

City of Menasha

Imaging Feasibility Study

August 11, 2003

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Mr. Thomas Stoffel
Comptroller/Treasurer
140 Main Street
Menasha, WI 54952

Subject: Document Imaging Study

Thank you for selecting Schenck SC to provide the City of Menasha with a Document Imaging Study.

The results of our analysis are presented in the following sections:

- A. Purpose of study
- B. Approach used for study
- C. Department profiles
- D. Legal implication
- E. Configuration & costs
- F. Projected benefits
- G. Implementation schedule

Each of these topics will be discussed in detail below.

We would like to take this opportunity to thank you for selecting Schenck SC to perform a Document Imaging Study for the City of Menasha. If you have any questions, please contact Chad Dorton or Larry Schmitz at 920-731-8111.

Sincerely,

Schenck SC

A. Purpose of Study

The purpose of the Document Imaging Study is to conduct an analysis of the current document procedures in various departments at the City of Menasha to determine how document imaging can be applied to improve the efficiency, and determine the feasibility of document management for each department. Our study will focus on the necessary components and their cost to implement document imaging for the selected departments. We have relied on information provided to us from the departments as to the scope and suitability of document imaging. We have provided a recommendation as to the feasibility and priority of document imaging for each department that opted to be part of the study. After examining the configurations and costs contained in this document, the City can then determine if a particular department's workflow and needs justify the cost of implementation.

B. Approach used for Study

To develop the recommendations contained in this plan, Schenck SC evaluated the current information systems of the City of Menasha departments, identified integration opportunities, determined the future information requirements, and reviewed current computer operations. The above evaluation was performed by completing the following tasks:

- Present the City with basic knowledge and definitions of imaging technologies to all interested departments.
- Conduct an on-site visit to gather necessary information.
- Meet with participating City of Menasha department personnel to review document procedures.
- Based on the information gathered, and our experience with document imaging at other Wisconsin cities and counties, we determined the feasibility and suitability of document imaging for each department.

This study is based solely on the information we have obtained through the on-site visit and interviews, combined with previous experience in document imaging systems for local government. The end result of this study can be used to prepare Request for Proposal(s) for document imaging at the City of Menasha. Our recommendations and cost projections are therefore not vendor specific, but rather represent a broad average from qualified vendors.

C. Department Profiles

We have prepared detailed department profiles for the following departments:

- City Assessor
- City Attorney
- City Clerk
- Community Development
- Finance Department
- Health Department/Senior Center
- Library
- Mayor
- Park and Recreation
- Personnel
- Police Department
- Public Works – Engineering

Each of these departments is covered in detail below.

Department: City Assessor

I. Department Overview

The City Assessor's office is responsible for the valuation of all real and personal property located within the City of Menasha for tax purposes. The City Assessor's office ensures fair and equitable assessments throughout the City. The department also provides parcel mapping, assigns parcel numbers, does field work for building permits and sales review, and completes annual Department of Revenue reports, in addition to many other tasks.

II. Present Document Management System

Parcel Files

The City Assessor's office maintains a parcel file for each of the 6,321 real property and 500 personal property parcels located in the City of Menasha. The parcel file contains various documents about each parcel including property cards, real estate transfer returns, building permits, building sketches, lot sketches, legal descriptions, correspondence, hand drawings, pictures related to the property, and other related documents. The following table summarizes some of the documents that are added to the parcel file annually including the type of document, estimated number of documents annually, and estimated number of pages annually.

<i>Document Series</i>	<i># of documents (annually)</i>	<i># of pages (annually)</i>
Building Permits	600	1,200
Notice of Assessment	1000	1000
Real Estate Transfer Returns	400	800
Tax Exempt Reports	300 (bi-annual)	600 (bi-annual)
Other documents	-	2,400

Currently the City Assessor's office does dual entry on data elements from the real estate transfer returns. The information from the transfer return is entered into the AS/400 Assessment System. In addition, the information is also entered into Market Drive, a PC-based application. Presently, the City of Menasha is utilizing the City of Neenah's Tax system for entering and processing Tax Notices. The AS/400 Assessment System integrates with the AS/400 Special Assessment System and the City of Neenah's Tax System; however, the fore mentioned applications are not integrated with Market Drive. The City Assessor's office utilizes Market Drive to prepare all of the City's Notice of Assessments and Assessment Rolls.

The parcel files may also contain 35 mm pictures. The City Assessor now utilizes a digital camera and stores the pictures in the Market Drive application as .jpg images.

Tax Exempt Requests

The City Assessor receives 2-3 requests annually by an entity requesting to be tax exempt. The request is reviewed by the Assessor and either approved or denied. All requests are stored according to year and parcel. An average size of a request can range between 200-300 pages.

Maps

The City Assessor receives various maps from Winnebago County, Calumet County, and other departments within the City of Menasha. The maps include Sub-division maps, Certified Survey Maps, and Block maps. The maps vary in paper-size from 8 ½" x 11" to 30" x 40" and larger. Presently the department has approximately 1,000 certified survey maps, 1,400 block maps, and 210 miscellaneous maps. Approximately 25 maps are received annually.

Certified survey maps and block maps are stored in binders whereas the miscellaneous maps are stored in a map cabinet or on hanging map racks. In addition, the City Assessor's office maintains digital maps on a network drive. The digital maps are accessed with ESRI products.

Other Files

The City Assessor's office also maintains numerous other records within the department. The following table summarizes documents not specifically addressed above including the estimated volume and access method in which the document is stored or retrieved.

<i>Record Series</i>	<i># of pages (annually)</i>	<i>Access Method</i>
Assessor's Final Report (2)	8	Year/County
Assessment Rolls	900	Year
Statement of Monthly Parking Permit Fees	300	Lot number
Statement of Personal Property	550	Year
TID/School District	500	Year/District
Work Roll	900	Year

Summary of Documents

The following table shows a summary of documents, including paper size, estimated annual volume of pages, and optical storage space required.

Record Series	Size*	# of pages (annual)	Storage size (50 Kilobytes page)
Parcel Files	8 ½ x 11 – SS 8 ½ x 11 – DS	6,000	300 MB
Tax Exempt Request	8 ½ x 11 – DS	600	30 MB
Maps	8 ½ x 11 – SS 11 x 17 – SS 30 x 40 – SS	25	5 MB
Assessor's Final Report	8 ½ x 11 – SS	10	↓ 1 MB
Assessment Rolls	11 x 15 – DS	900	45 MB
Statement of Monthly Parking Permit Fees	8 ½ x 11 – SS	300	15 MB
Statement of Personal Property	11 x 15 – SS	550	27.5 MB
TID/School District	8 ½ x 11 – SS	500	25 MB
Work Roll	11 x 15 – SS	900	45 MB
Approximate Total Optical Storage (megabytes)			493.5 MB

* SS = Single Sided DS = Double Sided MX = Mixed

III. Present Computerization

The City Assessor has three personal computers. The department uses a number of applications. Some of the applications used most frequently by the department include the following;

- Market Drive
- Personal Property program, a PC-based Fox Pro application
- AS/400 Assessment System
- ArcView
- ArcExplorer
- Microsoft Word
- Microsoft Excel
- Groupwise (email)

IV. Other Considerations

The City Assessor occupies approximately 125 cubic feet of file storage. The department indicated that access to various records in the Public Works Department and Community Development would be beneficial. In addition to the records stored locally within the department, the records are also stored in boxes on shelves in the basement. Although there are no visible signs of moisture or other damage to the records, the basement does have numerous water pipes near the records.

Department: City Attorney

I. Department Overview

The City Attorney's office provides legal services including advice, legal opinions, and counsel to the Mayor, alderpersons, boards, commissions, and staff members of the City. Responsibilities also include drafting municipal ordinances and resolutions for action by the Common Council, and representing the City in courts and administrative proceedings. Additionally, this office prosecutes cases in municipal court on behalf of the City and processes all claims filed against the City of Menasha.

II. Present Document Management System

Subject Matter Files

The City Attorney maintains numerous subject folders on various topics related to the City. The subject files are broad in nature and include topics such as:

- Case files
- Litigation files
- Accident reports
- Claims
- Insurance reports
- Legal memos
- And many more
- Deeds
- Abstracts
- Easements
- Traffic Files
- Contracts
- Legal Opinions

Subject files also contain various types of documents including correspondence, plans, studies, and large-scaled maps and drawings.

Active subject files are stored in the City Attorney's office for a period of one year. Closed files or files active more than one year are moved to a shelving unit outside the City Attorney's office where they are maintained for two years before being placed into storage. The files are stored alphabetically and occasionally grouped by category. Approximately 100 to 200 subject folders are created annually.

Summary of Documents

The following table shows a summary of documents, including paper size, estimated annual volume of pages, and optical storage space required.

Record Series	Size*	# of pages (annual)	Storage size (50 Kilobytes page)
Subject Files	8 ½ x 11 – MX 8 ½ x 14 – MX Oversized	5,000	250 MB
Approximate Total Optical Storage (megabytes)			250 MB

* SS = Single Sided DS = Double Sided MX = Mixed

III. Present Computerization

The City Attorney and Personnel Department share office space as well as staff. Currently, the City Attorney is also responsible for the oversight of the Personnel Department. Between the City Attorney and Personnel Department, the two departments have three employees. The City Attorney's office uses a combination of Microsoft Office products such as Word and Excel to maintain information electronically. In addition, the City Attorney uses the AS/400-based HTE Budget module and HTE Payroll module.

The City Attorney also indicated that accessing assessment and zoning information, council packets, contracts, committee notes, incident reports, and fire reports electronically would be a benefit.

IV. Other Considerations

The City Attorney occupies approximately 45 cubic feet of storage.

An interest was shown to use document imaging to provide the following:

- Automate the record keeping process
- Maintain historical documents for quality control
- Reduce storage

Department: City Clerk

I. Department Overview

The City Clerk is responsible for maintaining all official City records, contracts, agreements, ordinances, resolutions, minutes, and election records. The City Clerk has many duties including;

- Attend City Council meetings
- Attest and sign official documents
- File and index council actions
- Publish legal notices as directed
- Issue licenses required by ordinances and statute
- Supervise elections
- Voter registration
- Purchase and maintenance of election equipment
- And preparation of election notices

In addition, the department administrates all other City Clerk duties per state statutes.

