Transportation Agency Use of Owner-Controlled Insurance Programs

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Abstract: Controlled insurance programs are highly efficient risk control mechanisms. With a controlled insurance program, the interest of the owner, designer, construction manager, contractors, and consultants are covered by one insurance arrangement. This paper describes the current state of practice regarding the use of owner-controlled insurance programs by transportation agencies. Departments of transportation that have used controlled insurance programs for their major projects (construction costs greater than $100 million) report that they were satisfied with the results. But contractors are cautious because, when an owner's controlled insurance program administrator fails to perform, it is the contractor who incurs the residual consequences of increased business cost, and those consequences can extend far into the future.

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Introduction

A vast storehouse of information exists on nearly every subject of concern to the community of construction practitioners and researchers. Much of this information has resulted from successful application of solutions to the problems faced by practitioners in their daily work. This paper reports on transportation agency experience in using owner-controlled insurance programs (OCIPs). It provides insight into the critical issues affecting successful employment of a controlled insurance program.

Across the country, owners of transportation facilities are pursuing strategies to improve transportation project delivery (e.g., reducing costs, controlling risk, streamlining processes) (Parsons Brinckerhoff undated; *Wrap-up* 1996; *Owner-Controlled* 1997; *Project* 1999; ADOT 2000; Fisher 2000; *Project* 2001). At the same time, the lines of responsibility for construction site safety have become blurry as the number of project participants working in the same physical space increases, and the courts have been vague as to who is responsible for construction safety (Donovan 1999). Some states hold that the duty to provide a safe workplace is a matter of law, e.g., Title 8 California Code of Regulations §3203 (8 CCR 3203) and, in New York State, Sections 240 and 241 of the labor law.

On many urban projects there can be multiple prime contractors, municipal utility crews, private utility crews, and even transit authority contractors involved. Project complexity is increasing and the roles assumed by designers, project managers, contractors, and subcontractors are changing (Donovan 1999). Complex projects combined with management role changes have created ambiguity in responsibilities, especially responsibility concerning safety. The project owner, as the party ultimately responsible for the construction work, is consequently seeking to limit exposure to liability. In many cases this desire has resulted in greater control over project safety and risk management.

One mechanism that an owner can use to manage construction risk is to engage in a Controlled Insurance Program (CIP). Such programs have been in use since the 1940s (Bird 2000). Based on project size, defense projects during World War II obtained insurance under what was then called the War Projects Rating Plan (Decampi-Stewart 1992). These CIPs were an early form of insurance based on economies of scale. More recently, in Houston, the general contractor for a stadium project used a contractor-controlled insurance program (CCIP) (Donovan 1999). Owner-controlled insurance programs (OCIPs) are used on almost all ''mega'' transit projects (Schexnayder and Weber 2002). Bay Area Rapid Transit, the Washington Metropolitan Area Transit Authority, the Metropolitan Atlanta Rapid Transit Authority, and the Baltimore Mass Transit Administration have all used OCIPs. More recently, the San Joaquin and Eastern Transportation corridor projects in California both used OCIPs. Each of these design-build projects had a cost of about $800 million.

There are several different names for a controlled insurance program, including consolidated insurance program; owner-controlled insurance program, where the sponsor is the project owner; or contractor-controlled insurance program, where the contractor acts as the program sponsor. The original name for such insurance programs was ''wrap-up,'' and many in the industry use the term wrap-up insurance and OCIP interchangeably.

Construction Insurance

All major construction projects include contractual insurance requirements (Table 1). With so many participants working on large transportation projects—owner representatives, private design professionals, a prime contractor, subcontractors, and suppliers—there may be redundancy and/or gaps in insurance coverage

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Table 1. Responsibility for Insurance Coverage

Construction insurance coverage	Provided under controlled insurance program	May be included under controlled insurance program	Excluded from controlled insurance program
General liability	Always		
Workers compensation and employers liability	Typically, but not legal in monopolistic states		
Builders risk	Always		
Excess/umbrella liability	Always		
Pollution/environmental liability		If there are special pollution risks	
Airport liability		If there is work around airfield operations	
Railroad protective liability		If there is work abutting railroads	
Design liability	Often		
Design-build errors and omissions		If a design-build project	
Contractor's tools			Always
Automobile liability			Always

(GAO 1999). An OCIP risk management program will help to eliminate both duplication of coverages and insurance gaps, and it can provide all parties with higher coverage limits.

