Capital Budgeting for Municipalities

Presented by
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Presenters
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The “Municipal Business” Is Very Capital/Asset Intensive

• Examples
  – Water & Wastewater – extensive infrastructure
  – Fire Protection – hydrants, stations, vehicles, equipment, communication systems
  – Police Protection – station, vehicles, communication systems
  – Streets – extensive infrastructure, snowplows, sweepers
  – Etc.

All require LOTS of infrastructure & equipment (i.e. capital)

. . . Capital/Assets Combined with “Infrastructure Crisis” Creates Challenges . . .

Introduction

American Society of Civil Engineers (ASCE) 2005 Report Card for America’s Infrastructure

America’s Infrastructure GPA

ND’s ASCE Report Card

Bridges – 24% of bridges are structurally deficient or functionally obsolete
Dams - 17 state-determined deficient & 20 high hazard dams (failure = loss of life & significant property damage).
Rehabilitation cost for most critical dams is $25.7M.

Drinking Water - Infrastructure needs $490M over next 20 yrs.
Wastewater - $52M in wastewater infrastructure needs (low)

Solid Waste - Generates 1.01 tons of solid waste per capita. Recycles 3.4% of state’s solid waste.

Schools - 49% have at least one inadequate building feature. 62% have at least one unsatisfactory environmental condition.

Introduction

Other National Indicators

EPA WIN REPORT

WEF

There’s no doubt that in the years ahead America’s water infrastructure faces some serious challenges."
— Gov. Christie Todd Whitman, S.E. EPA
Infrastructure Challenges

Local Example – Large Municipality

City of Fargo

- Water Supply Shortage: Red River Valley Water Supply Project
- Water System Capital Improvements: $250M
- Wastewater System Capital Improvements: $250M
- Streets: $10M/YR.

Local Example – Small Municipality

City of Langdon

- Water Treatment Plant Improvements: $850,000
- Water Treatment Plant and Residuals Management Improvements: $3,000,000
- Main Street Improvements: $3,200,000
- Seal Coating and City Street Overlay: $300,000
- City-Wide Pavement Repair and Improvements: $1,450,000
- Total 1995 to the present: $8,800,000

Need for Capital Budgeting

- Capital Improvements are Costly
- Debt Financing Typically Needed
- Occur Over Extended Period of Time
- Multiple Capital Improvements are often Required Simultaneously

How Do We Manage These Challenges?

This is why we’re here!

System Challenges

- Problem → Solution → Costs
  - Aging Infrastructure
  - Growth/Expansion
  - Regulatory Compliance
  - Increase Reliability & Security
  - Increase Productivity & Efficiency
  - Financial, Legal, & Political

Aging Infrastructure

- Cast Iron Water Main
- Clay Sewer Pipes
- Water Treatment Plant Media Replacement
- Wastewater Lagoon Dredging
- Street Deterioration
- Vehicles (police, fire, etc.)
- Buildings
Growth/Expansion

Examples

- Low Water Pressure (ends of system)
- Collection System Overflows
- Capacity Upgrades
- Traffic Signals
- New Landfill
- Another Police Car/Fire Truck
  (e.g. Moorhead, MN: 2 new fire trucks = $1M)

Regulatory Compliance

Examples

- Drinking Water Treatment
  - Long Term 2 Enhanced Surface Water Rule
  - Stage 2 Disinfection By-Products Rule
  - Groundwater Rule
  - Arsenic Rule
- Wastewater
  - Peak Wet Weather Flow By-Pass Rule
- Security Requirements
- Other . . .

Reliability & Security

Examples

- New Pumps/Pump Replacement
- Cast Iron Pipe
- Water Tower Maintenance
- Technology Upgrades
- Fencing
- Access & Overflow Structures on Water System
- Chemical Vulnerability

Productivity & Efficiency

Examples

- Properly Functioning Equipment
- Functional Facilities
- Control Systems
- Automation
- Overcoming staffing shortages

Financial, Legal, & Political

- $$$ don't grow on trees
- Who benefits from improvements?
- “Utilities should be self-sufficient”
- Environmental activist challenges
  (e.g. Moratorium on wastewater permits in Minnesota)
- Divided councils/commissioners
- Other . . .

Overcoming These Challenges

How do we overcome these challenges while operating an efficient, healthy municipality?

