

SUBCONTRACTOR PERSPECTIVES: FACTORS THAT MOST AFFECT THEIR
RELATIONSHIPS WITH GENERAL CONTRACTORS - A PACIFIC
NORTHWEST STUDY

By

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Abstract

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A Pacific Northwest study to determine the most important factors in the general contractor - subcontractor relationship. Subcontractor perspectives are presented about the factors that affect their relationships with general contractors. Interviews are conducted with twenty four subcontractors from eight disciplines to evaluate their opinions about the general contractor's personnel, procedures and practices that improve or damage their relationships. The study reveals the top three relationship factors to be bid shopping, project manager relationship and superintendent capability, respectively. A mixed method research design is utilized where subcontractors are asked to determine the importance of each factor through their experiences with general contractors. Participants are also asked to rank their top three relationship factors and determine which factors are important enough to end their relationships with general contractors. Relationship factors included in the study are listed in order of importance as determined by subcontractors using the average rating on a ten point scale:

1. Bid Shopping
2. Project manager capability
3. Project manager fairness
4. Superintendent
5. Timeliness of Payments

6. Safety
7. Financial capacity
8. Retainage practices
9. Future work
10. Previous claims
11. The pay-when-paid clause
12. Indemnity clauses
13. Backcharging
14. Insurance
15. Bonding
16. Takeover of equipment
17. Termination for convenience

NVivio 8 software is utilized for analysis of data to determine trends and correlations.

Subcontractors stated that bid shopping is a serious betrayal of trust with 18/24 respondents indicating that they have ended a relationship after being bid shopped. The project manager and superintendent have key roles in maintaining the subcontractor relationship; honesty, fairness and capability were determined to be their most important traits. Payment issues ranked fairly high compared to other factors. Many subcontractors admitted that they adjust pricing on their bids based on their treatment from general contractors. General contractors that treat them well receive lower pricing on bids and those that don't treat them well receive higher bids or no bid at all. The relative importance of each factor was dependent on the current economic outlook of each subcontractor. Subcontractors tend to align themselves with general contractors that meet their standards of conduct.

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Dedication

This thesis is dedicated to my wife, Sandra, who inspired me to start it and who provided the encouragement and support I needed to finish it.

Introduction

Subcontracting is a common practice in the commercial construction industry. On any particular project, general contractors may rely on 20 to 40 subcontractors to perform the specific work items that are required. A typical group of contractors that work together on a project may include such diverse trades as electrical, drywall, roofing and steel erection to name a few. The characteristics of the project dictate the type, size and capabilities of each subcontractor that may be required (Knutson, Schexnayder, Fiori & Mayo, 2003). Each project has a unique combination of job-specific subcontractors that are typically assembled under a general contractor acting as the head. The general contractor may also have his own labor force working alongside the various subcontractors throughout the project. There is a team approach to completing the work on most projects with the general contractor taking the lead to manage the jobsite and direct the personnel. Subcontractors are a vital component of the success of every construction project.

General contractors utilize subcontractors for various reasons such as: they lack expertise in these types of work, it enables them to limit their risk exposure or it expands their available workforce so they have more opportunities to bid on new projects (Gould & Joyce, 2009). Approximately 80% of the dollar value of construction is accomplished under subcontracts therefore the subcontractor's perspective is important (Currie, Sweeney & Hafner, 1991). Subcontractors rely on general contractors for virtually all of their work and the relationships they maintain with general contractors in their geographic area directly affect their long term success. Generally, a subcontractor evaluates the performance of the general contractor on a

project-by-project basis. A subcontractor can choose which general contractor to work with and this business decision can be affected by a number of factors. The perceived fairness and capability of the general contractor can be significant factors when considering future work with that general contractor (Knutson et al, 2003).

Research Questions

This research project will attempt to answer the following questions in order to gain an understanding of the factors that affect the relationship between the subcontractor and the general contractor from the subcontractor's perspective:

1. How do subcontractors perceive the importance of payment issues and contract issues in maintaining the relationship?
2. From the subcontractor's perspective, are the general contractor's project manager and superintendent the most important factors in maintaining the relationship between the general contractor and the subcontractor?
3. From the subcontractors perspective, is the practice of bid shopping a serious betrayal of trust that can end the relationship?
4. What other factors are important to the subcontractor/general contractor relationship?

Areas of this study which have been more commonly studied and written about include:

- The fairness of the general contractor toward the subcontractor in awarding work, specifically, bid shopping practices.
- The general contractor's payment practices toward subcontractors including pay-when-paid provisions and retainage practices.

Other areas of study included in this thesis have been less frequently studied or not at all:

1. Onerous subcontract provisions i.e. termination for convenience, indemnity clauses and takeover of equipment clauses;
2. Backcharging practices;
3. Financial capacity of the general contractor;
4. Future work prospects;
5. Insurance and bonding requirements;
6. Safety requirements;

7. The capability of the general contractor in managing the jobsite and project administration specifically as it relates the superintendent's capability and the project manager relationship;
8. Previous claims & disputes.

The literature review will first present information about the topic of subcontracting in general including background information about the subcontractor/general contractor relationship. The eight specific areas of study listed above will then be presented.

Literature Review

Although the practice of subcontracting is widespread and well established in the construction industry, there has been little research done on the topic. Subcontracting has only recently begun to be studied in peer-reviewed journals within the last 15 years. Prior to this, the topic was explored primarily in books and trade journals. Garrett (1979) published one of the first books about subcontracting. It was a broad presentation of the issues that are important to the subcontracting community including “principles of business management, accounting and other subjects that are particularly relevant to specialist subcontracting” (Garret, 1979, p. 2). The book was to be used as a training aid and a reference; it covered basic topics such as contracts, payment issues and estimating principles. Another major publication that has contributed to the current base of knowledge regarding subcontracting and subcontractors is the book written by Currie, Sweeney and Hafer (1991), *Construction Subcontracting: A legal Guide for Industry Professionals*. This book provides a comprehensive review of the issues that affect subcontractors that conduct commercial construction business in the United States.

The General Contractor/ Subcontractor Relationship - Background Information

Since subcontractors secure virtually all their work through general contractors, the success of the typical subcontractor depends directly on the relationships they establish and maintain with those general contractors that need their expertise. Once the relationship is established, most subcontractors work with the same general contractors on a regular basis and they tend to maintain the relationship over time. Shash (1998) stated that “general contractors and subcontractors may not cooperate in a highly recurrent way; nevertheless they entertain long term business relations” (p. 446). Statistics presented in the publication indicate that 76% of commercial subcontractors have maintained their relationships with general contractors for an average of 21.1 years (Shash, 1988, p. 442).

In his paper, Golden Rule of Contractor-Subcontractor Relations, Proctor (1996) emphasized the importance of developing a spirit of trust between general contractors and subcontractors which requires a long-standing practice of fair dealing between parties. He detailed the four C’s of the general contractor-subcontractor relationship: consideration, communication, cooperation and compensation stating that “the ultimate responsibility for successful completion of a project lies with the general contractor” (Proctor, 1996, p.14). Proctor explained that the relationship is prone to disputes due to a poor sense of fairness and a misunderstanding of each others’ needs. He stressed the importance of clear communication of the specific project requirements by the general contractor and also daily contact with the project superintendent to stay abreast of operations, problems and schedule compliance. The fact that the construction business is a

relationship business is summarized in an article published in the trade journal, *Construction Management and Economics*:

Subcontracting develops a set of stable relationships between general contractor and subcontractors...on a project basis, this relationship takes the form of “classical” contracting, but as parties cooperate over the years, the same relationship takes the form of “relational” contracting. (Constantino, Pietroforte & Hamill, 2001, p. 440)

In order to procure new work, subcontractors typically submit bids to general contractors within their geographic area. Subcontractors are notified by general contractors about new bidding opportunities on upcoming projects that are in line with their expertise and experience.

Subcontractors also learn of new bidding opportunities through local or online plan centers.

These plan centers provide lists of the general contractors bidding on each project. Sometimes subcontractors submit bids to general contractors without a formal bid request. General contractors may receive multiple bids from several different subcontractors on the same area of work i.e. painting, flooring, steel erection, etc. The general contractor must then decide which subcontractor is the best choice based on the subcontractor’s price, capabilities, experience and other factors and try to match them with the demands and requirements of each project (Garrett, 1979).

In contrast, once the subcontractor decides to bid on a particular project, the subcontractor must evaluate each general contractor that may be bidding on a project based on what is in the best interest of their company. The subcontractor must decide which general contractors will receive a bid, or if they will boycott certain general contractors. This decision is greatly affected by the treatment they have received from a general contractor on previous projects or what may be known about the general contractor’s reputation in the local community from other subcontractors. There is a vast difference in the management style and capabilities of general

contractors and their reputation in their treatment of subcontractors. Subcontractors typically continue to bid to those general contractors that have treated them well in the past. Some subcontractors may even decide to give favored pricing to a particular general contractor they like to give them a special advantage over other general contractors competing for the same project. General contractors that do not treat their subcontractors well may not receive bids from them in the future or the subcontractors may decide to raise their bids to general contractors that don't treat them well (Currie et al, 1991). A publication prepared by the American Subcontractor Association reinforces this practice.

Tremendous differences exist among various contractors in experience, financial stability, technical ability and business acumen that will define whether a particular prime will be a good team member or not. These differences can and should be taken into account in fashioning a bid proposal to more than one prime contractor on a project. The price or other terms quoted need not be the same nor must a subcontractor bid to all primes. The bid to each prime must reflect a careful assessment of relative risks, benefits and burdens expected to arise out of a subcontract relationship (Hendrick & Schemm, 1991, p. 11).

George Birrell (1986) summarized his 1978 dissertation about how subcontractors evaluate the management capability and business practices of general contractors. Through interviewing subcontractors and general contractors, the study identified the most significant criteria that affect the subcontractor's efficiency in conducting their operations. The study identified a framework to evaluate a general contractor in order to provide subcontractors with useful information to structure their future bidding practice toward general contractors. The better a general contractor was at management, the lower the subcontractors pricing could be. Conversely, the poorly managed firms should receive higher pricing from subcontractors when bidding new projects (Birrell, 1986).

Tracey (1991) studied the subcontractor-general contractor relationship with the purpose “to better understand this relationship and possibly improve it” (p. 3). The thesis detailed the common experiences of subcontractors and determined that, corporately, they have many common concerns: one-sidedness of subcontracts, the bidding process favors the general contractor and the general contractors have the upper hand in the relationship. The most divisive areas in their relationships with general contractors were identified by the subcontractors as bid shopping and onerous contractual clauses such as: pay-when-paid provisions, indemnification clauses and retainage practices.

The relationship that subcontractors have with general contractors is a dynamic one which is affected many factors. The following describes eight specific areas that affect the relationship.

Bid Shopping

Very few general contractors have the capacity or expertise to self-perform all aspects of a construction project so they typically solicit bids from subcontractors when preparing a bid.

When determining which subcontractor to hire for a particular construction project, the general contractor may indulge in the practice of bid shopping or bid chiseling (Knutson et al, 2003).

Bid shopping by general contractors was addressed in a 1998 Supplement to the Construction Subcontracting Manual stating that:

Bid shopping occurs when a general contractor seeks other bids, using the lowest bid as leverage for better offers... bid chiseling involves the general contractor’s seeking a reduction in the original subcontractor’s bid after award of the general contract by threatening to subcontract the work to another party (Wickwire, 1998, p. 9).

These practices are harmful to the subcontractor, contributing to poor quality workmanship and sometimes even the insolvency of the subcontractor. Bid shopping is considered to be a serious problem that promotes an adversarial relationship between subcontractors and general contractors. The practice of bid shopping by general contractors is considered to be a serious breach of trust from the subcontractor's perspective (Arditi & Chotibhongs, 2005).

When submitting their bid to a general contractor, a subcontractor has a distinct disadvantage because, in many jurisdictions, the subcontractor is obligated to honor their bid but the general contractor is not legally required to award the work to them. This is called promissory estoppel and it literally means "stopped from withdrawing". It is a term used to describe this situation where a prime contractor is entitled to expressly accept and bind the subcontractor to its bid subject to all accompanying terms and conditions (Sears, Sears & Clough, 2008). In many jurisdictions, if the general contractor relies on the bid, the subcontractor's bid can be accepted (stopped from withdrawing) without any communication to the subcontractor of formal acceptance by the prime contractor (Hendrick & Schemm, 1991).

There are many reasons why a general contractor may decide not to enter into contract with a subcontractor i.e. inexperience, lack of manpower to meet the schedule requirements of the project, financial instability, etc. Although the general contractor has the right to make this decision unilaterally, many subcontractors believe that they have a right to be granted the work if the general contractor utilized their bid to win the project. Over time, if a subcontractor is not awarded enough work from a particular general contractor, they may decide not to bid to them in the future.

When discussing issues that affect the relationship, A.J. Tracey (1991) said one of the most divisive issues was bid shopping. In his thesis, Tracey presented statistics indicating that 53% of subcontractors said they don't bid to bid shoppers and 68% offer differing prices to multiple general contractors when tendering the same bid (p. 30). According to Tracey, subcontractors offer better prices to those general contractors they like the most.

Subcontractors view bid shopping by general contractors as unethical and therefore they tend to avoid the general contractors that have "shopped" their bids in the past. According to Shash (1998), subcontractors hesitate to submit quotations to general contractors who do not adhere to common professional ethics and 37% limit their bids based on the perceived fairness of certain general contractors (p. 103). Many subcontractors believe that general contractors are not concerned about what is in the best interest of subcontractors and that ethics in the relationship regarding bid shopping should be emphasized (Hinze & Tracey, 1994).

Payment Issues

General contractors are notorious for being slow to pay their subcontractors for completed work. Although the general contractor has the contractual right to withhold payments for many reasons, this can be a major source of contention between the subcontractor and general contractor (Sears et al, 2008). Payment and profit is a main concern for subcontractors and no issue is more important than payment. In his 1991 thesis, A.J. Tracey presented survey results which indicated

that over 50% of respondents say that what makes a good contractor is paying on time (Tracey, 2005, p. 45).

In 2005, Arditi and Chotibhongs studied the relationship from both the general contractor's and the subcontractor's perspective. They revisited the topic of subcontractor's experiences with general contractors and included viewpoints from the general contractors' perspective and also the owner's perspective about subcontracting issues. Questionnaires were mailed out to Engineering News Record top-ranked firms. The group was comprised of 450 specialty subcontractors, 300 general contractors and 250 owner firms. Factors identified that affect subcontractor's relationship to general contractors included payment issues such as timeliness of payment and retainage (Arditi & Chotibhongs, 2005).

Pay-when-paid

The pay-when-paid clause, also known as a contingent payment clause, is commonly used in most subcontracts as a means for general contractors to avoid paying a subcontractor until they have received payment from the owner. It is one of the most divisive issues in the general contractor-subcontractor relationship. An example of the pay-when-paid clause contract language is "the price paid to the subcontractor is not due until 5 days after the owner shall have paid the contractor" (Currie et al, 1991, p. 508). Basically, if the owner does not pay the general contractor, for any reason, then the subcontractor does not get paid.

Contractors often seek to exert their superior leverage in the subcontracting process to shift the entire risk of owner non-payment to the subcontractor by use of a contingent payment or pay-when-paid clause...such clauses can substantially or even entirely thwart the subcontractor's entitlement to payment (Hendrick & Schemm, 1991, p. 19).

When a subcontractor doesn't receive timely payments, it can become a very serious problem.

Lack of working capital is the primary reason that subcontracting businesses fail.

Subcontractors, like most providers of labor, material and services in the construction industry do their work first and seek payment later. Such credit transactions present no particular cause for concern as long as the flow of payments is reasonably prompt and predictable. Failure to receive timely and sufficient payment for work can very quickly cause the consumption of the subcontractor's available working capital and result in financial disaster. Allocation of the risk of owner non-payment is one of the principle areas of controversy between subcontractor and contractor in reaching an agreement on subcontract language (Hendrick & Schemm, 1991, p.19).

Subcontractors typically have to play by the rules set by the general contractor. They may want to avoid submitting to this clause but they risk losing the work, "Subcontractors do assume the risk not because it is benign, but because it is frequently the only way they can compete with others for the work" (Hollander, 2002, p.101). This clause is a perennial problem in the subcontracting industry and pay-when-paid is mentioned repeatedly as a problem in interviews (Tracey, 1991).

Retainage Practices

Withholding or "retaining" a portion of each progress payment owed to contractors and subcontractors throughout the construction project is known as retainage. Owners provide partial payments to the general contractor throughout the project duration as the work progresses (Gould & Joyce, 2009). Progress payments are typically made on a monthly basis to the general contractor and, subsequently, subcontractors are paid from the proceeds. Extending payment for a project during production has inherent risks including overpayment for the work installed, payment for defective work and the continued solvency of the parties until the work is complete.

To counter these risks, retainage has evolved as a common practice in the construction industry whereby owners retain a percentage of each progress payment to their contractors (Sears et al, 2008). Contractors in turn typically withhold a similar amount from their subcontractors until satisfactory completion of the project. “Contractual arrangements vary, but retainage typically ranges from 5 to 10 percent of the value of the work installed” (Bausman, 2004, p. 2). In addition to protection against contractor insolvency, proponents have encouraged its use to provide a buffer for the valuation of work installed, remedy defects found during turnover of the facility and to encourage contractor performance (Bausman, 2004).

