2002-2007

CAPITAL IMPROVEMENTS PLAN

CITY OF MILWAUKEE

State of Wisconsin

John O. Norquist
Mayor

Department of Administration
Budget and Management Division

Michael Soika
Administration Director

Laura J. Engan
Budget and Management Director

John Ledvina
Capital Planning and Finance Specialist

Budget and Management Staff:

Thomas Bell
Jennifer C. Gonda
Patrick Hartmann
Crystal Ivy
Katherine O'Sullivan
Eric Pearson
Sandra J. Rotar
Dore Marie Rozwadowski
David Schroeder
Dennis Yaccarino

MILWAUKEE CITY OFFICIALS

MAYOR
JOHN O. NORQUIST

CITY ATTORNEY
GRANT F. LANGLEY

COMPTROLLER
W. MARTIN MORICS

CITY TREASURER
WAYNE F. WHITTOW

COMMON COUNCIL

PRESIDENT - MARVIN E. PRATT

MARVIN E. PRATT	ALDERMANIC DISTRICT 1
TERRANCE HERRON	ALDERMANIC DISTRICT 2
MICHAEL S. D'AMATO	ALDERMANIC DISTRICT 3
PAUL A. HENNINGSEN	ALDERMANIC DISTRICT 4
JAMES A. BOHL JR	ALDERMANIC DISTRICT 5
MARLENE E. JOHNSON-ODOM	ALDERMANIC DISTRICT 6
FREDRICK G. GORDON	ALDERMANIC DISTRICT 7
ROBERT G. DONOVAN	ALDERMANIC DISTRICT 8
DONALD F. RICHARDS	ALDERMANIC DISTRICT 9
ROSA CAMERON	ALDERMANIC DISTRICT 10
JOE DUDZIK	ALDERMANIC DISTRICT 11
ANGEL SANCHEZ	ALDERMANIC DISTRICT 12
JEFFREY A. PAWLINSKI	ALDERMANIC DISTRICT 13
SUZANNE M. BREIER	ALDERMANIC DISTRICT 14
THOMAS G. NARDELLI	ALDERMANIC DISTRICT 15
MICHAEL J. MURPHY	ALDERMANIC DISTRICT 16
WILLIE L. HINES JR.	ALDERMANIC DISTRICT 17

PUBLIC DEBT COMMISSION

COMMISSIONER MARGARET J. HENNINGSEN, CHAIRPERSON
COMMISSIONER TIMOTHY J. ELVERMAN
COMMISSIONER MICHELLE J. NATE

EX-OFFICIO MEMBERS:

W. MARTIN MORICS, SECRETARY
WAYNE F. WHITTOW, TREASURER

TABLE OF CONTENTS

PAGE

MAPS, TABLES, AND FIGURES

MAPS **PAGE**

TABLES

TABLES (Continued) **PAGE**

FIGURES

2002-2007 CAPITAL IMPROVEMENTS PLAN: EXECUTIVE SUMMARY

The 2002-2007 Capital Improvements Plan is an integral part of the city's long-range financial planning. The two primary goals of the 2002-2007 Capital Improvements Plan are to maintain and strengthen the city's existing capital assets and to provide appropriate funding that meets overall spending, debt, and tax rate goals.

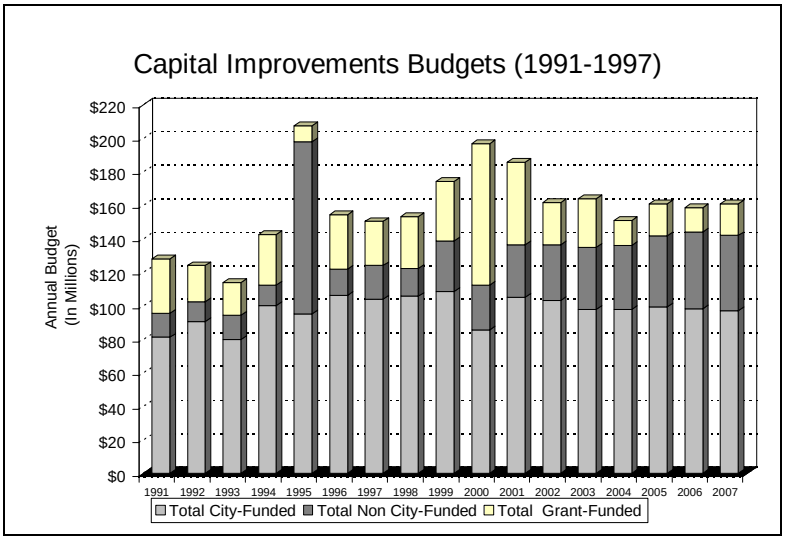
The 2002-2007 Capital Improvements Plan continues an important city goal of maintaining and strengthening the city's capital stock. The plan, which includes the 2002 adopted capital budget, allocates a total of $957.5 million to a variety of capital projects and programs. Of this total, $593.5 million will be funded directly through city resources while the remaining amount, $364 million, will be funded through intergovernmental aid or through self-funded sources such as the Water, Parking, and Sewer Enterprise Funds.

This section of the document puts the 2002-2007 capital plan in a historical context with a discussion of how funding levels over the next six years compare to the recent past. Contained within this overall discussion will be an explanation of the fluctuations in annual capital budgets as well as a description of some of the major projects that have had a significant impact on the city's capital budget in recent years. This section also briefly describes some of the specific "critical capital investments" which will be funded during the life of the six-year plan.

THE CAPITAL BUDGET: PAST AND PRESENT

As shown in Figure 1, the city-funded portion of Milwaukee's capital budget increased overall from 1991 to 1999. In 2000, the city-funded portion declined and is projected to remain fairly constant through 2007 averaging approximately $99 million each year. One factor contributing to this decline is the transfer of the Relief and Relay Sewer Program to the Sewer Maintenance Fund. This change also contributes to the increase in non city-funded capital in 2000 and beyond.

Figure 1



The increase in city-funded capital expenditures apparent in 1996 through 2000 results from a series of significant (annual project cost exceeding $10 million), one-time special projects. In 1996, the city included $18 million in cash revenue offset spending authority for stadium improvements associated with the Miller Park project. In 1997, the budget included $15 million in city borrowing authority for a Milwaukee Economic Development Commission (MEDC) loan for the Milwaukee Brewers, which would also assist in covering stadium-related costs. The 1998 capital budget included $10.9 million in borrowing authority to fund the purchase and installation of a new Financial Management Information System (FMIS). The 1999 and 2000 budgets included $12.5 and $20.5 million respectively for the construction of a new Data Com Center/District Station for the Police Department. In 2001, $20.5 million was appropriated for tax increment financing districts (TIDs) to provide for emerging economic development opportunities. This self-funded financing was over $12 million higher than in 2000.

Excluding large one-time projects from the analysis, city funding of capital needs appears quite consistent. For instance, if the $18 million in cash revenue offset spending authority is excluded the total city-funded capital budget in 1996 is approximately $88 million. If the $15 million MEDC loan is excluded, the 1997 capital budget also totals $88 million. When the funding provided for the FMIS project is excluded from the 1998 budget, the city-funded capital budget totals only $94.8 million. In the case of 1999, the exclusion of the Data Communications Center/District Station project generates a city-funded capital budget of $96.2 million, an amount more consistent with prior-year funding amounts. In 2000 infrastructure projects, such as the new Sixth Street Viaduct, received substantial state and federal aid funding. This resulted in lower city funding requirements for the projects.

Large one-time projects funded through non-city sources also inflate past capital budgets. In 1995, the non city-funded portion of the capital program includes approximately $80 million for a Water Works Ozonation Project (see Figure 1). Excluding this one-time project, funding levels for non city-funded capital are relatively constant from 1991 to 2001.

Funding for the 2002-2007 Capital Improvements Plan is also relatively constant over the six-year period. The city-funded portion of the program ranges from approximately $103 million to approximately $97 million over the life of the plan. The non city-funded portion, which includes the Water Works, Parking Fund, and Sewer Maintenance Fund ranges from approximately $33.3 million to approximately $46 million. Grant and aid funding over the life of the plan ranges from $25.6 million in 2002 to $14.7 million in 2006. Grant and aid capital funding peaks at almost $29 million in 2003 due to grants for the West Canal Street reconstruction, expansion, and preparation for the Marquette Interchange reconstruction.

This analysis shows that capital funding has remained relatively constant (in nominal terms) once certain large one-time projects are removed from the equation. It is important to note that although the aggregate level of funding has not increased over time, Milwaukee's capital infrastructure has not been adversely affected. In fact, Milwaukee's infrastructure systems have not only been adequately maintained but in fact have even expanded over the last decade.

2002-2007 CAPITAL IMPROVEMENTS PLAN: CRITICAL CAPITAL INVESTMENTS

The 2002-2007 Capital Improvements Plan outlines the major initiatives and/or program changes that are planned during the life of the six-year plan. The following is an overview of some of the "critical investments" that the document describes in greater detail.

Capital Equipment: Beginning in 2002, durable equipment with a unit cost of $50,000 or more is financed through the capital improvement fund. This long lasting equipment included fire engines, ladder trucks, and ambulances, DPW vehicles such as sweepers, dump trucks and garbage packers and other specialized equipment such as a conduit directional boring machine. Over the six-year plan $34.7 million is provided for capital equipment.

City Hall Restoration Program: Milwaukee's City Hall is an architecturally significant landmark building listed on the National Register of Historic Places. The 2002-2007 plan includes funding of $22.5 for city hall restoration. This initial estimate was made by DPW staff based on their preliminary visual analysis of the building's exterior condition and records of work accomplished during the 1973-1974 renovation. Subsequent detailed studies by engineering and architectural consultants have found significant structural problems with the towers, exterior walls, interior walls, and supporting structure. The consultants' cost estimate to complete the required repairs and renovations is approximately $44 million.

Department of Public Works staff and Budget and Management Division staff are currently evaluating this extensive, detailed restoration and repairs report.

In addition, a Historic Structures Report will be written by consultants who are experts in historic preservation to obtain historic landmark status from the National Park Service. This may allow the city to seek federal funding for a portion of this project.

Please refer to the *General Government, Maintenance and Remodeling, Program Changes and Initiatives* section for detailed information.

City Telephone Switch (System) Replacement: The city's telephone system is long obsolete, no longer supported by its manufacturer, and becoming increasingly difficult to repair. In 2002, $5 million is provided to replace this obsolete system. The new system will directly interface into primary trunk lines, lower energy bills, save space, comply with environmental requirements, and allow precise location (building and room) for emergency 911 calls.

Police Data Communications Center/Third District Station: Construction began in late 1999 on the Data Comm Center/Third District Station on Milwaukee's west side. The 2002 capital improvements budget includes $4 million for this project. The project has an expected budget of over $50 million and will be completed in 2002.

Consolidated Fire Equipment Repair Municipal Garage Study: The city will study the equipment repair needs of the Fire Department and other city departments to determine if efficiencies may be gained from consolidating maintenance and repair operations. The current separate Fire and Municipal Garage facilities are aged and outmoded for repair of modern fire and other equipment. Modern diagnostic equipment and associated tools were not contemplated when these facilities were built in the early- and mid-1900's. Repair bays are cramped and the layouts preclude efficient movement of equipment. To properly accommodate the equipment in the long-term future, new facilities need to be constructed. The study will determine whether separate or combined facilities will optimize maintenance and repair operations.

New Library Construction: A new Finney neighborhood library will be constructed to replace an aging, outmoded facility. Construction began in 2001. The project cost was funded over two years, $1.6 million in 2001 and $2.7 million in 2002. The old library site will be turned over to Milwaukee Public Schools (MPS) for construction of a new neighborhood school as part of MPS's Neighborhood School Initiative.

Trunked Radio Communications: Nearly $15 million will be provided for trunked radio communications in 2004 and 2005. A $300,000 study to determine citywide requirements was funded in 2001. This conversion is imperative, as the Federal Communications Commission (FCC) is reallocating frequency ranges in 2005. A FCC compliant digital system will allow several users to communicate over the same frequency simultaneously. It will also ensure that various local agencies are able to communicate on mutually accessible frequencies.

West Canal Street Reconstruction and Extension: The improvement and extension of West Canal Street from North Sixth Street to the Miller Park Baseball Stadium is scheduled to begin construction in 2003. Approximately $10 million of city funding is provided to match grant funding for this project. This project is considered vital to the redevelopment of the Menomonee Valley. It will also serve as an alternate travel route during the planned upcoming reconstruction of the Marquette Interchange.

2002-2007 CAPITAL IMPROVEMENT PLAN: FUTURE DIRECTIONS

Monitoring State Financial Crisis

The State of Wisconsin has a $1.1 billion budget deficit in the current (2001-2003) biennium. In January 2002, Governor McCallum proposed an immediate reduction and in 2004 elimination of the State Shared Revenue Program. The State Assembly and Senate have passed dramatically different versions of a budget bill to eliminate the deficit. The proposals are now being debated by a conference committee.

The proposed state shared revenue reduction and elimination would have a substantial impact on the city's operations and capital budgets. The exact impact is not currently known because of the widely varying proposals being considered in conference. As a precaution, the Common Council and administration have placed nearly $17.5 million in 2002 capital projects on hold pending state action. Should significant reductions in state shared revenue occur, the city will have to reprioritize its capital program with specific attention placed on preserving Milwaukee's physical infrastructure.

Strengthening Decision Making

The City of Milwaukee has historically engaged in vigorous planning as a strategy to preserve and strengthen its capital stock. The city will not only continue the implementation of this strategy but enhance its efforts as well. Capital decision making will be strengthened through the development of a capital investment model. This model will help policymakers choose between various projects based upon the project's "value-added" impact on the city's capital stock. In addition, the city will implement stricter project management and accountability standards to ensure that decisions made by policymakers are implemented in a manner consistent with budgetary and policy intent.

CAPITAL INVESTMENT PLANNING: MILWAUKEE'S APPROACH

The 2002-2007 Capital Improvements Plan reflects the city's long-range capital needs and citywide objectives as outlined in the city's strategic plan. In addition, the plan incorporates the city's long-range fiscal plan through the implementation of various capital financing strategies.

The capital improvements plan not only identifies projects and estimates costs, it also identifies funding sources. A summary of the capital improvements planning process, as well as definitions of capital projects, is presented below.

Program Assumptions

The 2002-2007 Capital Improvements Plan estimates future costs based on present value (in 2002 dollars) and does not adjust for inflation. This is comparable to other local taxing jurisdictions, which do not adjust for inflation in their capital improvement plans.

Planning Process

The capital improvements planning process includes development of both a one-year budget and a six-year plan. The six-year plan is reviewed annually by city departments and the Budget and Management Division as part of the overall budget review process.

By April of each year, city departments prepare and submit a one-year budget and a six-year capital improvements plan to the Budget and Management Division. Capital requests are reviewed and recommendations are made to the Mayor. After a series of public hearings, the Mayor submits the executive city budget, which includes capital improvements, to the Common Council. The Common Council's Finance and Personnel Committee reviews the executive budget, holds additional public hearings, and submits its recommendations to the full Common Council. After the Common Council and the Mayor approve the budget, the adopted capital improvements budget is established as the initial year of the six-year capital improvements plan.

Planning for the "Out" Years

The value of any capital plan can be evaluated in how well it enables the city to anticipate future capital commitments. Through planning, the city can avoid system failures and corresponding fiscal stresses. A long-term horizon is essential to this planning process, yet it is the most challenging aspect of planning. The city will continue to focus on improving its ability to plan for projects in the last several years of the six year plan.

Capital Project Definition

A capital project includes the purchase, construction, enhancement, or maintenance of physical infrastructure systems or facilities. These include bridges, streets, alleys, sidewalks, street lighting, traffic control, parking facilities, port facilities, sewer system, water system, public buildings and related equipment, underground conduit and manholes, communication systems, major equipment purchases, boulevards, trees, and recreation facilities. In addition, a capital project may enhance economic development through job creation, business formation, and housing production.

Capital improvements typically meet one or more of the following criteria:

1) Renovation or restoration of buildings, structures, facilities, and integral equipment items whose cost exceeds $25,000;
2) Construction of new or replacement buildings or structures at a cost exceeding $25,000 including planning and design costs;
3) Remodeling of office and shop areas;
4) Durable equipment with an original unit cost of $50,000 or more;
5) Equipment and furnishings which are to be purchased as a part of a capital project; and
6) Replacement equipment (an integral part of a building, structure, or facility) which costs $25,000 or more.

Oversight of Capital Projects

The city employs a decentralized approach to capital project management and oversight. In the re-

cent past, large capital projects have presented administrative challenges. These include budget overruns and contention regarding controlling decision making authority for changes to the original plan. While individual departments are now granted expenditure authority for a project, the Department of Public Works – Operations Division, Buildings and Fleet Section works as the project manager for the facility design and construction. This split of authority and responsibility has caused difficulties in communication between DPW and "customer" departments, for accountability, accurate estimation of project expenditures, and design/construction changes. In 2002, Budget and Management Division analysts will evaluate how capital accounts are managed with the goal of ensuring better reporting and accountability to the administration and the Common Council. It is anticipated that changes in how projects are reported and monitored will increase departments' accountability to ensure projects are kept within budget and time constraints. This should minimize funding shortfalls and requests to the administration and Common Council for additional funding to complete projects.

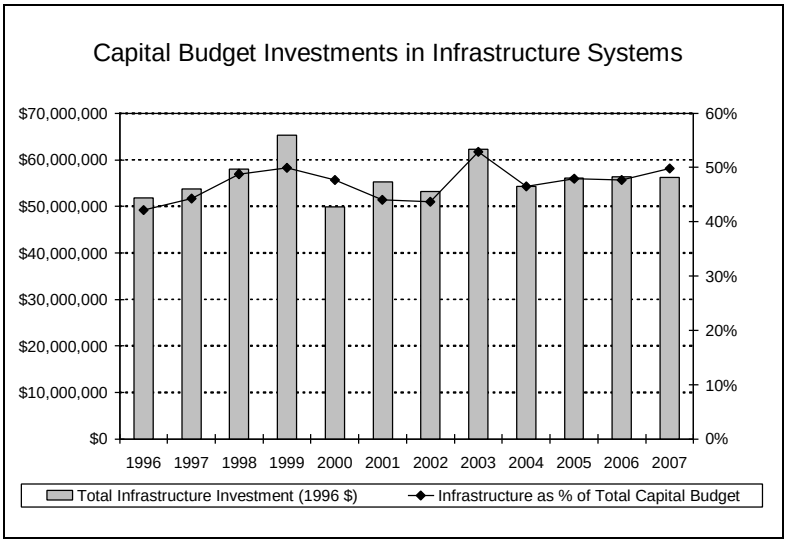
2002-2007 CAPITAL IMPROVEMENTS PLAN: MAKING CRITICAL CAPITAL INVESTMENTS

THE CAPITAL BUDGET FOCUS: STRENGTHENING INFRASTRUCTURE

An important function of local government is maintaining basic infrastructure systems. These systems – sewers, water mains, streets, bridges, alleys, sidewalks, and street accessories (traffic signals and streetlights) - are essential to the economic viability of any city.

The City of Milwaukee invests significant resources in its infrastructure systems. Figure 2 shows the capital budget for infrastructure in real terms for the years 1997-2007 (intergovernmental grant and aid is excluded). As the graphic demonstrates, the real dollar amount budgeted for infrastructure has remained relatively stable, with the exception of 1999 and 2003. In 1999, a large sewer project contributed to a significant increase in the amount budgeted for infrastructure. In 2003, a major street project, the reconstruction and extension of West Canal Street, increases infrastructure spending to over $60,000,000. Figure 2 also shows that the percentage of total capital expenditure dedicated to infrastructure expansion and replacement increased from the 1996 to 1999 budget. It decreased slightly in 2000 and again in 2001 with the multi-year construction of the Police Data Communication/Third District Station and large intergovernmental grant and aid for the Sixth Street Viaduct project. With the exception of 2003 (West Canal Street referred to above) the proportion shows a slight increase during the 2002-2007 plan.

Figure 2



The 2002-2007 Capital Improvements Plan continues to maintain the real dollar value of the annual infrastructure maintenance and expansion budget. The effect of this level of commitment to infrastructure is quite substantial.

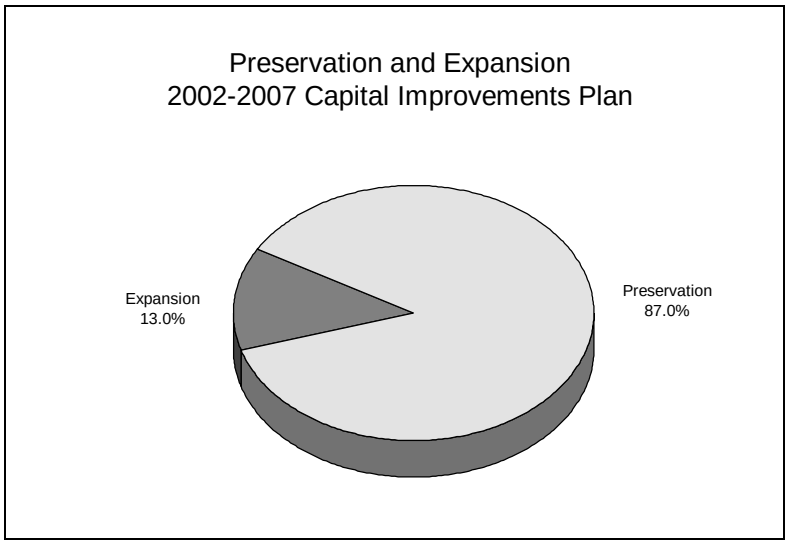
PRESERVATION vs. EXPANSION

Capital projects are classified into two categories: preservation and expansion. Preservation refers to capital improvement projects whose major objective is to reconstruct, rehabilitate, or otherwise restore an existing system or facility to full functionality. In contrast, expansion refers to projects whose primary objective is to construct a new system or to expand an existing system or facility to meet increased demands or to enhance development.

Figure 3 illustrates the proportion of capital projects that either preserve or expand capital infrastructure. The 2002-2007 Capital Improvements Plan (including grants and aid and self-funded projects) allocates $833.4 million, or 87% of the total budget, to preserve the city's existing infrastructure. A total of $124.1 million, or 13%, is allocated to expand public facilities. Expansion projects primarily include economic development-related projects and new street and sewer construction projects. Preservation projects include mainte-

nance and replacement of existing systems and facilities.

Figure 3



SIX YEAR CAPITAL PLAN BY FUNCTION

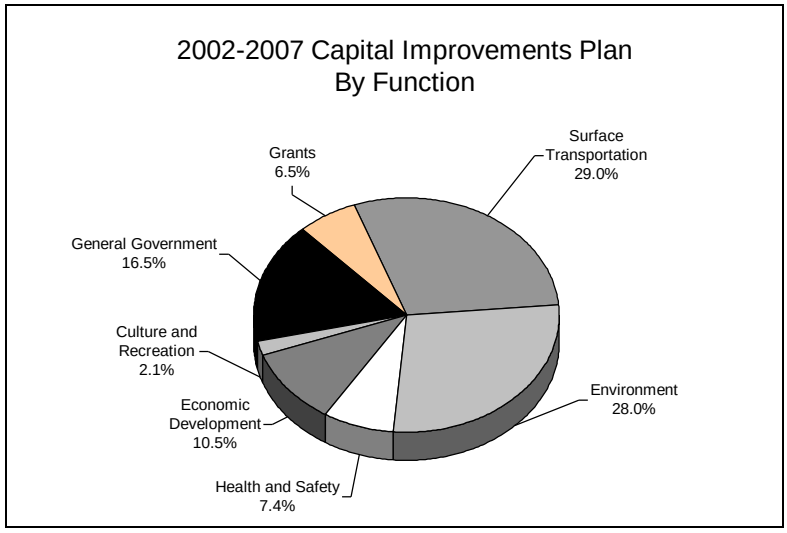
The final sections of this document provide an overview of the 2002-2007 Capital Improvements Plan by function (see pages 19 through 114). An analysis of each project category is provided, including the major initiatives and program changes brought about by the 2002 adopted capital budget as well as those proposed in the 2003-2007 capital plan.

Figure 4 provides a breakdown of the plan by its seven functional areas, including surface transportation, environment, health and safety, economic development, culture and recreation, general government, and grants and fringe benefits.

Surface transportation projects make up the largest component of the six-year plan, approximately 29%. Funding for environmental projects constitute the second largest functional area at 28% of total funding. The smallest functional area is culture and recreation, which includes funding for libraries and totlots and amounts to about 2.1% of total funding.

The grants category includes the grant fund that provides funding authority to receive grants not previously budgeted. Grants and fringe benefits specifically identified to projects are included in their respective functional area. The grand total includes city-funded projects, the Parking Fund, Milwaukee Water Works, the Sewer Maintenance Fund, and grants and aid. Table 2 (see page 16) summarizes capital projects in the six-year plan by functional area.

Figure 4



SIX-YEAR CAPITAL PLAN BY DEPARTMENT

Table 3 (see page 17) shows the 2002-2007 Capital Improvements Plan by Department. The table also shows totals for city-funded capital improvement projects, as well as for self-funded projects, including the Parking Program, the Sewer Maintenance Fund and the Milwaukee Water Works (which are not funded directly by property taxes). Specific capital projects and funding amounts are shown in the appropriate functional category in the final six sections of this document.

2002-2007 CAPITAL PLAN: FINANCING THE PLAN

The 2002-2007 Capital Improvements Plan not only includes a list of projects which the city intends to fund over the next six years, but also an explanation of how it will finance these projects. The financing goals and strategies used by the city as well as a thorough description of the various funding sources utilized to fund the capital plan are discussed in this section.

CAPITAL FINANCING GOALS

The primary objective of the 2002-2007 Capital Improvements Plan is to protect and enhance the city's infrastructure in the most cost-effective manner. To achieve this objective, the city has established four specific capital financing goals:

1) To fund adequately the city's infrastructure and general capital needs;
2) To moderate the city's overall debt burdens;
3) To achieve greater intergenerational equity in terms of funding major, non-recurring capital projects; and
4) To control tax levy-supported capital spending so as to assist the city in meeting its general goal of tax rate reduction which, in turn, further enhances the city's competitive position.

The 2002-2007 Capital Improvements Plan achieves all four of these goals. The 2002-2007 capital plan dedicates a total of $957.5 million to the city's capital budget (including Parking, Sewer Maintenance and Water Works, and intergovernmental grants). This sum reflects the city's intention to maintain its existing infrastructure in a manner that will not only heighten Milwaukee's economic vitality today, but also ensure that the next generation inherits a city that remains physically strong and economically sound.

In attempting to achieve the second stated goal of moderating the city's debt burden, the 2002-2007 capital plan continues to implement the city's infrastructure cash conversion policy. This policy has helped the city control debt by increasing tax levy financing of recurring infrastructure projects. By 2005, 100% of the city's recurring infrastructure budget will be cash levy-financed.

Although moderating the burden of outstanding debt has been an important goal of the city, policymakers also remain pledged to use long-term debt instruments, when appropriate, to spread the cost of appropriate capital expenditures across multiple generations of taxpayers. Large non-recurring projects, such as the Police Department's recently constructed Data Communications/Third District Station facility, are most appropriately funded with long-term debt. Such projects have long useful lives and, as a result, benefit several generations of taxpayers. Intergenerational equity is an important goal for any municipality that plans for the long run. Milwaukee has made a commitment to support intergenerational equity while limiting increases in outstanding debt.

Conversely, short-term projects are financed through one to five year notes. An example is the one-year note to finance the 2002 Equipment Replacement Program, which is replacing aged equipment that is beyond economic repair. Another example is the past issuance of five-year notes for certain short-lived aspects of the financial management information system.

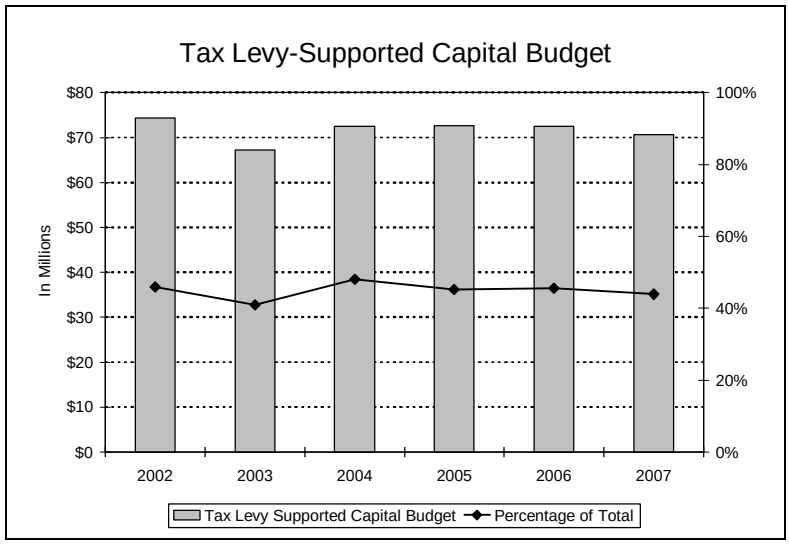
The fourth goal of controlling spending in order to assist the city in reducing property taxes will be achieved by moderating growth in the tax levy-supported capital budget (specifically, tax levy-cash and tax levy-supported debt; self-supported debt is excluded) and by pursuing alternatives for addressing capital needs. In 2002, the tax levy-supported portion of the capital budget totals approximately $74.3 million. The 2002-2007 capital plan holds the annual tax levy-supported capital budget at approximately $71.6 million. To compensate for inflationary price increases and other cost increases over time, the city must continue to find more cost-effective methods for meeting its capital needs.

In addition, the plan will hold the tax levy-supported portion at approximately 45% of the total capital budget. The tax levy-supported portion of the capital budget is slightly lower in 2003 due to increased intergovernmental aid for major street and bridge projects, most notably the West

Canal Street reconstruction and extension. Figure 5 shows how the tax levy-supported portion of the city's capital budget will fluctuate over the life of the plan.

Non-property tax resources finance more than half of the city's capital needs. These sources include Parking and Sewer Funds, the Milwaukee Water Works and intergovernmental aids. Since 2000, the Sewer Maintenance Relay capital program has been financed by the Sewer Maintenance Fund. The transfer of the sewer capital maintenance program to the fund was intended to capture all costs related to maintenance of the city sewer system on the Sewer User Fee. Sewer capital programs related to system expansion remain in the tax levy-funded portion of the capital budget.

Figure 5



Intergovernmental grants and aids are of particular importance to the city, especially in the area of transportation projects, which make up roughly 12.7% of total city funding for capital in the 2002-2007 capital plan.

Most of the intergovernmental grants to the city help to finance major street projects, bridge projects, and the Port's Dockwall Rehabilitation Program. These funds typically come from the state, while the city is usually required to finance a portion of the cost.

In the case of major bridge and street projects, the city is typically required to finance between 12.5% and 20% of the design and construction costs. In return, the county, state, and federal governments finance the remaining costs.

Tax incremental districts (TIDs) represent yet another important funding source for city capital projects. Since the mid-1970's, the city has created 48 TID districts. Funding provided in the 2002 capital budget, as well as in the last five years of the 2002-2007 Capital Improvements Plan, will finance existing TID projects, provide funding for projects currently in the initial stages of planning, and allow for city involvement in potential developments under discussion.

DEBT FINANCING STRATEGIES

An objective of the city is to maintain Milwaukee's AA+ general obligation bond rating (Standard and Poor's and Fitch's Investors Services). As of August 2001, the city received strong ratings from the credit rating agencies: an AA+ from Fitch's Investor's Services, an Aa2 rating from Moody's Investors Services, and an AA rating from Standard and Poor's. The city's ratings are a reflection of a substantial Public Debt Amortization Fund, rapid debt pay-out, and increased use of pay-as-you-go financing for recurring capital needs. Although all the bond-rating agencies indicate that the city's debt levels are moderately high, they remain affordable and are offset by the capital financing policies employed by the city. Appropriately managing future debt levels will continue to be an important goal for the city.

Debt Structure

One especially important debt financing strategy used by the city relates to how it structures its debt issuances. The general policy of the city relating to general obligation bonds is to issue 15-year, level principal-payment bonds. This policy produces higher payments in the early years of a bond issue, but produces lower total financing costs. As a result of this rapid debt amortization schedule, 55%

of principal is retired in five years and 86% is retired in ten years.

One area of the capital improvement budget, which is financed through a different debt structure, is tax incremental districts (TIDs). In 1998, the city began to implement a new debt structure for TID projects which was designed to eliminate a timing problem which required the city tax levy to help support these normally self-supported projects. The TID financing structure stretches out the maturity schedule of the bonds to 17 years (two years longer than the typical GO bond term used previously) and capitalizes interest (principal and interest payments are deferred) in the first two years of the bond's life.

Although this new structure adds to the total amount of debt service to be repaid, it significantly reduces the cost impact of any new TID borrowings for two years. This in turn allows time for increments of newly created TIDs to be sufficient to cover costs.

In 2001, the city began issuing revenue bonds to implement its capital financing policy goal where appropriate. Currently, most of the city's debt is general obligation, irrespective of the project's ability to generate revenues. The 2000 budget included borrowing authority for revenue bonds for projects with revenue sources. The Sewer Maintenance Fund issued $28.3 million of revenue bonds in November, 2001. The Water Works and Parking Fund may issue revenue bond debt in the near future. In addition, capital projects financed by tax increments may also use revenue bonds.

The reason for the use of revenue bonds is to eliminate taxpayer liability (as under general obligation debt issues) for debt payment if revenues are insufficient to retire the debt. To justify the investment, projects funded with revenue bonds should maintain an adequate revenue stream to cover debt service costs.

Public Debt Amortization Fund

Another important debt financing strategy used by the city involves use of the city's Public Debt Amortization Fund (PDAF). This fund, which is administered by the city's Public Debt Commission, was created in 1925 by state statutes. Fund revenue includes interest earned by assets of the fund, one-third of the general interest earnings of the city and one-third of interest received on delinquent personal property taxes.

Table 1

PDAF Unsegregated Balance (In Thousands)

Year	Fund Balance	Year	Fund Balance
1988	56,809	1995	56,891
1989	56,935	1996	52,622
1990	55,663	1997	53,797
1991	56,551	1998	52,666
1992	56,803	1999	45,054
1993	56,456	2000	43,499
1994	57,088	2001	43,652

Table 1 shows how the unsegregated portion of the PDAF balance has fluctuated over time. This is largely due to the PDAF's investments in interest rate sensitive long-term U.S. Treasury securities. In 1997 and 1998, the PDAF had earnings of approximately $10.3 million each year. In 1999, rising interest rates caused significant market value declines. Revenues declined to $3.9 million. In 2000, revenues rebounded to $9.4 million. Revenues for 2001 totaled $7.2 million. These market fluctuations have made it difficult for the city to achieve its goal of maintaining the unsegregated portion of the PDAF within the range of 15% to 20% of the city's non-self supporting general obligation debt. The city has addressed this challenge by reducing the annual PDAF draw for prepayment purposes.

Fund assets play an important role in capital financing in two primary ways: (1) fund resources may be used to prepay a portion of the principal and interest on city debt due the following year, thereby reducing the levy portion of the debt budget (in 2002, $7 million of fund resources will be used for this purpose), and (2) the fund itself functions as a "debt reserve" which helps provide city bondholders with added assurance of the city's ability to make principal and interest payments. This in turn reduces the city's interest rate costs because city bonds are more attractive to investors.

Debt Management Working Group

As previously mentioned, a primary goal of the city is to maintain its AA+ bond rating. The city recognizes that overlapping debt is an important

factor in meeting this goal. In 1992, a Debt Management Working Group was created by Common Council resolution. The working group includes five local units of government including the City of Milwaukee, Milwaukee County, Milwaukee Metropolitan Sewerage District, Milwaukee Area Technical College, and Milwaukee Public Schools. Since its inception, the working group has completed four annual reports on *"Capital Spending and Debt"* for the five local units of government. The report analyzes the historical and planned capital spending and debt trends of each unit of government. The purpose of this analysis is to develop practical methods for coordinating, managing, and controlling the amount, structure, and timing of debt issued by each of the member governments. The goal is to minimize the overall debt burden on city residents while meeting essential capital improvement needs over the next five years.

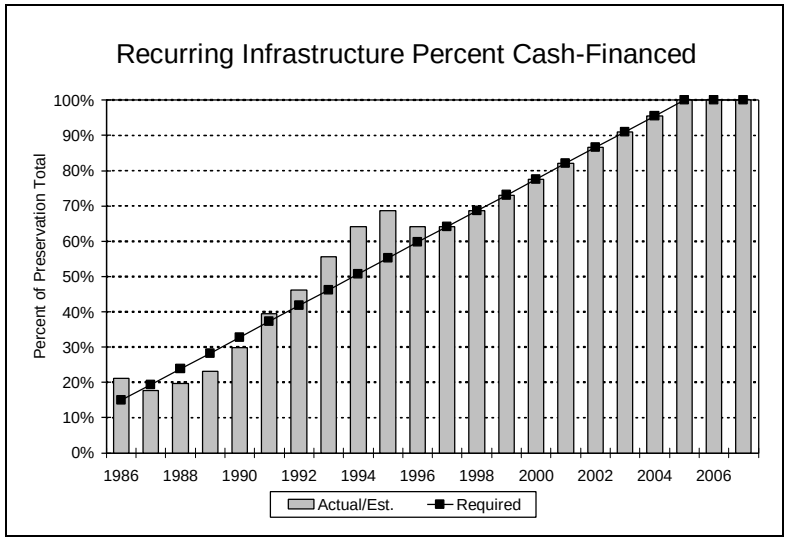
CASH FINANCING STRATEGIES

One key cash financing strategy of the city's capital improvements program is to limit debt financing for capital improvements to only those projects which occur at irregular intervals and benefit future as well as current taxpayers. The purpose of cash financing recurring infrastructure projects is to decrease overall debt and ultimately reduce costs and resulting tax levies for what are, in effect, annual recurring replacement projects.

To implement this strategy, the Common Council adopted a resolution in 1986 that gradually converts funding for recurring infrastructure preservation projects from borrowing to cash financing. Recurring infrastructure includes local streets, alleys, sidewalks, street lighting, traffic control, communications, underground conduits, and recreational facilities. With the adoption of this resolution, city policymakers recognized that a moderate growth economy and slow growing tax base couldn't sustain payment of large deferred expenditures.

The strategy employed by the City of Milwaukee includes financing 100% of recurring infrastructure replacement with cash by the year 2005. Figure 6 compares the percent of infrastructure cash financed as required by resolution with the percent of infrastructure cash financed in the 1986-2001 capital improvements budgets and the 2002-2007 Capital Improvements Plan.

Figure 6



The city has met or exceeded its cash financed infrastructure goals since 1991, a period of eleven years. The city will meet its 100% cash financing goal in 2005.

STRATEGY IN ACTION: SOURCES OF FUNDING FOR THE 2002-2007 CAPITAL IMPROVEMENTS PLAN

All projects identified in the 2002-2007 Capital Improvements Plan are fully-funded through a variety of sources. These sources include tax levy-supported debt, tax incremental districts, special assessments, cash revenues, tax levy, self-funded, and grants and aids. Figure 7 illustrates the percentage of the six-year plan financed by each funding source. Use of these diverse funding resources is wholly consistent with the financing strategies discussed earlier. As a result of using this diverse set of funding sources over the next six years:

1) The overall capital needs of the city will be met;
2) The city will continue to increase the proportion of recurring infrastructure projects financed with tax levy resources;
3) The cash conversion policy will, in the long run, reduce outstanding debt and save taxpayers millions in interest costs; and
4) The city will continue to use long-term debt to finance non-recurring projects that have long useful lives. This policy will help spread the costs of these projects fairly across generations of project users.