√ Identify Solutions
√ Quantify Costs
√ Prioritization of Challenges
√ Start with Proper Planning
Planning
(According to Webster)

1. A detailed scheme, program, or method worked out beforehand for the accomplishment of an objective
2. A proposed or tentative goal
3. A systematic arrangement of details; an outline or sketch

Long-Term Planning Perspective

- Proactive Municipal Service
- Financial Planning
- Capital Improvement Planning
- Master Planning
- Strategic Planning

Strategic Planning

The blueprint that defines the municipal policies, municipal activities, and municipal resource allocation required for meeting objectives.

What is Your Municipal Strategy (Mission)?

- Reliable Customer Service
- Minimize Cost of Service/Customer Rates
- Minimize Property Taxes
- Preventative Maintenance of Aging Infrastructure
- Infrastructure Replacement
- Prepare for Expansion
- Prepare for New Regulations
- Best of Class

Strategy Will Be Different Within Municipality and from Municipality to Municipality

- Public Works
- Police & Fire Protection
- Administration
- Large – Medium – Small
- Age
- Condition
- Rate of Growth
- Population Demographics/Needs

Strategy Will Change With Time

- Size of Municipality
- Age of Infrastructure/Equipment
- Condition of Infrastructure/Equipment
- Rate of Growth
- State of Regulations
- Mindset of Staff
- Financial Condition
- Attitude of Policy Makers
1. The orderly planning of a municipality’s future
2. Identifies the present and future needs and direction for developing the municipality

Master Planning Considerations
- Strategy (Mission)
- Assessment of Existing System Components and Service Area
- Long-range Projections of Area To Be Served
- Planning Periods of the Various Facilities/Infrastructures
- Present and Future Demands/Loads
- Regulatory Requirements

Planning Horizons
- 10 to 50 Years Plus
- 10 to 15 More Common for Equipment
- 50+ More Common for Major Structures and Underground Utilities
- 20 Years Is a Common ND Planning Horizon
- Must be a “Living Document”

Master Plan . . .
. . . often serves as the framework for a capital improvements plan.

Capital Improvement Plan (CIP)
*What is it?*
- Single or Multi-year plan for infrastructure improvements prioritizing….
- Major Infrastructure, building, and equipment needs

Capital Improvement Planning Considerations
- Define Service Levels and Customer Needs
- Physical Facilities (what is needed to meet service levels)
- Financial Resources
  - Customers’ ability and willingness to pay for new facilities
  - Return on Investment (risk)
  - Review of financing alternatives (impacts to rates and financial performance)
What Does a CIP Tell You?

- Description of Needs (Challenges & Solutions)
- Estimated Costs (Current & Indexed Costs)
- Prioritized List of Improvements
- Implementation Timeline

Purpose of CIP:
1. Assists in Identifying Existing and Future Needs
2. Assists in the Financial Planning for Large Scale Improvements or Equipment Purchases
3. Assists in the Prioritization of Improvements
4. Improvements Completed within Context of Plan – Proactive vs. Reactive
5. Assists in the Development of Funding of Improvements
   - Cash/Reserves
   - Grants
   - Loans/Bonds
6. Assists in Justification of the Improvements
   - To Policy Makers
   - Users

Capital Improvements Plan

What’s it for?

Elements of CIP

- Description of Project or Purchase
- Presented in Prioritized Order
- Estimated Costs in Current Dollars
- Proposed Timeline for Completion
- Estimated Costs in Future Dollars

Prioritizing Capital Needs

1. Considerations
   - Availability of Funds
   - Health/Safety/Welfare
   - Legal Compliance
   - Political Environment
   - Social Needs

2. Analytical Techniques
   - Net Present Value
   - Rate of Return
   - Pay Back Period
   - Simple Cost Analysis
   - Cost/Benefit Analysis
   - Net Cash Flow

Capital Improvements Scope

1. Facility Specific
2. Utility or Service Specific
3. City – System Wide
<table>
<thead>
<tr>
<th>YEAR</th>
<th>PROJECT</th>
<th>ESTIMATE OF COST</th>
<th>SOURCE OF FUNDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001 - 2002</td>
<td>Water Plant SWTR Impr.</td>
<td>$800,000</td>
<td>SRF Loan</td>
</tr>
<tr>
<td>2002 - 2003</td>
<td>Seal Coat &amp; Overlay</td>
<td>$300,000</td>
<td>G.O. Bond</td>
</tr>
<tr>
<td>2003 - 2004</td>
<td>City Pavement Impr.</td>
<td>$1,450,000</td>
<td>G.O. Bond</td>
</tr>
<tr>
<td>2002 - 2005</td>
<td>WTP Residuals Impr.</td>
<td>$3,000,000</td>
<td>SRF Loan</td>
</tr>
<tr>
<td>2006 - 2007</td>
<td>Main Street Impr.</td>
<td>$3,200,000</td>
<td>G.O. Bond</td>
</tr>
</tbody>
</table>

**Capital Improvements Program**
City of Langdon

**Financial Strategies**

- Strategies for Capital Facilities

**Capital Planning for Municipalities**

- Time for a Break!