Often times, the retainage amount held on a project exceeds the profit margin that subcontractors can earn on that particular project. The typical subcontractor profit margin averages 3% to 4% (Bausman, 2004, p. 2). Retainage payments are typically held by the owner of each project until all contractual obligations are met. The general contractor in turn withholds retainage on each subcontractor. The final retainage payment can be held for all kinds of things such as: unfinished or deficient work items, as-built drawings, operations and maintenance manuals, warranties, tax certificates, lien releases, final occupancy permit and many more like items.

The terms of contingent payment are enumerated in the main contract and typically the same terms are contractually tied to each subcontract. Because of this, the final retainage payment can be held up to 12 to 18 months after the project has been substantially completed and occupied by the owner (Knutson et al, 2003). Final retainage payments to subcontractors can be withheld for many reasons including delivery of operations and maintenance manuals, as-built drawings, affidavits, final lien releases, etc. When retainage payments are withheld for long periods of

time, it can be a financial hardship to the subcontractor and could ultimately lead to insolvency if a subcontractor is owed money on several projects at the same time.

Subcontractors look to the general contractor to be their advocate when it comes to expediting payments, especially their retainage payments. Because the general contractor has the responsibility to coordinate all the final close-out requirements of each project, the subcontractors depend on the general contractor. Although the owner and architect have a lot to do with it, the general contractor can do a lot to expedite the final payment by proactively managing the process. Some subcontractors consider these practices to be a deliberate strategy by general contractors to avoid paying the final payment for as long as possible. The timeliness of the release of the final retainage payment can be a factor in the subcontractor's evaluation of the general contractor.

Contractual Issues/Onerous Subcontract terms

When a general contractor is considering a certain subcontractor for a project, the two parties typically enter into a subcontract negotiation phase. Although the particular subcontract form may vary between contractors, there are a few common areas of contention that can arise before a satisfactory agreement can be reached. Many general contractors consider the subcontract terms to be non-negotiable so this can put the subcontractor in a difficult position (Clough, Sears & Sears, 2005). Some common subcontract provisions that strain the relationship include indemnity clauses, takeover of equipment clauses and termination for convenience clauses.

Indemnity – Indemnification clauses are commonly used by general contractors to transfer risk to subcontractors. “The concept of indemnification arose in common law and allows the burden of loss to be shifted from one party to another” (Currie, et al., 1991, p. 102). Indemnity clauses determine the distribution of liability for accidents or other risks between contracting parties. In extreme cases, some general contractors require their subcontractors to indemnify them from any and all claims that may arise from any person or entity even if the general contractor is negligent (Davis & Prichard, 2000). Subcontractors dislike this clause because it pushes the project risk of claims all to them in order to protect the general contractor and owner (Tracy, 1991). Many subcontractors recognize indemnification provisions as a burden and consider them to be unfair (Schaufelberger, 2009).

Takeover of equipment – this clause is typically used by general contractors to allow them the right to utilize the specialized equipment of the subcontractor in the event that the subcontractor could not perform the work. Typically this would occur when a subcontractor is terminated or if they happen to go bankrupt during the course of the project (Clough et al, 2005). It allows the general contractor to keep the project moving by using the subcontractor’s equipment to perform the required work when otherwise the general contractor may be in a bind trying to find the required piece of specialized equipment on short notice. Subcontractors often take issue with this suspecting the general contractor to abuse them by exercising their right to take the subcontractor’s equipment, but without cause.

Termination for convenience – this contract provision allows a general contractor the right to terminate the contract of the subcontractor for virtually no reason except that they want

to. General contractors have a unilateral right to suspend all work under the subcontract and pay the subcontractor for the portion of work completed. When utilized, this one-sided caveat is considered to be heavy-handed by subcontractors and would negatively impact their relationship with any particular general contractor that engaged in his practice (Sears et al, 2008).

Subcontractors often enter into subcontracts without full knowledge or understanding of the legal consequences of their terms and conditions. Subcontractors generally exert little influence over the prime contract language and often lack sufficient leverage in the subcontract negotiation process to greatly influence even the subcontract terms and conditions. The language in those terms and conditions can literally make or break a subcontractor on a troubled project (Hendrick & Schemm, 1991).

The more one sided and inequitable a contract relationship is, the greater likelihood that such imbalance will lead to abuse problems, disputes and ultimately to disruption of the very construction process it is supposed to enhance (Hendrick & Schemm, 1991).

In order to decide whether to bid, how to bid and on what terms to bid, subcontractors must be able to identify and evaluate the factors posed by any potential subcontract relationship which may bear on the costs and risks of performance. Subcontractors can and must adjust its bidding strategy to address each of the risks and responsibilities undertaken so that they can be effectively avoided, transferred, insured or covered in the bid price. “The informed and careful sub can effectively preserve its right to walk away without liability from a potential subcontract

when a fair and reasonable subcontract agreement cannot be reached” (Hendrick & Schemm, 1991, p. 1).

The relationship that a subcontractor has with the general contractor can be influenced by other factors besides the more commonly studied items such as bid shopping, payment, and contractual issues. Other less studied issues listed below include backcharging, financial capacity of the general contractor, future work/types of work prospects, insurance and bonding issues, safety requirements, superintendent capability, project manager relationship and previous claims and disputes.

Backcharging

Backcharging is a practice of general contractors whereby they withhold money from subcontractors for various expenses incurred by the general contractor on behalf of the subcontractor. The backcharged items are typically defined as part of the subcontractors’ work in their subcontracts terms and most subcontracts utilized by general contractors allow for this practice. As defined by a 1991 publication of the American Subcontractors Association, it is “the right of the general contractor to claim additional compensation for costs for work items that should have been performed by the subcontractor” (Hendrick & Schemm, 1991, p. 25). These charges can be major or minor in value and scope, but it is the manner in which they are administered that affects the relationship between the subcontractor and the general contractor. These kinds of issues can lead to claims and disputes if the subcontractor is not properly notified or if the subcontractor does not agree with the charges.

Commonly, a general contractor will perform minor work for a subcontractor such as housekeeping or disposal of trash because the subcontractor does not keep up with these duties in a conscientious manner on the jobsite. A notice may be given to the subcontractor to alert them to the fact that their subcontract will be backcharged if they do not perform this work (Clough et al, 2005). Many times the subcontractor simply chooses not to perform these work items and, after an agreement is made with the general contractor, they accept these charges without complaint.

But if a subcontractor disagrees with the charges or is surprised at the end of the project with a previously unknown backcharge, they may believe that they are being abused or taken advantage of by the general contractor. In Tracey's 1991 thesis he states, "The receipt of final payment is often a 'day of reckoning', that is, subcontractors discover the contractor's backcharges for such things as dumpster fees and scaffolding" (Tracey, 1991, p. 51). At this time, the subcontractor may come up with several cost issues that they feel could fairly be charged back to the general contractor for extra expenses incurred throughout the course of the project i.e. delays caused by the general contractor, sharing of manlifts, weekend work, etc. They may have previously been unmentioned by the subcontractor in order to maintain a spirit of cooperation on the jobsite and to be seen as a team player.

The subcontractor will look to the general contractor for a fair settlement. Sometimes the charges are dropped or they may enter into negotiations in an attempt to come to an amicable agreement (Sears et al, 2008). From the subcontractor's perspective, since the general contractor controls

the flow of money, the practice of backcharging puts them in an inferior position and they should try to protect themselves by amending their subcontracts:

Because the contractor assumes the role of judge, jury and executioner it is important that certain safeguards be engrafted into any subcontract to ensure subcontractors receive adequate notice of any planned takeover of work and for general contractors to provide a summary of charges within three days. (Hendrick & Schemm, 1991, p. 25).

The decision to backcharge is normally made by the project manager employed by the general contractor and therefore this is closely tied to the project manager relationship factor presented later in this paper. The frequency and fairness of a general contractor's backcharge practices are factors considered by subcontractors in their evaluation of general contractors.

Financial Capacity of the General Contractor

When a subcontractor is considering their risk exposure on future work, an important component is the financial capacity of the general contractor. Huycke (1991) outlined the primary causes of subcontractor failure and recommended strategies to prevent failure. Many factors were identified in the study with the most frequently occurring causes of failure being insufficient capital, management experience and the subcontractor's inferior position in the cash chain. The study stated that subcontractors have a built-in financial burden because they are two or three tiers from the source of funding and that they assume more risk than sureties, lenders and most suppliers. It is therefore of primary importance to the subcontractor that the general contractors they work with are financially sound. This is especially relevant to smaller contractors since they could face bankruptcy if they suffer large losses on a single job (Chester & Hendrickson, 2005,

p. 107). Subcontractors may hesitate to establish or maintain a relationship with a general contractor if the financial condition of the general contractor is questionable.

Future work/Types of work prospects

Subcontractors rely on general contractors for virtually all of their work. General contractors typically notify subcontractors about new bidding opportunities for future work (Sears et al, 2008). By maintaining good relations with general contractors, subcontractors ensure that they will continue to receive requests for bids on new projects. Most subcontractors operate within a limited radius of their home office so the number of general contractors to work under is limited also. Subcontractors value their relationships that they have established and maintained with their preferred general contractors. When relations go poorly due to any number of reasons, subcontractors may decide not to bid to the general contractors they dislike (Garrett, 1979). Each time a subcontractor chooses not to bid to a certain general contractor though, it reduces their bidding opportunities. Subcontractors understand that the prosperity and business growth of their operations are directly dependent on the bidding opportunities made available to them by general contractors (Shash, 1998,). Because of this vital link, subcontractors are willing to overlook past difficulties that they may have experienced with general contractors in order to be permitted to bid on future projects. Maintaining good relations with all the general contractors in their geographic area enables them to maximize the new work opportunities available to them. Although most subcontractors typically work with multiple general contractors, they usually have a preferred list. According to Shash (1998), subcontractors consider the future relationship with general contractors heavily when quoting work. As part of this study, each subcontractor

will be asked to evaluate the importance of this factor when considering submitting a bid to certain general contractors especially to those that have not treated them well in the past.

It seems subcontractors anticipate smooth and effective coordination and control when the project is within the experience of the general contractor – the likelihood of a general contractor being awarded a main contract outside his expertise is not high (Shash, 1998).

Insurance and Bonding Issues

As part of their risk management, general contractors typically require subcontractors to provide commercial general liability insurance coverage with specific certificates issued for each separate project. The certificates are required to provide protection for both the subcontractor and the general contractor against claims for property damage or bodily injury (Barrie & Paulson, 1992). Sometimes the owner, the architect and even the architect's consultants are also named as additional insured parties. The cost of liability insurance is considered by most subcontractors to be a part of doing business in the construction industry. But when some general contractors require more coverage than is typically carried by the subcontractor, it can increase their annual insurance premium cost. These costs are typically passed on to the general contractor if they are known at the time of their bid preparation on a particular project. If they are known only after the project is bid, the general contractor may attempt to include any added insurance costs into the subcontractor's price. This becomes part of the subcontract negotiations, but is usually not considered to be a major point of contention between the general contractor and subcontractor (Garrett, 1979).

Additional Named Insured coverage affords full insurance for each named party under the subcontractors insurance. The subcontractor would thus be potentially insuring those other parties against their own negligent acts. Frequently, “the insurer must then be obliged to fully defend against and satisfy claims brought against these additional assureds without recourse” (Hendrick & Schemm, 1991, p.30). Sometimes the coverage is difficult to obtain or cannot be obtained at all; and it usually costs more. Waiver of subrogation rights is also a common insurance requirement. This purpose of the waiver is to limit the rights of insurers to recover costs between multiple insured parties and this requirement also typically costs more.

Subcontractors are sometimes required by general contractors to provide performance bonds to cover any performance or payment issues that may arise as part of the subcontractor’s work. These bonds can be difficult to secure by subcontractors when they attempt to buy one for the first time because they must prove to the bonding company their creditworthiness and capacity to perform the work (Schaufelberger, 2009). When they do achieve bondable status from their bonding company, the subcontractor’s bonding capacity is capped at a certain amount based on the evaluation of the bonding company. This upper limit can restrict the subcontractor from taking on any more work in a given time period. Not all general contractors require bonds and subcontractors may prepare bids on a particular project without expecting a bonding requirement. This restriction can become an issue when a subcontractor is asked to provide a bond after they have submitted their bid and they don’t have enough capacity, although, the bonding company may allow the limit to be raised when this situation occurs (Garrett, 1979).

Some potentially detrimental subcontract surety bond requirements appear in proprietary general contract forms and time limitations extend to the full statute of limitations, typically between 4 and 8 years – the American Subcontractors Association recommends 2 years. Principles personally indemnify the surety company against loss. This circumvents the “corporate protection and transfers the risk of loss directly to the principles personally” (Hendrick & Schemm, 1991, p. 31).

Bonding and insurance issues are generally considered as a non-issue from the subcontractor’s perspective except when generals pass excessive risk on to the subcontractor i.e. additional insured endorsements, waivers of subrogation and broad form indemnity (Arditi & Chotibhongs, 2005).

Safety Requirements

Virtually all general contractors have a requirement for their subcontractors work in a safe manner and to conduct their on-site operations in compliance with relevant safety codes and laws. Because the general contractor typically bears the burden to ensure the safety on the jobsite, virtually all general contractors require that their subcontractors actively participate in the safety management on the jobsite (Clough et al, 2005). Common areas of mandatory participation may include:

- Jobsite Safety orientation instruction for all employees;
- Attendance at all scheduled jobsite safety meetings;
- Submission of a job specific safety plan with signatures of all personnel;
- Participation in daily jobsite calisthenics and stretching for all personnel.

Some subcontractors may not have a sophisticated safety program and find some of these requirements to be a hardship (Garrett, 1979). These requirements may be considered to be too burdensome by some subcontractors and therefore may negatively affect their decision to bid to those general contractors with such safety programs.

Superintendent Capability

The general contractor's superintendent is in charge of all jobsite operations throughout the project duration of a particular project. Normally there is one superintendent for each construction project and general contractors may employ several superintendents depending on the number of projects that they build simultaneously (Gould et al, 2009). The superintendent is responsible for scheduling of the subcontractors, dimensional control, quality control, safety control measures, work hours, job site access, security, inspections, etc. The superintendent exerts control over virtually all aspects of the jobsite operations such that the capabilities of the superintendent can greatly affect the outcome of the project. The subcontractor's success depends heavily on the capabilities of the particular superintendent selected for the project. Over time, the expertise and reputation of each particular superintendent becomes known throughout the subcontracting community. Subcontractors may decide not to bid to a general contractor that has lower caliber superintendents (Knutson et al, 2003). They may even ask which superintendent will be on the project before deciding to enter into contract. Some subcontractors may adjust their bid when a particular project superintendent based on the expertise of the superintendent (Garrett, 1979). Subcontractors put a heavy emphasis on the general contractor's experience in building and managing similar projects when they decide on a bid price (Shash,

1998, p.105). Because of their contractually-dependent status, subcontractors continually evaluate general contractors' capabilities and conduct on a project-by-project basis because it directly affects their profitability and long-term success as a business (Huycke, 1999).

The workflow and organization of the jobsite activities are dictated chiefly by the superintendent. The superintendent is typically responsible for the scheduling of subcontract crews and directing the sequence of work throughout the project duration. The superintendent notifies each subcontractor when areas are ready for them to begin their work. This requires foresight and skill which is developed over years of project experience. Superintendents may have difficulty learning this skill which can negatively impact the subcontractor's productivity. Sometimes the work areas are not ready or another subcontractor is still working in the area when the superintendent directs the subcontractor to proceed (Clough et al, 2005). If a subcontractor is called to the jobsite and is unable to perform their work, the subcontractor will be less productive. Loss of production will in turn reduce their potential profit margins. Productivity issues are one of the main variables that can most affect the profitability of the subcontractor on the jobsite (Garrett, 1979).

Subcontractors rely on the superintendent to provide the required dimensional information they need to install their work as defined on the contract drawings. Various trades interface with each other and their work needs to be coordinated to reduce conflicts and ensure that each component is installed in the proper locations. Many general contractors push this responsibility back to the subcontractors so that they must provide their own layout without the aid of the superintendent.

This shift in responsibility puts more of a burden on subcontractors to perform their work (Garrett, 1979).

Subcontractors depend on the superintendent to interpret the drawings when there is conflicting information or when clarifications are needed. Increasingly, some general contractors consider this to be the responsibility of the subcontractor and they do not take the lead to resolve issues as they arise on the jobsite (Gould et al, 2009). Without active conflict resolution by the general contractor, the subcontractors are left to fend for themselves. This ultimately leads to greater conflict when assumptions are made by each subcontractor as they see fit. When installations have to be corrected and work redone at the subcontractor's expense, it can lead to claims and lawsuits. This kind of jobsite management is really no management at all and could be a major deterrent to maintaining the relationship between subcontractor and general contractor (Garrett, 1979).

Subcontractors expect that the general contractor will take the lead on the jobsite to organize and direct operations but prime contractors are "taking a lesser role in coordination between trades and instead specify coordination as a subcontractor requirement" (Dossick & Schunk, 2007, p. 262). Studies by Adrian (1987) and Hsieh (1998) indicate that subcontractors bear responsibility to manage their own affairs on the jobsite without much support from the general contractor. The superintendent's capabilities in directing the daily operations of the jobsite can greatly affect the productivity and profitability of the subcontractor. How subcontractors view the organizational and leadership abilities of the superintendent is therefore an important factor to study.