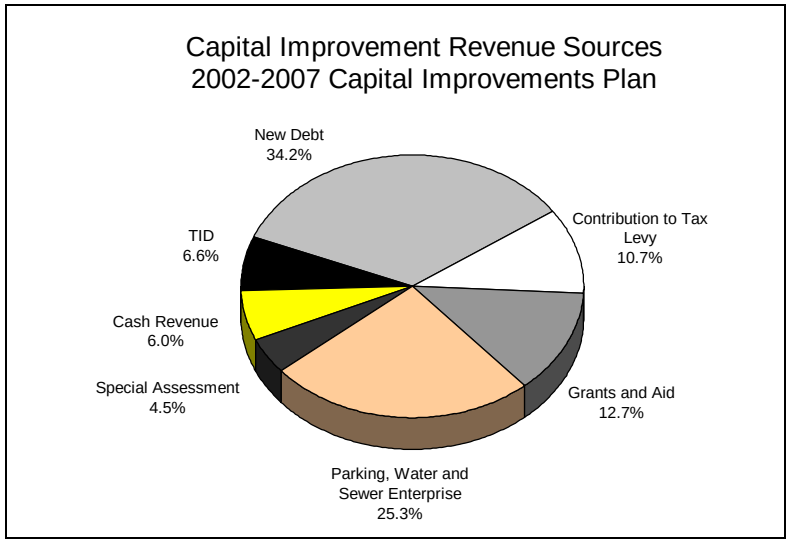
The specific sources of funding for the 2002-2007 Capital Improvements Plan are described in the following sections. In addition, Table 4 (see page 18) details how the six-year plan is financed.

Tax Levy-Supported Debt: The six-year plan estimates the amount of funds that must be borrowed to finance capital projects. This amount does not include special assessments or tax incremental financing since they are considered self-sustaining, though they are funded through general obligation borrowing. In the six-year plan, $327.1 million, or 34.2% of the total capital budget is expected to be borrowed, excluding $106.4 million in special assessment and tax incremental borrowing. As shown in Table 4, tax levy-supported debt remains stable throughout the six-year plan, averaging $54.5 million. This trend, in part, reflects a strategy of cash financing for infrastructure projects, which reduces projected debt financing of infrastructure projects by nearly $1.8 million from 2002 to 2007.

Tax Incremental Districts: These districts are considered self-sustaining and have been funded through issuance of general obligation debt. Again, starting in 2000 borrowing authority was provided to finance TIDs with revenue bonds. Self-sustaining debt refers to the use of borrowed proceeds to generate a stream of revenues that will offset related principal and interest payments. After a tax incremental district is established, debt instruments are issued to finance public improvements to aid development within the district. The increase, or increment in real property taxes after a district is established is set aside and used to retire debt contracted by the authority. As shown in Figure 7, $63.4 million, or 6.6% of total capital funding is provided to fund tax incremental districts. Funding for this purpose ranges from $14.5 million to $9 million annually in the six-year plan.

Special Assessments: Special assessments are considered self-sustaining debt even though they are issued as general obligation debt. Self-sustaining debt refers to the use of borrowed proceeds to generate a stream of revenues that will offset related principal and interest payments.

Figure 7



When certain infrastructure improvements are made, such as repaving a street or installing a new sewer, part of the cost is charged to the abutting property owners as special assessments. The property owner may either pay the entire amount when the bill is received, have the assessment

placed on the next tax bill, or pay the amount over six years, with interest charged for the final five years. If the latter option is chosen, the interest cost to the city is offset by the interest charged to the property owners. However, regardless of how the property owner pays the special assessment, the city borrows the funds as general obligation debt to finance the project.

As Figure 7 shows, $43 million, or 4.5%, of capital projects are financed through special assessments. Funding throughout the six-year plan ranges annually from $4.9 million to $10.2 million.

Cash Revenues: A portion of capital projects are financed through cash revenues, including general (or unassigned) grant and aid, developer financing, and other sources of revenue. The grant fund provides funding authority for grant and aid that may be received throughout the year but is not specifically included in the capital improvements plan. Developer-financed projects occur when a private developer requests the city to expand street or sewer systems. These projects are fully financed by the developer who enters into a formal agreement with the city. In the six-year plan, $57.8 million, or 6% of all capital projects are funded through cash revenues. This source of funding averages $9.6 million in the six-year plan.

Tax Levy: Tax levy-funding of capital projects totals $102.7 million, or 10.7% of total funding, over the six-year plan. As shown in Table 4, total tax levy-funding is projected to remain stable throughout the plan, averaging $17.1 million each year. During the 2002-2007 plan, the city meets its infrastructure cash financing objectives, increasing funding from $11.3 million in 2002 to $14.7 million in 2007. In addition, at least 5% of non-infrastructure projects are cash financed during the six-year plan.

Self-Funded: These projects include those financed through the Parking Fund, Sewer Maintenance Fund and Milwaukee Water Works. The Parking Fund was established to account for revenues received from parking operations. Parking revenues are used to defray all costs related to these operations, including debt service costs on various parking obligations. Milwaukee Water Works' capital improvement projects and Sewer Maintenance Fund capital improvements are fully-financed by their respective user fees. In total, $241.8 million, or 25.3%, of capital projects are funded through the Parking Fund, Sewer Maintenance Fund and Milwaukee Water Works.

Grants and Aid: In the six-year plan, funding provided through grants and aids totals over $121.7 million, or 12.7% of total funding. This funding is received from the state and federal governments, primarily for bridge and paving programs. Grant and aid funding fluctuates dramatically, from a high of $28.9 million in 2003 to a low of $14.7 million in 2006. The reconstruction and extension of West Canal Street and other preparations for the reconstruction of the Marquette Interchange account for most of the higher 2003 grant and aid amount.

Table 2

2002-2007 Capital Improvements Plan by Function

FUNCTIONAL AREA	2002 ADOPTED BUDGET	2003 BUDGET PLAN	2004 BUDGET PLAN	2005 BUDGET PLAN	2006 BUDGET PLAN	2007 BUDGET PLAN	TOTAL SIX-YEAR PLAN
SURFACE TRANSPORTATION							
Streets	$28,937,975	$43,525,000	$19,973,666	$27,767,500	$19,171,666	$21,636,000	$161,011,807
Alleys	1,479,000	3,879,000	2,679,000	2,679,000	2,679,000	2,679,000	16,074,000
Bridges	7,682,000	6,256,000	4,391,000	4,830,000	3,975,000	8,750,000	35,884,000
Street Accessories	7,528,000	7,113,000	7,231,000	7,441,000	7,591,000	7,316,000	44,220,000
Sidewalks	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000	11,100,000
Parking	822,000	3,457,700	1,610,000	800,000	1,555,000	1,625,000	9,869,700
Subtotal	**$48,298,975**	**$66,080,700**	**$37,734,666**	**$45,367,500**	**$36,821,666**	**$43,856,000**	**$278,159,507**
ENVIRONMENT							
Sewer System	$21,059,000	$21,009,000	$22,909,000	$22,909,000	$24,909,000	$24,909,000	$137,704,000
Water System	15,050,000	16,100,000	17,285,000	21,991,000	22,805,100	21,740,610	114,971,710
Sanitation	275,000	1,354,000	600,000	430,000	1,125,000	896,000	4,680,000
Forestry	887,062	925,000	935,000	945,000	955,000	965,000	5,612,062
Environmental Remediation	634,000	834,000	1,830,000	688,000	699,200	712,000	5,397,200
Subtotal	**$37,905,062**	**$40,222,000**	**$43,559,000**	**$46,963,000**	**$50,493,300**	**$49,222,610**	**$268,364,972**
HEALTH AND SAFETY							
Fire	$2,730,000	$3,395,000	$4,630,000	$6,160,000	$4,150,000	$5,860,000	$26,925,000
Police	9,862,914	2,542,793	11,186,679	10,656,072	2,338,474	4,787,883	41,374,815
Public Health	130,900	486,400	421,900	423,500	567,200	509,100	2,539,000
Subtotal	**$12,723,814**	**$6,424,193**	**$16,238,579**	**$17,239,572**	**$7,055,674**	**$11,156,983**	**$70,838,815**
ECONOMIC DEVELOPMENT							
TID	$14,500,000	$11,000,000	$9,000,000	$9,500,000	$9,700,000	$9,700,000	$63,400,000
Development District Funds	2,350,000	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000	11,600,000
Business Improvement	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	6,000,000
Port of Milwaukee	2,765,000	2,150,000	5,325,000	1,850,000	4,600,000	2,650,000	19,340,000
Subtotal	**$20,615,000**	**$16,000,000**	**$17,175,000**	**$14,200,000**	**$17,150,000**	**$15,200,000**	**$100,340,000**
CULTURE AND RECREATION							
Libraries	$3,415,000	$2,218,000	$1,891,000	$2,875,000	$2,676,000	$1,275,000	$14,350,000
Recreational Facilities	721,000	734,000	782,000	762,000	776,000	791,000	4,566,000
Pabst and Art Fund	630,000	105,050	105,000	108,835	105,000	105,000	1,158,885
Subtotal	**$4,766,000**	**$3,057,050**	**$2,778,000**	**$3,745,835**	**$3,557,000**	**$2,171,000**	**$20,074,885**
GENERAL GOVERNMENT							
Maintenance and Remodeling	$11,738,890	$15,929,000	$15,429,000	$15,227,000	$15,954,000	$11,635,500	$85,913,390
Underground Conduits and Manholes	760,000	760,000	760,000	760,000	760,000	760,000	4,560,000
Communications and Control	5,621,000	621,000	621,000	621,000	621,000	621,000	8,726,000
Capital Equipment	6,480,000	3,272,400	3,367,572	3,465,599	3,566,567	3,670,564	23,822,702
Other Projects	2,524,945	1,390,000	3,000,000	3,000,000	12,500,000	12,500,000	34,914,945
Subtotal	**$27,124,835**	**$21,972,400**	**$23,177,572**	**$23,073,599**	**$33,401,567**	**$29,187,064**	**$157,937,037**
GRANT AND AID	**$10,300,000**	**$10,300,000**	**$10,300,000**	**$10,300,000**	**$10,300,000**	**$10,300,000**	**$61,800,000**
GRAND TOTAL	**$161,733,686**	**$164,056,343**	**$150,962,817**	**$160,889,506**	**$158,779,207**	**$161,093,657**	**$957,515,216**

Note: In 2002, fringe benefit appropriations were distributed directly to programs and projects.

Table 3
2002-2007 Capital Improvements Plan by Department

DEPARTMENT	2002 ADOPTED BUDGET	2003 BUDGET PLAN	2004 BUDGET PLAN	2005 BUDGET PLAN	2006 BUDGET PLAN	2007 BUDGET PLAN	TOTAL SIX-YEAR PLAN
CITY-FUNDED CAPITAL PROJECTS							
Special Projects	$14,880,000	$11,405,050	$13,405,000	$13,408,835	$22,905,000	$22,905,000	$98,908,885
Department of Administration	324,945	2,080,000	0	0	0	0	2,404,945
City Attorney	352,000	153,000	0	0	0	0	505,000
City Treasurer	0	0	0	0	0	0	0
Common Council-City Clerk	0	0	0	0	0	0	0
Department of City Development	17,850,000	13,850,000	11,850,000	12,350,000	12,550,000	12,550,000	81,000,000
Comptroller	0	0	0	0	0	0	0
Fire Department	2,730,000	3,395,000	4,630,000	6,160,000	4,150,000	5,860,000	26,925,000
Health Department	130,900	486,400	421,900	423,500	567,200	509,100	2,539,000
Library	3,415,000	2,218,000	1,891,000	2,875,000	2,676,000	1,275,000	14,350,000
Municipal Court	1,833,900	0	0	0	0	0	1,833,900
Neighborhoods Department	2,949,990	0	0	0	0	0	2,949,990
Police Department	9,862,914	2,542,793	11,186,679	10,656,072	2,338,474	4,787,883	41,374,815
Port of Milwaukee	785,000	550,000	2,825,000	1,050,000	1,300,000	1,050,000	7,560,000
Grant and Aid	1,980,000	1,600,000	2,500,000	800,000	3,300,000	1,600,000	11,780,000
DPW-Administrative Services	5,621,000	671,000	1,771,000	621,000	621,000	621,000	9,926,000
DPW-Operations	13,750,062	21,055,400	21,693,572	21,417,599	22,975,767	18,570,064	119,462,464
Grant and Aid	0	0	0	0	0	0	0
DPW-Infrastructure	28,856,602	39,566,950	28,171,033	30,491,350	28,138,633	29,030,700	184,255,268
Grant and Aid	23,139,373	27,325,050	12,222,633	18,345,150	11,397,033	17,469,300	109,898,539
TOTAL CITY-FUNDED CAPITAL PROJECTS	**$103,342,313**	**$97,973,593**	**$97,845,184**	**$99,453,356**	**$98,222,074**	**$97,158,747**	**$593,995,267**
TOTAL GRANT AND AID	**$25,119,373**	**$28,925,050**	**$14,722,633**	**$19,145,150**	**$14,697,033**	**$19,069,300**	**$121,678,539**
NON-CITY-FUNDED CAPITAL PROJECTS							
Parking	$822,000	$3,457,700	$1,610,000	$800,000	$1,555,000	$1,625,000	$9,869,700
Milwaukee Water Works	15,050,000	16,100,000	17,285,000	21,991,000	22,805,100	21,740,610	114,971,710
Sewer Maintenance Fund	17,400,000	17,600,000	19,500,000	19,500,000	21,500,000	21,500,000	117,000,000
TOTAL NON-CITY-FUNDED CAPITAL PROJECTS	**$33,272,000**	**$37,157,700**	**$38,395,000**	**$42,291,000**	**$45,860,100**	**$44,865,610**	**$241,841,410**
GRAND TOTAL CAPITAL INVESTMENT	**$161,733,686**	**$164,056,343**	**$150,962,817**	**$160,889,506**	**$158,779,207**	**$161,093,657**	**$957,515,216**

Table 4

2002-2007 Capital Improvements Plan by Funding Source

DEPARTMENT	2002 ADOPTED BUDGET	2003 BUDGET PLAN	2004 BUDGET PLAN	2005 BUDGET PLAN	2006 BUDGET PLAN	2007 BUDGET PLAN	TOTAL SIX-YEAR PLAN
TOTAL CAPITAL IMPROVEMENTS PLAN	$161,733,686	$164,056,343	$150,962,817	$160,889,506	$158,779,207	$161,093,657	$957,515,216
LESS:							
Enterprise Funds (Parking, Water, Sewer)	33,272,000	37,157,700	38,395,000	42,291,000	45,860,100	44,865,610	241,841,410
Special Assessments	4,936,093	10,193,800	6,508,853	7,654,100	6,491,053	7,202,700	42,986,599
Cash Revenues	9,600,000	9,600,000	9,783,000	9,600,000	9,600,000	9,600,000	57,783,000
Tax Incremental Districts	14,500,000	11,000,000	9,000,000	9,500,000	9,700,000	9,700,000	63,400,000
Grant and Aid	25,119,373	28,925,050	14,722,633	19,145,150	14,697,033	19,069,300	121,678,539
Infrastructure Cash Financed	11,303,004	14,289,456	13,073,631	14,876,800	14,040,800	14,780,800	82,364,492
As a percent of total infrastructure funding	86.56%	91.04%	95.52%	100.00%	100.00%	100.00%	
Compared to percent required by resolution	86.56%	91.04%	95.52%	100.00%	100.00%	100.00%	
Infrastructure Debt Financed	1,754,995	1,406,344	613,169	0	0	0	3,774,507
REMAINING EXPENDITURES TO BE FINANCED	$61,248,220	$51,483,993	$58,866,531	$57,822,456	$58,390,221	$55,875,247	$343,686,668
Cash	6,212,814	2,574,200	2,943,327	2,891,123	2,919,511	2,793,762	20,334,736
Debt	55,035,406	48,909,793	55,923,204	54,931,333	55,470,710	53,081,485	323,351,932
SUMMARY OF FINANCING SOURCES							
Tax Levy-Supported Debt	$56,790,401	$50,316,137	$56,536,373	$54,931,333	$55,470,710	$53,081,485	$327,126,439
Tax Incremental Districts	14,500,000	11,000,000	9,000,000	9,500,000	9,700,000	9,700,000	63,400,000
Special Assessments	4,936,093	10,193,800	6,508,853	7,654,100	6,491,053	7,202,700	42,986,599
Cash Revenues	9,600,000	9,600,000	9,783,000	9,600,000	9,600,000	9,600,000	57,783,000
Tax Levy	17,515,818	16,863,656	16,016,958	17,767,923	16,960,311	17,574,562	102,699,229
TOTAL CITY FUNDING	$103,342,313	$97,973,593	$97,845,184	$99,453,356	$98,222,074	$97,158,747	$593,995,267
Enterprise Funds (Parking, Water, Sewer)	$33,272,000	$37,157,700	$38,395,000	$42,291,000	$45,860,100	$44,865,610	$241,841,410
Grant and Aid	$25,119,373	$28,925,050	$14,722,633	$19,145,150	$14,697,033	$19,069,300	$121,678,539
TOTAL CAPITAL INVESTMENT	$161,733,686	$164,056,343	$150,962,817	$160,889,506	$158,779,207	$161,093,657	$957,515,216

Note: Totals may not sum due to rounding.
*Does not reflect a PDAF withdrawal of $7 million.

SURFACE TRANSPORTATION

Capital improvements that support surface transportation consist of projects involving streets, alleys, bridges, street accessories, sidewalks, and parking structures. The objective of the surface transportation capital program is to provide safe, attractive, and efficient surface public ways and infrastructure systems. Funding for these systems is determined primarily through the use of condition criteria, including age, structural adequacy, maintenance problems, construction projects, citizen complaints, and aldermanic requests. These criteria are used to assess the condition of the infrastructure system, plan budgets in a cost-effective manner, and predict annual preservation effort requirements.

Surface transportation projects are funded through special assessments, federal/state grants and aids, revenue from developers, city borrowing, and property tax levy. Surface transportation projects total $278.2 million, or 29% of the total six-year capital improvement plan. Figure 8 shows the 2002-2007 plan for these projects. Funding decreases after 2002 because the state government, which funds and schedules many projects, has proposed fewer street and bridge projects resulting in a decrease in the amount of grants and aids. This decrease is further explained below. The 2002 budget provides $48.3 million in funding for surface transportation projects.

Streets

Street-related capital improvement projects account for the largest portion, 57.9% of the surface transportation plan. The six-year plan includes $161 million for street improvements. Street-related projects include major street improvements, such as: state and/or federal-aided street reconstruction and resurfacing, street resurfacing by contract, new street construction and developer-financed streets. As Figure 8 illustrates, funding for streets peaks in 2003 at $43.5 million. The peak is due to the reconstruction and extension of West Canal Street, funded in 2003 at approximately $10 million. In the six-year plan, grants and aids (including CDBG funding) are expected to total $86.8 million, or 53.9% of total funding for street-related capital improvement projects.

Alleys

The 2002-2007 Capital Improvements Plan provides $16.1 million, or 5.8% of total surface transportation funding to finance reconstruction and resurfacing of city alleys. Figure 8 shows that funding for this purpose varies over the six-year plan from $1.5 million in 2002 to $3.9 million in 2003 and $2.7 million thereafter.

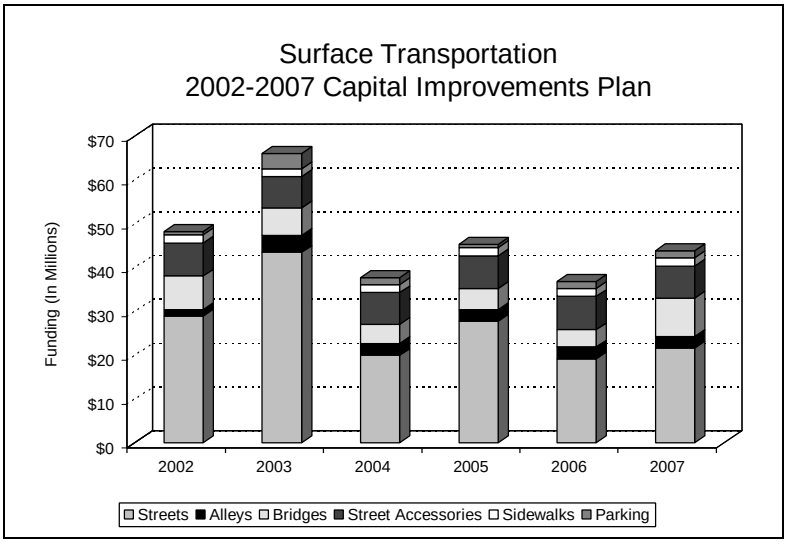
Bridges

Funding for bridge projects accounts for $35.9 million, or 12.9% of total funding provided in the six-year plan. Figure 8 shows that funding for bridges peaks in 2007 at $8.8 million. The major state aided bridge project; C. P. Rail Systems will be funded in 2007. In the six-year plan, $23.2 million, or 64.7% of total funding for bridges is received from federal and state transportation aids.

Street Accessories

This category includes street lighting and traffic control facilities. The six-year plan includes approximately $44.2 million for street accessories, which accounts for 15.9% of total funding. Funding for this purpose is steady throughout the six-

Figure 8



year plan. The 2002 budget provides $7.5 million for street accessories.

Sidewalks

Funding for sidewalks and other pedestrian-related projects in the six-year plan totals $11.1 million and accounts for 4% of total surface transportation funding. Funding of $1.9 million is provided in 2002.

Parking

The 2002-2007 Capital Improvements Plan includes $9.9 million for parking-related projects. This accounts for 3.5% of total surface transportation funding. Funding of $822,000 is provided in the 2002 budget. These projects will be financed with Parking Fund revenues.

STREETS

LINK TO THE STRATEGIC PLAN

One of many important functions of local government is to ensure that citizens have access to an adequate system of pedestrian-friendly streets and roadways in order to ensure that safe and efficient travel and commerce are possible. Since the city's incorporation in 1846, there has been a consistent commitment on the part of city officials to fund the street expansion, repair, and replacement needs of Milwaukee.

At present, the focus of the city's street paving program is on preserving the existing asset. Milwaukee is a mature city and many of its roadways have existed for over 100 years. As a result of the aging of the street system, most of the city's efforts with regards to funding levels are associated with repair and/or reconstruction. In fact, the 2002-2007 Capital Improvements Plan calls for an allocation of approximately 96.6% of street construction funds for preservation-related projects while only 3.4% will be directed for new street construction.

The specific link between street construction and the city's strategic plan is found with the city's strategic goal - to strengthen the local economy, attract and retain family-supporting jobs, and ensure economic opportunities. The city's attractiveness to private sector investment is enhanced when it is home to a well-maintained and diverse transportation network. Expenditures for street improvements improve and expand the street system, thereby promoting economic development, supporting residential and commercial development, and increasing property values.

ASSESSMENT CRITERIA

The paving program was the first major capital improvement program to use a database system for condition-based project planning and needs assessment. The database, known as the Pavement Management System (PMS), contains an estimated 40 records on street conditions and inventory elements, surface and structural adequacy, type and age of pavement, and maintenance history. The purpose of the Pavement Management System is to plan paving budgets in a more cost-effective manner and predict annual preservation effort requirements.

In 1997, the Infrastructure Services Division updated the city's PMS by implementing a new rating system wherein each street segment was assigned a new rating value. This index called the Pavement Quality Index (PQI), rates street conditions on a scale of 0 to 10. Under PQI, condition ratings are provided for two general categories of streets: locals and collectors/arterials. Each type of street has a different minimum acceptable PQI. A rating below the minimum acceptable PQI indicates that the street requires reconstruction or rehabilitation. The minimum rating for local streets is 4.0 compared to 4.5 for collectors, 5.0 for minor arterials, and 5.5 for major arterials. The higher ratings for collectors and arterials reflect the premise that more heavily traveled streets need to be in better condition than those that are less frequently traveled.

Currently, the Department of Public Works Infrastructure Services Division is in the process of refining the PQI and the software used to develop condition ratings in order to ensure that this system accurately models the condition of city streets. Once this refinement is completed in 2002, data on projected condition ratings in future years will be used to adjust funding for street improvements.

STATUS OF THE ASSET/PROGRAM

The City of Milwaukee contains 1,416.7 miles of freeways, highways, arterials, collectors, and local roads. Of this amount 8.6%, or 121.7 miles, is the responsibility of other governmental units, which include federal, state and county roads, as well as Port of Milwaukee and Water Department roads. Table 5 indicates the type and mileage of roads in the city. City streets are composed of various

types of materials primarily asphalt and concrete. Other materials include crushed rock and gravel, brick, granite block, and macadam. Macadam consists of layers of stone penetrated with tar or asphalt emulsion.

Most streets classified as arterial and collector are designated as part of the Federal Aid Transportation System and are eligible for county, state, and/or federal funding. The State of Wisconsin also funds the Local Road Improvement Program, which assists the city in financing necessary improvements for local residential street systems. County, state, and federal funds assist the city with financing the costs of street resurfacing and reconstruction under the major street improvements program.

Streets that do not qualify for county, state, or federal funding are financed under the Street Reconstruction and Resurfacing Program administered by the Infrastructure Services Division. These projects are funded through the capital budget with a portion of the costs recovered through special assessments levied against abutting properties.

The Infrastructure Services Division is responsible for contracting for partial resurfacing of certain arterial streets that are in fair or poor condition but are not scheduled for future reconstruction or resurfacing under the paving program. This activity is funded in the capital budget as well; however, no special assessments are levied for these projects. The division is also responsible for preventive and emergency maintenance of city streets which is funded in the operating budget.

As for the status of the city's street system, the Pavement Quality Index (PQI) provides a good picture of the integrity of the present street system. As shown in Figure 9, the majority of local streets, 75.5%, are currently rated above the minimum recommended rating of 4.0.

In addition to the PQI, the Infrastructure Services Division continuously updates the Roadlife Database, which is a historical data file containing information about construction activities by city block. The Roadlife Database helps generate specific roadwork schedules. Many of these projects result from citizen or aldermanic requests. The opportunity to coordinate major street repairs with sewer and water main repairs/replacement can affect the scheduling of infrastructure maintenance. According to the Roadlife data, the majority of local and collector streets have a concrete surface, whereas the majority of arterial streets have an asphalt surface with a concrete base.

Pavement composition dictates the estimated useful life of city streets. According to the Infrastructure Services Division, concrete reconstruction has a life cycle of 40-50 years, whereas asphalt reconstruction has a life cycle of 25-35 years. A street resurfaced with asphalt has an estimated useful life of 25 years.

Table 5

Miles of City Streets and Highways by Type as of December 31, 2001

Type	Miles
Freeways	40.1
State Highways	25.7
State Maintained Roads	7.0
County Trunk Highways	25.7
County Park Roads	21.7
Harbor and Water Dept Roads	1.5
Arterials	279.5
Collectors	72.2
Locals	943.3
TOTAL	1,416.7

Figure 9

SIX-YEAR PLAN

The 2002-2007 Capital Improvements Plan calls for allocation of approximately $161 million for the rebuilding/repair of city streets. However, only $48.4 million represents city resources. The remainder is funded by federal, state and county grants and aids, special assessments, and revenue from developers. Table 6 below breaks down the various capital accounts that fund street improvements.

The funding levels described below are sufficient to preserve and maintain the city's street system at a standard considered safe for motorists and pedestrians. The condition rating of streets will be monitored and funding adjusted if necessary to ensure adequate preservation of the street system. The Infrastructure Services Division anticipates that a total of 95 miles of street will be repaved during the life of the six-year plan. Of this aggregate sum, 38 miles of local roadways will be repaved while 57 miles of collectors and arterials will receive attention. This represents an annual average street preservation effort of 16 miles, or 1.1% of the total street system under the responsibility of the city.

Table 6

2002-2007 Capital Improvements Plan for Street Improvements

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Regular Streets, Net City Cost	$2,692,000	$4,492,000	$2,842,000	$3,842,000	$2,842,000	$3,842,000	$20,552,000
New Street Construction, Net City Cost	651,000	351,000	351,000	351,000	351,000	351,000	2,406,000
Major Street (Federal & State Aided), Net City Cost	5,320,509	8,736,150	2,973,180	3,284,250	2,848,580	2,294,000	25,456,669
Revenue	400,000	400,000	400,000	400,000	400,000	400,000	2,400,000
Grant and Aid	17,723,373	23,145,050	10,163,633	15,501,150	9,504,033	10,811,300	86,848,539
Assessments	2,151,093	6,400,800	3,243,853	4,389,100	3,226,053	3,937,700	23,348,599
TOTAL	$28,937,975	$43,525,000	$19,973,666	$27,767,500	$19,171,666	$21,636,000	$161,011,807

PROGRAM CHANGES AND INITIATIVES

Park East Redevelopment: The 2001 capital budget included initial funding for $25 million to begin the removal of the Park East Freeway. The Park East Freeway removal project is expected to create more than $220 million in housing, retail, and entertainment development. The project includes construction of a new lift bridge over the Milwaukee River and other traffic improvements on surface streets. Federal, state, and local funding will be used for this project. Removal of the freeway spur will begin in 2002.

West Canal Street Reconstruction and Extension: The 2002-2007 plan includes approximately $10 million of city funding for the reconstruction and extension of West Canal Street from Sixth Street to Miller Park. Construction is scheduled to begin in 2003. This project is considered vital to the redevelopment of the Menomonee Valley. It will also be a main alternate route for travel during the planned upcoming reconstruction of the Marquette Interchange.

ALLEYS

LINK TO THE STRATEGIC PLAN

The Department of Public Works Infrastructure Services Division is responsible for the alley reconstruction and resurfacing program. The city's alley system contains 415.0 miles of alleys that are composed of asphalt, brick, macadam, and other materials. Project funding is provided in the capital budget with a portion of program costs recovered through special assessments levied against adjacent properties.

The link between alley construction and the city's strategic plan is found with the strategic goal - to strengthen the local economy, attract and retain family-supporting jobs, and ensure economic opportunities. The purpose of the alley program is to maintain the alley system at a standard which is safe and nuisance free, while holding annual maintenance costs at a reasonable level. Expenditures for alley reconstruction and rehabilitation ensure safe and efficient access to the rear of residential and commercial properties and enhance property values. This contributes to maintaining the city's transportation system, which in turn helps strengthen Milwaukee's economic environment.

ASSESSMENT CRITERIA

The Infrastructure Services Division inspects and rates alley condition utilizing the following criteria: (1) age and condition; (2) citizen complaints; and (3) aldermanic requests. Alleys are inspected on a three-year cycle.

Alleys are rated as excellent, good, fair, poor, or recommended for replacement. Alleys rated as excellent generally have been replaced in the last 5-10 years and require no maintenance activities. Alleys rated as good, require minor repairs such as crack filling. Alleys rated as fair, require general maintenance such as grinding, crack filling, patching, or slab replacement. Alleys rated poor, may not be replaced or maintained but would require repair of serious defects or hazardous conditions and are likely projects for reconstruction or resurfacing. Alleys which are rated as recommended for replacement, require reconstruction or resurfacing and are proposed as a part of the alley-paving program.

At present, the Infrastructure Services Division plans to utilize the above described criteria until the newly implemented street Pavement Quality Index is further tested and proves to be a consistent measure of street integrity. Following this testing period, the division intends to apply the PQI to the city's alley system in order to provide a reliable and quantitative evaluation system for assessing the status of the city's alleys. The PQI will also assist the division in determining appropriate funding levels and setting the overall repavement schedule.

STATUS OF THE ASSET/PROGRAM

As with streets, the Infrastructure Services Division inspects and rates alley condition. In late 1992, the division completed an Alley Pavement Management System (PMS) that rated the condition of alleys using four variables: surface defects, crack filling, condition of patches, and surface grade. This system rated alley segments on a scale from 0 to 100. In 1994, the system reflected a condition rating of 76, which indicates that alleys are in generally good condition and typically require minor repair rather than extensive maintenance, reconstruction, or resurfacing.

In conjunction with the development of a new street PMS, the alley PMS is being updated. The alley condition rating was updated for the development of the alley program for the years 2002 through 2007. Because of the special assessment formula for alleys, wherein a larger portion of the cost is borne by the abutting property owners in comparison to a street project, alleys tend to reach a higher level of deterioration before they receive approval at public hearings.

SIX-YEAR PLAN

The 2002-2007 Capital Improvements Plan allocates a total of $16.1 million to the reconstruction and resurfacing of alleys. Of this total, $8.3 million, or approximately 51.8%, will be provided through special assessments against property owners. This level of funding will allow for continuation of annual alley improvement at a level sufficient to allow for the construction, rehabilitation, or restoration of alley pavements necessary to maintain the present status of the alley system. Specifically, the funding allocated in the 2002-2007 capital plan will allow for repavement/reconstruction of approximately three miles of alleys each year, with a total of 21 miles of alleys scheduled to be repaved. Table 7 below indicates the level of funding allocated in the plan, along with the funding source for the next six fiscal years.

Table 7

2002-2007 Capital Improvements Plan for Alley Improvements

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
City Funding	$1,179,000	$1,851,000	$1,179,000	$1,179,000	$1,179,000	$1,179,000	$7,746,000
Assessments	300,000	2,028,000	1,500,000	1,500,000	1,500,000	1,500,000	8,328,000
TOTAL	$1,479,000	$3,879,000	$2,679,000	$2,679,000	$2,679,000	$2,679,000	$16,074,000

BRIDGES

LINK TO THE STRATEGIC PLAN

One of the primary objectives of the Department of Public Works Infrastructure Services Division is to provide a safe, attractive, and efficient surface for public ways and infrastructure systems by making sure the city's network of bridges are in good condition. At present there are 711 bridges contained within the city limits. Of this total, 216 are maintained and city-owned, 35 are the responsibility of the county, and 460 are maintained by the state.

The specific link between bridge construction and the city's strategic plan is found in the city's strategic goal - to strengthen the local economy, attract and retain family-supporting jobs, and ensure economic opportunities. The city's attractiveness to private sector investment is enhanced when the city maintains a safe and efficient transportation system. Expenditures for bridge reconstruction contribute to this objective by ensuring the efficient movement of vehicles, people, and commodities; preserving a bridge system considered safe for motorists and pedestrians; and promoting commercial development.

ASSESSMENT CRITERIA

The Infrastructure Services Division uses the National Bridge Sufficiency Rating System to aid in the development of a capital improvement program for city bridges. Other considerations include improving and expanding the transportation system and providing for public safety and welfare. Most bridges are inspected on a two-year cycle, with the majority completed in even number years. Bridges in poor condition are inspected more frequently while railroad bridges are inspected on an as needed basis. The following criteria are used to determine bridge sufficiency ratings: (1) structural adequacy and safety; (2) serviceability and functional obsolescence; (3) necessity for public use; and (4) special factors pertaining to detour lengths and structure type.

Bridge sufficiency ratings are used by the county, state, and federal governments to determine eligibility for grantor funds and are an indicator of bridge serviceability and structural adequacy. Each bridge receives a rating between 0 (major structural and other deficiencies) and 100 (excellent condition and constructed to current standards). The Federal Highway Administration and the Wisconsin Department of Transportation require the sufficiency rating to be below 50 to qualify for bridge replacement funds.

A bridge rated below 50 has structural deficiencies and may be functionally obsolete (outlived its usefulness). Bridges with sufficiency ratings between 50 and 80 may be structurally deficient or functionally obsolete. Bridges with sufficiency ratings below 80 may be eligible for bridge rehabilitation. If an engineering study can show that rehabilitation can extend the life of a bridge by ten years, is cost efficient, and raises that bridge sufficiency rating above 80, funds will be provided to prevent further deterioration. A bridge rated over 80 is generally considered in good condition and has no major deficiencies.

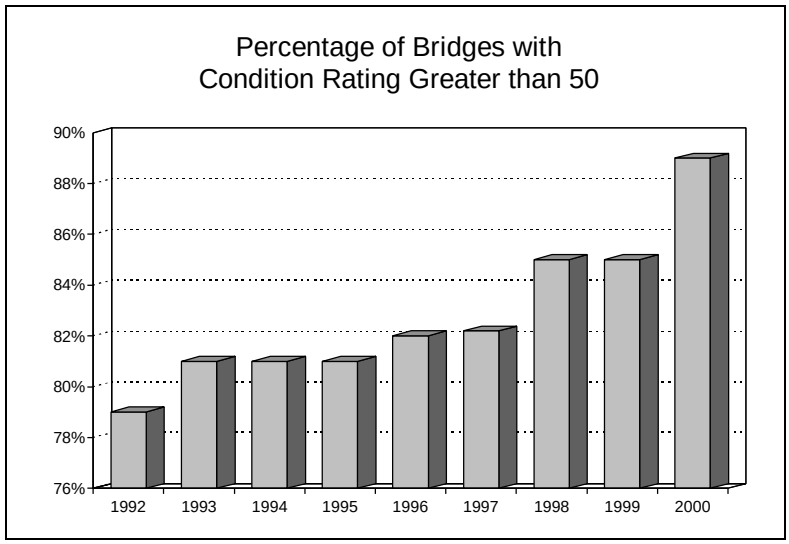
STATUS OF THE ASSET/PROGRAM

The Infrastructure Services Division's objective is to maintain 81% of bridges at a condition rating greater than 50. As shown in Figure 10, 89% of bridges are rated at or above 50. Since the State of Wisconsin does not require inspection reports for pedestrian bridges, bridges less than 20 feet, and railroad bridges, these are not rated. However, Infrastructure Services Division staff conducts inspections of these bridges. The condition rating of bridges has improved since 1992, with a greater percentage of bridges maintained at a satisfactory level or higher. The division estimates that planned funding from 2002 through 2007 will maintain the current bridge condition rating. However, the specific effect on the condition rating is uncertain because of potential changes in the cost

of planned projects, the possible addition of new projects to the bridge program, or delays in the timetable for existing projects.

State, federal, and county funds are used to assist the city with financing bridge rehabilitation and reconstruction improvements. Approximately 65.2% of the total cost of the current major bridge program will be funded by state, federal, and other sources. Some of the major state projects funded in the 2002-2007 plan include reconstruction of the State Street Bascule over the Milwaukee River, replacement of the West Highland Boulevard Bridge over C. P. Rail Systems, renovation of the Hawley Road Viaduct over the Menomonee Valley, replacement of the North Sherman Boulevard Bridge over Lincoln Creek as part of the Lincoln Creek Flood Control Project and replacement of the West Forest Home Avenue Bridge over the Kinnickinnic River.

Figure 10



In addition, the 2002-2007 plan includes funding for total replacement of the Sixth Street Viaduct.

SIX-YEAR PLAN

The 2002-2007 Capital Improvements Plan calls for allocation of $35.9 million for repair, replacement, and/or enhancement of bridges and viaducts within city limits. Of this total, $12.5 million will come from city resources, approximately $183,000 will come from revenue received from the City of Mequon and $23.2 million will be in the form of state and federal grants. Approximately 43 different bridges throughout the city have been specifically designated for improvements during the life of the six-year plan. Table 8 outlines the planned expenditures for the city's bridge program throughout the life of the 2002-2007 Capital Improvements Plan.

Table 8

2002-2007 Capital Improvements Plan for Bridge Improvements

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Net City Cost	$2,116,000	$2,076,000	$2,149,000	$1,986,000	$2,082,000	$2,092,000	$12,501,000
Revenue	0	0	183,000	0	0	0	183,000
Grant and Aid	5,566,000	4,180,000	2,059,000	2,844,000	1,893,000	6,658,000	23,200,000
TOTAL	$7,682,000	$6,256,000	$4,391,000	$4,830,000	$3,975,000	$8,750,000	$35,884,000

PROGRAM CHANGES AND INITIATIVES

Sixth Street Viaduct Reconstruction: This multi-year project was funded in the 2000 budget, which provided approximately $54 million in city, county, state, and federal funds for reconstruction of the Sixth Street Viaduct. In 2000, preliminary engineering was completed and demolition and construction began in 2001. The new viaduct will be brought down to grade at Canal Street, which will significantly enhance the economic development environment in the Menomonee River Valley. The new viaduct will be open to traffic in Fall of 2002.

McKinley-Knapp Street Bridge: As part of the project to remove the Park East Freeway, the 2002-2007 plan includes funding for construction of a new river bridge at McKinley Boulevard and Knapp Street. This new bridge is expected to open in early Summer 2003.

STREET ACCESSORIES - STREET LIGHTING

LINK TO THE STRATEGIC PLAN

The Department of Public Works Infrastructure Services Division is responsible for constructing, maintaining, and operating the city's lighting system. The city purchases electricity from the Wisconsin Electric Power Company, which in turn, provides electrical power to the city's substations. Underground and overhead cables distribute power from these substations to streetlights. Construction of substations and replacement/installation of cable, circuitry, light poles, and streetlights are funded through the capital budget. Maintenance of the lighting system is funded through the division's operating budget.

The street lighting program supports the city's strategic goal - of maintaining quality neighborhoods by enhancing the safety and security of residents and the aesthetics of neighborhoods and business districts. By providing a safe, attractive, and reliable lighting system, the street lighting program helps to provide pleasant and secure neighborhoods. The street lighting program also contributes to the city's goal of strengthening the local economy, attracting and retaining family-supporting jobs. The street lighting program significantly enhances the safety of the city's transportation system by providing adequate light for nighttime travel. By improving transportation safety, the street lighting program, like the street reconstruction program, makes the city attractive to private sector investments.

