

Small City Capital Improvement Planning:
Design and Implementation

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Executive Summary

The significance of this case study is to (1) assist a small community in the implementation of a Capital Improvement Plan (CIP), and; (2) analyze the specific process for the implementation of a CIP in a small city.

The City Administrator of Onawa, Iowa (population 2,746) requested assistance from the University of Nebraska at Omaha Public Administration Program in completing the city's first Capital Improvement Plan (CIP). He believed the community would be better prepared for the future if a capital expenditure plan was created.

This provided the opportunity to answer the research question, how should a small city create a CIP, by comparing the actual process to the scholarly research. The analytical framework section outlines the academic research which focused on the following four areas: CIP participants, procedural steps, project prioritization methods, and funding options. These areas became the focus of the study, which strives to provide practical knowledge to the scholarly beliefs.

To compare the academic findings outlined in the analytical framework to the actual CIP process in a small city, the researcher became the CIP Coordinator in Onawa, Iowa. This allowed the researcher to make observations and participate in the processes at the same time. Through this method the key findings for a small city's CIP include:

- 1) A city administrator, department director, finance representative, and a CIP coordinator are able to complete a CIP with citizen and legislative review upon completion;
- 2) The procedural steps, as outlined in the research, were relevant;
- 3) Experienced-based judgment was the most utilized prioritization method; and,
- 4) All financial options, as outlined in the research, were considered.

Upon completion of the Capital Improvement Plan in Onawa the following conclusions were prepared:

- 1) The responsibility of preparing a CIP in a small city should be shared by the chief executive, legislative body, planning agency, finance agency, various operating departments and citizen representatives;
- 2) The procedural steps outlined in the research should be utilized as a guide for the CIP;
- 3) Experience-based judgment and departmental ranking are the most relevant project prioritization approaches for a small city; and,
- 4) The different financing options, as outlined in the research, should all be considered during a CIP process.

It is believed an efficient and effective Capital Improvement Plan can be created for any small city if the conclusions outlined in this research paper are utilized.

Introduction

Capital projects are some of the most visible characteristics defining all sizes of cities and communities around the world. The appearance and functionality of streets, parks, sewer systems and equipment immensely impact a city's livability. To create a well-designed community it takes careful planning and financing by city officials and citizens.

The International City/County Management Association (ICMA) and the Government Finance Officers Association (GFOA) have both recognized the importance of capital expenditure planning. Each organization recommends the use of a Capital Improvement Plan (CIP) to drive and sustain local government capital projects. In the mid-1970's, GFOA first published its *Small Cities* book which has been credited with providing "greater significance" to capital improvement programming (Tigue, 1996, p. vii). ICMA simultaneously began publishing articles and books on the topic and has continued stressing the importance of creating a CIP. ICMA's new 2009 book titled "Capital Budgeting and Finance: A Guide for Local Governments," has a chapter dedicated to the creation of a Capital Improvement Plan (Marlowe & Rivenbark).

Scholars have argued towns and cities without CIP's are at a disadvantage because there are no mechanisms in place to forecast all potential capital projects simultaneously. When project forecasting is conducted, long-term appropriations and expenditures are examined. This assists in determining the impacts on future annual budgets and possible cost saving practices (Vogt, 2004).

The advantages of the CIP process have been recognized by all sizes of communities across the nation. Large United States cities have written and maintained their CIP's for a couple of decades. Many small communities, on the other hand, are just beginning to acknowledge the need for such a plan.

The City Administrator of Onawa, Iowa (population 2,746) requested assistance from the University of Nebraska at Omaha Public Administration Program in completing a CIP. This allows an opportunity for a study to be conducted on the actual process in a small city. Mr. Burks believes the community would be better prepared for the future if a capital expenditure plan was created. Without an adopted plan, potential cost saving practices and non-tax funding sources may be underutilized.

This project answers the research question: How should a small city create a CIP? This will be answered by assisting and analyzing Onawa's formal processes for capital project planning, which includes identifying priority projects by city officials, conducting financial analysis and scheduling the identified projects. This research will compare the actual creation of a CIP in a small city against the scholarly methods/models.

According to the Federal Highway Administration, 59.3 million people or 20.7% of the United States' population resides in communities with less than 2,500 residents (Census issues, 2004, p. 1). This stresses the importance of small communities to the field of public administration. The more researchers and practitioners know about the implementation of scholarly models, the better adapted

the models can become, ultimately making them easier to utilize. The significance of this project is to (1) assist a small city in the implementation of a recognized professional model (CIP), and; (2) analyze the specific processes for the implementation of a Capital Improvement Plan in a small city.

Analytical Framework

The City Administrator of Onawa, Iowa began contemplating the creation of a Capital Improvement Plan (CIP) in 2009 for the community. The town has never written this type of plan and many questions surfaced on how best to address the project. The scholarly discussions on capital improvement planning directly related to Onawa's questions. Who should be involved in the CIP process, what steps are needed, how should projects be prioritized, and what funding options are available will be analyzed. This will allow a comparison to be made of the scholarly research and the actual creation of a CIP.

CIP Participants:

The responsibility of preparing a CIP within the governmental body is shared by the chief executive, legislative body, planning agency, finance agency, and various operating departments. Each of these key stakeholders has to play an important role in the decision-making process. The planning agency's concern for long-range implications, the finance agency's concern with maximizing returns from individual projects, and the other department's wants and needs must be balanced (Steiss, 2005, p. 15).

During a CIP process Coughlin observed "Each group attempts to look at the program as a whole and make decisions about its parts. But, because of its particular function and position, each group sees the problems with a slightly different emphasis" (Coughlin, 1970, p. 3). This represents the difficulty some group members can have based on their personal feelings. These difficulties are justified since members of an individual operating department will be concerned with their efficiencies and view the entire CIP in terms of its impact on their own project requests. Steiss states this can cause departments to overemphasize the importance of their own requests when prioritizing projects. This is something that needs to be monitored to ensure all requests are reasonable (2005, p. 15).