Many subcontractors trade work items which promotes better relations on the jobsite. “The project superintendent can put a damper on it or promote it” (Tracey, 1991, p. 50).

Project Manager Relationship

The general contractor typically employs a project manager to take the lead managing the daily affairs of each construction project. In smaller firms, sometimes the owner of the firm can act as project manager. The administrative skills and people management skills of the project manager have a direct affect on the success of every project. The project manager has full authority to direct subcontractors in all aspects of their work. Subcontractors rely on the project manager to act in their best interest when dealing with the owner and architect and to facilitate their change order requests when there are changes to the work. In each project there can be literally hundreds of questions that need a formal answer or clarification and the timelines of the answer can greatly affect the flow of the subcontractor’s work on the jobsite. The project manager is responsible to process subcontractor questions and to coordinate the various entities to facilitate the flow of information (Gould et al, 2009). This enables the subcontractors to efficiently and effectively perform their work. The various entities typically include the architect, consultants, local code officials, engineers, inspectors and others. When an answer is delayed to a critical question it can force a subcontractor to move to a different task or even to leave the jobsite until an answer is received. This can negatively affect their productivity which, in turn, reduces their profit margins (Garrett, 1979).

The project manager also is responsible to process the subcontractor's requests for changes and for changes to the work initiated by the owner. Subcontractors expect the project manager to treat them fairly when evaluating their change order requests. If the subcontractor perceives that the project manager is unfair or not working toward their best interests, they may be less inclined to want to continue their relationship with that particular project manager on future projects (Clough et al, 2005).

Each construction project is uniquely different and typically has a unique mixture of subcontractors that likely have never worked together before as a team. It's the responsibility of the project manager to promote the teamwork atmosphere and facilitate a spirit of cooperation on the project (Rahman and Kumaraswamy, 2005). As the project progresses, the project manager's style of management can promote or deter communication and teamwork. The administrative competency and perceived fairness of the project manager can directly affect the subcontractor's willingness to maintain a long term relationship with a general contractor (Sears et al, 2008).

Many subcontractors relate that even though their project experiences with general contractors have had past difficulties they still maintain the bond. This study will seek to determine the importance of the project manager's competency, management style and fairness as it affects their relationship from the subcontractor's perspective.

Previous Claims and Disputes

Disputes are a common occurrence on a typical construction project. When a subcontractor has a conflict with a general contractor that cannot be resolved, it can escalate into a claim. “Problems and disagreements are an inherent part of all construction projects and when contractors, owners or construction managers do not deal directly with those problems often they escalate into major conflicts” (Yates & Duran, 2006 p. 335). Miscommunications and conflicts between prime contractors, subcontractors and other project participants often result in costly litigation and dissatisfied customers (Dossick & Schunk, 2007).

The most common area of dispute between subcontractor and general contractor tends to be about the definition of the subcontractor’s scope of work. A common scenario is when a subcontractor did not intend to include a particular item in their bid but the general contractor interpreted their bid to include it. When this happens, the subcontract terms may or may not define the work item but typically the general contractor can either force the subcontractor to perform the work, pay additional money for it or negotiate a compromise, depending on the situation. The subcontractor expects to be treated fairly and respectfully. The outcomes of each dispute are judged by the subcontractor and, over time, if the general contractor is perceived to be opportunistic or heavy-handed, the subcontractor may decide not to continue the relationship (Clough et al, 2005).

Sometimes a subcontractor can file a claim against the owner or architect on a particular project. The claims typically revolve around interpretation of the contract documents. When this

happens, a subcontractor expects the general contractor to act as their advocate to promote their cause and to be the mediator between them and the owner or architect. When the general contractor does not act in their best interest, the subcontractor may not want to work with them again on future projects. Conversely, many general contractors would consider a claim by their subcontractor against the owner to be a bad subcontractor decision and an act of insubordination (Sears et al, 2008).

Common to most general contractor subcontracts, the dispute resolution procedures are clearly described. “The process requires the parties to move through a progression of increasing formality: direct discussion, mediation, arbitration and finally litigation” (Hendrick & Schemm, 1991, p. 26). Subcontractors are particularly vulnerable with regard to dispute resolution. They are burdened not only by the risks and responsibilities set forth in the subcontract documents, but also they inherit many of the burdens created by the prime contract documents flowing through the subcontract conduit clause (Hendrick & Schemm, 1991, p. 21).

If a subcontractor perceives unfairness by the general contractor when handling a claim or dispute, it will negatively impact their relationship. As the claims and disputes increase, the relationship becomes more strained. Ultimately, the relationship may be terminated as it becomes increasingly adversarial. But subcontractors value their relationships with general contractors. Tracey (1991) determined that subcontractor respondents filed liens on only 1% of their projects and that only about 20% of disputes end in litigation (p. 57). This shows that most subcontractors value their relationship enough to work things out before they get too hostile. Although there are

many common areas of conflict between subcontractors and general contractors, the bond can be a strong one with many long lasting relationships.

This thesis studied the subcontractor-general contractor relationship from the subcontractor's point of view. Specific attention was focused on what relational factors are most important in maintaining the bond. Emphasis was placed on what particular actions or practices of the general contractors are cause for the subcontractor to suspend or even end the relationship. This study included the more common relationally-linked factors such as payment issues, bid shopping and subcontract provisions. Other dynamics in the relationship that were included in this study are less frequently studied or not at all: backcharging, financial capacity of the general contractor, future work/types of work prospects, insurance and bonding issues, safety requirements, superintendent capability, project manager relationship and previous claims & disputes.

A hierarchy of importance for each item was developed to determine the most important and least important factors for maintaining a long term relationship between the two parties. Practices which would likely cause the subcontractor to terminate the relationship were also studied.

The research method that provides the best combination of relevant data and candid responses from subcontractors is the interview method. Developing essential questions that are consistent with the central aim and focus of the study is important (Berg, 1989). Other questions, such as probing, "extra" and "throw-away" types enable the interviewer to keep the interview moving along. Care should be taken to evoke responses to questions that interviewees attempt to evade (Berg, 1989). Maintaining a good rapport during interviews produces the most complete and useful responses (Berg, 1989). Sometimes, when conducting the interview, error can be

introduced caused mainly by the influence of the interviewer. Standardization of the interviewing process reduces error (Fowler, 1990). Other studies indicate that standardization can limit the subjective nature of the interview which suppresses the linkages (Holstein & Gubrium, 1995). A combination of a fixed interview with standard questions along with open ended questions throughout the interview allows the interviewer to capture qualitative ideas within the context of each defined category (McCracken, 1998).

Research Methodology

The goal of this methodology was to develop and evaluate a list of relationship factors and determine the most important factors that affect the relationship between the subcontractor and the general contractor from the subcontractor's perspective.

A mixed methods approach was utilized in this research to enable a comprehensive collection of data. Qualitative and quantitative components were combined to provide both anecdotal and numerical representation of participant's opinions and experiences. This approach was designed to counter the inherent limitations of a strictly qualitative or strictly quantitative study (Creswell, 2007). Merging research methods can mitigate bias and allow salient subcontractor perspectives to emerge while providing a solid basis of numerical data for a better understanding of the topics (Gliner & Morgan, 2000). In order to gain valuable, broad-based information from participants, an interview was developed that had elements combining deductive and inductive questioning (Patton, 2002).

This research paper presents a series of questions and collected data specifically related to the categories defined in the literature review section. The questions were designed to stimulate candid responses during interviews with subcontractors about the relationship between subcontractors and general contractors. The interviews also included ranking questions and an exploratory component meant to extract any new factors that subcontractors consider to be important.

Quotations from each participant were included to add depth and understanding from their perspective. This qualitative method provides a general picture of trends, associations and relationships to capture the uniqueness of individuals in a way that quantitative research cannot (Creswell, 2007). The incorporation of a structured survey into the interview provided an ordered means to enable comparisons and grouping of data for later assessment. The geographic area of this study will be limited to the Pacific Northwest with a concentration of subcontractors from Washington State.

There were twenty four interviews conducted with subcontractors that operate chiefly in the Spokane and Seattle regions with many interviewees operating in all parts of the state of Washington. The interviews were recorded either via telephone or face-to-face. This was a survey and also a guided interview with the same questions asked of each participant along with probing questions relevant to each participant. In the survey, each participant was asked to rate the importance of the factors on a ten point scale.

Other specific questions were asked in each category in order to gain a better understanding of the respondent's perspectives and to encourage them to offer details about their particular experiences. The respondents were asked to rank their top three relationship factors in order of importance from most important to least important. Participants were asked to identify any particular factors that are important enough to end the relationship.

There was an open-ended exploratory section that asks each participant to offer any other personal accounts describing their good and bad experiences with general contractors and their opinions of any other relationship factors that they may deem important.

Delimitations

The information gathered for this study is derived from interviews with subcontractors that operate in the Pacific Northwest region of the United States and therefore the results and implications of this research are relevant to the Pacific Northwest. The participants involved in this study are comprised of subcontractors that specialize in commercial construction, so the data collected is not necessarily transferrable to subcontractors that operate in other markets i.e. residential, heavy civil, mining, etc.

Limitations

When considering the validity of the findings, there is a potential that the responses from participants may have been somewhat biased by the presence of the interviewer. Consideration also should be made for the limited amount of subcontractors that were interviewed. Restricting

the study to only twenty four participants can potentially skew the results as compared to a larger study. In some instances, the respondents had a personal relationship with the interviewer so it is possible that this relationship may have affected the outcome of the interview. Also, the selection process itself could be a limiting factor because, generally, the subcontractors that were selected were the ones that are successful and reputable. Excluding those that may be less desirable as candidates for the interviews could potentially result in unbalanced data collection.

Research Results

Personal interviews were conducted via telephone and face-to-face with commercial subcontractors that perform work in the geographic Northwestern United States, chiefly the Spokane and Seattle area markets. Twenty four subcontractors participated in the interviews representing a broad range of disciplines. Three subcontractors were selected from each of the following eight disciplines: excavators, masons, steel erectors, roofers, finish contractors ((1) flooring, (2) drywall), elevator contractors, mechanical contractors (HVAC) and electrical contractors. Subcontractor's annual volume ranged from \$2 million to \$32 million. The majority of participants stated that they perform a minimum of ninety percent of their work as a subcontractor working for a general contractor. Representatives from each company were chosen to participate if they had a minimum of five years experience in a position in which they worked directly with a general contractor that specialized in commercial construction. The interviews were conducted using the prescribed questions and in the format shown in Appendix A. The results were recorded and transcribed. NVivo 8 software was utilized to analyze the data presented by the respondents. The discussions from all twenty four respondents were grouped by

each of the seventeen relationship factors as follows:

1a. Pay-when-Paid	6. Safety	10b. Insurance
1b. Timeliness of Payments	7. Previous Claims	11a. Termination for Convenience
2. Bid Shopping	8a. Project Manager – Capability	11b. Takeover of Equipment
3. Backcharging	8b. Project Manager – Fairness	11c. Indemnity
4. Financial Capacity	9. Superintendent	12. Retainage Practices
5. Future Work	10a. Bonding	

Then within each of the seventeen relationship factors, the interview discussions were combined according to each individual question within that category. The responses and discussions from all twenty four participants could then be analyzed and evaluated by specific subject question in order to establish trends. Interviewees were asked to rate the importance of each of the seventeen factors on a ten point scale with ten being the most important. The numerical results of this rating exercise are summarized on the table in Appendix B.

After rating each factor on a ten point scale, each respondent was asked to rank their top three most important factors from a condensed list of thirteen interview categories listed on the bottom of the table in Appendix B. In order to simplify the top three ranking, items within the same category were combined. 1a and 1b were combined into Item 1; Item 8a and 8b were combined into Item 8 and so on. The category listed most often as the number one relationship factor was Bid Shopping (Item 2). Project Manager (Item 8) was a close second factor identified by the respondents. The number three factors listed by respondents were a tie between Superintendent (Item 9) and Payment Issues (Item 1).

The ten point scale evaluation provided by the respondents indicated the same order of importance when averaging the point totals for each category. Totaling the points for each category and then dividing by the number of respondents, the category with the highest average rating was Bid Shopping (Item 2) with 8.67 average points. Project Manager (Item 8) was second with an average point total of 8.08. The two subcategories of the Project Manager relationship factor were Fairness and Capability. The Fairness factor was listed more often by respondents than Project Manager Capability, but only slightly. Superintendent (Item 9) was third on the 10 point scale rating with 7.63 average points.

The relationship factors with the lowest average rating were Onerous Subcontract Provisions (Item 11) with an average point total of 3.66 followed by Insurance and Bonding (Item 10) with 4.00 average points.

The following is a presentation of the results for each of the seventeen relationship factors listed in the table above. The relationship factors are presented in order of importance based on the average ratings from subcontractors on the ten point scale.

Bid Shopping

This factor received the highest average importance rating of all seventeen factors with a rating of 8.67 and was listed the most times as the number one factor from the twenty four respondents. It is also the factor most cited by subcontractors to be important enough to end the relationship.

All respondents stated they had experienced having their bid shopped by a general contractor numerous times. When asked if their bids had ever been shopped, one interviewee said, “It happens almost every bid we do now, we think it does...” Another said, “...there’s always a lot of scuttle right after the bid and of course right before the bid closing time, and constantly get calls back, ‘what else can you do here’ or ‘what else can you do there’, and then time will pass and you get another call back or you hear back through the grapevine from another contractor...that numbers are being shopped.”

All subcontractors said they would consider not entering into a relationship with a general contractor known to be a bid shopper. A common response of interviewees was exemplified in this response from a masonry subcontractor, “If he’s got a reputation, he’s not going to get my bid.”

Three quarters of subcontractors (18/24) said they have ended a relationship with a general contractor that shopped their bid in the past. This is the largest ratio of all the factors. When asked why this factor was important enough to end the relationship, one interviewee said, “Well, bid shopping is automatic. If I find out somebody is shopping my bid and they are just flagrant about it then I am done with them.” When asked why he would terminate the relationship for bid shopping, one participant summarized the responses of many subcontractors “if someone’s out blatantly shopping my bid, I consider that to be purely unethicalwhich, yes, I would terminate that in a heartbeat. Another interviewee stated, “because you’re doing all the legwork for what? For somebody else to get the job?” This same respondent went on to cite an example from his experience, “I did all the legwork, put everything together, and then he gave our bid to

the roofer he'd been using and he said he'd beat us on it so he wasn't using me, yeah." A flooring subcontractor stated, "we'll follow up with a phone call to them just to find out what went wrong, or what happened, and if they don't seem to have an answer that we believe then we just flat won't bid to them again."

Many subcontractors stated that would suffer bid shopping only one time and then end the relationship on the second offense. Some indicated that they would tolerate bid shopping from a general contract several times before considering ending the relationship.

Sometimes a subcontractor will temporarily suspend bidding to a general contractor then resume bidding after a set time period. When asked if he ever terminated a relationship based on this factor, one respondent said, "...terminating, no. Stopped bidding for a period of time, yes." Another interviewee said, "I would, I stopped things for a while until I could discuss it with a higher person in that company."

Some indicated that they consider it to be part of the game and would never end the relationship because of it (as long as they were awarded some reasonable amount of work with that general contractor over time). When asked if he would continue in a relationship with a bid shopper, one participant stated, "Possibly, as long as we're getting other work from them. You know, if it's something that we're continually bidding to somebody and not finding any jobs, then it's another matter..."

Many subcontractors relayed stories of their bid shopping experiences when asked how they knew their bid was being shopped. A flooring subcontractor stated, "...you find out about it, round about ways from other contractors, um vendors on the street. Now vendors are probably ways of finding out a lot of what the GC does." Another subcontractor said, "Well I knew it happened because I talked to the other GC's that bid the project and they ah, informed us we were low with all of them but apparently we weren't low with the guy who had a buddy down the street." One steel erector said, "This is a small community, and I've been here a long time...everybody talks." Another subcontractor said, "Usually that information comes from the general contractor that doesn't get the job...And when you find out from more than one of the general contractors that they used you or you were low, or what part you weren't low and you find out you don't get the job, and then you find out that the guys had never even bid to anybody end up getting the job later on you know it had to be shopped."

Some expressed that they would continue with a known bid shopper only after the general contractor agreed to stop that practice with them. One interviewee described it like this, "I guess with an understanding, you know, probably a face to face understanding that it would not be shopped."

One third of interviewees (8/24) said they raise their bids to known bid shoppers. One electrical subcontractor stated, "...and when I say terminate I don't necessarily burn bridges, but I may, it may influence the way we bid to them in the future..." Another said, "We have, but there definitely are times where prior to a bid, we will go down the GC's, the bidder list, and through, you know kind of the group of managers in here, including the branch manager, there might be

somewhere we say we're not going to send them a bid, or if we send them anything it's going to be elevated.”