When an OCIP is used, the contract documents will contain three specific sets of information and requirements:

1. Specific information about (a) the insurance coverage that will be provided under the OCIP; and (b) OCIP enrollment procedures;
2. Requirements concerning contractor-provided insurance outside the OCIP; and
3. Insurance requirements for those contractors not enrolled in the OCIP.

Critics question the ability of such arrangements to achieve their stated objectives and claim that these programs pit the owner and contractor as adversaries. Further, contractors worry that OCIPs create potential coverage gaps in their own insurance programs and can hinder their competitiveness on other projects. Even supporters acknowledge that an owner's ability to meet controlled insurance program objectives depends heavily on how the program is managed—especially concerning safety. To achieve project cost savings with an OCIP requires that the owner and all project contractors work together closely to implement and enforce an aggressive safety program.

Sources of Information

At the outset of the exploratory work for the research that led to this paper, letters were sent to the Departments of Transportation (DOTs) in all 50 states. The purpose of the letter was to identify states having OCIP experience. Alaska, Arizona, Colorado, Florida, Massachusetts, Michigan, New Mexico, Ohio, Pennsylvania, and Utah responded that they had experience with using OCIPs. Those departments were asked to identify knowledgeable points of contact and those contacts were then asked to complete a questionnaire and participate in an interview. The researchers conducted these interviews on site with multiple staff members in Arizona, Colorado, Michigan, New Mexico, Utah, and Massachusetts. Florida, Michigan, Ohio, and Pennsylvania participated in telephone interviews that lasted approximately 1.5 hours. The interviews gathered facts and opinions about the respective state's OCIP experiences. The response to the interviews provided practical information concerning specific experiences and strategies.

The first writer attended several contractor association meetings and engaged in discussions with contractors concerning their OCIP participation experiences. Based on those discussions, a contractor survey was sent by e-mail to all heavy highway contractor members of the Associated General Contractors of America (AGC). That survey instrument sought information from construction companies having specific OCIP experience. It attempted to identify positive and negative aspects of OCIP programs from the contractor's point of view. Many contractor comments are cited in this paper.

Contractor Issues

It should be noted that many contractors are hesitant to be part of an OCIP. Therefore, contractor concerns must be carefully addressed when structuring a controlled insurance program. Specific issues raised by the contracting community include (Schexnayder and Weber 2002):

1. Administration expense: What are the administrative functions of the contractor that relate to working under an OCIP and how is reimbursement made for such activity?
2. Claims management: In most jurisdictions, the workers compensation experience under the OCIP follows the contractor, impacts the construction company's experience modification rating (EMR), and affects the cost of doing business.
3. Exclusion clauses: Who is not covered by the OCIP—vendors, haulers, truckers?
4. Safety incentive programs: Is there an incentive plan and does the contractor receive a monetary benefit for superior performance?
5. Punchlist exposure: Does the OCIP cover warranty and callback exposure?
6. Loss data, loss runs, and EMR filings: The owner's insurance broker is not a party to the construction contract but the contractor and every participating subcontractor is the broker's client.

While there are many questions a contractor should explore before becoming a party to an OCIP, such programs also bring advantages to the contractor. A workers compensation insurance payment does not preclude litigation by the insured employee or the workers compensation insurance company in subrogation against a third party. Such a suit is known in the industry as a third-party-over action. An OCIP eliminates the possibility of the subcontractor's workers compensation insurance carrier suing the general contractor in ''subrogation'' in the name of the injured

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employee. All of the parties that participate in the OCIP have the same insurance carrier, so there is only one defense lawyer and one pot of money being defended.