II. Present Document Management System

City Council Records

The City Council meets bi-monthly on the first and third Monday of each month. City Council records include minutes, agendas, resolutions, ordinances, communications, and any other documents to be discussed during the City Council proceedings. The City Council records average approximately 100 - 150 pages for each meeting. The document workflow for City Council records is as follows:

The City Attorney or other department with assistance from the City Attorney creates ordinances and resolutions. The ordinances and resolutions are submitted to the City Clerk's office through interoffice mail. Other documents, such as correspondence and notices may also be received by interoffice mail, U.S. postal service, or over the counter. Once the City Clerk's office receives documents to be discussed at the City Council proceeding, the staff begins to draft an agenda. Although most documents will receive an item on the agenda, not all documents are attached to the Council packet. Some documents are simply referenced on the agenda and filed by the City Clerk.

The submitted documents are organized and combined according to the layout of the agenda to form a City Council packet. Prior to the City Council meeting,

photocopies of the agenda and City Council packet are distributed to members of the City Council, department heads, and media. During the proceeding, the City Council discusses and reviews each item on the agenda. A City Clerk staff member attends the proceeding and records minutes.

Once the City Council proceeding is completed, the City Clerk staff enters the minutes into the computer using word processing software and forwards the resolutions and ordinances to the Mayor for final signatures. Additionally, photocopies of the minutes, resolutions, and ordinances are distributed to the media, various departments and organizations affected by the resolution or ordinance, and sometimes citizens. Occasionally, the City Clerk also needs to address other documents such as having an "Oath of Office" document signed when an appointee is assigned by the Mayor.

Finally, the City Clerk separates and files the documents in their appropriate location.

Over 6,000 photocopies of the City Council records are created monthly. The following table shows how this figure was calculated. Please note that this number only represents the number of copies created prior to the Council meeting. Additional photocopies of ordinances, resolutions, minutes, and other documents are also created for distribution after the proceeding is complete.

# of Meetings p/ Month		2
Average Size of Council Packet	X	150
Total Size of Council Packet per Month	=	300
# of Copies Made (8 Alderpersons + 9 Departments + 2 Media + 1 Extra Copy)	X	20
Total Copies Made per month	=	6,000

Currently, the City Clerk's office maintains City Council records across multiple folders. In some cases the records are duplicated. A summary of the storage methods used in the City Clerk is as follows;

- A copy of the paper-based minutes is retained and bound for permanent retention. Agendas and minutes have also been maintained electronically in Microsoft Word for the past few years.
- Ordinances are stored in a fire-proof vault in the basement by ordinance number. An example of the ordinance number is O-##-yy where yy is the year the ordinance was created and # is the consecutive number of the ordinance for the year (i.e. O-1-03 first ordinance of 2003). An additional copy of the Ordinance is also maintained in a binder by year and ordinance number. Periodically, the ordinance is used to update the City Code, a narrative of all ordinances. Approximately 30 ordinances are created annually.
- Resolutions are stored in a fire-proof vault in the basement by resolution number. An example of the resolution number is R-##-yy

where yy is the year the resolution was created and # is the consecutive number of the resolution for the year (i.e. R-1-03 first resolution for 2003). An additional copy of the resolution is also maintained in a binder by year and resolution number. Approximately 30 resolutions are created annually.

- Communications are filed by subject
- Licenses including liquor, tobacco, mechanical device, and temporary liquor licenses are filed by business name. Most licenses are renewed annually. Approximately 100 licenses are issued each year.
- Fire permits are stored by subject and year. Approximately 200 fire permits are issued annually.
- Agreements and contracts are assigned a number by the City Clerk. General information is maintained on each document such as the number assigned, a brief description, and date approved by the Council. Agreements and contracts not approved are filed in a miscellaneous folder for future reference.
- Other items that are typically filed include deeds, easements, abstracts, and many others. These documents are usually filed according to subject.

Committee Minutes

The City Clerk's office maintains all minutes from various committees. Currently, there are approximately 17 committees including:

- Administration Committee
- Board of Public Works
- Menasha Utilities Commission
- Plan Commission
- Menasha-Neenah Sewage Commission
- Police and Fire Commission
- Landmarks Commission
- Library Board
- Board of Health
- Parks and Recreation Board
- Board of Appeals
- Board of Review
- Medical Advisory Board
- Committee on Aging
- Housing Authority
- Board of Education
- IS Steering Committee

After the committee meeting, a representative from the various committee forwards the minutes to the City Clerk. The minutes are typically included with

the Council packet. The City Clerk maintains the Committee minutes by committee name and chronologically by date.

Election Records

The City Clerk's office is responsible for coordinating all elections held within the districts of the City of Menasha. This includes performing the following tasks:

- Create ballot layout
- Process absentee ballots
- Maintain voter registration
- Test voting equipment for accuracy
- Provide supplies to the districts
- Retain election records for set retention periods

The following table summarizes the election documents including the estimated volume and access method in which the document is stored or retrieved.

<i>Record Series</i>	<i># of pages (annually)</i>	<i>Access Method</i>
Canvas Statements	10	Election
Registration & Poll Lists	240	Election
Campaign Registration Statements	20	Subject/Year
Master List	720	Election

In addition to the documents described above, the City Clerk also maintains ballots for approximately 22 months.

The City Clerk uses Town Hall, a PC-based application for voter registration and statistical reporting on elections. No other applications are used for elections at this time. Presently each election occupies approximately ¼ to ½ of a standard file drawer.

Summary of Documents

The following table shows a summary of documents, including paper size, estimated annual volume of pages, and optical storage space required.

Record Series	Size*	# of pages (annual)	Storage size (50 Kilobytes page)
City Council Records	8 ½ x 11 – MX	3,600	180 MB
Committee Minutes	8 ½ x 11 - SS	780	39 MB
Election Records	8 ½ x 11 – SS	2,000	100 MB
Other documents filed	8 ½ x 11 – MX	5,200	260 MB
Approximate Total Optical Storage (megabytes)			579 MB

* SS = Single Sided DS = Double Sided MX = Mixed

III. Present Computerization

The City Clerk's office has two personal computers. The office consists of the City Clerk and a Deputy Clerk. The Deputy Clerk works half-time in the City Clerk's office and half-time in the Mayor's office. The City Clerk uses Town Hall, a PC-based application for maintaining voter registration. Microsoft Word is the predominant application used for creating agendas and minutes. Other applications which the department uses include:

- Microsoft Excel
- Groupwise (email)

IV. Other Considerations

The City Clerk occupies approximately 90 cubic feet of file storage. In addition to the records stored locally within the department, some records are also stored in a fire-proof vault located on the basement. Numerous departments have expressed an interest to be able to access Council Records and Committee Minutes. Currently many of the departments are retaining copies of minutes within their department.

Department: Community Development

I. Department Overview

The Community Development Department provides many services for the residents of the City of Menasha including;

- Land use planning
- Zoning administration
- Redevelopment coordination
- Growth management
- Economic development
- Administration of housing and business loan programs
- Historic preservation
- TIF development and administration

The department also serves in an advisory and coordinating capacity for the Public Works projects, local and regional development policy, Plan Commission, Housing Authority, Board of Appeals, Landmarks Commission, and other planning and development organizations.

II. Present Document Management System

Building Inspection Files

The building inspection files are property files that contain a wide range of documents including plot plans, application forms, violation letters, inspection reports, correspondence, citations, grievances, complaints, and other related documents.

Presently the department issues approximately 100 permits monthly. Once a permit is issued, the building inspection file becomes active and the file is placed in a separate filing cabinet. Building permits for heating and venting, electrical, and plumbing are entered into an AS/400-based homegrown application. After a successful inspection is completed, the file is moved back into the inactive drawers; however inactive files may still have additional documents added to the file at anytime.

The department has estimated that approximately 4,500 building inspection files are stored in the department. The files are arranged according to street address; however, some oversized plans are also stored in hanging files, map cabinets, and the basement. Plans range in paper-size and can include 24" x 36" documents and larger.

Miscellaneous Plans and Maps

The department occasionally receives other oversized plans, architectural drawings, air photos, or specifications from various sources. These documents do not necessarily fall into any of the other categories described within this department profile. The oversized documents are stored in hanging files, map cabinets, and the basement. The documents range in paper-size and can include 24" x 36" documents and larger. Approximately 50 pages are received annually. Each document is stored by category.

Red Files

Red files consist of site plans, special use permits, variances, certified survey maps, rezoning files, annexations, and plats. All of these documents are stored according to subject and year. The department has indicated that site plans, special use permits, and variances could be stored with the building inspection files however they have been maintained separately for ease of access. Many of the documents contained in the red files vary in size and also include oversized documents. Approximately 250 – 350 documents are added to these files annually. Additionally, many of these documents are also found in other departments including annexations, rezoning, and variances found in the City Clerk's office, certified survey maps found in the City Assessor's office, and plats found in Public Works Department.

Community Development Housing Program

Under the direction of the Housing Authority, the Community Development Housing Program assists low to moderate-income families with housing assistance. The department maintains the files by grant year and individual name. Housing Program files are retained for the life of the loan. Approximately 35 files are created annually.

Tax Increment Finance District

The Community Development Department maintains a folder on each of the six districts presently in place. A seventh district is currently planned. The district files contain various documents including minutes, correspondence, maps, forms, and other related documents. Districts typically have a 23-year life. The department maintains a folder for each district by year.

Other Files

The Community Development Department also maintains other documents within the department. The following table summarizes documents not specifically addressed above including the estimated volume and access method in which the document is stored or retrieved.

<i>Record Series</i>	<i># of pages (annually)</i>	<i>Access Method</i>
Plan Commission Minutes	120	Month/Year
Correspondence	200	Subject

Summary of Documents

The following table shows a summary of documents, including paper size, estimated annual volume of pages, and optical storage space required.

