



Job Order Contracting for Novices

Just the Basics

So, What is JOC?

Job Order Contracting (JOC) is a way of getting small, simple, and commonly encountered construction projects done easily and quickly. A JOC contract usually applies to a specific site or sites and can be used for any number of jobs that need to be done for as long as the contract is in effect. The JOC method of project delivery was devised by the military sector in the 1980s as a way to overcome problems with the traditional Design Bid Build (DBB) method. Using DBB, every project, no matter how small, had to be designed and put out for bid, with the award going to the lowest bidder. Going through this procedure for every little job was becoming impractical. The common occurrences of construction delays, cost over-runs, and quality disputes were successfully reduced using the new method, and JOC has been equally successful in the private sector for more than a decade. Recently, legislation has authorized the use JOC for public construction in many states. Essentially, JOC provides owners with an on-call general contractor who is familiar with the site and the owner's needs..

When is JOC Used?

The JOC delivery method is particularly well suited to repetitive jobs and situations in which owners know that many small tasks will arise, but the timing, type of work, and quantity of work are unknown at the time the contract is signed. Many diverse tasks such as routine maintenance, upgrades and renovations, alterations, and minor construction for a site are very efficiently handled using a single JOC contract. These jobs usually have minimal design requirements.

The JOC method should not be used for large, complex new construction projects that require extensive or innovative design or are likely to encounter changes and revisions during construction. In fact, some states require each job completed under a JOC contract to cost less than \$750,000.

Why is JOC Useful?

There are several important advantages provided by Job Order Contracting. Projects done under JOC contracts are completed faster and cost less, and the quality of the work is equal to or higher than that of projects done using DBB.

The most obvious benefit of JOC is the fact that it is not necessary to write separate contracts for each job. Since procurement procedures are major contributors to overhead and require significant staff resources, bypassing this procedure saves time and money. Jobs get done faster and more cost effectively because the procurement costs are spread over many jobs. In fact, for most jobs done under JOC contracts, work beings 20 – 30

days after the need for work is communicated to the contractor, as compared to 180 days for DBB.

Another advantage is that the JOC contract establishes prices for each unit of work or materials, so it is fast and easy to arrive at a fixed price for each job. There are no price negotiations involved in implementing a JOC contract.

Additionally, because the owner establishes a long-term relationship with the Job Order Contractor, communication can be very efficient as the contractor becomes familiar with the needs and expectations of the owner. This long-term partnership, when established in a cooperative environment, leads to better quality and better value. JOC contracts are written with minimum and maximum dollar amounts of work that may be assigned under the contract. This situation creates a powerful incentive for the contractor to provide fast, high quality, reliable service to the owner. Owners are also motivated to establish positive relationships with the Job Order Contractors in order to reap the maximum benefits from the contract.

Finally, a very important feature of the JOC process is that the contractor is chosen by Qualifications Based Selection. This means that the choice will be based on experience with similar sites, knowledge and capability of personnel, and other factors that directly impact the quality of work delivered.

The JOC contractor typically uses his in-house design staff or an architect already under contract to quickly draw up plans for jobs as the need arises, saving substantial time.

How are JOC Contracts are Set Up?

The procurement process for Job Order Contracting starts with the identification of a need. When the owner's needs include repetitive tasks, small new projects, and renovations, using the JOC method is appropriate. Before the task of selecting a contracting firm can commence, the owner must establish a general scope of work definition, including possible types of work to be covered by the contract, locations of the work, and a set of quality and design criteria that will apply to all work done under the contract. There are two steps to the procurement procedure.

The first step of the process consists of issuing a Request for Qualifications (RFQ). Responding firms are then evaluated using a set of criteria determined by the owner. These criteria usually consist of:

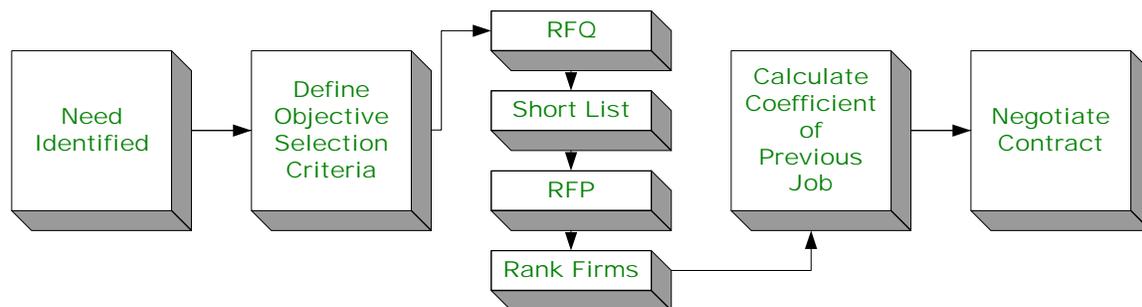
- Offeror's qualifications and past performance (including references)
- The firm's previous experience with JOC contracts
- Demonstrated ability to handle multiple jobs simultaneously
- Qualifications of key personnel
- Financial status
- Safety record
- Quality assurance program or quality management plan
- Project management methods