Concerns Expressed by the Associated General Contractors of America

The document ''OCIPs Look Before You Leap'' (AGC 2001) goes into even greater detail about contractor issues. The lead paragraphs of the AGC document state: ''Very early in the project delivery process, contractors and their legal and insurance advisors need to start asking questions about any OCIPs they encounter. Contractors have every right and reason to know exactly how any such program will work, including the details of the safety and other loss control programs that will be one of the keys to its success—or failure.'' One issue often raised by the AGC and individual contractors is their concern about added administrative burdens.

Contractor Owner-Controlled Insurance Program Administrative Burden

An extra paperwork burden arises for the contractor because of requirements to file separate OCIP project workers compensation coverage labor hour reports. The contractor will have to file separate labor hour reports for each OCIP project and for work that is covered under its own insurance policy. This is because labor hours must be tracked in order to adjust the OCIP's workers compensation coverage premium. The initial OCIP project workers compensation premium is based on an estimate of the labor hours made at the beginning of the project. During the project, the actual labor hours are tracked and compared to the estimated labor hours in order to adjust the premium to match the actual project experience. Contractors have complained that this labor hour tracking is an undue burden, but on federally funded projects, contractors must track the hours anyway for the certified payrolls that are required under the Davis-Bacon Act.

For the contractor, the cost of labor hour tracking is a contract or home office overhead issue, and this cost should be included in the bid. Therefore, it is important that these OCIP payroll-reporting requirements be clearly explained in the project bid documents.

Choosing an Owner-Controlled Insurance Program

The important issues that owners should consider when evaluating the use of an OCIP are:

1. Risk,
2. Potential for catastrophic loss,
3. Construction cost—especially the payroll component of the project cost,
4. Extended schedule, and
5. Safety/loss control.

Risk

The first step in risk management is a process to identify, measure, and analyze potential risks. If that process leads to the conclusion that increased insurance limits are warranted, then an OCIP should be considered. Projects exposing the owner to large elements of risk include those involving complex construction procedures in urban environments and those presenting considerable third party liability exposure; examples of this would be disruptions to activities at airport, railroad, or medical facilities. Such projects can benefit from the coordinated safety program and higher insurance limits of an OCIP.

An OCIP eliminates conflicting insurance provisions, removes overlapping policies, and closes coverage gaps (GAO 1999). Many smaller contractors carry $1,000,000 per occurrence liability coverage. Therefore, the policy will only pay the first $1 million of a major claim. Additionally, contractor policies typically have to be renewed on an annual basis and may not be renewed or may not be renewed to the limits specified in the project contract.

Catastrophic Loss

Projects that expose the owner to catastrophic loss—for example, hurricane, flood, or multiple vehicle accidents—should have very high insurance limits. The Central Artery/Tunnel Project exposed the owner and contractors to great risk because of the extensive underground work in a highly urbanized environment. Using an OCIP allowed the project owner, because of the inherent economies of scale, to purchase very high insurance coverage limits. Both the general liability and the builder's risk policies for the Central Artery/Tunnel Project had $400,000,000 per occurrence limits. For the urban I-15 reconstruction project in Utah, the excess liability coverage was $100,000,000 for each occurrence (*Owner-Controlled* 1997). In New Mexico on the Corridor 44 Project, which was primarily a rural reconstruction job, the excess general liability coverage was $50,000,000 (*Project* 1999).

A properly designed OCIP assures that adequate limits of coverage are in place for all of the project's partners. The insurance limits are dedicated to the project. With an OCIP, it is generally true that broader coverage with substantially higher limits can be provided and the coverage is placed for the full term of the project plus a completed operations period.