ASSESSMENT CRITERIA

The Infrastructure Services Division uses the following criteria to determine street lighting capital needs: (1) paving program; (2) age and historical circuit problems; (3) aldermanic and citizen requests; (4) traffic and pedestrian safety; (5) incidence of crime; and (6) lighting standards.

Where possible, replacement of street lighting assets occurs in conjunction with the city's paving program, minimizing replacement costs and maintaining the integrity of newly paved streets and sidewalks. Substations are replaced when they show signs of deterioration. The age and historical circuit problems dictate cable replacement, which is coordinated with the street paving program. Aldermanic service requests and citizen complaints are taken into account to determine upgrading and installation of streetlights. In addition, streetlights in high-crime areas are given priority for upgrades and additional alley lights are provided in areas with a higher than average crime rate.

STATUS OF THE ASSET/PROGRAM

One of the most important criteria utilized by the Infrastructure Services Division when assessing the long-term needs of the city's street light system is the Illuminating Engineering Society (IES) Guide for new street lighting installations. The IES bases its recommendations on cost, traffic volume, roadway construction material, and the need to improve traffic safety and reduce crime. Generally, the IES recommends that a street light be installed every 120-150 feet, depending upon whether the area is residential or commercial. Infrastructure Services will evaluate the efficacy of this standard over the next year, paying particular attention to the reasonableness and design impact it presents. For instance, based on IES information, during the period 1996-2000 an average of 200 new streetlights were installed. The goal of the Infrastructure Services Division is to ensure that at least 94% of city streets meet IES lighting standards. The division has met this goal, with 96.7% of lighted streets meeting IES standards as of December, 2000.

SIX-YEAR PLAN

In total, the 2002-2007 Capital Improvements Plan (see Table 9) allocates $39.8 million for installation of streetlights and related infrastructure. The division estimates that this level of funding will maintain the existing level of compliance with IES standards.

Specific objectives of the street lighting program include: converting series circuitry to multiple circuitry; converting existing mercury vapor and incandescent street lights to high pressure sodium lighting; and replacing all low pressure sodium vapor units. Major areas of work include installation and replacement of streetlights associated with the paving program and the neighborhood lighting program. Activities include street light conversions, lighting upgrades, excavation repairs, removal of series circuitry, and pole and cable replacement.

Table 9

2002-2007 Capital Improvements Plan for Street Lighting

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Net City Cost	$5,484,000	$5,784,000	$6,034,000	$6,234,000	$6,384,000	$6,109,000	$36,029,000
Assessments	1,220,000	500,000	500,000	500,000	500,000	500,000	3,720,000
TOTAL	$6,704,000	$6,284,000	$6,534,000	$6,734,000	$6,884,000	$6,609,000	$39,749,000

PROGRAM CHANGES AND INITIATIVES

An annual average of $6.6 million is provided for the ongoing street lighting program during the 2002–2007 plan. This funding level is necessary to continue to maintain and improve the reliability of the current street lighting system, to upgrade the system to meet the needs of area residents and businesses, and to meet minimum lighting levels defined in national standards. This includes replacement of deteriorated poles and other lighting equipment, replacement of defective cable and equipment, removal of overhead wires, replacement of outdated circuitry and electrical substations, and modernization of the street lighting control system.

As the city's street lighting system ages, some of the technology and materials used have become outdated. Replacement parts necessary to keep the system in service have become increasingly difficult to locate and purchase. This occasionally leads to long term outages in affected areas. The capital plan will provide funds to systematically replace aging and obsolete street lighting equipment.

Upgrading Control Circuits: The division will implement a pilot street lighting control circuits upgrade in 2002 to enhance system reliability.

Central Lighting Control Units: The current central lighting control unit system will be replaced beginning in late 2002. The current lighting control unit, located at 1540 West Canal Street, is a 1950's electrical-mechanical device that is reaching the end of its useful life. A new non-mechanized computerized control unit will assist in identifying, locating and repairing malfunctions more quickly, thereby improving customer service and ensuring effective operation of the street lighting program. The request for proposal is being drafted and will be released in 2002. Control units and the supporting communication system will be replaced throughout the six year plan.

STREET ACCESSORIES - TRAFFIC CONTROLS

LINK TO THE STRATEGIC PLAN

The primary objective of traffic control facilities is to provide for the safe, efficient, and economical movement of pedestrians and vehicles through the city's street system. This is integrated in the Department of Public Works' strategic objective - to maintain the livability of city neighborhoods and the economic viability of the city, as well as reduce the environmental impact of the automobile through traffic control policies established by the Infrastructure Services Division.

The specific link between the traffic controls program and the city's strategic plan is found in the city's strategic goal - to strengthen the local economy and to attract and retain family-supporting jobs. The traffic control program significantly enhances the safety of the city's transportation system by providing direction of traffic throughout the city. By improving transportation safety, the traffic control program, like the street reconstruction program, adds economic value to Milwaukee.

ASSESSMENT CRITERIA

The Department of Public Works Infrastructure Services Division uses the following criteria to determine traffic control equipment capital needs: (1) age and condition of traffic control devices; (2) traffic and pedestrian volume and travel time; (3) accident experience; and (4) state and federal requirements.

Coordinated with the street-paving program, traffic signs are replaced after 15 years (their estimated useful life). However, changes in national standards, aldermanic or citizen requests, and engineering studies which indicate a need for improved signals also affect replacement of signals. The reconstruction of traffic signals is based on paving programs, accident reduction efforts, or safety improvement projects. Traffic controllers, which regulate traffic signals, are installed to meet national standards and are replaced due to age, damage, deterioration, or insufficient capacity to accomplish required functions.

STATUS OF THE ASSET/PROGRAM

Table 10 shows the inventory of traffic control devices as of December 31, 2000.

Wisconsin State Statutes require that all traffic control devices placed and maintained by local authorities conform to the Federal Manual on Uniform Traffic Control Devices for Streets and Highways. The manual sets basic principles for the design and use of traffic control devices and provides guidance for their proper installation, operation, and maintenance. Traffic patterns and roadway geography governs the appropriate combination of traffic control devices.

Table 10

Traffic Control Device Inventory as of December 31, 2000

Traffic Control Device	Units	Traffic Control Device	Units
TRAFFIC SIGNS		TRAFFIC CONTROLLERS	
Stop and Stop-Related	13,918	Electromechanical	44
Yield	760	Solid State	652
Parking	32,108	**TOTAL**	696
Other Regulatory	17,827		
Warning	6,890	PAVEMENT MARKINGS	
Street Names	21,712	Center and Lane Lines	
Reflectors	4,938	Painted	178 (miles)
Miscellaneous	2,031	Semi-permanent	133 (miles)
TOTAL	100,184	**TOTAL**	311 (miles)
TRAFFIC SIGNALS		Crosswalks	1,680
Signalized Intersections	705		
Traffic Control Beacons	12		
TOTAL	717		

As of December 1996, the city was compliant with the federal manual and the Infrastructure Services Division believesthat the 2002-2007 capital plan will allow this important trend to continue.

In addition to complying with federal standards, the city remains committed to providing traffic controls in areas of special needs. Traffic checks and studies are conducted on a regular basis to evaluate the performance of existing traffic control devices and to assess additional needs. The city performs weeklong, 24-hour automated traffic volume counts once a month at 23 key sites, once every three years on arterial roads, and as needed on non-arterial roads and for specific traffic situations. These counts are used to determine levels of road use and to analyze citywide travel habits and patterns.

SIX-YEAR PLAN

In total, the 2002-2007 capital plan allocates $4.2 million to the improvement of traffic control facilities. Table 11 breaks down traffic control funding for the 2002-2007 capital plan. (Table 11 includes funding for the OPTICOM System which is discussed below.)

Table 11

2002-2007 Capital Improvements Plan for Traffic Control Improvements

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Traffic Control Improvements	$677,000	$682,000	$697,000	$707,000	$707,000	$707,000	$4,177,000
Emergency Response Management	147,000	147,000	0	0	0	0	294,000
TOTAL	$824,000	$829,000	$697,000	$707,000	$707,000	$707,000	$4,471,000

PROGRAM CHANGES AND INITIATIVES

Emergency Response Management (OPTICOM): The 2002-2007 Capital Improvements Plan provides $147,000 for 2002 and 2003 for the OPTICOM Project. This project equips traffic signal installations along primary emergency vehicle routes with devices to allow signal preemption for emergency vehicles. The project converts high traffic volume controlled intersections on emergency response routes to the OPTICOM system and, in the past, has helped install emitters on all Fire Department vehicles. Out of 325 targeted intersections, 124 were fully converted by the end of 2000 and many others have been partially converted. Moreover, all of the Fire Department's existing vehicles have been converted. The funds provided in the six-year plan are sufficient to cover the cost of installing the system, as well as providing additional vehicle emitters for new vehicles and replacement of failed units.

SIDEWALKS

LINK TO THE STRATEGIC PLAN

A key strategic objective of the Department of Public Works is to provide safe, attractive, and efficient surface public ways and infrastructure systems, including sidewalks. The primary purpose of sidewalks is to provide a means for safe and efficient pedestrian travel. At present, the city has approximately 2,200 miles, or 68.5 million square feet of sidewalk. More than 150 pedestrian ways and malls also contain public sidewalks.

The sidewalk reconstruction program supports the city's strategic goal - to ensure economic opportunities in the city by strengthening the local economy, and attracting and retaining family supporting jobs. The goal of the program is to keep sidewalks in a safe condition for use by the general public. This not only keep sidewalks in proper repair but also enhances the restoration of neighborhoods. By providing a safe system of transportation for pedestrians throughout the city, the sidewalk reconstruction program significantly enhances the city's transportation system and adds economic value to Milwaukee.

ASSESSMENT CRITERIA

The Department of Public Works Infrastructure Services Division utilizes the following criteria to determine the capital needs for sidewalks and pedestrian curb ramps: (1) age and condition; (2) street, sewer, and water construction projects; (3) citizens' complaints; and (4) handicapped accessibility.

Random sample sidewalk condition surveys are conducted to accurately assess the condition of city sidewalks. The surveys categorize a sidewalk condition by defect type; worn or deteriorated, cracked, settled, raised, or satisfactory. Several factors contribute to sidewalk defects:

Age – deterioration, wear, cracking, and disintegration;

Trees – root growth which causes heaving of sidewalk slab;

Trench settlement – utility service trenches continue to settle after many years of installation;

Frost action – causes heaving and movement of sidewalk slabs;

Heat expansion – heat expands concrete causing heaved sections; and

Damage – nearby construction or work activities can damage sidewalks causing cracks and settlement.

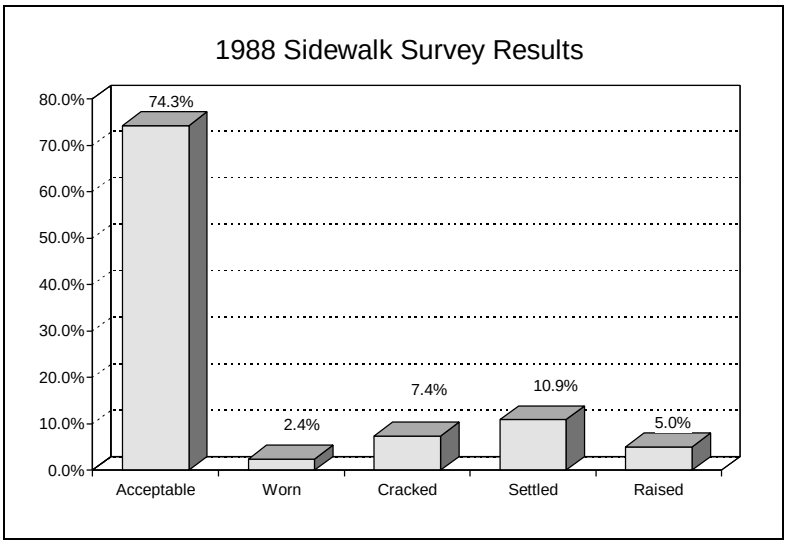
In addition to the condition surveys, the Infrastructure Services Division utilizes a cyclical approach to review sidewalk condition. Under this approach, all sidewalks are examined every 25-30 years.

STATUS OF THE ASSET/PROGRAM

In 1988, a comprehensive survey (see Figure 11) was conducted to assess the condition of city sidewalks. The result of this survey revealed that approximately 26%, or 17.8 million square feet of sidewalk had one or more defective conditions. Although a study to assess the condition of the city's sidewalk network was conducted in 1992, Infrastructure Services Division is not confident that the random sample method used provides accurate results. The division has delayed conducting another survey until a more accurate condition analysis method can be developed. Work to develop this method is on-going.

Since 1988, 14.6 million square feet of sidewalk has been replaced. The amount includes work performed by all sources, including city and Wisconsin Department of Transportation paving contracts, city forces, and utility replacement and sidewalk repair contracts. Approximately 430,000 square feet of sidewalk is replaced annually through utility replacement and sidewalk repair contracts. This level of sidewalk replacement is able to maintain the system at its current condition.

Figure 11



SIX-YEAR PLAN

The 2002-2007 Capital Improvements Plan allocates a total of $11.1 million to the replacement or repair of city sidewalks (see Table 12). This level of funding will allow the city to continue to replace city sidewalks on a 25-30 year replacement cycle. On average, the division contends this level of funding will replace approximately 400,000 square feet per year throughout the life of the plan.

Table 12

2002-2007 Capital Improvements Plan for Sidewalk Improvements

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
City Funding	$585,000	$585,000	$585,000	$585,000	$585,000	$585,000	$3,510,000
Assessments	1,265,000	1,265,000	1,265,000	1,265,000	1,265,000	1,265,000	7,590,000
TOTAL	$1,850,000	$1,850,000	$1,850,000	$1,850,000	$1,850,000	$1,850,000	$11,100,000

PARKING

LINK TO THE STRATEGIC PLAN

The city's parking activities are managed by Parking Fund staff who work under the direction of the Commissioner of the Department of Public Works. The fund is responsible for the administrating and operating four city-owned parking structures; managing and leasing approximately 70 leased, permit, and metered lots; and for the management and collection of approximately 6,500 on- and off-street parking meters. Capital improvements as well as operating and management costs are funded through the Parking Fund.

The primary objectives of city-owned parking structures in the downtown area is to provide safe and secure parking for patrons and employees of downtown businesses, to enhance economic development, and also to retain existing businesses in the downtown area.

The parking improvements program supports the city's strategic goal - to strengthen the local economy, attract and retain family-supporting jobs, and ensure economic opportunities. The presence of sufficient levels of safe and secure parking facilities fosters and promotes commercial/residential development.

The city's Parking Fund helps to guarantee that Milwaukee has an adequate amount of parking throughout the city, especially in the downtown area where all of the city-maintained parking structures are located.

STATUS OF THE ASSET/PROGRAM

The city owns and operates five parking structures through the Parking Fund. One of the five, the Milwaukee/Michigan parking structure, is leased to a local business. The city is responsible for its capital repairs and improvements. Four other structures are operated using contracted parking companies. The city receives revenues from these contractors. In addition, the city has title to five other structures through the Redevelopment Authority.

Table 13 provides a summary of the four city-owned and operated parking structures. This summary includes date of construction, descriptive information, and revenue data.

Parking staff developed and annually reviews a long-term capital maintenance plan in order to ensure proper maintenance of fund facilities, in particular, its parking structures. A range of maintenance items, if not addressed within the proper time frame, may result in more extensive and costly repair or replacement needs. By identifying these maintenance items and budgeting for them in advance, the fund can minimize the potential for unanticipated and significant capital expenses. This will help the fund maintain its assets in proper condition and will also reduce the use of reserves to finance capital costs.

Almost $2 million was spent in 2001 to renovate the Milwaukee/Michigan parking structure. Concrete sections, aluminum façade panels, and a chain link fence were repaired or replaced as required.

Table 13

Summary of City-Owned and Operated Parking Structures

Structure	Construction Date	Square Footage	No. of Levels	No. of Stalls	2001 Revenues
MacArthur Square	1966	573,000	3	1,418	$3,178,098
724 North 2nd	1961	212,800	8	501	411,845
North 4th and East Highland	1987	356,000	8	993	1,057,031
1000 North Water	1991	638,000	8	1,542	1,317,282

SIX-YEAR PLAN

The 2002-2007 Capital Improvements Plan includes $9.9 million for parking-related projects (see Table 14). Funding of $822,000 is provided in the 2002 budget. These projects will be financed with Parking Fund revenues.

The current ongoing capital projects for parking structures include:

Repair of concrete spalling and steel reinforcement bar corrosion in the common wall of the MacArthur Square Parking Structure and the state owned I-43 freeway tunnel;

Replacement of the revenue control equipment (gates, ticket machines, electronic entry pads, and cash registers) at the four structures to replace worn equipment and obsolete, unsupported software;

Evaluation of consolidation of Parking enforcement personnel and equipment into one facility. Since parking enforcement was transferred from the Police Department to DPW, the 94 people and 58 vehicles have operated from two overcrowded facilities at the Central Garage and the DPW Tow Yard. Flexibility, other operating efficiencies, and workplace improvements will result from consolidation. The city will evaluate whether a new facility is necessary or whether other city-owned sites could be used; and

Resealing deck membrane, painting, recaulking, and repair of expansion joints at the various parking structures.

Table 14

2002-2007 Capital Improvements Plan for Parking Improvements

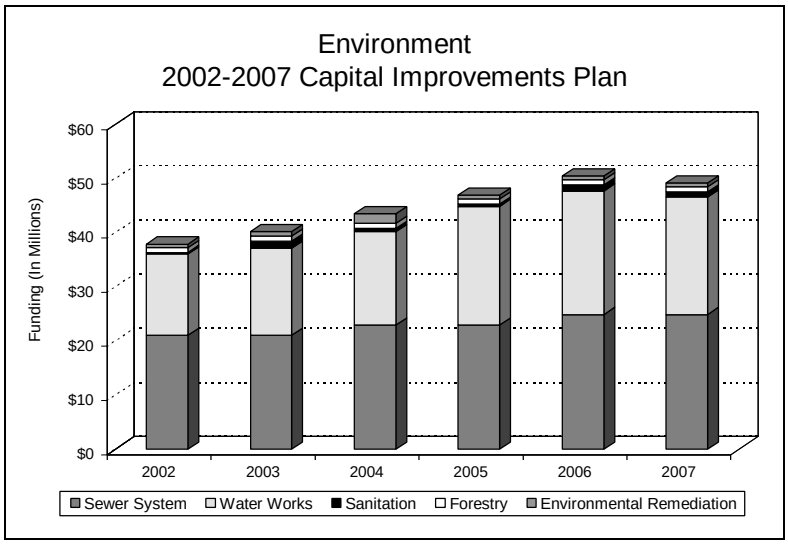
	Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
1)	MacArthur Square I-43 Ramp Repair	$422,000	$0	$0	$0	$0	$0	$422,000
2)	MacArthur Square Remembrane Project	0	0	460,000	375,000	405,000	0	1,240,000
3)	4th and Highland - Concrete Sealer and Caulk Joint	0	400,000	0	0	0	0	400,000
4)	4th and Highland - Paint Beams and Snow Chute	0	0	205,000	0	0	0	205,000
5)	4th and Highland - Recaulking	0	0	0	0	0	475,000	475,000
6)	Replace Revenue Control Equipment - Four Structures	0	940,700	0	0	0	0	940,700
7)	Consolidated Facility for Parking Enforcement	0	1,600,000	0	0	0	0	1,600,000
8)	2nd and Plankinton Traffic Membrane	0	217,000	217,000	0	0	0	434,000
9)	Milwaukee/Michigan Remembrane Project	0	0	335,000	0	0	0	335,000
10)	Milwaukee/Michigan Repainting	0	0	0	0	950,000	950,000	1,900,000
11)	1000 North Water Membrane Replacement	0	0	193,000	0	0	0	193,000
12)	1000 North Water - Joint Replacement	0	0	0	225,000	0	0	225,000
13)	Miscellaneous Repairs and Upgrades	200,000	150,000	100,000	100,000	100,000	100,000	750,000
14)	Structural Repairs to Various Structures	200,000	150,000	100,000	100,000	100,000	100,000	750,000
	TOTAL	$822,000	$3,457,700	$1,610,000	$800,000	$1,555,000	$1,625,000	$9,869,700

ENVIRONMENT

Environment-related capital projects include the sewer system, water facilities, sanitation, forestry, and environmental remediation. The objective of the environmental capital program is to enhance the long-term environmental health of Milwaukee by reducing lake and river pollution, protecting human health and the local ecosystem, and maintaining the cleanliness and beauty of city neighborhoods. Funding for environmental projects is determined by a wide range of criteria, including condition, age, maintenance problems, state and environmental regulations, citizen complaints, and aldermanic requests. When possible, replacement of environment-related infrastructure is coordinated with the paving program.

Environmental projects are funded through city borrowing, special assessments, revenue from developers, user fees, and the property tax levy. The 2002-2007 Capital Improvements Plan provides $268.4 million for environment-related capital projects, the largest functional category representing 28% of total funding in the six-year plan. Figure 12 shows projected costs of environment-related capital projects.

Figure 12



Sewers

The six-year plan includes $137.7 million for sewer system projects, which accounts for 51.3% of total funding for environment-related projects. The sewer program includes relief and relay sewers, expansion of capacity sewers, and developer-financed sewers. As Figure 12 shows, funding for the city's sewer infrastructure is relatively stable throughout the six-year plan. The Relief and Relay Program has been financed with a user fee since 2000.

Water Works

Capital improvement funding for the Milwaukee Water Works totals approximately $115 million over the six-year plan and accounts for 42.8% of total funding for environment-related capital projects. Of this amount, $84.4 million is appropriated for the water main program, which includes distribution and feeder mains. The remaining $30.6 million finances purification plants, pumping stations, storage facilities and the control center.

Forestry

Funding for forestry-related activities totals over $5.6 million in the six-year capital improvements plan, which accounts for 2.1% of total funding for environmental projects. These activities include $2.5 million to maintain landscaping on city boulevards and $3.1 million for the tree planting program.

Sanitation

The six-year plan provides $4.7 million for sanitation related capital improvement projects or 1.75% of total funding for environment related capital projects. Funding for sanitation projects ranges from $275,000 to $1.35 million in the six-year plan.

Environmental Remediation

The six-year plan provides approximately $5.4 million or 2% of total funding for a variety of environment-related capital projects. Funding for this purpose ranges from $634,000 in 2002 to $1.8 million in 2004.

SEWERS

LINK TO THE STRATEGIC PLAN

The environmental component of the 2002-2007 Capital Improvements Plan includes funding for the city's sewer infrastructure. The Infrastructure Services Division is responsible for constructing the city's sewer infrastructure, including storm and sanitary sewers, stormwater inlets, catch basins, and manholes. Since the year 2000, the Sewer Maintenance Relay Program in the Sewer Maintenance Fund has supported replacement of existing sewers. Preventive and emergency maintenance and most inspections of the city's sewer infrastructure are funded through the Sewer Maintenance Fund's operating budget.

The sewer program contributes to the city's strategic goal of strengthening the local economy, attracting and retaining family-supporting jobs, and ensuring economic opportunities for all city residents. A safe and effective sewer system helps to enhance the city's attractiveness for private sector investment, supports residential, industrial, and commercial development, and provides employment opportunities as all capital sewer projects are constructed by private contract.

The sewer program not only promotes growth and development, but also preserves neighborhood and environmental quality. Maintaining a quality sewer infrastructure helps reduce lake and river pollution by improving the quality of stormwater runoff entering rivers. Compliance with current state and federally mandated pollutant abatement programs and monitoring clean water legislation prevents discharges that adversely affect the city's harbor and rivers. In addition, watershed management of the Milwaukee, Menomonee, and Kinnickinnic Rivers and remedial action plans for the harbor and river estuaries, help to restore and maintain water quality standards and protect human health. The sewer infrastructure program also minimizes service backups and street flooding incidents, which maintains the quality and safety of the city's neighborhoods.

The city's system of collector, sanitary, and combined sewers empties into the sewer system of the Milwaukee Metropolitan Sewerage District (MMSD). MMSD, a special purpose municipal corporation, provides sewage treatment services to the City of Milwaukee and 17 other cities and villages within the district's legal boundary, as well as other areas outside of its boundary. MMSD owns and maintains two treatment plants that convey wastewater using a 305 mile system of intercepting and main sewers owned and maintained by the district. These activities are funded through the property tax and user fees levied by the district.

ASSESSMENT CRITERIA

The goal of the sewer program is to ensure that the city's sewer infrastructure remains structurally sound, properly maintained, and capable of handling adequate volumes of wastewater and stormwater. If properly maintained, the sewer program will limit service backups, street flooding incidents, and meet stormwater quality standards set by the State of Wisconsin Department of Natural Resources (DNR).

The following criteria are used to determine the capital needs of the city's sewer infrastructure: (1) paving program; (2) state, federal and Milwaukee Metropolitan Sewerage District mandates; (3) backwater complaints and sewer main failures; (4) age and condition; (5) sewer capacity; (6) development projects; (7) cleaning and maintenance problems; and (8) aldermanic requests.

The sewer infrastructure currently has no automated data-based system for condition-based project planning. Sewer system data includes map products, a computer-based inventory, reports, examinations, computation sheets, backwater complaints, and aldermanic requests. Specific information on a particular section of sewer requires researching the sources identified above. Analysis of the sewer system requires computation of the upstream portion of the system to obtain flow conditions. Sewer examination reports are analyzed and a rating for the sewer is determined using such factors as age, backwater complaints, aldermanic re-

quests, and scheduled pavings. The research involved and the computations required during this process are very labor intensive. The Department of Public Works will explore the merits of an automated condition assessment system during 2002.

STATUS OF THE ASSET/PROGRAM

The Infrastructure Services Division annually updates an inventory of the city's sewer infrastructure. The inventory contains information on location, type, length, diameter, age, and appurtenances of each segment of sewer. Table 15 shows the major components of the city's sewer infrastructure.

The city's sewer infrastructure inventory contains sanitary, storm and combined sewers, storm inlets, catch basins, and manholes. Sanitary sewers carry sanitary flow to intercepting sewers that carry the flow to sewage treatment facilities. Storm sewers carry surface drainage from parking lots, roofs, and streets to rivers or the lake. Combined sewers carry both sanitary flow and stormwater. During periods of dry weather, the sanitary flow is conveyed to intercepting sewers that carry the flow to sewage treatment facilities. When heavy rain occurs, crossovers between sanitary and storm sewers allow stormwater to mix with the sanitary flow and this combined flow empties into rivers and the lake. The Milwaukee Metropolitan Sewerage District's deep tunnel project has reduced this overflow from approximately 50 occurrences to 2 occurrences a year.

Table 15

City Sewer Infrastructure Inventory as of December 31, 2001

Facility	Quantity	
Sanitary Sewers	932	miles
Storm Sewers	949	miles
Combined Sewers	547	miles
TOTAL	2,428	miles
Storm Inlets	32,000	*
Catch Basins	24,000	*
Manholes	73,888	

* An estimated database of storm inlets and catch basins is not maintained.

Under the Wisconsin Permit Discharge Elimination System (WPDES), the city must eliminate existing crossovers between sanitary and storm sewers. To prevent sanitary sewer backups, bypass pumps are used to transfer excess flows from sanitary to storm sewers. The Department of Natural Resources requires the city to remove all bypasses between sanitary and storm sewers by repairing, sealing, relaying or relining sanitary sewers.

A stormwater inlet collects stormwater and drains it to a storm sewer. A catch basin, which is an 8-foot deep underground tank, collects debris from stormwater run-off and drains either into a combined or storm sewer. Manholes provide access to the sewer system.

Information on the condition of sewers is gathered primarily through sewer inspections, which are funded through the Sewer Maintenance Fund. The Infrastructure Services Division conducts most inspections of sewer mains using video cameras. Sewers are examined under the following conditions: (1) prior to all paving projects, (2) when backwater complaints are received, or (3) part of a systematic review program. When a segment of sewer is inspected, it is rated based upon the following criteria; mandatory project, structural condition, hydraulics, age, cleaning and maintenance problems, and aldermanic request. The ratings range on a scale from 0 to 100 with 100 indicating the best condition. Table 16 illustrates the rating

Table 16

Factors Used for Calculating Sewer Index Rating

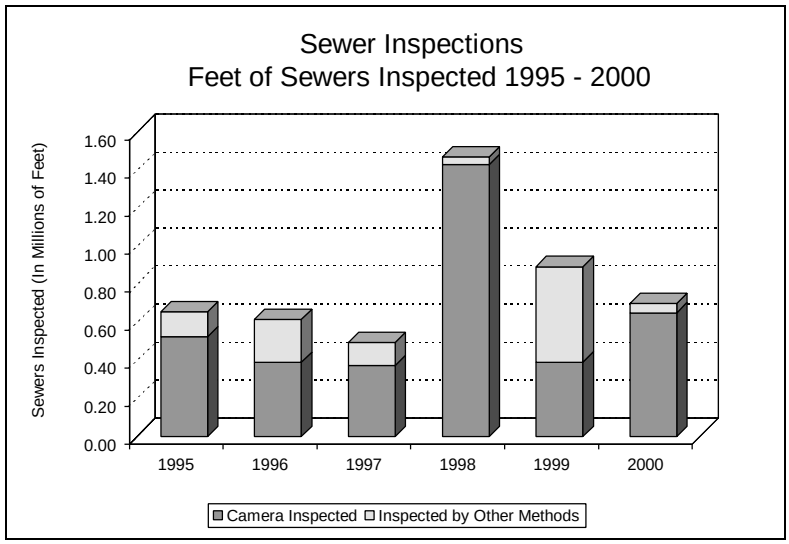
Category
Mandatory Work
Aldermanic Service Request
Backwater
Structural Condition
Hydraulics
Age of Sewer
Cleaning/Maintenance Problem
Deleted from Prior Year's Schedule

Note: Index rating is from 0=Worst to 100=Best

system for the sewer program. Sewer backups occur when there is inadequate system hydraulics, structural failure, roots or debris blocking flow, or a surcharged metropolitan interceptor sewer.

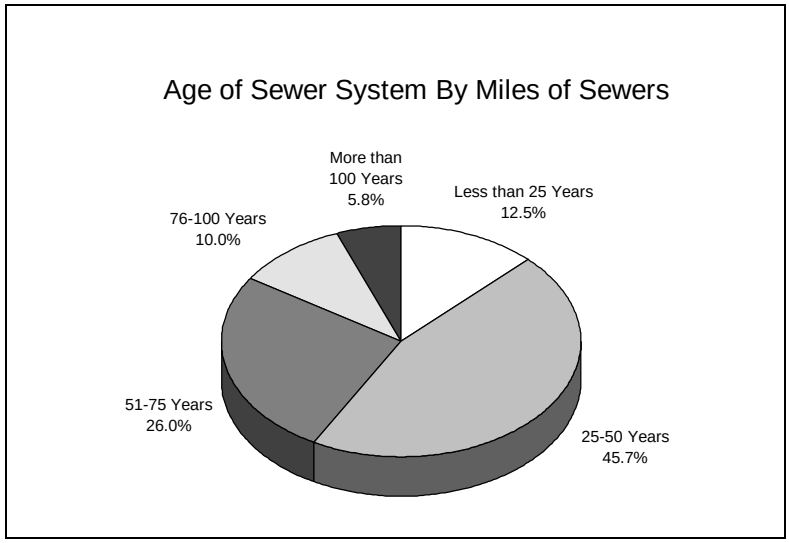
During the period 1995 to 2000, the division remotely viewed over 3.8 million feet of sewer, an annual average of 633,000 feet. The division also inspected nearly 630,000 feet of sewer over the same time period, for an annual average of 125,000 feet. In total, almost 4.5 million feet of sewer have been inspected between 1995 and 2000 which represents nearly 35% of the total sewer system (see Figure 13). At this rate of inspection, each sewer segment would be inspected every 15 years on average.

Figure 13



Another criterion used to assess condition is the age of the sewer system. The current estimated useful life of a sewer system is 90 years. According to Figure 14, 2,045 miles of sewer, or 84.2% of the system is 75 years old or younger. Almost 242 miles, or 10% of the system is between 75-100 years, and over 142 miles or 5.8% of the system is over 100 years old. Although age can be an important indicator of condition, ascertaining actual condition and determining the need for replacement requires an actual inspection. Based upon inspections, sewers that have an index rating of 65 or less will be scheduled for replacement.

Figure 14



The replacement of sewers is funded through the Sewer Maintenance Relay Program. During the period 1996 to 2000, an average of 8.7 miles of sewers were replaced each year, of which 81% were combined sewers, 12% were sanitary sewers, and 7% were storm sewers. At this level of effort, approximately 1% of the sewer system is replaced annually.

Fluctuations in sewer preservation efforts reflect the type and size of sewer replaced. Pipe diameter affects the flow volume and, consequently, construction costs. For example, in 1998 the cost to replace one mile of 8-inch sewer totaled $841,000 compared to $2.9 million to replace one mile of 60-inch pipe. Other circumstances, such as ground conditions, depth of the pipe and utility location also affect replacement costs. Rather than completely replace a sewer main, the Infrastructure Services Division seals mains to extend their useful lives by 25-50 years. Sealing helps to keep clear water from infiltrating the sanitary or combined sewer main. Between 1996 and 2000, 28 miles of sewers have been sealed.

If the sewer system is properly maintained the number of sewer backups and street flooding incidents should be minimized and stormwater quality standards should be met. An objective of the Department of Public Works is to limit the number of sewer backups to less than 55 incidents each year. In 2000, 78 incidents of backwater were reported (see Figure 15). The increase was due to an equipment shortage, which reduced triennial mainte-

nance efforts and extensive manhole rehabilitation by contractors, which restricted flow in the immediate vicinity. Both of these difficulties have been resolved. The division expects about 50 backwater incidents in 2002.

SIX-YEAR PLAN

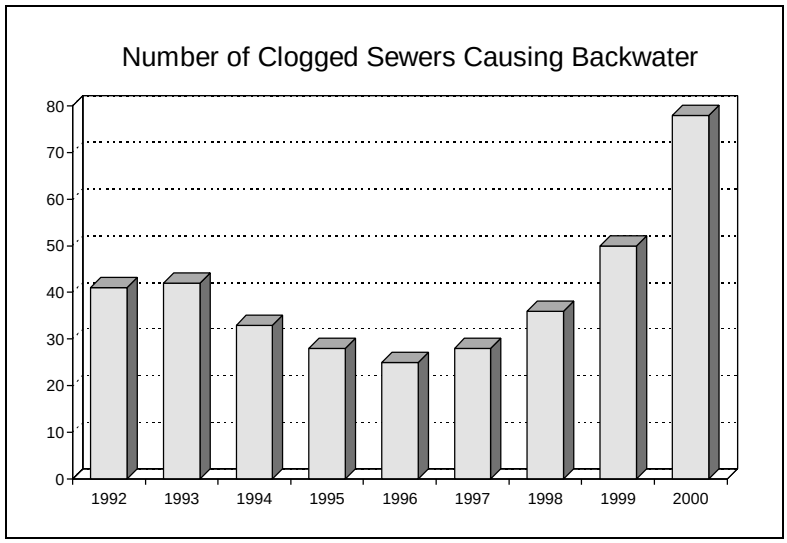
The 2002-2007 Capital Improvements Plan provides $137.7 million for the city's sewer system. Of this amount, $117 million, or 85% is for sewer preservation and approximately $20.7 million, or 15%, is for sewer expansion. Table 17 shows the six-year capital improvements program for the sewer system including the following: (1) the Sewer Maintenance Relay Program; (2) Expansion of Capacity Sewer Program; (3) Sewer Debris Dewatering Sites; and (4) Developer-Financed Sewer Program.

Sewer Maintenance Relay Program: The 2002-2007 Capital Improvements Plan provides $116.8 million for the Sewer Maintenance Relay Program. This level of funding is expected to replace ten miles of sewer annually. The 2002 budget provides approximately $3 million to replace sewer mains associated with the paving program and $14.4 million to replace sewers other than those associated with the paving program.

Expansion of Capacity Sewer Program: The 2002-2007 plan provides approximately $17.7 million in funding for expansion of capacity sewer projects, which includes construction of new sewers and large-diameter relief sewers. Approximately $16 million is provided to construct new large-diameter relief sewers, which provide additional capacity to the sewer system in order to ensure that sewers are sufficient to handle demand.

The remaining $1.7 million is provided to extend sewer service to areas of the city that does not currently have service. These extensions may occur in either established or undeveloped areas of the city because of failing septic systems, surface flooding problems, paving of a local street, or requests by abutting property owners. These sewer extensions are financed in part through special assessments levied against the owners whose properties have benefited from the new sewer system.

Figure 15



Developer-Financed Sewers: The 2002-2007 plan provides $3 million for developer-financed sewers.

Table 17

2002-2007 Capital Improvements Plan for the Sewer Program

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Sewer Maintenance Relay Program	$17,400,000	$17,400,000	$19,500,000	$19,500,000	$21,500,000	$21,500,000	$116,800,000
Expansion of Capacity Program City Cost	3,159,000	2,909,000	2,909,000	2,909,000	2,909,000	2,909,000	17,704,000
Assessments	0	0	0	0	0	0	0
SUBTOTAL	$20,559,000	$20,309,000	$22,409,000	$22,409,000	$24,409,000	$24,409,000	$134,504,000
Sewer Debris Dewatering Sites	$0	$200,000	$0	$0	$0	$0	$200,000
Developer Financed Sewer Program Revenue	500,000	500,000	500,000	500,000	500,000	500,000	3,000,000
SUBTOTAL	$500,000	$700,000	$500,000	$500,000	$500,000	$500,000	$3,200,000
TOTAL	$21,059,000	$21,009,000	$22,909,000	$22,909,000	$24,909,000	$24,909,000	$137,704,000

Developer-financed construction occurs when a private developer requests that the city extend sewer service to the developer's lands or when the development requires modifications to the existing system. This program is fully-financed by the developer, who enters into a formal agreement with the city. Developers are refunded if a sewer main, which is larger than needed by the particular development, is installed to serve properties other than the developers or to address future city needs.

PROGRAM CHANGES AND INITIATIVES

Cash Financing Policy for the Relay Sewer Program: The 2000 budget transferred the Relief and Relay Sewer Program from the city-funded capital budget to the Sewer Maintenance Fund. As part of this transfer, a cash financing program will be developed for the Relay Sewer Program. Cash financing some of this program is appropriate because it maintains the condition of the current sewer infrastructure by annually replacing a portion of the sewer system. The major advantage of cash financing is the long-term savings realized through debt service avoided. This policy will balance increased costs and future savings so as to make annual fee increases manageable and acceptable. Continuing implementation of this policy, the 2002 budget cash financed 7.25%, or $1.3 million of the Sewer Maintenance Relay Program.

Sewer Debris Dewatering Sites: The State of Wisconsin Department of Natural Resources has required that sewer debris must be dry prior to landfill disposal. Currently, the city has contracted to dry this material at a cost of approximately $1,000,000 annually. The $200,000 in the 2003 budget will fund a study to determine if it would be in the city's best interest to construct our own dewatering facility.

WATER

LINK TO THE STRATEGIC PLAN

The 2002-2007 Capital Improvements Plan for the environment includes funding for the city's water system. The Milwaukee Water Works is a public utility owned by the City of Milwaukee and regulated by the Wisconsin Public Service Commission. It is responsible for constructing, operating, and maintaining facilities and equipment used to collect, filter, treat, store, pump, and distribute water to Milwaukee area residents.

The primary objective of the Milwaukee Water Works is to provide potable and palatable water in quantities sufficient to meet domestic consumption and fire protection needs, while enhancing the long-term economic and environmental health of the city.

The water system contributes primarily to the city's strategic goal of strengthening the local economy, attracting and retaining family-supporting jobs, and ensuring economic opportunities for all city residents. Ensuring high quality water service is a key contributor to sustaining the economic prosperity of the city. Maintaining efficient and high quality public water utility enhances the city's attractiveness for private sector investment, increasing land values and promoting new development. Moreover, by ensuring that drinking water is safe and healthy for human consumption, the water system promotes and protects the environmental quality of the Milwaukee metropolitan area, which renders the city a more desirable destination for private investment.

The magnitude of the Water Works' infrastructure, and the city's commitment to high quality water, require a vigorous, on-going capital program.