Respondents indicated that most masons in Spokane, Washington have a unique position which protects them from bid shopping in the bidding process. The majority of masons are members in a bid repository that collects bids from each mason, and then releases the results to all participants. This essentially prevents bid shopping because everyone knows what their competitors bid amount was and each one is expected to “stay honest”. One mason offered this description, “...we have a bid depository. We turn our bids into the Masonry Contractors Association two hours before bid, and so everybody kinda knows where everybody's price is. They're faxed back to us after the bid time so we can see everybody's price. And I've had general contractors lie to me about where people were. It kind of keeps the generals honest.”

Project Manager Capability and Fairness

This factor received the second highest average importance rating of all seventeen factors and was listed the most times as the number two factor from the twenty four respondents. The fairness of the project manager was ranked slightly higher than project manager's capability on the ten point scale. Project manager fairness rated 8.08 and project manager capability rated 7.63.

All twenty four participants stated that they have worked with project managers they liked. The character traits mentioned for those project managers they liked can be summarized as follows: teamwork mentality; organization; competency; leadership; good communicators; easy to work

with; reasonable; availability; workability; fairness; honesty; attitude; friendliness; administrative skill; approachable; flexibility when working on issues; subcontractor advocate. The traits mentioned most often were honesty and fairness. One subcontractor said it succinctly, “their honesty, their trustfulness.” Another said, “Honesty is a must”. A steel erector said, “honesty to me in this business is a huge factor. If you always know that the person telling you something on the phone that it’s exactly the way it is, that it’s the best he can do, I can live with that. But when I have somebody who is not straight with me or tries to use me to get a better number to make their margins bigger...that leaves a really sour taste in my mouth.”

When considering what traits they liked best in a project manager, several subcontractors commented on their preference for project managers to be focused on working as a team. One respondent said that the best trait of a project manager is, “teamwork. They’re not in it for themselves.” Another said, “I guess flexibility and willing to work with us on issues rather than just demanding.” Another said, “I think their workability ...working together to get a win-win”. Another interviewee voiced a similar sentiment, “project managers that understand that we’re all out here to make money and they’re not out to just get you.” Another said he prefers working with project managers “that actually propose a team relationship instead of ‘I’m the general you’re the sub.’ ”

Several subcontractors discussed their desire for the project manager to be their advocate. One participant felt that the project manager should “support me in change orders...that the architect may not agree with.” Another interviewee said it this way, “The project manager has to get in there and fight for more money..., put his gloves on for you.” When speaking about the best traits

of project managers, one respondent stated that he likes “knowing that they’re taking care of you.” Another said he appreciates “the ones that actually go to bat for you.”

Subcontractors also mentioned that the project managers technical skill and leadership ability is important, “their awareness of the job, their willingness to work though, I mean every job’s got problems; every job’s got difficulties; every job has unforeseen things. And the project managers that grab the bull by the horns, sit down let’s work this out figure out what we’re gonna do...you work out the relationships, you move on.”

Friendliness of the project manager was listed often by subcontractors as an important trait, “I guess I’m big on attitudes myself. If they’re nice, friendly, open”. Another subcontractor said, “definitely someone who is approachable.”

Communication was listed as a key element of a good project manager. One interviewee stated his view, “good communication...and willing to discuss issues, and not, you know, be like they don’t, won’t take your input because you’re a subcontractor.” Another said, the best project managers are “the ones that are good at conversation as far as interacting and talking about issues... When you have a project manager that just sends you nasty emails instead of trying to work out something ...Some don’t want to discuss it, they don’t want to take the time to deal with a problem; that’s an issue.” A masonry contractor said, “Communication, integrity are probably two of the most important things.”

One interviewee emphasized a project manager's responsibility to be timely, "...timeliness of the design team's change orders, ASI's, RFI responses, timeliness them getting back to us; and timeliness of change order execution."

All twenty four participants stated they have worked with project managers they disliked. The character traits mentioned for those project managers they disliked can be summarized as follows: Disregard for teamwork, looking out for their own interests; disorganization; too concerned with their own profit margins at the expense of their subcontractors; arrogant; unfair; uncooperative; difficult to work with; harsh; cold; unfriendly; dishonest; poor management skills; demanding; poor communicator; poor technical skills; blaming attitude. The traits mentioned most often were dishonesty and unfairness.

One subcontractor discussed his dislike of project managers that take unfair advantage of subcontractors, saying, "they were always kind of finding a way to increase the profitability of their projects on the back of the subcontractors."

A major complaint of many subcontractors was the attitude they have experienced in some project managers. An arrogant or harsh approach presented by a project manager can be a negative factor in their relationship with subcontractors. One interviewee stated, "Ironically enough...It's usually an attitude of not really working together. More of 'I need this done, get it done' and, 'don't care what your problems are' " Another expressed this opinion, "very harsh, harsh minded, cold, they only want to talk business numbers, and you know they leave any personal aspect out of the whole thing. Everything's pretty much black and white." A drywall

contractor said, “The biggest one is probably that they look down on you, they look at you know, obviously we are subs, we are working for the GC and stuff.”

Participants described some project managers as being unworkable, “Their managing skills and the fact that they came across as not wanting to work with us on issues.” And another, “Or they tell you that you’ve done it wrong and you gotta change, rather than saying “we got a problem and what can we do to solve it.”

Lack of technical knowledge was mentioned by more than one respondent, “they don’t know the job that well. They try to stick with either specs or plans or something that won’t really work, but that’s the way it is and they try to force it.” A masonry contractor offered a short answer, “Disorganized, unfair, and dishonest.”

All twenty four participants said that they would continue in a relationship after being mistreated by a general contractor’s project manager. Reasons cited include prior good experiences with other project managers in the same company. Subcontractors also expressed a high tolerance level when working with difficult project managers. “A lot of times, personal conflicts or attitudes come into play and you just kinda got to be a bigger person and get on with it.” And another “..just because it’s raining, doesn’t mean you’re going to pack up and go home.”

Subcontractors frequently talked about the importance of getting their jobs done efficiently and effectively as their primary purpose on most projects. Because of this philosophy, subcontractors try to find a way to work around a project manager that may be causing them trouble. One

interviewee said, “Because there’s always ways around the PM. If the problem is that severe, you can always go over the PM...as long as my crews and superintendents on the jobsite are functioning then I’ll figure out how to get resolved with the PM.”

Some would continue in a relationship only if they could work with a different project manager on future projects. One subcontractor stated, “Doesn’t mean it won’t work the next time. I mean there could be a lot of factors to why you didn’t get along with them. Plus a company may sign a different one. I mean, I would work for one company and maybe do ten jobs and never have the same project manager.” Another subcontractor said that he would continue because, “Most of the contractors we work for have more than one project manager”. An elevator subcontractor said, “...because typically there are different project manager’s on different jobs, and we can usually move past, and move on to the next project with a different project manager.”

Subcontractors stated they would change their own project manager to one that could get along better with the general contractor’s project manager although some reported that tolerance for this factor is affected by the economic outlook for each company.

The majority of respondents stated that they do not know who the project manager is at the time of submitting their bid to the general contractor, but if they did know, about half (11/24) interviewees said they would adjust their pricing based on the particular project manager selected for the project. When asked how he would adjust his bid, one subcontractor said, “It would only go up. We typically bid everybody the same unless there’s a real, you know if there’s a real problem with somebody we’re gonna put a little extra in there to deal with them.” Another

subcontractor described a particular project manager that he disliked saying, “If I knew he was going to be on another project and I was bidding to him, I would adjust my pricing accordingly.” Another said, “Some project manager’s that I’ve dealt with in the past are very disorganized and it drives your cost up... and if you find out some information that’s going to affect your cost, like a project manager’s organizational skills...then you’re going to raise your bid. A roofing subcontractor said, “I’ll probably factor in money and raise the number a bit.”

One subcontractor said he would lower his bid if he liked working with a particular project manager, “if we know the project manager that’s involved then we know it removes the risk so it might even be a better price involved with that.”

One respondent said he would avoid a project manager he didn’t like by adding enough money to his bid to avoid working with that project manager altogether, “If it’s a project manager I don’t like I probably won’t try to get the job”. Approximately twenty percent of respondents (5/24) have ended a relationship with a general contractor due to the project manager. As described by one participant, “Sometimes it’s just not worth the headache”.

Only one respondent decided not to sign a subcontract after being awarded the project, due to the assigned project manager. Conversely, 23/24 said they have never decided not to sign a subcontract once awarded. Nearly half (10/24) of the interviewees stated that they have signed a contract or bid on a project solely because of the relationship they had with a particular Project Manager. When asked how often this happens, one subcontractor said, “a fair amount”. Another respondent talked about his relationship of trust he has with a particular project manager, “He

tells me what he wants done and I give him a price on it without even seeing the drawings. I know what he tells me is straight up.”

Three quarters of the interviewees (18/24) believe that there is a “corporate culture” that defines the conduct of project managers that is recognizable. In other words, the project managers in a particular company have similar management styles. When asked if he ever noticed this, an electrical subcontractor said “I have noticed that, yeah. Certain GC’s, you know, it’s like they’re all from the same mould. Definitely noticed that.” And another stated, “usually the project managers are pretty parallel with that company.”

Superintendent

This factor received the third highest average importance rating of all seventeen factors with a rating of 7.63 and was tied with payment issues as the number three factor from the twenty four respondents.

All subcontractors stated they have worked with superintendents they liked. The character traits mentioned for those superintendents they liked can be summarized as follows: good organization; good scheduler; pushing a project; pushing for answers; capability; good planning; forward looking; good communicator; cleanliness; safety on the jobsite; field knowledge; ability to adapt; competence; those who help them to make money; problem solver; coordination skills; fair; honest; advocate to support them for claims against design deficiencies. The trait mentioned most often was capability. One subcontractor described his view of a capable superintendent

saying, “A good superintendent doesn’t waste your time by making you do stuff just because they want you hanging around. They are organized in what needs to be done and when it needs to be done. They don’t have you stacked up with other trades and you’re in each other’s way and slowed down.” Another said, “I like their job running capabilities, their planning, their forward looking, you know they’re looking forward, knowing their job inside and out, communicating. Communication is huge.”

Knowledge and experience was expressed during the interviews as being very important. One subcontractor said the superintendent should be “experienced, very knowledgeable, know the ins and ends between RFI’s, knowing that they’re helping you out by saying “this is an extra because this is an extra because this is changed, this has done this,” worked with us 100%, say “no, I know this isn’t gonna happen, give me a deduct here, a change order over here.” In other words knowing their job upside down...I mean if they don’t know what they’re doing, I’d just assume not working with them.” Another stated that an important characteristic of a superintendent is “their knowledge on the job, being able to communicate with our foremen, being able to handle issues on site, and be willing to go and look at the issue firsthand instead of just sitting in an office not being receptive to input.”

Respondents emphasized the importance of the superintendent’s ability to schedule the subcontractor’s work on the jobsite. A mechanical subcontractor said, “Competence, scheduling...ability to move with the job...Just sticking to a schedule that’s printed on a piece of paper and not acknowledging what’s happening on a jobsite doesn’t work in my opinion. Having the ability to move and fluctuate and change and adapt to the job makes a huge difference in my

opinion.” Another subcontractor said, “Aggressive pursuit of completion. I think it has a ton to do with their capability. I love the ones that say they’re gonna adhere to a schedule that’s unattainable, and they’ll bury you if you don’t get to your stuff”.

Teamwork was mentioned by several subcontractors as being a very important superintendent quality. One subcontractor stated that he preferred when a superintendent understood “that we’re there to accomplish a common goal, we’re there to work together to complete a project so everybody walks away proud and profitable.” When asked what were the most important traits in a superintendent, one subcontractor said that the most important thing is having “a teaming relationship you know, give you a guy to help unload a truck, ...let you use their forklift to help offload a piece of equipment, and not try to backcharge every little thing...”. Other subcontractors discussed the importance of the superintendent having a “can do attitude, ‘we can do that,’ not balking at everything and always pointing the finger at somebody else’s problem.”

Many subcontractors described their desire for the superintendent to be their advocate. One interviewee said that it was important for the superintendent to be “actually looking out for their subs, to take care of their subs...working with them so they can make money on the job, not at all a one way street. A flooring contractor stated, “Cleanliness has so much to do with safety and working on a clean job is so much more efficient than working on a filthy job.” Another subcontractor put it simply, “Fair and honest, communicate a lot, accessible.”

All subcontractors stated they have worked with superintendents they disliked. The character traits mentioned for those superintendents they disliked can be summarized as follows: lack of

knowledge; lack of ambition; demeaning; shack sitter; coffee drinker; uncooperative; disorganized; stacking trades; looking out for themselves; yellers and screamers; assholes; blamers; unfair; out of sequence; incapable; belligerent; hard headed; not a team player; inexperienced; inaccessible; poor scheduler; unprepared; poor skill; calling you to the job and it isn't ready; unfair; dishonest.

Many subcontractors mentioned unfairness of the superintendent as a negative trait. One respondent said, "it always comes back to the fairness." Others described the importance of being responsible saying that a superintendent shouldn't "shirk his responsibility". A bad trait mentioned by several respondents during the interview was for a superintendent to be unworkable. One subcontractor said. "they get into the blame game...they try to start pointing fingers... blame instead of fixing the problem."

Interviewees commented that they dislike when a superintendent acts arrogantly or in a demeaning way toward them. An HVAC contractor stated that they don't like when a superintendent is "not being receptive to input, not being accessible, demeaning our crew." Another said. "a lot of times you get a superintendent that is demeaning, what bothers me the most is a superintendent that abuses his power...and he stops being a team player...". Poor attitude was described by several subcontractors as a negative characteristic of superintendents. One subcontractor said, "Everything's an issue, everything's a problem. We step on site, there's a negative attitude towards the subcontractor"

The lack of competence was mentioned by many subcontractors as being a negative characteristic of their least favorite superintendents. One subcontractor mentioned that superintendents do a poor job when they do not have things prepared for them when they get to the jobsite, "...a lot of the superintendents have us a week or two too early. They're not ready for us. We waste a lot of time and effort." Another subcontractor said that poor superintendents are "not very organized, didn't understand the job, people who stack trades." A roofing contractor said, "A lot of the superintendents sit in the trailer and never go out. I go up and I walk a roof to go out and measure, they got a problem, it was built wrong, I get up there and find out they haven't got the ridges coming together, there's a foot drop between them. And you go down and you tell them, "oh we haven't gone up there to look at it." Well it's already built, you want me to roof it. What type of superintendent is that?"

One steel erector commented that "The newer generation do not know what they're doing and the skilled people that are gone probably didn't train them, didn't care to train them. The younger generation, may be a little cocky, thinking they know it all because they're running a big job...just don't understand it... just flat out do not understand steel at all." Some subcontractors evaluate the capability of the assigned general contractor's superintendent and then match their own superintendent to the general contractor's superintendent's strengths and weaknesses. One interviewee said, "I think it's just learning to try to work with people and training our guys to work with them really rather than just people digging in their heels and going toe to toe." Another said, "If I see a difficult project with difficult personnel from past projects, I typically send the appropriate person, whether he's an effective communicator, or he's better at construction as far as day to day work. I mean it is evaluated." Over half (14/24) of the

subcontractors do not consider the general contractor's superintendents capabilities at all when assigning personnel to a project.

The vast majority (20/24) of subcontractors said that the overall quality of superintendents at a particular general contractor affects their relationships with general contractors. One subcontractor said, "I strongly feel that the more qualified superintendent the better the project is going to turn out for everyone involved. The more qualified and organized and schedule driven, the better it's going to turn out for everybody involved." Another subcontractor said, "We know general contractors that do not have a good superintendent core and inevitably cost us money... We're kind of going through this right now with a superintendent who let the mechanical and electrical guys go in front of us, increased our labor costs by 20% by letting them put their rough-ins in instead of letting us to first." A drywall contractor said, "If he's good quality, it just makes things run really smooth, and you just know that the chance of success for the whole project... it's going to be a win-win for everybody. On the other hand if it's not and you get a really bad one and the management backs them up, you're toast, you're stuck... the inexperience of the superintendent in the field can be devastating."

Stated by one electrician, "the superintendent capability has a direct affect on whether we do well on the job or not." A roofer stated, "Oh yes. Because they're the day-to-day spokesperson for the general contractor and if they're not organized; if they're not on top of things, then your whole job is going to cost you more." Those that said this factor was unimportant also stated that they believe their own superintendents were very capable and so they rely less on the general contractor's superintendent.

All twenty four subcontractors said they have continued in their relationship after being mistreated by a general contractor's superintendent. Subcontractors want to maintain the bond expecting that they will likely get a different superintendent on the next project. When asked why they would continue with a general contractor after being mistreated by a superintendent, one respondent said, "Because hopefully the next job we wouldn't get that same super, or maybe we could request a different super. But we usually don't have that much input on a job anyway". Another said, "I just don't think it reflects the whole company on a normal basis." An excavator said, "Well I'll just make sure they don't give me the same guy." Stated by a mechanical contractor, "I would weigh the overall situation and determine whether or not I'm going to be willing to work with this guy or I'm not. If I am then I have to accept the fact that that's the way that person is and if that's what I can expect from our business relationship then I need to deal with it."

Most subcontractors stated that they do not know who the superintendent is at the time of their bid submission to the general contractor. If they did know, over half (13/24) said they would alter their bid. One respondent said, "I would say it affects the way I bid a project if I'm aware of who the super is going to be on the jobsite". Interviewees mentioned that good quality superintendents can be an important factor enabling them to be more efficient and, therefore, profitable. One subcontractor said, "Well productivity and efficiency, that is how we make our money is by staying productive and efficient, and if I am on a jobsite where that's not possible because of the superintendent then that affects my bottom line."

