REPORT TO

UTAH STATE LEGISLATURE

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A Performance Audit
of
Construction Management by
Political Subdivisions

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Audit Performed by:

Audit Manager	Richard D. Coleman
Audit Supervisor	Leslie S. Marks
Audit Staff	Paul A. Hicken
	Jennifer A. Hogge

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Performance Audit of Construction Management
by Political Subdivisions

This audit addresses several issues dealing with construction of buildings by political subdivisions. We were first asked to study construction management (CM) as a specific project delivery system because of concerns expressed by legislators that the use of CM had caused problems in some projects. Concerns included whether CM is a cost beneficial project delivery system and whether CM lacks necessary controls, thereby increasing costs to entities using it. Subsequently, we were asked to review the issue of why cities and counties some- times choose to fund construction with lease revenue bonds instead of general obligation bonds.

Our findings are summarized as follows:

Choosing CM Needs Careful Assessment of Options. Public officials in counties and school districts do not always give adequate consideration to whether to use Construction Management (CM) as a project delivery system (as opposed to using a general contractor, for example). Cost should not be the only factor considered. Early consideration of factors such as project complexity and owner ability or willingness to devote time to a project can help political subdivisions choose the appropriate project delivery system for their needs. Some of the projects we reviewed did not involve sufficient initial consideration of the construction options available to an owner and several had problems in contracting and ongoing project management. Additionally, some owners did not follow procurement procedures when going through the initial stages of a project. Public entities need to adhere to competitive bidding and proposal practices.

- We recommend that political subdivisions perform adequate initial analysis to choose the most appropriate project delivery system for their needs; we recommend that political subdivisions comply with all relevant procurement requirements for construction services.

Well-written Contracts Protect Owners Better. Once a political subdivision has considered its needs and followed public procurement procedures to obtain an architect and CM (or GC), contracts need to be negotiated and signed. Contracts play an important role in determining the signing parties' rights, risks, and responsibilities in the project to be undertaken and, as such, need to be carefully and fairly written with specific provisions that protect public entities' interests. Our review of several county-level and school district projects found that some contracts inadequately protected the owners' interests. Problems include the use of standard contracts that were developed by architect and builder groups without owner input; the use of contracts that do not specifically address a CM arrangement; and the use of contracts that do not assign the risks equitably between the owner and CM. Some projects experienced problems (e.g., cost overruns, delays in project completion) we associate with the

inadequate controls in their contracts. Political subdivisions need to be aware of the problems that can arise from the use of a poorly written contract.

- We recommend that political subdivisions use construction contracts that are specific to the chosen project delivery system and ensure that owner-protective provisions are included that provide for avenues of recourse if needed.

Good Project Management Includes Control Points. As with all major construction projects, a CM project's success depends to some degree on the involvement of the owner in the process along with the use of other control measures. Professional literature on construction management and discussions with some local construction firms provided some guidelines on what owners as well as architects and the project management team should know and do while state law defines inspection requirements during construction. When we compared these selected guidelines to the projects reviewed, we found that management controls were in place to varying degrees. CM project management can improve by more consistent use of selected controls.

- We recommend that political subdivisions using CM ensure that internal staff resources are sufficient and knowledgeable, that they ensure the project architect provides cost and quality control assistance to the owner as needed, that documented team meetings fulfill the intended purpose of cooperation and coordination, and that legal requirements for independent project inspection are met.

Several Considerations Influence Bonding Decisions. Of two bonding options available to political subdivisions in Utah for financing building projects, general obligation (GO) bonds are less expensive than lease revenue bonds. Even so, some political subdivisions choose lease revenue bonds when they have the ability to use GO bonds. The decision to use lease revenue bonds is often based more on a reluctance to hold a bond election than on available debt capacity or project characteristics. Where possible, we feel the use of GO bonds should be attempted when financing public projects because they cost less. The information presented in this chapter is intended to assist the Legislature in determining whether the present situation is acceptable or change is needed.

- We recommend that political subdivisions consider financing projects with GO bonds if possible and that the Legislature assess whether any change is needed in present bonding practices.

Chapter I
Introduction and Scope

This audit addresses several issues dealing with construction of buildings by political subdivisions. We were first asked to study construction management (CM) as a specific project delivery system because of concerns expressed by legislators that the use of CM had caused problems in some projects. Concerns included whether CM is a cost beneficial project delivery system and whether CM lacks necessary controls, thereby increasing costs to entities using it. Subsequently, we were asked to review the issue of why cities and counties some- times choose to fund construction with lease revenue bonds instead of general obligation bonds.

In general, we found that owners (political subdivisions such as cities, counties, or school districts) should engage in substantive initial analysis of the project and their own staff capabilities before choosing among project delivery systems. Owners need to be aware of contracting pitfalls and negotiate contract terms that protect their interests and provide for methods of recourse in the event of problems. Once past the contracting stage, ongoing project management can improve and requires time and ability from owners and architects to ensure a smoothly run project. Differences between CM and general contracting (GC) will be discussed in the next section of this chapter.

In the second area included in this audit, a limited review of bonding choices by political subdivisions revealed that the decision to use lease revenue bonds instead of less expensive general obligation (GO) bonds is often based on political considerations. More frequent use of GO bonds would save the taxpayers money because of the generally lower cost of GO bonds.

The following sections provide some background information on the construction and bonding concepts discussed in this report.

CM Differs from Traditional General Contracting

Construction management or CM is one of several options available to owners as they consider building a project. CM, general contracting (GC), and design-build are all project delivery systems that can be used to manage and coordinate construction. GC can, perhaps, be called the traditional construction method, while CM and design-build offer different approaches developed in response to problems sometimes experienced with GC.

GC involves sequential phases called design, bid, and build. An owner contracts with a design firm (usually an architect) to provide a complete set of plans and specifications for a proposed project. With the design completed, bids are requested for a general contractor to build the project. Once a GC is selected based on low bid, construction begins. As part of the bid, the GC may provide a list of subcontractors who will work on the project. In this arrangement, the owner holds separate contracts with the architect and the GC; the GC in turn holds contracts with trade specialists or subcontractors. The GC provides a firm price for the construction of the

project, which includes his profit.

In contrast, Construction Management is a project delivery system that involves the project management firm earlier in the project's life than in a general contracting situation. After reviewing several definitions of CM, one scholarly source combines the common factors in the definitions to suggest that CM can be defined as the following:

> *...a technical and business management service that integrates planning, design, and construction processes of facilities under a project team. The objective of the combined and coordinated team efforts of the owner, the A/E, and the construction manager is to satisfy the owner's needs and interests from the beginning of the planning to the completion of the project. The team works together and carefully examines the interactions between cost, quality, and completion schedule so that a facility of maximum value to the owner is realized in the most economic time frame.* (Tenah and Guevara, *Fundamentals of Construction Management and Organization*, 1985, p. 385)

The CM is involved in a project early in order to participate in the project's design development phase, providing input to the architect or designer. The CM's input is used during design development to help ensure that plans and specifications meet the owner's needs and wants. The CM is also involved in value engineering (reviewing plans to optimize value and constructability) during design development. Value engineering should minimize change orders and associated costs during construction.

Typically, the CM is then involved in advertising for and awarding of bids for trade contracts to build the project. The CM assists the owner in evaluating the bids and usually signs (and administers) the contracts with the subcontractors. The CM then manages the construction phase of the project, ensuring timely and complete performance of contracts and ensuring that the project is completed on time, within budget, and to the owner's satisfaction. CMs are paid a fee for their services that may be a flat fee or a percentage of the project's total cost.

There are different types of CM arrangements with the responsibilities and roles differing somewhat. In the projects we reviewed, we found that one type of CM predominated: the CM-Constructor, or CM-GC. This type of CM is also referred to as a CM-At Risk. In this scenario the owner has contracts with the architect and the CM. When construction begins, the CM takes on the role of the GC and may or may not perform some of the actual construction work of the project. The CM signs contracts with the trade contractors or subcontractors and has responsibility for their performance. A guaranteed maximum price (GMP) for construction, set when plans are complete, is an option in this arrangement.

Other types of CMs include a CM-Agent and a CM-Advisor. These types do not self-perform but act as managers and coordinators, with the CM-Agent functioning as a legal representative for the owner. These CM arrangements usually also involve a contract with a GC who actually builds the project under the direction of the CM, who acts as the owner's representative.

In a general contracting arrangement, the process has linear, distinct phases that are each completed before the next one begins. The design phase is completed by the architect under contract with the owner. Bids are requested and a contract is signed with a general contractor. The GC is responsible for setting up contracts with subcontractors, and construction then starts. The GC has the responsibility to complete the project for the agreed-upon price, subject to changes resulting from the approval of change orders that revise the scope or cost of the project. The team concept is not stressed as in CM, and value engineering may or may not occur. Typically, since the plans are complete before the GC starts the job, any changes to the design occur through a change order process which usually involves additional time and cost.

In CM, the phases of the project can overlap; for example, construction may start before designs are finalized. This is sometimes called "fast tracking." Proponents of CM indicate that the duration of a CM project is shortened because of fast tracking, lessening the time needed for construction and thereby saving money. Proponents of GC, on the other hand, believe that the fee paid to the CM erases savings in construction time and cost. Cost considerations will be dealt with in Chapter II.

Lease Revenue Bonding Differs From Traditional GO Bonding

Political subdivisions frequently need funding beyond current year funding to build major capital projects. Issuing bonds is one way to finance construction projects. Public entities in Utah have a number of bonding avenues available to them, including general obligation (GO) bonds and lease revenue bonds. GO bonds are a type of long-term debt and are backed by the full faith and credit of the government entity. The risk of buying these bonds is considered to be low because of the government's ability to assess property taxes, providing a source of repayment monies. Issuing GO bonds requires the approval of the voters in the issuing jurisdiction. Total long-term debt is limited by the state constitution. A second bonding avenue is the use of lease revenue bonds, which are backed by renewable lease agreements on a year-to-year basis. Issuing lease revenue bonds does not require the approval of the electorate although a public hearing is required. These bonds are not restricted by constitutional debt limitations because they are not technically long-term debt but a year-to-year obligation.

Audit Scope and Objectives

In our review of the use of construction management by political subdivisions, our objectives were to determine if such use is cost beneficial, and to determine what political subdivisions can do to better control construction managers. To address these issues, we chose a sample of three school district and four county construction projects that used construction management as a construction project delivery system. We then interviewed staff, architects, project managers, inspectors, and personnel from large construction management firms in Utah. We reviewed contracts, relevant project documentation, invoices and other financial information. We also reviewed professional and academic literature on construction methods including construction management as a specific project delivery system.