Record Series	Size*	# of pages (annual)	Storage size (50 Kilobytes page)
Building Inspection Files	4 x 8 ½ - SS 8 ½ x 11 - MX Oversized	5,000	250 MB
Miscellaneous Plans and Maps	Oversized	100	5 MB
Red Files	8 ½ x 11 - MX Oversized	1,000	50 MB
Community Development Housing Program	8 ½ x 11 - MX	2,000	100 MB
Tax Increment Finance District	8 ½ x 11 - SS	300	15 MB
Plan Commission Minutes	8 ½ x 11 - SS	120	6 MB
Correspondence	8 ½ x 11 - MX	200	10 MB
Approximate Total Optical Storage (megabytes)			436 MB

* SS = Single Sided DS = Double Sided MX = Mixed

III. Present Computerization

The Community Development Department has four personal computers and one laptop computer. The department uses a number of applications. Some of the applications used most frequently by the department include the following:

- AS/400 Building Permits System
- Govern
- ArcView
- HTE Budget module
- Microsoft Word
- Microsoft Excel
- Microsoft Access
- Groupwise (email)

IV. Other Considerations

The Community Development Department occupies approximately 105 cubic feet of file storage. In addition to the records stored locally within the department, the records are also stored in various areas of the basement. Although there are no visible signs of moisture or other damage to the records, the basement does have numerous water pipes near the vicinity of the records.

Department: Finance

I. Department Overview

The Finance Department is responsible for overseeing all financial aspects of the City, including budget preparation, accounts payable and general ledger. In addition the Finance Department acts as the City Treasurer. The City Treasurer is responsible for the receipting of all funds collected by the City. It is the Treasurer's responsibility to bill and collect for all monies due to the City for real estate taxes, special assessments, and personal property. The department maintains tax roll and tax payment information for all parcels. The department ensures that all financial dealings of the City are conducted according to the generally accepted accounting principles related to governmental accounting.

II. Present Document Management System

Accounts Payable Vouchers

All bills are first reviewed and approved by the respective department heads. Using a stamp, the department codes the invoice with the date, name, and account distribution number. The invoice and supporting documentation is forwarded to the Finance Department for processing. Staff verifies the invoice is coded correctly and keys the information into the AS/400 HTE Financial System. Checks are created when the invoice information is processed. A copy of the remittance form and check are attached to the invoice(s) and the invoices and their supporting documentation are then stored by check number. A copy of the check register is presented to the City Council. Approximately 17,000 invoices are processed creating over 5,700 checks annually. Invoices are presently stored for seven years.

Journal Entries

The Finance Department is informed by other departments that a journal entry needs to be prepared. A staff member of the Finance Department enters the information into a form. The form is verified and entered into the AS/400 HTE Financial System. The journal entry documents are then stored according to journal entry number. The documents are also separated by year. Approximately 500 journal entries are created annually.

Purchase Orders

The Finance Department occasionally creates purchase orders for purchases greater than \$1,000. The purchase orders are created manually as there is not an automated process nor does the City maintain a purchasing application that would integrate with the HTE Financial System. Purchase order information including the date of the purchase order, purchase order number, vendor, and department requesting the purchase order, are entered into a notebook. The purchase order number is assigned the next incremental number. The City creates approximately 300 purchase orders annually. The purchase orders are stored according to the sequence assigned at creation time.

Tax Records

The Finance Department creates and maintains all tax related records for the City. Presently, the City of Menasha is utilizing the City of Neenah's Tax system for entering and processing tax notices. Approximately 7,000 tax notices are created and mailed annually. The department has not maintained a paper-based tax notice since 2001 as the City of Neenah provides the City of Menasha with a Compact Disc (CD-ROM) containing all tax notices. Using the CD-ROM, the tax notices can be re-created at will. Previously, the City of Menasha stored tax notices by year, tax district, and parcel number. Currently the City has tax notices from 1996 to 2001.

In addition to the Tax Notices, the City also creates the following reports:

<i>Record Series</i>	<i># of pages (annually)</i>	<i>Access Method</i>
Daily Collection report*	360	By Date
Tax Roll*	834	By Year

* Documents generated from AS/400 System

The documents that are created from the AS/400 System are ideal candidates for COLD (Computer Output to Laser Disk) storage. COLD storage would allow the documents to be stored directly from the AS/400 to optical disk without the need for scanning.

Budget Records

The City of Menasha prepares a budget on an annual basis. The departments fill out a budget worksheet. The budget worksheet is entered into the AS/400 HTE Budget System. Additionally, Microsoft Access is used to produce the narrative for the budget. Once the budget is approved by the City Council, the worksheets are destroyed; however, the annual budget is retained in the department indefinitely. A budget is approximately 250 pages annually.

Other Files

The Finance Department also maintains numerous other documents within the department. The following table summarizes documents not specifically addressed above including the estimated volume and access method in which the document is stored or retrieved.

<i>Record Series</i>	<i># of pages (annually)</i>	<i>Access Method</i>
Accounts Receivable	1,000	Department/Invoice #
Animal Licenses	1,000	License number
Bank Statement	180	Year/Month
Cancelled Checks	5,700	Check number
Check Register*	500	Year/Month
Correspondence	200	Various
Fuel Usage Reports	30	Year/Month
General Ledger Reports*	50	Year
General Ledger - Trial Balance*	50	Year
General Receipts	0	All Online
Investment Records	40	Year/Month/Investment
Special Assessment Records*	130	Year/Month
Vehicle Usage Reports*	300	Year/Month
Vendor Listing*	50	Year

* Documents generated from AS/400 System

The documents that are created from the AS/400 System are ideal candidates for COLD (Computer Output to Laser Disk) storage. COLD storage would allow the documents to be stored directly from the AS/400 to optical disk.

Summary of Documents

The following table shows a summary of documents, including paper size, estimated annual volume of pages, and optical storage space required.

Record Series	Size*	# of pages (annual)	Storage size (50 Kilobytes page)
Accounts Payable	8 ½ x 11 – SS 8 ½ x 11 – DS	17,000	850 MB
Journal Entries	8 ½ x 11 – SS	500	25 MB
Purchase Orders	8 ½ x 11 – SS	300	15 MB
Tax Receipts	8 ½ x 11 – SS 11 x 6 – SS	7,000	n/a
Budget Records	8 ½ x 11 – DS	250	12.5 MB
Accounts Receivable	8 ½ x 11 – SS	1,000	50 MB
Animal License Records	5 x 7 – SS	1,000	50 MB
Bank Statements	8 ½ x 11 – SS	180	9 MB
Cancelled Checks	8 ½ x 3 ½ - SS	5,700	285 MB
Check Registers	8 ½ x 11 – SS	150	7.5 MB
Correspondence	8 ½ x 11 – SS	200	10 MB
Fuel Usage Reports	8 ½ x 11 – SS	30	1.5 MB
General Ledger Reports	11 x 15 – SS	50	2.5 MB
General Ledger – Trial Balance	11 x 15 – SS	50	2.5 MB
General Receipts	n/a	n/a	n/a
Investment Records	8 ½ x 11 – SS	40	2 MB
Special Assessment Records	8 ½ x 11 – SS 11 x 15 – SS	130	6.5 MB
Vehicle Usage Reports	11 x 15 – SS	300	15 MB
Vendor Listing	11 x 15 – SS	50	2.5 MB
Approximate Total Optical Storage (megabytes)			1,346.5 MB

* SS = Single Sided DS = Double Sided MX = Mixed

III. Present Computerization

The Finance Department has approximately seven personal computers. Two of the personal computers are located at the counter for tax collection purposes. The department use HTE Software for most of their daily work including accounts payable, budgeting, and pet licensing. In addition to HTE, the department also utilizes other AS/400 based applications written in-house for such things as special assessments, fixed assets, and budgeting. Other applications which the department uses include:

- Microsoft Word
- Microsoft Excel
- Microsoft Access
- Groupwise (email)
- City of Neenah’s Tax System

IV. Other Considerations

The Finance Department occupies approximately 250 cubic feet of file storage. In addition to the records stored locally within the department, the records are also stored in various areas of the basement. Although there are no visible signs of moisture or other damage to the records, the basement does have numerous water pipes near the vicinity of the records.

Department: Health Department/Senior Center

I. Department Overview

The overall mission of public health is to fulfill society's interest in assuring the conditions in which people can be healthy. The Health Department works to accomplish this mission by providing the following;

- diagnosing and investigating health problems and hazards
- linking people to needed personal health services and assuring the provision of health care when it is unavailable
- informing and educating the public about health issues
- monitoring the health status in the community to identify health problems and needs
- and enforcing laws, rules, and regulations that protect the public's health and safety

The Menasha Health Department has three main program areas to meet the needs of the residents in Menasha. A brief summary of each program follows:

1) Public Health

The main focus of this program is the promotion of health and wellness for City residents served by the Health Department. This includes the prevention and control of communicable diseases, the provision of immunization clinics, and bioterrorism preparedness.

2) School Health

The health department contracts with the Menasha Schools to provide all school health services to students and faculty. The school district reimburses 50% of the public health budget in return for the comprehensive health services provided by the health department.

3) Environmental Health

This Environmental Health program provides for the following:

- inspections of eating, drinking, and retail food establishments
- inspections of public swimming pools
- monitoring lead and asbestos hazards
- monitoring drinking water
- monitoring air quality
- nuisance abatement (health related)
- enforcement of weights and measures standards for consumer protection.

The Public Health Director also oversees the operations of the health department and at the Menasha Senior Center.

The Senior Center is a community service for senior citizens 55 years or older offering social, educational or recreational activities. The individuals may also receive or be directed to counseling services and information on health, housing, financial services, and personal services.

II. Present Document Management System

Bloodborne Pathogen Exposure Incident Records

Any City employee exposed to any bloodborne pathogen is required to fill out a Bloodborne Pathogen Exposure Incident report. The report is submitted to the employee's supervisor who routes the document to the Health Department. A copy of the report is required to be maintained for 30 years past employment. The Health Department also provides a copy to the Personnel Department for their records. Only one or two reports are created annually. Currently the department has reports from 1992 to present. The reports are maintained in a folder by incident date.

Monthly Statistical Report

The Health Department creates reports monthly summarizing the statistical information regarding the types of cases and number of cases performed monthly. The report is generated in Microsoft Word. The department provides a copy of the report to the Common Council, School Board, and Board of Health. A copy is also maintained in the department chronologically. Although the department is not mandated to create these reports, the department maintains these reports indefinitely for historical purposes.

Board of Health Minutes

The Board of Health meets on a monthly basis with the exception of June and July. Together, the agenda and minutes of the meeting are typically three pages. The minutes are distributed to the City Clerk and Common Council. The Health Department maintains the minutes in the department for seven years. Minutes are stored chronologically.