ASSESSMENT CRITERIA

Milwaukee Water Works maintains an extensive infrastructure system consisting of treatment plants, pumping stations, storage facilities, water mains, hydrants, meters, and valves. An inventory of this infrastructure, as of December 31, 2000 is shown in Table 18.

Various criteria are used to assess the condition of this infrastructure and to plan on-going capital improvements. Water engineering utilizes a Water Main Break Experience Index to rank water main replacement projects on the basis of break frequency. The resultant ranking is modified by other factors including: (1) water quality considerations; (2) types of breaks; (3) potential damage from future breaks; (4) adequacy of existing mains; and (5) the paving program.

Criteria used to assess the condition of other components of the water system, such as treatment facilities, pumping stations, and storage facilities include the following: (1) ability to optimize operation of the facility; (2) maintenance history; (3) pressure or flow concerns; (4) water quality standards; and (5) growth and development.

Table 18

WATER WORKS INFRASTRUCTURE SYSTEM as of December 31, 2000

Componet	Quantity
Water Mains (Miles):	
Distribution	1,605
Feeder	347
Total Mains	1,952
Purification Plants	2
Pumping Stations:	
Major	3
Booster	11
Total Pumping Stations	14
Storage Facilities	9
Hydrants	19,594
Active Service Connections	164,660
Valves	46,640
Meters	160,609

Milwaukee Water Works is exploring the use of a database management system to monitor the water main infrastructure system. The project will link various databases such as water main diameter,

age, composition, joint material, pressure district, valves, hydrants and main break frequency. When completed, this system will allow Water Works to better track the age of installed mains, quantities of mains, and other details related to mains. It will also have the ability to generate statistical reports for management decision making. Mains in need of replacement or repair can be identified using statistical reports and other related data.

STATUS OF THE ASSET/PROGRAM

The City of Milwaukee water distribution system consists of distribution and feeder mains. Feeder mains carry water from the two purification plants to the distribution system for service to customers, or to storage facilities to be re-pumped during periods of maximum demand. Distribution mains carry water from feeder mains to customers' service lines. The oldest active water mains in the city were originally installed in 1872. For long-range planning purposes, the estimated useful life for the majority of the water mains currently in existence is 110 years. As of January 1, 2001, 71% of the system was less than 75 years old.

One of the criteria used to determine the condition of the water main system is the number of main breaks. Breaks are caused by several factors; severe winter weather, the size of mains, location of mains, period of installation, pipe material, length of pipe, and the corrosiveness of the soil surrounding the main. Figure 16 shows the number of water main breaks over the last six years. In 2000, there were 667 water main breaks, a decrease of 43 from 1999. The recent declining trend in water main breaks is attributed to milder winters. Most main breaks occur during December, January, and February. The number of breaks is much greater in severely cold weather. Recent winters have not been as frigid as winters of the mid-1990's.

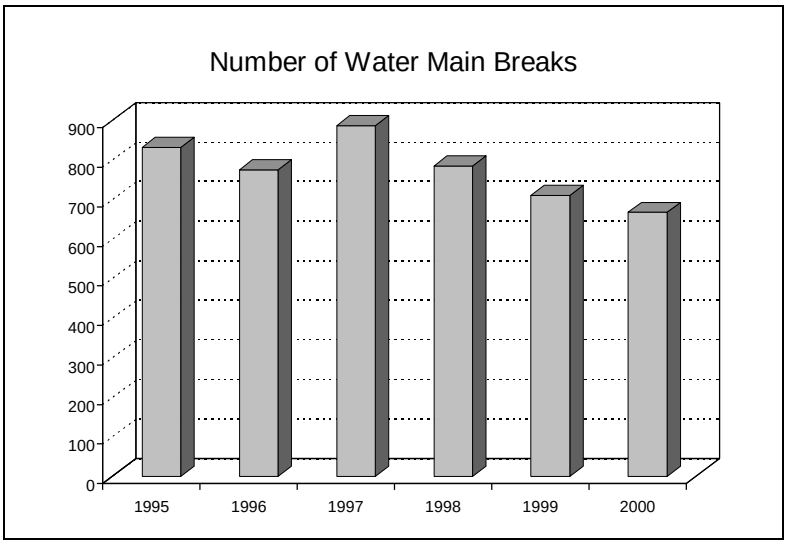
Currently, the system's mains are inspected when a break occurs. This data is compiled into a Water Main Break Experience Index which ranks water main replacement projects on the basis of break frequency based on the number of breaks per 100 feet of pipe.

As shown in Figure 17, between 1994 and 2000, 80.3 miles of water mains have been constructed for an annual average of 11.5 miles. This includes mostly main replacement and some new main construction.

The Distribution Section of Water Works is primarily responsible for maintenance and repair of the utility's distribution system. Distribution staff currently works out of two field offices a southside location at 3801 West Lincoln Avenue and a northside location at 2919 West Cameron Avenue. These existing facilities are inadequate and in need of major renovation. The increasing size and amount of equipment, the need for larger garage space to house diesel vehicles and the age of the current facilities drive the cost of operating the Distribution Section. Budget authority exists to consolidate into a single site to gain efficiencies. The search for a suitable location continues.

Water Treatment Facilities: The Milwaukee Water Works operates two water treatment facilities each with its own intake. The Linnwood Plant, constructed in 1938, is located on the northside of the city and has a design capacity of 275 million gallons of water per day. The Linnwood Plant is served by the Linnwood Intake Facility, a concrete tunnel 12 feet in diameter extending 6,565 feet into Lake Michigan.

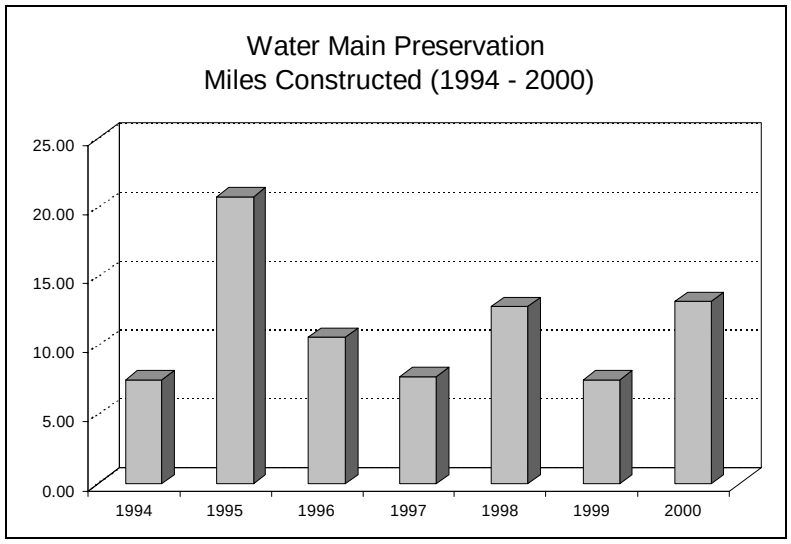
Figure 16



The Howard Avenue Plant, constructed in 1962 is located on the city's southside and has a design capacity of 105 million gallons per day. This plant is served by the Texas Avenue Intake Facility, a 9 foot diameter concrete pipe extending 11,823 feet into Lake Michigan.

The treatment process at both plants begins with the contact of raw water with ozone, the primary disinfectant. Coagulation with aluminum sulfate, settling and rapid dual media filtration follows. Free chlorine is added after filtration. A phosphorus compound is added to control lead and fluoride is added to prevent tooth decay. The final step is the addition of chloramine to maintain a disinfectant residual throughout the distribution system.

Figure 17



Water Pumping Facilities: After treatment, water enters the distribution system at three primary pumping stations: (1) Riverside; (2) North Point; and (3) Howard Avenue. As water passes through the distribution system, it gradually loses pressure due to distances traveled, friction on the inside surfaces of the mains, and higher elevations found in some areas. Booster pumping stations assist in maintaining proper pressure throughout the system. Currently, the Milwaukee Water Works operates 11 booster stations strategically located throughout Milwaukee County and operated remotely from one of three locations. Booster stations include: (1) Kilbourn Reservoir, which distributes water from the reservoir during periods of peak demand; (2) Menomonee Valley; (3) Lincoln Avenue; (4) Lake Drive; (5) Florist Avenue; (6) Grange Avenue; (7) Bluemound Road; (8) Oklahoma Avenue; (9) Adler Street; (10) Capitol Drive; and (11) Lisbon Avenue.

The total rated pumping capacity of all primary pumping stations and booster stations is 1.005 billion gallons of water per day.

Water Storage Facilities: In addition to the pumping stations, the water distribution system also includes reservoirs and ground level and elevated storage tanks. These include the following: (1) Kilbourn Reservoir; (2) two storage tanks near the Menomonee Valley Booster Station; (3) two storage tanks adjacent to the Lincoln Avenue Booster Station; (4) one storage tank near Lake Drive Station; (5) two storage tanks near the Florist Avenue Booster Station; (6) one storage tank located in Greenfield; and (7) one storage tank located on Hawley Road. Other water storage facilities include the clearwells at the Howard Avenue and Linnwood Avenue purification plants.

These storage facilities have a total storage capacity of 139 million gallons of water. The reservoirs and tanks provide excess capacity and assist in handling peak demands, which reduces the need for large investments in treatment and pumping equipment when demand is high.

The six-year plan includes funding for improvements at three storage facilities:

The tanks at the Menomonee Valley Pumping Station have excessive leakage because the base of the tank has separated from the side walls; these tanks will be replaced and altitude valves will be installed on the new tanks to prevent tank overflow and flood damage.

The one million gallon elevated Lake District storage tank has not been painted since 1977 and needs painting of both the interior and exterior surfaces.

The tanks at Lincoln Avenue Station are in need of replacement. Altitude valves will be installed on the new tanks to prevent tank overflow and flood damage in the event of alarm failure.

The structure of the clearwell at the Howard Avenue Plant was found to be cracked, allowing the

possible infiltration of groundwater into the basins. A membrane arterial will be bonded to the roof slab to prevent leaking.

In addition to the work on the above storage facilities, construction of a new storage tank at the Kilbourn location began in 2001. This project will be funded with borrowings authorized in the 1999 capital budget.

Control Center: The Milwaukee Water Works' Control Center contains centralized electronic data telemetering, recording, and supervisory equipment for remote control of storage and booster pumps. The Control Center can monitor operation of pumps and valves. Additionally, load centers at the treatment plants control and monitors the pumpage from Lake Michigan, the entire treatment process, and continuously analyzes water quality and chemical content.

SIX-YEAR PLAN

The 2002-2007 Capital Improvements Plan calls for the allocation of $115 million for the city's water system. Most of this funding, approximately $107.8 million, will come from water revenues; with the remaining $7.2 million funded by land developers for installation of new water mains in new developments. Table 19 (on the following page) summarizes the various capital accounts that fund water improvements.

Distribution Main Program: The six-year plan provides, approximately $77.2 million for replacement and installation of new distribution mains. The Milwaukee Water Works intends to increase the annual allocation to this account by approximately 10% annually, as part of an increased focus on buried infrastructure. This program will maintain the reliability and adequacy of the water main system. An additional $7.2 million is provided by the Developer Out-of-Program Agreement Program, which facilitates the extension of water mains to serve new customers.

Feeder Main Program: The six-year capital improvements plan provides $7.7 million for the Feeder Main Program. This funding is expected to replace, reinforce, and extend one mile of feeder mains each year. This program will maintain the integrity of the feeder main system.

Treatment Improvements: The six-year capital improvements budget provides approximately $5.9 million for various treatment improvement projects at the Linnwood and Howard Avenue treatment plants. The 2002 budget provides funding totaling $300,000 for the replacement of flucculator bearings and shafts at the Linnwood and Howard Avenue plants.

Pump Facilities: The six-year capital improvements plan provides $7.1 million for pump facilities. The 2002 budget includes funding totaling $300,000 to replace outdated brush type pump motors with lower maintenance brushless motors at the Linnwood Plant. Also, $1.4 million will be used to replace an outdated substation at the Howard Avenue Pump Station.

Storage Facilities: The six-year capital improvements plan provides $6 million for water storage facilities including tanks and reservoirs. No capital improvements to storage facilities are planned for 2002.

Building Improvements: The six-year capital improvements plan provides $3.1 million for building improvements. The 2002 budget includes $850,000 for security upgrades at Linnwood and Howard Avenue Plants, in addition to the replacement of a corroded steam radiator heating system at the Linnwood Plant.

PROGRAM CHANGES AND INITIATIVES

Clean and Safe Water Program: Over the past several years, the Milwaukee Water Works implemented a program to significantly improve its water quality monitoring and treatment facilities. The program had three components: (1) the Howard Avenue Intake Facility was extended an additional 4,200 feet at a cost of $11 million to provide cleaner water for the Howard Avenue Plant; (2) new fil-

ters, monitoring equipment, and systems to control the leaching of lead and copper from plumbing were installed at both treatment plants at a cost of $27 million; and (3) systems using ozone, the strongest available disinfectant for drinking water, were installed at both treatment plants at a cost of $36.5 million. An additional $12.9 million was spent on various enhancements to plant systems. All three components of the program are complete. However, the Water Works continues to work on optimizing system operation and on warranty-related issues.

Table 19

2002-2007 Capital Improvements Plan for the Milwaukee Water Works

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
WATER MAIN PROGRAM							
Distribution Mains							
Developer Financed	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$1,200,000	$7,200,000
Revenue	10,000,000	11,000,000	12,125,000	13,310,000	14,641,000	16,105,100	77,181,100
SUBTOTAL	$11,200,000	$12,200,000	$13,325,000	$14,510,000	$15,841,000	$17,305,100	$84,381,100
Feeder Mains Revenue	$1,000,000	$1,100,000	$1,210,000	$1,331,000	$1,464,100	$1,610,510	$7,715,610
SUBTOTAL	$12,200,000	$13,300,000	$14,535,000	$15,841,000	$17,305,100	$18,915,610	$92,096,710
Treatment Improvements	$300,000	$700,000	$600,000	$950,000	$2,400,000	$975,000	$5,925,000
Building Improvements	850,000	600,000	450,000	1,200,000	0	0	3,100,000
Storage Facilities	0	0	0	2,500,000	2,500,000	1,000,000	6,000,000
Pump Facilities	1,700,000	1,250,000	1,500,000	1,200,000	600,000	850,000	7,100,000
Meter Repair Shop Improvements	0	250,000	200,000	300,000	0	0	750,000
TOTAL	$15,050,000	$16,100,000	$17,285,000	$21,991,000	$22,805,100	$21,740,610	$114,971,710

FORESTRY

LINK TO THE STRATEGIC PLAN

The activities of the Forestry Division link to the city's strategic goal of strengthening the quality and ensuring the stability of Milwaukee's neighborhoods. The city works to create stronger neighborhoods by encouraging residents to become more invested in their neighborhoods. The city's neighborhoods possess many unique assets, including their extensive boulevard system and the surrounding urban forest. Trees and boulevards add to the quality of life for Milwaukee's residents, providing aesthetic and environmental benefits, which make the city an attractive place to live. The 2002-2007 Capital Improvements Plan preserves these assets and maintains the quality of Milwaukee's neighborhoods primarily through two forestry-related programs: (1) Concealed Irrigation and General Landscaping; and (2) Planting Trees, Shrubs, and Evergreens.

The Concealed Irrigation Program installs irrigation systems and provides general landscaping for new boulevards after street construction or traffic control modifications have been completed. Routine maintenance of boulevards, including repair of irrigation systems and general maintenance of plant material is funded through the operating budget. The Forestry Division is responsible for designing boulevard medians as a part of street construction projects.

The Planting Program plants and maintains trees located on city right-of-ways and property. The capital budget provides funds to replace trees removed due to street and sidewalk construction. Funds to maintain these trees are provided in the operating budget.

ASSESSMENT CRITERIA

The Forestry Division uses the following criteria to determine its capital needs for irrigation and landscaping of city boulevards: (1) the number of boulevards affected by street construction; and (2) the number of boulevards affected by traffic control changes.

Renovation of boulevards is based not on age or condition but on the street construction program. Since renovation of boulevard irrigation systems often requires breaking street pavement, boulevard renovation is scheduled to coincide with street reconstruction. As a result, capital funding for boulevard irrigation and landscaping activities can vary year-to-year as boulevards are included in the paving program.

The Forestry Division utilizes similar criteria to determine its capital needs for tree planting, including: (1) street construction projects; (2) sidewalk construction projects; and (3) replacement trees.

The capital program for tree planting is based not on condition assessments but rather on street and sidewalk construction activities. Tree planting is necessary where new street or sidewalk construction requires an initial planting or where reconstruction of existing streets and sidewalks requires tree replacement. The city makes every effort to replace each removed tree. Trees are scheduled for replacement within one year after the completion of the street or sidewalk construction.

STATUS OF THE ASSET/PROGRAM

The city's boulevard system encompasses approximately 120-miles of landscaped boulevard medians and traffic triangles. The Forestry Division uses a database to record landscape and irrigation plans for every city boulevard. The database is updated and boulevard plans are redrawn if the boulevard is impacted by a street construction project.

In 2000, the Forestry Division conducted an inventory of street trees. The division estimates that there are approximately 200,000 trees on city right-of-ways and property. These trees are located be-

tween the sidewalk and the curb, as well as on boulevards, municipal properties, concrete boxouts, and other green spaces.

In addition, the division uses a computerized database to record tree planting locations and generate annual planting lists. A Master Planting Plan plat book contains listings of tree species designated for streets and blocks. The appropriate species of trees are planted on city right-of-ways where growing space is suitable. Type of species, property width, and the presence or absence of traffic control signs, streetlights, utilities, or other permanent structures determines tree spacing.

The average useful life of a tree located on a city right-of-way is estimated to be 60 years. The division uses tree mortality rates to help assess the health of the city's urban forest. Over the last ten years, the tree mortality rate has decreased from over 2.5% to approximately 2%. A slight increase in the mortality rate was experienced in 1997 and 1998 due to a change in criteria for removal. At that time, Forestry began removing marginal trees when their condition has declined 75% instead of waiting until they are almost dead. In the long run, this policy will result in a healthier urban forest and decreased mortality rate.

In order to ensure a healthy urban forest, the Forestry Division wants to reduce the three-year average tree mortality rate to less than 1.5%.

SIX-YEAR PLAN

The 2002-2007 Capital Improvements Plan calls for allocation of nearly $2.6 million to irrigate and landscape city boulevards and approximately $3.1 million for tree planting activities (see Table 20).

Concealed Irrigation and Landscaping: In the 2002 budget, approximately $372,062 is provided for all construction phases of new and existing boulevard irrigation systems, including water tap installation, raising water services, and construction of concealed irrigation systems in conjunction with the city's paving program. The 2002-2007 plan provides an average of about $420,000 per year for this purpose. In 2002, the city will explore the merits of constructing new boulevards that use limited turf and require irrigation for flowerbeds.

Tree Planting: The 2002 budget includes $515,000 to plant 4,648 trees. Between 2003 and 2007, $515,000 is provided each year for the Tree Planting Program. This funding is intended to maintain the tree stock on Milwaukee streets at 98% of full capacity.

Table 20

2002-2007 Capital Improvements Plan for the Forestry Division

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Concealed Irrigation and Landscaping City Boulevards	$372,062	$410,000	$420,000	$430,000	$440,000	$450,000	$2,522,062
Planting Program	515,000	515,000	515,000	515,000	515,000	515,000	3,090,000
TOTAL	$887,062	$925,000	$935,000	$945,000	$955,000	$965,000	$5,612,062

PROGRAM CHANGES AND INITIATIVES

Greening Milwaukee's Schools: In 1999, the Forestry Division partnered with Milwaukee Public Schools, the UPAF/Visions Urban Forestry Fund, and 53rd Street School to establish a demonstration project by which a grove of trees were planted in and around a three-acre asphalt playground.

In 2002, the Forestry Division will seek to expand this program to other schools. A total of $50,000 is allocated in the 2002 capital budget to fund the division's participation in the Greening Milwaukee's Schools Program. The Forestry Division will provide trees to schools, help to coordinate volunteers and train volunteers on how to plant and care for their new trees.

SANITATION

LINK TO THE STRATEGIC PLAN

The 2002-2007 Capital Improvements Plan for environment-related projects includes funding for the Sanitation Division. The Sanitation Division is responsible for collection and disposal of solid waste and recyclables, cleaning of streets and alleys, assessable and non-assessable weed cutting, and snow and ice control on city streets.

The capital program for the Sanitation Division contributes to the city's strategic goal to improve the environmental health of Milwaukee and the personal health of its citizens. Milwaukee has a strong commitment to the environment and is proud of its reputation as a clean city. The Sanitation Division helps maintain the cleanliness of the city by providing a number of services including residential garbage collection, neighborhood clean-up box program, special collections, street and alley sweeping. The division is also responsible for the city's curbside recycling program. This program exhibits the city's commitment to improving the environment through waste reduction efforts.

The six-year capital program for the Sanitation Division includes funding for improvements to division facilities such as district stations and the Materials Recovery Facility. These facilities support all operations of the division. Therefore, it is critical that they are kept in sound structural condition.

ASSESSMENT CRITERIA

The Sanitation Division uses the following criteria to determine its capital needs: (1) environmental concerns and regulations; (2) salt storage capacity; (3) office, equipment, and vehicle storage facility requirements; and (4) age and condition of facility.

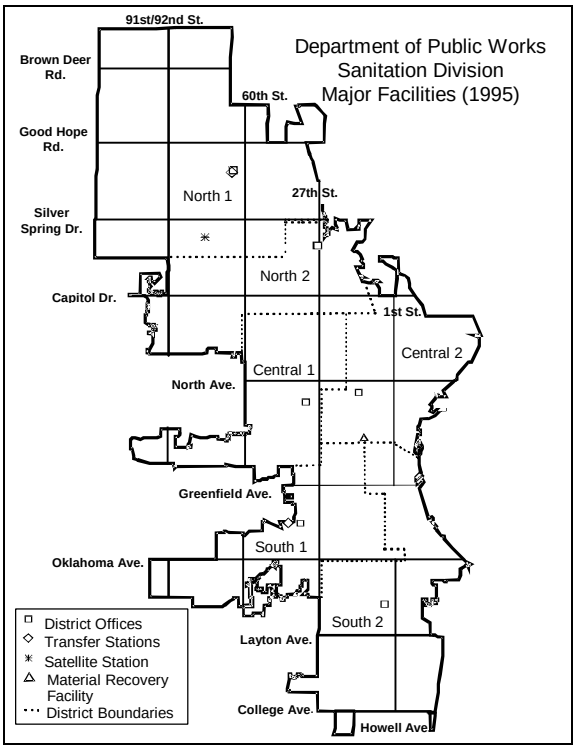
STATUS OF THE ASSET/PROGRAM

The operations of the Sanitation Division are organized into three geographic areas of the city: North, Central and South. Each area is divided into two districts. Each district location provides storage for salt and equipment and space for field staff responsible for garbage collection and snow plowing. In addition, the Sanitation Division is responsible for providing a self-help, drop-off location at each of the city's transfer stations.

Map 1 shows the location of the following: district boundaries, district offices, transfer stations, satellite station, and material recovery facility.

In 1994, the Sanitation Division reduced the number of transfer stations and self-help stations it operates from three to two, when it converted the central transfer station located on Mount Vernon Avenue to a materials recovery facility. Transfer stations are facilities where city garbage packers unload garbage onto "tipping floors". Refuse is then pushed into a compactor and loaded into tractor-trailer trucks for transport to a landfill. One of

Map 1



the facilities, Lincoln Avenue, is located on the southside of the city and is approximately 50 years old. The second facility, Industrial Road, is located on the northside and is approximately 20 years old. Funding to reconstruct both transfer stations was provided in the 1995 budget. The amount of garbage handled at both facilities averages 1,100 tons per day. On peak days, the amount of tonnage handled can approach 1,800 tons.

The Sanitation Division is also responsible for operating and maintaining two self-help stations. Self-help stations provide a place where city residents can dispose of yard waste, recyclables, bulky items, clean fill, and various other types of refuse. These facilities, which have been at their current locations since 1990, handle 150 tons of refuse daily.

The city has a Materials Recovery Facility (MRF) where all recyclables collected by the city are sorted, processed, and marketed by a private contractor. Although this facility is owned by the city, the contractor is responsible for any capital improvements until the contract expires in 2004.

Currently, there are six district headquarters. The age of each district station ranges from 27 to 35 years old. Each district is responsible for garbage collection, recycling, snow and ice removal for a section of the city. Located at each district are the office headquarters, a salt storage facility, and a garage. While the majority of these facilities are in satisfactory condition, district stations such as South District I, North District II and South District II are in need of expansion. Currently, these district stations do not have adequate office space for office staff and other personnel.

The 1990 reorganization of the Sanitation Division resulted in the consolidation of district stations from nine locations to six locations. In addition, there is one satellite salting location. As a result of this consolidation, the six remaining district locations require additional capacity for salt and equipment storage.

SIX-YEAR PLAN

Table 21 shows the 2002-2007 Capital Improvements Plan for the Sanitation Division's capital projects. The six-year plan, totaling just under $4.7 million, provides funding for improvements to the division's facilities. In 1999, funding for capital projects was consolidated into one account instead of several different accounts in order to give the division the flexibility to prioritize among various projects.

The plan provides funding for reconstruction of joint Sanitation/Forestry headquarters at Industrial Road. Improvements include headquarters reconstruction and retrofitting/reconstruction of the vehicle garages.

The six-year plan also provides funding for various improvements at other Sanitation facilities. Improvements include modifications to office and personnel buildings at North District I, North District II, South District II, and Central District II. In addition, the plan provides funding for roof replacement and overhead door replacement at the Materials Recovery Facility, and a repaving project at the 72nd and Fond du Lac Avenue Salting Facility.

Table 21

2002-2007 Capital Improvements Plan for the Sanitation Division

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Sanitation Headquarters Modifications Various Sites	$275,000	$1,354,000	$600,000	$430,000	$1,125,000	$896,000	$4,680,000
TOTAL	$275,000	$1,354,000	$600,000	$430,000	$1,125,000	$896,000	$4,680,000

ENVIRONMENTAL REMEDIATION PROGRAM

LINK TO STRATEGIC PLAN

One of the city's strategic goals is to improve the environmental health of Milwaukee and the personal health of its citizens. Environmental contamination can adversely impact the health of Milwaukee citizens if not addressed properly. The six-year capital plan for the environmental remediation program provides funding to address potential environmental risks and preserve the environmental health of the city.

The 2002-2007 Capital Improvements Plan for the environment includes approximately $5.4 million for several projects. Projects funded through the environmental program address asbestos abatement, lead abatement, soil and groundwater remediation at city-owned facilities.

ASSESSMENT CRITERIA

Regulations established by the U.S. Environmental Protection Agency and the Wisconsin Department of Commerce require that the city equip underground storage tanks (USTs) with corrosion protection and devices to prevent spills and overfills, as well as to monitor USTs for leaks. The city met the federal deadline of December, 1998 for completing UST replacements, upgrades or closures.

Currently, the Wisconsin Department of Natural Resources requires that the city conduct investigations to determine the extent of contamination, potential for groundwater impacts, and remedial actions necessary to clean-up contaminated soil and groundwater at these sites. The Buildings and Fleet Division works with contractors to conduct ongoing investigations and remediation activities.

In addition to soil and groundwater remediation, the environmental remediation program addresses hazards associated with asbestos and lead in city facilities. The Buildings and Fleet Division has developed management plans for asbestos abatement in city facilities. The plans allow the division to prioritize asbestos abatement projects according to hazard ratings. Buildings are rated on a scale of A to D, with A indicating the most important to address. Abatement activities are then scheduled accordingly.

STATUS OF THE ASSET/PROGRAM

The Buildings and Fleet Division is responsible for underground storage tanks located on city-owned property. The division's UST Management Program monitors 53 active underground storage tanks and 13 active above ground storage tanks.

Since 1988, the division has been involved in the removal, replacement, and upgrade of USTs, as well as monitoring and testing activities. As of December 31, 2001 139 USTs and 10 above-ground tanks (ASTs) have been removed, 47 new USTs and 13 new ASTs have been installed to meet current regulations. Tanks were removed for the following reasons: (1) improper abandonment; (2) site contamination; and (3) changes in department operations.

There are currently 27 city sites that have soil and/or groundwater contamination that require remediation. The contamination was found during removal and replacement of tanks. The division is responsible for conducting investigations to determine the extent of contamination, analyzing the potential for groundwater impacts, and meeting remediation needs for contaminated soil and groundwater.

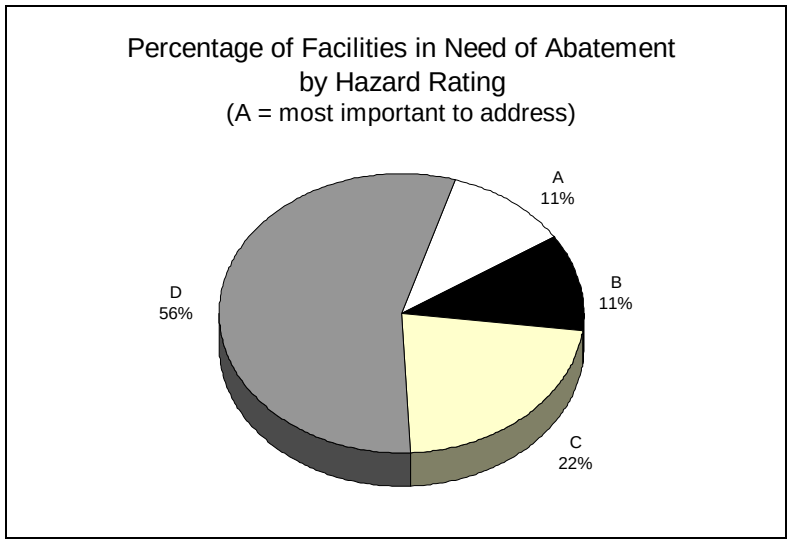
Where appropriate, the Wisconsin Department of Natural Resources will allow natural attenuation as a viable active remedial action rather than costly engineered systems. Natural attenuation uses naturally occurring physical, chemical and/or biological processes to restore soil and groundwater quality within a reasonable period of time.

As long as the source of contamination has been addressed, and there is no additional release to the groundwater, the DNR will allow natural attenuation as the remedy for the site. Monitoring wells are installed and quarterly ground water samples are analyzed for two or more years before closure is granted by the DNR.

The Buildings and Fleet Division is also responsible for asbestos and lead abatement in many city buildings. Most of the 220 buildings operated and maintained by Buildings and Fleet (not including Libraries, Health Centers, Fire and Police Department buildings) were constructed prior to 1973. As a result, the probability of many city buildings containing asbestos material is high. The age of many of these structures also contributes to a potential presence of lead in the paint or piping systems of the buildings.

The Buildings and Fleet Division has identified several city facilities that require asbestos abatement. Facilities include the Police Administration Building, Fourth District Station, the Downtown Complex, Health Department, and Library facilities. Asbestos management plans have prioritized abatement projects at these facilities according to hazard ratings. Figure 18 shows the percentage of buildings by hazard rating, with a rating of "A" indicating the highest priority facilities.

Figure 18



SIX-YEAR PLAN

Environmental Remediation Program: The six-year plan provides approximately $4.2 million for the environmental remediation program (see Table 22). Funding is provided for activities related to remediation of contaminated soil and groundwater, as well as asbestos and lead abatement.

Environment Projects Fund: The city's remaining landfill, the Hartung Quarry Landfill, is used to dispose of clean construction debris generated by city crews. The landfill is expected to reach capacity in 2004. Funding is provided in 2003 for testing and to prepare closure plans. In 2004, $1.2 million is provided to close and cap the landfill per Wisconsin Department of Natural Resources specifications.

Table 22

2002-2007 Capital Improvements Plan for Environmental Remediation Projects

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Environmental Remediation	$634,000	$784,000	$680,000	$688,000	$699,200	$712,000	$4,197,200
Environmental Projects Fund	0	50,000	1,150,000	0	0	0	1,200,000
TOTAL	$634,000	$834,000	$1,830,000	$688,000	$699,200	$712,000	$5,397,200

HEALTH AND SAFETY

The city's strategic plan includes goals of making Milwaukee safer, and improving its environmental health and the personal health of its residents. Health and safety are also critical components of two other strategic goals; a strong local economy, and stable, attractive neighborhoods.

Capital projects in the health and safety category make the Fire, Police, and Health Departments - the primary providers of public health and safety services - more effective at what they do. The projects described in this section provide them with more useful, efficient, aesthetic settings for many of their interactions with Milwaukee residents.

Funding for health and safety totals $70.8 million and accounts for 7.4% of total funding. Figure 19 shows projected funding levels for health and safety capital projects. As the remainder of this section explains, most of that funding improves facilities for the Fire, Police, and Health Departments.

Map 2 shows the location of all engine houses, police district stations, and public health centers.

Map 2

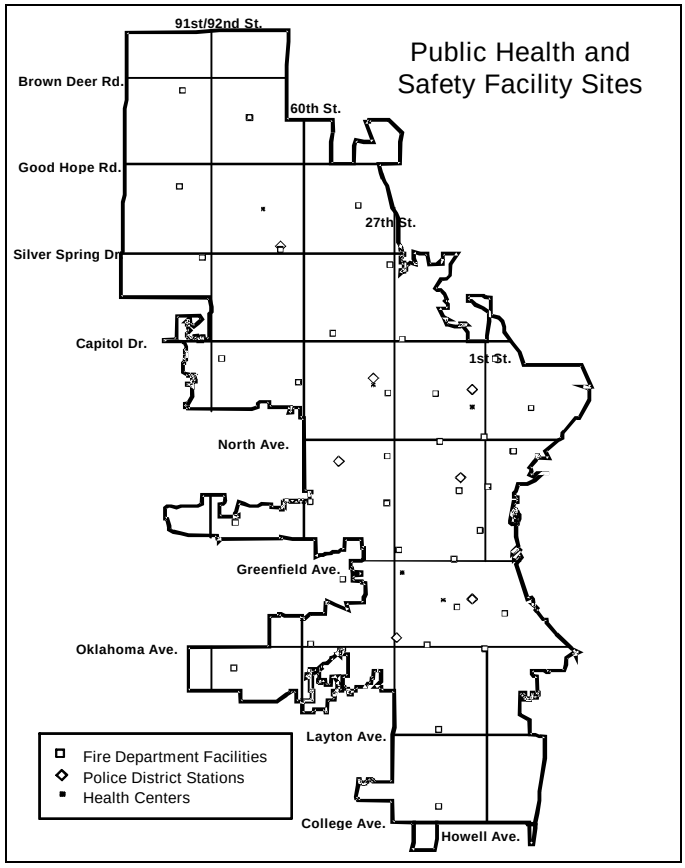
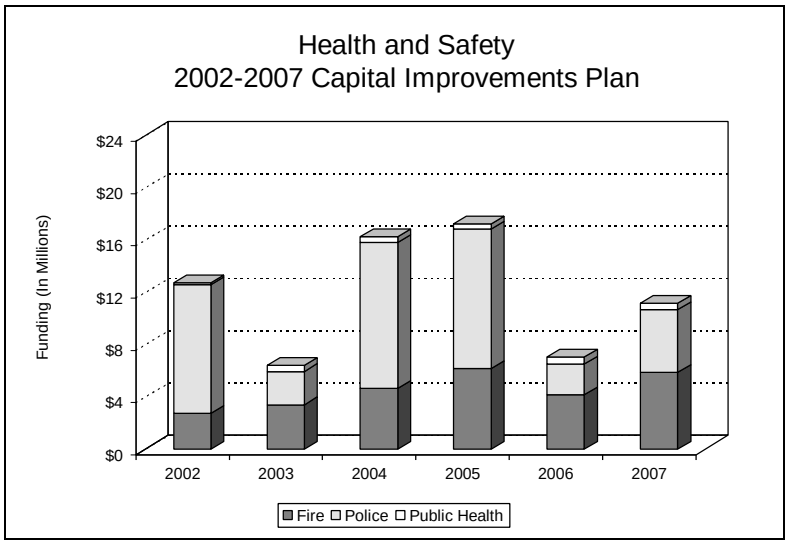


Figure 19



Fire

Funding for Fire Department capital improvement projects total $26.9 million over six years, or 38% of total health and safety funding. Across the six-year plan, funding for Fire Department projects ranges from $2.7 million in 2002 to $6.2 million in 2005.

Police

The six-year plan provides $41.4 million, or 58.4% total health and safety funding for Police Department capital improvement projects. Of this amount, $4 million is for the construction of the combined Data Communications and Third District Station. The six-year plan also includes approximately $15.8 million for the reno-

vation of the Police Administration Building and parking garage. Replacement of the department's radio system with a flexible, trunked system will be completed in 2005.

Health

Health Department capital improvement projects include maintenance of five public health centers and one remote clinic site. Funding for this purpose total approximately $2.5 million, or 3.6% of total health and safety funding in the 2002-2007 Capital Improvements Plan working with the Health Department, the Budget and Management Division will evaluate whether this level of funding is sufficient to cost effectively maintain the department's facilities. Additional resources may be necessary.

FIRE

LINK TO THE STRATEGIC PLAN

Milwaukee protects its residents from a variety of potential threats, enabling them to feel safe in their community as well as within their own homes. The specific link between the responsibilities and objectives of the Fire Department and the city's strategic plan is found in the city's strategic goal - to protect Milwaukee's citizens from crime, fires, and other hazards. The Fire Department contributes to this goal by protecting life and property through rapid professional response to threats of fire, medical or other emergencies. In order to be able to respond to 95% of calls received within five minutes, the department operates 36 firehouses strategically located throughout the city. In addition, the department operates a repair shop for the maintenance of equipment and a training facility for recruit and in-service training. The maintenance, renovation, and reconstruction of these facilities make up the department's capital plan.

ASSESSMENT CRITERIA

The Fire Department uses the following criteria to determine its capital needs: (1) age and condition of facilities; (2) current and future firefighting, emergency medical, and rescue service needs; and (3) accommodations for Fire Department personnel.

STATUS OF THE ASSET/PROGRAM

There are 36 firehouses located throughout the city, as well as construction and maintenance shops (see Map 2). Seventeen firehouses were constructed prior to 1960. The remaining firehouses were either constructed or remodeled after 1960. Most of the firehouses constructed prior to 1960 no longer meet the city's firefighting and medical response needs.

These facilities lack modern utilities and space for personnel. They also cannot accommodate current vehicle numbers and size. Personnel have found ways to manage around the lack of a modern facility; however, vehicle placement has created problems. Vehicles are located where they can fit in a station rather than being located where they may be needed. This hinders the department's efforts to meet its goal of responding within five minutes.

In addition, the Fire Department is also responsible for maintenance of its vehicular fleet. The Fire Repair Shop was constructed near the turn of the century. Since then, the types of vehicles being repaired have changed dramatically which has made the existing facility inadequate to meet the maintenance needs of the department.

Finally, funding has been provided over the last few years to improve the quality of the fire training facility. That facility is being improved to adequately meet the needs of the department.

SIX-YEAR PLAN

Table 23 shows the six-year capital improvement plan for the Fire Department. From 2002 to 2007, $26.9 million is provided for capital improvement projects, or 38% of total health and safety funding. Of this amount, approximately $15.1 million is for construction and renovation of eleven firehouses and the department's repair shop. Across the six-year plan, funding for Fire Department projects ranges from $2.7 million in 2002 to approximately $6.2 million in 2005.