In the bonding area, our objective was to determine why political subdivisions sometimes use lease revenue bonds instead of less expensive GO bonds to finance a construction project. In addressing this issue, we consulted the State Auditor's Office staff and reviewed their file of financial statements from political subdivisions, consulted financial advisors and obtained bonding statements on a sample of political subdivisions, and interviewed administrators at those sampled political subdivisions.

Specifically, our audit objectives were to do the following:

1. Determine whether public entities using CM as a project delivery system adequately reviewed the options to choose a construction method appropriate for their needs and the project under consideration.

2. Determine whether public entities using CM used contracts that adequately protected their interests as owners and provided protection in case of problems.

3. Determine whether public entities using CM provided for and implemented good project management practices during construction.

4. Determine what decision process is followed by public entities when choosing a bonding method to finance public construction projects.

Chapter II
Careful Assessment of Options Needed When Choosing CM vs. GC

Public officials in counties and school districts do not always give adequate consideration to whether to use Construction Management (CM) as a project delivery system (as opposed to using a general contractor, for example). Cost should not be the only factor considered. Early consideration of factors such as project complexity and owner ability or willingness to devote time to a project can help political subdivisions choose the appropriate project delivery system for their needs. Some of the projects we reviewed did not involve sufficient initial consideration of the construction options available to an owner. Additionally, some owners did not follow procurement procedures when going through the initial stages of a project. Public entities need to adhere to competitive bidding and proposal practices.

Cost Comparison Between CM and GC Was Inconclusive

To assess whether CM is a cost beneficial project delivery system, we reviewed a sample of construction projects in two school districts. The results of this small sample were inconclusive and show the need for consideration of factors beyond cost. In one district, we compared construction costs for two identical middle schools, one built by a general contractor (GC) and one by a CM, to assess whether there were cost savings in one delivery system versus the other. We also compared the construction costs of two similar elementary schools in another school district, one built by a CM and the other by a GC.

The first district's director of new construction stated that using a GC is better because it provides the lowest possible bid; the director believes GC costs are ultimately lower without the CM's management fee of three to five percent of the project's cost. In the second district, staff told us that CM is the best way to build because the owner has more involvement and more cost control over the project, keeping the final cost less. We reviewed the sampled projects' costs but were unable to conclude that one method was more cost effective than the other. As shown in the following figure, actual costs were fairly close to each other in both districts. Once adjustments were made for inflation (because the projects were not built in the same year), the CM project was more expensive in one district's experience but less expensive in the other.

Figure I
CM - GC Cost Comparison

District	School	Type	Completion Date	Cost per Sq. Foot	Adjusted for Inflation
Jordan	Elk Ridge Middle School	CM	9/94	$ 99.00	$114.59
Jordan	West Hills Middle School	GC	8/96	109.26	109.26
Nebo	Mt. Loafer Elementary	GC	6/96	101.67	107.82
Nebo	Canyon Elementary	CM	5/97	101.31	101.31

Note: Jordan costs were adjusted to 1996 dollars for 12 months @ 11.3% and 11 months @ 4.4% per year. Nebo costs were adjusted to 1997 dollars for 11 months @ 6.6% per year. Inflation factors from DFCM.

As with any construction project, many factors affect the total cost, including the cost of land, materials, and labor, as well as the desired quality of construction, bid competition, and construction demand. Although we backed out the land acquisition costs and adjusted for inflation, the comparability of other factors is unknown. For example, it is difficult to account for and quantify differences in the cost of owners' resources (staff time, in-house construction labor, accounting/data processing, etc.) devoted to a project.

In the sampled projects at Nebo School District, the CM school was built in 13 months versus 17 months for the GC school; however, the same companies worked on both projects, and staff felt familiarity with the plans accounted for much of this time savings. The CM school built one year later was slightly less expensive (allowing for inflation) than the GC school. It is important to keep in mind, however, that factors other than those we were able to control for may have contributed to the cost differences.

Because of the unknowns and because CM and GC were each less costly in one district, we cannot state that one method of construction is more cost effective than another. Factors beyond cost need to be considered when choosing a project delivery system.

Choosing CM Should Involve Consideration of Several Factors

A political subdivision's initial assessment of project characteristics should include at least the size and complexity of the project, the owner's ability to be involved in decisions, and whether the project needs to be completed on an accelerated schedule, or "fast tracked." Although assessment of a project's characteristics and an owner's needs should determine the project

delivery system chosen, owners of some projects we reviewed conducted inadequate up-front analysis of their needs. We found that some owners not only did not consider these factors, but they also moved to CM midway through the bidding phase of a GC project.

Discussions with large construction firms in Salt Lake City and a review of professional literature on construction methods indicate that no construction method is always best, but that owners should carefully assess which construction delivery system is the best for the project under consideration. Factors that should be considered when reviewing options include the following:

- **Design considerations:** If the project is large or complex, or if it requires specialized knowledge to build, a higher degree of cooperation and team effort may be called for than usually found in traditional construction methods;

- **Time considerations:** If there is a time constraint, and/or the project needs to be fast tracked, which means construction starts before final plans are available in an effort to shorten the total time involved, then the use of CM or design-build can be considered since these delivery systems allow for construction to start before plans are finalized;

- **Owner considerations:** If the owner wants to be closely involved in decisions and has the knowledge and ability to be a hands-on decision maker throughout the process, the opportunity for this level of involvement is more often seen with CM than GC.

If these factors are present, singly or in combination, then the use of CM may be indicated. Conversely, construction experts indicate that where the project design is not very complex or has been built before, where fast tracking is not as crucial, or where the owner is unsophis- ticated or unable to be highly involved, the use of a general contracting approach is suitable.

Some Entities Considered Relevant Factors in Their Decisions

Of seven CM projects sampled, three of the entities performed the type of analysis during the planning stages that considered project characteristics in the decision to use CM. These entities considered factors such as the time line and the owner's desire for involvement.

Duchesne County commissioners and staff indicated they initiated their jail construction project intending to use CM. They wanted to build their new jail quickly and also wanted to be closely involved with decisions made on the project. They told us they were interested in cost control and felt the value engineering and coordination between the designer and builder that are factors in a CM project would control costs well. Thus, they favored the CM approach for all these reasons and entered into the project with the intent of using CM.

Two sampled school districts using CM performed some up-front analysis of their needs to determine whether to use CM or not. Jordan School District, for example, needed to "fast track" two high schools and a middle school to provide classrooms for their rapidly growing student population. They decided to use CM to get the schools built within their 17-month time frame.

In general, however, Jordan School District prefers to use a GC approach when building schools. Since they build the same plan multiple times with minimal changes, CM's advantage of design development input is inapplicable. With a completed design in-hand, they are ready to request firm bids and begin construction. Construction officials at the district did indicate they choose either CM or GC depending on the needs of the project at hand. We believe the consideration of such key factors is necessary when choosing among project delivery systems.

Nebo School District prefers to use CM for its construction of schools, citing more control over the process (owner involvement) as a main reason for using a CM firm. This school district usually goes into construction projects intending to use CM firms as the preferred route to a finished project. Staff believe they get a better building at a lower price. District staff noted that having an honest project manager, a good contract, and a knowledgeable, involved owner on site are keys to their success.

Several Entities Failed to Assess Whether Factors Pointing to CM Were Present

The other political subdivisions we reviewed lacked adequate consideration of the size or complexity of the planned project, the proper consideration of time constraints, or the ability of the owner's staff to provide required oversight and involvement, and made decisions based on other factors. Of chief note were a county and a school district which each began its construction project intending to use general contracting but changed to CM in the middle of the bidding process. In addition, two other counties used CM without an analysis of the options, relying on the advice of others.

Two Entities Switched to CM Partway Through Their Bid Processes. One county government wanting to build a new jail and a school district needing to build and remodel schools set up construction projects and then bid out the construction as general contracting jobs. Both decided to accept a proposal to use a CM approach when all submitted GC bids were too high for their budgets. In our opinion, switching to CM because bids were too high reflects decision-making in a crisis management mode instead of having conducted an initial analysis that showed CM to be the appropriate project delivery system for their needs. Another reason the entities should not have switched was that procurement procedures may not have been followed, as will be discussed in an upcoming section.

Juab County initially intended to use a GC to build a new jail. The county contracted with an architect to draw the plans. Once they were complete, the county requested bids from contractors. County commissioners indicated that when the bids came in, the lowest bid was $600,000 over their preliminary budget. The commissioners told us that one bidder came back to them and said they could save money if they used CM. He said if they paid their bills in 10 days, he could cut some costs; the CM told them additional savings were possible by avoiding the necessity of bonding for performance and payment. The county agreed to this proposal. According to the architect, the county used CM because the bidder told them he could bring the project in at the budgeted amount if they used CM instead of GC. Not only did this decision

disregard procurement procedures, but, as already discussed, cost savings are uncertain so other factors need to play into the CM decision.

Similarly, the North Sanpete School District initiated a GC project to remodel two schools and build one new school. After the designs were complete, they advertised for general contractors to bid on the projects. When all bids came in about $1 million over the budget, the board of education was concerned whether the projects were financially feasible. At a board meeting held to decide how to proceed, one bidder came back to them with the proposal that they use his firm and switch to CM to save money. The board accepted this offer, even though another bidder registered a protest. The initial plan at this district was to use a GC, and CM was chosen more for the hope of cost savings than because they had determined that it was the most appropriate delivery system for their needs.

While the school district superintendent believes the district and school board had justification to proceed as they did, in our opinion, the decisions nonetheless occurred without sufficient analysis of the pros and cons of GC versus CM. Further, as will be discussed shortly, we have concerns that their actions violated normal procurement procedures.

Because these entities started out intending to use the traditional GC approach to construction, the designs were essentially complete and budgets were set prior to the agreement with the CM being made. Advantages of CM---involving the CM in the design phase, in budgeting, and in bidding for subcontractors---were lost in these cases. Fast tracking was also not done since the decision to use a CM approach came after designs were complete. The architect for one of these projects commented that he could not think of anything the CM did differently to warrant the CM fee.

The architect's comment brings up an important point also raised by one of the large construction management firms we talked with. A firm may call itself a CM firm but actually not provide the full range of services associated with the CM project delivery system. This audit was initiated as a result of concerns about some projects that were called CM projects, but, in fact, review of those projects shows more similarities to a traditional GC project than to CM as it is described in professional literature or by major construction firms in Utah. This distinction is important to keep in mind as we discuss problems encountered on some projects labeled "CM"; in fact, the problems that occurred may have very little to do with CM itself as a project delivery system.

Two Counties Used CM Primarily Because Others Recommended It. Although it's recommended that entities should assess their needs and capabilities to determine which project delivery system is best for a particular project, two counties relied instead on the advice of others. One county's staff told us they relied on the advice of a citizen committee. The other county's staff and commissioners indicated they relied on the advice of their architect. Staff at

the first county were unhappy with their experience primarily because they felt that the CM did not take responsibility for problems as they expected him to.