Steiss further argues the chief executive must assume a position that places primary emphasis on middle-range objectives, falling somewhere on the "continuum between the short-range perspective of the finance agency and the longer-range viewpoint of the planning agency" (2005, p. 15). This assists in balancing the true needs for the municipality. The executive must also be particularly cognizant of the political consequences for capital expenditure decisions. The public directly holds the governing body accountable and it is imperative for the government officials to be aware of the public's concerns. The capital project decisions rest with the city administrator and ultimately the city council.

Elected and classified public employees alike must be stewards for citizens. Kee and Newcomer state, stewardship "involves creating a balance of power in an organization, establishing a primary commitment to the larger community, having each person join in defining purpose, and ensuring a balanced and equitable distribution of rewards" (2008, p. 30). This directly relates to the CIP process since capital projects require large amounts of tax dollars and debt. The

taxpayers therefore need some outlet to voice their opinions. As Mayor Ralph Becker of Salt Lake City, Utah stated in the video *Salt Lake Solutions*, government needs to act as the catalyst for community involvement. Interested individuals and groups that come together to help define the objectives, identify the resources and help identify what projects are important will think more positively about the plan and the process as a whole (2007).

Steiss and Vogt urge the importance of citizen involvement in the CIP process. Steiss believes the plan should include public hearings and the report should be made available to civic groups and interested citizens (2005, p. 132). Vogt agrees with Mayor Becker and takes the citizens involvement a step further. Vogt states the decisions in a "CIP are often substantial and carry long-term implication, involving citizens can help ensure that the projects selected are valued by the community and that citizens understand the need for issuing debt and levying taxes to finance projects" (2004, p. 71). When citizens do not understand projects it can take even more time and effort when compared to allowing them to be a part of the process from the beginning.

It is not believed Kee and Newcomer, Vogt, Steiss, and Mayor Ralph Becker want public officials to solely make decisions based on public interest (2008; 2004; 2004; 2007). Public officials and key personnel may have a better professional understanding of the long range impacts of capital planning and budgeting. There however needs to be dialog with the public; the questions of whom, what, and why all need to be critically analyzed and answered (Kee and Newcomer, 2008, p. 7). While government employees from many different agencies or departments are needed to make the professional decisions, scholars definitely believe citizens should have a role in the plan as well.

CIP Procedural Steps:

In 1978 the Municipal Finance Officers Association of the United States and Canada completed one of the first Capital Improvement Plan manuals under a grant from the National Science Foundation. The manual, *A Capital Improvement Programming Handbook for Small Cities and Other Local Governmental Units*, while out-dated, provides a starting point at how a CIP should be written in a small community. The document states the capital improvement process is built around the following seven steps: 1) establish the administrative and policy framework for the CIP process; 2) prepare an inventory of existing facilities; 3) determine the status of previously approved projects; 4) perform financial analysis and financial programming; 5) compile and evaluate project requests by agencies; 6) adopt the CIP; and, 7) implement the CIP (Rosenberg and Stallings, 1978, p. 2).

The Municipal Finance Officers Association of the United States and Canada's steps are relevant today and are discussed in more current literature. Coe writes about the importance of completing an inventory of facilities as one of the first steps in a CIP process and ends with the adoption of the plan (2007, p. 196). Vogt similarly discusses the starting point of a CIP in the broad category of formulation, review, and approval of goals and policies. His model also discusses the review of requests, preparation of the recommended plan, and governing board review and approval of the CIP (2004, p. 68).

Tigue argues there should be additional steps included in the CIP process when compared to other literature. She states CIP's should be built around eleven steps, while the other scholars

discuss six or less steps (Coe, 2007, p. 196; Vogt, 2004, p. 68; Rosenberg & Stallings, 1978). The process, Tigie states, needs to continue beyond CIP implementation and include a process evaluation and monitoring of the capital projects during construction. These additional steps are important to a successful CIP process, she argues, because they allow the government to "...better anticipate changes that might impact the next year's CIP" (Tigie, 1996, p. 9).

While the additional steps are not acknowledged by the others, they are relevant to the CIP process. Capital projects can have major consequences with respect to cash and debt management objects. Routine monitoring of the approved capital projects helps to ensure they remain on schedule and within budget. Evaluation of the CIP process is also important, especially when a municipality is completing the plan for the first time. An evaluation can ensure changes are not required to improve the plan and allows the project participants a time to reflect on the process. Tigie states governments attempting to formulate a capital program for the first time should expect mistakes and problems to occur. Capital improvement programming is a dynamic process and changes do and should occur in the process from year to year (Tigie, 1996, p. 10).

CIP Project Prioritization:

A city's capital wants and needs cannot be completed all at once. Budgets have to remain balanced, federal and state guidelines have to be met, and projections of growth must be considered. Scholars have provided insight on different tools available to local governments for assisting in the determination of what projects should and should not be included in a Capital Improvement Plan (CIP). Since a CIP outlines all capital projects for a five to six year period it is imperative for cities to identify the most appropriate and acceptable projects for their constituents.

According to Vogt and Coe, in separate publications, there are five prioritization approaches used by governments to rank projects for a CIP and capital budget (Vogt, 2004; Coe, 2007). Each of the methods are significant to the research and acceptable when completing the CIP process. To determine the options available and which methods will assist a small community, each are briefly described in order of complexity.

Experienced-Based Judgment

Decision-makers utilize experienced-based judgment by subjectively prioritizing projects on the basis of their personal preferences. This approach is mostly used by small and medium sized units of local government and can be effective if the government officials are well informed. This method however is overly simplistic if there are multiple complex requests or a need to justify priorities (Vogt, 2004, p. 90; Coe, 2007, p. 197).