Conversely, poor quality superintendents can cause subcontractors to lose money. Some subcontractors, therefore, adjust their pricing based on the capability of the superintendent. One subcontractor said, “Yes. If I know it’s going to be someone I’ve worked with in the past...and it’ll go smooth, I will cut my bid”. Another stated, “Well sure it works in both directions. The guy can either make or break you. If he makes your life miserable and causes you all kinds of problems, he didn’t do his job and screws up a lot and you gotta fix it, it costs you money.” A masonry contractor said, “if we know the site superintendent is somebody who’s got a reputation for being a hard ass or unreasonable that could definitely come into play. If we know this particular person has poor management skills then we know we gotta compensate for that, might add a point or two to the bid.”

When speaking about superintendents that have poor organizational skills, one subcontractor said that sometimes superintendents “can be unreasonable or disorganized. Either one of those two things will diminish everybody’s profit and productivity.” Two respondents said they had decided not to submit their bid on a past project once they found out who the superintendent would be on that project.

A drywall subcontractor stated that he adjusts his pricing when he bids to general contractors with weak superintendents. When asked ‘In what way do you adjust your bid’, he said, “I either don’t bid to them or raise my price accordingly because the track record usually is we tend not to make money with them.” One subcontractor stated that one particular general contractor has the best superintendents so he “will always price their bids in a smaller margin”.

Stating that even though they lost money on a project due to the poor superintendent, one subcontractor said they were willing to overlook it to maintain the relationship, “on previous projects where their superintendent did not do a great job at all, it ended up costing us money...we’ve sort of overlooked that in the hope they would put a more qualified individual on it.”

Slightly less than half (10/24) of the interviewees said that they have signed a subcontract or bid on a project solely because of their relationship with a particular superintendent. A roofing subcontractor commented on his good relationship with a particular superintendent, “I get along great with the super...his comments back to the office are ‘as long as they are close to the ballgame that’s who I want to do my roof’”.

Only three subcontractors have decided not to sign a subcontract due to the assigned superintendent. When asked why they would not sign, one subcontractor said, “Because you know I just don’t need the aggravation. It makes the job too miserable.” Only one subcontractor mentioned that they had ended a relationship based on this factor.

Whenever possible, a subcontractor might attempt to force a change of a superintendent that they consider to be incompetent on a particular project. One subcontractor described a situation where a general contractor recognized the problem and replaced the superintendent, “I mean it’s costing everybody money when somebody’s not capable...so they got rid of him. All the subs were having trouble, so they decided to make a change which was good.”

Only three subcontractors said that they have recognized a corporate culture regarding superintendents - that particular companies have superintendents that act in a similar way. The vast majority of interviewees said that superintendents manage their jobsites independently with no recognizable similarities within companies. When asked if they recognized a corporate culture among superintendents as compared to project managers, one subcontractor said, "No. You know the guys in the office are more blended to their office. The guys in the field are more into their background. Because I think the superintendents have probably moved around more, they're not brought up through the corporate ranks. They're out in the field moving around working for different guys. You're done with that job you go to the next one, where the managers are more hung on by the generals."

Timeliness of Payments

This factor was rated an average of 6.96 on the ten point scale. All subcontractors described that they have experienced being paid late by a general contractor and that timely payments are important to them. When asked to define "what is a late payment", respondents indicated that anything beyond 30 days is late, but the majority of subcontractors don't consider it to be late till between 60 to 90 days. When talking about the length of time typically experienced for payment, one subcontractor said, "Obviously we're going to be wanting it in the 30 and really going to be pushing for it in the 60, but once it hits 90 it's kind of unacceptable then."

One interviewee discussed his dissatisfaction with general contractors who make excuses not to pay their subcontractors, "When you know that they've been paid and they just wait around and

make excuses, hiding behind when they cut checks, to me it's a bunch of hobo; you know, blowing smoke; and it irritates me." This sentiment was echoed by several subcontractors.

All subcontractors stated that they have maintained relationships with slow paying general contractors but they have differing tolerance levels. This tolerance is affected by the available opportunities and loyalty. When asked why they would maintain a relationship with a slow paying general contractor, one respondent said, "...I would say because everybody goes through a tough time and it could be just because they were held up or something happened that um, primary is just keeping the relationship open for the future."

Many subcontractors indicated a high level of loyalty toward the general contractors with whom they work and they have a high tolerance level for slow paying general contractors. Many subcontractors expressed the importance of building relationships with general contractors that have a strong financial track record so the risk of non-payment is reduced. When asked, "Why continue with a general contractor that is known to be a slow payer", one interviewee with several long term general contractor relationships put it simply, "Because you always end up getting paid". The same respondent indicated his loyalty saying "...but we're pretty relationship bound as well." These subcontractors with the most tolerance tended to be the ones that have the best financial standing enabling them to endure late payments without experiencing a hardship.

As economic conditions worsen, subcontractors indicated that they become less selective and therefore more tolerant of slow payers. One respondent said, "Well, I guess the current market situation we're in, it's obvious work is pretty important, and I guess after the first time you gain

an understanding of the way they generally operate you can enter into the next contract with a better understanding that they're generally late." Another stated, "We don't tend to work for them as much. We might be getting into that now because of the market. But if the market's good, I really try to stay away from those people."

A minority of subcontractors (5/24) stated that they would alter their bids to accommodate lateness of payment by raising their bids to slow paying general contractors and reducing bids for quick payers. When asked if they would consider raising their price on future bids to a general contractor that is consistently slow with their payments, one interviewee said, "Their payment schedule reflects their price, yes...we use a specific procedure with them based on slowness of payment." Another stated, "Well, a little bit ...well you know we would just factor an additional amount into the bid to cover that." A flooring contractor said, "It's real important. If you know somebody is going to pay well, you're going to give them the very best price." One respondent described how they would add money to their bid for slow paying general contractor, but not too much, so they wouldn't jeopardize their competitiveness, "They may get an increased price because we'd rather see somebody get the job who pays their bills better. But we don't want to give up our opportunity to get the job because of it."

An excavator stated how the local subcontractors talk to each other about who are the slow paying general contractors, "Well, I guess the deal is there is scuttle among subcontractors about who pays well and who doesn't, and a slow paying one, if you know a general contractor is slow-paying I always jack their price up a little bit." He went on to say, "For general contractors who

are slow-paying to me and don't really communicate with me well; I will add an extra percent or two to their bid to cover my cost of carrying their slow pay.”

Almost two thirds of subcontractors (15/24) have ended a relationship with a general contractor based on this factor. This is the second highest ratio, next to bid shopping, which indicates the importance of this factor to the relationship. One interviewee described his willingness to end the relationship based on how he was treated by the general contractor, saying “I don't know if it's so much the payment issue as it's how you're treated when you talk to them about it.”

One subcontractor described how he would tolerate slow payments for a time, but would eventually end the relationship if it continued, “...for a certain amount of time we have. I mean, we've done certain jobs, been paid late, tried other jobs out, and if the pattern continued we'd discontinue our services with them.”

Safety

All twenty four interviewees said they appreciated the general contractor's safety efforts and emphasis. This factor was rated an average of 6.83 on the ten point scale. One roofing subcontractor said, “I appreciate it to the point where they're being reasonable with it. We're a pretty safety orientated company. We have our own in house safety and everything. So, we're all about safety being roofing, you know it's one of the higher risk areas of a job too so you know.” Another subcontractor said, “It can bring us together and it can separate us. You know, although safety is very, very important, somebody getting hurt is a huge issue.”

Roofers jointly voiced concerns that sometimes the general contractors tend to be overly cautious which can hinder their work. One roofer said, “I appreciate it to the point where they’re being reasonable with it. We’re a pretty safety orientated company. We have our own in house safety and everything. So, we’re all about safety being roofing, you know it’s one of the higher risk areas of a job too so you know...But you know, there have been occasions where I don’t want to say it goes overboard but sometimes it’s a little unreasonable. Another roofer said, “There are times when it is a double edged sword and far more is working with safety and helps our L&I rates and workman’s comp rates, but there are times when it gets to be excessive.”

Other subcontractors commented that safety regulations that are imposed by the general contractor can be a hindrance to their work. One respondent said, “I consider it a hindrance, but it also is appreciated and it is a necessity.” When a project is relatively small, one subcontractor considered the safety requirements to be a hardship, “ you’ve got a little \$10,000 job and your cost of going through all of their 30 hours of training and everything else they want for you isn’t worth the value of the job. If it was a larger job then it may not have been an issue. But based on the size of the job, it wasn’t worth the cost of going through all the safety rigmarole for.”

In response to the question, “Is it important to you for the general contractor to have a good safety program?” one subcontractor said, “...in our relationship, it’s very important...safety isn’t just necessarily in how our guys are hooked on but the condition of the jobsite, and all the things that trickle down to what ultimately makes up a safe job site, making sure guys get home at night.” Those that answered no to this question considered themselves to have a good safety

program already. When asked if they would work for a general contractor with a poor safety program, one mason said, “Yes, because we have a pretty strong safety program of our own, so we don’t worry about it.”

Only one respondent has ever refused to sign a subcontract because of excessive safety requirements. No interviewees have ever ended a relationship with a general contractor based on this factor. The vast majority of interviewees (20/24) said they would be likely to establish a relationship with a general contractor that had a good safety program.

Financial Capacity

The financial stability of general contractors was described as a very common concern for the majority of interviewees. All twenty four participants said they would consider this factor when establishing a relationship with a general contractor and they gave it an average rating of 6.13 on the ten point scale. One interviewee said, “I think it’s pretty important to know that the funding is there for the project and that, you know, obviously the bonding agencies want to know that stuff too so, make sure the project is adequately funded up front”. Another responded, “...you know, it’s pretty important...if they don’t have any money then there’s no point in working for them.” A minority of subcontractors (5/24) have ended a relationship based on this factor.

Respondents indicated that this factor is generally considered to be less important to subcontractors when projects are publicly funded due to the fact that these projects are protected by a payment and performance bond. Three quarters of interviewees (18/24) stated that the

bonded projects were less risky. They rated this factor lower when considering public bids and higher when tendering private-money bids. Simply stated, one interviewee said, “If it’s public we have a lot more protection than if it’s a private project.” Another subcontractor said, “I feel more comfortable with a public project as far as you know, getting paid, comfort level and getting paid.” When asked to elaborate, the same subcontractor continued,

“If it’s a public works job then it’s protected by bonding and what not and I know some way or another I’ll get paid. But if we’re going out and we’re going to do work for Louie down the corner who wants to put up his corner store and there’s no provisions in there to protect your work or to get paid, you’ve got to look seriously about whether you’re going to put at risk your capital...and so if the only thing you have is recourse to the general contractor and you haven’t done your due diligence to protect yourself with the general owner then first of all, you’re stupid, and second of all, you have no recourse and why would you want to sit on the back of somebody you have no recourse to nail with?”

Only two respondents would raise their bids to general contractors they considered to be a financial risk. When asked, “Would you adjust your price based on the perceived financial risk?” An electrician stated, “Depending on the project. If it was private money, yes. If it was state or federal money, I wouldn’t be as concerned about it.”

Most said they would continue in a relationship as long as they were being paid. One participant said, “It depends. If we’re getting paid, maybe; if we’re having struggling, if there’s lots of late payments or whatever, then probably not”. When asked, “Why?” he said, “A company likes to get paid. They frown on not getting paid”. Another subcontractor responded to the question, “Would you continue in a relationship with a general contractor that was having financial trouble?” he said, “Probably not. It’s just not very good business I don’t think”. When asked “Why?” he answered, “Well I probably wouldn’t get my money.”

Less than half (10/24) of subcontractors have experienced not being paid because a general contractor was having financial trouble. Most subcontractors explained that they recognize the risk and try to work with general contractors that are financially sound. One subcontractor put it this way, “Yeah, you know, most contractors we work with around here we have for years. The only ones I get concerned about are the out of state, the guys you have no track record with.” Another stated, “...obviously, we try to align ourselves with the right people. If they’re not financially stable there’s a good reason for it...you know, typically all it’s gonna do is affect our bottom line in the end anyway.”

Retainage

Two thirds (16/24) of participants believe the practice of holding retainage to be unfair although they gave it an average rating of only 5.75 on the ten point scale. The common complaint described by subcontractors is that the retainage release is delayed due to the fault of other subcontractors and that compliant subcontractors are therefore penalized. One subcontractor described the problem this way, “It’s the fault of other subs, so the owner was not paying on the project. It happens all the time.”

The interviewees also stated that their retainage can be held up due to the lack of proper documentation by the general contractor. When asked if he thought the practice of holding retainage to be unfair, one subcontractor said, “There have been occasions when yes, I would say it’s unfair when the release of retainage is not based on work we have not completed...I’m

talking when retainage is held for 8 months plus because the general is not getting his closeout documents together or something like that.” An electrician said, “Yes, it’s unfair because why should one issue with one subcontractor hold the entire project up for retainage”.

One respondent complained that the general contractor gained the advantage when retainage funds are held for an extended period because the general contractor typically receives interest on the money, “If we’re not getting retainage in a timely fashion, they’re holding our money, and getting interest on retainage. If we’re not getting that, we’re basically the general contractor’s bank.”

Some subcontractors believe that general contractors hold the retainage, even after they have been paid retainage by the owner, as a strategy to boost their cash flow and earn interest. One subcontractor stated, “I think sometimes they just make you come hunting for it if you’re not in there asking for it...and they’ll keep it if you’re not asking for it”. Another subcontractor said, “We’ve had situations where we go back and review our retainage and realize we haven’t received our retainage far, far beyond when we should have, and leads you to wonder, once you make a telephone call it comes right through. Sometimes you wonder if it’s just sitting in a bank account helping somebody else’s bottom line.”

All but two subcontractors (22/24) state that they have had their retainage payment withheld for an extended time period, typically over one year and some as long as two years. One excavator said, “a lot of times my retainage is slow. I’m always the first one in and my retainage is held for up to 2 years anyway”. Another subcontractor said, “We know certain contractors take forever to

close their jobs out. I'm talking years, I'm not talking months, I'm talking years... It's because some subcontractor doesn't get his L&I stuff turned in or stuff hanging out that the general should have taken care of."

Respondents expressed their frustration with the retainage release requirements on most projects. Nearly four fifths (20/24) of subcontractors said they would be more likely to work with a general contractor that had fewer retainage release requirements. One subcontractor said, "I would probably be more apt to go after that because it's money in the bank."

When asked what he would be the change in the law that would be most beneficial, a roofing subcontractor said, "There would be line-item retention release... In other words, once my portion is done, it's been inspected, and it's done to satisfaction, then my portion of the money is released". Many subcontractors expressed an interest in this change since it would allow their portion of the retainage to be paid without being tied to the compliance of their fellow subcontractors on the project.

Several subcontractors would add money to their bids to slow-paying general contractors, "if there's somebody who is notoriously slow, I would charge them more on the bid to begin with." Two respondents stated that they would lower their price if a general contractor has relatively few retainage release requirements. One subcontractor said, "it also affects the price that we quote that particular general contractor... they'd get a better price".

No subcontractors have ever refused to sign a subcontract due to a general contractor's retainage

release record. Three subcontractors have ended a relationship based on this factor because the general contractor was notoriously slow to pay retainage. One excavator described his view, “since I’m the first guy in, they’ve got my retainage from day one, and if the project is done then I expect my retainage... If they hang onto it for a year or a year and a half after that, that would be extremely slow, ...so I end my relationship with them”.

Future Work

Subcontractors will maintain their relationships with general contractors in order to have the opportunity to secure new projects. The vast majority of subcontractors (22/24) indicated they would consider a general contractor’s future work prospects before starting a relationship with them but the average rating was only 5.63 on the ten point scale. One participant said that he especially looks for general contractors that can offer private construction work because it is more profitable saying, “...especially with private stuff. With private stuff we go to the guys who got work.”

No subcontractors have ever ended a relationship based on this factor - although some have suspended their bidding when no bidding opportunities are provided by the general contractor that are of interest them. One participant stated, “I just have to look for more work elsewhere. I wouldn’t end a relationship.” Another said, “Well, just because they have minimal work prospects, we have such a vast range of generals that we work for, if one general only has a few jobs, but we’re able to land one of them, that’s another job for us.”

Most subcontractors displayed an opportunistic attitude and said they will bid to a general contractor they like whenever they are asked; even if they haven't bid to that particular general contractor for a long period of time. An electrical subcontractor said, "let's just say there's a company out there I've worked for 4 or 5 years and they don't bid on anything for 4 or 5 years, just because they don't bid anything I'm not going to theoretically end the relationship, and if they show up on a couple bid lists I'm not going to not bid to them because they didn't bid for 4 or 5 years. Another subcontractor said, "you never know... just because they don't have a job for me every year doesn't mean I don't want to work for them."