It appears that Summit County could have done more analysis of project management alternatives. Staff there stated they used CM for their jail because others were using it and it "seemed like the way to go." Staff told us a citizen blue ribbon committee formed to study jail issues had recommended using CM. However, the chairman of that committee told us the committee recommended hiring an "independent owner's representative" to manage (not build) the project to provide needed oversight. He stated that while county staff were qualified to manage the project, they all had other jobs to do.

In our opinion, it appears that mis-communication occurred between the committee and the commission. While the blue ribbon committee recommended using what could be described as a CM-Agent who would have managed the project, the county actually contracted with a CM-GC, and county staff managed the project. As a result, the county engineer spent a good deal of time overseeing the jail construction, and numerous county staff expressed their dissatisfaction with CM as they experienced it. Staff reported that the CM did not take responsibility in areas they expected him to, such as an instance where a fire hydrant was damaged by someone on site and cases where subcontractors did not show up to work as scheduled. In any case, the county staff indicated that there was little formal analysis of options prior to contracting with a CM firm.

Piute County used the CM approach on the recommendation of their architect. Staff there told us they were not well educated in construction methods and so relied on the architect's recommendation in this area. They did not perform an analysis to determine the best method to use for their needs. However, they were satisfied with their experience with CM.

The lack of sufficient initial analysis can result in an inexperienced owner becoming involved in a project delivery system that takes more time and expertise than the owner has to give because the CM approach succeeds best when the owner is a knowledgeable and hands-on partner in the construction team. In our opinion, the entities discussed above entered into a CM project lacking sufficient knowledge of the differences between CM and GC. We found that some of the projects we sampled had problems in procurement, contracting, and ongoing project management. Procurement concerns will be the subject of the rest of this chapter while the contracting and ongoing project management phases will be dealt with in following chapters.

Political Subdivisions Need to Adhere to Procurement Provisions

We found instances where the public entities whose projects were reviewed did not comply with all relevant procurement provisions. One of the three school district projects and two of the four county projects failed to follow all procurement requirements. Relevant procurement provisions include statutes on state procurement and school construction and any applicable local regulations. Most of the concerns occurred in the areas of competitive bidding and related actions. School districts and other political subdivisions (i.e. cities, towns, and counties) should comply with procurement laws to ensure a fair and open procurement is followed when public funds are involved.

The **School Construction Act** (53A-20-101(2)) requires a school board to reject all bids and rebid projects in the event all received bids are unsatisfactory. We found that this requirement was not complied with in the North Sanpete School District. As already noted, the project was bid out as a GC project, but all bids came in higher than the cost estimates. As the school board was considering what to do, one bidder offered them cost savings if they used his firm as a CM and bundled the three schools into one project. Rather than rebidding as CM or giving all bidders the option to amend their bids, the board accepted this offer. One of the other bidders submitted letters of protest at this decision but did not pursue the matter further. We believe the district should have rebid the project rather than accept the revised offer of one bidder as it did. In addition to not complying with the law, the school district lost the potential for cost savings that may have been achieved had it asked the bidders to submit revised bids or advertised to CM firms for new bids.

Discussions with school district officials revealed their rationale. They stated they negotiated with the overall low bidder and they felt pressure to move quickly because an upcoming change in the tax laws meant sales taxes would be paid on construction materials purchased by the contractor. Whether or not this bidder was low bidder on the GC project does not provide justification to switch to CM without rebidding the project. In addition, the director of the State Division of Purchasing indicated to us that a change in the law did not amount to an emergency that would allow the district to circumvent procurement guidelines.

In a similar series of events, Juab County began its jail construction project intending to hire a general contractor to build the jail. When all bids came in high, one bidder came to the county with a proposal to save them money through the use of CM. In fact, this was the same firm that later bid on the North Sanpete School District project. The county accepted that proposal and signed a contract with this bidder without rebidding the project to all bidders. The **Utah Procurement Code** (63-56-20) allows for some negotiation with the low bidder, but only under certain circumstances. The law requires that the low responsive and responsible bid does not exceed available funds by more than five percent; in that case, the chief procurement officer is allowed to negotiate an adjustment of the bid price to bring the bid within the amount of available funds in situations where time or economic considerations preclude resolicitation of work of reduced scope. According to the Juab County commissioners, the original low bid for the jail project was about $600,000 over the estimate, or about 30 percent. Because the bid exceeded the five percent leeway, the project should have been rebid.

Piute County officials indicated that some of the trade contracts for their project were not successfully bid out. Either bids were not responsive or bids were not received on some portions of the project. Their CM offered to perform the portions of the work for which acceptable bids had not been received. The county accepted that offer and did not rebid those portions of the work. One of the commissioners admitted to us that in hindsight they should have rebid the contracts. We agree that rebidding would have better met public procurement regulations. Additionally, county staff were unable to provide evidence that they bid out the contract for the architect's services for designing the county building. Staff told us they had bid out a feasibility study for a new county administrative building and simply retained the same architect to design the project. State procurement law calls for a minimum of three firms to be considered for architect services. We believe that the feasibility study and the actual plans preparation should have been bid separately with multiple firms being considered each time.

Recommendations:

1. We recommend that political subdivisions, including school districts, perform adequate initial analysis of their needs and project characteristics to determine the most appropriate project delivery system for the project under consideration.

2. We recommend that political subdivisions comply with all parts of state procurement law for construction services when contracting for architects, engineers, builders, CMs, and trade contractors.

Chapter III
Well-written Contracts Protect Owners Better

Once a political subdivision has considered its needs and followed public procurement procedures to obtain an architect and CM (or GC), contracts need to be negotiated and signed. Contracts play an important role in determining the signing parties' rights, risks, and responsibilities in the project to be undertaken, and, as such, need to be carefully and fairly written with specific provisions that protect public entities' interests. Our review of several county-level and school district projects found that some contracts inadequately protected the owners' interests. Problems include the use of standard contracts that were developed by architect and builder groups without owner input; the use of contracts that do not specifically address a CM arrangement; and the use of contracts that do not assign the risks equitably between the owner and CM. Some projects experienced problems (e.g., cost overruns, delays in project completion) we associate with the inadequate controls in their contracts. Political subdivisions need to be aware of the problems that can arise from the use of a poorly written contract.

As we assessed the adequacy of CM contracts used by school districts and counties, we discussed our concerns with two attorneys, one a specialist in the contracting field and the other an Assistant Attorney General for the Division of Facilities Construction and Management. We asked them to review contracts used by counties and school districts in their projects and provide feedback on the strengths and weaknesses of those contracts. We also asked for input on the provisions needed in a contract to protect the owner's interests. Their comments are included where appropriate in the body of this chapter.

Good Contracts Contribute to Successful Projects

Because of our concern with the apparent inadequacy of some of the contracts to protect owners' interests, we sought contractual guidelines that could be provided to entities considering using CM. Attorneys and construction professionals with whom we spoke, as well as literature we reviewed, indicate that some specific provisions should be included in a CM contract to protect the owner's interests. Protecting an owner's interests involves specific descriptions of both owner and contractor duties and responsibilities so that each party understands its own and the other's role in the agreement. Protection also involves including contractual provisions that provide for avenues of recourse in the event of poor contractor performance.

Contracts Should Delineate Each Party's Responsibilities

Because there are differences between CM and GC, and because there are different types of CMs, it becomes important to understand the type of CM arrangement an owner is entering into and to ensure that the responsibilities specific to that type of CM are delineated in the contract. A GC contract is different in content and responsibilities from a CM contract. Further, the contracts for the various types of CM projects should also differ in content because the responsibilities differ. If responsibilities are not clearly delineated, there is a risk that things will not get done and that the owner will not have recourse if responsibilities are not taken care of.

Most CMs are involved in a project's design development or preconstruction phase, whereas GCs are not. CM contracts, therefore, should delineate the CM's services and responsibilities during this phase. For example, these could include working with the architect on scheduling requirements, completion priorities, and feasibility studies. The development of what should be included in a work plan (e.g., home office and field services, proposed contractors, preliminary procurement schedules, value engineering, life cycle analysis) is another area to be covered. The CM's responsibility to review the architectural and engineering plans and specifications to advise on construction feasibility, material and labor availability, possible economies, and projected costs should be detailed. Generally, these are areas not included in GC contracts.

Construction phase activities may also differ from those in a GC contract although there would be more similarities if the CM is the CM-GC type. These responsibilities also need to be specific so that the parties understand what is required of them. For example, it should be specified that the CM should maintain a competent, full-time staff at the job site; ensure that furnished materials and work performed are in accordance with the quality required; ensure that needed materials are available when needed; act as a troubleshooter to prevent time and cost overruns; review and process all applications for payment; negotiate change orders; schedule and conduct job meetings; and so on.

In addition, the owner's responsibilities also need to be delineated in the contract. These responsibilities can include providing requirements for the overall project, establishing an overall budget for the project, furnishing site reports, surveys, drawings and tests, and providing some engineering, testing, and inspection services. The owner should provide a representative to work on the project team with authority to make decisions on the owner's behalf.

Good Contracts Need Specific Provisions That Protect Owner Interests

Beyond the delineation of specific responsibilities of the parties to a contract, contract documents should also contain some particular provisions that provide protection to the parties. Because we found that some reviewed contracts did not provide adequate protection to the owner entities (e.g., some lacked recourse in the event of poor or non-performance), we will provide a list with some suggested provisions that can provide more protection to an owner. While some of the provisions are commonly found in GC contracts, their use in a CM contract can help to better

distribute the risk involved in completing a construction project.

The following list provides some recommended features or provisions for a CM contract:

- **A Guaranteed Maximum Price (GMP) -** Although a GC contract always includes a firm bid price, CM contracts frequently are open-ended, which means they do not set a total cost for the project. During the contracting phase of a project, the owner should protect its own interests by negotiating a contract that includes a GMP or provides for the development of a GMP as design development nears completion. A GMP provides all parties with a better feel for the cost of the project, gives the owner a budgeting figure, and gives the CM a set maximum within which to work in completing the project.

- **Set Completion Date for the Project** - Both GC and CM contracts should include a specific date for project completion. The completion date provides the time budget and can be especially important for a project with a built-in time constraint; for example, a school slated for occupancy at the beginning of a school year would be such a project. Setting a contractual date gives the owner an avenue for seeking damages if the project is not completed on time.

- **Liquidated Damages of Significant Size** - While most GC contracts contain a provision for liquidated damages, this provision is frequently missing in CM contracts. Liquidated damages are daily charges against the contractor that reimburse an owner if the owner is unable to occupy a facility at the time or date specified in the contract. If the amount of damages is significant, the inclusion of a liquidated damages provision in a contract gives a contractor an incentive to finish on time. This incentive becomes especially important in a CM situation where there is a time constraint.