Departmental Ranking

The chief executive may be unfamiliar with the exact needs of each department and this approach allows the departmental officials to identify and rank their own priorities. Departmental staff are the frontline workers and this generally puts them in a good position to establish priorities for their area of expertise. The approach, while helpful to identify the needs of each department, requires the executive to determine the jurisdiction-wide priorities which can contradict the department's project list (Vogt, 2004, p. 91; Coe, 2007, p. 197).

Broad-Need Categories

Broad-need categories are utilized by grouping projects based on their level of need and benefit to the community. This can be accomplished by simply ranking the projects or can use a complex rating scale. This model is primarily used to rank projects jurisdiction wide (Vogt, 2004, p. 92; Coe, 2007, p. 197).

Urgency-of-Need Criteria

This approach focuses government prioritization on what "must" be completed first to alleviate the biggest problem or need. Urgency-of-need criteria is used to categorize projects based on legal mandates, eliminating public hazards, advancing governing board goals, improving efficiency, rehabilitating public facilities, and supporting economic growth. This method can be used by all sizes of governments and is something that should at least be considered, even if informally, while creating a CIP project list (Vogt, 2004, p. 94; Coe, 2007, p. 197).

Weighted Rating of Urgency-of-Need

This method utilizes the urgency-of-need criteria approach and adds to the complexity by assigning a maximum number of points for each urgency-of-need criterion (i.e. 15% for legal mandate). The projects are then ranked according to the amount of criteria they meet and the number of points they receive (Vogt, 2004, p. 97; Coe, 2007, p. 197).

CIP Financial Options:

Capital projects are an expensive and imperative part of government functions. Municipal capital projects can include roads, fire stations, water treatment facilities, recreational centers and utilities. These types of projects require meticulous planning and present special complications for decision makers. Complications can derive from political pressure, financial ability, and governmental mandates (Nice, 2002, p. 120; Bland & Rubin, 1997, p. 111; Rubin, 2006, p. 187; Wang, 2006, p. 21).

Mikesell states, "The government must keep its infrastructure development program within its financial capacity" (2007, p. 252). To complete this task scholars and practitioners have outlined many options available to municipalities. For the purpose of this study, eight options with the potential use in a small city are briefly discussed through the insight of scholarly research.

Pay-As-You-Go Financing

Pay-as-you-go financing involves paying for capital projects with cash on hand. These monies can be derived from surplus revenues, unreserved funds, and specific tax levies dedicated to capital improvements. Advantages of this method include no interest cost, no long-term obligations, and the ability to issue debt in the future. The disadvantages include possible insufficient funding for capital needs, unevenness in capital expenditures from year to year and discourages intergenerational equity (Tigue, 1996, p. 85; Nice, 2002, p. 121; Rosenberg & Stallings, 1978, p. 20).

Debt Financing

Long-term bonds that have a five year or more maturity are commonly used for capital expenditures. They allow governments to acquire assets as needed rather than waiting until a sufficient amount of cash has been accumulated (Joseph, 1994, p. 74). This allows the loan to be

paid back over a period of many years and enables the people who benefit from the project to help pay for it (Nice, 2002, p. 121).

The four types of bonds include general obligation bonds, revenue bonds, special assessment bonds, and tax increment financing bonds. Smaller governments most commonly issue general obligations bonds, which may be secured by an unlimited tax pledge. Revenue bonds are securities for which debt service payments are generated from a specific revenue source (i.e. a sales tax). Special assessment bonds are utilized when an assessment district is created to finance capital improvements in a certain area and are secured by special taxes levied on businesses and residences. Tax increment financing bonds (TIF) are utilized when a TIF area is defined and as the area undergoes revitalization the bonds are serviced by the incremental tax revenue generated within the district (Tigue, 1996, p. 88; Rosenberg & Stallings, 1978, p. 21).

Lease-Purchase Agreements

Lease-purchase agreements can be used for capital equipment and facilities. Local governments utilizing this method create specifications for a needed project and take steps to have it constructed by a private vendor or financial institution. The property or equipment is then leased over a certain number of years (Tigue, 1996, p. 90; Rosenberg & Stallings, 1978, p. 22).

Grants/State and Federal Aid

Grants are funding sources available to municipalities for a specific purpose or project. The funding does not have to be paid back, however matching funds may be required. Grants can be a good source of funding for capital projects (Tigue, 1996, p. 91; Rosenberg & Stallings, 1978, p. 23).

Impact Fees and Exactions

Impact fees and exactions are funds paid by developers for capital improvements associated with a new development. These fees are usually negotiated on a project-by-project basis and can include construction of water and sewer lines, land for public facilities and payments to help defer the construction of public assets needed to support the development (Tigue, 1996, p. 91).

Revolving Loan Programs

Revolving loan programs allow governments to receive new loans as other loans are repaid. They are initially setup by capitalizing a loan fund, which may be used by local governments to finance capital projects. They are often made at below-market rates of interest which makes them desirable to some municipalities (Tigue, 1996, p. 91).

Joint Financing

Counties and cities can partner together to fund projects that benefit both jurisdictions. City-county office buildings, sanitary landfills, and ambulance and fire services are possible areas the governmental agencies can finance together to meet the needs of the citizens (Rosenberg & Stallings, 1978, p. 23).

Public-Private Partnerships

There are many forms of public-private partnerships, including joint development, service contracts and franchise agreements. These partnerships can be created to achieve financial benefits that would otherwise not be possible (Tigue, 1996, p. 93).