When asked why they would you continue in a relationship with a general contractor that has minimal work prospects, one respondent said, bidding opportunities are "...kind of like fish in a pond...throw your bobber out as many times as you can. They only bite once, that's one more time they wouldn't have if we hadn't thrown it out there...we need a lot of poles." Another said, "...because most of the time we have a good relationship ...with most all of our general contractors. And if they come across a design build or a job that they need us to look at, even though they ...don't carry a big revenue. We've got two general contractors... that I know that we work with ...that do very minimal revenue in a year but we still work with them." An elevator subcontractor said, "Well, being a subcontractor, we bid to lots of general contractors so we try not to put all our eggs in one basket anyhow. So, you know, the one or two jobs that they get if it's a good relationship we had with them we'll continue to work with them."

One subcontractor said that he might consider ending the relationship if the work offered by the general contractor was “not extremely attractive”, and he said that if he was bidding for a period of time but “not ever getting work with them, we may consider not continuing to bid them.”

Many subcontractors have overlooked a past offense in order to maintain the relationship.

Although some subcontractors indicated that they are less likely to forgive an offense when they have multiple general contractors to work with or if they have a sufficient amount of work. So their current economic position affects this decision. Conversely, they were more likely to overlook an offense when they need another project from that general contractor that offended them. One subcontractor expressed his view about maintaining the relationship after an offense, “We’ll always ... sit down with the general contractor and talk to them about the offense and see... if we can grow our relationship better. So we always try to clear the air.” Another stated, “There have been past occasions where maybe a previous job didn’t go so well due to whatever reasons, but you know that future bigger jobs are coming up ...so you may let some of those problems slide or even not even really acknowledge them to the point where you’re not making them into something.”

Although, not all subcontractors are willing to overlook a past offense from a general contractor, one steel erector stated, “No, I don’t overlook. That’s a factor in every decision because it only takes one job to bury you in this market.”

Previous Claims

Subcontractors indicated that disputes are common occurrences on most projects. This factor received an average rating of 5.33 on the ten point scale. Most subcontractors (18/24) expressed having experienced a situation where they have had a dispute or claim that was resolved and then continued in the relationship with that general contractor. One subcontractor said the claims and disputes “all get resolved at some point. It might not be what you want but they’re always resolved.” Another respondent stated, “Somehow they always get resolved in one way or another.”

Sometimes, a subcontractor decides to continue working with a general contractor even if they have a dispute that is unresolved. When asked if they had ever overlooked a previous unresolved claim, two thirds of the subcontractors (16/24) stated that they have done this in order to maintain the relationship with a general contractor. Respondents indicated the importance of being resilient in their relationships, “... it’s something we’ve worked through in order to maintain a relationship with the GC you know, look forward”, and, “... Well because we’ve come to resolve it even though we didn’t get the amount of money we were asking for, it still was resolved...we either split it or both parties walked away from it satisfied.”

A mechanical subcontractor emphasized the importance of fairness and communication when working out the details of a dispute, “...it’s all well if somebody’s being fair and you’re talking issues out.”

Many subcontractors extolled the necessity of having a cooperative spirit to work things out and on being optimistic, “I guess as long as you have a business mind and you have an understanding that you know what’s in dispute or whatever, you close that off and that’s behind you, and you open up a new chapter for a new job not holding that against them...I like to look at each job as a complete separate business ordeal with no ties to the last one financially or attitudes or people or...open minded I guess is a good way to put it on each new job.” Another subcontractor stated, “If you know you’ve all done the best you can and want to work together you have to go past it.” But there can be a limit to their optimism as described by one mechanical contractor, “...if there’s a pattern then you have to draw a line in the sand.”

Slightly over one quarter (7/24) responded that they have ended a relationship due to a previous claim or dispute. Stated succinctly by one interviewee, “If someone did something flagrantly against you...then you’re not going to work with them if it’s the last job in town.”

Pay when Paid

The interviews indicated that the pay when paid clause is a standard component used by virtually all the general contractors as part of their subcontract language. This factor received an average rating of 5.29 on the ten point scale. The majority of subcontractors accept it as part of doing business but they would prefer not to have their payments restricted by this clause. One respondent described it this way, “Well, our ultimate goal is the work in my opinion, and some of the steps we have to get to or get through to do the work, not all of them are the easiest, but we think of it as part of the process I guess.”

Subcontractors mentioned that this clause is widely used by general contractors allowing them to withhold payments to subcontractors until they are paid by the owner. The common use of this clause was described by one subcontractor this way, “Every contract I get has this provision in it”. Another respondent described his feelings about the general contractor’s obligation to pay their subcontractors, “It’s the nature of the market... The reason we don’t like it as a subcontractor obviously is that we have no contractual relationship with the owner. Our relationship is with the general contractor so we feel it’s their obligation to pay us, we’re contractual to them.”

Almost two thirds (15/24) of the respondents were aware of payments being withheld due to this clause. When questioning the general contractor why they haven’t released payments yet, one of the subcontractors said, “that’s a very common answer you would get when you ask a GC why he’s not paid you, he’d say because he’s not been paid by the owner.” Some were unsure of the reason payments may have been withheld or they claim that they have never experienced this. A roofing subcontractor said, “Well it’s an excuse that’s used. I can’t pay you ‘cause I haven’t been paid yet. Whether they have or whether they haven’t, I have no way of knowing.” Another subcontractor described it this way, “I don’t know if it was because of a dispute or just because a GC had not been paid.”

Many subcontractors voiced their preference to have it removed or altered. One interviewee responded, “it’s historically something we’d try to strike from contracts”. Elevator subcontractors stated that they historically have not complied with this provision and they

described that they have been generally very successful in negotiating this out of their contracts with general contractors. The majority of subcontractors indicated that they have had limited success in reducing this practice in the industry. One respondent stated, “Eventually we have signed it, we have argued it. Obviously as a sub we’d rather not have that in there.” Most subcontractors indicated that they sign the contract with this provision unaltered.

When asked why they would continue in a relationship with a general contractor that utilizes this clause, an interviewee summarized the view of most of the subcontractors, “Probably. Because that’s the only way you’re going to continue in this business, cause every general does it.”

In the interview, one subcontractor mentioned that he sometimes negotiates in an attempt to remove it from the subcontract and sometimes raises his price to compensate for this factor, saying “...you know I may enter into a conversation about that issue, or I may price to that general contractor differently on an individual bid.” Three interviewees said they were not familiar with the provision at all. Only one subcontractor said has ended a relationship over this, all others said they would not end it over this.

Some participants stated that they are satisfied with current payment record of general contractors with whom they work because they only work with general contractors that pay well. When asked why work with a general contractor that utilizes this clause, one subcontractor said, “Because we’ve established very good working relationships with the GC’s that we’ve been in business with. ...occasionally we work with a new GC and we’re always looking to build on those relationships. But 90% of our business is with GC’s that we’ve been with in the past and

want to continue those relationships.” One respondent mentioned that they screen general contractors beforehand and only bid to those that pay well. The subcontractor stated, “If we’ve built up a relationship with them, and done work with them over the years, and have potential of doing a fair amount of future work, we essentially know what to expect and continue along with it.”

Some see the provision as a positive contract provision because they can determine the status of the owner payment and then exert pressure on the general contractor to pay them. A masonry contractor stated, “...you actually are able to find out when that general contractor has been paid... that way you have leverage if that general contractor’s not able to pay you.”

Interviewee responses indicated that the importance of this factor depends on the subcontractor’s current economic outlook. Subcontractors with good financial backing tended to rate this lower. One subcontractor stated, “from a business standpoint it’s never been something that’s a something that tips us over, puts us in a bad place financially.” One respondent described that this factor becomes more important as his economic situation worsens, “In the years past, it isn’t that critical. Now that’s when times are good. But as the economics go further into the toilet, as they are, it is more important. The problem that I’ve got right now is...I would not form a relationship with a new client with that clause in there with the economic system the way it is right there...It’s not near as important in a boom economy. As the dollar gets tighter, it becomes increasingly important....Because it is important. Just cause it hasn’t happened to me doesn’t mean that you know, I don’t think about it, don’t look at it.”

Backcharging

The practice of backcharging was described as a very common experience in the interviews. All but one subcontractor stated they have experienced backcharging. Subcontractors rated this factor an average of 4.50 on the ten point scale. The typical items cited by subcontractors were cleanup, damage repair, equipment rental and cost to complete deficient work. The most common item mentioned by subcontractors is clean up costs. When asked what are the typical items backcharged by the general contractor, one subcontractor described, “Backcharges that I’ve experienced usually consist of trash removal from the site, dumpster fees, cleanup fees for laborers, that’s been really about it.”

Generally, the majority of subcontractors believe the practice of backcharging by general contractors to be fair. When asked if backcharging is an acceptable practice, most subcontractors agreed that in their experience, it is. One participant said, “Yes. Most of the time in my experience when backcharging has happened on jobsites it’s pretty clearly outlined from the beginning.”

The majority of participants stated that backcharging is rare in their experience. When asked this question, one respondent said, “... it’s pretty rare that it’s happened to me.” Another said, “in my experience I would say normally, yes. It’s rare for myself to get backcharged. Most of the time that thing can be worked out with other trades, or with them, you know, trading for other things.”

No subcontractors have ended a relationship based on this factor. Only two interviewees stated that they would end the relationship if they perceived the general contractor's backcharging to be unfair. One participant described, "Well I guess if it was an unfair backcharge then of course we'd have to end the relationship. If it was justified, then I guess it's justified. Another stated, "If it was excessive and you felt it was unfair, yeah." Another subcontractor stated he would end the relationship, "If they just arbitrarily backcharge for something that was not from my doing." One claimed he would end it if the backcharging by a general contractor occurred frequently, he said, "Well if it's a habitual thing, then, yes I would."

Subcontractors would continue in a relationship with a general contractor that backcharged them as long as the general contractor is fair. One subcontractor stated it this way, "Well, there's issues on every job and it's just the nature of the business. And as long as somebody's willing to sit down and talk about it then I have no problem with it."

One subcontractor said that he would raise his price on future bids in lieu of ending the relationship if a general contractor arbitrarily backcharged then at the end of a project, "Well, I think it's something that can be worked out, if it can be worked out. And if their standard is to just arbitrarily backcharge at the end of the project then we would in either future bidding add an amount to their price to compensate for that . . . well, that's probably what we would do rather than just ending the relationship."

Most were given notice prior to the backcharge. When asked if it matters to them whether or not they are given prior notice, the common response was, "I prefer notice." When asked why, one

subcontractor provided a typical response of interviewees, “Because I might be able to rectify the situation before the actual backcharge.” Backcharging can be a sensitive issue when a general contractor does not provide adequate notice. According to one excavator, “If it’s a backcharge for something that wasn’t notified to me I will blow a cork.”

Most subcontractors disliked the practice of surprise backcharges at the end of the project. Most preferred the option to make the corrections with their own forces. One participant described it like this, “Well as long as I have the option to correct my work, if I don’t do it and you go ahead and do it then I understand that and I have to accept it. But if I’m not given notice then somebody is going to get their butt chewed.”

Many subcontractors tend to trade work items with the general throughout the project with a teamwork mentality. For example, a subcontractor may allow use of his lift to the general contractor and, in return, general contractor may provide cleanup labor as a trade. This teamwork mentality typically reduces the likelihood of backcharging. An electrical subcontractor described it this way, “If you have a good relationship it shouldn’t enter into the relationship. Cause out on the job I can do a lot of things for a contractor as an electrician, as far as temp power and all that kind of stuff that comes along with the electrician on the job. So most of the time we work together . . . we have a lot of equipment that we can loan out, and a lot of times we can work it out on the job if we have a good relationship.”

Some see it as a point of personal pride in their work. An excavation contractor said, “I will stand by my work. The reason I don’t see many backcharges is that I finish my work.”

Onerous Subcontract Provisions

The three subcategories in this section are Termination for Convenience, Takeover of Equipment and Indemnity Clauses. These provisions were ranked toward the bottom on the 10 point scale by most interviewees.

Elevator subcontractors had the most to say about contract provisions as a group during the interviews. They stated that they tend to negotiate contract terms from a strong position due to the limited number of elevator subcontractors in the market. These three subcontract provisions are typically altered or struck from the contracts entirely by elevator subcontractors. Elevator subcontractors commented that failure to satisfactorily negotiate subcontract terms would be grounds for them to refuse to sign a subcontract or ultimately even end the relationship.

Indemnity Clauses – This clause is rated higher than the other two onerous contract provisions in this category with an average rating of 4.54 on the ten point scale. One quarter (6/24) of interviewees said that the clause is unfair. One subcontractor expressed the common view that in most clauses, “It appears that everything’s passed down to the subs ...so the GC can basically walk away from everything and have everybody else pay for it.” One quarter (6/24) of the respondents stated that they have negotiated a change to the indemnity clause wording as a prerequisite to signing the subcontract. One interviewee described what he thought about indemnity clauses, “The problem with indemnity clauses is the way they word them. You gotta be very careful because in one paragraph they can tell you irregardless or for

whatever circumstances you're gonna be responsible, if you can't find a clause or paragraph down below that says "but only to the extent of your negligence," then you got a problem. And nobody has a consistent indemnity clause. They all seem to put different ones in. That's probably the item I read closer than anything else in the contract, other than scope of work." Most subcontractors see it as a regular part of every general contractor's subcontract and something they have to accept. I've run across a couple where we requested a change before we'd sign it. But for the most part, I'd say we always entered into the contract" Elevator subcontractors claimed to have the most success in negotiating indemnity clauses out of their contracts. Stated simply by one elevator subcontractor, "we typically cross it out". No subcontractors have ever ended a relationship based on this factor.

Takeover of Equipment - This clause is basically a non-issue to the subcontractors. No subcontractors have ever had their equipment confiscated. Most subcontractors were unaware of this clause ever being included in any of their subcontracts. Subcontractors gave this factor an average rating of 3.33 on the ten point scale. An excavation contractor described his feelings about the clause, "I don't know if I've ever seen it. If somebody ever wants to take over my equipment though, they better have a bigger shotgun. A piece of paper's not going to help them". No subcontractors have ever ended a relationship based on this clause.

Termination for Convenience – Subcontractors stated that they were aware of this clause being part of most contracts but only one respondent had ever experienced being terminated for convenience. This factor was rated an average of 3.13 on the ten point scale. When asked

if it was a good experience, the respondent described it his way, “Well I think everybody made money. You know, the owner decided not to do the project and had to close the job down. But we all got paid on our percentage of completion. One sixth (4/24) of subcontractors stated that they have refused to sign a subcontract due to this clause. Others have tried to negotiate to have the clause removed or altered, “we have fought this and we try to mark it up every time, and it is an issue with us and we would love to see it struck from our contract.” No subcontractors have ended a relationship based on this clause.

Insurance and Bonding

Insurance:

Subcontractors mentioned that insurance requirements seldom become an issue in their relationship with general contractors. This factor received an average rating of 4.17 on the ten point scale. About one fifth (5/24) stated that they decided not to sign a subcontract after being awarded the project because of the insurance requirements. One subcontractor described a situation when the general contractor required more insurance than he typically carried, “well, for example I had a little \$100,000 roofing job. And I carried \$5 million with umbrella and everything insurance, and the GC said he wanted \$7 million. And I said well, you know, for a little \$100,000 job you want \$7 million, I’ve got \$5 million and that’s not good enough, well that’s our company policy...am I willing to pay another \$8 to \$10 thousand dollars just so I can get the job...? It’s not in my bid. Am I just going to eat it on this one job?”

Several subcontractors believe insurance and bonding requirements to be an advantage for them in the bidding process because it can limit the competition; a barrier of entry. Regarding the bonding requirements, one interviewee stated, “I think it helps me, you know if the GC has a requirement for a bond, it’s going to ace out some of the other contractors.” One subcontractor described that their bonding rate is lower than most so it gives them a competitive advantage when bidding projects that require a bond, “It makes you more competitive, yeah... I’ve got a better bonding rate than most of the other guys cause of our financial capacity.” When describing the general contractor’s insurance requirements, one subcontractor said, “The sterner and more difficult they are, the more better off I am in the bidding pool because it minimizes our competition.”

No subcontractors have ever ended a relationship based on insurance or bonding requirements, although elevator subcontractors say they would end it if the insurance requirements were not altered to their liking.

Bonding:

Bonding was described by most respondents as a relatively minor factor in their relationship with general contractors. Only about one fifth of interviewees (5/24) stated that they had decided not to bid on a project because a bond was required. Subcontractors rated this factor an average of 3.83 on the ten point scale. In those cases, subcontractors explained that they were prevented from bidding new work because the bonding requirement would cause them to exceed their maximum allowable bonding capacity. One participant said, “I just won’t go after a project if I

can't get a bond". Another said, "I have not bid some projects cause I couldn't get a bond. And another said, "I have not bid on a job if they required it, I wouldn't bid it"

In a similar circumstance, a subcontractor may decide not to sign a subcontract due to the bonding requirements. This can happen when the bonding requirement for a project became known to the subcontractor only after they had been awarded the project. One quarter (6/24) of respondents stated that they have made this decision; mostly because it would cause them to exceed their bonding capacity. One subcontractor described how he preferred to avoid bonded projects altogether, "if I've got a half a million dollar job that you don't need to bond, or a half a million dollar job that you do, I'm going to go after the one you don't need to. Less exposure."

Conclusions and Recommendations

The qualitative and quantitative interview results indicated that the three most important relationship factors identified by subcontractors in the order of importance are Bid Shopping, Project Manager and Superintendent. These indications were determined by the numerical results of the average ratings on the ten point scale and also by taking the top three relationship factors ranked by subcontractors (See Appendix B).