- **Retainage from Each Payment** - Again, most of the GC and subcontractor contracts we reviewed contained provisions for retainage, but CM contracts do not always include this protection. Retainage should be provided for in a CM contract. Retained amounts withheld by the owner are paid to the contractor at the end of the project, often as the final payment after the owner takes possession of the building. Amounts retained by the owner (usually ten percent of each payment) provide incentive to the contractor to complete the work satisfactorily.

- **CM Fee** - The fee should be expressed in the contract either as a flat fee or a percentage of the project cost with an upper limit on amount.

- **Performance and Payment Bonds Required of the CM** - Bonds are usually included in GC contracts but often do not appear in standard CM contracts. Performance and payment bonds should be included. These protect the owner in case of non-performance or if the contractor does not pay subcontractors. State law stipulates that school districts require these bonds of contractors.

- **Distribution of Risk Between the Owner and the CM** - Risk or responsibility for performance as well as for unforeseen costs needs to be clearly defined in the contract. For example, the CM firm should be given responsibility for getting subcontractors to perform. In a GC setup, most of the risk lies with the contractor until the project is successfully completed and the owner takes possession. In CM contracts, varying degrees of risk are possible, depending on the contract language. For example, a CM-Agent or CM-Advisor usually assumes little to no risk for the project, but the CM-GC should take on as much risk during construction as a GC would.

Using the list above as a guide, we reviewed the contracts related to the projects sampled for this audit. We found that the contracts varied widely in the included provisions and the degree of protection or recourse given to the local government-owner entities.

Adequacy of Reviewed Contracts Varies

Contracts used in the county and school projects reviewed in this audit lacked key provisions that attorneys indicate should be in a CM contract. Because of this, we believe the contracts provided inadequate protection to owners in the event of problems. To remedy this situation, owners first need to understand the importance of 1) developing a contract that is modified if need be to address the particulars of their project and, 2) ensuring that the contract is specific to a CM delivery system. Second, owners need to be aware of specific provisions that may or may not be in standard contracts that should nonetheless be included to provide adequate protection to them.

Effective Contract Development Process Is Important

Public entities need to ensure that the contract development phase of a project is conducted in such a way as to provide them adequate assurance of a smoothly run project. Toward this end, owners should be aware that modification of standard contracts to address specific needs or desires is an option. In fact, it was recommended to us that owners should not simply accept the use of a standard contract but should tailor the provisions to the specifics of the project at hand. Further, the use of a contract that is written for the chosen project delivery system is important because the responsibilities differ according to the type of construction method used.

Owners Should Not Rely on Standard CM Contracts. According to two attorneys we contacted, the standard AIA (American Institute of Architects) and AGC (Association of General Contractors) CM contracts were written by architect and contractor groups without input from owner groups. These attorneys stated that the contracts are slanted in favor of the architect and builder. We found versions of the AIA and AGC contract in use in all the projects reviewed for this audit. In fact, staff at one county told us the county attorney had approved the use of one of these contracts because it was “standard in the industry,” a correct assessment that nonetheless afforded the county, as the owner, little protection.

Because of problems in the general tone and wording of these contracts, the attorneys with whom we worked indicated that political subdivisions should avoid using CM contracts developed by the AGC or AIA that date from the early 1980's. For example, these contracts typically did not include liquidated damages and did not assign the CM responsibility for construction means or methods used by the contractors on the job. In other words, there was little recourse if the project ran over time, and oversight responsibility fell to someone other than the CM.

One alternative to using these standard contracts would be to develop a contract similar to the contract used by the State of Utah's DFCM. Another option for a political subdivision would be to write supplemental language into the standard contract to take care of items left out of the standard or "boilerplate" terms and conditions. For example, officials at the Nebo School District told us they used the services of an attorney to develop contract language to supplement the standard contract. This additional language provided the district with protection and specific remedies not included in the boilerplate contracts.

Some CM Projects Used GC Contracts Instead of CM Contracts. Another issue that arose as we reviewed contract documents is that a number of CM projects used contracts that do not address the specifics of a CM arrangement. Instead, the contracts were standard agreements between an owner and a contractor; in other words, the contract was written for and applicable to a GC project. For example, the projects reviewed at Piute County, North Sanpete School District, and Nebo School District did not use contracts specifically written for CM. Because these contracts were worded for a general contracting arrangement, the responsibilities of the CM were not addressed. In Nebo School District's case, however, detailed supplementary conditions were written to address many of these responsibilities.

Thus, the contract documents used in two of these projects lack provisions that list out the CM's responsibilities for the different phases of a project and only discuss in general terms that the contractor is responsible to build the project. This wording is acceptable for a GC contract. In contrast, CM contracts address or should address the CM's services and responsibilities, including such activities as preparing preliminary cost estimates, reviewing designs during their development, providing and updating a project schedule, and coordinating the bidding for subcontractors. Construction phase activities described in a CM contract, but missing in a GC contract, include coordinating the subcontractors' work, scheduling and conducting construction progress meetings, reviewing change order requests, reviewing applications for payment, and determining that contractors are performing in accordance with contract requirements. Without these responsibilities being spelled out, two of the owner-

entities were paying for the services of a CM but not necessarily receiving the services they thought they should receive.

One problem with using a GC contract is that the CM fee is not addressed in a GC contract. Several of the reviewed contracts state that the contractor will build the project for a certain sum. This sum is a total construction price, not a CM fee. The CM's fee is not specified. At Piute County, staff told us they handled the CM fee in a separate contract. The North Sanpete School

District handled the fee as a change order to the contractor's agreement after the board of education decided to accept the contractor's offer of using CM to build their schools, but they did not modify the contract itself. At Nebo School District, the CM fee was included in the proposal submitted by the construction firm, but we did not see contractual documentation of the fee.

The specification of the amount of the CM's fee and of the method used to compute the fee are important features of a CM contract. Depending on how the fee is calculated, CMs may be paid a monthly fee for the duration of the project, however long it takes. This method gives very little incentive to a CM to ensure that the project comes in on time. A recommended method to compute a CM's fee is that it be expressed in the contract as a set fee or as a percentage of the total cost of the project, subject to an upper limit. In the second method, it becomes important to specify clearly what is included in the total cost and to define the components of total cost carefully, including general conditions.

One of the attorneys we spoke with also recommended that the contract specify payment of the fee in proportion to the percent of work completed. This language prevents a practice known as front-loading in which a contractor or CM structures payments to receive a disproportionate percentage of payment early in the project. Then, when the budget is nearly exhausted and significant work remains to be done, a budget increase is needed to complete the project. While a project might run over budget without front-loading, it appears that going over budget and paying the contractor or CM more are direct results of front-loading. Also, if the CM has been paid the majority of his fee and significant problems arise, an owner might retain a firm simply because of the amount of money already invested.

To illustrate, we have concerns with the way CM fees were handled in two projects. In Summit County, the majority of the CM's fee was paid at the beginning of the project. The firm was paid $200,000 plus $4,000 per month for the length of the project. In addition, with an open-ended monthly payment, there was little incentive to bring the project in on time. The Juab County CM was paid $122,000 of a total fee of $183,000 before construction started. The concern here is that the owner loses a lot of bargaining power if most of the fee has been paid out early in the project and then problems occur later. Problems did happen in Summit County. The CM had been convicted of a felony that occurred in another project, but the county had already paid the CM the majority of his fee. Therefore, the county decided to keep the company on the project but stipulated that the CM company's owner had to dissociate himself from their project.

Some Contracts Failed to Include Owner-Protective Provisions

We found that some reviewed contracts were missing specific provisions that provide owners with some level of protection in case of problems with the contractor. Instead, some of the contracts favor the CM or builder and inequitably assign risk to the owner instead of sharing it between the owner and CM. These provisions include liquidated damages, a guaranteed maximum price, retainage, and performance and payment bonds.

In addition, at a very general level, some contract language relieves CMs of basic

responsibilities. For example, the AIA contract document B801, Standard Form of Agreement Between Owner and Construction Manager, dated 1980 (used by Summit and Juab counties), provides that the CM *"shall not be responsible for construction means, methods, techniques, sequences, and procedures employed by Contractors in the performance of their Contracts, and shall not be responsible for the failure of any Contractor to carry out Work in accordance with the Contract Documents."* This provision relieves the CM of many of the responsibilities for which counties and school districts told us they pay the CM a fee: to have a CM manage the project and keep the contractors working so that the project is done on time, within budget, and according to the plans and specifications.

To illustrate, Summit County staff told us repeatedly that they did not like the CM approach because the CM did not take responsibility for problems that arose. For example, the project was delayed because subcontractors did not show up at the work site. County staff stated that instead of taking steps to enforce performance, the CM came to the county and asked what the county was going to do about the problems. It was clear to us that county staff expected the CM to deal with labor problems. However, the contract signed by the county relieved the CM of this responsibility. In contrast, we reviewed a contract between a CM firm and Sandy City that specified the CM was responsible to the city for the acts and omissions of its agents and employees, including trade contractors, under contract with the CM. The contract used by Sandy City is an example of how political subdivisions can tailor provisions to protect themselves and meet their needs.

Liquidated Damages Are Not Always Provided For. The contracts used in Summit, Juab, and Duchesne Counties did not provide for any liquidated damages against the CM. Damages serve two purposes: to provide an incentive to the CM or builder to complete the project on time, and to reimburse the owner for the loss of use of the project in the event it is not completed on time. For example, if a building could not be occupied at the time planned, an owner might incur extra costs to house students or employees (or prisoners in the case of a jail) elsewhere. For the incentive to work, the damages need to be large enough to cause the CM to avoid them. According to one attorney we spoke with, tiered damages are effective, wherein the first 30 days' overrun may have a moderate value per day, but after that, the size of the damages climbs sharply.

The projects in both Summit and Juab Counties ran over the time agreed upon by 2.5 months and 15 months respectively. However, because the CM contracts had no liquidated damages clause, the counties were unable to recover anything from the CM for the extra time it took to finish their jails. In fact, Summit County continued to pay the CM a monthly fee during the extra months of the project. Liquidated damages were included in the subcontractors' contracts and, in the case of Juab County, appeared in the contract the CM used to perform some of the construction. However, we were told that early in the project an agreement had been made with the CM that the liquidated damages clause would not be invoked. Thus, when the project ran over the time budget, the county felt its hands were tied in regards to this remedy.

Two Contracts Lacked a Guaranteed Maximum Price. Summit County and Juab County used the same standard form of CM contract (AIA document B801) for their projects. Neither of

these contracts specified a guaranteed maximum price (GMP). Setting a GMP provides the advantage of an agreed upon total cost for the project. With a GMP, budgeting is easier for the owner. Also, progress can be monitored by comparing the percentage of the job completed with the total amount billed and the GMP to see if the project is on track. This control is designed to prevent overpayment and cost overruns. The other two county projects reviewed (Duchesne and Piute) had prices specified in their contracts. All three of the school district projects reviewed had GMPs, with two of them set partway through a CM project and the other stated as part of a GC contract.