Private Contributions

The private sector, in some cases, may be willing to donate capital assets or facilities to the government. Municipalities “should identify capital needs that could be donated by private businesses or individuals and seek out contribution in order to stretch capital dollars” (Tigue, 1996, p. 93).

Through the examination of scholarly research the questions of who should be involved in the CIP process, what steps are needed, how projects should be prioritized, and what funding options are available have been examined; setting the analytical framework for answering the research question. The insight of scholars can now be utilized throughout the planning, writing, and implementation phases of a CIP in a small city. This will allow a comparison to be made of the scholarly research and the actual creation and implementation of a CIP.

The difference between small and large municipal CIP processes was not found through the literature review. There was information related to small cities and many discussions believed to be acceptable for all local governments, however nothing was located that compared and contrasted the models based on size of local government. This is an area needing further research that would assist in the implementation of a CIP in all sizes of local governments.

Methodology

The analytical framework provided scholarly insight into who should be involved in the CIP processes, what steps are needed, how projects should be prioritized, and what funding options are available. Upon completion of the framework the research question, how should a small city create a CIP, remains unanswered. This study strives to find conclusive results and scholars disagreed on aspects of the creation and implementation of a CIP. To find results, qualitative data on a small city will be compiled through a case study conducted by a participant-observation research design (Weiss, 1998, p. 257).

For the purpose of this research a small city or community is defined as "a municipal corporation, but not including a county, township, school district, or any special-purpose district or authority," with a population of under 3,000 people (Iowa Administrative Code, Statute 362.2). According to the United States Census Bureau's 2008 population estimates Onawa, Iowa's has a population of 2,746 people, which meets the studies criteria.

Onawa has never written a CIP and this makes the city an ideal candidate for studying the true implications of the plan's creation. The small community requested assistance from the University of Nebraska at Omaha, therefore the case study through participant-observation design allows the research to be conducted while helping to facilitate the process. Weiss states, "... participant-observation is just what it sounds like: observation of a scene by a researcher who takes part in the activities and events. She engages in the activities that she is studying, but her

first priority is the observation" (1998, p. 257). In Family Health International's, *Qualitative Research Methods: A Data Collector's Field Guide*, it states, "participant observation is a qualitative method with roots in traditional ethnographic research, whose objective is to help researchers learn the perspectives held by study populations" (Mack, Woodsong, MacQueen, Guest, & Namey, 2005, p. 13). This design allows the researcher to get close to the action and the participants throughout the observation period. Conclusions can then be made from the actions of the individual group members and the group as a whole.

Hypotheses will not be provided in this study due to unfairness to the research. Meetings have taken place with Onawa's City Administrator, Utilities Superintendent, City Clerk, and the City Accountant to ensure the project was acceptable by all parties. The possible procedures in the creation of the CIP were discussed at these meetings, thus leading to preconceived notions by the researcher. This however does not suggest the study will be invaluable to the body of research. These meetings have allowed the city officials to become comfortable with the research and create an ideal opportunity for a participant-observation lead case study.

This study anticipates providing practical knowledge to the scholarly beliefs of creating and implementing a CIP. As outlined in the Analytical Framework section, scholars primarily focused on who should be involved in the CIP processes, the procedural steps, project prioritization methods, and funding options. The research question will be answered through the collection of data in each of these areas as the participant-observation design is implemented in the small city of Onawa.

Data collection techniques will include taking meticulous notes during the observations and writing about the experiences immediately following the observations. The data will be processed according to who was present and other meeting identifiers such as date, location, and time of day. Analysis will then be conducted through identifying the similarities and differences between Onawa's CIP processes and the methods discussed in the scholarly research. Each of the data points or data questions below will be answered and compared to the academic beliefs.

Data Points/Questions:

CIP Participants:

Data will be collected on each of the following questions related to Onawa's CIP participants. This data will then be analyzed and compared to the scholarly discussions as outlined in the analytical framework.

- 1) What parties were involved in the CIP processes?
- 2) What role did each person/position play in the CIP processes?
- 3) Did personal feelings mandate each person's/position's opinion on the CIP as a whole?
- 4) What type of citizen involvement took place in the CIP processes?
- 5) Were all of the stakeholders as outlined in the research necessary in the creation of a CIP for a small community?

CIP Procedural Steps:

Data will be collected on each of the following questions related to Onawa's CIP procedural steps. This data will then be analyzed and compared to the scholarly discussions as outlined in the analytical framework.

- 1) Was an administrative and policy framework established for the CIP process?
- 2) Was an inventory of existing facilities conducted?
- 3) Was the status of previously approved projects determined?
- 4) Was financial analysis and financial programming performed?
- 5) Were project requests compiled by agencies and evaluated?
- 6) Was the CIP adopted by the legislative body?
- 7) Was the CIP implemented?

Due to time constraints, Tigie's argument stating the CIP procedural steps should involve a process evaluation and the monitoring of the capital projects during construction will not be analyzed (Tigie, 1996, p. 9). Discussion of their importance will take place with the City Administrator of Onawa, since the project will have to conclude upon CIP adoption.

CIP Project Prioritization:

Data will be collected on each of the following questions related to Onawa's CIP project prioritization methods. This data will then be analyzed and compared to the scholarly discussions as outlined in the analytical framework.

- 1) Was experienced-based judgment utilized?
- 2) Was departmental ranking utilized?
- 3) Were broad-need categories utilized?
- 4) Were urgency-of-need criteria utilized?
- 5) Was the weighted rating of urgency-of-need utilized?

CIP Financial Options:

Data will be collected on each of the following questions related to Onawa's CIP financing methods. This data will then be analyzed and compared to the scholarly discussions as outlined in the analytical framework.