Contracts - Health

The Health Department maintains grant and service contracts that regulate monies received from other entities, how the monies can be spent, and the types of services the department will provide. There are approximately 10 active service contracts and 15 active grant contracts. Some contracts are renewable annually while others simply expire. Contracts are maintained for a minimum of seven years and stored according to year and contract name.

Immunization Records

The Health Department maintains immunization records separate from client medical records. Immunization records are stored according to year and month. The department enters information such as client name, vaccine lot number, and name of the administrator into the Wisconsin Immunization Registry (WIR) application. WIR is an internet-based application provided by the State. Immunization records are required to be maintained permanently by the State. The department has concerns whether the records can be imaged according to State retention rules.

Client Medical Records

The Health Department provides various services to clients. A client can be a walk-in or referred by another party such as a client, a doctor, or a home care agency. The department has approximately 100 active case and approximately 100 new cases are created and retired each year.

The Health Department does not presently have an application where client information is retained. Currently, each client has an index card containing demographic information. The index card indicates whether the client has an additional medical file. Only clients that have more than one visit receive a medical file. The medical file contains documents such as health history, growth charts, assessments, check-off lists, nurse's notes, and other related medical documents. Active client files are stored alphabetically according to client name, whereas inactive medical files are stored alphabetically and chronologically. Client files are retained for seven years after the file becomes inactive.

Inspection Records

The Health Department performs various inspections of establishments including retail foods, restaurants, pools, and other various locations where weights and measures is a factor. The department maintains a folder for each establishment. The folder contains the permit, inspection reports, and other related material. Approximately 900 – 1,000 pages are added to these files annually. The records are stored according to the type of establishment and name of establishment.

Complaints

The Health Department receives approximately 125 complaints annually relating to health concerns. All complaints are investigated. Typically complaints are stored monthly; however, on an occasional basis, the complaints are filed by an address or name based on the number of complaints received or the investigation. Complaints are maintained for a minimum of three years.

Committee on Aging Minutes

The Committee on Aging meets once a month for eleven months in a year. The committee advises the Senior Center and Common Council on various topics including policies, programs, and population. Together, the agenda and minutes of the meeting are typically three pages. The minutes are distributed to the City Clerk and Common Council. The Senior Center maintains the minutes in the department for seven years. Minutes are stored chronologically by meeting date.

Contracts/Grant Proposal – Senior Center

The Senior Center currently maintains records for one grant and one contract. The grants dictate how monies can be spent and the services that must be provided by the Senior Center. Additionally, the contract allows the Senior Center to be a meal site for the Winnebago County nutrition program's noon meals offered to seniors. Contracts and grants are maintained for seven years and stored by year and name.

Summary of Documents

The following table shows a summary of documents, including paper size, estimated annual volume of pages, and optical storage space required.

Record Series	Size*	# of pages (annual)	Storage size (50 Kilobytes page)
Bloodborne Pathogen Incident Reports	8 ½ x 11 – SS	2	↓1 MB
Monthly Statistical Report	8 ½ x 11 – SS	40	2 MB
Board of Health Minutes	8 ½ x 11 – SS	40	2 MB
Contracts – Health Department	8 ½ x 11 – SS 8 ½ x 11 – DS	250	12.5 MB
Immunization Records	8 ½ x 11 - SS	720	36 MB
Client Medical Records	8 ½ x 11 – SS 8 ½ x 11 – DS 5 x 7 – SS	500	25 MB
Inspection Records	8 ½ x 11 – SS	1,000	50 MB
Complaints	8 ½ x 11 – SS	300	15 MB
Committee on Aging Minutes	8 ½ x 11 – SS	40	2 MB
Contracts – Senior Center	8 ½ x 11 - SS	10	↓1 MB
Approximate Total Optical Storage (megabytes)			146.5 MB

* SS = Single Sided DS = Double Sided MX = Mixed

III. Present Computerization

The Health Department has approximately ten personal computers. One of the personal computers is located in the reference room. The department uses various State applications including the Wisconsin Immunization Registry (WIR), and SPHERE, both internet-based. The department also utilizes an AS/400-based application for statistical reporting.

The Senior Center has two personal computers.

Other applications which the department uses include:

- Microsoft Word
- Microsoft Excel
- Groupwise (email)

IV. Other Considerations

The Health Department occupies approximately 30 cubic feet of file storage. The Senior Center occupies approximately 6 cubic feet of storage.

Department: Library

I. Department Overview

The Library extends library services to the residents of the City of Menasha. The Menasha Library is a member of the Winnefox Library System which has 30 members in five counties. The Winnefox Library System serves a population of over 300,000 residents from Fond du Lac, Green Lake, Marquette, Waushara and Winnebago counties. The Winnefox Library System provides access to materials and services available at all member libraries.

The City of Menasha Library provides a variety of meeting rooms, programming and service for children, adults and families.

II. Present Document Management System

Personnel Files

The Library maintains personnel records for each employee. Personnel files are stored according to employee name and include applications, change forms, evaluations, promotions, and other personnel related documents. Approximately 25 to 30 active folders presently exist in the Library. The Library also has approximately 150 closed files.

Library Board Files

The Library Board is the Oversight Committee for the Library. The Library Board is responsible to oversee the Director of the Library and set policy for Library operations. In addition, the Board also approves all financial transactions. The Library maintains all agendas, minutes, and attached documentation for the monthly meetings. The Library Board files are stored according to meeting date. The Library has minutes dated back to 1890s.

Vouchers

The Library is one of the few departments in which original financial vouchers and attached documentation are maintained within the department. The Library staff currently enters approximately 250 invoices monthly into the HTE Financial System. The Finance Department processes the information and routes the associated checks to the Library. The Library attaches a copy of the check to the paid invoices. Approximately 60 checks are created monthly. The Library maintains vouchers for a minimum of seven years. Vouchers are stored according to year and vendor.

Accounts

The Library also maintains four other accounts. An example of one of the accounts is the Endowment Fund. The Endowment Fund is monies received outside the tax basis, typically donated as gifts or from estates. Each of the accounts typically involves processing payments, standard bookkeeping procedures, account reconciliation, and account auditing. Each account is maintained separately from the other.

Timesheets

The Library maintains the original timesheet for each of the 30 library employees. The timesheets are stored according to category, employee name, and date of the timesheet. The timesheets are maintained for two years before being destroyed.

The Library also receives a "Time Off Status Report" from the Finance Department on a monthly basis. The library staff uses the information from the report to create a summary for each employee. The summary is distributed to supervisors and each employee. In addition to the Time Off Summary Report, the library staff also creates an Absence Summary Report annually for each employee.

Subject Matter Files

The Library maintains subject folders on various topics related to the Library. The topic subjects range based on the type of project the Library is engaging. Currently, the Library is in the process of renovating the existing Library to add additional capacity. Once a project is complete, the files are accessed infrequently however, the files are maintained for historical or reference purposes. Subject files are stored according to subject name.

Other Files

The Library also maintains other documents within the department. The following table summarizes documents not specifically addressed above including the estimated volume and access method in which the document is stored or retrieved.

<i>Record Series</i>	<i># of pages (annually)</i>	<i>Access Method</i>
Cash Drawer Audit Report	200	Date
Daily Transaction Listing	1,250	Date
Weekly Deposit Slips	100	Year/Date

Summary of Documents

The following table shows a summary of documents, including paper size, estimated annual volume of pages, and optical storage space required.

Record Series	Size*	# of pages (annual)	Storage size (50 Kilobytes page)
Personnel Files	8 ½ x 11 – MX	450	22.5 MB
Library Board Files	8 ½ x 11 – MX 8 ½ x 14 – SS	240	12 MB
Vouchers	8 ½ x 11 – MX 8 ½ x 14 – MX	12,000	600 MB
Accounts	8 ½ x 11 – SS	400	20 MB
Timesheets	8 ½ x 11 – SS	780	39 MB
Subject Matter Files	8 ½ x 11 – MX Various	400	20 MB
Cash Drawer Audit Report	8 ½ x 11 – SS	200	10 MB
Daily Transaction Listing	8 ½ x 11 – SS	1,250	62.5 MB
Weekly Deposit Slips	3 x 6 – SS 8 ½ x 11 – SS	100	5 MB
Approximate Total Optical Storage (megabytes)			791MB

* SS = Single Sided DS = Double Sided MX = Mixed

III. Present Computerization

The Library has between 40 and 50 personal computers. Currently, only one personal computer is currently connected to the City of Menasha network. All of the other personal computers are connected to the Winnefox network. The library indicated that only two or three individuals currently access the library documents mentioned above.

The personal computer connected to the City’s network utilizes the HTE Financial System, HTE Payroll System, and the HTE Budget System. In addition, the Library also uses other applications including:

- Microsoft Word
- Microsoft Excel
- Outlook (email)
- Donor Perfect (fundraising software)

IV. Other Considerations

The Library occupies approximately 36 cubic feet of file storage.

Department: Mayor

I. Department Overview

The Mayor's office is responsible to direct the overall city operations including:

- Coordinate all city departments
- Review and monitor the city budget
- Direct economic and long range plans
- Plan and recommend service levels
- Respond to citizen comments
- Coordinate the sale and purchase of property
- Analyze and interpret legislation

II. Present Document Management System

Subject Matter Files

The Mayor maintains subject folders on various topics related to the City. As mentioned in the Department Overview, the Mayor is responsible to direct the overall city operations, therefore the topic subjects range based on the type of project the City is engaging. The Mayor typically has 5 – 10 active project folders at any given time. The files contain various documents including project notes, correspondence, reports from other departments, and other documents relating to the project. The Mayor also maintains correspondence electronically; however, important documents are printed and placed in the appropriate folder. The projects are typically brief in nature and usually accessed by only the Mayor. Once a project is complete, the files are accessed infrequently; however, the files are maintained for historical or reference purposes. Subject files are located in the Mayor's office and stored according to subject name.

Summary of Documents

The following table shows a summary of documents, including paper size, estimated annual volume of pages, and optical storage space required.

