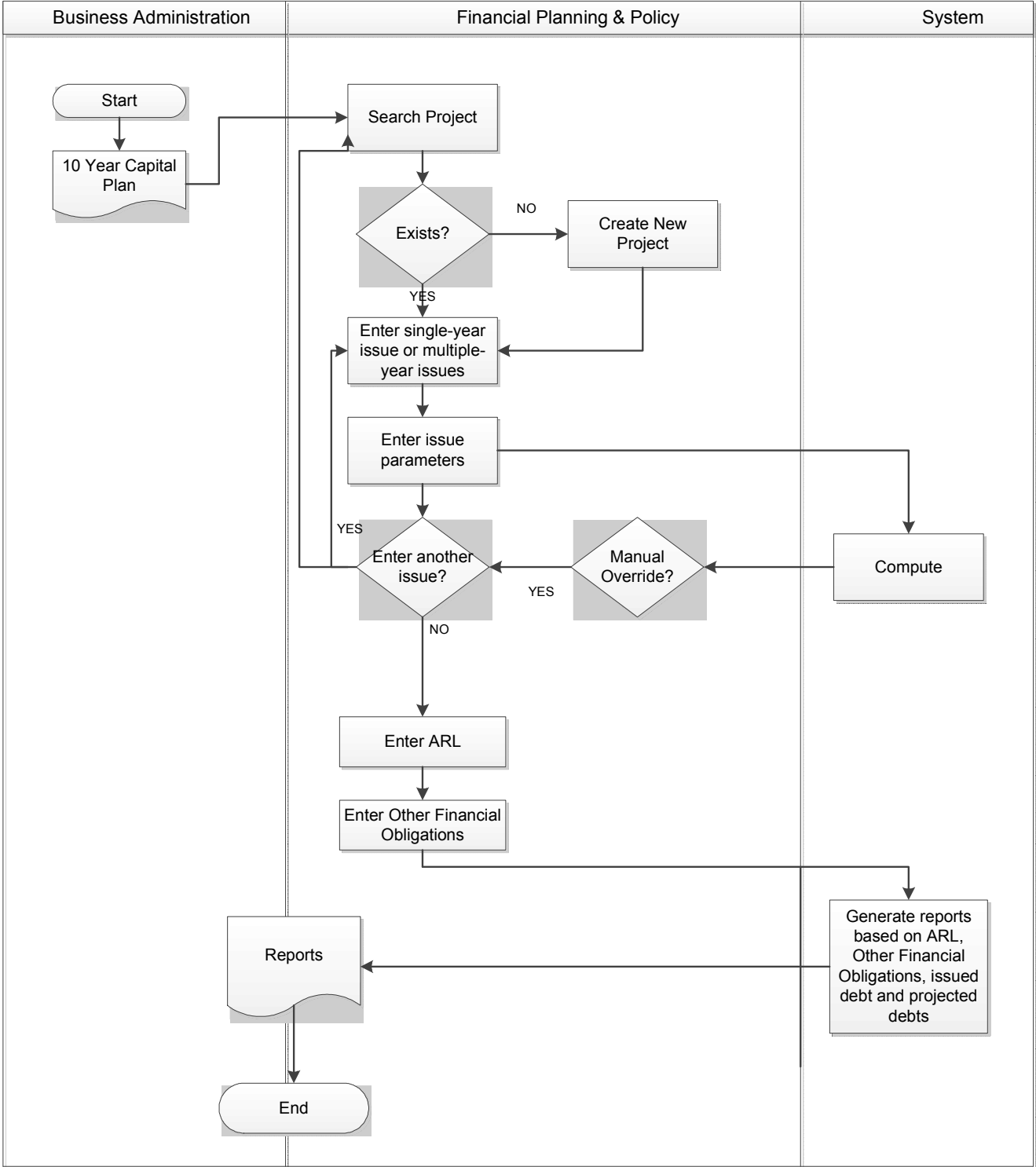
10.0 Notes to Appendix - continued

Note 3 – Payment Generation Business Process



10.0 Notes to Appendix - continued

Note 4 – Debt Forecasting and Projection Business Process



10.0 Notes to Appendix - continued

Note 5 - Joint Water Boards (JWB)

The City in its capacity as the Administering Municipality for both the Elgin Area and Huron Primary Water Supply Systems, in accordance with the Transfer Order issued by the Minister of the Environment (Elgin Area effective November 29, 2000 and Huron effective September 15, 2000), has authorization to issue debt on behalf of the JWB.

The City not only issues debt on behalf of the JWB but also is responsible for tracking, monitoring and making debt repayments. While the City performs administration duties for the JWB, the City is also responsible for the City’s proportionate share of JWB debt. As such, the DMS must have the capability of tracking 100% of the JWB debt, but also being able to report on the City’s portion of debt, including authorized and issued debt as well as servicing costs.

Note 6 – Sample of Chart