- 1) Was pay-as-you-go financing utilized?
- 2) Was debt financing utilized and what methods were included?
- 3) Were lease-purchase agreements utilized?
- 4) Were grants/state and federal aid utilized?
- 5) Were impact fees and exactions utilized?
- 6) Were revolving loan programs utilized?
- 7) Was joint financing utilized?
- 8) Were public-private partnerships utilized?
- 9) Were private contributions utilized?

Answering the questions in each of these research areas will provided the information necessary to make conclusive findings on how a small city creates a CIP. While this study strives to

provide insight into how CIPs are written in small cities across the United States, it must be acknowledged this case study only focuses on one community. This decreases the external validity compared to a study that researches the implementation of CIP's in many communities (Langbein, 2006, p 35). Due to time constraints this will remain an area in need of further study.

Nonetheless, this study will provide a direct comparison of how researchers believe a CIP should be conducted and how a small city actually completes the plan. It must be remembered the significance of this project is to (1) assist a small community in the implementation of a recognized professional model (CIP), and; (2) analyze the specific process for the implementation of a Capital Improvement Plan in a small city.

Findings

Through the participant-observation design and techniques outlined in the methodology section, qualitative data was collected during the creation of the Capital Improvement Plan (CIP) in Onawa, Iowa. The data points included the CIP participants, procedural steps, project prioritization methods, and the financing options used. The findings for each, as outlined through the questions posed in the methodology section, are below in table and narrative format. These findings will allow the research question to be answered in the conclusion section.

CIP Participants:

Table 1 illustrates the participants during the CIP process in Onawa, Iowa, their role in the CIP process, and if it was believed if their personal feelings mandated their opinions on the CIP as a whole.

Table 1: CIP Participants	Party Involved in the CIP Process	Role	Personal Feelings Mandated Opinions
City Administrator	Yes	City-wide Interest	Yes
Department Directors	Yes	Department Interest	Yes
Finance Representative	Yes	Financial Interest	Yes
CIP Coordinator	Yes	Coordinator	Yes
Citizen Representative	Yes	Limited	Yes
Legislative Body	Yes	Limited/Plan Approval	Yes

As Table 1 represents, in Onawa, Iowa, the CIP committee members included the City Administrator, Utility Superintendent, City Accountant, and the CIP Coordinator/Researcher and participant-observer. Each of the group members brought a different perspective to the table through their personal experiences and expertise. It became quickly apparent everyone was comfortable working together. The group dynamics were friendly and open to everyone's opinions, as each member took the appropriate role in the plan formulation.

The City Administrator took the most active role in the beginning of the three month process. It must be remembered, the City Administrator initially made contact with the University of Nebraska at Omaha Masters of Public Administration Program to locate an outside CIP Coordinator. The Administrator setup an initial meeting between the Coordinator and the other CIP committee members, then allowed the Coordinator to take charge of the project. After the initial meeting the City Administrator began acting as the point-of-contact for the committee and remained active in all meetings and e-mail correspondence. He was considered an equal on the team throughout the process. While assisting to steer the plan he did not try to control the group members. His actions and statements in the meetings, lead to the belief that he was focused on creating long-term jurisdiction-wide priorities and not solely on any wants/needs of a single stakeholder group. This is something that Vogt and Coe stated was important and it materialized during the Onawa CIP process (Vogt, 2004, p. 91; Coe, 2007, p. 197). Upon completion of each project section, as requested by the Coordinator, the City Administrator also reviewed the material to ensure the committee's recommendations were represented correctly.

The Utility Superintendent was the most knowledgeable member of the team concerning the specific infrastructure needs of the city. He naturally took the role of a department head. In the small city, the Utility Superintendent is a front-line worker and familiar with all aspects of the city projects. His expertise included the needs of the Fire Department, Airport, Parks and Recreation, Streets, and Utilities. This made him a vital member of the team and gave him the power to have a large impact on how the projects were scheduled.

The City Accountant from a local firm acts as the city's finance director. Since Onawa is a small city, less than 3,000 residences, a full-time finance director is unnecessary and a part-time consultant conducts the director functions. The City Accountant was engaged in all of the CIP committee meetings and was knowledgeable about the financing options for each of the proposed projects. The consultant acted appropriately throughout the CIP process, as if he was a full-time finance director. He took the role of being concerned with the short-term financial capabilities of the city and the impact of potential long-term debt. This role was consistent with Steiss's belief that finance personnel have a short-range perspective during the CIP process (Steiss, 2005, p. 15).

The CIP Coordinator acted in the role of project manager and participant-observer for this study. He focused on the CIP format, facilitation of meetings, note taking and writing of the plan. The Coordinator strived to stay neutral throughout the process, which was assisted by being a community outsider and committed to the research.

During the CIP meetings it was apparent personal feelings can impact decisions when discussing individual projects. This was to be expected since members usually view the entire CIP in terms of its impact on their own project requests and efficiencies (Steiss, 2005, p. 15). The remodeling of City Hall, for example, was a project one member felt passionately about. They would have liked the project to be scheduled within the next five years. The other members, while not against the project, were concerned about the projects political unpopularity. All members did eventually agree and the project remained unscheduled. While the project was not scheduled based on only one person's feelings, it does represent the possible impact that personal feeling can have on the plan.

Citizen and legislative involvement was not included before the completion of the CIP. As stated, there were only four committee members and the citizen interest and legislative interest was not represented. The citizens and city council members will however have the ability to provide comments when the CIP is presented for approval to the City Council. This amount of citizen involvement was at the level suggested by Steiss (2005, p.132) and was lower than the amount Vogt suggested (2004, p. 71).

While a citizen and legislative representative was not a part of the CIP committee, the other representatives were appropriate and sufficient. The project could not have been completed without the City Administrator, the City Accountant, the Utility Superintendent and a project coordinator. These members each represented the city stakeholder groups with the most knowledge of the city functions. While the small community did not have as many members on the committee as some of the research suggested was needed, Onawa's members did have the knowledge necessary to complete the plan (Steiss, 2005, p. 15). The small city does not have, for example, a planning director to impact the plans creation.