Table 23

2002-2007 Capital Improvements Plan for the Fire Department

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Engine House Construction/Renovation							
Engine House #1 - Alterations	$0	$0	$1,180,000	$0	$0	$0	$1,180,000
Engine House #2 - Alterations	0	85,000	0	0	0	0	85,000
Engine House #3 - Alterations	980,000	0	0	0	0	0	980,000
Engine House #6 - Alterations	0	0	0	0	0	1,200,000	1,200,000
Engine House #7 - Alterations	0	0	0	0	1,200,000	0	1,200,000
Engine House #8 - Land Acquisition and New Building	0	0	100,000	1,700,000	0	0	1,800,000
Engine House #9 - Floor Repairs	0	50,000	0	0	0	0	50,000
Engine House #10 - Alterations	0	0	0	0	0	1,200,000	1,200,000
Engine House #12 - Alterations	0	0	0	0	0	1,200,000	1,200,000
Engine House #22 - Alterations	0	0	0	0	1,200,000	0	1,200,000
Engine House #34 - Alterations	0	0	0	1,200,000	0	0	1,200,000
Repair Shop Addition and Expansion - 118 W Virginia	0	0	1,600,000	1,000,000	0	0	2,600,000
Ventilation and Toilet Separation - Various Locations	100,000	100,000	100,000	100,000	100,000	100,000	600,000
Window Replacement - Various Locations	100,000	100,000	100,000	100,000	100,000	100,000	600,000
Subtotal	$1,180,000	$335,000	$3,080,000	$4,100,000	$2,600,000	$3,800,000	$15,095,000
Other Projects							
Major Capital Equipment	$1,550,000	$2,060,000	$1,550,000	$2,060,000	$1,550,000	$2,060,000	$10,830,000
Computer Aided Dispatch System	0	1,000,000	0	0	0	0	1,000,000
Subtotal	$1,550,000	$3,060,000	$1,550,000	$2,060,000	$1,550,000	$2,060,000	$11,830,000
TOTAL FIRE DEPARTMENT PROJECTS	$2,730,000	$3,395,000	$4,630,000	$6,160,000	$4,150,000	$5,860,000	$26,925,000

PROGRAM CHANGES AND INITIATIVES

Computer Aided Dispatch (CAD) System: In 2002, the Fire Department will implement their new CAD system. This system will replace the current CAD system, which has been operational since 1991. CAD is a unique system that employs communication hardware and software to aid and improve Fire Department dispatching operations. The CAD system will be installed in the Fire Department's portion of the new Data Communications Center/Third District Police Station. All 36 firehouses throughout the city will be linked to CAD.

Funding of approximately $4 million was provided over a two-year period (2000 and 2001) for the initial phase of this project. The 2002-2007 plan includes funding of $1 million in 2003 for the second phase of this project, placing Mobile Data Terminals (MDT) and Automatic Vehicle Locator (AVL) devices in emergency vehicles. This phase of the project will enhance the information reporting capabilities of the CAD system to personnel in the field and improve response times to emergency situations.

Fire Repair Shop Alterations: The 2002 budget includes $150,000 in the special projects section of the capital budget to study the renovation and/or expansion needs of the Fire Department's Repair Shop and other city repair facilities (Consolidated Municipal Garage-Fire Repair Facility Study). The Fire Department's Repair Shop was constructed in 1928, and reflects the needs of the department during the 1920's and 1930's. Since then, the types of vehicles being repaired have changed dramatically (in both size and technology) and the existing facility is inadequate to meet the maintenance needs of the department. In preparation for the results of this study, the capital plan includes $1.6 million in 2003 and $1 million in 2004 for the expansion of and upgrades to the Fire Department's Repair Shop or a consolidated citywide repair facility.

Facility Alterations: The six-year capital plan funds alterations at various firehouses. Alterations are planned for houses 1, 2, 3, 6, 7, 9, 10, 12, 22, and 34 in 2002 through 2007. The plan also includes a total of $1.8 million for the construction of a new firehouse for Engine No. 8.

Some of these firehouses were built in the early- to mid-1900's and lack sufficient space to house a modern engine company and paramedic unit. They also lack space for modern plumbing and air conditioning units, plus space for personnel and new equipment. These alteration and renovation projects account for a total of $13.9 million in capital funding through 2007.

Equipment Replacement Program. The 2002-2007 capital plan includes $10.8 million to continue the

equipment replacement program initiated in the 2001 budget. The 2002 budget shifts acquisition of replacement fire equipment from the operating budget to the capital budget because fire equipment, including pumper trucks, ladder trucks, and paramedic ambulances, are long lived, high value assets. The equipment replacement schedule calls for the purchase of three pumper engines annually. In alternating years, either one or two ladder trucks will be purchased. These fire vehicles have anticipated service lives of twelve years with an additional five years in reserve status. Ambulances are replaced every six to seven years due to extraordinarily heavy usage. This replacement cycle is based on national standards and is essential to maintaining short response times to emergency situations.

POLICE

LINK TO THE STRATEGIC PLAN

The Milwaukee Police Department (MPD) protects the safety of Milwaukee's residents and visitors, and enhances the quality of life in the city. Generally, the MPD accomplishes this through prevention of crime, apprehension of criminals, and by preservation of public peace and order. Also, the department assists in the safe movement of pedestrians and vehicles on city streets, acts on citizen complaints, provides juvenile services, and investigates persons applying for various city licenses.

The 2002-2007 Capital Improvements Plan for health and safety includes Police Department capital improvement projects. The capital facilities of the Police Department are the joint responsibility of the DPW-Operations Division, Buildings and Fleet Section and the Police Department. The six-year capital improvements plan concentrates primarily on improving the efficiency and expanding the functionality of the department's facilities.

The Police Department accomplishes its responsibilities through three primary objectives: (1) responding to the Commission of Crimes by successfully detecting criminal activity, identifying, apprehending, and assisting in the prosecution of criminal offenders; (2) preventing, deterring, and suppressing crime in order to make Milwaukee the safest city of its size in the Nation; and (3) providing services in a manner acceptable to a diverse community with varying needs and demands for police services.

The specific link between the responsibilities and objectives of the MPD and the city's strategic plan is found in the city's strategic goal to protect Milwaukee's citizens from crime, fires, and other hazards. Furthermore, the city's strategic plan specifically identifies making city neighborhoods safer as an objective under this goal. By working with community-based organizations, MPD also contributes to another city strategic goal, to promote a sense of community among neighborhood residents and foster cooperation among city neighborhoods.

ASSESSMENT CRITERIA

The MPD uses the following criteria to determine its capital needs: (1) age and condition of facilities; and (2) current and future Police Department personnel, technological, and communication needs.

There are seven district police stations located throughout the city (see Map 2). The oldest of these, the Second District Station, was built in 1953, while the newest station, Sixth District Station, was constructed in 1987. In addition to the district stations, there is a Police Administration Building (PAB). This facility, constructed in 1971, also houses the First District Station and the Municipal Court. The Safety Academy, constructed in 1965, is the training facility for both the Police and Fire Departments. In 1998, the department acquired a building to be used for evidence and property storage. The renovation of this facility was completed in January, 2001.

STATUS OF ASSET/PROGRAM

Since construction of the district stations, Administration Building, and the Safety Academy, several changes have occurred that affect the MPD and its capital needs: (1) an increase in the number of Police Department personnel; (2) department policy and organizational changes; (3) legislated mandates; and (4) more sophisticated communication and electronic equipment. These four factors all contribute to the analysis of MPD capital needs.

Most of the capital appropriations for the department involve remodeling of facilities due to functional obsolescence (see Table 24). However, some appropriations, such as evidence storage, are needed because of mandates that require the department to retain evidence for a longer period. Other appropriations for a data/communications facility are driven by the evolution of technology into a larger, more significant component of police service delivery.

SIX-YEAR PLAN

The 2002-2007 Capital Improvements Plan includes $41.4 million for a number of projects that are important to the effective and efficient provision of Police services. These projects include:

Data and Communications Center/Third District Station

Police Administration Building Remodeling Project

District Station Remodeling

ADA Compliance

Data and Communications Center/Third District Station: The 2002-2007 plan provides $4 million to complete construction of the Data Services and Communication Center/Third District Station project. The new facility, located in the vicinity of 49th Street and Lisbon Avenue, houses the Third District Station on the first floor and the Data and Communications Center on the second and third floors. It will also house the Milwaukee Fire Department's Computer Aided Dispatch (CAD) System. An attached adjacent garage and parking ramp will house police vehicles and provide parking for employees. The garage is needed to prevent the facility from having an adverse effect on parking in the Lisbon and North Avenues area. The facility will be a landmark for the area and is expected to have a positive impact on the businesses and residents of the surrounding neighborhood.

Police Administration Building (PAB) Remodeling Project: The six-year plan includes $15.8 million for renovation of the Police Administration Building and garage. Projects include office and entrance remodeling, reconstruction of the garage floor, upgrading of the HVAC system, elevator replacement, and asbestos abatement.

District Station Remodeling: The 2002-2007 plan includes $4,000,000 for district station renovations in 2002 and 2005. A needs assessment was funded in 2001 for the Second District Station in anticipation of the $2,000,000 renovation funded in 2002. Needs assessments totaling $30,000 are funded in 2004 and 2007 for district station renovations planned to begin in 2005 and 2008.

ADA Compliance: The six-year capital plan includes a total of $119,315 to comply with the Americans with Disabilities Act (ADA). This funding provides for the construction of ramps, installation of power door openers, modification of service counters, and development of appropriate signs at all Police buildings.

Trunked Radio Communications: Nearly $15 million will be appropriated for trunked radio communications in 2004 and 2005. A $300,000 study to determine citywide requirements was funded in 2001.

Radio trunking utilizes modern technology to provide the most efficient use of available radio channels or frequencies. Through radio trunking several users are able to communicate across a given frequency at the same time. This will allow Police and Fire personnel to more quickly communicate with one another. The Federal Communications Commission will reallocate radio frequencies among different classes of users beginning in 2005, making this modernization imperative.

Table 24

2002-2007 Capital Improvements Plan for the Police Department

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
ADA Compliance Program - Various Department Facilities	$18,914	$19,293	$19,679	$20,072	$20,474	$20,883	$119,315
Data Services and Communication Center Construction	4,000,000	0	0	0	0	0	4,000,000
Interim Radio Replacements (Pending Trunked Radio)	244,000	71,000	71,000	0	0	0	386,000
Renovate Police Administration Building	2,100,000	2,152,500	2,206,000	2,261,000	2,318,000	4,752,000	15,789,500
Trunked Radio Communications	0	0	8,725,000	6,225,000	0	0	14,950,000
District Needs Assessment	0	0	15,000	0	0	15,000	30,000
District Station Renovation	2,000,000	0	0	2,000,000	0	0	4,000,000
Automated Fingerprint Identification System	1,500,000	0	0	0	0	0	1,500,000
Additional Parking District Stations	0	150,000	150,000	150,000	0	0	450,000
Safety Academy Parking Lot Expansion	0	150,000	0	0	0	0	150,000
TOTAL PROJECTS	$9,862,914	$2,542,793	$11,186,679	$10,656,072	$2,338,474	$4,787,883	$41,374,815

PROGRAM CHANGES AND INITIATIVES

Data Communications Center/Police Third District Station: Construction began in late 1999 on the combined Data Communications Center and Third District Station on Milwaukee's westside. The 2002 capital improvements budget includes $4 million for this project. The project has an expected budget of approximately $50 million. The Third District Station portion of the project opened in 2001. In 2002, $4 million is provided to complete the Data Communications aspects of the project.

HEALTH

LINK TO THE STRATEGIC PLAN

The Milwaukee Health Department supports the strategic goal of improving the environmental health of Milwaukee and the personal health of its citizens. The city's public health role concentrates on protecting residents from food-borne illness and other environmental hazards, reducing the incidence of communicable disease, and coordinating efforts to ensure that mothers and children have appropriate access to health care services. The Health Department performs these functions in six facilities throughout the city. This enables city residents to have easy access to available services.

ASSESSMENT CRITERIA

With the support of the Department of Public Works-Operations Division, Buildings and Fleet Section, the Health Department uses the following criteria to determine their capital needs: (1) age and condition of facilities; (2) usage patterns of the facilities, including present and future public health needs of the community; and (3) safety needs of clients, the general public, and department personnel. However, the Health Department has attempted to set target dates for when some repairs should take place. For example, the department's goal is to tuckpoint each building once every 10 years, replace carpeting every 10 to 15 years, and replace hardwood floors every 30 years.

STATUS OF THE ASSET/PROGRAM

The Health Department operates and maintains five health centers and one remote clinic site located throughout the city (see Map 2). In addition to their primary health service provision function, these facilities are also used as polling places and locations for educational programs and community meetings.

The Isaac Coggs Community Health Center, constructed in 1915, is leased from Milwaukee Public Schools. Under the conditions of the lease, the city is responsible for the capital needs of the building. This center is the largest Health Department facility at 69,799 square feet. It is one of two locations for the department's Women, Infants, and Children (WIC) Program and also for the Municipal Health Services (MHSP) Program.

Johnston Health Center, located on the city's near south side, is 39,573 square feet and was constructed in 1929. The health center provides some direct clinic services and serves as both a WIC and a MHSP site.

Keenan Health Center, on the city's north side, was constructed in 1931 and is 21,402 square feet. This health center also serves as a WIC site.

Northwest Health Center is the city's newest health center. It was constructed in 1968 and occupies 30,479 square feet. The garage to the north of the building is 19,547 square feet. This health center also houses one district of the Consumer Protection Division, which performs food inspections.

Southside Health Center was constructed in 1912 and occupies 29,879 square feet. In addition to being the location of the Tuberculosis Control Clinic, the health center also houses eight Food Inspectors and one Food Inspector Supervisor.

The Health Department's Administration, Epidemiology and Planning, Laboratory, Occupational and Employee Health, Environmental Health, and Vital Statistics Sections are located in the Zeidler Municipal Building. Portions of the family and community health services functions are also located there. The Zeidler Municipal Building was constructed in 1960.

SIX-YEAR PLAN

Table 25 shows the six-year capital improvements plan for the Health Department. The plan emphasizes regular maintenance, repair, and replacement. The plan provides approximately $2.5 million for the projects summarized below.

Mechanical Systems Maintenance Program: The 2002-2007 plan provides $479,900 for mechanical systems maintenance at various health centers. This program focuses on the mechanical infrastructure of the six buildings that the Health Department maintains. Systems covered under this plan include boilers, HVAC, plumbing, and electrical. This program ensures that all of the mechanical systems are efficient and in safe working condition.

The 2002 budget does not provide funding for the Mechanical Systems Maintenance Program.

The 2003 plan provides $162,000 for a boiler replacement project at Northwest Health Center. It also provides $14,400 for re-tubing boiler No. 1 at Coggs Health Center. This will improve the efficiency of the boiler. The other Coggs boiler was retubed in 1985. Re-tubing the boiler will even the wear and improve overall efficiency of the system.

The 2004 plan provides $25,000 for unanticipated mechanical systems projects.

The 2005 plan provides $32,500 for adding baseboard heaters to the second floor of Northwest Health Center. In addition, $5,000 is provided to replace the air compressor, dryer, and related controls at Northwest Health Center. The boiler at Southside Health Center will also be replaced for $151,000. The remaining $20,000 is unallocated funding.

The 2006 plan provides $20,000 of unallocated funding for this program. Similarly, the 2007 plan provides $50,000 in unallocated funding.

Exterior Building Maintenance Program: The Health Department's Exterior Maintenance Program is designed to maintain and improve external components and areas outside of the health centers such as parking lots, windows, roofs, and paint. In the six-year plan, the department devotes $1.1 million to exterior maintenance.

The 2002 budget allocates $118,900 in funding to install new exterior passage and overhead doors and replace energy inefficient windows at Northwest Health Center. An additional $6,000 is provided to re-grade the blacktop lot on the west side of the building. The remaining $6,000 is currently unallocated.

The 2003 plan provides $120,000 to replace the roof on the detached garage at Northwest Health Center. Another $47,300 is provided to replace the roof at Johnston Health Center. The roof was last replaced in 1982 with flat asphalt and is now cracking and may begin to leak into the building. Funding of $20,700 is also provided for lighted exterior signage at Northwest, Keenan, and Southside Health Centers. An additional $10,000 is provided for unanticipated costs.

The 2004 plan provides $92,800 for projects at Northwest Health Center. These funds will be used to replace the roof on the main building and to tuckpoint the building's exterior. Funding of $22,000 is provided to install a commercial overhead canopy at Keenan Health Center. Another $25,000 is provided to replace windows at the Coggs Health Center.

The 2005 plan allocates $36,000 for replacement of the exterior overhead garage doors and install an overhead canopy at Northwest Health Center. The remaining $50,000 is unallocated.

The 2006 plan includes $500,000 to replace the windows at Coggs Health Center. An additional $20,000 is unallocated funding.

The 2007 plan sets aside $50,000 for unanticipated exterior maintenance costs.

Interior Maintenance Program: The Health Department has allocated $934,400 for interior maintenance during the 2002-2007 capital plan. The Interior Maintenance Program assures that interior surfaces and fixtures, such as flooring and lighting, are safe and efficient.

The 2002 budget does not provide funding for the Interior Maintenance Program.

The 2003 plan includes $112,000 in funding for a fire alarm system at Northwest, Keenan, and Southside Health Centers.

The 2004 plan provides $105,600 to install a new drop ceiling and to replace the light fixtures at the Southside Health Center. The original ceiling tiles have been taken down and repaired numerous times over the years, causing them to crack. In addition, $82,500 is allocated for the replacement of all interior doors, frames, and lock sets at the Southside Health Center. The doors, frames, and lock sets are the original to the center (c. 1912) and are becoming difficult and costly to repair. The workstations at Keenan Health Center will also be remodeled in 2004 at an estimated cost of $44,000. Unallocated funding for as yet unidentified projects totals $25,000.

The 2005 plan provides $11,000 to replace the linoleum flooring in the third floor hallway at the Johnston Health Center. The Keenan Health Center auditorium ceiling and lighting will be replaced for $29,000. The plan provides $39,000 to resurface hardwood floors at the Coggs Health Center. Unallocated funding totals $50,000.

In the 2006 plan, the Health Department will replace the carpet in the reception area at the Coggs Health Center for $7,200. An additional $20,000 of funds are unallocated.

The 2007 plan provides $89,100 to replace flooring throughout the Northwest Health Center. The Johnston Health Center front (south) elevator is planned to be replaced for about $300,000. An additional $20,000 is provided for unanticipated costs.

Table 25

2002-2007 Capital Improvements Plan for the Health Department

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Mechanical Systems Maintenance Program - Various Health Department Buildings	$0	$176,400	$25,000	$208,500	$20,000	$50,000	$479,900
Exterior Building Maintenance Program - Various Health Department Buildings	130,900	198,000	139,800	86,000	520,000	50,000	1,124,700
Interior Maintenance Program - Various Health Department Buildings	0	112,000	257,100	129,000	27,200	409,100	934,400
TOTAL HEALTH DEPARTMENT PROJECTS	$130,900	$486,400	$421,900	$423,500	$567,200	$509,100	$2,539,000

ECONOMIC DEVELOPMENT

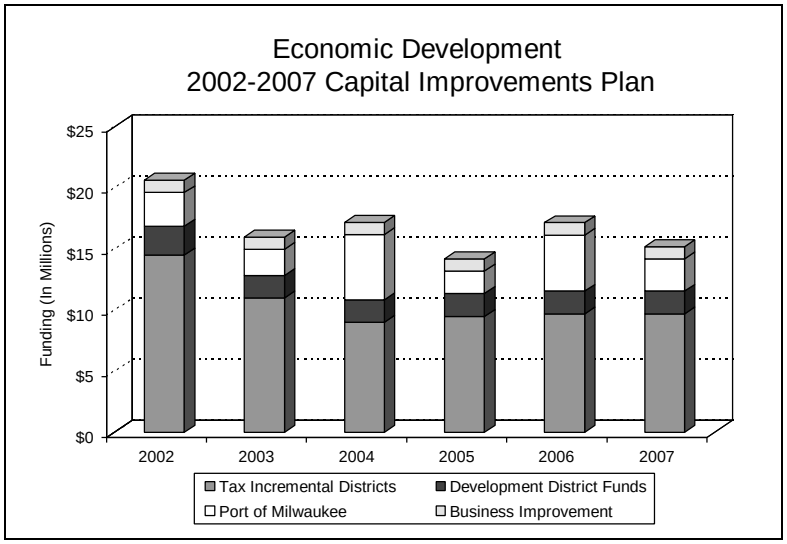
Market forces that are beyond the direct control of public officials are the most important determinants of economic growth and activity in Milwaukee. However, the city does play a key role as a facilitator in creating the proper environment, urban design, and business climate within which the private sector can innovate, grow, and prosper. Economic development capital spending should be used to increase the overall attractiveness of the city for private sector investment. For example, since 1976, city capital spending in active tax incremental districts has increased property values by approximately $357 million in real terms.

Economic development capital improvement projects consist of tax incremental districts, business improvement districts, development district funds, and targeted business loans. The six-year plan includes approximately $100 million, or 10.5%, of total funding for economic development projects. Figure 20 shows projected funding levels in the 2002-2007 Capital Improvements Plan.

Tax Incremental Districts (TIDs)

The capital budget appropriates general obligation borrowing to finance public improvements and loans in tax incremental districts. The resulting developments are anticipated to increase property value. Debt service and interest are subsequently paid back with the incremental taxes generated through the district's increased property values.

Figure 20



Of the total amount of funding for economic development 2002–2007 capital projects, $63.4 million, or 63.2% is for TIDs.

TID debt is generally considered self-supporting since revenues will eventually pay back expenditures. Each year, TID borrowing authority is provided to finance both new and existing districts. In 2002, $14.5 million is provided for TIDs to facilitate a number of developments, including infrastructure for redevelopment after removal of the Park East Freeway. Plan funding from 2003 to 2007 ranges from $9 million to $11 million.

Business Improvement Districts (BIDs)

Business improvement capital funding consists of the Business Improvement District Loan Fund and Neighborhood Commercial District Street Improvement Fund. Business improvement funding totals $6 million, or 6%, of economic development capital projects over the six-year plan.

Business improvement funding totaling $1 million per year is provided in the six-year plan. There are approximately one to two BID capital improvement projects and one to two Neighborhood Commercial District Street Improvement projects funded each year.

Development District Funds

Development funds include the Advance Planning Fund and the Development Fund Account. Funding totals $11.6 million and accounts for 11.5% of economic development funding in the six-year plan. Funding for this purpose will be $2.35 million in 2002 and $1.85 million in each of the plan's remaining years.

Port

In the six-year plan, funding provided to the Port of Milwaukee totals $19.3 million or 19.3% of economic development capital projects over the six-year plan. This includes $11.8 million from state grants to rehabilitate and improve Port facilities. In the six-year capital plan, funding for the Port ranges from $1.9 million to $5.3 million.

TAX INCREMENTAL DISTRICTS

LINK TO STRATEGIC PLAN

Economic growth in Milwaukee tends to reflect trends in the U.S. economy. When the national economy booms, Milwaukee usually prospers and vice versa. City government does not have the power to significantly affect these broader market forces. However, local public officials can strive to create a strong business environment in which the private sector can innovate, grow, and prosper.

Tax incremental districts have become an increasingly important tool in meeting the city's strategic goal of strengthening the local economy. The capital budget appropriates general obligation borrowing to finance TIDs, which is subsequently paid back with the incremental taxes generated through the district's development. TID partnerships with private developers have taken many forms. Public participation has not been limited to project infrastructure, such as streetscaping and public improvements but also includes loans to developers.

Private property owners within the district pay property taxes on the basis of the current value of their property. However, the city's general fund, the county, the school district, and other taxing jurisdictions receive only the taxes levied on the initial base value of the district. The remaining tax dollars (tax increments) are set aside in a special TID fund used to pay TID project costs. The TID ends when all project costs have been retired by tax increments or the TID reaches its statutory limit of either 23 or 27 years, depending on the date of its establishment.

The Department of City Development (DCD) uses TIDs to assist in improving job opportunities for city residents and to increase the city's commercial and industrial tax base. Active TIDs have led to growth in real property values of approximately $357 million.

This economic development tool has two basic advantages in meeting the city's strategic goal of strengthening the local economy. First, TIDs enable the city to share development costs with coterminous taxing jurisdictions that also benefit from the added property values of the proposed development. Second, they allow the city to respond quickly to development proposals since approval can occur at any point in the year rather than being constrained by budget timing.

ASSESSMENT CRITERIA

State statutes require specific criteria for development of a tax incremental district. Under current law, city and village governments may create a tax incremental district only if 50% or more of the proposed district's area is blighted, in need of rehabilitation or conservation work, or suitable for industrial sites.

In addition to the above criteria, state statutes require that the decision to create a TID consider whether: (1) the development would occur without tax increment financing; (2) the economic benefits of the project compensate for the cost of improvement; and (3) whether the benefits outweigh the tax increments required to be paid by overlying taxing districts.

In Milwaukee, creation of a TID generally begins when a private development proposal is presented to the city. Staff of the Department of City Development then evaluates whether the project is consistent with the city's development goals and assesses whether the use of a TID is feasible.

STATUS OF THE ASSET/PROGRAM

Currently there are 37 active TIDs (refer to Table 26). Table 26 also includes the year in which the district was created, property value of the district when created adjusted for inflation (inflation esti-

mated by CPI-U), and property values in 2001. The column, which shows the percent increase in property value in real terms, is one indication of the relative success of the district. More detailed descriptions of each TID are available in the Department of City Development's Annual TID Report. Map 3 (pages 72-73) shows the boundaries of active TIDs.

Several districts have had large real increases in value since their creation. Theater District (TID #5) is the most dramatic example with an almost 5800% increase in real terms since its 1985 establishment, when a number of parcels were tax exempt. Other high performers include Park East II (TID #29), Calumet Woods (TID #25), Park East (TID #10), and New Covenant (TID #18). Several recent projects such as Library Hill (TID #30) and 27th and Wisconsin Avenue (TID #35) have experienced delays in development and have not yet realized significant real increases in property values.

Table 26

Summary of Active Tax Incremental Districts

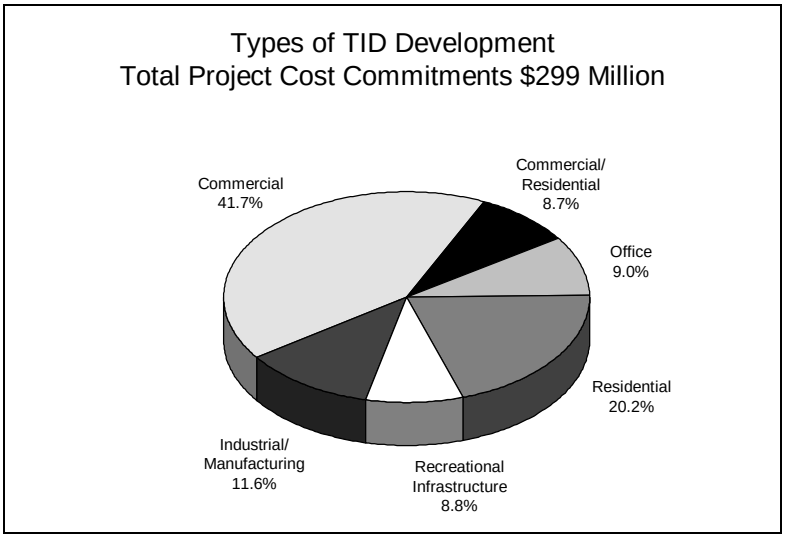
TID #	Project Name	Year Created	Property Value When Created in 2001 Dollars	Property Value as of 2001	Percent Real Property Value Increase
1	Menomonee Valley	1976	$108,470,197	$65,009,800	-40%
5	Theater District	1985	1,442,032	84,748,700	5777%
10	Park East	1988	2,212,436	39,803,600	1699%
11	Historic Third Ward	1988	44,333,435	76,747,500	73%
14	Historic King Place	1990	428,044	1,913,500	347%
15	Steeltech	1991	795,380	3,739,000	370%
17	Curry-Pierce	1992	841,282	2,547,500	203%
18	New Covenant	1992	152,626	2,289,600	1,400%
19	Campus Neighborhood	1992	30,996,867	47,104,200	52%
20	Florida Yards	1993	3,726,421	5,536,800	49%
21	North Avenue Jobs Bank	1993	2,106,313	4,666,100	122%
22	Beer-line "B"	1993	9,561,125	26,727,800	180%
23	City Hall Square	1994	5,829,800	18,952,000	225%
24	Riverworks Industrial Center	1994	7,245,873	17,973,500	148%
25	Calumet Woods	1994	443,439	9,780,600	2106%
26	Tannery	1995	7,850,571	24,147,000	208%
27	Clarke Square Mega Mart	1995	1,950,291	12,694,100	551%
28	City Homes	1995	907,169	7,117,200	685%
29	Park East II	1995	1,039,151	41,052,700	3851%
30	Library Hill	1996	15,957,604	19,784,600	24%
31	Milwaukee Street	1996	16,782,371	23,151,300	38%
32	King Drive and Walnut	1996	2,892,131	6,260,600	116%
33	United Health	1997	7,582,467	19,583,700	158%
34	Third Ward Riverwalk	1997	6,418,425	22,718,300	254%
35	27th and Wisconsin	1998	2,446,899	1,499,800	-39%
36	Granville Park	1998	1,767,879	24,204,100	1,269%
37	Grand Avenue	1998	65,868,081	84,218,600	28%
38	S 5th St and W Grange	2000	218	200	-8%
39	City Center Hilton	2000	26,059,418	37,892,200	45%
40	West North Ave.	2000	4,075,982	5,344,300	31%
41	Harley Riverwalk	2000	12,280,886	12,485,600	2%
42	Capital Court	2000	7,398,019	6,774,590	-8%
43	21st and North Retail Center	2001	503,050	503,050	0%
44	Locust/ Walnut Residential	2001	33,441,810	33,441,810	0%
45	Wilson Commons	2001	1,450,000	1,450,000	0%
46	New Arcade Project	2001	13,996,910	13,996,910	0%
48	Park East Freeway Removal	2001	*	*	*
	Totals		**$449,254,602**	**$805,860,860**	**79%**

*Information is currently unavailable

While tax increment financing in Wisconsin has typically been used for establishing industrial parks, the City of Milwaukee has used tax increment financing for a variety of development initiatives. In contrast to other cities in Wisconsin, industrial/manufacturing projects have made up a relatively small proportion of TID costs. Projects like Florida Yards (TID #20), Riverworks Industrial Park Project (TID # 24), Central City Industrial Job Bank Project (TID #21), and Granville Park Project (TID #36) make up only 11.6%, or approximately $34.7 million of TID costs.

A much larger proportion of projects costs are dedicated to commercial, residential, or joint commercial and residential projects. As illustrated in Figure 21, approximately 41.7%, or $124.5 million of project cost commitments made in TID project plans approved by the Common Council supported commercial projects such as Grand Avenue Mall (TID #4 and TID #37), Theater District (TID #5), Mega Mart (TID #27), and King Drive (TID #32). Commitments for residential housing projects including Beerline "B" (TID #22), City Hall Square (TID #23), Library Hill (TID #30), City Homes (TID #28), and New Covenant (TID #18) make up 20.2% or $60.3

Figure 21



million of all TID cost commitments. Projects with both residential and commercial components such as the Historic Third Ward (TID #11), Campus Neighborhood (TID #19), 27th and Wisconsin Avenue (TID #35) and Park East (TID #10) make up 8.7% of TID cost commitments.

Office projects including Schlitz Park (TID #8 and #13), United Health (TID #33), Curry-Pierce (TID #17), and the Tannery (TID #26) make up 9% of all TID commitments.

Finally, Milwaukee has been fairly unique in using TIDs to finance recreational infrastructure. In two cases, development of the lakefront Summerfest grounds (TID #3) and the extension of the Riverwalk to the Third Ward (TID #34), the City of Milwaukee has used TIDs to support recreational land development.

In the past several years, the city has increasingly relied on TIDs to carry out development initiatives. Over 86% of the city's TIDs have been created since 1990. An average of three new TIDs per year have been established since 1992.

Heightened TID activity continued into 2001, with preparations for further residential development in Beerline "B" (TID #22), demolition and site preparation at the former Capital Court Shopping Mall (TID #42), building improvements at the Grand Avenue Mall, and site acquisition at 27th and Wisconsin (TID #35).

SIX-YEAR PLAN

Table 27 shows the 2002-2007 Capital Improvements Plan for tax incremental districts. In the 2002 budget, $14.5 million is provided for TIDs. From 2003 to 2007 funding ranges from $9 million to $11 million. The city will continue to evaluate future funding needs of TID projects, which may or may not require changes in overall funding in the future.

Table 27

2002-2007 Capital Improvements Plan for Tax Incremental Districts

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Tax Incremental Districts	$14,500,000	$11,000,000	$9,000,000	$9,500,000	$9,700,000	$9,700,000	$63,400,000
TOTAL	$14,500,000	$11,000,000	$9,000,000	$9,500,000	$9,700,000	$9,700,000	$63,400,000

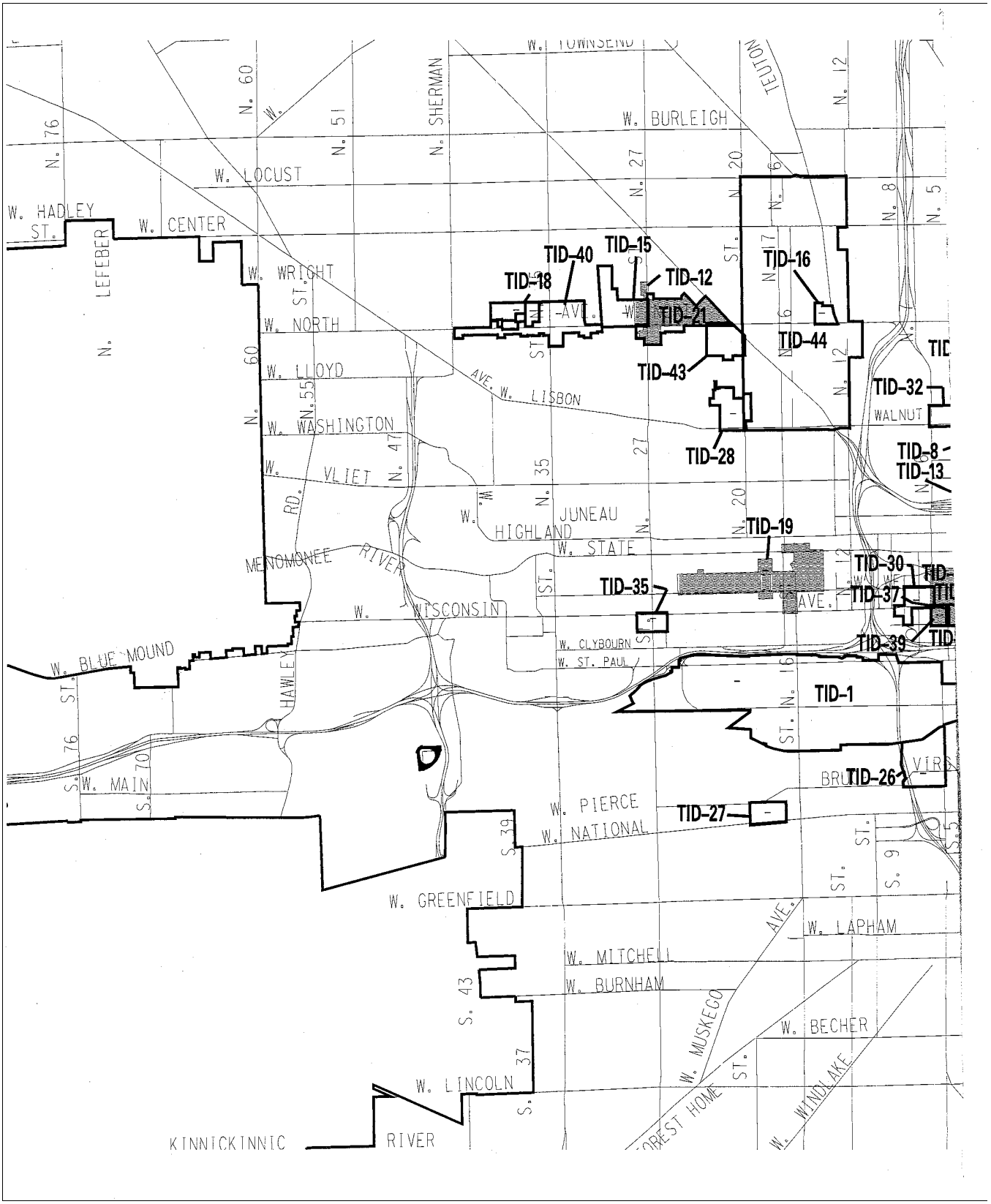
PROGRAM CHANGES AND INITIATIVES

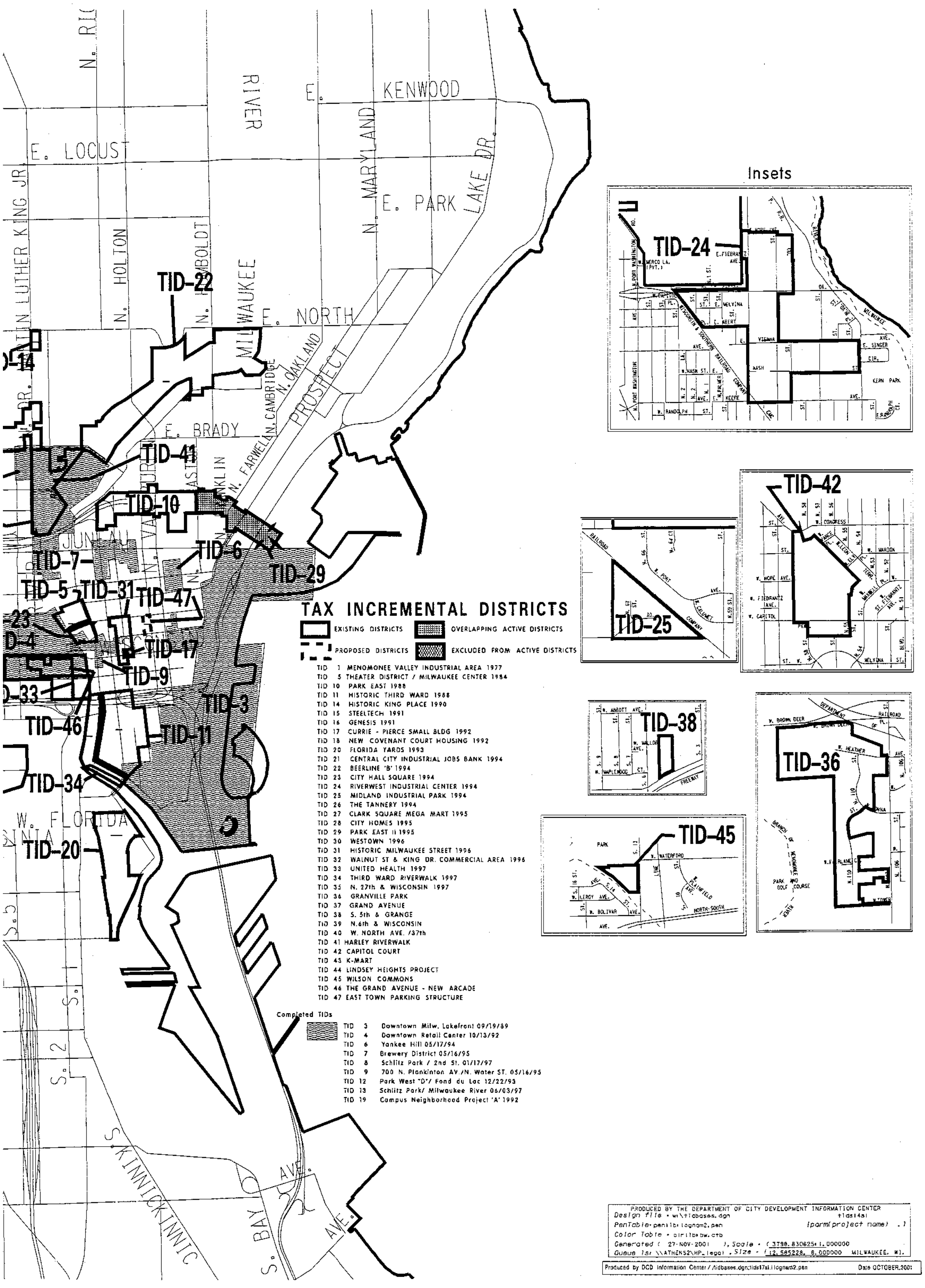
In 2002, TID borrowing authority totals $14.5 million. The majority of these funds (over $10 million) will be used for public improvements at Park East Freeway Removal (TID #48), Capitol Court (TID #42), and 35th and North Avenue (TID #40). Removal of the Park East Freeway and redevelopment of the 23-acres is projected to increase the downtown tax base at least $100 million over the next several years. Transforming the former Capitol Court Shopping Mall into a neighborhood town center with a main street mixed retail area is expected to revitalize the surrounding area.

A new bridge will be constructed in Beerline "B" (TID #22). Approximately $2.7 million will be used for site acquisition for the 21st and North Avenue Retail Center (TID #43). Industrial site preparation and clean-up expenses for the Riverworks Industrial Center (TID #24) will use approximately $1.3 million.

Several other new projects are being developed for the plan years 2003 to 2007. They include office building related improvements, further commercial and residential projects, and industrial projects.