Record Series	Size*	# of pages (annual)	Storage size (50 Kilobytes page)
Subject Matter Files	8 ½ x 11 – SS 8 ½ x 11 – DS	400	20 MB
Approximate Total Optical Storage (megabytes)			20 MB

* SS = Single Sided DS = Double Sided MX = Mixed

III. Present Computerization

The Mayor's office has two personal computers. The office consists of the Mayor and a personal assistant. The personal assistant works half-time in the Mayor's office and half-time in the City Clerk's office. The Mayor's office does not use any specialized applications but does access other City applications for inquiry. Other applications which the department uses include:

- Microsoft Word
- Microsoft Excel
- Groupwise (email)

IV. Other Considerations

The Mayor's office occupies approximately 8 cubic feet of file storage. The Mayor would be interested in having the ability to place documents for events in a location that would be easily accessible. The Mayor also mentioned that accessing City Council agendas and minutes, financial records, and budgets electronically would be beneficial.

Department: Park and Recreation

I. Department Overview

The purpose of the Parks and Recreation Department is to provide leisure services, facilities and environmental management to ensure a high quality of life for the citizens of Menasha, the community and its visitors.

The Parks and Recreation Department manages and operates a variety of recreation programs for youth, adults and seniors. The Parks and Recreation Department is also responsible for the operation of 18 City parks, totaling over 165 acres with numerous picnic and playground facilities. The department also manages the urban forestry program.

II. Present Document Management System

Recreation Program Files

The Park and Recreation Department maintains a folder for the 20 to 30 programs the department offers annually. Each program folder contains various documents including rules and other documentation about the program. The program folders are stored according to program name.

In addition to the program folders, the department also maintains two binders annually. Each binder is sub-categorized into fall, winter, spring, and summer programs. The binders contain program related information including correspondence, notes, and standings. The department has maintained the binders since 1980.

Receipt Forms

Recently, the department implemented a PC-based point of sale application, Safari, where the department now tracks fees for various recreational programs offered, park shelter reservations, pool passes, and boat launch permits. Since the implementation of Safari, the department rarely needs to create manual receipts. Previously receipts were created in a 5 x 7 booklet. The booklets are maintained for approximately 7 years and were stored by receipt number order.

Park Facility Rental Forms

The Parks and Recreation Department has over 200 Park facility rentals annually. Information from the rental form is entered into Safari application to assist with managing the reservations. The rental forms are stored chronologically by year. The department maintains rental forms for three years before the records are recycled.

Pool Pass Forms

The Parks and Recreation Department maintains a 5 x 7 index card for each family that receives a pool pass. Each year the card is updated with the family's information. The index cards are filed alphabetically.

The department is currently considering purchasing a membership module to the Safari application which would allow the department to maintain the information electronically. It is our opinion that these documents would be better suited to be entered into a membership application, and therefore, these documents are not calculated into the storage considerations.

Park and Recreation Board Minutes

The Parks and Recreation Board meets monthly. The board advises the Parks and Recreation Department on various topics including policies and programs. The packet including the agenda, minutes, and other documentation are typically 10 pages. The minutes are distributed to the City Clerk and Common Council. Minutes are stored chronologically by meeting date. The department has some documentation dating back to the 1940s.

Grant Records

Recently, the Parks and Forestry division have averaged five grants annually. Grant files contain information about the grant including applications and documentation on how the grant has been used. The department has maintained grant files since 1970. Grants files are stored alphabetically within each division.

Maps, Drawings, and Plans

Occasionally the department receives maps, drawings, or plans from various sources. The oversized documents may include park facilities or landscape plans. The department has approximately 250 various sized plans dating back to the 1950s. Approximately 10 oversized documents are received annually.

Summary of Documents

The following table shows a summary of documents, including paper size, estimated annual volume of pages, and optical storage space required.

Record Series	Size*	# of pages (annual)	Storage size (50 Kilobytes page)
Recreation Program Files	8 ½ x 11 – SS	500	25 MB
Receipt Forms	5 x 7 – SS	100	5 MB
Park Facility Rental Forms	8 ½ x 11 – DS	400	20 MB
Parks and Recreation Board Minutes	8 ½ x 11 - SS	120	6 MB
Grant Records	8 ½ x 11 – SS	250	12.5 MB
Maps, Drawings, Plans	8 ½ x 11 – SS 30 x 40 - SS	10	.5 MB
Approximate Total Optical Storage (megabytes)			69 MB

* SS = Single Sided DS = Double Sided MX = Mixed

III. Present Computerization

Although the department has numerous employees, the department indicated that only 2 – 3 individuals actually access the documents detailed in the study. The department uses various programs including Safari, HTE Financial System, and the HTE Budget System. Other applications which the department uses include:

- Microsoft Word
- Microsoft Excel
- Groupwise (email)

IV. Other Considerations

The Parks and Recreation Department occupies approximately 12 cubic feet of file storage.

Department: Personnel

I. Department Overview

The Personnel Department is responsible for all aspects of Human Resources including payroll, hiring, labor negotiations, Family Medical Leave Act, American Disability Act, Section 125, Deferred Compensation, health, dental, and vision insurance plans, retirement accounting, training, unemployment compensation, Workers' Compensation program, and support for department heads.

The Personnel Department also oversees the Safety Committee and Risk Management. The Personnel Director is also the City Attorney and Risk Manager.

II. Present Document Management System

Personnel Files

The Personnel Department maintains personnel files and medical files for each employee. Due to security and legal reasons, the medical records are kept separate from the personnel files. Currently, the City maintains records for 30 active firefighters, 125 full-time employees, and 150 casual employees.

The employee personnel file contains documents related to employment including applications, resumes, performance evaluations, training records, and other personnel related documents. The personnel file also contains a payroll section where payroll information for each employee is maintained such as the W-2, W-4, status change forms, and garnishment information. Active personnel files are stored by section and employee name. Sections include; Part-time, Non-representative, Union (3), Library, and Fire Department. Documents within each folder are placed in the folder chronologically with the most recent date first. Inactive personnel files are stored by year of termination and employee name.

The employee medical file contains work and non-work related medical documents including workers' compensation information and general medical records. Documents within each folder are placed in the folder chronologically with the most recent date first. The medical records are considered confidential and should only be accessed by authorized personnel.

Personnel files range in retention. The employee personnel files are required to be maintained for 8 years after termination whereas Workers' Compensation records are required for 30 years. Presently, the Personnel Department maintains

the records indefinitely. Approximately 1,500 pages are added to the personnel and medical files annually.

Subject Matter Files

The Personnel Department maintains subject folders on various topics related to the department or to the City in general. Subject Matter topics might include insurance policies, benefits, general policies and procedures, contracts, safety manuals, committee notes, vehicle lists, workers' compensation, section 125, deferred compensation, Wisconsin state retirement, union contract files, union negotiation files, and union grievances. Most subject files are arranged alphabetically; however, larger files are also separated by year.

Payroll Reports

The Personnel Department has various archived payroll reports from 1997 – 1999 including Payroll registers, quarterly reports, and annual reports. The payroll reports were printed from the previous payroll application. The Personnel Department indicated the current payroll application, HTE, allows complete online access to all payroll information thus new payroll reports are not printed with the exception of those reports distributed to department heads. Currently the reports distributed on a payroll cycle basis include; "Time off status report" and "600 hours report".

Timecards

Timecards are filled out by the staff on a weekly or bi-weekly basis based on the payroll cycle for the staff member. The timecards are submitted to the department supervisor for approval. Most departments re-enter the timecards into an Excel spreadsheet. The printed spreadsheets are then routed to the Personnel Department where the information is keyed into the HTE Payroll System for processing. Timecards are stored according to the payroll cycle and alphabetically by staff member.

Summary of Documents

The following table shows a summary of documents, including paper size, estimated annual volume of pages, and optical storage space required.

Record Series	Size*	# of pages (annual)	Storage size (50 Kilobytes page)
Personnel Files	8 ½ x 11 – MX	1,500	75 MB
Subject Files	8 ½ x 11 – MX	500	25 MB
Timesheets	8 ½ x 11 - SS	6,000	300 MB
Approximate Total Optical Storage (megabytes)			400 MB

* SS = Single Sided DS = Double Sided MX = Mixed

III. Present Computerization

The Personnel Department has three personal computers. The department uses a number of applications. Some of the applications used most frequently by the department include the following:

- HTE Payroll Module
- Microsoft Word
- Microsoft Excel
- Groupwise (email)

IV. Other Considerations

The Personnel Department occupies approximately 95 cubic feet of storage.

Department: Police

I. Department Overview

The Police Department provides law enforcement services to the citizens of the City of Menasha including the following:

- Serve civil process and arrest warrants
- Conduct criminal investigations
- Conduct accident and traffic related investigations
- Provide traffic safety control and enforcement
- Provide emergency rescue services
- Maintain and generate reports on all of the above law enforcement activities

II. Present Document Management System

Law Enforcement Case Files

Law Enforcement case files such as incident reports and accident reports can be generated by a 911-dispatch call, traffic stop, or a citizen report. A case record number is assigned to each type of case file when it is entered into Incident Tracker, a PC-based application. The following table shows the average number of cases created by type annually.

<i>Document Type</i>	<i>Annual Volume</i>
General Case Files	4,500
Accident Case Files	300

Each case file can contain various types of documents including statements, narratives, damage reports, medical reports, evidence reports, accident reports, investigation reports, maps and diagrams, and other case related documents. Case files range in size. Smaller cases are typically a few pages while larger cases may have several hundred pages. Although many of the case files have seven to ten year retention, the Police Department has all case files since 1990.

Arrest Records

The Police Department maintains an Arrest folder for anyone that has ever received a citation, summons, or other related document from the department. The department has approximate 32,000 arrest folders. Each folder is tracked by using the Incident Tracker application and an arrest number is assigned to each folder. The following table shows the average number of cases created by type annually.

<i>Document Type</i>	<i>Annual Volume</i>
Citations	1,600
Summons	700

Arrest folders are accessed frequently by the department. Many of the documents created or received by the department are added to existing arrest folders.

Approximately 2,000 warnings are also issued annually. Warnings are entered into Incident Tracker and only maintained for six months. Due to the brief nature in which warnings are retained, warnings will not be calculated into the estimated storage considerations for the City.

Jail Records

The Police Department stores most jail records with the case file or arrest folder. The department does however maintain a log as well as maintenance records of the facility. Approximately 150 pages are created annually.