- Information technology systems
- Any other criteria the owner deems relevant

Each of these criteria is weighted according to how important it is to the successful outcome of jobs. A short list is formed by scoring all competing firms. The contract is then negotiated with the top firm, unless this proves impossible, whereupon, the next firm on the list is considered, until an agreement is reached. This process uses Qualifications Based Selection almost exclusively. However, price is considered in the form of a price coefficient, explained below, that is agreed upon during contract negotiations.

Sometimes, a second step is added to the procurement process. The second step uses a Request for Proposals (RFP) issued to the firms on the short list. For the JOC procurement method, the RFP consists of the proposed contract, which contains the items listed in the next section. Responders to the RFP will be required to submit any proposed changes to contract conditions that they think desirable, along with a price coefficient. The price coefficient is a multiplier that is applied to a Unit Price Book in order to determine the cost of each line item used on jobs.

In evaluating the responses, it is advisable to independently evaluate the proposed price coefficients, especially for inexperienced owners. This is generally done by selecting a recently completed job (not done under a JOC contract) that is representative of the type of job expected to arise under the contract. That job is broken out into line items included in the unit price book. Adding up the line items and dividing that total into the price paid for the project shows what the price coefficient would have been for that project. This can then be compared to what offerors are proposing in response to the RFP. This serves as a guideline for negotiations. It should be possible to negotiate a slightly lower price coefficient than that reflecting a single job, because the start-up costs for the contractor are significant and having many jobs covered by the contract will result in economies of scale, some of the savings from which should be passed on to the owner. However, price coefficients do vary regionally and also depend on market conditions.



What is in a JOC Contract?

The key elements of JOC contracts that are unique to this delivery method include:

- Unit Price Book (UPB)
- Price coefficient

- Guaranteed minimum amount of work
- Contract maximum amount of work
- Duration of the contract
- Options for extension of the contract

The price coefficient will be used to determine the actual cost of each job. The contract must specify the UPB to be used. The contracted price coefficient will then be applied to all labor and materials line items necessary for each job to arrive at a firm price for the job.

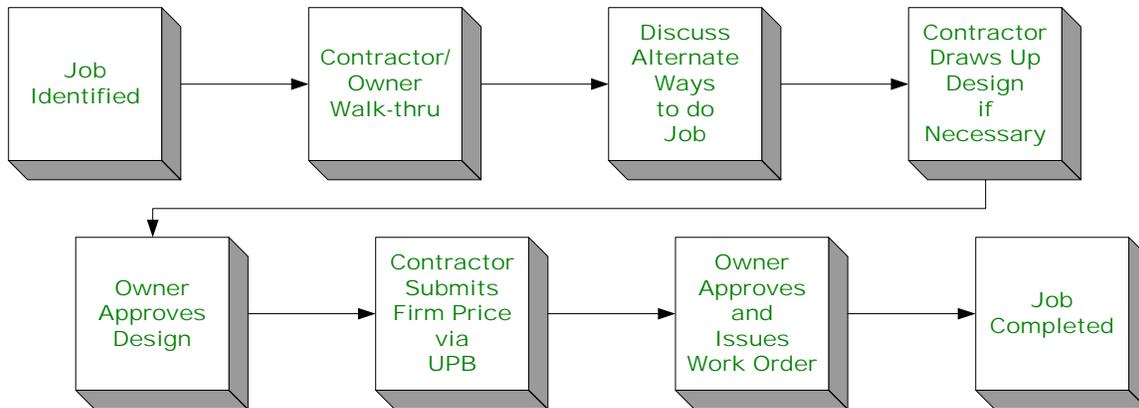
The contract will include a guaranteed minimum dollar amount of work to be done during the initial term of the contract and during subsequent option years. This protects the contractor, since a large investment must be made to set up a base of operations on or near the site and to establish the working partnership with the owner that will ensure success. Usual contract minimums range from \$50,000 to \$200,000.

A potential maximum dollar amount of work for each year of the contract is also specified. Setting a maximum amount of work significantly higher than the minimum, but still realistic, provides a powerful incentive for the contractor to perform well. Average JOC contracts set this maximum between \$5 and \$7 million, but some go as high as \$15 to \$20 million.