The following are the research questions that were originally asked as the outset of this study:

1. How do subcontractors perceive the importance of payment issues and contract issues in maintaining the relationship?

2. From the subcontractor's perspective, are the general contractor's project manager and superintendent the most important factors in maintaining the relationship between the general contractor and the subcontractor?
3. From the subcontractors perspective, is the practice of bid shopping a serious betrayal of trust that can end the relationship?
4. What other factors are important to the subcontractor/general contractor relationship?

Conclusions and recommendations correlating to each of the original research questions are presented below.

Research Question 1: How do subcontractors perceive the importance of payment issues and contract issues in maintaining the relationship?

The research question can be divided into two components for analysis: The importance of payment issues in the relationship and the importance of contract issues in the relationship.

Payment Issues – The importance of payment issues in their relationships was described by subcontractors in three main factors of study: Pay-when-Paid Clauses, Timeliness of Payments and Retainage Practices.

Pay-when-Paid

The average rating of the Pay-when-Paid Clause factor was 5.29 on the ten point scale which

indicated that it is not considered to be very important as compared to other factors. Since virtually all general contractors utilize this provision, the majority of subcontractors explained that they consider this to be part of the business and therefore have accepted it as unavoidable. During the interviews, subcontractors stated that the pay-when-paid clause is important because it can put them at risk of not being paid. If a subcontractor is in a relatively poor financial condition, the pay-when-paid clause can become a major factor because it can severely restrict their available cash to run their operations.

Timeliness of Payments

The average rating of the Timeliness of Payment factor was 6.96 on the ten point scale which indicated that this factor is very important as compared to other factors. This factor was the second most cited factor important enough to end the relationship with nearly two thirds (15/24) of interviewees stating that they had done so in the past. In the interviews, subcontractors described the importance of cash flow to their daily operations and that they align themselves with general contractors that have a good payment record. When a subcontractor depends on the financial condition of the general contractor, slow payments sometimes create a hardship for subcontractors - if a subcontractor is well established financially, this factor is not very important. Respondents stated that they avoid bidding to general contractors with poor payment records. Subcontractors indicated that they offer preferential pricing to those general contractors that have a good payment record. The implications of these findings are that general contractors should consider ways to expedite payments to subcontractors in order to enhance relations and gain favored pricing on bids.

Retainage Practices

The average rating of the Retainage Practices factor was 5.75 on the ten point scale which indicated that this factor is relatively important as compared to other factors. This can become a major factor when retainage payments are withheld for long periods of time; generally over one year. Many subcontractors considered the practice of withholding retainage for long periods of time to be unfair. Many considered it to be common practice and accept it as part of working in the commercial construction business. Some subcontractors believe that general contractors fabricate reasons to withhold their retainage in order to hold the money for a longer period of time. Respondents indicated that general contractors were not proactive enough when requesting required paperwork from delinquent subcontractors. Several interviewees voiced their desire to see owners release partial retainage payments to certain subcontractors that comply with all the requirements. Current law and practice on many public projects allows all retainage to be held until every subcontractor complies with all release requirements. This practice penalizes subcontractors that cooperate and can hold up final payments sometimes for over two years after the project is completed. This concept of partial release appealed to many subcontractors but would require a change to the current laws that affect many public projects. Subcontractors indicated that they would consider reducing their bids to general contractors that had less retainage release requirements. This could enhance the competitive advantage to those general contractors that make it a priority to streamline their retainage release requirements when possible and to make efforts to expedite the final retainage payments to their subcontractors on public projects. This could include being more proactive in the pursuit of final documentation

from all subcontractors on a particular project. It may be in the best interest of general contractors to include penalties in their own subcontracts toward those subcontractors that are delinquent in their final paperwork submissions. Subcontractors would likely see this as a positive step toward advocacy on their behalf.

Contract issues – The second part of this first research question dealt with the importance of contract issues. This topic was studied under the heading of onerous subcontract provisions and then further subdivided into three secondary categories that studied particular subcontract clauses: termination for convenience, takeover of equipment and indemnity clauses.

Onerous Subcontract Provisions

Generally speaking, subcontractors indicated that these factors are not very important in their relationships with general contractors. Using the ten point scale, these three contract provisions ranked toward the bottom of the scale. Elevator subcontractors were the exception to this conclusion stating that they typically modify these three provisions to their liking. They have a strong negotiating position unique to most subcontractors because there are so few elevator subcontractors in the Pacific Northwest market and they typically voice similar concerns with the same provisions. This unity enables the elevator subcontractors to dictate their terms and the interviewees indicated that general contractors usually acquiesce because they do not have any other options.

Research Question 2: From the subcontractor's perspective, are the general contractor's project manager and superintendent the most important factors in maintaining the relationship between the general contractor and the subcontractor?

During the interviews, this research question was separated into two components: Project manager and Superintendent.

Project Manager

Respondents indicated that this factor is the second most important factor in their relationship with the general contractor as compared to bid shopping, which was ranked by subcontractors as the most important factor. This factor of study was separated into two subcomponents: Capability and Fairness. The average rating of the Project Manager Capability factor was 7.63 on a ten point scale. The average rating of the Project Manager Fairness factor was 8.08 on the ten point scale. Subcontractors described the project manager as the main point of contact that is responsible to maintain the general contractor relationship. Characteristics of a good project manager that were mentioned most often were honesty, fairness and good communication. Nearly half of the participants (11/24) pointed out that they would alter their pricing based on the particular project manager assigned to a project. One interviewee said, "You just know that they're going to cost you money; they're just going to make the job difficult." Many of the participants mentioned the importance of the project manager to promote a team environment on each project and for them to be their advocate when dealing with the owner or architect on each project. The implications of these findings are that general contractors that want good subcontractor relations will consider recruiting and developing good project

managers. Focusing on the positive traits of honesty, fairness and communication and avoiding the opposite negative traits will enhance their relationships with subcontractors. Promoting a team environment and acting as the subcontractor's advocate would also support good subcontractor relations. This could enhance the competitive advantage to those general contractors that make it a priority to retain good project managers.

Superintendent

The Superintendent Capability was identified by subcontractors as the third most important element in their relationships with general contractors. The average rating of the Superintendent factor was 7.63 on a ten point scale. The superintendent is a vital component that ranks very closely to the project manager for many of the same reasons.

During the interviews, respondents conveyed that the superintendent is the main point of contact on the project worksite acting as the daily overseer of all the subcontractor's personnel.

Interviewees described that the superintendent's capabilities and expertise directly affect the operations and productivity of all subcontractors, which consequently affects their profitability.

One subcontractor said, "Well productivity and efficiency, that is how we make our money is by staying productive and efficient, and if I am on a jobsite where that's not possible because of the superintendent, then that affects my bottom line."

Characteristics of a good superintendent that were mentioned most often were capability and organization. The superintendent's role in promoting an environment of mutual respect with good communication was emphasized as vital to maintaining good jobsite relations.

Subcontractors indicated that they would consider altering their bids to general contractors based on the quality of their superintendents. Over half (13/24) said they would alter their bid to general contractors that had capable superintendents. One respondent said, "I would say it affects the way I bid a project if I'm aware of who the super is going to be on the jobsite".

The implications of these findings are that general contractors that make it a priority to recruit and retain good superintendents could therefore enhance their competitive advantage.

Superintendents that promote an environment of mutual respect on the jobsite would also encourage good subcontractor relations.

Research Question 3: From the subcontractors perspective, is the practice of bid shopping a serious betrayal of trust that can end the relationship?

Bid Shopping

Bid shopping was identified by respondents as the most important factor in their relationship. The average rating of the Bid Shopping factor was 8.67 on the ten point scale. Respondents indicated that they consider bid shopping to be a betrayal of trust with three quarters (18/24) willing to end their relationship with those general contractors that shop their bids. One

subcontractor stated, “Bid shopping doesn’t happen very often to us. When it does, we end the relationship and we don’t bid them anymore. That’s our only recourse.”

One third (8/24) of the interviewees stated that they raise their bids to known bid shoppers. The implication is that general contractors should avoid the practice of bid shopping because it reduces their competitiveness. Those general contractors that do not engage in bid shopping are more likely to receive more bids and more competitive bids than their bid-shopping counterparts. General contractors who are interested in maintaining good subcontractor relations must not engage in the practice of bid shopping.

Research Question 4: What other factors are important to the subcontractor/general contractor relationship? This question can be answered by studying the remaining factors that were part of the original seventeen relationship factors discussed in the interviews and not mentioned above. The remaining factors include: Backcharging; Financial Capacity; Future Work; Safety; Previous Claims and Disputes; Bonding and Insurance. The conclusions and recommendations are separated into each factor of study:

Backcharging

The average rating of the Backcharging factor was 4.50 on the ten point scale. The practice of backcharging by general contractors was described as a common experience for all subcontractors in the interviews. Respondents considered backcharging to be a problem only when the general contractor acts in an unreasonable manner.

Financial Capacity

The average rating of the Financial Capacity factor was 6.13 on the ten point scale.

Subcontractors described that this factor is not usually considered to be important when the general contractor is involved in bonded public projects but it can become more important on private construction projects.

Future Work

The average rating of the Future Work factor was 5.63 on the ten point scale. Subcontractors indicated that they tend to align themselves with general contractors based on this factor. All subcontractors considered it to be an important factor because it directly impacts their viability. Respondents confirmed that profitability is a driving force in their business so future work is always a consideration. Interviewees said they are always willing to consider new work opportunities when solicited by a general contractor. No subcontractors would consider ending a relationship just because there are no current opportunities.

Safety

The average rating of the Safety factor was 6.83 on the ten point scale. This factor is rated more important with subcontractors that have the highest risk factors i.e. roofers, masons.

Subcontractors with strong safety programs tended to rank this lower because it minimally affects their relationships with general contractors.

Previous Claims or Disputes

The average rating of the Previous Claims and Disputes factor was 5.33 on the ten point scale. This factor had a varied response based on the magnitude of the claim and how the claim was handled by the general contractors in each situation. Generally, subcontractors that had a major unresolved claim with a general contractor tend to end their relationship. If a general contractor was cooperative in settling a claim or dispute, the relationship was maintained. Subcontractors tended to overlook minor claims in order to secure new projects with the same general contractor.

Bonding and Insurance

The average rating of the Bonding factor was 3.83 and the average rating of the Insurance factor was 4.17 on the ten point scale. Generally, bonding and insurance are not very important factors to most subcontractors. Sometimes, when a general contractor requires a bond from a subcontractor on a particular project, it may exceed the subcontractor's maximum bonding capacity. A minority of subcontractors mentioned that they have experienced this, causing them to become ineligible to acquire new work. Insurance issues can become important when the requirements exceed the subcontractors typical coverages or dollar limits. If the added insurance requirements result in added premium costs, and if the general contractor refuses to pay the added expense, some subcontractors might decline to enter into contract on that particular project. Some subcontractors believe bonding and insurance requirements to be a barrier of entry

and therefore an advantage for them in the bidding process because it can limit their competition.

Exploratory Section

Subcontractors were asked during the interviews to identify any other factors that they would consider to be important to their relationships with general contractors. Only one respondent offered an opinion on this. Teamwork was mentioned by one subcontractor as an additional relationship factor. Many other interviewees mentioned teamwork as an important element to the relationship but only as part of the discussion of the Project Manager relationship factor.

Observations

When considering their response to the importance of each factor, subcontractors sometimes rank certain factors low when in reality, they are very important to their relationship with a general contractor. They are so important that they align themselves with general contractors that comply with their standards of conduct in an attempt to avoid those general contractors that they dislike. So in their experience, subcontractors may not rank these very high, but only because they only work with general contractors that treat them well. If they could not find general contractors that would work the way that they like, they would rank this factor higher. Therefore the ranking of importance may be skewed to the low side based on this propensity of some of the respondents.

Throughout the interviews, it became apparent that subcontractors are optimists by nature. The

average subcontractor displayed a willingness to look at each new construction project as a fresh start with a general contractor and they tend to have cooperative spirit when considering their relationships to general contractors. Because each new project typically assembles a new and different group of subcontractors, vendors and managers, subcontractors described that they look forward to the potential positive outcome rather than focus on the negatives from past experiences.

Subcontractors also displayed that they are profit oriented during the interviews. The average subcontractor is willing to move forward with general contractor based on the potential opportunity to earn a reasonable profit on a new project.

Many of the interviewees portrayed that they are tolerant and thick-skinned saying that they were willing to overlook the various difficulties and conflicts that occur on most jobsites. They understand that commercial construction is a give-and-take relationship where subcontractors must cooperate with the requirements as dictated by the general contractor. Respondents indicated that they must also work together with their fellow subcontractors with a teaming mentality in order to make their efforts successful on each particular jobsite.

Subcontractors mentioned that the importance of these factors and their tolerance level related to each one is greatly affected by their current economic outlook. In other words, if they have a lot of work, they tend to have less tolerance for things that annoy them. In contrast, when times are lean, subcontractors will be more tolerant with general contractors and give them more leniencies.

It's important to emphasize the relationship of subcontractor pricing to their treatment by general contractors. The interviews revealed that a common method of dealing with a general contractor that engages in practices that they don't like is for subcontractors to adjust their pricing on future bids. Respondents mentioned that they raise their bids to general contractors that they don't like and some reduce their bids to general contractors that they do like. Essentially, this empowers subcontractors to favor certain general contractors, rewarding good behavior and treatment that they prefer and vice versa. General contractors that want to increase their competitive advantage would benefit by focusing on enhancing their subcontractor relations.

Future research: This research could be continued or expanded by studying specific industries more in depth. For example, by focusing on one particular subcontractor specialty i.e. excavators or roofers, it might reveal distinct trends peculiar to each trade. Another consideration could be to broaden the study to a larger geographic area or sampling. Or compare results to another defined geographic area elsewhere in the United States. Of course, a comparative study overseas might provide interesting contrasts or similarities. This same type of study could also be conducted in other types of construction i.e. residential, heavy civil, mining, marine, etc.

References

- Arditi, D., Chotibhongs, R. (2005). Issues in Subcontracting Practice. *Journal of Construction Engineering and Management*, 131(8), 866-875.
- Adrian, J. J. (1987). *Construction Productivity Improvement*. New York: Elsevier Science.
- Barrie, D. S., Paulson Jr., B. C. (1992). *Professional Construction Management Including CM, Design-Construct and General Contracting*. New York: McGraw-Hill, Inc.

- Bausman, D.C., (2004). *Retainage Practice in the Construction Industry*. Alexandria, VA: Foundation of the American Subcontractors Association, Inc.
- Birrell, G. S. (1985). General Contractors' Management: How Subs Evaluate It. *Journal of Construction Engineering & Management*, 3(3), 244-259.
- Berg, B., (1989). *Qualitative Research Methods for the Social Sciences*. Boston, MA: Allyn and Bacon.
- Chester, M., Hendrickson, C. (2005). Cost Impacts, Scheduling Impacts and the Claims Process During Construction. *Journal of Construction Engineering and Management*. 131(1), 102-107.
- Clough, R H., Sears, G A., Sears, S. K., (2005). *Construction Contracting Seventh Edition A Practical Guide to Company Management*. Hoboken, NJ: John Wiley & Sons, Inc.
- Constantino, N., Pietroforte, R., Hamill, P., (2001). Subcontracting in Commercial & Residential Construction: An Empirical Investigation. *Construction Management and Economics*. 19, 439-447.
- Cresswell, J. W., (2007). *Qualitative Inquiry & Research Design Choosing Among Five Approaches*. Thousand Oaks, CA: Sage Publications, Inc.
- Currie, O. A., Sweeney, N. J., Hafer, R. F., (1991). *Construction Subcontracting: A Legal Guide for Industry Professionals*. Hoboken, NJ: John Wiley & Sons, Inc.
- Davis, S., Prichard, R., (2000). *Risk management & Insurance Bonding for the Construction Industry*. Alexandria VA: Associated General Contractors of America.
- Dossick, C.S., Schunk, T.K., (2007). Subcontractor Schedule Control Method. *Journal of Construction Engineering and Management*. 133(3), 262-265.
- Garrett, M. D., (1979). *Complete Handbook of Successful Subcontracting*. Englewood Cliffs, N.J.: Prentice-Hall.
- Gliner, J. A., Morgan, G. A., (2000). *Research Methods in Applied Settings: An Integrated Approach to Design and Analysis*. Mahwah, NJ: Lawrence Erlbaum Associates, Inc.
- Gould, F. E., Joyce, N. E., (2009). *Construction Project Management 3rd ed*. Upper Seattle River, NJ: Pearson Education, Inc.
- Fowler, F., (1990). *Standardized Survey Interviewing – Minimizing Interviewer Error*. Thousand Oaks, CA: Sage Publications, Inc.
- Hendrick, D., Schemm N., (1991). *Safeguarding Your Subcontract Rights*. Alexandria, VA: Foundation of the American Subcontractors Association.

