

AS SEEN IN
CAROLINA FIRE RESCUE EMS JOURNAL

Reprinted with Permission

“Counting the Costs of New Construction”

Written by: Kenneth C. Newell, AIA NCARB

If you've ever bought a new car you know it's the *hidden costs* that can surprise you. The same is true in planning and building a building. Even Jesus said, “*Which of you, intending to build a tower, sitteth not down first, and counteth the cost, whether he have sufficient to finish it?*” There is a plethora of potential expenses to encounter during the process of building a new public safety facility. Everyone recognizes the cost of *brick and mortar*, but what are the other expenses that you may encounter during your project?

The goal of this conversation is to identify the most common, unexpected expenses for a building project. Hopefully, you will not face many of these issues. However, you should at least be prepared to address them if they become a factor.

Property or Land Purchase

Unless you already own the property or someone is going to give it to you, you will have to purchase property. You may only have to purchase adjacent property to what you already own. You may also consider an existing facility that can be retrofit into a station.

Demolition of Existing Structures

The property you buy for a new facility may have existing structures on them that need to be removed. Or, you may be renovating an existing building that requires limited demolition before new construction can begin. Normally, demolition expenses are not that overwhelming. You may even know a fire department that can burn the buildings to be demolished, leaving only the rubbish to be disposed.

Environmental Assessment

If the property has previously been used for other structures, it will likely have to be assessed for contamination issues. These issues can include things like chemical/oil spills, underground tanks, etc. Your lender will likely require this assessment prior to the purchase of the property. Older, local residents may be able to recollect any previous use of the property, which is helpful information, but the assessment will provide valuable information that is necessary.

Asbestos/Lead Paint Survey

If the project requires demolition or renovation of an existing building, a determination must be made as to the presence of asbestos and lead paint. Sometimes municipalities or previous building owners will already have a survey in hand that reveals whether these items exist. If there is no existing survey available, a testing company will need to be hired in order to provide this service. The cost of asbestos/lead paint surveys are relatively inexpensive and cannot be avoided.

Asbestos/Lead Paint Abatement

Abatement, or properly addressing the asbestos/lead paint, will be necessary if the above survey reveals their presence in existing structures. It is illegal not to address these items if they exist, even if you only intend to

burn the building. If asbestos/lead paint exist and are not properly addressed, you can be fined substantial dollars during demolition/construction. The cost of abatement is not as high as you might expect it to be.

Property Survey

The survey is more than the boundary plat that came with the deed. A surveyor will have to produce a survey that includes things like: property boundaries, topography, utilities, major trees or tree lines, existing structures, etc. You will want to make sure that the property survey is produced using CAD, or computer aided drafting. The designer will likely need computer drawings in order to provide their services. The cost of property surveys can vary greatly. Be sure to get more than one proposal.

Geotechnical Exploration and Testing

Buried debris, rock, unsuitable soils, high ground water, multiple utility easements, etc., are all unseen conditions that may require you to spend thousands of dollars just to get the site ready of construction. Geotechnical Exploration and Testing will help identify these issues while identifying the remedies for their presence. This testing is well worth the cost so that there are as few *costly* surprises as possible after construction begins.

Legal Fees

As we all know, it has become necessary to involve an attorney for almost anything you do these days. As you also know, attorneys don't work free. If the owner is an entity that has an attorney on staff, this cost is a mute point. Otherwise, deed searches, closing cost, document filings, etc., will require the expense of legal council.

Architectural/Engineering Fees

Design professionals will be necessary to provide proper designs and construction documents. These costs will likely range from seven to ten percent of the cost of construction. The Architect can assist you in the coordination of all these other expense issues.

Interior Design Fees

Depending on the size and complexity of the project, the you may want an interior designer to provide services that will help select finishes, colors, furnishings, and accessories. This cost can usually be combined as an additional service to the Architectural/Engineering Fees or it can be a completely different contract with a separate entity. Either way, allowance should be made for the potential cost.

Construction Testing

During the construction period, testing must be performed on soils, concrete, steel, etc., to assure that the proper procedures are being followed that will result in sound construction. Larger owners like municipalities will normally contract directly with the testing company for these tests. Other owners will make the testing the responsibility of the building contractor. Either way, the cost will be passed on to the Owner and should be planned for.