Map 3


TID-40
TID-15
TID-18
TID-12
TID-16
TID-21
TID-44
TID-43
TID-32
TID-28
TID-8
TID-13
TID-19
TID-30
TID-35
TID-37
TID-39
TID-1
TID-26
TID-27
W. BURLEIGH
W. LOCUST
W. HADLEY ST.
W. CENTER
W. WRIGHT
W. NORTH
W. LLOYD
W. WASHINGTON
W. VLIET
W. HIGHLAND
W. STATE
W. WISCONSIN
W. CLYBOURN
W. ST. PAUL
W. BLUE MOUND
W. MAIN
W. PIERCE
W. NATIONAL
W. GREENFIELD
W. LAPHAM
W. MITCHELL
W. BURNHAM
W. BECHER
W. LINCOLN
W. MUSKEGO
W. WINDLAKE
AVE. W. LISBON
MENOMONEE RIVER
KINNICKINNIC RIVER
N. SHERMAN
TEUTON
N. LEFEBER
HAWLEY
WALNUT


TAX INCREMENTAL DISTRICTS
EXISTING DISTRICTS
OVERLAPPING ACTIVE DISTRICTS
PROPOSED DISTRICTS
EXCLUDED FROM ACTIVE DISTRICTS
TID 1 MENOMONEE VALLEY INDUSTRIAL AREA 1977
TID 5 THEATER DISTRICT / MILWAUKEE CENTER 1984
TID 10 PARK EAST 1988
TID 11 HISTORIC THIRD WARD 1988
TID 14 HISTORIC KING PLACE 1990
TID 15 STEELTECH 1991
TID 16 GENESIS 1991
TID 17 CURRIE - PIERCE SMALL BLDG 1992
TID 18 NEW COVENANT COURT HOUSING 1992
TID 20 FLORIDA YARDS 1993
TID 21 CENTRAL CITY INDUSTRIAL JOBS BANK 1994
TID 22 BEERLINE 'B' 1994
TID 23 CITY HALL SQUARE 1994
TID 24 RIVERWEST INDUSTRIAL CENTER 1994
TID 25 MIDLAND INDUSTRIAL PARK 1994
TID 26 THE TANNERY 1994
TID 27 CLARK SQUARE MEGA MART 1995
TID 28 CITY HOMES 1995
TID 29 PARK EAST II 1995
TID 30 WESTOWN 1996
TID 31 HISTORIC MILWAUKEE STREET 1996
TID 32 WALNUT ST & KING DR. COMMERCIAL AREA 1996
TID 33 UNITED HEALTH 1997
TID 34 THIRD WARD RIVERWALK 1997
TID 35 N. 27th & WISCONSIN 1997
TID 36 GRANVILLE PARK
TID 37 GRAND AVENUE
TID 38 S. 5th & GRANGE
TID 39 N.6th & WISCONSIN
TID 40 W. NORTH AVE. /37th
TID 41 HARLEY RIVERWALK
TID 42 CAPITOL COURT
TID 43 K-MART
TID 44 LINDSEY HEIGHTS PROJECT
TID 45 WILSON COMMONS
TID 46 THE GRAND AVENUE - NEW ARCADE
TID 47 EAST TOWN PARKING STRUCTURE
Completed TIDs
TID 3 Downtown Milw. Lakefront 09/19/89
TID 4 Downtown Retail Center 10/13/92
TID 6 Yankee Hill 05/17/94
TID 7 Brewery District 05/16/95
TID 8 Schlitz Park / 2nd St. 01/17/97
TID 9 700 N. Plankinton AV./N. Water ST. 05/16/95
TID 12 Park West "D"/ Fond du Lac 12/22/93
TID 13 Schlitz Park/ Milwaukee River 06/03/97
TID 19 Campus Neighborhood Project 'A' 1992
Insets
TID-24
TID-42
TID-25
TID-38
TID-36
TID-45
TID-22
TID-41
TID-10
TID-6
TID-29
TID-7
TID-5
TID-31
TID-47
TID-17
TID-9
TID-3
TID-11
TID-46
TID-34
TID-20
E. KENWOOD
E. LOCUST
E. PARK
E. NORTH
E. BRADY
N. MARYLAND
N. HOLTON
N. MILWAUKEE
N. OAKLAND
PROSPECT
LAKE DR.
RIVER
W. FLORIDA
S. KINNICKINNIC
S. BAY
AVE.
PRODUCED BY THE DEPARTMENT OF CITY DEVELOPMENT INFORMATION CENTER
Design file = w:\ticbases.dgn
PenTable=penlib:lognam2.pen
Color Table = cirlib:bw.ctb
Generated (27-NOV-2001), Scale = (3798.830625:1.000000
Queue is: \\ATHENS2\HP_legal . Size = (12.585228, 6.000000 MILWAUKEE, WI.
Produced by DCD Information Center / /tidbases.dgn;tids47al.i lognam2.pen
Date OCTOBER,2001

BUSINESS IMPROVEMENT DISTRICTS

LINK TO STRATEGIC PLAN

City government's role in making Milwaukee's economy competitive is not always through the direct provision of services. Instead, the city is sometimes more successful when it acts as a catalyst for private sector activity, as is the case with Business Improvement Districts (BIDs). BIDs provide a way for Milwaukee businesses, renown for their involvement and commitment to their community, to work together to make their commercial strips rival any in the metro area.

Department of City Development staff assists merchants wishing to contribute to efforts designed to strengthen their local business territory in creating a business improvement district. This allows the group to use city collection methods to communally charge themselves to accomplish projects such as hiring coordinators for the area, adding pedestrian lighting, and sponsoring major streetscaping projects.

By providing a collection mechanism and making available loans for capital improvements, the city is able to facilitate collaborative action from Milwaukee businesses. The city has two capital accounts which support business improvement districts: (1) the Business Improvement District Loan Fund, which provides loans that are paid back from district proceeds, and (2) the Neighborhood Commercial District Street Improvement Fund, which matches BID capital investments in block grant areas up to $500,000 and provides funding for other commercial neighborhood investments. Improvements from this type of merchant cooperation make Milwaukee's commercial strips more competitive and help the city achieve its strategic goal of strengthening the local economy.

ASSESSMENT CRITERIA

Any group of neighborhood merchants that organize to create a business improvement district under Wisconsin Act 184 can qualify for business improvement district loans. Under the law, property owners petition the city to create a district from specific contiguous property tax assessable parcels and to adopt an operating plan for the district. Funding of loans for capital improvements within a district can be considered when a district is created and demonstrates sufficient ability to pay back loans.

The Neighborhood Commercial District Street Improvement Fund enables the city to form public/private partnerships with neighborhood merchant associations to upgrade the appearance of commercial streets located outside of the downtown area. Use of this fund is intended to serve as an up-front catalyst or a public sector companion to private improvements. City funds are only expended where private financial participation is committed, usually through investment of a BID in capital improvements. Projects that receive funding under this capital account are selected based on their potential to significantly upgrade the appearance of the street and on the likelihood the proposed public improvements will promote private investment. Selection of projects is made by the Economic Development Committee based upon a recommendation from the Department of City Development.

STATUS OF THE PROGRAM

The following sections include a brief description of the two capital accounts that support business improvement efforts.

Business Improvement Districts: Business improvement districts are established to maintain and improve the viability of commercial business areas. Under the law, property owners petition the city to create a district from specific contiguous property tax assessable parcels and to adopt an operating plan for the district.

The district establishes an assessment method to collect funds from its members, which will be used to develop, manage, and promote commercial activity within the district. In districts where the city is a property owner, the city may annually appropriate a contribution to the district but may not be assessed based on the value of its property. The city contribution is funded through an operating budget special purpose account. As of the end of 2001, the city had 19 active business improvement districts.

The 2002 capital budget contains funding totaling $500,000 in the business improvement district capital account for loans to fund capital improvement projects such as new streetlights, public art, or sidewalk improvements. These loans are made to business improvement districts and are repaid over time by funds the district assesses on itself. These payments are designed to be sufficient to cover associated interest costs of the loans.

As Table 28 indicates, several business improvement districts have chosen to make significant capital investments in their areas through this loan program including: Historic Third Ward (BID #2), Riverwalk BID (#3), Avenues West BID (#10), Brady Street BID (#11), Oakland Avenue BID (#13), Downtown Riverwalk BID (#15), Uptown Triangle BID (#16), Villard Avenue BID (#19), the North/Prospect/Farwell Avenues BID (#20), and Riverworks BID (#25). In 2002, $500,000 is expected to be expended for capital improvement loans to business improvement districts.

Neighborhood Commercial District Street Improvement Fund: This capital account enables the city to form public/private partnerships with neighborhood merchant associations to upgrade the appearance of commercial streets located outside of the downtown area. Many of Milwaukee's central city commercial areas are struggling to survive against competition from newer, more attractive commercial areas. At the same time, many of the city's older commercial districts have substantial historic tradition and architectural character.

Table 28

Capital Investments in Active Business Improvement Districts

BID #	BID Name	BID Loan Amount	Neighborhood Commercial Improvement
2	Historic Third Ward	$688,800	$0
3	Riverwalk	343,000	0
4	Greater Mitchell Street	0	0
5	Westown	0	0
8	Historic King Drive	0	0
9	735 North Water Street Riverwalk	277,000	0
10	Avenues West	425,000	425,000
11	Brady Street Business Area	582,600	500,000
13	Oakland Avenue	192,560	16,000
15	Downtown Riverwalks	3,666,278	0
16	Uptown Triangle	500,000	500,000
17	Northwest Area/76th and Brown Deer	175,000	0
19	Villard Avenue	237,500	237,500
20	North/Prospect/Farwell Avenues	885,950	500,000
21	Downtown Management District	0	0
22	Edgewood/Oakland	0	0
25	Riverworks	650,000	650,000
26	The Valley	0	0
27	Burleigh Street	0	0

The Neighborhood Commercial District Street Improvement Fund is often used to match capital investments that business improvement districts make in their district. This fund will provide a 50% match (up to $500,000) for capital improvements in BIDs. In 2002, $500,000 is expected to be expended in this fund.

Rapidly growing property values are the best demonstration that BID capital account and neighborhood commercial district expenditures are successful. Established in 1992, the Avenues West BID (#10) has experienced a 44% increase in property values in four years. The Oakland Avenue BID has seen a 39% increase in property values between its 1993 establishment and 1996. Brady Street values have risen an incredible 48% in only five years, closely followed by King Drive with a 41% increase between 1992 and 1996. In all of these cases, property values have grown at least three times faster than the average city commercial property growth during the same period. While these BIDs have initiated diverse improvements projects and are in very different areas, business involvement in BIDs has correlated with higher than average increases in property values.

SIX-YEAR PLAN

Table 29 shows the 2002-2007 Capital Improvements Plan for business improvement districts which totals $6 million.

Business Improvement District Loans: The 2002-2007 capital plan provides funding of $3 million for this purpose. Funding of $500,000 annually will provide sufficient resources for one or two capital improvement loans per year to BIDs.

Neighborhood Commercial Districts: This fund provides financial assistance for public improvements of commercial streets located outside of the downtown area. The six-year plan provides $3 million for this purpose. This level of funding is sufficient to provide matching funds for one or two projects per year.

Table 29

2002-2007 Capital Improvements Plan for Business Improvement Districts

Project Title	2002 Plan	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Neighborhood Commercial District Street Improvement Fund	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$3,000,000
Business Improvement Districts	500,000	500,000	500,000	500,000	500,000	500,000	3,000,000
TOTAL	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$6,000,000

DEVELOPMENT DISTRICT FUNDS

LINK TO STRATEGIC PLAN

The Department of City Development works to strengthen the local economy and attract and retain jobs through the Development Fund Program and the Advance Planning Fund.

These capital improvement efforts fund public improvements, façade grants, brownfield clean-up, planning studies of the downtown, and provide funds for loans targeted at minority-owned, women-owned, and disadvantaged owners of businesses. Many of these programs assist in creating public/private partnerships with developers and business owners in order to promote private investment in the development area and help to strengthen the local economy and attract middle-income families to Milwaukee.

ASSESSMENT CRITERIA

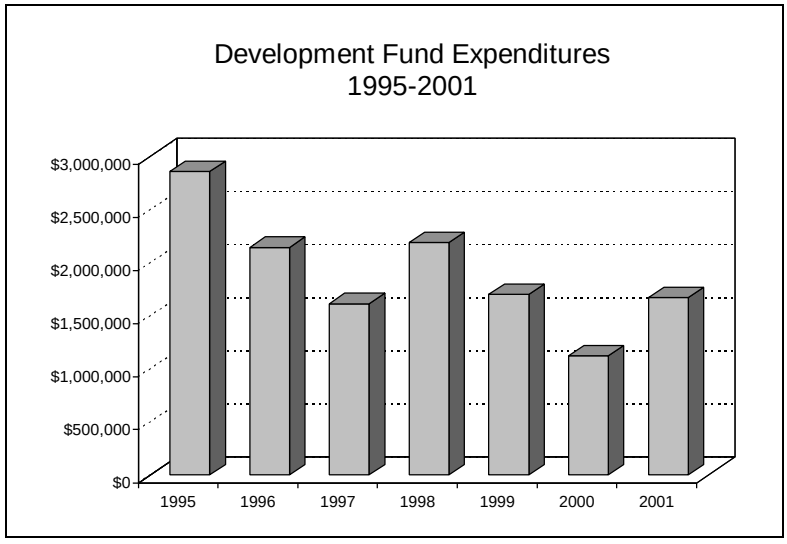
The criterion used for the Development District Funds varies. However, there are general criteria that may be applicable to each project. These include the following: (1) the project is located in a commercial district, a Community Development Block Grant area, a "mainstreet" area or a city development zone; (2) the project is historically significant for the community; (3) the project is recommended by a resident business or merchant organization, community development organization, Neighborhood Business Improvement District Board, or the Department of City Development; (4) the project stimulates development and investment; (5) the project increases the tax base and employment opportunities; (6) the project removes blighted conditions; (7) the project is an appropriate use of public funds; and (8) the project has potential to be completed.

STATUS OF THE PROGRAM

The Development Fund provides a catalyst for developer- and neighborhood-based project initiatives with great potential that need quicker response than possible with more structured options. This flexibility allows the city to address development opportunities as they arise.

The 2001 budget provided $2.5 million for Developer Fund initiatives. During 2001, $1.7 million was expended in support of streetscaping, façade grants, small-scale public improvements, and Historic Third Ward dockwall renovation. Figure 22 includes expenditures for the Development Fund and its predecessors, the Development Opportunities Fund, the Development Zone-Commercial Development Revitalization Fund, and the Riverfront and Other Downtown Planning and Improvements Fund. Higher expenditures in the mid- and late- 1990's were due to support of various segments of the downtown Riverwalk project and related development.

Figure 22



Projects that receive financial assistance from the Development Fund are chosen on their potential to stimulate development, to remove blighting conditions, to be completed within a reasonable period of time, and to involve a public subsidy. These

projects include smaller projects that do not require the establishment of a tax incremental district. Specific projects will be selected in accordance with the following criteria: (1) location of the project, appropriateness to the surrounding area and consistency with any applicable city plans; (2) site plan, urban design, and overall project concept; (3) financial feasibility, redeveloper capacity, long-range development benefit, city resident and tax base impact; (4) lack of other funds for city share; and (5) private sector commitment to the project and the potential leverage of private funds.

The Development Fund provides complementary public improvements along neighborhood commercial thoroughfares to encourage and enhance private investment and to make development projects more feasible. The intent of these public improvements is to encourage greater pedestrian traffic, upgrade the quality of design of existing facilities and uses, and to make the public environment more accommodating to business.

Map 4 shows the current Riverwalk system. Nineteen Riverwalk segments have already been developed, encompassing most of the downtown business district and segments stretching from the Summerfest grounds to Veteran's Park along Lake Michigan.

During the mid-1990's funding was provided to the Department of City Development to work with private developers and business improvement districts to create Riverwalks throughout the downtown area. In addition, the city has participated in upgrading some existing downtown segments, most notably Riverwalks adjacent to the Grand Avenue Mall, the Theater District, and the Riverfront Plaza by improving lighting and adding pre-cast concrete skirts.

The Department of City Development uses the following criteria to determine the capital needs of the Riverwalk system and downtown improvements: (1) complete development of the Riverwalk; (2) complete illumination of adjacent streets, buildings, and parks; (3) level of private participation and financial contribution; (4) availability of other funding resources; (5) level of commercial activity; (6) level of pedestrian traffic; and (7) desired enhancement of the city's physical attributes.

Advance Planning Fund: This fund finances planning studies and research into land use, marketing, development and redevelopment proposals, and other issues related to the physical and economic development of the city. These studies assist the department in developing strategic positions on major planning issues. These studies also provide timely information and/or policy recommendations to city officials on housing, industrial development, transportation, community facilities and services, preservation, and other issues affecting the economic stability and livability of the city. This fund also provides the means to contract for professional services. Studies financed through the Advance Planning Fund are based on requests from the Mayor, aldermen, or citizen groups.

Some examples of studies conducted through the Advance Planning Fund include the Fond du Lac Transit Corridor Study, the King Drive Planning Study, the 27th Street Corridor Study, the Lisbon

Map 4

Avenue Study, New Zoning Code Plan and a number of TID feasibility studies. In 2001, $208,000 was expended to finance various economic development plans and studies.

SIX-YEAR PLAN

Table 30 shows the 2002-2007 Capital Improvements Plan for development districts and other projects, which total $11.6 million.

Development Fund: The six-year plan provides a total of $10.7 million, $2.2 million in 2002, and $1.7 million in each year thereafter for the Development Fund. These funds will be used to finance public costs associated with various development projects. Several projects are slated for 2002, including Menomonee Valley improvements ($500,000), neighborhood retail area improvements ($500,000), façade grants ($350,000), 30th Street corridor improvements ($500,000), and other projects ($350,000).

Advance Planning Fund: The purpose of this fund is to finance planning studies and research into land use, marketing, development and redevelopment proposals, and other issues relating to the physical and economic development of the city. From 2002-2007, a six-year total of $900,000 is provided. In 2002 study areas include; Walker's Point, Riverwest, King Drive in-fill housing, comprehensive neighborhood plans, and tax incremental funding (TIF) planning studies.

Table 30

2002-2007 Capital Improvements Plan for Development Districts and Other Economic Development Projects

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Development Fund	$2,200,000	$1,700,000	$1,700,000	$1,700,000	$1,700,000	$1,700,000	$10,700,000
Advance Planning Fund	150,000	150,000	150,000	150,000	150,000	150,000	900,000
TOTAL	$2,350,000	$1,850,000	$1,850,000	$1,850,000	$1,850,000	$1,850,000	$11,600,000

PORT OF MILWAUKEE

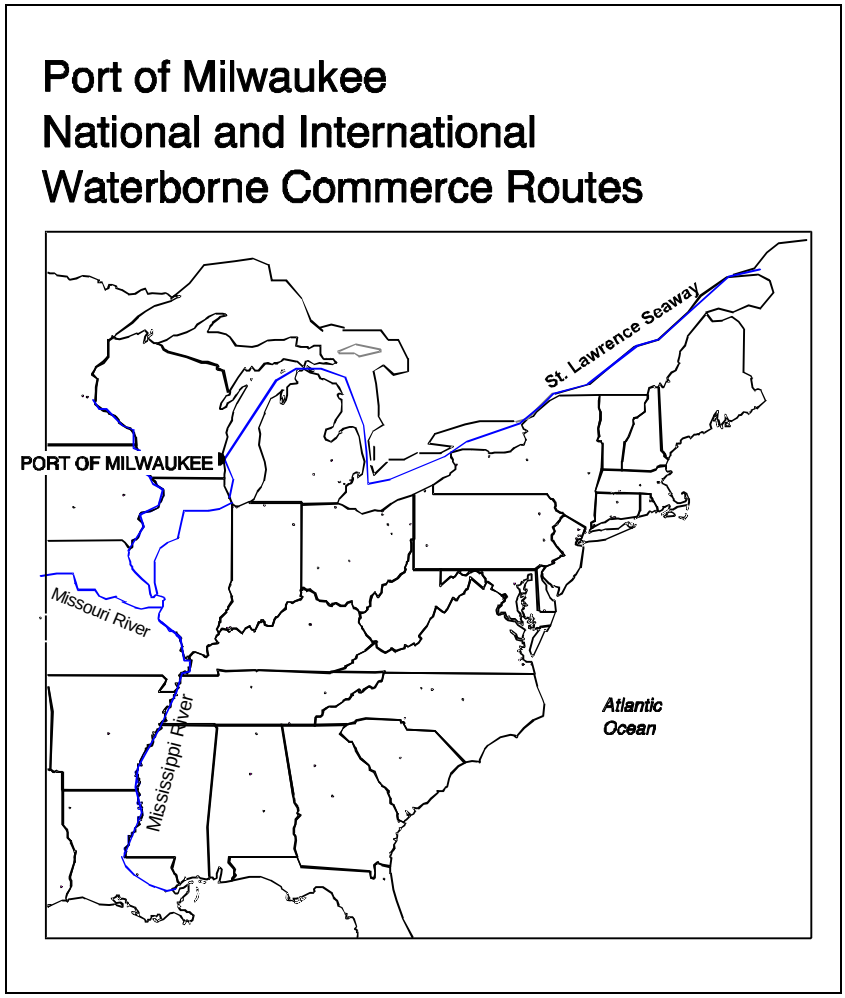
LINK TO STRATEGIC PLAN

One of the city's strategic goals is to strengthen the local economy, attract and retain family-supporting jobs, and ensure economic opportunities for all city residents. Port activities support this goal by providing quality transportation and distribution services designed to anticipate and satisfy the needs and desires of Port customers. With higher activity levels, the Port hopes to enhance the overall economic environment of the region by stimulating trade, business, and employment.

The Port of Milwaukee, which is located on Lake Michigan, is owned and operated by the City of Milwaukee. Ships and barges access the Port in one of two ways: (1) through the St. Lawrence Seaway System; or (2) through the Mississippi River and the Illinois River System (see Map 5).

The Port of Milwaukee offers operational flexibility unique to the Western Great Lakes. Terminals designed for the efficient handling of containers, general cargo, roll-on/roll-off vehicles, dry and liquid bulk, and heavy machinery, plus inter-modal connection to all Midwest cities, make the Port the economic choice for routing all types of cargo.

Map 5



Improvements to Port facilities are funded through the city's capital budget and are financed by property taxes, either through the current tax levy or levy-supported borrowing. The major focus of the Port's capital program is on preserving existing assets.

ASSESSMENT CRITERIA

The following criteria are used to determine the Port's capital needs: (1) age and condition; (2) cargo storage capacity; (3) cargo handling capacity; (4) Port accessibility; (5) product markets; and (6) state and federal regulations.

STATUS OF THE ASSET

Storage Facilities: The Port maintains four cargo terminals. These facilities, which have steel frames and asphalt floors, have a total storage capacity of 300,000 square feet and house general cargo. There is also a reefer shed that has a storage capacity of 180,000 cubic feet. This facility is refrigerated and stores meat and other perishable items.

The Port has three liquid cargo facilities each served by the Port's liquid cargo pier and/or by connections on one of the Port's outer general cargo piers. These liquid cargo terminals are served by the West Shore Pipeline Company and are connected to Chicago distribution centers, major pipelines, and East Coast and Gulf Coast refineries. These Port liquid terminals generally store petroleum, edible and non-edible fats and oils, and have tank capacities between 200,000 and 300,000 barrels.

Several parcels of Port land, totaling 23.2-acres, are dedicated to the handling and storage of dry bulk commodities, roll-on and roll-off units, and containers. These areas are in various states of development with earth or asphalt surfaces. All have road or rail access and are in close proximity to the truck scale.

Located along the inner harbor are seven dock areas. These facilities occupy a total of 66.8-acres and have concrete, asphalt, gravel, or earth surfaces. Road and rail access is also available. A variety of cargoes are stored at these facilities including steel, dry bulk, pig iron, bulk scrap, and bulk grain.

Located along the outer harbor are four dock areas. These facilities occupy a total of 24.6 acres and have concrete or asphalt surfaces. All these facilities have road or rail access. A variety of cargoes are stored at these facilities including general cargo, liquids, steel, roll-on and roll-off cargo, containers, and dry bulk.

Other Facilities: The Port is responsible for maintaining ten miles of dockwall along Lake Michigan and the municipal mooring basin. In addition, the Port maintains sewer and water distribution systems on Jones Island. There are approximately ten miles of mains in each system.

Finally, the Port of Milwaukee has long ranked as one of the premier heavy-lift ports on the Great Lakes. To help maintain this status, the Port operates ten cranes with various lifting capacities.

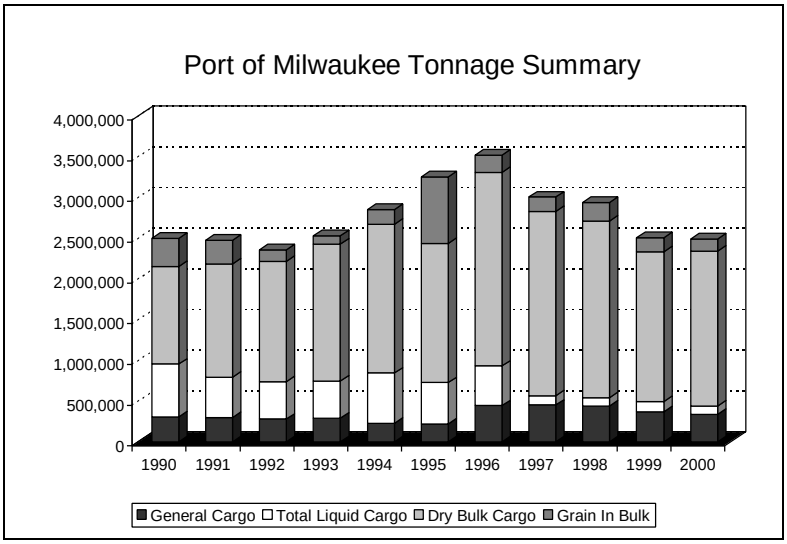
Inter-Modal Operations: The Port of Milwaukee is served by two Class I railroads which provide pier delivery and switching services. Over 15 miles of Port owned and maintained track connect each terminal to main line railroads.

The federal interstate highway system leads directly into the Port of Milwaukee. The Port has approximately five miles of access roads on Harbor Island. Trucks entering and leaving the Port can be weighed at one of three truck scales. These scales are not owned nor maintained by the Port.

Tonnage Summary: Maintenance of Port facilities is important because of the large volume of cargo handled at the Port of Milwaukee. Figure 23 shows tonnage data from 1992-2000. In 2000, tonnage handled at the Port of Milwaukee was 2.5 million tons. The 2000 tonnage was down approximately 17,587 tons (less than 1%) from the prior year.

Revenue Summary: Another measure of facility usage is the amount of revenue received from Port customers. Port revenues are generated from land and building rentals, wharfage fees, throughput dockage fees, crane rent, and labor charges. Figure 24 shows revenue generated from Port facilities

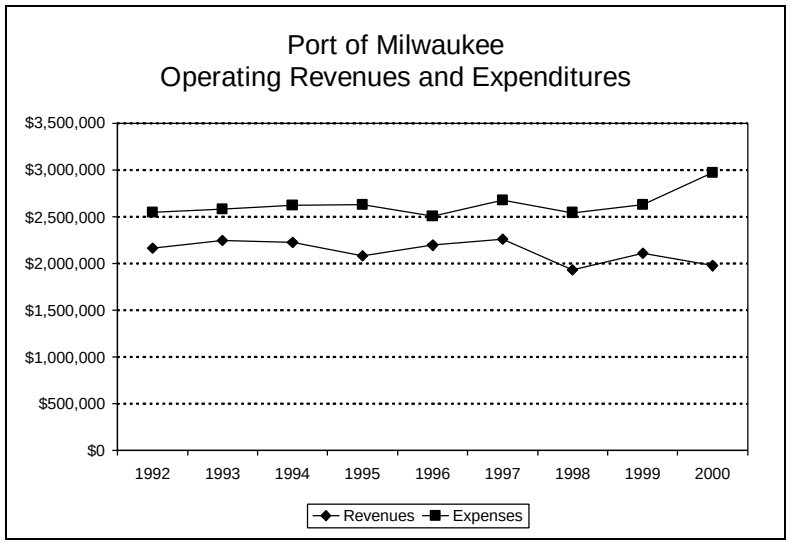
Figure 23



from 1992-2000. Since 1992, Port revenues have been less than its operating expenditures. In 2000, Port revenues were approximately $2 million while expenditures were $3 million. However, in 2001 the Port will begin receiving an additional $1 million in annual revenues for the lease of its Summerfest property to World Festivals Inc. This additional revenue is anticipated to result in Port revenues meeting its operating expenditures.

While facility rent currently makes up the majority of Port revenues (60%), the largest potential for increasing revenue is through revenues such as wharfage, throughput, crane rent, and dockage that respond to higher use of Port facilities.

Figure 24



Economic Impact: A study was conducted to determine the economic impact the Port of Milwaukee has upon the region and to aid the Port in evaluating present and future business. The study, based on 2000 data, measured the impact of the Port on Milwaukee County in terms of jobs, personal income, and tax revenues.

The study indicated that the Port was responsible for 1,119 direct jobs through dock and pier operations, water transport services, and inter-modal services. Approximately 909 jobs are indirectly related through secondary spending on goods and services in the local economy. Income generated annually from personal wages and salaries related to these jobs equaled approximately $93.6 million, while business revenues were estimated to total $79.6 million. In addition, the study indicated that the amount of federal, state, and local taxes generated totaled $35 million annually.

SIX-YEAR PLAN

Table 31 (see page 83) shows the 2002-2007 Capital Improvements Plan for the Port of Milwaukee. The six-year plan provides $19.3 million, of which $11.8 million, or 60.9%, is grant and aid funding.

The 2002-2007 capital plan provides $715,000 to maintain Port terminals and piers. This is an on-going maintenance program that is necessary in order to ensure safe and efficient cargo transfer operations. The plan also provides a total of $375,000 to purchase cargo handling equipment in 2005 and $1.5 million to buy a Manitowoc crane in 2004. These projects enhance the Port's ability to provide uninterrupted service to customers. Revenues generated through lease of this equipment will offset the cost of purchasing this equipment.

The 2002-2007 plan provides a total of $850,000 for dockwall rehabilitation. The purpose of this program is to rehabilitate portions of the dockwall that have deteriorated or have been damaged due to storm action. This is an on-going capital improvements program.

The 2002 capital budget totals $2.8 million with $2 million in grant funding and $785,000 in city funding. Capital projects for 2002 include $470,000 for pier, berth, and channel improvements. The Wisconsin Harbor Assistance Program will cover 80% of this project's total cost of $2.4 million. Over the six-year plan, $2.3 million of city funding and $9.1 million of grant and aid funding are dedicated to pier, berth, and channel improvements.

To serve its customers, the Port must maintain its infrastructure in appropriate condition. The 2002 Port capital plan includes $50,000 for resurfacing the road to the Continental Grain Facility on the westside mooring basin.

Table 31

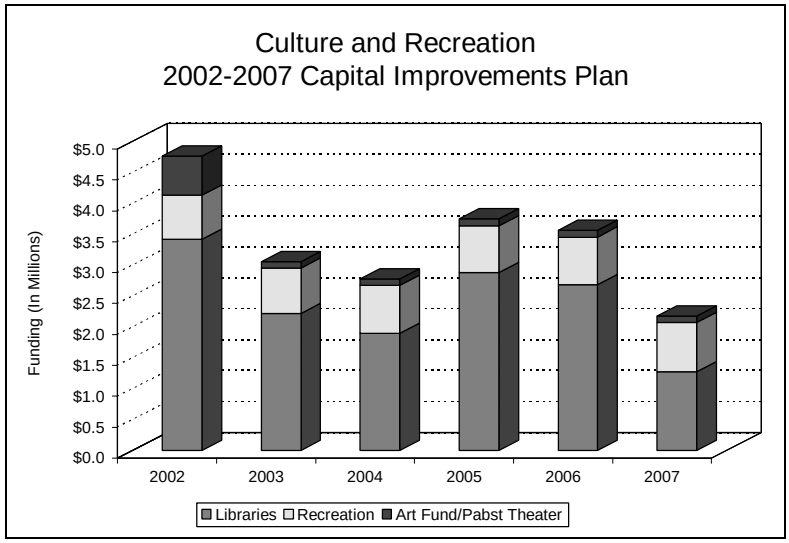
2002-2007 Capital Improvements Plan for the Port of Milwaukee

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Major Maintenance of Terminals and Piers	$115,000	$100,000	$100,000	$100,000	$100,000	$200,000	$715,000
Major Equipment Rehabilitation	50,000	50,000	50,000	50,000	50,000	50,000	300,000
Dockwall Rehabilitation	0	0	100,000	250,000	250,000	250,000	850,000
Harbor Maintenance and Dredging	0	0	200,000	0	0	0	200,000
*******Grant and Aid*******	0	0	800,000	0	0	0	800,000
Cargo Handling Equipment	0	0	50,000	375,000	0	150,000	575,000
Resurface Road to Westside Mooring Basin	50,000	0	0	0	0	0	50,000
Analyze and Upgrade Sewer System	0	0	250,000	0	0	0	250,000
Pier Berth and Channel Improvements	470,000	400,000	200,000	200,000	600,000	400,000	2,270,000
*******Grant and Aid*******	1,880,000	1,600,000	800,000	800,000	2,400,000	1,600,000	9,080,000
New Crane/Heavy Lift Equipment	0	0	1,500,000	0	0	0	1,500,000
Rail Track and Service Improvements/Upgrades	100,000	0	100,000	0	100,000	0	300,000
*******Grant and Aid*******	100,000	0	100,000	0	100,000	0	300,000
Rehab Dockwall KK River Site	0	0	200,000	0	200,000	0	400,000
*******Grant and Aid*******	0	0	800,000	0	800,000	0	1,600,000
Demolish Facilities and Grade Site	0	0	75,000	75,000	0	0	150,000
TOTAL PORT PROJECTS	$2,765,000	$2,150,000	$5,325,000	$1,850,000	$4,600,000	$2,650,000	$19,340,000
Less Grant and Aid Funding	$1,980,000	$1,600,000	$2,500,000	$800,000	$3,300,000	$1,600,000	$11,780,000
TOTAL CITY FUNDING	$785,000	$550,000	$2,825,000	$1,050,000	$1,300,000	$1,050,000	$7,560,000

CULTURE AND RECREATION

Culture and recreation capital improvement projects include public libraries, recreational facilities, the Pabst Theater, and the Municipal Art Fund. In the 2002-2007 capital plan, approximately $20.1 million, or 2% of total funding is provided for culture and recreation projects. Figure 25 shows the 2002-2007 Capital Improvements Plan for these projects.

Figure 25



The city invests in culture and recreation in order to strengthen the city's neighborhoods and to build on the city's role as the "cultural hub" of the metropolitan area. The Pabst Theater, along with the previously funded Wisconsin Center (1998 represented the last year of the city's commitment to renovate the facility), brings not only city residents to the downtown area but suburban residents into the city. Public libraries and recreational facilities provide stability to the city's neighborhoods by creating places for residents to learn and play close to home. By maintaining and upgrading its cultural and recreational facilities, Milwaukee is able to enhance the quality of life of all city residents.

Libraries

Funding for public libraries in the plan totals $14.35 million, or 71% of total funding for culture and recreation projects. Of this amount, approximately $4.7 million is for Central Library projects and $9.6 million is for neighborhood library projects. The new Finney neighborhood library will be constructed in 2002 at a total cost of $4.3 million ($2.7 million provided in 2002). Annual funding for library capital projects ranges from $1.3 million to $3.4 million in the six-year plan.

Pabst Theater and Art Fund

The 2002-2007 plan provides approximately $1.2 million, or 6% of culture and recreation funding for the Pabst Theater and the Municipal Art Fund. This amount includes $979,000 for projects at the Pabst Theater. In addition, approximately $30,000 is provided annually for the Municipal Art Fund.

Recreation

Recreational facilities include playgrounds and totlots located in neighborhoods throughout the city. In the 2002-2007 plan, $4.6 million, or 23% of total funding for culture and recreation projects is provided for renovation and maintenance of existing totlots. Funding for recreational facilities increases from $721,000 in 2002 to $791,000 in 2007. Funding in 2002 includes $350,000 in grants and aid. Also, beginning in 2002, fringe benefits associated with recreational facilities projects are appropriated directly in the project accounts.

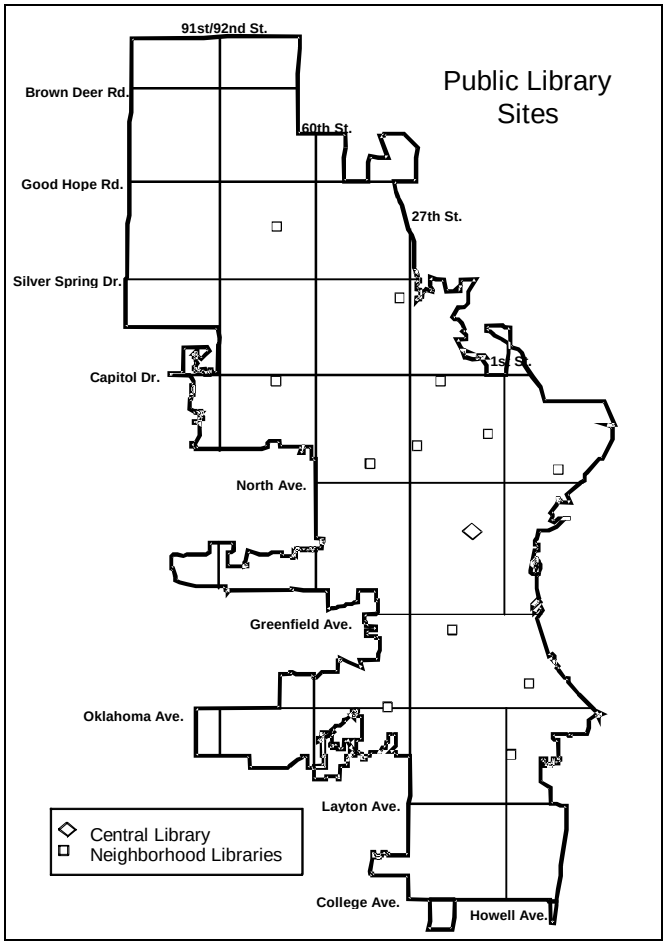
LIBRARIES

LINK TO THE STRATEGIC PLAN

One of the city's strategic goals is to create an environment that fosters life-long learning by city residents. Although the city is not directly responsible for the public school system, some city departments provide services that affect the opportunities that city residents have to learn. One such department is the Milwaukee Public Library System. The Milwaukee Public Library System, which consists of the Central Library and twelve neighborhood libraries (see Map 6), provides services for city's residents to encourage learning such as job and career centers, reading programs for preschoolers, children and young adults, computer training centers, and tutoring opportunities. Milwaukee's library facilities need to be multifunctional in order to provide these diverse services and to accommodate the needs of city residents.

Although many projects at the libraries consist of maintenance or upgrade efforts (such as improving the HVAC system or upgrading elevators to meet current standards), major projects usually have a broader purpose. Faced with new technology that makes information more widely available, the libraries did not possess the resources to take full advantage of these new opportunities. As a major urban public library and the largest public library system in the state, the Milwaukee Public Library needed to modernize its facilities in order to serve its patrons appropriately. To provide city residents with access to new technology like the Internet, information databases, and educational software, the library must first upgrade facilities resources.

Map 6



ASSESSMENT CRITERIA

The Milwaukee Public Library uses the following criteria to determine its capital needs: (1) condition of facilities; (2) useful life of the asset; (3) informational and technological needs of patrons and staff; and (4) safety and security needs of patrons and staff. Each year library staff inspects all library facilities to determine which items need repair or replacement. The priority given to particular items depends on the condition of the asset. The library keeps an internal plan for ten years. Some items are repaired or replaced at specified intervals. For example, the library will usually replace a roof on a neighborhood library every 20 years. Remodeling is scheduled based on the age and condition of the library, the needs of library patrons and changing technology.

STATUS OF THE ASSET/PROGRAM

The city's neighborhood libraries, with the exception of Bay View and Center Street (which were constructed in 1993 and 1989, respectively) were built in the 1950's, 1960's, and 1970's. Central Library was constructed in 1898 with an addition built in 1955. As a result of the age of the system, the libraries require continual maintenance and remodeling. Central Library is approximately 454,000 square feet. It houses 1.5 million volumes, over 1 million government documents, 5,300 periodicals, and is the home of the city's archives. In addition, the Central Library provides many regional services such as the Regional Library for the Blind and Physically Handicapped and the Inter-Library Loan Service.