Typically, JOC contracts have a base year and two to four option years, however, the initial contract period can be up to three years or more. The longer the relationship between the owner and the contracting firm, the more benefit is gained, so it is in the best interest of both owners and contractors to make the partnership work well so that both parties want to extend the contract beyond the initial term.

How is a JOC Contract Used?

The process of using a JOC contract is very fast and straightforward. When a need is identified, the owner contacts the JOC contractor and they walk through the site, define the extent of the project, and discuss alternate approaches to be considered. The contractor then draws up a design, if necessary, and a detailed project list, including all materials and labor needed. Using the chosen unit price book, the contractor can establish a firm price for the job. The owner reviews the proposal and issues an authorization to proceed. The process from request to authorization to begin work takes a very short time, sometimes as little as ten days to two weeks and not more than 30 days. The flow diagram below shows the steps of the process.



Job Order Contracting in Action

The best way to become familiar with when and how JOC is used and what determines its effectiveness is to follow a specific example through the steps of the process. The following scenario illustrates a situation very well suited to the JOC delivery method.

Owner: A public school district.

Site: A single high school campus. Alternatively, the district could elect to use one JOC contract to cover all high schools or even all schools within the district.

Pre-Selection Analysis: The high school administration has recognized that many small upgrades, renovations, and repairs have accumulated and are not getting done very quickly because of paperwork and delays in defining exact requirements, bidding each project, and establishing contracts for each job. Even using district staff, there is not enough manpower to keep up with the increasing needs of a school with a growing student population. A representative of the school approaches the school board with this problem and the recommendation is to establish a JOC order contract to facilitate fast completion of necessary work. The decision to use JOC is supported by the fact that there are a good number of projects that really must be completed during the summer in order to be ready for a larger incoming class in the fall.

Selection Process: The district, already intimately familiar with the needs of the particular school, can quickly write up a description of what kinds of jobs the contract would cover. In addition, the district is a public entity and will be subject to specific legal requirements regarding what general conditions and specifications must be included in any contract it enters into. The district would normally use a consultant to write the Request for Qualifications and the Request for Proposals (which includes the proposed contract), however, the district staff will make the ultimate decision of whether to use a one-step or two-step procurement procedure and what criteria to use in the evaluation of qualifications. With either method, the selection will rest mainly on qualifications, but may consider the price coefficient if an RFP is used. If the owner (the district) is experienced in the use of JOC, these processes are already routine and the owner knows approximately what the coefficient should be.

Using the Contract: Four examples of jobs will be given. One is representative of upgrades, one of repairs, one of remodeling, and the last is an example of a small new

construction project of the type that can be accomplished efficiently with a JOC contract. In addition to these four kinds of jobs, routine maintenance can be handled under a JOC contract also. In the case of a high school, this function may be performed by district staff assigned to the school, such as janitors or custodians, but it certainly can be included in a JOC contract if the district chooses to do so (to reduce payroll, for instance).

- **An Upgrade Task** – The site includes a hill on one side of the main classroom building. In order to get down to the lower levels of the building from other buildings on site, students have been taking a direct route down a grassy hill, causing the grass to die, with subsequent erosion, and increasing maintenance due to dirt tracking into the building. The JOC contractor is called in and conducts a site walk through with a member of the high school staff (and sometimes a district staff member also) to discuss how the problem may be solved. They decide then and there to install a set of concrete steps along the shortest route to the building, replacing the dirt path and requiring no grass repair. The contractor takes a few measurements, goes back to the office, calculates materials, and looks up (in the UPB) the cost of all line items needed for the job. The contractor may have his in-house designer draw up a simple plan showing how many steps there will be and how wide the walkway will be. The contractor then submits a firm price to the district, usually within 10 – 14 days for such a simple job. The district approves and work begins less than three weeks after the request was received by the contractor. The approach would also work very well for accomplishing a set of repetitive tasks the district needs done, such as replacing the chalk boards in all classrooms with white boards.
- **Repair Jobs** – The parking lot is aging and accumulating pot holes. It is also settling in certain areas, resulting in virtual lakes after rainstorms. The JOC contractor again participates in a walk-through with school and/or district staff, quickly grasping an understanding of the issues. JOC contractors very often have subcontractors on call that they have pre-qualified, especially in commonly used trades (plumbing, electrical, masonry) or those they anticipate needing over the course of the contract. In this case, the JOC contractor would probably bring his grading and paving subcontractor to the walk-through, thus streamlining the process of job definition and saving time. The subcontractor will give the contractor a cost for the job, allowing the JOC contractor to submit a firm price to the district. Since prices are fixed by the Unit Price Book and coefficient, there is nothing to debate, approval is immediate, and the work can begin. This rapid approval process also imparts another advantage in that work can be scheduled for a time when the parking lot is not in use, such as over a holiday or summer vacation. This not only makes the work go faster (the paving doesn't have to be broken up into sections to allow use of part of the parking lot, for example), it significantly reduces the inconvenience and impact on the faculty, staff, and students. Other common needs on schools campuses include fence, restroom, locker, and hallway repairs. These needs tend to be repetitive and this situation illustrates another big advantage of using JOC. The contractor becomes so familiar with the site and the usual requirements of the owner that it may be possible to simply call the JOC contractor and communicate that another fence repair like the last one done is needed before Monday, for example.