CIP Procedural Steps:

Table 2 illustrates the use of the research based procedural steps during the CIP process in Onawa, Iowa.

Table 2: CIP Procedural Steps	Conducted	Not Conducted	Planned
Established administration framework	X		
Established policy framework		X	
Conducted inventory of existing facilities	X		
Determined status of previously approved projects	X		
Compiled project requests by agencies and evaluated by Committee	X		
CIP Approval by Legislative Body			X
CIP Implementation			X

As Table 2 represents, during the CIP process, an administrative framework was established. The City Administrator's goal in the creation of the CIP was to lay out each project so there was never a surprise capital expenditure in Onawa for the city administration, citizens and city council. Through the first CIP process he wanted to create a mechanism for the document to be completed each year. This was accomplished by creating a project format, which included project justification forms. The administrative framework also included a timeline for project completion and informally outlined the responsibilities of the project coordinator.

A policy framework was not established through the first year CIP in Onawa. A CIP policy framework can include how the CIP is to be used, how the projects are ranked, financial guidelines relating to the definition of a capital project, and when/who will update the CIP. The creation and adoption of these policies to govern the CIP process was not an initial priority in

Onawa. This project was completed in a three month time frame and it was believed this step would have taken longer than the project commitment. This decision does not imply a policy framework is unnecessary for a CIP process in a small city.

An official inventory of existing facilities was not conducted as part of the CIP process. The city of Onawa's staff completed informal inventories of existing facilities on an ongoing basis. Onawa, like many small cities, has a relatively few number of facilities compared to a large city. This allows the city officials to be continuously aware of any problems requiring attention. For this reason an official inventory was deemed unnecessary, however the step was completed through the knowledge of the committee members.

The status of previously approved projects was informally determined as part of the CIP process. Between the City Administrator and the Utility Superintendent the status of all projects was common knowledge. This informal process of determining the status was sufficient for the small city. In a larger community this would probably not be the case since there are many different projects and project managers.

Financial analysis and financial programming was performed as part of the CIP process in Onawa. Throughout the committee meetings the current financial status and projections were discussed in detail. These discussions took place for each individual project as the group scheduled them over the five year program. Some projects were left in the CIP documents that were not scheduled, which allows them to be readily available for discussion in future years of capital improvement programming. The project costs were adjusted by three percent each year after the fiscal year 2010-11 to represent the net present costs. The City Accountant and the other committee members believed the three percent adjustment rate was an accurate projection based on past experience.

Project requests were compiled and evaluated, however it was conducted in a different manner than described in the first CIP manual written by Rosenberg and Stallings (1978, p. 2). The projects were not compiled by the different agencies and departments and then presented to the CIP committee. Instead, outlines of each project were provided by the City Administrator to the Coordinator. The Coordinator then compiled the documents and completed a project justification sheet for each. The sheet included the project name, department or agency, cost estimates, justifications, budgeting options, and a community need ranking. These sheets were then presented to the committee members during a meeting, where they were discussed and updated accordingly. After this was completed the financial programming for the projects took place.

The process of allowing the coordinator to complete the project justification sheets worked well in the small community. This would not have been the case if specific project outlines and cost estimates had not been completed before the CIP process began. The committee members were also available to answer any questions that arose and provided additional documentation when requested by the coordinator.

In future years, the project justification sheets will probably have to be completed by the individual departments if an outside coordinator is not available. This could be a positive

experience for the departments since they will be forced to begin thinking about their needs beyond the next five year period. This can, at least informally, create long-range community goals that will assist the CIP process.

The CIP, as proposed by the committee, will be presented to the City Council with the recommendation of adoption after a public hearing. At this time, the City Council plans to vote on the issue at the May, 2010 meeting which is past this research projects due date. The CIP Coordinator plans to be a part of this process to answer any questions the public and council have concerning the plans creation. The City Administrator has assured the CIP will be implemented upon city council adoption.

CIP Project Prioritization:

Table 3 illustrates the use of the research based project prioritization methods during the CIP process in Onawa, Iowa.

Table 3: CIP Project Prioritization	Utilized	Not Utilized	Use Ranking
Experienced-Based Judgment	X		1st
Departmental Ranking	X		2nd
Broad-Need Categories		X	N/A
Urgency-of-Need Criteria	X		3rd
Weighted Rating of Urgency-of-Need		X	N/A

As Table 3 represents, during the CIP process in Onawa, projects were prioritized through a few different prioritization methods. As Vogt and Coe believed, experienced-based judgment was the most widely utilized method in the small city (Vogt, 2004, p. 90; Coe, 2007, p. 197). Since the committee members were familiar with the projects they were able to subjectively prioritize them on the basis of their personal preferences. The Utility Superintendent, for example, provided new cost estimates for the Wastewater Treatment Plant improvements based on his view that a large part of the project did not need to be completed within the next five years. These new estimates were used because his experience and expertise lead the CIP committee to believe he knew what was best for Onawa's Wastewater Plant. This type of experience-based judgment was important to the CIP throughout the project.

Departmental ranking was utilized alongside experienced-based judgment. Since there was only one department head on the CIP committee the process of ranking went smoothly. The Utility Superintendent, balanced by the City Accountant and the City Administrator's opinions, was able to rank the projects as he felt best. All projects, of course, could not be financed at once, so the Superintendent ranked them by importance of completion. This was accomplished during a committee meeting and allowed everyone to provide input.