Photos/Mug shots

Most of the pictures and mug shots the department creates are now done electronically. The Police Department uses Mug Pac, a PC-based application for Mug shots. Mug Pac provides the capability to perform automated lineups. Other pictures are produced using a digital camera and stored out on the network. Approximately 200 – 500 pictures are still produced using a 35 mm camera. Developed pictures are stored in envelopes by case number. These files are separate from the actual case files discussed previously.

Personnel Files

The Police Department maintains a copy of the personnel records for each employee. Personnel files are stored according to employee name and include applications, evaluations, promotions, training records, and other personnel related documents. Approximately 75 active folders presently exist in the department for active employees, temporary employees, auxiliary, and crossing guards. The department also creates a copy of most documents for the Personnel Department.

Other Files

The Police Department also maintains numerous other documents within the department:

- Parking tickets (not in Powerpack)
- Sex Offender records
- Property sheets
- Various logs
- Liability releases
- False alarm records
- Schedules
- UCR Reporting

The volume of these documents is considered low, and can be added to the imaging system without any material impact. We encourage the department to focus first on their high volume documents, before addressing the above documents.

Summary of Documents

The following table shows a summary of documents, including paper size, estimated annual volume of pages, and optical storage space required.

Record Series	Size*	# of pages (annual)	Storage size (50 Kilobytes page)
General Case Files	8 ½ x 11 – MX	45,500	2,275 MB
Accident Case Files	8 ½ x 11 – MX	2,400	120 MB
Arrest Records	4 x 8 – DS 8 ½ x 11 – MX	10,000	500 MB
Jail Records	8 ½ x 11 – SS	150	7.5 MB
Photos/Mug shots	3 x 5 – SS	500	25 MB
Personnel Files	8 ½ x 11 – MX	750	37.5 MB
Approximate Total Optical Storage (megabytes)			2,965 MB

* SS = Single Sided DS = Double Sided MX = Mixed

III. Present Computerization

The Police Department has approximately 34 personal computers. Eight of the personal computers are located in police cars. The department uses a number of applications. Some of the applications used most frequently by the department include the following:

- HTE Financial System
- HTE Animal License System
- Incident Tracker
- Power Park
- Mug Pac
- Microsoft Word
- Microsoft Excel
- Groupwise (email)

IV. Other Considerations

The Police Department occupies approximately 1,080 cubic feet of file storage.

Department: Public Works

I. Department Overview

The Public Works Department is responsible for providing a variety of services to the residents of Menasha and information to the general public. The Public Works Department consists of the following divisions: Engineering Division, Building Services Division, Streets and Sanitation Division, and Lift Bridge Division. A brief description of each division is provided below.

The Engineering division includes design, drafting, surveying, and inspection of public improvement projects, design and management of traffic signal systems, maintenance of City maps, and management of City sanitary and storm sewer systems. In addition, the Engineering division provides information to the public relative to City infrastructure systems, traffic control, maps, special assessments, and various other public works related items.

The Building Services division provides custodial services as well as management of general building maintenance for all City owned facilities.

The Streets and Sanitation division provides street and sidewalk maintenance, snow and ice control for streets and public parking lots, refuse and recycling collection, yard waste processing, sanitary and storm sewer maintenance, pavement marking and traffic sign assembly and installation, public parking lot maintenance, weed control, and fleet maintenance for City owned vehicles and equipment.

The Lift Bridge division is responsible for the operation of the Racine Street and Tayco Street lift bridges, entirely funded by Wisconsin Department of Transportation.

II. Present Document Management System

Plan Files

The Engineering division retains a large volume of plans within the department. The department maintains a binder where each plan is categorized by street. Information about each plan including the type of plan, project description, and reference number is entered in the binder. A list of plan types is as follows:

- A - Sanitary Sewer
- B - Storm Sewer
- C - Curb/Gutter/Street

- D - Cross Section
- E – Plat
- Incomplete

The project plans are maintained in both electronic and paper-based systems. The electronic plan files, typically CAD drawings, are backed up to CD-ROM. The paper-based plans are stored in hanging files or map cabinets. Plans vary in paper size; however, the majority of the documents are oversized and can include 24" x 36" and larger documents.

The department has approximately 540 or more plans each varying in number of pages. In addition, the department also has 3,300 aperture cards, a form of microfilm. Each aperture card contains a single plan. The department receives an additional 25 to 30 plans annually, averaging approximately 60 to 75 pages in total.

Sanitary/Storm Sewer System VHS Tapes

The Engineering division has approximately 90 VHS video tapes of the sanitary and storm sewers in the City. Each tape contains an estimated 6 hours of video spanning multiple sewer lines. A manual log is maintained in the department identifying the sewer line, video tape, and counter number on the tape where the video footage can be located. Each video segment will be retained indefinitely or until the sewer segment is re-recorded.

The department is currently in the beginning stages of converting the video tapes to a digital format. Each sewer segment will be extracted from the tape, converted to digital format, and copied to DVD for archival purposes. Ultimately, the department would like to retain the digital videos in an easily accessible format where the video can be linked to a CAD map and accessed from the office or the internet. During the discussion of the VHS tapes, the department identified that a single DVD will retain 3 hours 20 minutes of digital video. The following table summarizes the volume of storage the video will require:

Number of VHS tapes		90
Hours of video on each VHS tape	X	6
Total hours	=	540
Hours available on DVD technology	/	3 1/3
Total DVDs needed	=	164
Disk capacity per DVD	X	4.7 GB
Total Storage needed (in Gigabytes)	=	770.8 GB

Therefore, the Public Works department will need approximately 770.8 gigabytes of storage space available.

Notices

The Public Works Department occasionally issues notices to residents for weeds, refuse removal, or snow removal. Every notice requires a return visit to determine if the resident has complied. On occasions where the resident has not complied, a workorder is completed and the City performs the service. The resident is sent an invoice for the service. Pictures are periodically taken as proof that the service was needed. Approximately 200 notices are issued annually. The notices, work orders, and photos are stored according to year. Notices requiring a work order are also tracked in an Excel spreadsheet.

Equipment Files

The Public Works Department maintains a folder on each piece of equipment the department maintains. Once the piece of equipment is purchased, the department issues a fleet number and records information about the equipment into Jet Fleet, a PC-based application. An equipment folder is created and various documents including warranties, receipts, and maintenance records are added for the entire life-cycle of the equipment.

Excavation Permits

The City requires an excavation permit anytime the surface of a sidewalk, terrace, or road is broke. Approximately 400 to 500 permits are issued annually. The department maintains two copies of each permit. The first copy is temporarily retained in the Engineering division in a binder by category and permit. The following four categories are used by the Engineering division; WE Energies, Menasha Utilities, Ameritech, and general contractors. After approximately one month, the copies are extracted from the binder and stored in a folder according to year and month. The second copy is retained by the Streets and Sanitation division. The Streets and Sanitations division enters any costs associated with repair and the excavation permits are filed according to freeze thaw cycle and permit number. The Engineering division indicated interest in automating the form as well as storing the permit with the street file for historical purposes.

Street Files

The Engineering division maintains a folder for each street in the City. Larger folders are also subcategorized by block. The folder contains various documents for each street including house grades, landscape grades, correspondence, and complaints. Approximately 300 folders are currently in the department.

Bidding Documents

The City periodically refers to outside contractors to perform various services to streets, sewers, shelters, or other project requested by the City. The Engineering division maintains a bidding folder for each project in which the City engages. The bidding folder contains various documents including specifications, proposals, contracts, correspondence, bid tabulation, testing, assessments, payments, plans of various sizes, or other document relating to the bid. Each bidding folder is assigned a unique number containing the year and bid number (i.e. 2003-1). Approximately 4 to 10 bids are requested by the City annually. Bid documents are retained for 15 years by the department.

Other Files

The Public Works Department also maintains numerous other documents within the department. The following table summarizes documents not specifically addressed above including the estimated volume and access method in which the document is stored or retrieved.

<i>Record Series</i>	<i># of pages (annually)</i>	<i>Access Method</i>
Dumpster Rentals	550	Month
Diggers Hotline	200	Year
Untagged Files	750	Month/Day
Weather Reports	200	Year
Equipment Tickets	2,400	Year/Month
Parking Committee Minutes	180	Year/Month
Board of Public Works Minutes	240	Year/Month

The Department also expressed interest in many other documents including:

- DOT Projects
- Engineering Studies
- Land Acquisition
- Traffic Studies
- Sewer Investigation Reports
- Grant Files
- Street Lighting
- Recycling programs
- Accident reports
- Fuel Files
- Timesheets
- Plus many other documents

Although the volumes of these documents ranged in capacity, not all of these documents were investigated to the full extent.

The department also maintains copies of purchase orders and accounts payable. Although these documents are also sent to the Finance Department, the copies are maintained in Public Works for ease of access. These documents were addressed in the Finance Department profile, and therefore were not re-addressed here.

Summary of Documents

The following table shows a summary of documents, including paper size, estimated annual volume of pages, and optical storage space required.

Record Series	Size*	# of pages (annual)	Storage size (50 Kilobytes page)
Plan Files	8 ½ x 11 – SS 24 x 36 – SS Various	75	75 MB (adjusted to 1 MB each)
Sanitary/Storm Sewer System VHS Tapes	n/a	n/a	See recommendations
Notices	8 ½ x 11 – SS 3 x 5 – SS	300	15 MB
Equipment Files	8 ½ x 11 - MX	500	25 MB
Excavation Permits	8 ½ x 11 – SS	750	37.5 MB
Street Files	8 ½ x 11 – SS	500	25 MB
Bidding Documents	8 ½ x 11- SS Various	500	25 MB
Dumpster Rentals	8 ½ x 11 – SS	500	25 MB
Diggers Hotline	8 ½ x 11 – SS	200	10 MB
Untagged Files	8 ½ x 11 – SS	750	37.5 MB
Weather Reports	8 ½ x 11 – SS	200	10 MB
Equipment Tickets	8 ½ x 4 - SS	1,200	60 MB
Parking Committee Minutes	8 ½ x 11 – SS	180	9 MB
Board of Public Works Minutes	8 ½ x 11 – SS	240	12 MB
Approximate Total Optical Storage (megabytes)			366 MB

* SS = Single Sided DS = Double Sided MX = Mixed

III. Present Computerization

The Public Works Department has approximately 15 personal computers each needing access to various documents within the department. The department uses a number of applications. Some of the applications used most frequently by the department include the following:

- Jet Fleet
- Equipment Ticket Software, homegrown AS/400 application
- Fuel Master
- Refuse Cart Inventory Software
- Microsoft Word
- Microsoft Excel

- Microsoft Access
- Groupwise (email)

The department also has the following additional equipment:

- HP 1050C Plotter
- Xerox Engineering Copier

IV. Other Considerations

The Public Works Department occupies approximately 100 cubic feet of file storage. In addition to the records stored locally within the department, the records are also stored in various areas of the basement. Although there are no visible signs of moisture or other damage to the records, the basement does have numerous water pipes near the vicinity of the records.