- Hinze, J., Tracey, A., (1994). The Contractor-Subcontractor Relationship: The Subcontractor's View. *Journal of Construction Engineering and Management*, 120(2), 274-287.
- Huycke, A. E., (1998). *Primary Causes of Subcontract Failure and Recommended Strategies to Prevent Failure*. Unpublished master's thesis, University of Washington, Seattle.
- Hollander, H. J., (2002). "Pay When Paid" Construction Contract Requirement: Bane of the Subcontractors Existence. *Florida Bar Journal*, June, 101-103.
- Holstein, J., Gubrium, J., (1995). *The Active Interview*. Thousand Oaks, CA: Sage Publications, Inc.
- Hsieh, T., (1998). Impact of Subcontracting on site Productivity: Lessons Learned in Taiwan. *Journal of Management Engineering*, 124(2), 91-100.
- Knutson, K., Schexnayder, C. J., Fiori, C., Mayo, R. E., (2003). *Construction Management Fundamentals*. Boston, MA: McGraw-Hill, Inc.
- McCracken, G., (1988). *The Long Interview*. Thousand Oaks, CA: Sage Publications, Inc.
- Patton, M. Q., (2002). *Qualitative Research & Evaluation Methods (3rd ed.)*. Thousand Oaks, CA: Sage Publications, Inc.
- Proctor Jr., J.R., (1996). Golden rule of Contractor-Subcontractor Relations. *Practice Periodical on Structural Design and Construction*, 1(1), 12-14.
- Rahman, M.M., Kumaraswamy, M. (2005). Relational Selection for Collaborative Working Arrangements. *Journal of Construction Engineering Management*, 131(10), 1087-1098.
- Sears, S. K., Sears, G. A., Clough, R. H., (2008). *Construction Project Management - A Practical Guide to Field Construction Management (5th ed.)*. Hoboken, NJ: John Wiley and Sons, Inc.
- Schaufelberger, J., (2009). *Construction Business Management*. Upper Seattle River, NJ: Pearson Education, Inc.
- Shash, A.A., (1998). Subcontractors' Bidding Decisions. *Journal of Construction Engineering & Management*, 124(3), 219-225.
- Tracey, A.J., (1991). *Contractor-Subcontractor Relations from the Subcontractor's Perspective*. Unpublished master's thesis, University of Washington, Seattle.
- Wickwire, J. M., Fisher, W. B., Kelley, M. P., Bertke, F. H., (1995). *The Construction Subcontracting Manual Practice Guide with Forms*. Hoboken, NJ: John Wiley & Sons, Inc.

Wickwire, J.M., (1998). *Supplement to the Original Construction Subcontracting Manual*
Hoboken, NJ: John Wiley & Sons, Inc.

Yates, J.K., Duran, J., (2006). Utilizing Dispute Review Boards. *Journal of Professional Issues in Engineering Education and Practice*, 132(4), 334-341.

Appendix A – Interview Questions

The following is the actual interview questions asked of each of the 24 subcontractors.

Additional probing questions were also asked as required to gain more insight and to extract the most meaningful information from each respondent.

Points to cover:

1. Thank you taking time today.
2. This is a study for a WSU thesis project. Its an anonymous interview where the results will be collated and organized and then after transcription, all company names and names of individuals will be removed.
3. This interview is completely voluntary - You are not obligated to complete this interview once it is started and you are free to leave at any time during the interview.

...TURN ON AUDIO RECORDER NOW...

General questions regarding each specific subcontractor:

Today's Date:

1. Please state your name.
2. What is your company name?
3. What is your area of expertise/type of subcontractor?
4. What is the age of your firm?
5. What is the size of your company based on annual dollar volume? What is your maximum dollar value of projects? How many projects do you typically oversee (personally) in one year? Or concurrently?

6. Are you in a management position that oversees projects where you work under a general contractor? How many years have you worked in commercial construction? How much of your work is subcontracted through general contractors (percentage)?

7. What is your geographic work area?

Specific Questions:

1. Payment Issues

A. Pay-when-paid

- Are you familiar with the pay-when-paid provision in some subcontract agreements?
- Have you ever had your payments withheld by a general contractor due to non-payment from the owner or financial institution?
- Have you ever decided not to sign a subcontract because of the pay-when-paid provision?
- Have you ever ended a relationship with a general contractor because of their pay-when-paid payment practices toward you?
- Would you ever continue in a relationship when a general contractor utilizes a pay-when-paid provision? Why?

Statement: On a scale of 1 to 10 (with 1 being the most important), rate the importance of a subcontract pay-when-paid clause when considering starting or maintaining a relationship with a general contractor.

B. Timeliness of payments

- Have you ever been paid late by a general contractor (due to no fault of your own)?
- Have you ever maintained a relationship with a general contractor who was consistently slow with their payments to you?
- Have you ever ended a relationship with a general contractor because of their poor payment record with you?
- Would you continue in a relationship with a general contractor who is known to be slow to pay you? Why?

Statement: On a scale of 1 to 10 (with 1 being the most important), rate the importance of a general contractor's speed of payment when considering starting or maintaining a relationship with that general contractor.

2. Bid shopping

- Has your bid ever been “shopped” by a general contractor? If so, please elaborate.
- Would you consider terminating your relationship with a general contractor that shopped your bid? Have you ever done this? (Terminated your relationship with a general contractor after being bid shopped). If you did end a relationship with a general contractor, did that general contractor engage in shopping your bids more than one time?
- Would you consider not entering into a relationship with a general contractor that had a reputation for shopping bids?
- Would you ever continue in a relationship with a general contractor that shopped your bid? Why?

Statement: On a scale of 1 to 10 (with 10 being the most important), rate the importance of a general contractor's bid shopping practices when considering starting or maintaining a relationship that general contractor.

3. Backcharging practices

- Have you ever been backcharged by a general contractor? If yes, please describe. Were you given notice, or did the general contractor just send you the charge without notice?
- Do you consider this to be an acceptable and reasonable practice?
- Have you ever ended a relationship with a general contractor because of their backcharging practices toward you?
- Would you continue in a relationship with a general contractor that backcharges? Why?

Statement: On a scale of 1 to 10 (with 10 being the most important), rate the importance of a general contractor's previous backcharging practices toward you when maintaining a relationship with that general contractor.

4. Financial capacity of the general contractor

- Have you ever not been paid because a general contractor was having financial trouble?
- Would you consider this factor when deciding to establish a relationship with a general contractor?
- Would you ever continue in a relationship when a general contractor that was not financially sound? Why?
- Have you ever ended a relationship with a general contractor because they were not financially sound?

Statement: On a scale of 1 to 10 (with 10 being the most important), rate the importance of a general contractor's financial capacity when considering starting or maintaining a relationship with that general contractor.

5. Future work prospects

- Would you ever consider future work when deciding to establish a relationship with a general contractor?
- Have you ever sought out a general contractor in order to establish a working relationship because the general contractor had significant work opportunities?
- Have you ever overlooked a past offense or difficulty in order to secure new work with a general contractor?

- Have you ever ended a relationship with a general contractor because they did not have many bidding opportunities?
- Why would you continue in a relationship when a general contractor that has minimal work prospects?

Statement: On a scale of 1 to 10 (with 10 being the most important), rate the importance of the potential opportunities for future work offered by a general contractor when considering starting or maintaining a relationship with a general contractor.

6. Safety requirements

- Have you ever decided not to sign a subcontract because of the excessive safety requirements?
- Do you appreciate the emphasis on safety by general contractors or do you consider it to be a hindrance to your work?
- Have you ever ended a relationship with a general contractor because of their excessive safety requirements?
- Would you be more likely to establish or maintain a relationship with a general contractor because they had a good safety program?

Statement: On a scale of 1 to 10 (with 10 being the most important), rate the importance of the safety requirements imposed by a general contractor when considering starting or maintaining a relationship with that general contractor.

7. Previous claims and disputes

- Have you ever had a claim or dispute that was resolved with a general contractor so that, afterward, you felt good about continuing in your relationship together?
- Have you ever ended a relationship with a particular general contractor because of a claim or dispute? How did you make that decision?
- Have you ever overlooked a previous unresolved claim or dispute in order to continue in a relationship with a general contractor? Why?

Statement: On a scale of 1 to 10 (with 10 being the most important), rate the importance of previous claims and disputes you have had with a general contractor when considering maintaining a relationship with that general contractor.

8. Project Manager Relationship

- Have you worked with project managers that you liked? If so, what factors contributed to your evaluation?
- Have you worked with project managers that you disliked? If so, what factors contributed to your evaluation?
- Have you ever decided not to sign a subcontract on a particular project because of the assigned project manager? Why?
- Have you ever ended a relationship with a general contractor because of your treatment from a project manager?
- Do you normally know who the project manager will be on a project before you bid on a project? If you did know, would it affect your bidding decisions?
- Have you ever bid a project or signed a subcontract solely because of your relationship with a particular project manager?

- Would you continue in a relationship with a general contractor after you have been mistreated by a project manager? Why?
- This factor has is separated into 2 components so you can rate each one separately: 1. The capability and experience of the project manager and 2. The fairness of the project manager.

Statement: On a scale of 1 to 10 (with 10 being the most important), rate the importance of the capability and experience of the project manager when considering starting or maintaining a relationship with a general contractor.

Statement: On a scale of 1 to 10 (with 10 being the most important), rate the importance of the fairness of the project manager when considering starting or maintaining a relationship with a general contractor.

9. Superintendent Capability

- Have you worked with superintendents that you liked? If so, what factors contributed to your evaluation?
- Have you worked with superintendents that you disliked? If so, what factors contributed to your evaluation?
- Have you ever decided not to sign a subcontract on a particular project because of the assigned superintendent? Why?
- Does the overall quality of a general contractor's superintendents affect your relationship with the general contractor?
- Does the capability of a superintendent affect your decision to work on a particular project?
- Do you normally know who the superintendent will be on a project before you bid on a project? If you did know, would it affect your bidding decisions?

- Have you ever ended a relationship with a general contractor because of your treatment from a superintendent?
- Have you ever bid a project or signed a subcontract solely because of your relationship with a particular superintendent?
- Would you continue in a relationship with a general contractor after you have been mistreated by a superintendent? Why?

Statement: On a scale of 1 to 10 (with 10 being the most important), rate the importance of the capability and experience of the project superintendent when considering starting or maintaining a relationship with a general contractor.

10. Bonding and Insurance –

A. Bonding

- Have you ever decided not to enter into a subcontract because a performance bond was required? Why?
- Have you ever lost a project because you could not get a performance bond?
- Have you ever decided not to bid on a project because the general contractor required a performance bond?
- Have you ever ended a relationship with a general contractor because of their bonding requirements?

Statement: On a scale of 1 to 10 (with 10 being the most important), rate the importance of bonding requirements imposed by a general contractor when considering starting or maintaining a relationship with that general contractor.

B. Insurance

- Have you ever decided not to enter into a subcontract because of the insurance requirements?
- Have you ever ended a relationship with a general contractor because of their insurance requirements?

Statement: On a scale of 1 to 10 (with 10 being the most important), rate the importance of liability insurance requirements imposed by a general contractor when considering starting or maintaining a relationship with that general contractor.

11. Onerous Subcontract Provisions – Termination for Convenience, Takeover of Equipment , Indemnity

A. Termination for Convenience

- Have you ever had a situation where you were terminated for convenience (through no fault of your own)?
- Have you ever refused to sign a subcontract because of the “termination for convenience” clause?
- Have you ever ended a relationship with a general contractor because of the “termination for convenience” clause?

Statement: On a scale of 1 to 10 (with 10 being the most important), rate the importance of the termination-for-convenience clause when considering starting or maintaining a relationship with a general contractor.

B. Takeover of equipment

- Have you ever refused to sign a subcontract because of the “takeover of equipment” clause?
- Have you ever had your equipment confiscated by a general contractor based on this clause?

- Have you ever ended a relationship with a general contractor because of the “takeover of equipment” clause?

Statement: On a scale of 1 to 10 (with 10 being the most important), rate the importance of the takeover of equipment clause when considering starting or maintaining a relationship with a general contractor.

C. Indemnity

- Have you ever decided not to enter into a subcontract due to the indemnity requirements?
- Do you have an opinion about the fairness of this clause?

Statement: On a scale of 1 to 10 (with 10 being the most important), rate the importance of the contractual requirement to sign an indemnity clause when considering starting or maintaining a relationship with a general contractor.

12. Retainage practices

- Have you ever decided not to sign a subcontract because of the retainage release requirements?
- Have you ever ended a relationship with a general contractor because of their retainage release requirements?
- Would you continue in a relationship with a general contractor that is notoriously slow to pay retainage? Why?
- Has a general contractor ever held your final retainage payment for an extended time period? Why?
- Would you consider this practice generally to be unfair?
- Does a general contractor’s retainage requirements and payment record (whether good or bad) affect your decision to work with a particular general contractor? How so?

- Would you be more likely to work for a general contractor that has relatively few retainage release requirements?

Statement: On a scale of 1 to 10 (with 10 being the most important), rate the importance of retainage release requirements when considering maintaining a relationship with a general contractor.

Exploratory section: Please add any other factors that you deem to be important to your relationships with general contractors, either positive or negative, that have not already been presented in the categories listed above.

What factors would affect your pricing when deciding how to bid to particular general contractors? Would you ever raise or lower your pricing to certain general contractors based on one of these factors? Which ones and in what way (higher or lower)?

Ranking: Please rank the top 3 relationship factors in order of importance from most important to least important.

Appendix B – Ratings Spreadsheet

Factors	Excavators			Masons			Steel Erectors			Roofing			Finishes			Elevator			Mechanical			Electrical			Avg. Rating
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
1a. Pay-when-paid	3	7	10	7	5	8	5	3	10	7	3	2	8	3	3	8	8	4	2	10	5	2	2	2	5.29
1b. Timeliness of Payments	8	8	8	7	6	7	8	5	10	8	6	10	7	5	4	6	5	8	10	8	8	3	10	2	6.96
2. Bid Shopping	10	8	10	10	9	8	10	8	8	8	7	8	10	10	7	9	8	10	10	8	9	9	10	4	8.67
3. Backcharging	3	6	2	2	3	7	4	5	9	5	3	2	7	7	5	2	5	6	1	5	5	8	3	3	4.50
4. Financial Capacity	7	7	9	8	8	7	6	5	10	6	8	8	7	2	6	2	4	8	4	8	9	2	2	4	6.13
5. Future Work	8	8	9	6	7	4	7	6	8	8	4	1	3	2	7	10	6	6	4	5	9	1	1	5	5.63
6. Safety	9	10	9	10	9	8	10	5	10	7	4	2	10	5	6	6	10	7	3	6	5	8	2	3	6.83
7. Previous Claims	5	6	8	3	5	7	7	5	10	8	7	8	7	7	6	3	4	5	5	5	1	2	2	2	5.33
8a. Project Manager - Capability	7	8	9	8	7	8	7	6	10	7	6	9	8	7	8	7	4	5	10	9	7	8	10	8	7.63
8b. Project Manager - Fairness	8	9	10	9	9	8	9	7	10	7	6	9	9	7	8	7	4	7	10	6	8	9	10	8	8.08
9. Superintendent	8	8	9	10	9	8	8	8	10	6	6	10	8	4	8	5	4	7	8	9	5	8	8	9	7.63
10a. Bonding	5	6	10	9	5	8	3	2	8	4	2	1	1	5	3	2	1	2	1	4	5	1	1	3	3.83
10b. Insurance	5	6	2	9	5	5	4	2	5	7	4	8	1	2	5	8	4	4	1	3	5	1	1	3	4.17
11a. Termination for Convenience	3	5	2	1	5	5	4	2	5	7	5	1	2	1	2	9	3	3	1	3	2	1	1	2	3.13
11b. Takeover of Equipment	10	5	8	1	6	5	4	1	5	4	3	1	1	1	1	2	8	3	2	1	3	2	1	2	3.33
11c. Indemnity	9	7	3	2	4	7	6	2	10	6	6	9	2	1	2	8	6	4	3	5	2	2	1	2	4.54
12. Retainage Practices	7	3	2	7	8	5	8	2	10	7	6	9	6	2	3	8	2	7	4	6	7	9	6	4	5.75
13. Teamwork *																									
Top 3 Factors																									
1	2	2	8	9	1	8	8	9	1	2	7	1	8	2	9	11	1	2	2	9	2	13	8	8	
2	8	8	9	2	2	9	9	1	3	7	1	12	9	8	8	12	11	1	1	1	4	2	9	9	
3	1	9	1	6	4	1	1	8	8	5	2	9	1	7	2	9	10	9	9	2	8	12	2	5	

*This factor was added as part of the exploratory section

APPENDIX B – RATINGS SPREADSHEET

Appendix C – Relationship factors ranked in order of importance (Based on the ten point scale average rating)

1. Bid Shopping
2. Project manager capability
3. Project manager fairness
4. Superintendent
5. Timeliness of Payments
6. Safety
7. Financial capacity
8. Retainage practices
9. Future work
10. Previous claims
11. The pay-when-paid clause
12. Indemnity
13. Backcharging
14. Insurance
15. Bonding
16. Takeover of equipment
17. Termination for convenience

Appendix D – Factors that end the relationship

Factors mentioned by subcontractors that have ended their relationship with a general contractor in the past (in order of frequency):

Bid Shopping 18/24
Timeliness of Payments 15/24
Previous Claims or Disputes 7/24
Financial Capacity 5/24
Project Manager 5/24
Retainage Practices 3/24
Superintendent 1/24