Retainage Was Lacking in the Same Two Contracts' Provisions. In many construction contracts, provisions allow the owner to hold back or retain a portion of each payment to the contractor (usually 10 percent) until the work is satisfactorily completed. This provision gives the owner some leverage in getting incomplete items resolved at the end of a project and also ensures that the owner already has some money in hand should monetary damages be assessed. However, Summit County's contract did not provide for the county to hold retainage from the CM although the subcontracts show that the CM held retainage from the subcontractors. Juab County's contract also made no provision for retainage by the owner. Because of this, neither county had a monetary bargaining position to enforce completion of their jails in a timely manner. Although Duchesne County's contract did not provide for retainage, payment documents show that ten percent of each payment to the CM was retained. Piute County's contract specifically provided that ten percent would be held out until the project was 50 percent complete at which time retainage dropped to five percent. All three school district projects held retainage of ten percent with one district lowering retainage to five percent halfway through the project.

Performance and Payment Bonds Were Not Always Required. Not requiring CMs to provide performance and payment bonds increases the owner's liability. The reason that contracts typically include performance and payment bond requirements is to ensure that there is recourse (against the bond surety company) if the contractor fails to perform or fails to pay those who supply materials or labor to the project. This provision protects the owner to some extent from being asked to pay for the failures of the contractor; instead, the surety company providing the bond would be liable. None of the four county projects included bond requirements in the contracts. However, Piute County staff indicated the county paid for a bond in the total price paid to their CM. The school districts' contracts provided for payment and performance bonds. Although none of the entities reviewed in this audit had to make a claim against the bond companies because of nonperformance or nonpayment, requiring the bonds provides some insurance to owners that they are protected in case of nonperformance.

DFCM Contract Provides Model Others Can Use

Aware that some political subdivisions may not have the resources available to develop a sufficiently protective contract from scratch, we reviewed one of the State of Utah's Division of Facilities and Construction Management (DFCM) construction management contracts to see whether it might function as a model for other entities. We found that most of the recommended

provisions missing in other contracts as discussed above are included in the DFCM contract we read. Accordingly, we summarize some of those points here and recommend that interested parties obtain the "boilerplate" language from DFCM.

One concern we had with several contracts we reviewed was the lack of responsibility assigned to the CM for complete and timely performance of contract requirements. In contrast, the DFCM contract states that the CM *"...shall cause the Work to be performed in strict and complete accordance with the Construction Documents and all matters indicated or implied therefrom"* [1.2.1]. In addition, the contract states that the CM will, as one construction phase requirement, "*determine in general that the Work of each subcontractor is being performed in accordance with the requirements of the Contract Documents"* [1.2.6]. These and other provisions in the contract give clear responsibility to the CM to complete the project as required.

The DFCM contract also lists out specific services to be provided by the CM in the preconstruction and construction phases of the project. These areas of the contract effectively address one of our other concerns: the lack of specific responsibilities listed in some of the political subdivisions' contracts. The following is a short list of some of the basic services listed for preconstruction and construction:

Preconstruction Phase:

- Review budget requirements; provide cost evaluations of alternative materials and systems
- Review designs during development; advise on improvements, material selection; provide recommendations on feasibility of construction methods
- Provide and periodically update a project schedule

- Prepare, for owner's approval, a detailed estimate of construction cost; periodically update estimate

- Consult with owner and architect on drawings/specifications, recommending alternative solutions whenever details are identified which affect construction feasibility, cost or schedules

- Receive bids; prepare bid analyses and make recommendations to owner for awards

- Prepare subcontractor's agreements

Construction Phase:

- Provide services to coordinate subcontractors' work with each other and with CM, owner, and architect to complete the project in accordance with the owner's objectives

- Schedule and conduct meetings to discuss procedures, progress, problems, and scheduling

- Provide monitoring of approved estimate of cost; identify variances and advise owner and architect when projected costs exceed budget or estimates

- Determine that each subcontractor's work is being performed in accordance with contract document requirements; recommend and arrange for special testing and inspections

- Record project progress; submit written progress reports to owner; show percentage of completion and number and amounts of change orders

- At the appropriate time, prepare a list of incomplete or unsatisfactory items and schedule for their completion

- Assist architect in determining when the project or portion thereof is substantially complete

As mentioned, numerous other services are listed in the contract as the CM's responsibility. In terms of the contract provisions already discussed as concerns in the other contracts we reviewed, the DFCM contract also contains provisions for liquidated damages, a Guaranteed Maximum Price, retainage, a definition of total and reimbursable costs, and sets the CM fee both as a percentage and total amount.

Recommendations:

1. We recommend that political subdivisions use contracts specific to construction management when using that method of project delivery.

2. We recommend that contracts should be carefully scrutinized to ensure that specific provisions are included to protect the owner's interests and provide for avenues of recourse in the event of inadequate or unsatisfactory contractor performance.

3. We recommend that political subdivisions should consider using the state DFCM contract as a guide when developing CM contract provisions.

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Chapter IV
Good Project Management Includes Control Points

As with all major construction projects, a CM project's success depends to some degree on the involvement of the owner in the process along with the use of other control measures. Professional literature on construction management and discussions with local construction firms provided some guidelines on what owners as well as architects and the project management team should know and do while state law defines inspection requirements during construction. When we compared these selected guidelines to the projects reviewed, we found that management controls were in place to varying degrees. CM project manage- ment can improve by more consistent use of selected controls.

To be more specific, management characteristics that increase the likelihood of a well-run CM-GC project include placing a knowledgeable owner representative on the project team who is qualified to make decisions about the project to keep things moving on schedule. This individual should also review billings and change orders. Second, for this type of project delivery system, ideally an architect not only draws the project plans and develops the specifications but also participates as a member of the project team, reviews billings and change orders, and monitors the work for quality, adherence to the plans and specifications, and assessment of percent complete. These responsibilities will differ from project to project, of course, depending on the needs of the owner. Third, frequent team meetings to discuss and resolve problems are a positive feature of the CM process with the goals being to keep the project on track and to minimize conflicts. Finally, inspections by qualified independent inspectors not only are required by state law but may also identify problems that need correcting as the project progresses. These controls are not a complete list of good project management practices, but they were pointed out numerous times as some that are helpful for well-managed projects, particularly CM-GC projects.

Because the controls that should be in place will differ depending on the type of project delivery system used, it is difficult to provide a complete or detailed list of management controls that should always be implemented. For example, if a public entity chooses to use a CM-Agent or CM-Advisor, a highly active and involved owner would not be as crucial as if the entity chose to use a CM-GC. Similarly, the role of the architect can change depending on the experience and ability of the owner or the particular type of CM used. To reiterate a point made in the previous chapter, the roles and responsibilities of the various members of the project team need to be clearly specified in the contracts. The nature of the ongoing project management controls would also vary depending on the division of risk and responsibilities written into the contracts.

Another consideration for a public entity-owner when choosing to use CM to build a project is the difference in ongoing project management activity between CM and GC projects. Understanding the type and amount of owner and architect resources that should be devoted to overseeing the project and the nature of a teamwork approach used in CM should assist public entities in their decision whether to use CM at all. In addition, public entities need to be aware of the legal requirements for proper inspection of their construction projects. This chapter will attempt to provide further insight on some management controls deemed important in the projects we reviewed, all of which were CM-GC projects. We found a varying level of controls in place in those projects.

Owner Should Be Knowledgeable and Involved

Owners (in this case, public entities) and their representatives need to be knowledgeable and involved in the construction process if they opt to use CM, particularly CM-GC. The owner needs to participate on the project management team and have the ability to make informed decisions as plans are developed and finalized, as contracts are negotiated, and as changes occur during construction. Additionally, a knowledgeable owner representative can better perform control functions such as reviewing bills, invoices, and change orders. Although it appears necessary for an owner to have an informed and involved representative on the project team, we found that participation by such an individual was not always the case.

Various Sources Stress the Importance of a Knowledgeable, Involved Owner

The Associated General Contractors of America (AGC) published a booklet on construction contracting methods in which owner requirements and cautions are listed for various project delivery systems. The AGC indicated that, in a CM situation, the owner needs to have *"...staff involvement and ability to make prompt decisions after weighing the Building Team's recommendations."* The owner also needs to have the ability to select an architect/engineer *"...who is willing to operate as a team member and be receptive to the CM's recommendations."* This source further states that the owner must design selection criteria to find a CM who is *"...experienced in scheduling, cost control, plan and specification review, and who has management experience to act as a team member and [is] qualified to direct the work of the individual trade contractors."*

A variety of conflicts can arise which require an owner to make decisions to prevent or mitigate negative consequences. A knowledgeable owner can more easily address these conflicts than can one unfamiliar with construction. These decisions might involve defining the relationship between the architect and CM, determining who reviews the CM's work and payment requests in situations where the CM performs some of the work, or deciding what type of payment arrangement minimizes the conflict between the CM's responsibility to the owner and the CM's need to make a profit on the job.

Discussions with representatives from several local construction firms revealed that builders are aware of the importance of an owner being able to participate knowledgeably in the construction process. Several stated the importance of the owner entity having someone on the construction team who has construction background and who can ably represent them. *"They need a knowledgeable person in on the process."* One builder stated that a potential for abuse stems from naive owners who think they are being taken care of by certain construction firms when in reality some firms are looking after their own interests to the exclusion of others' interests. Finally, a representative from one local firm stated that if owners don't have construction experience, it would be better for them to hire a CM-Agent instead of a CM-GC.

Some Projects Lacked Knowledgeable Owner Representation

As noted, it is desirable for an owner to have an informed and involved representative on the CM project team. However, we found that participation by such an individual did not always occur. As mentioned in Chapter II of this report, assessing the owner's knowledge and ability to put significant time and effort into ongoing project management should be a factor in a decision whether to use CM to begin with. We found a school district that appeared to have used knowledgeable staff to its advantage while we identified concerns with another school district project and two county projects in this area.

One School District's Process Illustrates a Knowledgeable Owner's Involvement. Change orders at the Nebo School District undergo a thorough review process by district employees with construction experience and other team members. First, change orders are submitted for review to the project team (owner representative, owner's job superintendent, architect, and CM) during the weekly team meeting. If approved by the team, the change orders are signed by all team members. Major changes are also submitted to the district superintendent. If the owner has any questions or concerns, the staff send the change order to an engineer to check for accuracy; drawings are then sent back with the changes and a cost breakdown indicated. If the school district has any concerns at that point, they send the change order back to the requestor for revisions. The district's director of new construction indicated that about 95 percent of the time the questioned proposal comes back to him in line with the engineer's estimate.