- Remodeling of a Band Room** – This high school puts much emphasis on its marching band and has built it into a highly respected program over the past decade. This has attracted many students and the marching band has grown way too large for its current facility. An expansion of the band room is needed, with more space to practice, an office for the band director, and more lockers for band instruments and uniforms. The JOC contractor is contacted and, in this case, meets with both users (the band director and head of the music department) and district staff at the site to get a clear understanding of what is needed. For this project, the JOC contractor will need his designer to draw up detailed plans for the project, which will take about two weeks as opposed to the few days needed for the concrete steps. The users and district staff will also have to consider the design more carefully in this case, checking to make sure it will meet all the needs of the growing band. Once the owner approves the project, a fixed cost is calculated by the contractor, again using the UPB. Here again, the JOC contractor may have the subcontractors needed already chosen. Alternatively, the contracting firm may have most of these general construction capabilities in house. The notice to proceed on this remodeling project can be issued in as little as 30 days from the time of the walk-through. However, given the use of the site, the project will probably be planned for the next summer break, or at least delayed until the end of marching band season.
- New Construction of a Ticket Booth** – This high school’s stadium often hosts district events such as regional track meets or football playoffs, in addition to the usual regular season football games. The ticket sales were being handled by people standing at the gates, creating a situation in which lines were more like swarms and the process of getting into the stadium was an unpleasant experience for attendees. The school decided that a multi-window ticket booth would allow orderly purchasing of tickets and streamline the entry process, allowing the personnel at the gate to simply collect tickets. The booth would also increase accuracy and ease of accounting functions. This is another case in which the JOC contractor would meet with several district and school officials, because this project, although small, represents a larger investment and is open to more creative design possibilities than a set of concrete steps. This on-site meeting will establish an understanding of the intended functions of the ticket booth, the utilities needed in it, and its size and location. Issues to be considered include whether to add a small concession capability to the opposite side of the booth and how the shape, details, and colors of the structure will be designed to fit in with the rest of the site architecture. These decisions will be made in the design phase (which is once again an in-house service of the JOC contractor) and may require a couple of meetings between the contractor, the designer, and the district staff. Once the owner has approved a design, the contractor once again uses the UPB and price coefficient specified in the contract to establish a firm price for the job. If the price is too high for the district’s budget, the line item approach makes it easy to eliminate options (such as the concession capability or expensive exterior finishes, for example) and compare the cost of alternatives. Once a functional, affordable alternative has been defined, the owner approves the plan and the work is begun immediately or scheduled around the use patterns of the campus.

This example shows the power of JOC to streamline the project definition process and to expedite construction tasks, resulting in more efficient use of resources, both human and financial. The case of a school campus also demonstrates the flexibility and responsiveness that is a hallmark of JOC contractors. Because it becomes so familiar with the site, its use patterns, and the owners concerns and needs, the JOC contractor really become part of a team working together to meet the needs of this campus.

The Key to JOC

It cannot be emphasized enough that the success of the JOC method depends on teamwork. Setting up an effective contract will provide motivation for the contractor to perform well and exceed the owner's expectations. The contractor will gain repeat business and a great reputation by doing so. The owner will get quality work, done when it is needed, at a fair price.

However, even a proper contract cannot substitute for a positive partnering relationship in which both contractor and owner understand that either they both succeed or neither does. It is important that all team members on both the contractor's and the owner's staff must be knowledgeable about Job Order Contracting and must be trained to administer the contract properly.

For owners who have never used Job Order Contracting, hiring a consultant will prevent contract errors, provide hands-on training in the execution of JOC contracts, and greatly increase the likelihood of success.

More Information on JOC

More information on Job Order Contracting is available from The Alliance for Construction Excellence (ACE), part of the Del E. Webb School of Construction at Arizona State University. Through its Center for Job Order Contracting Excellence (CJE), ACE conducts research and provides information and assistance to owners and firms using the Job Order Contracting method. To access contact information and a description of CJE, visit the ACE website at <http://construction.asu.edu/ace/>

Additional information can be obtained by consulting with owners and other contracting firms that have experience in using the JOC method. Their experience can be invaluable and can prevent contract errors. Try to find firms and owners in your home state, because laws governing the use of JOC and the forms of contracts vary from state to state.