D. Legal Implications

As imaging consultants, it is important for us to be neutral in our approach concerning legal issues relating to document imaging. It is the City of Menasha's sole responsibility to obtain authoritative legal guidance related to document imaging, as we are not qualified to give legal guidance. We can, however, offer our informed opinions to assist the City of Menasha in understanding the legal issues that may need to be addressed.

Most records management industry experts believe that laws that govern the admissibility of documents favorably address the question of legality. Statutes that already cite admissibility criteria include the UPC (Uniform Photographic Copies of Business and Public Records as Evidence Act UPA 28USC pl732). According to many industry experts, there are two key points in determining admissibility of records stored on optical disk:

1. **Regular course of business test:** It is up to the business entity itself to establish and document the procedures and training programs necessary to demonstrate the trustworthiness of records. Audit trails can be produced by document imaging systems to assist in the documentation of the procedures.
2. **Trustworthiness of the records:** This is demonstrated by the existence of the formal, written procedures for handling of records, formally approved by the City Council. These procedures should include audit trails, and procedures for testing quality of documents stored.

In the State of Wisconsin, the City of Menasha must also be concerned with the following:

- Administrative Code Chapter 12, which governs the use of document imaging uses for governmental records.
- SCR Chapter 72, which specifically covers court related documents.

We urge the City of Menasha, through its City Attorney, to investigate the above mentioned issues to assure that it is in legal compliance in using document imaging for storage of City or State records.

E. Configuration & Costs

In order to develop the document imaging system for the departments reviewed, the City will need to acquire the following elements:

- 1) Scanners
- 2) Jukebox storage
- 3) Document Imaging System
- 4) Professional services for installation and training
- 5) Conversion

Each of these elements will be examined in detail below:

1. Scanners:

The scanner converts the paper document into an electronic format that can be stored on optical disk and later retrieved using devices such as personal computers. Scanners vary according to number of pages per minute (ppm) that can be scanned, the scanning mode (i.e., single side or duplex), the capacity of the automatic document feeder, and the maximum paper size.

The scanner attaches to a personal computer via a control card and cable. The Kofax card and Y-cable are the most popular among most imaging systems. The Kofax card controls the compression and decompression of the image for scanning and printing, increasing scanning throughput. Another popular scanner control card is the Small Computer System Interface (SCSI). SCSI cards provide a high-speed parallel interface between the scanner and personal computer. The Kofax card is based on SCSI technology; however, additional processing and memory functions are built into the Kofax card allowing for greater throughput over standard SCSI controllers.

The number and type of scanners we recommend for each department, based on their requirements, are as follows:

Department	Type	Number of Scanners
City Assessor	High	1
City Attorney	High	1
City Clerk	Medium	1
Community Development	High	1
Finance Department	High	1
Health Department/Senior Center	Low	1
Library	Medium	1
Mayor	Shared w/ City Attorney and Personnel	-
Park and Recreation	Shared w/ Community Development	-
Personnel	Shared w/ City Attorney and Mayor	-
Police Department	High	1
Public Works – Engineering	High Large Scale Scanner	1 1
Totals		10

Scanners can range in price based on the features the device supports. For the purpose of the study, the following tables show the estimates used in the study to cover the cost of a scanner, associated controlling card, and cable for low, medium, and high-end scanners.

Low-end scanner

Description	Est. Cost
8 ½ x 14 – 20 ppm Simplex Scanner	\$1,500
Attachment adapter	\$1,000
Scanner Cable	\$125
Totals	\$2,625

Medium-end scanner

Description	Est. Cost
8 ½ x 14 – 40/80 ppm Duplex Scanner	\$3,700
Attachment Adapter	\$1,000
Scanner Cable	\$125
Totals	\$4,825

High-end scanner

Description	Est. Cost
11 x 17 – 50/90 ppm Duplex Scanner	\$5,100
Attachment Adapter	\$1,000
Scanner Cable	\$125
Totals	\$6,225

Multi-function scanners/printers/copiers may also be used as part of the imaging system, provided it is compatible with the imaging system selected.

In addition to the production scanners used for standard size documents, several departments maintain maps, drawings, and plans ranging in size from 8 ½ x 11 to 34 x 44 inches. Documents larger than 11 x 17 inches would require the documents to be scanned by a large-scale scanner. The City presently maintains approximately 10,000 large-scale drawings. An estimated 1,050 drawings are received annually. The following table shows the departments and estimated number of large-scale drawings received annually:

Department	Estimated # of Pages
City Assessor	25
Community Development	500
Public Works – Engineering	500
Parks and Recreation	10
City Attorney	15
Totals	1,050

Large-scale scanners can range in cost from \$12,000 to \$30,000 depending on the scanner features provided. For purposes of this study, an average cost of \$16,000 was used. Based on our previous experience, the average cost is typical unless specialized features are needed. If the City of Menasha was to purchase a large-scale scanner, it is our recommendation to centrally locate the scanner in one of the departments needing the scanner. The City may also consider outsourcing the scanning process of large-scale drawings. The estimated cost for outsourcing drawings on a page basis is \$2.00. Based on the number of large-scale drawings received annually by the City, outsourcing large-scale drawings would cost \$2,100 annually. The following table shows how this figure was calculated.

Estimated number of maps annually		1,050
Estimated Cost per page	x	\$2.00
Estimated Cost per year	=	\$2,100

2. Jukebox Storage:

Optical Jukeboxes are devices connected to the network via a personal computer or server such as the AS/400. The purpose of the optical jukebox is to store and retrieve large quantities of images. Optical jukeboxes hold multiple optical disks and contain one or more read/write drives where disks can be swapped in and out as needed. Optical jukeboxes provide features to copy or mirror images to more than one optical cartridge providing for immediate document backup. In addition, most optical jukeboxes generally support both the Erasable and Write Once Read Many (WORM) technologies.

Based on the volume of documents projected in the department profiles, we estimate that the five-year total storage for the City will be as follows:

Department	Annual Storage	Five Year Storage	Percentage of Storage
City Assessor	494	2.47	6.28%
City Attorney	250	1.25	3.18%
City Clerk	579	2.90	7.36%
Community Development	436	2.18	5.55%
Finance Department	1,347	6.73	17.13%
Health Department/Senior Center	147	0.73	1.86%
Library	791	3.96	10.06%
Mayor	20	0.10	0.25%
Park and Recreation	69	0.35	0.88%
Personnel	400	2.00	5.09%
Police Department	2,965	14.83	37.71%
Public Works – Engineering	366	1.83	4.66%
Totals	7,863	39.31	100.00%

Therefore, if all departments were to implement document imaging, we are projecting a requirement of 40 gigabytes over a five-year period. We recommend purchasing a jukebox size that would allow for documents to be stored for three to five years before manual operations are necessary for swapping optical disks. The three to five-year recommendation is based on the fact that optical technology has doubled the storage capacity of disks every two years for the last six years. In addition to the increase in storage capacity, jukebox prices have fallen reducing the amount of investment.

Based on the manufacturer of the jukebox, the jukebox will vary in disk capacity, total capacity, number of drives and cost. The following table provides an averaged cost to accommodate most jukeboxes that will fit the City's needs. The cost of a jukebox to accommodate a minimum of 40 gigabytes of data is estimated to be as follows:

Quantity	Description	Est. Cost
1	Optical Jukebox (104 GB – 220 GB 2 drives)	\$13,000
1	Controller Card	\$1,500
20	Optical Disks	\$2,200
	Totals	\$15,670

In addition to the optical jukebox, a network attached storage (NAS) server is also suggested. Currently, the Public Works Department is in the beginning stages of converting video tapes to digital format. With the purchase of the NAS server, the City would be able to maintain the digital videos online with virtually immediate access. In some instances, a NAS server may also extend the life of the jukebox. The current cost of a 720 gigabyte NAS server is as follows:

Quantity	Description	Est. Cost
1	720 GB NAS Server	\$4,800
1	Installation & Configuration	\$1,000
	Totals	\$5,800

3. Imaging System User Licenses:

User licenses are typically sold as “per seat” or “concurrent”. The term “per seat” usually means the software can only be loaded on a specified number of personal computers whereas the term “concurrent” usually means that the software may be loaded on any number of personal computers. The “concurrent” user license method is preferred as typically the number of actual licenses that need to be purchased can be reduced as the software will keep track of how many users are in the system at the same time. We recommend acquiring a 10-15 user license of an imaging system, to provide adequate licensing for new users. The 10-15 concurrent user licenses will support approximately 40-65 total users, and should support most of the City. Additional user licenses may need to be acquired as other departments are added to the system or if documents are distributed over the internet. The average cost of a 10-15 user system is \$30,000.

4. Professional Services:

We have estimated the cost for training and installation of document imaging for each department reviewed. The costs assume the majority of the work being performed by an outside contractor, with assistance and oversight from the IS Department. We based the estimated costs on an hourly rate of \$100.00 per hour. The hours estimated are based on our experience with similar installations.