Urgency-of-need criteria was the last prioritization method used by Onawa. On the project justification sheets, created by the coordinator, a need criteria ranking was established. The criteria categories, in order of urgency, included: 1) imminent need or emergency; 2) existing need; 3) existing or developing need; 4) plans under preparation; 5) growing demand; and, 6)

other. Each project was ranked in one of these categories by the committee members. This criterion was however minimally used when scheduling the projects and may not have made a difference in the program. The experienced-based judgment and departmental ranking were far more important to the project in the small city. Broad-need categories and weighted rating of urgency-of-need were not utilized during the process.

CIP Financial Options:

Table 4 illustrates the use of the research based financial options during the CIP process in Onawa, Iowa.

Table 4: CIP Financial Options	Utilized	Not Utilized
Pay-As-You-Go Financing	X	
Debt Financing	X	
Lease-Purchase Agreements		X
Grants/State & Federal Aid	X	
Impact Fees & Exactions	Proposed	
Revolving Loan Programs	X	
Joint Financing		X
Public-Private Partnerships		X
Private Contributions	Proposed	

As Table 4 represents, pay-as-you-go financing was utilized by Onawa. This type of financing was used for many of the scheduled projects and derived from the general budget, city reserves, City Equipment Fund, and the Fire Equipment Fund. These funds were mostly used as a last resort option and were combined with other funding sources. The committee members were not opposed to using the cash reserves and cash-on-hand as long as it did not overly deplete the funds. Onawa does not have written policies or regulations on the minimum or maximum amount that should be in reserves.

Debt financing was utilized through a general obligation bond for one project. The public voted and passed the bond measure to build a new fire station in 2009. Funding for this project will be combined with pay-as-you-go financing and grant funding.

State and federal aid is actively sought and used in Onawa. For instance, the city will be receiving a federal grant under the Federal Recovery Act for the Underground Electric Project and an Assistance to Fire Fighters grant was applied for which will be announced later this year with possible upgrades for the new fire station. Onawa is also actively trying to locate a grant, possibly from the U.S. Department of Transportation, to assist with the expansion of tee-hangers at the airport. When grant funds become available for any of the proposed capital projects Onawa plans to submit an application.

The state of Iowa has a State Revolving Loan Fund for drinking water and wastewater treatment infrastructure improvements. This fund has provided low interest loans to communities since 1989 (IA DNR , 2010). Onawa has made arrangements to use these funds for the Water

Treatment Plant improvements scheduled for fiscal year 2010-11. These funds may also be used for future Wastewater Treatment Plant improvements.

Impact fees and exactions are a funding option currently under consideration for a new business park in Onawa. This project was not scheduled during the five year CIP, however depending on the amount of business interest the project could be moved up during next year's CIP creation. The business park would be created on an undeveloped part of land within the city limits and requires sewer lines, water lines, and streets. The project could use impact fees and exactions if a deal can be made with a developer for the capital improvements associated with the new development.

The last financing option proposed for the capital expenditures in Onawa was private contributions. The city of Onawa is currently discussing soliciting private funds from individuals and the Onawa Community Foundation. This type of project financing has not been utilized in the past; however it is a serious consideration for the Iowa Avenue Widening and Streetscape project.

The financial options not utilized as part of the funding mechanisms for the Onawa CIP include: lease-purchase agreements, joint financing, and public-private partnerships. This is not meant to indicate that a small city is unable to use these types of funding options. They just were not viable for the projects scheduled in the current CIP. These options may be a part of the funding mechanisms for future capital projects used by the city.

The key findings for a small city's CIP process include:

- 1) A city administrator, department director, finance representative, and a CIP coordinator are able to complete a CIP with citizen and legislative review upon completion;
- 2) The procedural steps, as outlined in the research, were relevant;
- 3) Experienced-based judgment was the most utilized prioritization method; and,
- 4) All financial options, as outlined in the research, were considered.

These findings were compared to the research outlined in the analytical framework so the research question could be answered in the conclusions section.

Conclusions:

Through the comparison of the scholarly beliefs outlined in the analytical framework section to the findings in Onawa, Iowa's Capital Improvement Plan (CIP) process, conclusions were made related to the research question. To answer the research questions this study focused on the CIP participants, procedural steps, project prioritization methods, and the financing options used in a small city. Conclusions are made accordingly and answer the questions: How should a small city create a CIP?

CIP Participants:

Steiss stated the responsibility of preparing a CIP within the governmental body is shared by the chief executive, legislative body, planning agency, finance agency, and various operating departments (2005, p. 15). While the small city in this case study did not have a representative

from each of these agencies during the CIP process, it was concluded Steiss is correct. A small city, such as Onawa, does not have the resources available for each of these members to be a part of the CIP process. The participants however were cognizant of each of these roles and adjusted their actions accordingly. This stresses the importance felt by the participants of the shared responsibility across the agencies identified by Steiss. The chief executive must assume a position placing primary emphasis on middle-range objectives to compete with the short-range financial viewpoint and the longer-range planning perspective. These unique points-of-view are conducive and necessary for the CIP process.

Coughin and Steiss were both correct stating personal feelings can impact decisions during the CIP process. City government officials are concerned with their efficiencies and view the entire CIP in terms of its impact on their own project requests. This is something that needs to be monitored during all CIP processes, so the most appropriate plan for a city can be adopted.

While citizen involvement was limited during the CIP process in this case study, it was not concluded this group of participants are unnecessary. It is believed citizen involvement is the most impactful during the creation of the plan. City officials should ask the opinions of community groups and/or allow a citizen representative to be on the CIP Committee. Vogt is correct in stating "...involving citizens can help ensure that the projects selected are valued by the community and that citizens understand the need for issuing debt and levying taxes to finance projects" (2004, p. 71). The exact conducive amount of citizen involvement cannot be determined from this study, however it was recognized they are an important stakeholder group to the CIP process.