**Need for Capital Budgeting & Financial Planning**

- Capital projects & equipment are expensive
- A lot of money at stake
- Debt financing is often needed
- Future citizens will pay/finance
- Major projects take years to plan, finance, & build. (Williston example)
- Capital budget can help identify & plan
  - Renovation & replacement projects
  - New facilities & infrastructure to meet or spur growth

**Role of Financial Planning**

- Allocate Costs to Appropriate Users
- Provide a Financial Tool for Decision Making
- Ensure Financial Viability
- Utilize as a Capital Planning Tool
- Utilize as a Strategic Planning Tool
- Use as a Basis to Develop and Minimize Taxes & User Fees
- Communicate with Customers
Financial Planning Considerations

Multiyear Planning Horizon

Risk-Benefit Relationship

Equitable Recovery of Financing Costs

Effects on Rates

How Do I Develop A Financial Plan?
Take A Systematic Approach

1. Set Capital Budgeting Policies
2. Organize (calendar, assign responsibilities, CIP, costs, scope, etc.)
3. Identify Capital Needs
4. Develop Criteria for Prioritizing Capital Needs
5. Identify Sources of Funding (grants, loans, bonds, taxes, etc.)
6. Develop Financing Strategies (establish payback periods)

How Do I Develop A Financial Plan?
Take A Systematic Approach

7. Set Capital Reserve Policies (required by USDA RD and SRF)
8. Identify and Earmark Revenue (do all revenues end up in the general fund?)
9. Set Debt Management Policies (how much can we take on?)
10. Set Project Authorization/Appropriation Policies (who can authorize/appropriate expenditures?)
11. Set Project Delivery System Policies (direct purchases vs. request for proposals)

Elements of Financial Planning

1. Risk to Benefit Management:
   • I.E. Short-Term vs. Long-Term Debt
   • Benefit: Lower Interest Rates
   • Risk: Refinancing may be at Higher Rate
2. Multi-year Planning:
   • Ensure Financing is Available
3. Effects on Rates:
   • Minimize Impacts of Customer Rates
   • Avoid Financing that causes Rate Volatility
4. Consider All Financing Options (Taxes, Bonds, Loans, Grants, User Fees)
5. Equitable Recovery of Financing Costs:
   • Existing customers should not pay more than future customers (and vice versa)
   • Intergenerational Equity – Debt distributed so current/future customers pay only for the portion that benefits them

Other Capital Financing Considerations

• Fund recurring capital needs from operating budget
• Maintain adequate operating fund balances
• Create & fund capital reserves
• Using variety of suitable debt instruments (balance debt & pay-as-you-go capital financing)

Operating Budget VS. Capital Budget

Less costly & recurring capital spending
Major, non-recurring project/acquisitions

Capital Expenditure

... spending of significant value, e.g., $50K or more for infrastructure or assets with a useful life greater than one year.
Other Financial Planning Elements

Need for Adequate Cash on Hand

- Typically 45 to 120 days O&M expense (Calculated based on float)
- Emergencies
- Minimize impact of seasonal revenue instability

Need for Reserves

- Minimize rate impact of major capital projects
- Proactive approach to major repairs
- Minimize impact of extreme weather conditions (drought, etc.)
- Debt service requirements

Methods of Financing Capital Projects

- Grants
- Revenue Bonds
- General Obligation Bonds
- SRF Loans
- Direct Financing (via Market)
- System Development Charges
- Sales Tax
- Rates
- Tax Incremental Financing (TIF)

Revenue Bonds

- Backed by User Fees
- Reserve Required (Typical 1 to 2 years debt)

Typical Rule:

\[
\text{NET REVENUES} > 120\% \text{ Annual Debt Service}
\]