Note that this process illustrates good team interaction as well as involvement by a knowledgeable owner. The school district indicated that change orders for the project reviewed totaled less than one percent of the cost of the project while one construction firm in Salt Lake City told us five percent of cost is typical for design and scope changes. Review by the team provides for input from various perspectives (owner, designer, builder) with their specialized knowledge. Review when needed by the engineers provides a second opinion on the accuracy of the cost so that costs can be kept to reasonable minimums and the cost versus the benefit of the change can be assessed.

Some Projects' Processes Differed From the Recommended Approach. Several other projects involved lower levels of owner construction-related knowledge or experience. For

example, North Sanpete School District's in-house administrative staff acted as project managers for their project; the district superintendent, business manager and, for a while, an associate superintendent performed project management duties. In our opinion, a lot of administrative time was involved in managing this project. Staff stated that managing this project was a challenge for them. Although the superintendent was reluctant to quantify his time commitment for us, he indicated he personally coordinated the work among the CM, the architect, and the school district. He also stated that he took over the task of project management when it became obvious to him that the associate superintendent did not have the time needed to devote to the project. The business manager estimated he spent an average of 20 percent of his time working on the project and stated that at times he spent 100 percent of his time on it.

While North Sanpete School District may not have had the advantage of project managers with construction experience, Juab County did not have that particular problem. On its jail project, the county used an engineer who was also the county administrator as the project manager; this individual left before the project was completed. However, in our opinion, the management of this project was weak in terms of expenditure control. The county commissioners relied quite heavily on this administrator while he was there and did not oversee the project themselves. For example, one commissioner indicated he signed payment requests without reviewing them if the project manager had already looked them over. The commissioners also told us they did not know that the administrator was drawing an $80,000 salary for managing the construction project in addition to his regular salary.

At times, Juab County's project manager reviewed and signed requests for payment for the county commissioner, a practice that circumvented normal review procedures. Since the administrator and the CM were the only ones normally reviewing the requests for payment, eliminating even a cursory review by the commissioner essentially meant that the administrator was the only expenditure control point for the county. This situation shows minimal involvement by the county's decision makers. In addition, the county sheriff stated that once the project manager was gone, there was very little oversight of the project and problems developed. The problems included considerable delay in completing the jail, and the CM firm was involved in a criminal investigation for fraud. Some of the problems could have been prevented or at least minimized if the county commissioners had provided better oversight.

The Piute County staff and commissioners indicated they relied on their CM to be their representative who would watch out for their interests. However, this CM was a CM-GC, not a CM-Advisor or CM-Agent. While the county may have had a good experience with this project, it is still more prudent to ensure that a knowledgeable owner representative is involved with the project management of a CM-GC project. Staff, however, relied on an individual to "be on their side" who had his own interests to protect. Staff did review summary billings but did not worry about detailed bills since they felt their architect or the Community Impact Board (CIB) was reviewing payments. The CIB, however, reviews payment requests only to ensure that authorizing signatures are in place, assuming from those signatures that prior review has occurred. The commissioners also commented that two of three commissioners were new at the time of the project, which is a further indication to us that the county may have benefitted from a

knowledgeable owner representative, especially in the area of expenditure review. While they felt the CM could have taken advantage of them, the commissioners stated that instead he treated them well and was fair.

Architect Involvement in CM-GC Is Helpful to Owner

Because many political subdivisions build construction projects only occasionally, we sometimes found that staff at school districts or counties were not very familiar with construction. Where an owner is less sophisticated or knowledgeable about construction and CM in particular, the architect's role takes on additional importance. If a public entity lacks a knowledgeable and involved owner representative, a high degree of architect involvement can help ensure that the owner's interests are protected. We found varying levels of architect involvement in the projects we reviewed. In several projects where there was not a high level of owner knowledge or experience, the architect was not sufficiently involved in the review of billings and change orders. This lack of involvement increases the risk of possible cost overruns through excessive change order approvals, for example.

Architect Should Be Involved on an Ongoing Basis

Some professional literature as well as architects involved in some of the projects we reviewed discussed the role of an architect in a CM-GC project.

The AGC booklet on project delivery systems states that an owner using CM needs to select an architect who is willing to operate as a team member and be receptive to the CM's recommendations, presumably during design development. A couple of the local construction firms' representatives told us that the architect should be reviewing bills with the CM with the purpose of judging and agreeing on the percentage of completion of construction in relation to what is submitted on the bills.

Architects with whom we spoke during the audit also addressed the architect's role in a CM project. One architect for a county project indicated that his firm believes it is the role of the architect to assist the owner with technical support, to review project progress, and to review invoices and billings. The willingness to perform payment-related reviews is especially important if the owner is not sophisticated or knowledgeable about construction. He stated he also works with the owner to choose which CM contract to use and indicated he prefers one that clearly spells out both owner and contractor duties and responsibilities. Another service important when the owner is not knowledgeable about construction is the estimate of work completed. This architect cautioned that some architectural firms are full service but others provide a limited set of services in the proposal price; owners need to understand what they are being offered in an architect's proposal.

Not All Architects Provided a Full Range of Services

Varying levels of architect involvement occurred in the CM-GC projects we reviewed. Even though some projects lacked a high degree of owner knowledge or experience, the architect was not necessarily highly involved in the review of billings and change orders. As mentioned, the risk is that without careful review by a knowledgeable architect, a project's costs might increase unnecessarily through unneeded change orders.

For example, in the Juab County project, the architect told us his firm did not have much involvement with the payment requests, and he did not review or sign monthly payment applications. He also had little involvement with change orders unless there were disputes on price or additional scope of work. The architect indicated that the county's project manager and the CM worked closely together, but that his involvement came mostly when there were problems or disputes. While the architect commented to us that this was not an unusual situation, we believe that the lack of involvement removed a layer of expenditure review from an already problematic project.

Piute County's architect reviewed the work in progress, billings, and change orders. However, since the billings did not usually include detailed invoices with supporting documentation, only the contractor's summary of charges was reviewed. Subcontractors' invoices were not submitted and therefore not reviewed. This process significantly reduces the effectiveness of a billing review since details are not included in the summary of charges. Reviewing a summary of charges without verifying the amounts listed creates inadequate cost control.

Finally, while the North Sanpete School District used the services of its architect to review change orders, we have another concern about the architect's work on this project. The architect commented to us that the school district should have invited the lowest bidders to modify and resubmit their proposals after all bids came in high. He then stated that the chosen CM firm had acted in the district's best interests by going to the school board with a proposal to save them money on the project by using CM. These two comments are somewhat contradictory since one supports and one negates the requirements of state procurement law. The architect also commented to us that the CM hadn't done anything differently from a GC to merit the CM fees received on this project. In spite of his apparent feelings that the school district was paying unnecessary fees to the CM, he approved a change order paying $200,000 of the $250,000 fee to the CM in the first month of construction. The architect would have served the school district better had he at least restricted the fee payment to that percent of services that had been rendered according to the project's schedule of values.

Goal of Team Meetings Is to Reduce Conflicts in CM-GC Projects

We found that three of the four county projects and one school district project did not successfully employ a team concept as a project management tool. An advantage of the construction management project delivery system is that it uses a team concept to minimize conflicts and to bring participants together to build a successful project. One method used to facilitate the team concept is regular meetings of all parties to discuss progress, problems, and solutions. The project's owner (in the cases reviewed here, a county or a school district), the architect, and the CM are the basic members of the project team.

CM-GC Fosters Teamwork Through Regular Meetings

One of the stated benefits of CM as a project delivery system is the team concept of project management. Generally, both literature and practitioners indicate that the creation of a team and regular team meetings enhance communication, reduce conflict, and assist the project in running smoothly.

Again, the AGC booklet states that CM creates a team with the owner, CM, and architect before plans are developed. Another source indicates that *"the key strengths of CM are the team relationships throughout the project as all players are striving for common goals, and the added construction input during the project development [phase]."*

Representatives of local construction firms agree with the importance of the team approach. One stated that more of a team setup is accomplished if the CM is brought into the picture early, and the project runs smoother. An early team meeting gets everyone together to discuss expectations and to make commitments to each other. Another firm indicated that a big part of the effectiveness of CM relates to the quality and qualifications of the team that is put together. Finally, a third local firm's project manager provided this summary of the purpose and function of teams:

> *One of the most effective ways to provide good communication channels is by holding weekly meetings. Minutes of meetings, schedules of outstanding questions, and action items should be logged and reviewed weekly. The meeting also provides opportunity for design review, submittal review, schedule review, and more.*

Expanding on the comments above, an attorney who provided information on contractual issues with CM also referred to a legal basis for documented team meetings. He indicated that not only is having these meetings important as a project management tool, but, from a legal standpoint, documenting them is important in case legal proceedings occur as a result of problems on the project.

Several Projects Lacked Team Meetings on a Regular Basis

We found that three of the four county projects and one school district project did not successfully employ the team meeting concept as a project management tool. While team meetings do not guarantee a smoothly run project, their use in the following situations may have reduced some of the conflict that occurred.

According to the county engineer, Summit County's project team held meetings with varying frequency. At the beginning of the project meetings were held weekly, but they tapered off to about once a month. These monthly sessions were not highly successful meetings according to the county engineer, who commented that they were often "more like shouting contests." In addition, while CM team meetings are supposed to promote a cooperative team effort to overcome problems, this benefit was not apparent here. For example, the project experienced work stoppages due to contractors leaving the site for other jobs. While the staff expected the CM to handle these situations, the CM instead came to the county to ask what they were going to do about the problem.

In Juab County, team meetings were held only until construction started and were then discontinued. The architect told us he was invited to meetings primarily when there were payment disputes between the county's project manager and the CM; this arrangement is not the collaborative team meeting format recommended by CM's proponents but a more adversarial situation. In addition, the architect commented that the county's project manager and the CM worked closely together most of the time and that he (the architect) was usually not involved.

In Piute County, staff indicated that team meetings bringing together the owner, CM, architect, and subcontractors were not held. Instead, regular updates were provided to the commissioners by the CM during commission meetings. These updates, though valuable, served a different purpose from team meetings.

The North Sanpete School District's architect indicated that weekly walk-throughs of the project occurred; however, these tours were not documented, so we were unable to verify the frequency, participants, or content of the walk-throughs. Thus, it is difficult to assess whether they sufficiently substituted for the team meetings recommended for a CM project.

Proper Inspections Play a Part in Project Management

One final project management area is the requirement that construction be inspected by independent, certified and licensed inspectors. A previous report issued by our office, **Inspection of School Construction (Report # 98-04),** details the state law and Uniform Building Code (UBC) requirements that school building construction must be inspected by someone other than the architect or contractor. State law and the UBC also require that public

buildings be properly inspected. The CM-GC projects reviewed in this report were not always

inspected by independent, qualified inspectors as required.