Construction Cost

Different reports give minimum construction cost values below which an OCIP should not be used. Across the literature there is in fact quite a range of values to be found (Parsons Brinckerhoff undated; GAO 1999; Bird 2000). An OCIP study for the Florida Department of Transportation suggested (Parsons Brinckerhoff undated):

- Single project with hard construction cost (contracted work) of $75 million or more,
- Multiple projects at a single site expected to generate $100 million or more of hard construction costs over 2–3 years (e.g., major interchange programs),
- Multiple projects at contiguous sites generating $100 million or more of hard construction costs, and
- On-going restoration, renovation, and repair work expected to generate at least $30–40 million per year of costs (e.g., interstate highway maintenance program).

Labor Component of Project Cost

The 1999 General Accounting Office report (GAO 1999) states: ''Large labor-intensive projects with construction costs between $50 million and $100 million would be in a better position to obtain wrap up insurance.'' Gary Bird (Bird 2000) believes: ''Major construction projects with hard costs in excess of $100 million are definite OCIP candidates. 'Hard costs' refers to the expense of actual construction only. Projects as small as $50 million may also be good candidates if they involve higher than average risks or an unusually high payroll component.'' The im-

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portant point is that the total hard construction cost is not the crucial factor for using an OCIP. It is the labor cost component of hard cost that is the critical determinant. Workers compensation insurance premiums are largely a function of the project man hours, labor classification, and state-set rates. They are not a function of total or hard project cost. Consequently, labor cost is very important, as most of the OCIP insurance cost savings come from reduced workers compensation premiums.

Extended Schedule

With long-term projects, over three years, the use of an OCIP assures the owner and contractors that adequate coverage and limits will be in effect for the duration of the work plus the completed operations protection for a fixed duration. Contractors assume substantial liabilities through the indemnity (or hold harmless) provisions of construction contracts. It is oftentimes required by contract that contractors indemnify the project owner against third party claims arising from their construction operations on the project. The completed operations coverage under the CIP should be structured with time (tail) extensions the match state liability statutes.

Repose statutes set an absolute time limit for suits against a contractor for a completed work. However, many state statutes provide an additional year for discovery. Twenty-seven states and the District of Columbia have statutes of repose with durations of 10 years or longer. Three states, Kansas, New York, and Vermont, have no construction specific statutes of repose. Only four states have statutes of repose of five years or less: Arkansas and Virginia (5 years) and Florida and Tennessee (4 years).

Safety/Loss Control

In the case of projects requiring separate construction contractors and/or multiple subcontractors, it is often difficult for the owner to coordinate the many individual safety programs. A key element of an OCIP and the element that makes such programs attractive to the insurance market is the opportunity to reduce risk through OCIP and a contract-mandated provision that all parties will work under a single professionally developed and managed safety/loss control program. The program involves the entire workforce in working towards accident and loss reductions by:

1. Education,
2. Promotion of safe work attitudes,
3. Awareness of factors that create accident situations,
4. Training,
5. Use of safety equipment and clothing,
6. Monitoring of compliance with statutory and contractual regulations, and
7. Inspections and enforcement actions.

Site Definition

Definition of the work locations covered by the OCIP is very important. Normally, a construction CIP provides coverage for work at a single designated project site (Bird 2000). Some risk managers believe that, ideally, the best OCIP project is one where site access can be easily controlled. The ideal site boundary condition is achieved where there is complete control of who enters or passes through the site. This ideal can be realized only on a limited number of projects. The construction of a nuclear power plant, where there is a fenced boundary and very limited entry points with tight control of who is allowed to enter, would be an example.

Typically in the case of transportation applications, the site definition includes the physical construction site and any supporting sites *dedicated 100%* to the project work. For example, a contractor's portable batch plant located a short distance from the project, but dedicated strictly to the OCIP project, would be covered and subject to the safety program and rules. A material supplier who is providing aggregate for several area projects from the same pit would not be covered. However, if the same aggregate supplier were providing material from the pit solely to the OCIP project, and no other projects, then the supplier would be eligible for inclusion in the OCIP. In one case, the designer's office space in another state was covered as long as they were working solely on the OCIP project. The physical construction site definition generally covers the ''zone of influence'' with respect to traffic control devices, so employees maintaining these signs and devices are covered under the OCIP.