The estimated costs for the implementation of imaging for each department would be as follows:

Department	Scanner Hardware	Services	Total
City Assessor	\$ 6,225	\$ 3,200	\$ 9,425
City Attorney	\$ 6,225	\$ 3,200	\$ 9,425
City Clerk	\$ 4,825	\$ 3,200	\$ 8,025
Community Development	\$ 6,225	\$ 4,000	\$ 10,225
Finance Department	\$ 6,225	\$ 4,000	\$ 10,225
Health Department/Senior Center	\$ 2,625	\$ 2,400	\$ 5,025
Library	\$ 4,825	\$ 3,200	\$ 8,025
Mayor	\$ -	\$ 2,400	\$ 2,400
Park and Recreation	\$ -	\$ 2,400	\$ 2,400
Personnel	\$ -	\$ 3,200	\$ 3,200
Police Department	\$ 6,225	\$ 4,000	\$ 10,225
Public Works – Engineering	\$ 6,225	\$ 4,000	\$ 10,225
Totals	\$ 49,625	\$ 39,200	\$ 88,825

Please note that the above table only reflects the initial cost of the scanner and implementation services and does not reflect any maintenance fees. In addition, the costs associated with purchasing a large-scale scanner or costs associated with the outsourcing of large-scale documents are not included in the table.

As described in the “Scanners” section above, the estimated cost of a large-scale scanner would be \$16,000. In addition to the initial cost of the scanner, most hardware and software components can have maintenance and support agreements. Maintenance and support fees are approximately 15% of the cost of the component. Based on the 15% average, the estimated maintenance and support fees for the large-scale scanner would be \$2,400 annually. The estimated cost to outsource 1,050 large-scale documents is \$2,100 annually. At this time, we recommend the City of Menasha use outsourcing for the large-scale documents. If the City should ever decide to back scan the estimated 10,000 large-scale documents, then the City should weigh the advantages and disadvantages of purchasing the large-scale scanner at that time.

Based on the information presented above, the total estimated cost for implementing document imaging would be as follows:

Item	Costs
Document scanners	\$ 49,625
Professional services	39,200
Imaging software	30,000
Jukebox storage	15,670
Network Attached Storage (NAS) Server	5,800
Hardware/Software Maintenance fees (15%)	28,277
Large-scale Map Outsourcing	4,200
Total	\$ 172,772

Please note that the above cost represents the total cost for the entire City over the next two years. A cost breakdown for each year is as follows:

Item	2004	2005
Jukebox Storage	\$15,670	\$0
Imaging Software	\$30,000	\$0
NAS Server	\$5,800	\$0
Scanners/Professional Services		
<u>Department</u>		
City Assessor	\$9,425	\$0
City Attorney	\$0	\$9,425
City Clerk	\$8,025	\$0
Community Development	\$10,225	\$0
Finance Department	\$10,225	\$0
Health Department/Senior Center	\$0	\$5,025
Library	\$0	\$8,025
Mayor	\$0	\$2,400
Park and Recreation	\$0	\$2,400
Personnel	\$0	\$3,200
Police Department	\$10,225	\$0
Public Works – Engineering	\$10,225	\$0
Total Scanner/Professional Services	\$58,350	\$30,475
Large-scale document outsourcing	\$2,100	\$2,100
Annual Maintenance Costs (15%)		
Jukebox Storage	\$2,351	\$2,351
Imaging Software	\$4,500	\$4,500
NAS Server	\$870	\$870
Scanners	\$5,393	\$7,444
Total Annual Maintenance	\$13,113	\$15,164
Total Annual	\$125,033	\$47,739

Table assumes implementation schedule provided in Section "G"

Based on the Implementation Schedule provided in Section G, six departments would be added to the imaging system each year. The estimated implementation costs for the first year would be \$125,033, and \$47,739 for the second year. Maintenance costs beyond the two year period are estimated to be \$15,200 annually which would be in addition to the estimated annual costs of \$2,100 for outsourcing the scanning of large-scale documents.

The City of Menasha should also plan that 10% of an FTE's time will need to be spent on technical services to actively manage and support the imaging system.

5. Conversion of Existing Documents

Conversion of existing documents can be very expensive. Therefore, the City of Menasha will need to consider very carefully before converting existing documents. *The purpose of this study is not to determine what type of back loading strategy to use, but whether or not digital imaging is a feasible alternative to existing methods for the City of Menasha.* In general, we recommended the following strategy for conversion of existing documents:

- Use a “point-forward” method, whereby a date is set, and all documents received after the cut-off date are included in the imaging system. Existing documents are retained in a paper format. The normal retention / destruction schedule will then eventually reduce the amount of paper storage.
- For departments that use case files, the “point-forward” method must be modified. It is not practical to have a case file split between paper-based storage and the imaging system. For case related files, we recommend initially converting all very active files. As new files are created, these files are included in the imaging system. Once the imaging system is operational, less active case files are converted whenever it is accessed. For example, if a case worker accesses a paper file after the imaging system is operational, the time would be taken to scan the entire case file into the system. In this fashion, the great majority of cases would be eventually stored on the imaging system. In addition, the size of the jukebox recommended would accommodate most, if not all of the documents converted in this fashion for the next three to five years.
- For departments that have very long or permanent retention schedules, and use microfilm, the microfilm can be converted to optical storage. The cost of conversion is \$.07 to \$.12 per page, depending on vendor and quality control methods selected. Once the images have been converted to optical, they can then be imported into the imaging system and indexed.
- For manual scanning operations, plan on achieving a 70% throughput from the rated page per minute on the scanner. The 70% number allows for time to setup the scanner, handle the physical documents, and verification. For example, if the scanner is rated for 30 pages per minute (ppm), then the City of Menasha can reasonably expect that the following volume can be achieved per 8 hour day:
 - $30 \text{ ppm} \times 480 \text{ minutes} \times 70\% = 10,080 \text{ documents}$

The above assumes a full 8 hours per day, and would be reduced if other tasks are also performed.

- Indexing of the scanned document will also require considerable time, once the documents are scanned. The City of Menasha can assume that the average person can index approximately 10 documents per minute. Therefore, the 10,080 documents scanned in one day may require up to three days to index. Because of the labor-intensive nature of manual conversion, we recommend it only be used for very high volumes documents that are accessed frequently, or for historical documents that would be protected by scanning into the imaging system.
- Using the above estimates and information from the section titled “Cost of Storage Space” (below) we can estimate some back loading metrics for a four drawer filing cabinet.
 - Approximately 6,400 Documents per Four Drawer Cabinet
 - A 30 ppm scanner running at a 70% through put = 21 ppm
 - 6,400 documents / 21 ppm = 305 minutes or just over 5 hours to scan documents.
 - Additional time to index properly. $6400 / 10 = 640$ minutes or 10 hours, 40 minutes to index.
 - A rough estimate on time needed to convert a four drawer file cabinet to digital imaging is approximately two full working days.

6. Integration of bar coding at scan time:

It should be mentioned that the integration of bar code technology can significantly reduce the amount of time it takes to scan and index documents. A bar code is placed on source documents in the same location each time. There are generally two ways this can happen. With some documents, you can print the bar code on the document at the time of its generation. For documents that come over the counter to a department, a pre-printed set of stick-on bar code labels could be generated and stuck to the document as it is filed.

The bar code represents a unique value in a predetermined index. When it is time to scan the document, the scanning software interprets the bar code and its associated value, and automatically indexes the digital image to the associated indexed database record.

It should be noted that this type of integration does come at a price, but the time savings often out weigh the costs.

F. Benefits

While many of the benefits of document imaging are intangible, there are some “hard” dollar savings that can be determined. These hard dollar savings include:

- ❑ Labor savings from retrieval and re-filing of documents
- ❑ Labor savings from eliminating lost documents
- ❑ Costs savings from storage space

Each of these will be examined in detail below.

Retrieval & Re-filing of Documents

Document imaging systems eliminate the labor associated with the retrieval and re-filing of documents from paper storage. In a recent time and motion study we performed, we determined the following metric:

26 hours of labor saved per 1,000 documents handled, or 1.56 minutes per document.

Applying this metric to the City of Menasha, we find that the City will handle approximately 157,000 documents over the next five years. The estimated timesavings are therefore:

785,000 pages/5 page (average) = 157,000 documents
157,000 documents x 1.56 minutes / 60 = 4,082 hours saved

If we apply a \$30.00 per hour average cost, including overhead, to the above time, we find that the City of Menasha will save \$122,460 in labor savings handling documents over the next five years. This labor time can be devoted to more managerial and productive tasks other than retrieving and filing documents.

Where feasible, the use of bar coding can further increase the benefits of document imaging. If a bar code representation of the index can be placed on the document, the imaging system will interpret the bar code, and perform the indexing automatically. The use of bar code technology creates additional savings because the indexing is done automatically, and with greater accuracy.

Elimination of misfiled documents

According to a study by Coppers & Lybrand, an organization misfiles an average 1.5% of the documents it handles. It requires \$20.00 of labor to find the misfiled documents. For the City of Menasha the costs savings would be:

$$157,000 \text{ documents} \times 1.5\% \times \$20.00 = \$47,100 \text{ savings}$$

Therefore, the City can plan to save \$47,100 over the next five years on misfiled documents.

Cost of Storage Space

The average 4-drawer filing cabinet holds 6,400 pages, and occupies 3 square feet of floor space. For the City of Menasha, the total number of 4-drawer filing cabinets that would be saved is:

$$785,000 \text{ pages} / 6,400 \text{ per cabinet} = 123 \text{ cabinets} \times 3 \text{ sq ft} = 369 \text{ square feet of storage}$$

If we use an average rate of \$50.00 per square foot, we find that the imaging system will save \$18,450 on storage space.

The total estimated cost savings are as follows:

Item	Savings
Re-filing and retrieval savings	\$ 122,460
Elimination of misfiled document savings	47,100
Storage space	18,450
Total Savings	\$ 188,010

G. Implementation Schedule

Based on our meetings with the departments, we recommend the following implementation schedule:

Department	2004 1st Qtr	2004 2nd Qtr	2004 3rd Qtr	2004 4th Qtr	2005 1st Qtr	2005 2nd Qtr	2005 3rd Qtr	2005 4th Qtr
City Assessor				■				
City Attorney						■		
City Clerk		■						
Community Development				■				
Finance Department		■						
Health Department/Senior Center							■	
Library					■			
Mayor						■		
Park and Recreation					■			
Personnel						■		
Police Department			■					
Public Works – Engineering	■							

This table should only be used as a guideline for implementation. The departments were selected based on information received during the interview process as well as analyzing the volume of records the department produces and the immediate impact the department would have where records could be shared with other departments. In some cases, departments were grouped together as the department may be sharing scanning resources.