Independent Inspections Are Required by Law and Benefit Owner

In addition to meeting a legal requirement, inspections can provide valuable information to the owner and other members of the project team. Inspections function as a useful ongoing control if they are done thoroughly and reviewed by the owner on a timely basis. Inspectors function to ensure that the project is built according to the plans and specifications and also according to building code requirements. The feedback from inspections can be helpful to ensure that the owner gets the finished product it expects.

Inspection requirements are spelled out in the state law and administrative rules. While city and county buildings are covered under the general requirements of the law and rules, some special language applies to school buildings. Generally, any building is subject to inspection, according to Utah's **Uniform Building Standard Rules** (R156-56-11), which provides for a building inspector to *"...inspect the construction, alteration, remodeling or repair of any building or structure, or the components of any building or structure for which a standard is provided in the specific edition of the UBC adopted under these rules or amendments to the UBC as included in these rules."*

The **Utah Code** states that a school district is subject to a county's or municipality's land use regulations (see 10-9-106 and 17-27-105), except that the jurisdiction may not provide for inspections of school construction *"unless neither the school district nor the state superintendent has provided for inspection...."* The law also says that the inspector must be someone *"...other than the project architect or contractor, who is qualified under criteria established by the state superintendent with the approval of the state building board and state fire marshal...."*

A qualified inspector is defined in the same rule (R156-56-11) as one who is licensed by the state, classified appropriately for the level of work under review, and certified for the appropriate level by the International Conference of Building Officials (ICBO). Only Level I ICBO inspectors may inspect school building construction; lower levels of certification are qualified to perform small commercial and residential construction inspections.

Some Projects Showed Inadequate Evidence of Proper Inspection

We did not find adequate proof of inspection in the records of the following projects:

- Juab County files contained documented inspections of its jail project for part of the construction time frame, with significant gaps in inspection documentation.

- The North Sanpete School District did not hire an independent ICBO Level I inspector, as required by law.
- The Duchesne County building official provided inspection records that reveal the inspector became certified part-way through the project, and even then performed some

inspections in areas in which he did not have the required certification.

In conclusion, as with any significant expense, adequate management controls need to be in place to ensure that public funds are spent wisely and well, accomplishing the purpose for the expenditure. Putting in place the recommended controls will help ensure that construction projects proceed as smoothly as possible.

Recommendations:

1. We recommend that public entities considering using Construction Management (CM) assess their internal resources to ensure staff have the necessary time and knowledge to devote to the project management team.

2. We recommend that public entities give careful consideration to the role the architect should play on a CM team, then choose an architectural firm that is willing to work on a team and provide assistance to the owner as needed for cost and quality control.

3. We recommend that public entities using CM review the advantages of team meetings and ensure that they occur and are documented.

4. We recommend that all public entities review the legal requirements for inspection of construction and ensure that the law is followed.

Chapter V
Several Considerations Influence Bonding Decisions

Of two bonding options available to political subdivisions in Utah for financing building projects, general obligation (GO) bonds are less expensive than lease revenue bonds. Even so, some political subdivisions choose lease revenue bonds when they have the ability to use GO bonds. The decision to use lease revenue bonds is often based more on a reluctance to hold a bond election than on available debt capacity or project characteristics. Where possible, we feel the use of GO bonds should be attempted when financing public projects because they cost less. The information presented in this chapter is intended to assist the Legislature in determining whether the present situation is acceptable or change is needed.

Both Bonding Options Are Valuable Financing Tools

Our work in this area arose from a legislative inquiry about whether nearing their constitutional debt limit forces political subdivisions to use higher cost financing options. The **Utah Constitution** limits governments' ability to enter into long-term debt in two ways. First, total long-term debt may not exceed a fixed percentage of the value of property within the jurisdiction. Cities may incur debt up to four percent (more if used for utilities), counties up to two percent, and school districts up to four percent of the market value of property in their jurisdictions. Second, the issuance of long-term debt must be approved by the voters residing in the jurisdiction. While GO bonds are subject to these constitutional limits, lease revenue bonds are not.

GO Bonds Are Backed by the Full Faith and Credit of the Government. GO bonds may be issued by governments that have the authority to levy property taxes. The issuing entity pledges as security its ability to increase property taxes, if necessary, to pay the debt. With an assured, tax-backed repayment source, the risk of default for GO bonds is low; hence bond ratings are generally higher and the bond interest rate is generally lower.

The source of credit for GO bonds (i.e., property taxes) can be seen as distinct from the source of payment: while the issuer promises to raise property taxes *if necessary* to generate the money to pay the debt, GO debt may be repaid from any source of revenue an entity has available. For example, the state has GO debt even though it levies no property taxes. The state is able to issue GO bonds and obtain the lowest cost financing because it has the authority to levy property taxes. However, the bonds are actually repaid from sales taxes or other revenues.

Lease Revenue Bonds Are Backed by Annual Appropriations. Lease revenue bonds are slightly more risky than GO bonds because they are backed by contracts pledging annually renewable lease revenues rather than the full faith and credit of a taxing authority. The government is not legally bound to appropriate funds to renew the lease for more than a year.

Thus, a higher risk is associated with these bonds that translates into higher interest rates paid by the political subdivision. Issuance costs are also slightly higher than for GO bonds.

In order to use lease-revenue financing a political subdivision must first create a municipal building authority, an entity that exists solely to finance and build public projects. Municipal building authorities (MBAs) are nonprofit corporations created by cities, counties, and school districts to obtain long-term financing without technically incurring long-term debt. Instead, the MBA incurs the obligation on behalf of the political subdivision. Annual lease payments from the political subdivision to the MBA are used to retire the bonds. Ownership of the project is eventually transferred to the government entity; because of this, these bonds are sometimes referred to as lease purchase bonds. The key to avoiding the constitutional debt limitation is that the lease is structured as an annually renewable obligation so that technically, the taxing authority does not create a long-term debt obligation.

Utah's Supreme Court affirmed in **Municipal Building Authority v. Lowder** (Utah 1985) that the use of MBAs to finance a political subdivision's capital improvements did not violate the **Utah Constitution**. At the same time, the Court recognized that the purpose of MBAs is to circumvent the constitutional debt restrictions. The court stated:

> *There is no question that the Utah Municipal Building Authority Act is yet another attempt to develop a means for financing needed capital improvements without being restricted by the rigid debt ceiling of article XIV, section 4 or by the taxpayer approval requirement of section 3....Of course the Act is intended to permit avoidance of the constitutional debt limitations.*

While the Court recognized that by using MBAs to finance projects, taxpayers *"...almost certainly will pay more..."* than had GO bonds been used, it found that the cost difference *"...is not relevant to the legal inquiry..."* about constitutionality. Since 1985, when the use of MBAs and the issuance of lease revenue bonds was affirmed in this Supreme Court case, their use has increased in Utah.

GO Bonds Cost Less than Lease Revenue Bonds. Cost differences between GO and lease revenue bonds arise from a number of factors. Local financial advisors told us that GO bonds are less complicated to issue and less expensive to repay than lease revenue bonds. For example, with a lease revenue bond a lease agreement has to be developed and additional funds may have to be borrowed to provide for the capitalization of a debt reserve fund. The biggest factor in the cost difference is the lower interest rate of GO bonds.

We asked financial advisors at Zions Bank Public Finance Division and at Lewis, Young, Robertson, and Burningham Investment firm to assist us in the comparison of costs between GO and lease revenue bonds for two sample public projects. The following figure provides two illustrations of the cost difference when using GO versus lease revenue bonds.

Figure I
Cost Differences Between GO and Lease Revenue Bonds (Two Illustrations)

	GO Bond	Lease Revenue Bond	Difference
Illustration 1: For a bond providing $9.8 million in construction proceeds and repaid over 24 years.			
Issuance Cost	$ 200,605	$ 288,613	$ 88,008
Interest Cost	7,446,925	9,044,720	1,597,795
Total			**$1,685,803**
Illustration 2: For a bond providing $2.0 million in construction proceeds and repaid over 12.5 years.			
Issuance Cost	$ 53,001	$ 82,359	$ 29,358
Interest Cost	879,701	1,096,918	217,217
Total			**$ 246,575**

Note: Cost estimates for the two illustrations provided by financial advisors at Zions Bank Public Finance and Lewis, Young, Robertson, and Burningham Investments.

As Figure I shows, the cost of a GO bond is less for issuance and interest than for a lease revenue bond. Having established that there are savings possible with GO bonds, we then looked at what motivates public entities to use the more expensive lease revenue bonds.

Cost Plays a Secondary Role in Bonding Decisions

From a strictly financial perspective, GOs would be the bonding option of choice for political subdivisions. Since lease revenue bonds are often used, we tried to identify the factors other than cost that play a part in financing decisions. At first we expected to see that political subdivisions used lease revenue bonds because they were close to their constitutional debt ceiling or because the project being financed generated a revenue stream to service the bond. However, we found that those factors were often not determinative. The principal reason for using lease revenue financing appears to be a reluctance to hold a bond election.

Most Sampled Political Subdivisions Are Not Near Their Debt Limit

One reason a political subdivision might choose to issue lease revenue bonds is that it is too close to its constitutional debt ceiling to issue GO bonds. To evaluate whether proximity to the debt ceiling was a significant factor, we obtained bonding information for a sample of cities and counties. Although a few political subdivisions were close to their debt limit, most of those reviewed were not.

Figures II and III indicate that none of the seven sampled cities and only three of the 11 sampled counties are close to the debt limit set by the state constitution.

Figure II
Selected Cities' Bond Amounts and GO Debt Limit
(in millions)

City	GO Bonds	GO Bonds as % of Property Value (Limit is 4%)	Unused GO Debt Capacity	Total Lease Revenue Bonds
St. George	$ 12.0	.46%	$ 92.4	$ 6.4
Pleasant Grove	2.4	.34	25.7	.3
Salt Lake City	30.3	.24	475.9	36.0
South Jordan	.4	.03	49.0	1.3
Layton	.4	.02	88.5	8.8
Bountiful	---	---	84.0	3.7
West Valley City	---	---	160.9	60.6

Note: Bond amounts obtained from audited financial statements dated June 30, 1997. GO debt limit computed as 4% of total real property value as of January 1, 1997. All data rounded.

As seen in Figure II, the highest debt percentage found for the sample cities was 0.46 percent compared to the 4 percent limit. Sampled cities have plenty of GO bonding capacity available. Nonetheless, some cities had a significant amount of lease revenue debt. For example, West Valley City has over $60 million of outstanding lease revenue bonds but no general obligation bonds.