There is no way to control or limit access to many transportation project sites. In the case of highway projects, the work area is often traversed by third parties (the traveling public) who create additional worksite hazards because of their unsafe conduct. Even with the problem of site control, OCIPs have been used successfully on both linear sites (roadways) and single location (bridge) transportation projects. They have also been used by Departments of Transportation for many airport reconstruction and expansion projects. The OCIP for the Blue Water Bridge project in Port Huron, Michigan, covered both construction of a new bridge and reconstruction of the existing adjacent bridge. The I-15 reconstruction project OCIP in Salt Lake City, Utah, covered rebuilding 144 bridges and 17 miles of roadway. All of the work was accomplished while maintaining traffic through the work zone. The Suncoast Parkway Toll Road OCIP in Florida covered new construction on a new alignment.

Understanding Owner-Controlled Insurance Program Administrative Requirements

Project owners face increased administrative burdens when using an OCIP. It is clear that administering an OCIP requires extra effort from the project management staffs of both the contractor and owner. A Transit Construction Roundtable survey in 1998 on transit agency use of OCIPs reported that ''All the respondents affirmed that the wrap-up insurance added to their administrative workload but that the burden was reasonable'' (GAO 1999):

> Conscientious administrative supervision is essential to the success of a CIP. Through efficient document control, data management, informative management reports, and regular inspections or audits, the CIP can be guided toward better-than-average experience and the resulting economic rewards (Bird 2000).

Owner Owner Controlled Insurance Program Administrative Burden

The project owner is responsible for administering the program and must either outsource this function or assign additional administrative staff. The owner must initially supply the resources to design and implement the OCIP.

Five of the 10 Departments of Transportation with recent OCIP experience stated that their administrative burden was increased because of the OCIP (Schexnayder and Weber 2002). Their responses give an indication of how this burden was handled:

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- ''Yes, more work—but same number of people. It was not burdensome (just another part of the project). Had a very helpful agent'' (Michigan).
- ''Yes, but did not add personnel, just made current staff work harder (salary positions)'' (New Mexico).
- ''Yes, hired a safety manager for the project. Billed salary through the Risk Management Department'' (Utah).
- ''Sure. In the past, the only insurance work was verification of contractor insurance certifications. We have some additional work but the broker does most of it'' (Pennsylvania).
- ''The broker handles much of the burden'' (Massachusetts).

CIPs emphasize job site safety, loss control, and effective claims management. These activities require additional resources for internal audits and risk management (GAO 1999). Many owners chose to outsource some of the administrative functions to insurance brokers, while others perform some or all of the functions with internal staff. For the Green Line Reconstruction project ($408.7 million), the Chicago Transit Authority relied on a broker to administer the OCIP. In Portland, Oregon, the Tri-County Metropolitan Transportation District used its own staff to administer the Westside Light Rail project ($952 million) OCIP. The General Accounting Office reported that all of the agencies queried in a 1999 study had relied on the insurance companies to investigate and settle claims (GAO 1999).

Contracting with an OCIP provider/broker to handle program administration can minimize the project staff time requirement. In the majority of cases, the broker handles most of the added burden of safety program development and contractor/subcontractor enrollment. Typically the broker provides an on-site representative to oversee the safety program and the initial claims filing. Under the OCIP, the general contractor is normally required by contract to also employ its own safety manager. The owner, in an effort to achieve the safety record required for the minimum insurance premium, imposes this requirement on the contractor. Additionally, for their OCIP projects, most owners will also engage safety engineers to supplement the insurance and general contractor safety teams.