Central Library has completed a major renovation to update its facilities in order to meet changing demand and the stress of increased use. Remodeling of the first floor was completed in 1996. This enabled Central Library to accommodate the new on-line catalog system as well as to enhance access to computer terminals. In addition, many of the mechanical systems were updated to improve efficiency and decrease the amount needed to be allocated out of the library's operating budget for minor repairs and utility costs.

As stated earlier, with the exception of Bay View and Center Street Libraries, neighborhood libraries were all constructed prior to 1980. Neighborhood libraries occupy, in total, almost 166,000 square feet and provide access to 826,000 volumes of reading and reference materials. They also offer an extensive audio and visual collection and provide a variety of educational programs.

The neighborhood libraries are also undergoing renovations to update and modernize them and will receive repair and replacement work on mechanical systems to improve efficiency and save on utility costs. In 2002, a new facility will be built to replace Finney Library. Five libraries have already been remodeled and the remainder are scheduled to be remodeled by the end of 2006. As neighborhood libraries become more multi-functional, it is important that facilities are capable of effectively meeting the needs of their patrons.

SIX-YEAR PLAN

Table 32 shows the 2002-2007 Capital Improvements Plan for the Milwaukee Public Library System. The six-year plan provides over $4.7 million for Central Library projects and $9.6 million for neighborhood library projects. The following is a summary of these projects.

Central Library Improvements Program: The 2002-2007 plan provides over $3.3 million for Central Library Improvements. These funds are divided between mechanical systems related improvements ($2,055,000) interior and exterior preservation and access changes ($1,270,000).

Mechanical systems improvements include installation of energy-saving heating, ventilation, and air conditioning (HVAC) systems; plumbing and ductwork; and electrical controls to replace outdated, under-capacity components. Also included are elevator upgrades to comply with the Americans with Disabilities Act (ADA), a fire alarm system, and a paging system. These improvements will make the physical environment more comfortable for library patrons and staff and better preserve the library's collection.

Preservation work will maintain the Central Library's historic architectural features and enhance building integrity. An ongoing masonry repair program will correct structural cracking in exterior walls. Interior painting and repair preserves walls and ceilings. Repairing damaged mosaic tiles, scagliola walls and columns will maintain the beauty of the library's unique historic features.

Access improvements will be made to comply with ADA requirements. The Eighth Street entrance doors will be replaced and new automatic openers installed. An architect will be hired to review the Wisconsin Avenue entrance to construct wheelchair access while retaining the historic architectural features of the entrance.

Central Library Remodeling Projects: The 2002-2007 Capital Improvements Plan for the Central Library provides approximately $1.4 million for remodeling projects. A combined effort between the Library Foundation and the city provided approximately $5 million to renovate the first and second floors of Central Library from 1997-2001. The renovation included a new Children's Science, Business, Technology and Art, Music and Recrea-

tion Rooms. Funding received from the Foundation was allocated for designing and engineering, also for finishes, furniture, equipment, and other enhancements to the infrastructure.

The final phase of the project involves remodeling the third floor of the Central Library, including the administration offices, as well as the technical processing area. In 2002-2007 the plan provides a total of $1.2 million for this purpose. The library's administration offices relocated to the third floor in 1984 after the Department of City Development vacated the area. Consequently, existing office configurations result in operational inefficiencies. In addition, both administration and technical processing areas have inadequate lighting, ventilation, sound control, and computer network access. A portion of the funding will also be used to update the Centennial Hall facility in 2004.

Neighborhood Library Remodeling Projects: The six-year plan provides $3.8 million to remodel four neighborhood libraries beginning in 2004. Two libraries, Atkinson and Zablocki were remodeled in 1994, the Capitol Library was completed in 1995 and the King Library was completed in 1997. Most recently, Forest Home was renovated in 2000. The remaining libraries, Villard, East, Mill Road, and Tippecanoe will be remodeled in 2004-2006.

A consultant was hired in 1988 to study the design needs of ten neighborhood libraries. The study analyzed the staff and patron areas and identified functional problems. The design recommendations form the basis for the neighborhood library renovation project. The intent of this project is to make the interior of the libraries more attractive, user friendly, compatible with changing technologies and formats of library materials, and consistent with the changing services demanded by library patrons.

Neighborhood Library Improvements Program: Approximately $1.1 million is provided for the Mechanical Systems Program in neighborhood libraries, including a technical study to evaluate the HVAC systems in neighborhood libraries and $514,000 to replace the chillers at nine neighborhood libraries. In 2006-2007, the electrical substations will be upgraded for $581,000. The purpose of these projects is to reduce energy consumption and to improve the physical environment for library patrons and staff.

The windows at seven neighborhood libraries have single-pane glass windows, which contribute to excessive heating and cooling costs. One maintenance project would replace these inefficient windows with thermal panes; anticipated savings in utility costs would be sufficient to offset the cost of this project. In 2005 and 2006, a total of $400,000 is provided for this purpose. In 2002, the Mill Road and Zablocki Libraries will be retrofitted for ADA compliance at a cost of $30,000.

The 2002 plan provides $180,000 to replace the mansard soffet panels at Villard Library with stucco-embossed aluminum panels and batten covers. The 2002-2007 plan provides $300,000 for interior painting and carpet replacement of neighborhood libraries, $300,000 for exterior painting, $160,000 for concrete repairs, and $150,000 for replacement of security systems. Other projects in the plan include $100,000 to upgrade the interior lighting of public spaces at Forest Home Library, $290,000 to upgrade exterior parking lot lighting and signage, and $150,000 for a concealed irrigation and landscape repair program.

New Finney Library: The 2002-2007 plan includes approximately $2.7 million to fund construction of a new neighborhood library to replace the current Finney Library. This project is discussed in more detail below.

Table 32

2002-2007 Capital Improvements Plan for the Milwaukee Public Library System

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Central Library Remodeling	$175,000	$1,050,000	$100,000	$0	$0	$75,000	$1,400,000
Central Library Improvements Program	320,000	725,000	470,000	395,000	795,000	620,000	3,325,000
New Library	2,710,000	0	0	0	0	0	2,710,000
Neighborhood Library Remodeling	0	0	1,100,000	1,710,000	950,000	0	3,760,000
Neighborhood Library Improvements Program	210,000	443,000	221,000	770,000	931,000	580,000	3,155,000
TOTAL PROJECTS	$3,415,000	$2,218,000	$1,891,000	$2,875,000	$2,676,000	$1,275,000	$14,350,000

PROGRAM CHANGES AND INITIATIVES

Replace Finney Library: A major capital project in the 2002-2007 plan is replacement of the current Finney Library, located at 4243 West North Avenue. In 2001, $1.6 million was provided for design and real estate acquisition for the new Finney Library site. An additional $2.7 million is provided for the building construction in 2002.

The initial planning and design of the new library was done throughout the Spring and Summer of 2001. Groundbreaking is expected in early Spring of 2002 and construction should be completed by the end of the year. At that time, the existing Finney Library will be given to the Milwaukee Public School system for renovation and reuse under their Neighborhood Schools Initiative.

RECREATIONAL FACILITIES

LINK TO STRATEGIC PLAN

The 2002-2007 Capital Improvements Plan for culture and recreation projects includes funding for recreational facilities. The Department of Public Works Operation Division Buildings and Fleet Section is responsible for constructing and maintaining playlots, totlots, and green areas throughout the city. In addition, the division is responsible for construction and reconstruction of the city's playgrounds and playfields operated by the Milwaukee Public School District. The district also shares responsibility with the city for maintaining totlots and playlots. Milwaukee County is responsible for operating and maintaining parks and parkways.

One of the city's strategic goals is to strengthen the quality and ensure the stability of Milwaukee's neighborhoods. The presence of recreation facilities such as totlots and playgrounds contributes to this goal by providing a positive outlet for youthful energy and social interactions.

The Department of Public Works has the following specific goals related to public outdoor recreational facilities: (1) to ensure an adequate number of public outdoor recreational facilities for all residents; (2) to conserve natural resources and significant natural features; (3) to ensure that facilities are accessible and available to people with disabilities; (4) to balance recreational development with the city's goals for other land uses; and (5) to ensure the best and most efficient use of the city's resources in meeting recreational needs of residents.

ASSESSMENT CRITERIA

The Department of Public Works utilizes the following criteria to determine the capital needs of recreational facilities: (1) age and condition; (2) safety and liability concerns; (3) accessibility to all residents including individuals with disabilities; (4) compliance with federal playground equipment guidelines; and (5) present and future recreational needs of city residents.

The division uses an informal rating system to measure the condition of recreational facilities. Visual surveys are conducted on each facility every five years. These surveys provide condition information at least three times over the 15 year estimated useful life of recreational equipment. In order to develop the capital improvement plan for recreational facilities, the division prioritizes recreational facilities based on condition. However, visual surveys, as well as the number of complaints received on a particular facility, may change project priorities.

Each recreational facility is prioritized by determining the age, equipment condition, population density of children under 12 years, and renovation needs determined jointly by the city and Milwaukee Public Schools. In addition, the Americans with Disabilities Act require that recreational facilities be accessible to all disabled persons. Together these criteria are used to determine recreational sites included in the annual capital budget and six-year plan.

STATUS OF THE ASSET/PROGRAM

The DPW-Operations Division Buildings and Fleet Section operates and maintains 45 non-supervised recreational areas and 10 passive green spaces totaling 69 acres. Many of the city sites were originally constructed prior to 1975. The Buildings and Fleet Section is also responsible for reconstruction of the city's 37 playgrounds and playfields totaling 296 acres.

There are 75 play areas on City of Milwaukee recreation facilities. The average design life of play areas is 15 to 20 years. As of January 1, 2001, surveys conducted by the division indicate that almost three-quarters (73%) of children's play areas on City of Milwaukee recreation facilities are in excellent condition. A play area rated as excellent will generally meet (or exceed) the following standards: updated equipment on rubber or wood chip play surface; equipment at the beginning of life cycle; equipment components in good condition; and meets safety and ADA accessibility standards.

SIX-YEAR PLAN

The 2002 budget includes $513,000 to reconstruct facilities at eight recreational areas. This funding is comprised of $163,000 city capital funds and $350,000 Community Development Block Grant (CDBG) funds. These improvements include reconstructing totlots, tennis courts and ball diamonds, upgrading facilities to meet ADA requirements, and replacing equipment. Funding will also provide for miscellaneous engineering expenses and various totlot improvements. Table 33 lists specific facilities scheduled for improvement in 2002. As outlined in Table 34, $3.3 million is provided in 2002-2007 for the improvement of recreation facilities. This funding would be sufficient for reconstruction projects on approximately eight facilities each year. Those facilities selected will be based upon visual surveys, as well as comments received by patrons.

Table 33

2002 Recreational Facilities Capital Improvements Budget

Project Description	Estimated Cost
Children's Area Reconstruction (ADA) Green Bay Playfield Ohio Playfield Franklin Square	$195,000
Playground Reconstruction (Phase II) Columbia Playground	$65,000
Wading Pool Filtration Replacement Merrill Park	$40,000
Tennis Court Reconstruction Lincoln Playfield	$143,000
Various Improvements/Engineering Ball Diamond Restoration Non-Programmed Improvements General Engineering	$70,000
Total	**$513,000**

Table 34

2002-2007 Capital Improvements Plan for Recreational Facilities

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Recreational Facilities	$163,000	$526,000	$574,000	$554,000	$568,000	$583,000	$2,968,000
Grant and Aid (CDBG)	350,000	0	0	0	0	0	350,000
TOTAL PROJECTS	$513,000	$526,000	$574,000	$554,000	$568,000	$583,000	$3,318,000

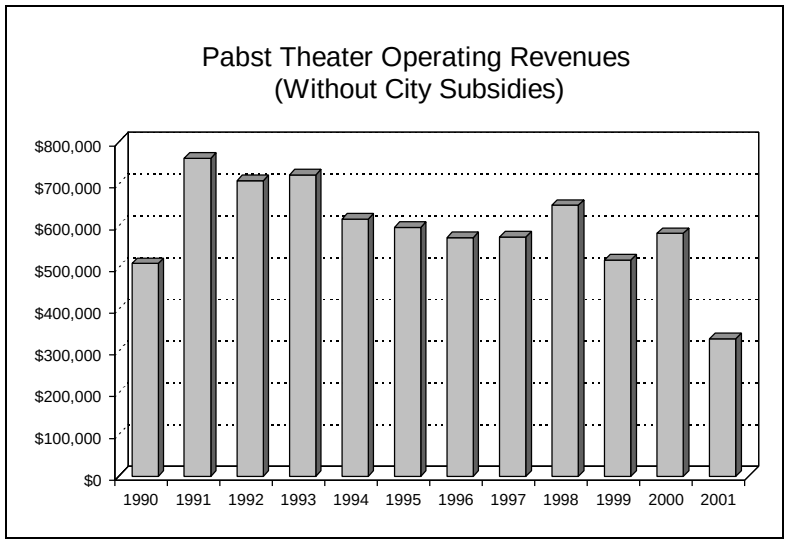
PABST THEATER

LINK TO STRATEGIC PLAN

The primary objective of the Pabst Theater is to provide a facility for the performing arts in order to enhance the quality of cultural life in the city. As a historic place of exceptional beauty, it also serves as a tourist attraction in downtown Milwaukee. The eleven-member Pabst Theater Board governs the structure, maintenance, and operations of the Pabst Theater. It is responsible for administering the operating budget.

Because management of a theater is not closely linked with the city's strategic goals, the Pabst Theater Board examined options for combining the Pabst Theater management with another organization that specializes in arts, theater, and event planning.

Figure 26



In April 2002, after careful consideration of three proposals, the Pabst Theater Board approved an offer from the Michael Cudahy Foundation, a nonprofit organization, to buy the city-owned theater for $1. The Board was concerned about one bidder's request for an annual city operating subsidy approximately three times larger than the current $150,000. An uncertain future revenue stream led a second entity to withdraw its bid.

The Cudahy Foundation will continue and enhance promotional efforts to increase the number of events and attendance at the historic theater. It will make additional physical improvements to the theater, including upgrading the Pabst's sound system, furnishings, and backstage facilities. The Pabst's historic appearance must be maintained and the city must approve a change of name. The agreement requires the building to be used as a theater in perpetuity.

According to the City Comptroller, the sale would save the city approximately $4.9 million (not adjusted for inflation) in operating subsidies, capital improvements, and debt service over the coming 20 years.

The Common Council approved the Captain Frederick Pabst Theater Transfer Agreement at its April 23, 2002 meeting. The Mayor signed the resolution shortly thereafter. The sale is expected to be completed on or before November 1, 2002.

The Cudahy Foundation will build on a successful theater enterprise. The Pabst Theater has strong attendance and stable operating revenues, as shown in Figure 26. (Construction of major improvements discussed below decreased event days and operating revenue in 2001.) However, event planning and promotion is not one of the city's primary missions. The city and the Foundation expect that the Foundation will be more successful in optimizing the use of this beautiful theater and enhancing cultural life in Milwaukee.

Throughout the time of the transfer the City of Milwaukee funds approximately one-sixth of the theater's operating budget. In the 2002 budget, the city provided $150,000 towards the theater's total operating budget and $10,000 to provide a rent subsidy for local arts groups who cannot afford to rent the Pabst Theater. Under the transfer agreement, the operating subsidy will continue in 2003. The theater also receives revenue from rentals, box office fees, concession commissions, and other miscellaneous sources of income to fund its operations.

The city is also responsible for maintaining the structural integrity of the Pabst Theater. This funding is provided through the capital budget. After 2002, the Cudahy Foundation is responsible for theater capital maintenance and improvements.

ASSESSMENT CRITERIA

The Pabst Theater uses the following criteria to determine its capital needs: (1) age and condition; (2) safety and security needs; (3) accessibility; (4) production capabilities; and (5) current and future needs of theater patrons and performing arts groups.

The Pabst Theater, which was constructed in 1895 and fully restored in 1976, occupies 11,840 square feet. In 2001, 156 events were held at the theater, which were attended by over 110,100 people. The theater was under construction for 141 days, reducing event days and attendance.

STATUS OF THE ASSET

The Pabst Theater has received many historic designations, including Local Historic Landmark of the City of Milwaukee, Wisconsin State Historic Site, listing on the National Register of Historic Places and, most recently, National Historic Landmark.

Between 1976-1986, no funds were provided to the Pabst Theater for capital improvement projects. However, since 1987 the City of Milwaukee has invested considerable financial resources to renovate this historical theater and ensure that maintenance is not deferred. Between 1989 and 1998, the city provided over $1.7 million in borrowing authority for capital improvement projects at the Pabst Theater. Changes have included improvements to the sound system, lobby, auditorium, stage and backstage, exterior, physically disabled accessibility and safety modifications, and general decoration improvements.

Most notably, in 1997 the city provided $475,000 for major renovations to the east wall, which was showing signs of settling. Underpinning of that wall was completed that year and will provide a long-term solution to stabilizing the wall. Recent evaluations of the structure by the city and county have demonstrated that the building is now in good repair.

SIX-YEAR PLAN

As depicted by Table 35, the 2002-2007 Capital Improvements Plan provides approximately $979,000 for Pabst Theater improvements. In 2002 $600,000 is provided to conclude the multi-year renovation project at the theater.

From 2003 through 2007, approximately $75,000 is provided each year for unspecified projects at the Pabst Theater. This funding is to ensure an adequate level of financial support for future Pabst Theater capital projects.

Table 35

2002-2007 Capital Improvements Plan for the Pabst Theater

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Theater Modifications	$600,000	$75,050	$75,000	$78,835	$75,000	$75,000	$978,885
TOTAL PROJECTS	$600,000	$75,050	$75,000	$78,835	$75,000	$75,000	$978,885

PROGRAM CHANGES AND INITIATIVES

The 2002 capital budget includes $600,000 to complete major improvements at the Historic Pabst Theater. Started in 2000, these renovations will improve access and seating in the gallery, add elevators to the theater, provide additional rest rooms, install modern ventilation systems, and expand the lobby area to form the Cudahy Irish Pub. Total project cost is estimated at approximately $8.9 million. The Pabst Theater Capital Campaign Committee solicited private contributions totaling approximately $6 million, while city contributions will total $2.9 million for the project.

MUNICIPAL ART FUND

LINK TO THE STRATEGIC PLAN

One of the city's strategies under the strategic goal of strengthening the quality of neighborhoods is to promote the city as a cultural hub of the metropolitan area. The Municipal Art Fund provides a way to encourage an appreciation of the visual arts and the development of artists and craftsmen by placing works of art in city facilities.

The 2002-2007 Capital Improvements Plan for culture and recreation includes funding for the Municipal Art Fund. This fund provides for visual arts in newly constructed or remodeled city-owned buildings. This funding is in accordance with City Ordinance 304-27 which states that a portion of capital expenditures, not to exceed 1% of the total cost of any such construction project as estimated in the capital budget, be set aside for the acquisition of works of art to be used for city buildings and public facilities. The Milwaukee Arts Board determines the allocation of funds to be expended on works of art for construction projects.

ASSESSMENT CRITERIA

The criteria used to determine the allocation of the Municipal Art Fund is based on the following: (1) the project must be a construction project paid wholly, or in part, by the city to construct or remodel any building, decorative, or commemorative structure within the city limits; (2) the project must be publicly accessible; (3) works of art include sculptures, paintings, graphic arts, mosaics, photography, crafts, calligraphy, and mixed media; and (4) the work of art must be completed by an artist who is a practitioner in the visual arts and is generally recognized by critics and peers as a professional who produces works of art.

In addition, the Milwaukee Arts Board is responsible for the following: (1) determining the allocation of funds; (2) determining the method(s) of selection and commissioning of artists; (3) requiring that any proposed work of art needing operational or maintenance expenses receive prior approval of the department involved; and (4) assuring that reasonable diversity is attained in the selection of art works.

Condition Assessment: The Municipal Art Fund provides funds to purchase visual art for newly constructed or remodeled city-owned buildings. The artwork is distributed based upon individual requests.

SIX-YEAR PLAN

As shown in Table 36 the 2002-2007 Capital Improvements Plan provides $180,000 for the Municipal Art Fund. Approximately $30,000 is provided each year to purchase artwork for the city's art collection. This funding ensures an adequate level of financial support for future Municipal Art Fund projects.

Table 36

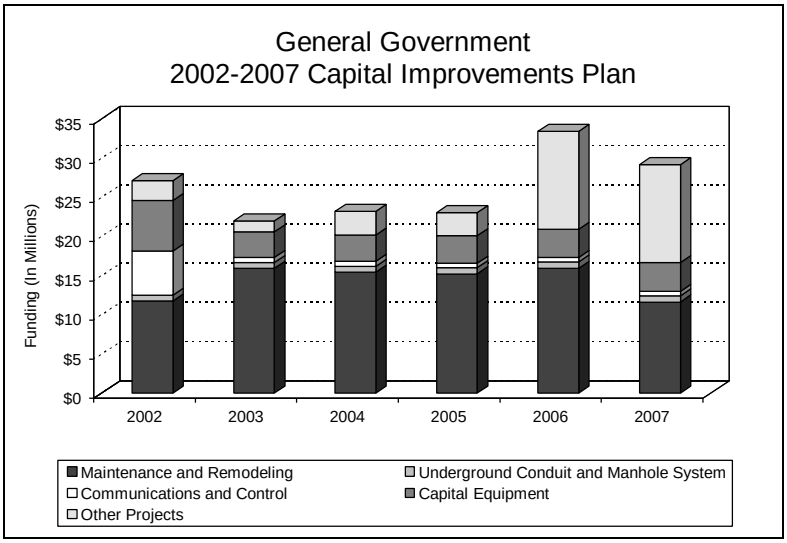
2002-2007 Capital Improvements Plan for the Municipal Art Fund

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Municipal Art Fund	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$180,000
TOTAL PROJECTS	$30,000	$30,000	$30,000	$30,000	$30,000	$30,000	$180,000

GENERAL GOVERNMENT

General government capital improvement projects consist of maintenance and remodeling of city-owned buildings and facilities and other special capital projects, as well as operation and maintenance of the city's underground conduit and communication systems. In the six-year plan, approximately $157.9 million is provided for these purposes, which accounts for 16.5% of total funding. Figure 27 shows projected funding levels for general government capital improvement projects for 2002-2007.

Figure 27



Maintenance, Remodeling, Capital Equipment, and Other Projects

The six-year plan provides approximately $85.9 million for remodeling and maintenance of city facilities. These projects account for 54.4% of total general government capital improvement projects.

Beginning in 2002, durable equipment items with a per unit cost of $50,000 or more are included in the capital budget. Equipment used by several Department of Public Work divisions is included in this section. DPW equipment funding is $23.8 million or 15.1% of general government funding during the plan. Fire equipment is classified in the Fire Department capital plan.

The six-year plan provides approximately $34.9 million, or 22.1% of total general government capital funding for other projects. Unspecified capital projects at the time the plan was completed account for $27 million of total funding for other projects. This funding is necessary to ensure an adequate level of financial support for future general government capital projects.

Communications and Control

In the six-year plan, approximately $8.7 million, or 5.5% of total funding for general government capital improvement projects is provided for the city's communication system which includes telecommunications, voice, data and video service circuits, interconnecting phones, computers, alarms, and radios.

Underground Conduit and Electrical Manhole Programs

Funding totaling $4.6 million, or 2.9% of general government capital improvement projects is provided for maintenance and expansion of the city's underground conduit system as well as for repair and replacement of various underground electrical manholes throughout the city. Funding for these purposes is budgeted for $760,000 in 2002 and remains at this level throughout the six-year plan.

MAINTENANCE AND REMODELING

LINK TO THE STRATEGIC PLAN

The 2002-2007 Capital Improvements Plan for general government includes funding for maintenance and remodeling of city-owned buildings and facilities and other special capital projects. The Department of Public Works Buildings and Fleet Division is responsible for maintenance and repair of approximately 160 city buildings. In addition, the division provides architectural and mechanical planning and design services for most city remodeling projects. Minor maintenance and repair projects, such as painting, patching, caulking, and sealing are funded in departments operating budgets.

The goal of the city's buildings and facilities maintenance and remodeling plan is to extend the useful life of present facilities and to meet the changing needs of city departments. The maintenance and remodeling capital program helps to ensure that various city facilities are kept in good operating condition. Because this program addresses facilities that house several city departments providing a wide array of services, it contributes to several of the city's strategic goals. City strategic goals supported by this capital program include those related to service delivery, public safety, and the environment.

ASSESSMENT CRITERIA

The Buildings and Fleet Division uses the following criteria to determine maintenance and remodeling needs: (1) age and condition; (2) safety and security needs; (3) accessibility; (4) space needs; (5) organizational needs; (6) technological and communication needs; (7) current and future needs of city departments, and (8) operational savings or service delivery improvements generated by a project.

The Buildings and Fleet Division uses a computerized Facilities Condition Index (FCI) to aid in evaluating building conditions and prioritizing maintenance needs. The FCI is the current cost of repairing a building compared to the cost of replacement. Index values directly identify facilities most in need of immediate repair. The citywide FCI is used to develop an overall cyclical maintenance program and concentrate more resources on preventative maintenance programs.

STATUS OF THE ASSET/PROGRAM

In 2001, the Department of Public Works conducted a comprehensive facility condition assessment. This effort updated a 1995 facility condition study performed by consultants. DPW staff performed extensive on site inspections to determine the physical condition of city 109 buildings and recreational facilities. These included general government buildings, such as City Hall and the Ziedler Municipal Building, public parking structures and specific use buildings, such as salt domes, sanitation transfer facilities and forestry nursery buildings. The study did not include libraries, fire stations, police stations, Port, or Water facilities. The respective departments are responsible for the maintenance and condition of those facilities.

The Facility Condition Assessment focused on the actual physical condition of the buildings as they are currently constructed. A thorough visual inspection of all infrastructure, structural, electrical, mechanical, and roof components in each building was performed. All maintenance, repair, equipment replacement, and safety needs were identified and detailed. Cost estimates for needed maintenance and improvements were based on standard pricing for similar buildings. This information was compiled into a database using the Facilities Condition Information System.

This study and database furnished city staff and policymakers with a clear picture of the physical condition of facilities. It also detailed the estimated costs for repairs and improvements to these facili-

ties. This information will be useful to determine whether a facility should be repaired, replaced, or consolidated. Such information will be used to prioritize capital projects to most efficiently utilize maintenance and capital funds.

Remodeling of the Zeidler Municipal Building is nearly complete. The result of a 1991 space utilization study and major reorganizations of departments, projects were integrated into DPW's six year capital improvements plans over the last decade. Remodeling of the tenth floor for the Department of Neighborhood Services is funded in 2002.

The 809 Broadway Building's mechanical and electrical systems are over 15 years old. An equipment upgrade and realignment is needed to meet changes in space and staff needs.

Over the past decade, information technology has transformed from a mainframe computer-based activity to client/server technology. To efficiently provide services to city departments, portions of the Information Technology Management Division located in the 809 Building are planned for renovation in 2003. This space was last renovated in 1982. These renovations include a floor layout reconfiguration to more efficiently organize employees and equipment. Emergency egress and fire suppression systems compliant with current federal requirements will also be addressed.

In addition to basic systems, several office areas in the downtown complex do not meet present building code requirements for energy efficiency, life/safety design, and ADA accessibility. Also many areas and workstations do not meet or lack the proper use of space due to the changing organizational and functional needs of city departments. These areas will be addressed through the various remodeling and reconstruction projects funded during the plan, see Table 37.

SIX-YEAR PLAN

The 2002-2007 Capital Improvements Plan for general government maintenance and remodeling includes funding for replacement or upgrade of major elements of the city's 220 facilities. This includes remodeling of office space, upgrade of interior systems such as HVAC and building exterior repairs.

Maintenance and remodeling capital projects funded in the six-year plan include installation or upgrades of the following equipment; HVAC, plumbing, electrical, communications, fire protection and suppression, chillers, boilers, computerized facilities management, and security. Funding is also included for interior remodeling and upgrades for many city agencies. These projects include office remodeling for various city departments in the downtown complex and remodeling projects at outlying facilities.

The maintenance and remodeling capital program also includes funding for building exterior repairs. Exterior repairs include projects such as roof and window replacement, masonry repairs, and painting.

As indicated in Table 37, the six-year plan includes funding for capital projects unspecified at the time the plan was completed. This funding is necessary to ensure an adequate level of financial support for future general government capital projects.

PROGRAM CHANGES AND INITIATIVES

Department of Neighborhood Services (DNS) Remodeling: The 2002 capital budget includes approximately $2.9 million in funding to remodel the Anderson Municipal Building (Sixth Street south of Howard Avenue) and the tenth floor of the Zeidler Municipal Building. The Anderson Building renovation will enable DNS to consolidate the Nuisance and Environmental Health Section staff. Also, 75 DNS employees will be moved from leased space in the Hill's Building at Ninth and Mitchell Streets. The Zeidler Municipal Building tenth floor will provide space for Inspectors in the Commercial Code Enforcement and Construction Trades Divisions.

Table 37

2002-2007 Capital Improvements Plan for Maintenance and Remodeling

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
REMODELING/CONSTRUCTION PROJECTS							
Record Retention Movable Shelving Units	$200,000	$0	$0	$0	$0	$0	$200,000
Remodel 809 Bldg 4th Floor - Info Technology Mgmt Division	0	1,690,000	0	0	0	0	1,690,000
City Attorney's Office - Five Additional Attorney Offices	352,000	0	0	0	0	0	352,000
City Attorney's Office - General Office Alterations	0	153,000	0	0	0	0	153,000
Dept of Neighborhood Services - ZMB 10th Fl and Anderson Bldg	2,949,990	0	0	0	0	0	2,949,990
Municipal Court - Remodel Wisc Correctional Svc Offices	83,900	0	0	0	0	0	83,900
Downtown Complex Remodeling	695,000	464,000	0	0	0	0	1,159,000
ADA Compliance Program	408,000	484,000	510,000	544,000	550,000	570,000	3,066,000
Municipal Garage/Outlying Facilities Development Program	0	1,200,000	4,250,000	3,500,000	3,700,000	3,500,000	16,150,000
Fringe Benefits - Buildings	484,000	484,000	484,000	484,000	484,000	484,000	2,904,000
Space Planning, Alterations and Engineering	150,000	155,000	155,000	160,000	160,000	170,000	950,000
TOTAL REMODELING/CONSTRUCTION PROJECTS	$5,322,890	$4,630,000	$5,399,000	$4,688,000	$4,894,000	$4,724,000	$29,657,890
MAINTENANCE PROJECTS							
Facility Systems Program	$2,808,000	$4,399,000	$4,096,000	$4,158,000	$4,971,000	$5,911,500	$26,343,500
Facility Exterior Program	1,108,000	1,900,000	934,000	1,381,000	1,089,000	1,000,000	7,412,000
City Hall Restoration Program	2,500,000	5,000,000	5,000,000	5,000,000	5,000,000	0	22,500,000
TOTAL MAINTENANCE PROJECTS	$6,416,000	$11,299,000	$10,030,000	$10,539,000	$11,060,000	$6,911,500	$56,255,500
CAPITAL EQUIPMENT							
Equipment Replacement Program	$3,300,000	$0	$0	$0	$0	$0	$3,300,000
Major Capital Equipment DPW - Operations - Fleet	3,080,000	3,172,400	3,267,572	3,365,599	3,466,567	3,570,564	19,922,702
Major Capital Equipment DPW - Infrastructure	100,000	100,000	100,000	100,000	100,000	100,000	600,000
TOTAL CAPITAL EQUIPMENT	$6,480,000	$3,272,400	$3,367,572	$3,465,599	$3,566,567	$3,670,564	$23,822,702
OTHER PROJECTS							
Consolidated Municipal Garage-Fire Repair Facility Study	$150,000	$0	$0	$0	$0	$0	$150,000
Technology Initiative	500,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,500,000
FMIS eProcurement	0	390,000	0	0	0	0	390,000
Optical Imaging System Software Upgrade	124,945	0	0	0	0	0	124,945
Municipal Court Case Management System	1,750,000	0	0	0	0	0	1,750,000
Unspecified Capital Projects	0	0	2,000,000	2,000,000	11,500,000	11,500,000	27,000,000
TOTAL OTHER PROJECTS	$2,524,945	$1,390,000	$3,000,000	$3,000,000	$12,500,000	$12,500,000	$34,914,945
GRAND TOTAL OF PROJECTS	$20,743,835	$20,591,400	$21,796,572	$21,692,599	$32,020,567	$27,806,064	$144,651,037

Information Technology Management Division (ITMD) Remodeling: As previously mentioned, computer technology has transformed over the last decade, from mainframe-based systems to client/server technology. This has dramatically changed the equipment used and staffing of the Information Technology Management Division. The current Halon Fire Suppression System is now forbidden by federal regulations due to its ozone depleting characteristics and must be replaced. Further, fire safety requirements, specifically ease of exiting the area, must be addressed. In 2003, $1.7 million is provided for ITMD renovation.

Municipal Garage and Outlying Facilities Development Program: Several DPW facilities including the Municipal Garage, are in need of repair, replacement, or consolidation. Over $16 million is funded in the 2002-2007 plan for this purpose.

City Hall Restoration Program: Milwaukee's City Hall is an architecturally significant landmark building listed on the National Register of Historic Places. The 2002-2007 plan includes funding of $22.5 for city hall restoration. The initial estimate made by DPW staff, was based on their preliminary visual analysis of the building's exterior condition and records of work accomplished during the 1973-1974 renovation. Several substantial problems were noted with the towers, exterior walls, and interior walls including deterioration, water damage, and substantial cracking. DPW staff then decided that additional investigation was needed to determine the true extent of the repairs and renovation.

Two studies were conducted in 2000 and 2001. The initial consultant study consisted of a detailed, "hands-on" visual condition survey of the exterior of the building. A close inspection occurred including rappelling down the sides of the building.

The information gathered by the initial study formed the basis for the second, in-depth investigation. The objective of this phase was to determine the severity and causes of the distressed condi-

tions. Extensive work including disassembly of particular parts of the building was conducted and the scope of the repairs required was determined. A cost estimate and construction plan was devised and the project cost was estimated at approximately $44 million over five to six years. The second phase study was critiqued by a peer review committee. A consensus developed regarding the repair approach and confirmed the cost estimate.

Department of Public Works staff and Budget and Management Division staff are currently evaluating this extensive, detailed restoration and repairs report.

In addition, a Historic Structures Report will be written by consultants who are experts in historic preservation to obtain Historic Landmark Status from the National Park Service. This may allow the city to seek federal funding for a portion of this project.

Equipment Replacement Program: This $3.3 million appropriation in 2002 will replace aged equipment that is beyond economical repair. Retention of such equipment is costly to taxpayers and hampers provision of services. This appropriation is the first part of a strategic plan to upgrade the city's equipment fleet and ensure that no equipment is kept past its economic replacement point.

Major Capital Equipment: In the 2002-2007 plan $20.5 million is provided for major capital equipment. Major capital equipment is durable equipment with an original unit cost of $50,000 or more. It includes equipment ranging from dump trucks and garbage packers to a directional-boring machine for conduit installation.

Technology Initiative: During the 2002-2007 plan, this $5.5 program is intended to provide city departments with an opportunity to invest in new technology. To qualify for funding, departments must submit a business plan that both meets citywide strategic goals and provides the ability to repay the investment in three years or less.

COMMUNICATION AND CONTROL

LINK TO STRATEGIC PLAN

The 2002-2007 Capital Improvements Plan for general government includes funding to modernize and expand the city's existing communications and control resources. These resources consist of telephone systems, cellular telephones, data communications systems, Fire and Police communication systems including computer-aided dispatch, security and alarm systems, water and sewer control systems, street lighting and traffic signal control systems, two-way radio antenna connection systems, and video communications systems. The cable and equipment used to connect all of the above systems is a critical part of the city's communication and control resources. Modernization and expansion of these resources are funded through the capital budget, whereas operation, maintenance, and inspection are funded in the operating budget.

The primary objective of the communication and control systems is to receive information quickly, reliably, and cost effectively to city offices that need it. Most importantly, these systems provide a means for the city to respond quickly to public health and safety needs. Also important is the ability to provide communications access to city governmental offices which allows them to communicate with the world.

For the above reasons, the communication and control capital program contributes to several citywide strategic goals, including: protecting citizens from crime and fire hazards, strengthening the quality of Milwaukee neighborhoods, and ensuring residents and businesses obtain high value from and pay a fair cost for services provided by the city.

ASSESSMENT CRITERIA

The DPW Administrative Serivces Division utilizes the following criteria to determine its capital needs for the city's communication and control system: (1) demands from city departments; (2) current capacities compared to estimated present and future communication needs of various city departments; (3) age and condition of equipment or cables; (4) cost of maintenance or repairs compared to replacement costs; (5) functionality of new equipment and cables versus old; (6) estimated needs based on previous experience; and (7) requirements of city's paving program.

STATUS OF THE ASSET/PROGRAM

The Community Safety Wide Area Network (CSWAN) is a system of copper and fiber optic cables, most of which reside in the city's 538.7 miles of underground conduit. The underground conduit grids the city and protects copper and fiber optic cables from inclement weather, accidents, vandalism, etc. A small portion of the network is direct buried or run overhead. Approximately 12 miles of cable is installed annually.

The city's telephone system, including Fire and Police, provides approximately 5,700 telephones for 8,184 employees at over 150 site locations, including telephone lines for about 235 fax machines. The system also provides 1,319 callbox locations. Voice mail services are provided to approximately 1,250 city employees, and approximately 750 pagers and 800 cellular telephones are in use by city employees. The Administrative Services Division completes approximately 1,200 moves and changes on an annual basis.

The city's wide area network includes about 80 miles of fiber optic cable providing data communication services to 55 sites. Multiple data communications technologies are used. The CSWAN currently has an eight node Nbase Wide Area Network (WAN) providing Fast Ethernet data connectivity for the Police Department. The city also has a six switch Asynchronous Transfer Mode (ATM) WAN which is transporting Ethernet and Fast Ethernet to Buildings and Fleet, DCD, Forestry, Health, Infrastructure Services, Police, Sanitation, Tow Lot, Fire Department, Library, Municipal Court, Port, and Water Works locations.

The ATM network has the capabilities of easily expanding the bandwidth and providing multiple networks multiplexed into one physical transport layer. ATM also has the future capability of providing video and telephone communications on the same network. A smaller portion of the data communications system is used for transporting T1 circuits for interconnecting telephone switch nodes and Fast Ethernet for Neighborhood Services.

Both Nbase and ATM technologies have failure survivability features. The city's Nbase Wide Area Network has been designed with a spanning tree algorithm to reroute traffic around an open segment should a failure or cable cut occur. Similarly, the ATM network design has a load sharing and load balancing feature that will also reroute traffic around an open segment. These reroutes can occur so quickly that a user may never know that a cable failure occurred.

There are several other important services provided under the umbrella of communications and control resources. Telemetering provides information and control for water distribution, which is required to provide adequate water volume and pressure throughout the city and outlying communities. Telemetering also provides sewer monitoring and pump control to help prevent sewer backup and backwater problems. Traffic signal control helps the smooth and orderly flow of traffic throughout the city. Street lighting control turns streetlights on and off at the appropriate times to provide adequate lighting while minimizing expenses.

Two-way radio antenna connections provide transmission and monitoring of radio frequencies important to fire, police, and municipal operations. Security alarm systems help provide quick response to theft and burglary attempts. Public address systems help alert employees of urgent messages. Video communications systems help reduce prisoner transportation costs for the Police and Municipal Court.

SIX-YEAR PLAN

As shown in Table 38, the 2002-2007 Capital Improvements Plan provides $8.7 million for the citywide communication and control system.

City Telephone Switch (System) Replacement: Funding of $5 million is provided in 2002-2007 plan to replace the long obsolete Rolm system. The city's current telephone system was installed in 1984. It is no longer supported by its manufacturer and is very difficult to repair. Technician training classes are no longer offered. Repair parts, including crucial circuit cards, are virtually unavailable in the market. Even used parts dealers are discarding these systems. The parts have to be cannibalized from equipment purchased from firms that have long ago replaced this equipment. As an alternative, the cards themselves are sent out for repair at considerable hourly repair expense. Many of the city's telephones are over 15 years old and are showing their age.