Unlike the sampled cities, some counties are nearing their GO debt ceiling. Figure III presents similar information for a sample of counties that have a 2 percent debt limit. The debt information is based on 1996 financial audits except for Beaver County data which is updated to include a recent major bond issue. In 1997, Beaver County issued $6.5 million in GO bonds and $2.55 million in lease revenue bonds to build a jail, bringing its GO debt percentage to 1.7 percent. Kane and Duchesne counties also have used more than half of their GO debt capacity. Taking all three counties into account, 27 percent of the sampled counties were close to their debt limit. However, the majority of sampled counties still had substantial GO bonding capacity.

Figure III
Selected Counties' Bond Amounts and GO Debt Limit
(in millions)

County	GO Bonds	GO Bonds as % of Property Value (limit is 2%)	Unused GO Debt Capacity	Total Lease Revenue Bonds
Beaver	$ 6.5	1.7 %	$1.4	$ 2.8
Kane	6.0	1.5	$ 1.8	---
Duchesne	7.0	1.1	5.4	2.4
Box Elder	6.3	.3	37.5	5.5
Weber	17.3	.2	129.7	32.8
Davis	13.7	.1	174.9	1.2
Cache	---	---	64.8	2.7
Iron	---	---	31.4	1.9
Juab	---	---	8.7	2.3
Sevier	---	---	14.6	3.7
Uintah	---	---	29.1	.4

Note: Bond amounts obtained from audited financial statements dated December 31, 1996 (except for Beaver County, for which 1997 bond data were used; 1996 property values used as most recent available). GO debt limit computed as 2% of total real property value as of January 1, 1997. All data rounded.

Of all the cities and counties reviewed, Beaver County is the only one whose lease revenue bonds exceed their unused GO debt capacity. It is apparent that Beaver County's constitutional debt ceiling was an important consideration in its use of lease revenue debt: the county either had to issue lease revenue bonds or borrow less money. The GO debt ceiling also may have been an important factor for Duchesne County since financial advisors told us that it is wise to hold some GO bonding capacity in reserve. Although Kane County does not have any lease revenue debt now, the GO debt ceiling could force the county to issue lease revenue bonds if it needs to borrow additional funds in the near term.

In addition to many cities and counties, a few school districts have MBAs. Of the school districts we reviewed, only Ogden City School District had a significant amount of lease revenue bond obligation ($5.4 million at the end of fiscal year 1997). Since the district's GO debt percentage was at just 0.4 percent when the lease revenue bonds were issued in 1992, its debt ceiling of 4.0 percent was not a factor in its decision to issue lease revenue bonds.

Project Revenue Stream Does Not Determine Bonding Choice

Since the debt ceiling was typically not a causal factor in choosing to finance a project with lease revenue bonds, we investigated whether project characteristics affected financing decisions. Theoretically, projects that have a revenue stream associated with them might be financed with lease revenue bonds while projects that do not generate revenues might be financed with GO bonds. Thus, a golf course (because it charges user fees) might be financed with lease revenue bonds and a city hall (because there are no user fees) with GO bonds. We found that the availability of a revenue stream was not a determining factor: projects with revenue streams were sometimes financed with GO bonds and those without revenue streams were sometimes financed with lease revenue bonds.

GO Bonds Are Used to Finance Projects with Revenue Streams. We found that projects which generate their own revenue stream are often still financed with GO bonds. Even though property taxes are not needed or used to repay the loan, a GO bond is used to minimize costs.

- **County Jails -** Many counties have recently built relatively large jails in order to house mostly state prisoners. The counties are relying on lease payments from the state to provide all or most of the revenue stream needed to repay the bond. For example, Daggett County expects that state lease payments will provide funds for repaying the GO bonds without any tax monies being needed. Despite the planned revenue stream, most counties, including Daggett, Summit, Duchesne, and Box Elder, have used GO bonds to finance large new jails.

- **Salt Lake County Parks -** In November 1997, the county asked voters to approve a GO bond to construct 12 new recreation facilities even though it already had the required revenue stream in place. Voters had previously authorized an increase in local sales tax to be allocated for the zoo, arts, and parks (ZAP tax). Salt Lake County voters authorized a GO bond with assurances that property taxes would not be used to pay the debt. While

the debt is guaranteed by property taxes, the county stated its intention in the voter information pamphlet to repay the bond primarily with ZAP tax revenue.

- **North Salt Lake Golf Course -** The golf course was initially financed with a lease revenue bond and then refinanced with a GO bond to reduce costs.

The above examples illustrate that the source of funds to repay a bond need not be the same as the source of credit used to secure the bond. With GO bonds, property taxes provide the source of credit resulting in the lowest costs, but other revenue streams may still be used as the source of payment to retire the debt.

Lease Revenue Bonds Are Used to Finance Projects Without Revenue Streams. We found that projects which do not generate any revenue stream are often still financed with lease revenue bonds. Even though general tax revenues are used to repay the loan, a lease revenue bond is used.

- **Central Middle School -** The Ogden City School District organized an MBA and issued $6 million in lease revenue bonds for a major remodeling project. Since the district then leases the school from its own MBA, there is no outside revenue stream to service the bond. The funds to repay the bond come from general tax revenues collected by the school district and paid to the MBA.

- **City Hall and Fire Station -** West Valley City financed a $6.9 million city hall in 1989 and $3.9 million fire station in 1997 with lease revenue bonds. These projects do not generate user fees, so their financing must be repaid with general tax revenues. In each case the lease revenue bond package also included another project that generates some revenue---$8.5 million in additional bonds for a golf course in 1989 and $7.7 million in additional bonds for a community theater in 1997.

- **County Government Center -** Summit County administrators indicated the remodeling /restoration of the county building will be financed with lease revenue bonds instead of GO bonds.

The above examples illustrate that lease revenue bonds are sometimes used to finance projects that do not generate any revenue. Since the project has no user fees, general tax revenues provide the funds to service the bond.

Reluctance to Hold Election Contributes to Lease Revenue Financing

Having determined that neither the debt ceiling nor a project's revenue stream were causal factors in choosing to finance a project with lease revenue bonds, we spoke with local officials to obtain input on how they made their financing decisions. While some officials cite other factors, the main reason for lease revenue bonding appears to be a reluctance to hold a bond election. A variety of reasons contribute to this reluctance to hold an election.

Some officials acknowledge that avoiding the GO bond election is a major factor in choosing lease revenue financing. For example, in a letter to the Permanent Community Impact Board seeking a lease revenue bond, one county stated that *"we do not believe the taxpayers will approve another bond...."* Another county chose to use lease revenue bonds instead of GO bonds for a multi-purpose building that included educational facilities even though their financial advisor advised them that voters are usually willing to authorize GO bonds for educational purposes. According to the financial advisor, county officials were concerned that voters had recently approved a GO bond for another project and did not want to risk non-passage of a GO bonding proposal.

One reason some officials might be reluctant to risk voters' defeat of a GO bonding proposal is their fear of political repercussions if they then try to use lease revenue bonds. This concern is illustrated by recent events in Draper. A GO bond proposal to build a new city hall failed by a slim margin of three votes. When city council members proposed using lease revenue bonds to finance the project, there was significant public outcry, and the proposal first passed then was voted down by the council. A council member who voted against the lease revenue bond proposal commented that *"...the lease revenue bond is an underhanded way to ask citizens for their tax dollars."*

Financial Experts Recommend Bonding Flexibility. Local financial advisors we spoke with emphasized that public officials need to have more than one route to the bonding market and that both GO and lease revenue bonds are appropriate choices for financing projects. They also stated that political subdivisions need to be responsible in choosing the best route and that there is an assumption that public officials are using their best financial judgment to make these decisions. Further, they indicated that in the present bond market, interest rates on both GOs and lease revenue bonds are low, and as they have dropped, the difference between the bonds' interest rates has lessened, though GO bond interest rates are still lower.

Both a financial advisor and a bond counsel stated their opinion that increased flexibility is needed if greater use of GO bonds is desired. These experts indicated that at present there are only four dates a year when bond elections can be held. They stated the limited flexibility to schedule an election can in turn adversely affect a project's start date and cost. The financial advisor felt that the ability to avoid winter weather conditions during construction is a cost saving step that should be available to Utah local governments. Additionally, bond counsel indicated that waiting for an election could delay financing of a project as much as six months and might result in higher interest costs than taking advantage of a present favorable interest rate on lease revenue bonds. Both suggested allowing more election dates for GO bonding purposes.

One financial advisor also provided input on some reasoning used by a local official regarding the use of lease revenue bonds instead of GOs. A city manager stated that one reason a golf course was initially financed with a lease revenue bond was that the city could "walk away" from the project if it did not generate adequate revenue. However, the financial advisor told us that a city cannot default on its lease revenue bond without significant repercussions. A good example of this occurred in Bay City, Texas, which chose to discontinue lease revenue bond payments for

a golf course. The city's general obligation bond rating was subsequently downgraded by Moody's, a nationally recognized bond rating agency. Downgrading an entity's bond rating makes it more difficult for the entity to obtain financing; it also results in higher total financing costs to the political subdivision.

Legislature Needs to Decide If Any Action Is Needed

Our review of the bonding activity shows that very few political subdivisions have reached the constitutionally set debt limitation, but many use lease revenue bonding because they are reluctant to hold a bond election. Because GO bonding is less expensive to incur and repay, we believe this type of bonding should be the first choice of political subdivisions when possible. In any case, the cost difference should be a major consideration to ensure maximum fiduciary responsibility is maintained at the local level.

Should the Legislature feel concern about the present practices as described in this chapter, options are available. Encouraging the use of GO bonds is a preferred option. Alternately, discouraging the use of lease revenue bonds is a possibility. Options include the following:

- Amend the election law to provide local governments more dates to put GO bond proposals on a ballot.

- Require more public notice when lease revenue bonds are under consideration. Present law requires one public hearing.

- Require a lower number of voters' signatures on a petition to force a vote on a lease revenue bond issue. Present law requires at least 20 percent of the registered voters to sign a petition requesting an election within 30 calendar days of the notice of the intent to issue bonds.

- Restrict the use of lease revenue bonds to projects fitting within certain parameters, for example, those with a revenue stream or those defined as essential. The Municipal Building Authorities Act (**Utah Code** 17A-3-917) states that an MBA performs *"...essential governmental functions on behalf of public bodies."* However, it is unclear whether this statement means that the projects themselves need to be essential (e.g., a jail vs. a golf course), so clarification of this provision would be needed if restriction is desirable.

Conversely, if the Legislature feels that the present use of bonding avenues by political subdivisions is acceptable, no action is needed.

Recommendations:

1. We recommend that political subdivisions give consideration to the cost differences between GO and lease revenue bonds when analyzing their bond options and consider GO

bonds as the first choice because savings are generally possible.

2. We recommend that the Legislature consider whether any action is needed regarding present practices of political subdivisions in issuing bonds for construction.

Agency Response