Partnering

Partnering is considered by most state transportation agencies to be the key to OCIP success. With partnering, the framework for cooperation and issue resolution is already in place. Regular meetings, with or without a partnering facilitator, help to further contractor understanding of the OCIP process and program. In Utah on the I-15 reconstruction project, the Department of Transportation had the OCIP insurance carriers join in the partnering process. The Michigan Department of Transportation (MIDOT) emphatically stressed the relationship between partnering and a successful OCIP by stating that ''we could not have completed the I-75 and I-275 projects without partnering'' (John LaVoy, MIDOT Construction Staff Engineer).

For the Southeast Corridor Multi-Model Project (now referred to as T-REX), the Colorado Department of Transportation (CDOT), in partnership with the Regional Transportation District (RTD) of Denver, created a unique risk control program completely based on partnering. The owners, CDOT and RTD, and the contractor have established a partner-controlled insurance program (PCIP) for the project:

> The vision of this Partnered Controlled Insurance Program is to have *Shared Goals*, *Shared Decisions*, and *Shared Savings*. A Partnering team made up of representatives from CDOT, RTD, and the Design/Build Contractor will manage the PCIP. The partnering approach will be incorporated in all aspects of design, implementation, and management of the PCIP. The Carriers will have the opportunity to participate in the partnering process throughout the duration of the project, and beyond through closure of all insurance related aspects of the PCIP. Carriers are encouraged to offer value-added or innovative program suggestions compatible with this partnering concept that will save money, provide superior service, and maximize protection to CDOT, RTD, the contractors and subcontractors, the citizens, and the traveling public (SEC Partner-Controlled Insurance Program, Letter from Southeast Corridor, Risk Management Office, CDOT, undated).

The critical difference with the controlled insurance approach for the T-REX project is that the contractor (the design/builder) is made a part of the team managing the PCIP. CDOT and RTD worked very hard to involve contractors in the design, implementation, and management of the PCIP. In most other cases the controlled insurance program was designed and implemented unilaterally by the agency, usually with input only from insurance brokers.

State Highway Agency Onwer-Controlled Insurance Program Experience

All Departments of Transportation interviewed during this research that had used OCIPs for their major projects reported that they were satisfied with the results. At the time of the interview process, in summer and fall 2001, this represented all DOTs having OCIP experience. Agency satisfaction is the result of a perception that safety was enhanced, responsiveness to the public was enhanced, and in some cases there were cost savings. In Ohio they were willing to spend an extra $300,000 to enhance safety. Agencies provided the following comments:

- Central Artery/Tunnel Project, Boston: Cannot document but believe there are savings through reduced litigation, efficient purchasing of insurance, safety prevention and loss control, and reduced premiums for general liability and workers compensation insurance.
- I-15 Reconstruction, Salt Lake City, Utah: Preconstruction survey consultant certifies that over $30 million were saved. Safety record, both project (loss history went down) and public, were excellent (speed through work zone was 75 mph in a 50 mph zone, with few accidents). Good public relations led to few complaints over small claims (contractor less likely to tell folks to ''buzz-off''). The claims process was controlled much better.
- Fort Washington Way, Cincinnati: Very safe project—after 2.5 million man-hours, incident record is 0.17 (4.7 national average), insurance claims handled expeditiously, full time safety managers (contract requirement and pay item) help carry the day. Proved there were no savings due to absence of workers compensation insurance in the OCIP, in fact, $300,000 cost. Owner wanted a safe project and felt cost was reasonable to obtain that goal.
- New Mexico Corridor 44 Project, New Mexico: Will try to document at the end. Cost per man-hour will be compared to national average. Should be about 1/3 of national average.
- Suncoast Parkway Project, Florida: A safe work place—the loss ratio (L.R.) was lower than the average L.R. for construction statewide. Over 3.3 million man-hours without a fatality. Financial savings of 2% of construction cost. $8.8 million pre-

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miums, $4.5 million broker insurance loss fund (actual cost/pay out), $2.3 million loss fund cap, $2.1 million paid out to date.
- Superstition Freeway, Maricopa County, Arizona: Too early to say, but the intangible benefits from the extensive safety program are very good. Safety is a big plus for the OCIP.
- Blue Water Bridge Project, Michigan: Low loss experience <25%. $1.8 million reimbursed to MDOT (about 2% of construction cost). Agent estimated $10 million; actual $5 million.