- Max Term = 40 years (20 to 30 years more typical)
- Municipality can Adjust User Fees
- Issue for $1M+
- Only Large ND Cities Have Bond Rating (costly)
- Small ND Cities can use “A”- Rating from Bank of North Dakota
- ND Public Finance Authority (Tim Porter 701-328-7120) can Borrow Directly to City via “Capital Financing Program” (i.e. $90,000)

G.O. (Improvement Bonds)

- Backed by special assessments
- May not require reserve (guarantee)
- Guarantee = Deficiency Tax
- Example of Guarantee:
  - $2000/House $200/year
  - House “X” does not have to pay (city can confiscate property)
  - Deficiency tax issued to others
- Hearing required to set user fees
- Issue for $1M+
- Term: Up to 20-years (typical)
- Lenders like G.O. Bonds (strong guarantee)

Common Grants

1. CDBG
2. Rural Development (USDA)
3. STAG
4. MR&I
5. HUD
6. Other (Pancake Breakfasts)

Note: Any combo > $500,000/year requires an audit
Historical Bond Interest Rates

<table>
<thead>
<tr>
<th>Date</th>
<th>Interest Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/8/1970</td>
<td>2%</td>
</tr>
<tr>
<td>1/8/1972</td>
<td>4%</td>
</tr>
<tr>
<td>1/8/1974</td>
<td>6%</td>
</tr>
<tr>
<td>1/8/1976</td>
<td>8%</td>
</tr>
<tr>
<td>1/8/1978</td>
<td>10%</td>
</tr>
<tr>
<td>1/8/1980</td>
<td>12%</td>
</tr>
<tr>
<td>1/8/1982</td>
<td>14%</td>
</tr>
<tr>
<td>1/8/1984</td>
<td>16%</td>
</tr>
<tr>
<td>1/8/1986</td>
<td>18%</td>
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<tr>
<td>1/8/1988</td>
<td>20%</td>
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<td>1/8/1990</td>
<td>22%</td>
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<td>1/8/1994</td>
<td>26%</td>
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<td>1/8/1996</td>
<td>28%</td>
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<tr>
<td>1/8/1998</td>
<td>30%</td>
</tr>
<tr>
<td>1/8/2000</td>
<td>32%</td>
</tr>
<tr>
<td>1/8/2002</td>
<td>34%</td>
</tr>
<tr>
<td>1/8/2004</td>
<td>36%</td>
</tr>
</tbody>
</table>

SRF (Federal & State Funds)
- Issued as Bond (below market rates)
- Can be revenue or improvement bonds
- Backed by user fees (or special assessment)
- Apply to get on “IUP” (and obtain bond counsel)
  1. Application must be approved by:
     - Bond Bank
     - Financial Advisor
     - Bank of North Dakota (Trustee)
     - Industrial Commission
  2. Complete Bond Documents
  3. Request Draws
- Reserves Required
- Annual Audits

SRF Repayments
- Make Principal Payment within 12-months of completing construction
- March 1st – Pay interest & admin fees
- September 1st – Principal, Interest, & Admin fees
- Typical ND terms of 20 year pay back with 3% interest rate

Contact Information
- ND Public Finance Authority
  - PO Box 5509
  - 700 E Main Avenue
  - Bismarck, ND 58506-5509
  - 701-328-7100 or 1-800-526-3509
  - Fax: 701-328-7130
  - ndmbb@state.nd.us/bondbank

Contact Information
- Scott Wegner
  - Cook Wegner & Wike PLLP
  - 3801 Lockport Street
  - Suite 1
  - Bismarck, ND 58501
  - 701-255-7100 or 1-888-417-5213
  - ccw@ccwbondlaw.com
**Capital Project Delivery Methods**

- Specify/Contract
- Design/Specify/Contract
- Design/Bid/Build (Traditional or Enhanced)
- Construction Management Options*  
- Design/Build*
- Design/Build/Operate (Privatization)*  

* Not Available to ND Municipalities (yet)

**Capital Project Delivery Goals**

1. Ensuring the quality of the designed and constructed project
2. Controlling life-cycle costs (capital and long-term O&M)
3. Creating a project that will permit effective & efficient O&M
4. Completing the project within the required schedule

**Capital Project Delivery Issues**

- Degree of Utility Control
- Quality of Completed Project
- Capital & Operating Costs & Efficiencies
- Schedule
- Risk Management & Allocation
- Legal Authority
- Internal & External Influences
- Utility Experience
- Market Share Availability & Adaptability
- Labor-Management Relationships

**Design-Bid-Build - Cont.**

- Project control: client participates in selecting designer/architect
- Client selection: general contractor, architect, and engineer
- Project control: client participates in selecting designer/architect
- Construction management: general contractor

**Construction Management at Risk**

- Client: manages project
- Contractor: manages project
- Risk: project management
- Challenges: communication, schedule, budget

*Not Available to ND Municipalities (yet)*
## Construction Management at Risk - Cont.