A new system would provide many advances. These include circuit cards that can directly interface into our primary telephone trunk lines. The new system will be more compact, allowing smaller space requirements. Environmental and energy requirements has dramatically changed over the last 18 years. Wisconsin Gas stated that it will recover the cost of a new system by energy savings alone over the next several years. Finally, the new system would have the capability to trace 911 emergency calls to the specific floor and room of city buildings. This would be very helpful because calls from over 150 buildings are routed through the 809 Building, which is the address shown on the 911-system display terminals.

Communications and Control: The six-year plan provides funding of $8.7 million to enhance the

Table 38

2002-2007 Capital Improvements Plan for Communication and Control System

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
City Telephone Switch Replacement	$5,000,000	$0	$0	$0	$0	$0	$5,000,000
Communication and Control System	621,000	621,000	621,000	621,000	621,000	621,000	3,726,000
TOTAL PROJECTS	$5,621,000	$621,000	$621,000	$621,000	$621,000	$621,000	$8,726,000

city's existing cable plant by extending it to locations in need of data interconnect services. The plan focuses on the Fire Department, Department of City Development Housing Authority, and public Libraries. Remaining buildings and network redundancies will be installed, if possible.

UNDERGROUND CONDUIT AND MANHOLE SYSTEM

LINK TO THE STRATEGIC PLAN

The 2002-2007 Capital Improvements Plan for general government includes funding for the underground conduit and manhole system. The Infrastructure Services Division is responsible for engineering, construction, maintenance, and operation of the underground conduit and manhole system, which provides a public safety network for various city communication, traffic control, and street lighting systems. Expansion of the system is funded through the capital budget, whereas maintenance and inspection services are funded through the operating budget. Whenever possible, expansion and improvement to the network are directly related to city, state, or county highway paving projects and development projects.

The Underground Conduit and Manhole Program supports several of the city's strategic goals, including strengthening the quality of Milwaukee's neighborhoods, strengthening the local economy, and protecting citizens from crime and fire hazards, through its support of a range of city services. These services include: (1) communication services for all existing and future city facilities; (2) cable services for the traffic control network, which includes synchronization of citywide traffic control signalized intersections and continuous monitoring of remote controlled automatic vehicular traffic counter stations; (3) cables for various street light circuits, special lighting systems, recreational lighting facilities, and the on/off citywide street light eye sensor systems; and (4) in those instances where excess capacity exists, a source of revenue through rental to private enterprise.

The reliability of the underground conduit and manhole system is vital to the city because it ensures effective communication among city facilities as well as provision of timely emergency services, such as Police and Fire Department services, needed by the community. The system also ensures the proper functioning of the street light and traffic control systems.

ASSESSMENT CRITERIA

The reliability of the underground conduit and manhole system is vital to the city because it provides communication links to over 200 sites, 76,000 street lamps, and 700 traffic signalized intersections. The Infrastructure Services Division uses the following criteria to determine its capital needs for the underground conduit and manhole system: (1) conduit cable capacity; (2) network capacities and capabilities; (3) paving program; (4) expansion of city facilities; (5) present and future communication needs of city departments; and (6) development projects.

Much of the network expansion coincides with paving projects so that underground conduits can be installed in conjunction with street construction. This process is not only cost efficient but also minimizes disruption to vehicular traffic. Most of the existing copper cables, which connect city facilities, are housed in the underground conduit system and are protected from wind, lightning, and pole damage. If the cables were not housed in underground conduits, unsightly wood poles and aerial cables would need to be installed for the network systems. This would have an adverse impact on the division's maintenance budget due to aerial cable exposure to the weather and wood pole knockdowns. These unnecessary interruptions would disconnect vital emergency services needed by the community from the Police and Fire Departments and other city departments.

STATUS OF THE ASSET/PROGRAM

The existing underground conduit and manhole network consists of 540.4 miles of underground conduit and 7,348 active manholes. Figure 28 illustrates the major components of the underground conduit and manhole system. As shown in Figure 28, the vast majority of the system is for communications and traffic control with less than 5% of the system dedicated to street lighting.

Underground conduits are encased in concrete and installed under roadways or in areas adjacent to the curb at a depth of approximately 30-36 inches. As Figure 28 shows, conduit for the communication system is the largest component of the underground conduit system, at least three times as many miles as traffic control conduits.

Between 1995 and 2000, an average of 1.7 miles of underground conduit have been installed or replaced annually. Figure 29 illustrates underground conduit installation and replacement activity from 1995-2000.

Manholes, which have an estimated useful life of 75 years, are located along the conduit line to allow safe and secure access to the cable. Although manholes vary in size, they average four to six feet in depth. Like the underground conduit system, communication is the largest component of the manhole system. Between 1995-2000, an average number of 14 new manholes have been installed each year.

Figure 28

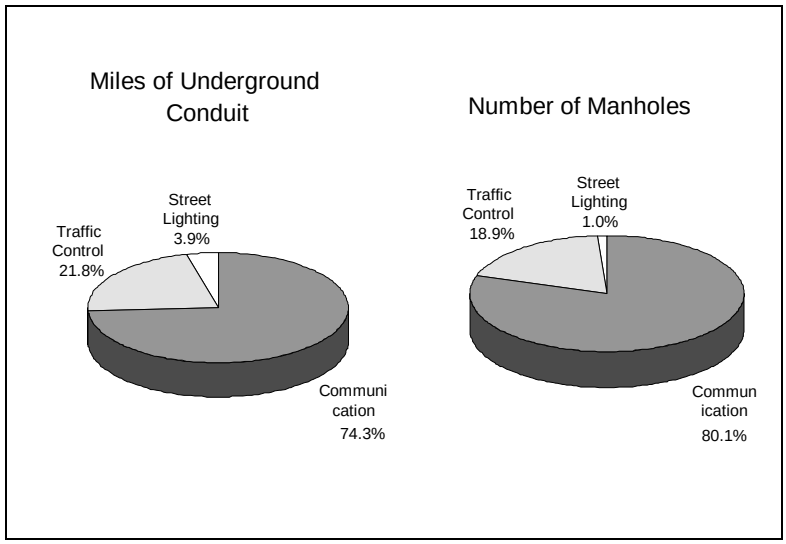
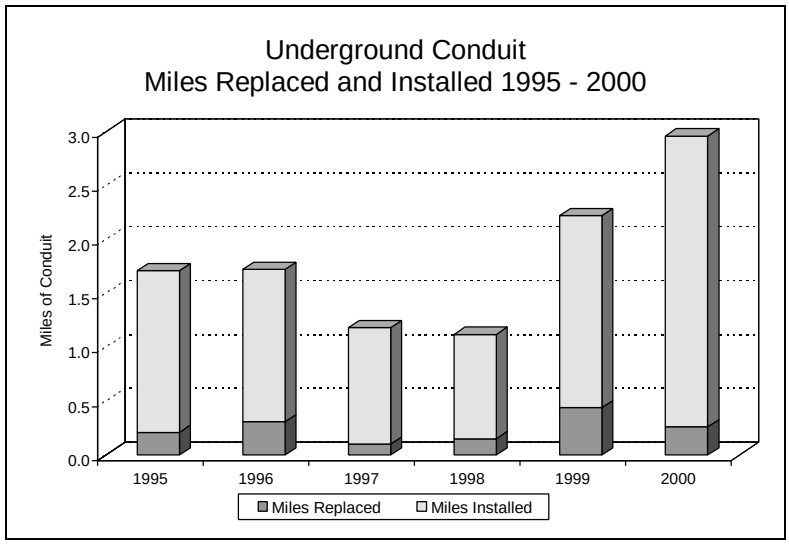


Figure 29



The Infrastructure Services Division performs maintenance and inspection of the city's conduit and manhole system. This activity is funded in the operating budget. Maintenance is scheduled along with the annual paving program. The maintenance program not only extends the useful life of the system but also provides information on the condition of the system.

SIX-YEAR PLAN

As shown in Table 39, the 2002-2007 Capital Improvements Plan for the underground conduit and manhole system totals $4.6 million. Of this funding, $3.2 million is provided for the Underground Conduit and Manhole Program and $1.3 million is provided for the Communication, Traffic and Lighting Manhole Reconstruction Program.

In the 2002-2007 plan, $539,000 is provided annually to install and replace approximately two miles of conduit, and to replace 10 to 15 manholes each year. This level is similar to the five-year average level for new conduit installation and replacement.

In addition, the 2002-2007 plan provides $1.3 million to survey, clean, repair, and replace electrical manholes. The division estimates that this funding will replace 250 manholes and repair 620 manholes. By supporting preventive maintenance of manholes, the program will avoid more costly replacement of manholes resulting from neglect and deterioration. Information from the survey of manholes will be entered into a database for future manhole repair and cable route design.

As previously noted, much of the network expansion coincides with paving projects so that underground conduits can be installed in conjunction with street construction. The division estimates that if underground conduits and manholes were installed outside of the paving program, installation costs to the city would be approximately 46% higher each year. This coordination minimizes disruption to vehicular traffic and is cost efficient.

Table 39

2002-2007 Capital Improvements Plan for the Underground Conduit and Manhole Program

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Underground Conduit and Manhole Program	$539,000	$539,000	$539,000	$539,000	$539,000	$539,000	$3,234,000
Communications, Traffic and Lighting, Manhole Reconstruction Program	221,000	221,000	221,000	221,000	221,000	221,000	1,326,000
TOTAL PROJECTS	$760,000	$760,000	$760,000	$760,000	$760,000	$760,000	$4,560,000

TABLE 40
2002 - 2007 CAPITAL IMPROVEMENTS PLAN

	2002 ADOPTED BUDGET	2003 BUDGET PLAN	2004 BUDGET PLAN	2005 BUDGET PLAN	2006 BUDGET PLAN	2007 BUDGET PLAN	TOTAL SIX-YEAR PLAN
SPECIAL CAPITAL PROJECTS							
Pabst Theatre Modifications	$600,000	$75,050	$75,000	$78,835	$75,000	$75,000	$978,885
Consolidated Municipal Garage - Fire Repair Facility Study	150,000	0	0	0	0	0	150,000
Municipal Art Fund	30,000	30,000	30,000	30,000	30,000	30,000	180,000
Grant and Aid Fund	10,300,000	10,300,000	10,300,000	10,300,000	10,300,000	10,300,000	61,800,000
Technology Initiative	500,000	1,000,000	1,000,000	1,000,000	1,000,000	1,000,000	5,500,000
Equipment Replacement Program	3,300,000	0	0	0	0	0	3,300,000
Unspecified	0	0	2,000,000	2,000,000	11,500,000	11,500,000	27,000,000
TOTAL SPECIAL CAPITAL PROJECTS	**$14,880,000**	**$11,405,050**	**$13,405,000**	**$13,408,835**	**$22,905,000**	**$22,905,000**	**$98,908,885**
ADMINISTRATION							
Record Retention Movable Shelving Units Vault A	$200,000	$0	$0	$0	$0	$0	$200,000
FMIS eProcurement	0	390,000	0	0	0	0	390,000
Optical Imaging System Software Upgrade	124,945	0	0	0	0	0	124,945
Remodel ITMD 809 Building 4th Floor	0	1,690,000	0	0	0	0	1,690,000
TOTAL ADMINISTRATION	**$324,945**	**$2,080,000**	**$0**	**$0**	**$0**	**$0**	**$2,404,945**
CITY ATTORNEY							
City Attorney - Five Additional Attorney Offices	$352,000	$0	$0	$0	$0	$0	$352,000
City Attorney - General Office Alterations	0	153,000	0	0	0	0	153,000
TOTAL CITY ATTORNEY	**$352,000**	**$153,000**	**$0**	**$0**	**$0**	**$0**	**$505,000**
DEPARTMENT OF NEIGHBORHOOD SERVICES							
Remodeling Project	$2,949,990	$0	$0	$0	$0	$0	$2,949,990
TOTAL DEPARTMENT OF NEIGHBORHOOD SERVICES	**$2,949,990**	**$0**	**$0**	**$0**	**$0**	**$0**	**$2,949,990**
DEPARTMENT OF CITY DEVELOPMENT							
Neighborhood Commercial District Street Improvement Fund	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$3,000,000
Business Improvement District	500,000	500,000	500,000	500,000	500,000	500,000	3,000,000
Tax Incremental Districts	14,500,000	11,000,000	9,000,000	9,500,000	9,700,000	9,700,000	63,400,000
Development Fund	2,200,000	1,700,000	1,700,000	1,700,000	1,700,000	1,700,000	10,700,000
Advance Planning Fund	150,000	150,000	150,000	150,000	150,000	150,000	900,000
TOTAL DEPARTMENT OF CITY DEVELOPMENT	**$17,850,000**	**$13,850,000**	**$11,850,000**	**$12,350,000**	**$12,550,000**	**$12,550,000**	**$81,000,000**

	2002 ADOPTED BUDGET	2003 BUDGET PLAN	2004 BUDGET PLAN	2005 BUDGET PLAN	2006 BUDGET PLAN	2007 BUDGET PLAN	TOTAL SIX-YEAR PLAN
FIRE DEPARTMENT							
Engine House #8 - Land Acquisition and New Building	$0	$0	$100,000	$1,700,000	$0	$0	$1,800,000
Engine House #9 - Floor Repairs	0	50,000	0	0	0	0	50,000
Engine House #1 - Alterations	0	0	1,180,000	0	0	0	1,180,000
Engine House #2 - Alterations	0	85,000	0	0	0	0	85,000
Engine House #6 - Alterations	0	0	0	0	0	1,200,000	1,200,000
Engine House #7 - Alterations	0	0	0	0	1,200,000	0	1,200,000
Engine House #12 - Alterations	0	0	0	0	0	1,200,000	1,200,000
Engine House #10 - Alterations	0	0	0	0	0	1,200,000	1,200,000
Engine House #22 - Alterations	0	0	0	0	1,200,000	0	1,200,000
Engine House #34 - Alterations	0	0	0	1,200,000	0	0	1,200,000
Engine House #3 - Alterations	980,000	0	0	0	0	0	980,000
Repair Shop Addition and Expansion 118 West Virginia	0	0	1,600,000	1,000,000	0	0	2,600,000
Major Capital Equipment ($50,000 or more)	1,550,000	2,060,000	1,550,000	2,060,000	1,550,000	2,060,000	10,830,000
Ventilation and Toilet Separation - Various Locations	100,000	100,000	100,000	100,000	100,000	100,000	600,000
Window Replacement - Various Locations	100,000	100,000	100,000	100,000	100,000	100,000	600,000
Computer Aided Dispatch System	0	1,000,000	0	0	0	0	1,000,000
TOTAL FIRE DEPARTMENT	**$2,730,000**	**$3,395,000**	**$4,630,000**	**$6,160,000**	**$4,150,000**	**$5,860,000**	**$26,925,000**
HEALTH DEPARTMENT							
Mechanical Systems Maintenance Program - Various Health Department Buildings	$0	$176,400	$25,000	$208,500	$20,000	$50,000	$479,900
Exterior Building Maintenance Program - Various Health Department Buildings	130,900	198,000	139,800	86,000	520,000	50,000	1,124,700
Interior Building Maintenance Program - Various Health Department Buildings	0	112,000	257,100	129,000	27,200	409,100	934,400
TOTAL HEALTH DEPARTMENT	**$130,900**	**$486,400**	**$421,900**	**$423,500**	**$567,200**	**$509,100**	**$2,539,000**
LIBRARY							
CENTRAL LIBRARY							
Central Library Improvements Program	$320,000	$725,000	$470,000	$395,000	$795,000	$620,000	$3,325,000
Central Library Remodeling Program	175,000	1,050,000	100,000	0	0	75,000	1,400,000
NEIGHBORHOOD LIBRARIES							
Neighborhood Library - New Library (Finney)	2,710,000	0	0	0	0	0	2,710,000
Neighborhood Library Improvements Program	210,000	443,000	221,000	770,000	931,000	580,000	3,155,000
Neighborhood Library Remodeling Program	0	0	1,100,000	1,710,000	950,000	0	3,760,000
TOTAL LIBRARY	**$3,415,000**	**$2,218,000**	**$1,891,000**	**$2,875,000**	**$2,676,000**	**$1,275,000**	**$14,350,000**

	2002 ADOPTED BUDGET	2003 BUDGET PLAN	2004 BUDGET PLAN	2005 BUDGET PLAN	2006 BUDGET PLAN	2007 BUDGET PLAN	TOTAL SIX-YEAR PLAN
MUNICIPAL COURT							
Remodel Wisconsin Correctional Services	$83,900	$0	$0	$0	$0	$0	$83,900
Court Case Management System	1,750,000	0	0	0	0	0	1,750,000
TOTAL MUNICIPAL COURT	**$1,833,900**	**$0**	**$0**	**$0**	**$0**	**$0**	**$1,833,900**
POLICE DEPARTMENT							
ADA Compliance Program - Various Dept Facilities	$18,914	$19,293	$19,679	$20,072	$20,474	$20,883	$119,315
Data Services and Communication Center Construction	4,000,000	0	0	0	0	0	4,000,000
Interim Radio Replacements (Pending Trunked Radio)	244,000	71,000	71,000	0	0	0	386,000
Renovate Police Administration Building	2,100,000	2,152,500	2,206,000	2,261,000	2,318,000	4,752,000	15,789,500
Trunked Radio Communications	0	0	8,725,000	6,225,000	0	0	14,950,000
District Needs Assessment	0	0	15,000	0	0	15,000	30,000
District Station Renovation	2,000,000	0	0	2,000,000	0	0	4,000,000
Automated Fingerprint Identification System	1,500,000	0	0	0	0	0	1,500,000
Additional Parking District Stations	0	150,000	150,000	150,000	0	0	450,000
Safety Academy Parking Lot Expansion	0	150,000	0	0	0	0	150,000
TOTAL POLICE DEPARTMENT	**$9,862,914**	**$2,542,793**	**$11,186,679**	**$10,656,072**	**$2,338,474**	**$4,787,883**	**$41,374,815**
PORT OF MILWAUKEE							
Major Maintenance - Terminals and Piers	$115,000	$100,000	$100,000	$100,000	$100,000	$200,000	$715,000
Major Rehabilitation and Upgrades - Equipment	50,000	50,000	50,000	50,000	50,000	50,000	300,000
Dockwall Rehabilitation	0	0	100,000	250,000	250,000	250,000	850,000
Harbor Maintenance Dredging	0	0	200,000	0	0	0	200,000
**********Grant and Aid**********	0	0	800,000	0	0	0	800,000
Cargo Handling Equipment	0	0	50,000	375,000	0	150,000	575,000
Resurface Road to Westside of Mooring Basin	50,000	0	0	0	0	0	50,000
Analyze and Upgrade Sewer System	0	0	250,000	0	0	0	250,000
Pier, Berth and Channel Improvements	470,000	400,000	200,000	200,000	600,000	400,000	2,270,000
**********Grant and Aid**********	1,880,000	1,600,000	800,000	800,000	2,400,000	1,600,000	9,080,000
New Crane - Heavy Lift Equipment	0	0	1,500,000	0	0	0	1,500,000
KK River Site Acquisition and Rehabilitation	0	0	0	0	0	0	0
**********Grant and Aid**********	0	0	0	0	0	0	0
Rail Track and Service Improvements	75,000	0	75,000	0	75,000	0	225,000
Rail Track and Service Upgrades	25,000	0	25,000	0	25,000	0	75,000
**********Grant and Aid**********	100,000	0	100,000	0	100,000	0	300,000
Rail/Water Transfer Facility	0	0	0	0	0	0	0
Rehab Dockwall KK River Site	0	0	200,000	0	200,000	0	400,000
**********Grant and Aid**********	0	0	800,000	0	800,000	0	1,600,000

	2002 ADOPTED BUDGET	2003 BUDGET PLAN	2004 BUDGET PLAN	2005 BUDGET PLAN	2006 BUDGET PLAN	2007 BUDGET PLAN	TOTAL SIX-YEAR PLAN
Demolish Deteriorated Facilities and Grade Sites	0	0	75,000	75,000	0	0	150,000
Grant and Aid	**$1,980,000**	**$1,600,000**	**$2,500,000**	**$800,000**	**$3,300,000**	**$1,600,000**	**$11,780,000**
Total City Funding	**$785,000**	**$550,000**	**$2,825,000**	**$1,050,000**	**$1,300,000**	**$1,050,000**	**$7,560,000**
TOTAL PORT OF MILWAUKEE	**$2,765,000**	**$2,150,000**	**$5,325,000**	**$1,850,000**	**$4,600,000**	**$2,650,000**	**$19,340,000**
DPW - ADMINISTRATIVE SERVICES DIVISION							
DPW Environmental Projects Fund	$0	$50,000	$1,150,000	$0	$0	$0	$1,200,000
Public Safety Communications	621,000	621,000	621,000	621,000	621,000	621,000	3,726,000
City Telephone Switch Replacement	5,000,000	0	0	0	0	0	5,000,000
TOTAL DPW - ADMINISTRATIVE SERVICES DIVISION	**$5,621,000**	**$671,000**	**$1,771,000**	**$621,000**	**$621,000**	**$621,000**	**$9,926,000**
DPW - OPERATIONS DIVISION							
Sanitation Projects							
Sanitation Headquarter Modification - Various Sites	$275,000	$1,354,000	$600,000	$430,000	$1,125,000	$896,000	$4,680,000
Sub-Total - Sanitation	**$275,000**	**$1,354,000**	**$600,000**	**$430,000**	**$1,125,000**	**$896,000**	**$4,680,000**
Forestry Projects							
Concealed Irrigation and General Landscaping - City Boulevards	$372,062	$410,000	$420,000	$430,000	$440,000	$450,000	$2,522,062
Planting Trees, Shrubs and Evergreens (Paving) Various	515,000	515,000	515,000	515,000	515,000	515,000	3,090,000
Sub-Total - Forestry	**$887,062**	**$925,000**	**$935,000**	**$945,000**	**$955,000**	**$965,000**	**$5,612,062**
Buildings and Fleet Projects							
Recreational Facilities - Citywide	$163,000	$526,000	$574,000	$554,000	$568,000	$583,000	$2,968,000
**********Grant and Aid (CDBG)**********	350,000	0	0	0	0	0	350,000
Fringe Benefits - Recreational Facilities	208,000	208,000	208,000	208,000	208,000	208,000	1,248,000
Space Planning, Alterations and Engineering	150,000	155,000	155,000	160,000	160,000	170,000	950,000
Downtown Complex Remodeling	695,000	464,000	0	0	0	0	1,159,000
City Hall Restoration Program	2,500,000	5,000,000	5,000,000	5,000,000	5,000,000	0	22,500,000
Facility Systems Program	2,808,000	4,399,000	4,096,000	4,158,000	4,971,000	5,911,500	26,343,500
Facilities Exterior Program	1,108,000	1,900,000	934,000	1,381,000	1,089,000	1,000,000	7,412,000
ADA Compliance Program	408,000	484,000	510,000	544,000	550,000	570,000	3,066,000
Environmental Program	634,000	784,000	680,000	688,000	699,200	712,000	4,197,200
Municipal Garages/Outlying Facilities Development Program	0	1,200,000	4,250,000	3,500,000	3,700,000	3,500,000	16,150,000
Major Capital Equipment ($50,000 or more)	3,080,000	3,172,400	3,267,572	3,365,599	3,466,567	3,570,564	19,922,702
Fringe Benefits - Buildings	484,000	484,000	484,000	484,000	484,000	484,000	2,904,000

	2002 ADOPTED BUDGET	2003 BUDGET PLAN	2004 BUDGET PLAN	2005 BUDGET PLAN	2006 BUDGET PLAN	2007 BUDGET PLAN	TOTAL SIX-YEAR PLAN
Grant and Aid	**$350,000**	**$0**	**$0**	**$0**	**$0**	**$0**	**$350,000**
Total City Funding	**$12,238,000**	**$18,776,400**	**$20,158,572**	**$20,042,599**	**$20,895,767**	**$16,709,064**	**$108,820,402**
Sub-Total - Buildings and Fleet	**$12,588,000**	**$18,776,400**	**$20,158,572**	**$20,042,599**	**$20,895,767**	**$16,709,064**	**$109,170,402**
TOTAL DPW - OPERATIONS DIVISION	**$13,750,062**	**$21,055,400**	**$21,693,572**	**$21,417,599**	**$22,975,767**	**$18,570,064**	**$119,462,464**
DPW - INFRASTRUCTURE SERVICES DIVISION							
Expansion of Capacity Sewers - Various Locations	$3,159,000	$2,909,000	$2,909,000	$2,909,000	$2,909,000	$2,909,000	$17,704,000
Development Out-Of-Program Agreement Sewer Program at Various Locations	500,000	500,000	500,000	500,000	500,000	500,000	3,000,000
Underground Conduit and Manholes Program Citywide	539,000	539,000	539,000	539,000	539,000	539,000	3,234,000
Major Bridge Program	2,116,000	2,076,000	2,332,000	1,986,000	2,082,000	2,092,000	12,684,000
**********Grant and Aid**********	5,566,000	4,180,000	2,059,000	2,844,000	1,893,000	6,658,000	23,200,000
Street Improvements - City Portion of State and/or Federal Aided Projects	6,146,602	11,311,950	3,867,033	4,323,350	3,724,633	2,881,700	32,255,268
**********Grant and Aid**********	17,573,373	23,145,050	10,163,633	15,501,150	9,504,033	10,811,300	86,698,539
New Street Construction	851,000	451,000	451,000	451,000	451,000	451,000	3,106,000
Street Reconstruction and Resurface	3,817,000	8,217,000	5,092,000	7,092,000	5,092,000	7,092,000	36,402,000
**********Grant and Aid (CDBG)**********	150,000	0	0	0	0	0	150,000
Alley Reconstruction and Resurface	1,479,000	3,879,000	2,679,000	2,679,000	2,679,000	2,679,000	16,074,000
Sidewalk Replacement Program (Contract and Scattered Sites)	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000	1,850,000	11,100,000
New Streets - Developer	400,000	400,000	400,000	400,000	400,000	400,000	2,400,000
Street Lighting Program - Citywide	6,704,000	6,284,000	6,534,000	6,734,000	6,884,000	6,609,000	39,749,000
Emergency Response Management - Opticom Program	147,000	147,000	0	0	0	0	294,000
Traffic Control Facilities - Citywide	677,000	682,000	697,000	707,000	707,000	707,000	4,177,000
Underground Electrical Manholes (Communication, Traffic Control, Street Lighting) Reconstruction Program	221,000	221,000	221,000	221,000	221,000	221,000	1,326,000
Major Capital Equipment ($50,000 or more)	100,000	100,000	100,000	100,000	100,000	100,000	600,000
Grant and Aid	**$23,289,373**	**$27,325,050**	**$12,222,633**	**$18,345,150**	**$11,397,033**	**$17,469,300**	**$110,048,539**
Total City Funding	**$28,706,602**	**$39,566,950**	**$28,171,033**	**$30,491,350**	**$28,138,633**	**$29,030,700**	**$184,105,268**
TOTAL DPW - INFRASTRUCTURE SERVICES	**$51,995,975**	**$66,892,000**	**$40,393,666**	**$48,836,500**	**$39,535,666**	**$46,500,000**	**$294,153,807**
BUDGETED GRANT AND AID	**$25,619,373**	**$28,925,050**	**$14,722,633**	**$19,145,150**	**$14,697,033**	**$19,069,300**	**$122,178,539**
SUBTOTAL CITY - FUNDED CAPITAL PROJECTS	**$102,842,313**	**$97,973,593**	**$97,845,184**	**$99,453,356**	**$98,222,074**	**$97,158,747**	**$593,495,267**

	2002 ADOPTED BUDGET	2003 BUDGET PLAN	2004 BUDGET PLAN	2005 BUDGET PLAN	2006 BUDGET PLAN	2007 BUDGET PLAN	TOTAL SIX-YEAR PLAN
PARKING FUND							
4th and Highland - Concrete Sealer and Caulk Joint Renovation	$0	$400,000	$0	$0	$0	$0	$400,000
MacArthur Square I-43 Ramp Repair	422,000	0	0	0	0	0	422,000
Second and Plankinton - Traffic Membrane	0	217,000	217,000	0	0	0	434,000
Misc Mechanical Repairs and Upgrades	200,000	150,000	100,000	100,000	100,000	100,000	750,000
Structural Repairs to Various Structures	200,000	150,000	100,000	100,000	100,000	100,000	750,000
Replace Revenue Control Equipment - Four Structures	0	940,700	0	0	0	0	940,700
MacArthur Square Remembrane Project	0	0	460,000	375,000	405,000	0	1,240,000
Milwaukee/Michigan Remembrane Project	0	0	335,000	0	0	0	335,000
1000 North Water Street - Membrane Replacement	0	0	193,000	0	0	0	193,000
1000 North Water Street - Joint Replacement	0	0	0	225,000	0	0	225,000
Fourth and Highland - Painting of Beams and Snow Chute	0	0	205,000	0	0	0	205,000
Milwaukee/Michigan Repainting	0	0	0	0	950,000	950,000	1,900,000
Fourth and Highland - Recaulking	0	0	0	0	0	475,000	475,000
Consolidated Facility for Parking Enforcement	0	1,600,000	0	0	0	0	1,600,000
TOTAL PARKING FUND	**$822,000**	**$3,457,700**	**$1,610,000**	**$800,000**	**$1,555,000**	**$1,625,000**	**$9,869,700**
DPW - WATER WORKS							
Distribution Water Main Program	$10,000,000	$11,000,000	$12,125,000	$13,310,000	$14,641,000	$16,105,100	$77,181,100
Development Out-Of-Program Agreement at Various Locations Throughout the City	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	1,200,000	7,200,000
Feeder Main Program	1,000,000	1,100,000	1,210,000	1,331,000	1,464,100	1,610,510	7,715,610
Linwood Plant Building Improvements	650,000	200,000	450,000	700,000	0	0	2,000,000
Linwood Plant Treatment Improvements	150,000	550,000	300,000	650,000	2,050,000	975,000	4,675,000
Howard Plant Building Improvements	200,000	400,000	0	500,000	0	0	1,100,000
Howard Plant Treatment Improvements	150,000	150,000	300,000	300,000	350,000	0	1,250,000
Pump Facilities Improvements	1,700,000	1,250,000	1,500,000	1,200,000	600,000	850,000	7,100,000
Storage Facilities Improvements	0	0	0	2,500,000	2,500,000	1,000,000	6,000,000
Meter Shop Improvements	0	250,000	200,000	300,000	0	0	750,000
TOTAL DPW - WATER WORKS	**$15,050,000**	**$16,100,000**	**$17,285,000**	**$21,991,000**	**$22,805,100**	**$21,740,610**	**$114,971,710**
DPW - SEWER MAINTENANCE FUND							
Sewer Debris Dewatering Sites	$0	$200,000	$0	$0	$0	$0	$200,000
Sewer Maintenance Relay Program	17,400,000	17,400,000	19,500,000	19,500,000	21,500,000	21,500,000	116,800,000
TOTAL DPW - SEWER MAINTENANCE FUND	**$17,400,000**	**$17,600,000**	**$19,500,000**	**$19,500,000**	**$21,500,000**	**$21,500,000**	**$117,000,000**
TOTAL GRANT AND AID	**$25,619,373**	**$28,925,050**	**$14,722,633**	**$19,145,150**	**$14,697,033**	**$19,069,300**	**$122,178,539**
TOTAL NON-GRANT	**$136,114,313**	**$135,131,293**	**$136,240,184**	**$141,744,356**	**$144,082,174**	**$142,024,357**	**$835,336,677**
TOTAL CAPITAL IMPROVEMENTS PLAN	**$161,733,686**	**$164,056,343**	**$150,962,817**	**$160,889,506**	**$158,779,207**	**$161,093,657**	**$957,515,216**

MILWAUKEE PUBLIC SCHOOLS

LINK TO STRATEGIC PLAN

Milwaukee's children are its future. Ensuring that the city's children receive the education and skills needed to compete in the job marketplace is critical to their survival as adults. Ensuring that Milwaukee's youth can keep the city economically competitive with other cities in the region, across the state, and throughout the U.S. is vital to Milwaukee's economic survival.

Although the City of Milwaukee does not play a direct role in educating children, the city does provide the Milwaukee Public Schools (MPS) with important assistance in meeting the capital improvement needs of the city's school district. Specifically, the city is required under state law to issue debt for Milwaukee Public Schools and make principal and interest payments on this debt. The debt issued by the city on behalf of the school district goes to help fund both building maintenance as well as expansion of capacity projects. By funding MPS' capital program, the city plays an important role in helping the district provide students with efficient and safe school facilities.

The specific strategic goal which the city's contribution to the MPS capital budget helps to achieve is the one which states: to foster an environment that will recognize the importance of lifelong learning, focus on the educational needs of children, and provide Milwaukee's youth with the skills needed to obtain a job, pursue additional training, or go on to college. The mere fact that one of the City of Milwaukee's six strategic goals is dedicated to the issue of education, despite the fact that it is not the primary governmental entity entrusted with running the city's school system, shows the great importance placed on the issue by city officials.

ASSESSMENT CRITERIA

The primary assessment mechanism utilized by Milwaukee Public Schools and the City of Milwaukee to determine the district's capital needs is the Cyclical Major Maintenance Program. This innovative program, most recently published in 1999, was developed in response to the need for a proactive and long-range approach to major maintenance projects at MPS facilities.

The Cyclical Major Maintenance Program addresses the replacement needs of 37 primary components over a 40 year period that began on January 1, 1999. It encompasses 200 Milwaukee Public Schools facilities including 155 school buildings, 8 office buildings, and 37 recreational buildings. The program does not, however, contain information about minor, seasonal, and/or as-needed-basis maintenance activities that are funded out of the schools' operating budget.

STATUS OF THE PROGRAM

As described above, the Cyclical Major Maintenance Program outlines replacement needs for 37 primary components of MPS facilities. The document further breaks down the condition of these assets into four specific rating categories: poor, fair, good, and excellent. A brief description of what constitutes each of these ratings is provided below:

Poor Condition:

Over 50% of components are in substandard condition and/or have failed.

At end of service life, fails to meet functional requirements.

Requires excessive and constant attention and major corrective repair.

Fair Condition:

25% to 50% of components are in substandard condition and/or have failed.

Between the middle and end of service life.

Requires some corrective repair and attention.

Good Condition:

Less than 25% of components are in substandard condition and/or have failed.

Between the beginning and middle of service life.

Requires only routine maintenance or minor repair.

Excellent Condition:

Components are new or easily restorable to "like new" condition.

At beginning of service life.

Requires only minimal routine maintenance.

Table 41

Cyclical Major Maintenance Program
Component Rating System (as of June, 2001)

Building Component	Poor	Fair	Good	Excellent
Air Balancing	24%	20%	23%	33%
Air Conditioner - Central	43%	38%	5%	14%
Boilers	23%	37%	16%	24%
Carpeting	10%	20%	68%	2%
Chillers	30%	31%	13%	26%
Chimneys - Masonry	12%	32%	42%	14%
Coils/Univents	23%	48%	23%	6%
Condensate Receivers	36%	20%	24%	20%
Cooling Tower And Pumps	35%	15%	10%	40%
Curtains - Stage/Gym	4%	53%	31%	12%
Dampers/Actuator	10%	26%	25%	39%
Door Hardware	13%	24%	7%	56%
Doors - Exterior	21%	52%	20%	7%
Elevator	8%	26%	52%	14%
Emergency Generators	9%	76%	12%	3%
Energy Management System	16%	51%	26%	7%
Gym Floor - Resilient	40%	60%	0%	0%
Lighting Panels - Stage	13%	41%	14%	32%
Lockers - Corridor	22%	41%	24%	13%
Lockers - Gym and Team	18%	46%	17%	19%
Painting - Exterior	23%	16%	35%	26%
Parapet Walls - Masonry	24%	26%	20%	30%
Parking Lot - Asphalt	9%	74%	15%	2%
Parking Lot - Concrete	4%	69%	12%	15%
Playground - Asphalt	8%	58%	22%	12%
Pool Bulkhead	0%	83%	17%	0%
Pool Filtration System	4%	39%	22%	35%
Pool Piping	19%	44%	31%	6%
Roof	38%	17%	17%	28%
Tank - Domestic Hot Water	7%	53%	20%	20%
Tennis Court	29%	31%	20%	20%
Tot Lot	12%	13%	39%	36%
Track - Athletic	17%	41%	0%	42%
Traps/Valves/Compressors	13%	43%	6%	38%
Vacuum Pumps	21%	15%	13%	51%
Vehicle	21%	24%	29%	26%
Window Assemblies	27%	36%	13%	24%
Average Rating:	**19%**	**39%**	**21%**	**21%**
Average Rating June 2000	21%	40%	21%	18%
Average Rating January 1999	22%	42%	21%	15%

Note: Conditions are based on funding received through June 2001.

Table 41 shows the rating breakdown of each component category as of June, 2001. The average component rating for the MPS Major Maintenance Program overall was 19% Poor; 39% Fair; 21% Good and 21% Excellent. Over the last two years, the overall component ratings have steadily improved.

In addition to utilizing the Cyclical Major Maintenance Program for capital planning direction, the city and MPS are also currently in the final year (2002) of a six-year capital plan which was adopted by the Milwaukee Board of School Directors in 1996. This plan outlined a series of major renovation/expansion projects as well as major maintenance activities which the city and school district together would fund. During 2002, construction will be completed on the Bradley Technical High School.

SIX-YEAR PLAN

A total of $59.5 million will be allocated to MPS capital needs over the next six years (see Table 42). Of this aggregate amount, $2.5 million will go to the private/public partnership that was formed to fund the construction of the Bradley Trade and Technical High School (formerly Milwaukee Tech).

During the plan, $2 million is provided annually for ADA improvements at MPS facilities. MPS is responsible for paying the debt service on this amount.

The plan also calls for the city's commitment to fund approximately $7.5 million per year in deferred maintenance and certain special remodeling projects district wide.

Table 42

2002-2007 Capital Improvements Plan for Milwaukee Public Schools

Project Title	2002 Budget	2003 Plan	2004 Plan	2005 Plan	2006 Plan	2007 Plan	Six-Year Plan
Maintenance/Remodeling	$7,500,000	$7,500,000	$7,500,000	$7,500,000	$7,500,000	$7,500,000	$45,000,000
ADA Improvements	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000	12,000,000
Bradley Tech	2,500,000	0	0	0	0	0	2,500,000
TOTAL PROJECTS	$12,000,000	$9,500,000	$9,500,000	$9,500,000	$9,500,000	$9,500,000	$59,500,000

PROGRAM CHANGES AND INITIATIVES

As part of the 1999 biennial budget, the Wisconsin legislature adopted legislation authorizing $170 million in borrowing authority for MPS to build classroom space for the purpose of expanding the number of neighborhood school seats in the district and reduce the number of MPS students that are involuntarily bused within the school district. The capital portion of the Neighborhood Schools Plan totals $98.4 million. The debt for this initiative is to be issued through the Redevelopment Authority of the City of Milwaukee.

In September 2000, the Board of School Directors submitted a report on the Neighborhood Schools Plan to the Joint Committee on Finance and the Senate and Assembly Education Committees. The report included the following:

A strategy for achieving the reduction in involuntary busing as set forth in the act;

A facility plan specifying neighborhood schools that are needed, the locations of specialty schools, and the estimated cost of the plan;

Other means by which the pupil capacity of neighborhood schools will be expanded, which could include remodeling and use of nontraditional facilities;

Specific plans for establishing neighborhood schools and replicating or relocating specialty schools in order to increase the number of pupils attending neighborhood schools; and

A description of alternative settings, which are in compliance, that will be used for educating pupils.

Inventory of Capital Assets

As of December 31, 2001

Miles of Street	
Freeways	40.1
State Highways	25.7
State Maintained Roads	7.0
County Trunk Highways	25.7
County Park Roads	21.7
Harbor and Water Department Roads	1.5
Arterials	279.5
Collectors	72.2
Locals	943.3
Bridges (Number)	217.0
Miles of Alleys	415.0
Miles of Sewers	
Storm	953.0
Sanitary	934.0
Combined	546.0
Miles of Sidewalk	2,200.0
Fire Stations (Number)	36.0
Police Stations (Number)	7.0
Public Libraries (Number)	13.0
Recreational Facilities (Number, Includes MPS)	277.0
Miles of Water Mains	1,953.4
Pumping Stations	
Major	3.0
Booster	11.0
Lights	
Street	66,419.0
Alley	8,790.0
Traffic Controls	
Signs (Number)	100,904.0
Signals (Number)	720.0
Controllers (Number)	706.0
Pavement Markings (Miles)	311.0
Crosswalks (Number)	1,688.0
Tax Incremental Districts (Number)	42.0