As was stated in the findings section, the amount of legislative input was similar to the citizens. This made determining the appropriate amount of involvement for this group in the CIP process unattainable. This study ended after making a recommendation of approval to the council, so it is unknown if the plan was adopted as proposed or if changes were requested. Nonetheless, it is acknowledged that legislative input is important to the process.

It was determined the participants in the CIP process greatly affect the end result. The members must be able to switch roles so the differing points-of-view and personal opinions can be determined and weighed. They also must be able to work together and create a plan in the best interest of the city and its citizens. These abilities of the CIP participants in Onawa, made the completion of this project attainable during the short timeframe.

CIP Procedural Steps:

The CIP procedural steps as outlined by Rosenberg and Stallings and further discussed by Coe and Vogt were relevant and inclusive to the CIP process in a small city (Rosenberg and Stallings, 1978, p. 2; Coe, 2007, p. 196; Vogt, 2004, p. 68). These steps included: the establishment of an administrative and policy framework, an inventory of existing facilities, finding the status of previously approved projects, conducting financial analysis and programming, compiling and evaluating project requests, adopting the CIP, and implementing the CIP. While some of the processes were completed informally (i.e. inventory of existing facilities; finding the status of previously approved projects) and a policy framework still needs to be adopted, it was found through the research that each of these steps are important to the CIP process in a small city.

The informal process of creating an inventory of existing facilities and finding the status of previously approved projects, as completed during the case study, seems acceptable for any small city. Small cities have a relatively few number of facilities compared to large municipalities. This allows the city officials and CIP participants to be constantly aware of any problems that may require attention.

During the CIP process in Onawa, a policy framework was not established. This does not indicate the unimportance of this step. The City of Onawa CIP Coordinator was naïve to the significance of creating a policy framework when the project began. The completion of this step is however recommended for any city creating a CIP and should include setting a maximum financial debt rate, a guideline for the use of cash reserves, and expectations for updating the CIP. This allows a financial framework to be followed during the CIP process and ensures the plan will be updated upon implementation.

CIP Project Prioritization:

Experience-based judgment is the most useful prioritization method for small cities during the CIP process. If the correct people are involved they should be able to articulate the needs for their community and subjectively prioritize the projects on the basis of their personal preferences. While this method may be overly simplistic if there are multiple complex requests or a need to justify priorities, it was concluded that this method is the most useful.

Departmental ranking is also relevant and ties directly into experienced-base judgment. When departments have multiple projects the departmental staff by default, become the most educated on the specific needs of their divisions. This makes it ideal to have the departments rank the projects based on need. The chief executive still has to determine the true need of the city based on the ranking however this process allows a place for this process to begin.

This research showed that experienced-based judgment and departmental ranking are the most useful to a small city's CIP process, this does not mean however the other prioritization methods should be ignored. It is recommended a small city starts with the experience-based judgment approach and implement the others as they feel necessary. A municipality may have multiple complex projects and the other options available could be appropriate for their needs.

CIP Financial Options:

All of the funding options outlined in the research were not utilized during the case study, it is however concluded that each of them are relevant to a small city's capital expenditures in a CIP (Tigue, 1996, p. 85; Nice, 2002, p. 121; Rosenberg & Stallings, 1987, p. 20). These funding options include: pay-as-you-go financing, debt financing, lease-purchase agreements, grants/state and federal aid, impact fees and exactions, revolving loan programs, joint financing, public-private partnerships, and private contributions.

City officials are charged with being stewards of citizen's tax dollars, so the most appropriate funding sources should be analyzed for each individual project. It is recommended that all options be considered. There are advantages and disadvantages of each and careful

consideration is required. The list of financial options does not claim to be exhaustive and new options should also be considered when appropriate.

Through these conclusions the research question, “How should a small city create a CIP?” has been answered. In summary, the following needs to be considered:

- The chief executive, legislative body, planning agency, finance agency, various operating departments and citizen representatives should be represented on the CIP Committee;
- The procedural steps, as outlined in the research, should be utilized as a guide for the CIP;
- When prioritizing projects, experience-based judgment should be the first method used while utilizing the others when more complex approaches are required; and,
- All financing options should all be considered during the CIP process for each project.

Thank you to the City Administrator, Utility Superintendent, and the City Accountant for allowing this research to take place on Onawa’s CIP process. The CIP Coordinator provided a presentation on April 27, 2010 to the Onawa City Council and submitted the document for their review and planned adoption.

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Purposes of Capital Improvement Planning: • Ensure the timely repair and replacement of aging infrastructure. • Provide a level of certainty for residents, businesses and developers regarding the location and timing of public investments. • Identify the most economical means of financing capital improvements. • Provide an opportunity for public input in the budget and financing process. • Eliminate unanticipated, poorly planned, or. IMPLEMENTATION What is a Capital Improvement? Most communities define capital improvements as major public expenditures, usually physical in nature. Local policies may specify the cost and useful life of qualified projects. The implementation of new computerized systems or the upgrading of existing ones, is a complex process, and becoming more so as computer applications and networks are expected to interface and exchange greater amounts of information. Project management is being used more formally in IS/IT organizations to handle these implementations. As with any industry though, IS/IT must find how to form project management processes and tools which best serve it's particular needs. The high rate of IS/IT project failures, and the increasing dependency of organizations on their IS/IT divisions makes it c • Implementation Plan: describes both the start-up tasks that are a precursor to effectively implementing the recommendations as well as the major action steps required to implement each recommendation. • Communication Plan: identifies communication strategies in the messaging of implementation efforts and the stakeholders who will be impacted. • Phase Two implements the planning activities and decision points of Phase One. The majority of capital outlays estimated for this implementation in the 2017-19 budget will occur in this phase. Phase Three focuses on operations, monitoring and evaluation activities.