Builders Risk Insurance

This policy protects you during construction against property loss like fire or vandalism. The lending institution will likely require Builders Risk Insurance to protect their investment as well. The building contractor can purchase this policy on the open market and pass the cost along to the owner in his bid. However, if the property is already insured by the owner for general liability, a Builders Risk attachment can usually be purchased through their provider for less than the builder's cost of providing the same.

Permits and Fees

Building permits, landscape permits, sign permits, utility taps, local business licenses, etc., are all costs that will have to be incurred. Like many other costs, these fees are normally the responsibility of the builder. They will simply build these costs into their bid to the owner. You can save money by paying these fees directly or in the case of a municipal/owner, simply waive the fees, if possible.

On Site Utilities

Typically, the on site utility improvements necessary for the new construction will be made part of the builder's contract. In the case of a municipal owner, there may be city or county staff that can provide the site utility upgrades necessary for the facility. Under these conditions, the owner providing utilities to within five feet of the building can save substantial costs. Don't forget, there is a cost to be expected no matter who provides it. Examples of these utilities are water, sanitary sewer, storm sewer, gas, power, etc.

Off Site Utilities

If the site does not already have the above-mentioned utilities, it may be required to extend those utilities from another nearby location. Like on site utility work, specifications can require that the builder provide these extensions or perform the extensions through existing work forces or separate contracts. A word of caution: utility work can become expensive very quickly.

Landscaping

Nearly all planning jurisdictions now require that some type of pre-prescribed landscape design be submitted with the building plans for permitting. Gone are the days when you could just throw some grass seed on the ground at the end of construction. The selected landscape design can range from the bare minimum that meets ordinance to a lavish plan that includes sod and irrigation. Many owners who plan to install more than the required minimum will provide for the landscape package outside of the building contract. Municipalities may have staff that will install the landscaping. Fire Departments often have members who are also landscapers that can install for less cost than the building contractor's sub.

Telephone System

Hopefully, the design professionals will have designed around the telephone systems that you wish to use. You likely already have a relationship with a telephone vendor and will plan to use this vendor for the new construction. As long as accommodation is made for the preferred system then you can simply have your vendor provide the equipment and installation. You can also have the system provided by the builder.

Computer Networking

Like the telephone system, accommodations should be made in the construction documents that will allow the your IT vendor to install the selected equipment. The vendors should be involved during the design phases in order to assure the end results desired.

Security System

See above comments on telephones and computers.

Interior Furnishings, Fixtures, and Equipment (FFE)

There is potentially more price variation in the FFE budget than any other part of the project. You may be able to reuse some of the FFE from the existing facilities. Kitchen equipment, appliances, compressors, furniture, etc., are all items that can be budgeted outside of the building contract. See the above *Interior Design Fees* for further information. It is not unusual to see a FFE budget of 15-25% of the cost of construction.

Building Signage

Whether it is interior door/wall signs and plaques or exterior yard or building signs, the cost will either be included in the building contract or separated for the owner to provide.

Moving Cost

If you already operating out of a facility prior to construction, there will be at least one move to get to the new building. If the construction is a renovation/addition in which the owner will have to remain on site, there could potentially be multiple moves to correspond with the phases of construction. Moving costs should be considered while developing a project budget.

Temporary Facilities and/or Storage during Construction

Corresponding with the *Moving Cost* category, you may be required to lease temporary facilities during the construction phase. This cost may be as little as the cost of a storage facility to temporarily house the non-critical equipment.

Project Contingency

Building construction should be considered the most *un*-exact science in the world. Unexpected issues will surface during the process. For this reason you should set aside contingency allowances in order to be able to address the unexpected costs that arise. It is recommended to provide a contingency allowance of at least 5% of the cost of construction. This contingency can be used to cover the cost of many of the items mentioned above. Hopefully, most of the contingency will be unused at the project's end.

Building Dedication

Don't forget that there is likely to be some sort of ceremony when the time comes for ribbon cutting. Depending on how extravagant the event will be, monies should be budgeted.

Financing Costs

Unless you are fortunate enough to pay cash for the whole project, there will be costs associated with financing. Filing fees, closing costs, construction interests, etc., are examples of expenses to investigate prior to developing your project budget.

In Conclusion

Don't let all of these *opportunities* to spend money frighten you. Several of these items will likely not be encountered on your project. But like we said before, its better to plan ahead and have funds left over at the end of the project than to come up short!