<table>
<thead>
<tr>
<th>Fundamental Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Risk and/or liability transferred</td>
</tr>
<tr>
<td>- Not limited by qualifications or qualifications level</td>
</tr>
<tr>
<td>- Not limited to life cycle</td>
</tr>
<tr>
<td>- Goal of bid to develop project rather than prepare bid</td>
</tr>
<tr>
<td>- Amount of control over project execution</td>
</tr>
<tr>
<td>- Construction and other legal issues</td>
</tr>
</tbody>
</table>

- Limited liability can be transferred to owner or to contractor.
- Option to use subcontractor with dual contract.
- Inability to define accurate cost and scope.
- Substantial delays can be difficult to recover.

- Assigned to general contractor.
- Assigned to general contractor in the owner can not multiple prime contracts (i.e., prime contracts, master contracts).
- A benefit can be realized by an agency relationship to coordinate the process.

## Design - Build

### Fundamental Approach

- Design-build/early design and construct
- Design-build/engineering provided by owner or consultant
- Design-build/early design and construct are not identical
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- Design-build/early design and construct are not identical
- Design-build/early design and construct are not identical

- Cannot be used for infrastructure projects.
- Design-build/early design and construct are not identical
- Local government may be part of package.
- Design-build/early design and construct are not identical
- Design-build/early design and construct are not identical
- Design-build/early design and construct are not identical

### Challenges

- Primary risk on infrastructure projects.
- Design-build/early design and construct are not identical
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### Life Cycle

- Identification of Need
- Study
- Decision
- Design
- Construction
- Operation
- Warranty
- Bidding

### Design – Build - Operate

- Fundamental Approach

- Design-build/early design and construct
- Planning/programming prepared by owner or consultant
- Design-build/early design and construct are not identical
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Preliminary Reports

- Concept Plans
- Master Plans
- Capital Improvement Plans
- Preliminary Engineering Report
- Facility Plans
- Feasibility Study

Goals of Design Process

- Develop a cost effective, constructible, and successful construction project that meets the needs of the client
- Prepare Bid Documents
- Opinion of Probable Construction Costs
- Owner Approval to Advertise
- Review Agency Approval

Construction Documents

Main Components

- Project Manual
  - Bidding Requirements
  - Contract Forms
  - Contract Conditions
  - Specifications
- Drawings

Bidding Phase

- Publication of Invitation to Bid
- 21 days (minimum advertisement period)
- Open Bids
- Compilation of Bids
- Evaluation of Bids
- Engineer Award Recommendation

Larimore WTP Case Study

Schedule

- Study Phase
- 100% Design
- 90% Design
- 100% Detail
- Bidding Phase
- Substantial Completion
- Final Completion

Dates:
- Aug 2001
- Dec 2001
- Mar 2001
- Jun 2001
- Jul 2002
- Aug 2003
- Oct 2003
Construction Administration

- Prepare/Distribute Construction Contracts
- Conduct Pre-Construction Conference
- Review Shop Drawings
- Review Application for Payment/Change Orders
- Certify Substantial Completion/Final Completion
- Final Payment

Warranty

- Typically Extends One-Year From Substantial Completion
- Coordinate Correction of Deficient Work/Optimization
- Warranty Walkthrough
- Issue Final Acceptability of Work

Conclusion

The “Municipal Business” Is Very Capital/Asset Intensive

CONCLUSION

Capital Improvement Planning

- Capital improvements planning is a tool to help manage your challenges by identifying specific prioritized projects, including timing, estimated costs, and anticipated funding sources

Challenges → Solutions → Costs
CONCLUSION

Financial Planning
  • Financial planning...
    – provides a framework for decision making to meet the needs of your customers and a communication tool with customers
    – provides a communication tool with your customers to justify decisions and policies

CONCLUSION

Proper Selection of a Project Delivery Method
  • Ensures the quality of the finished projects or acquisitions
  • Controls life-cycle costs

Questions?