One of the most highly touted benefits of an OCIP is the insurance cost savings. Because insurance cost savings are tied to the overall insurance market, the market greatly affects the level of direct cost savings that a CIP can achieve. The cost of insurance coverage tends to move in cycles that are referred to as ''soft'' and ''hard'' markets. A soft market occurs when the insurance industry has surplus investment capital and investment earnings; during such times, insurance is plentiful. During a soft market there is heavy competition among insurance companies. A lack of investment capital creates a hard market. During a hard market, insurance is scarce and prices increase. However, some insurance professionals believe that CIP savings will be greater during a hard market. This is caused by the fact that the difference in rate structure between contractor insurance cost and CIP cost would be greater. Contractors will experience higher insurance costs during a hard market (''Insurance'' 2001) as would the CIP, but the CIP would have a much lower premium rate comparatively because of better loss control procedures that enhance safety and reduce risk.

Many of the agencies are candid in stating that they believe there are cost savings but have not been able to document actual saving. The calculation of actual dollar saving experienced when using an OCIP is a complex task, but it is possible to develop responsible estimates of the savings.

Prebid Cost Savings Estimate

Any cost savings estimate made before a project is bid will have to rely on (1) estimated labor hours, by craft, to complete the work (currently only 13 DOTs perform detailed prebid estimates that would yield these data); and (2) assumed contractor experience modifier ratings (necessary to identify applicable insurance rates). With those two pieces of information, an estimated cost of ''contractor'' insurance can be calculated. The savings would then be projected based on the OCIP obtaining comparable or, in most cases, better insurance coverage at a lower rate because of a lower expected loss experienced and because of economics of scale.

Postbid Cost Savings Estimate

After the prime contractor and associated subcontractors are identified, the labor and experience modifier information can be solicited directly from the involved contractors. Each project contractor, as part of the OCIP enrollment process, provides their own estimate of labor hours by craft and their specific experience modifier ratings. With these two pieces of information, a ''contractor'' cost of insurance can be calculated. In this case actual experience modifier rating data are being used, a fact that improves the estimate, but there is still the possibility that the labor hour estimates will not reflect the final labor hour requirements to complete the work. The savings are calculated using the contractor data and the OCIP's expected lower loss experience insurance rate.

Postconstruction Cost Saving Calculation

The actual OCIP saving can only be calculated after the project is completed. When the project is finished, the actual labor hour data are available to calculate what the insurance costs would have been for each contractor employed. The actual cost of the OCIP is also available at that point in time. This may, however, be several years after work in the field is completed, as it can take years to finally settle all insurance claims.

As the actual savings cannot be calculated until some point in the distant future (many years after construction is completed when all claims have been settled), some parties have questioned the projected savings that can be achieved with an OCIP. Although they have a valid point, it can also be stated that a contractor has the same problem. A contracting firm purchases insurance based on its historical experience modification factor. With an OCIP, an agency institutes a very strict safety program in order to receive a reduced insurance premium based on a projected loss experience that will be better than the contractors' historical experience. One rate structure is based on looking back, and the other is based on taking positive action and looking forward. Savings are realized only if the owner and contractor jointly achieve the anticipated loss experience. Studying the experience records for the preceding projects, many agencies specifically comment on ''a safe work place'' and ''low loss experience.'' Those are good indicators that the OCIP is a success.

Summary of Major Findings

Because of the complex relationships between the parties involved in large transportation projects and the open-ended nature of construction liability, Departments of Transportation are facing new and significant construction risk challenges.

Use of Owner-Controlled Insurance Programs

With a controlled insurance program, the interest of the owner, designer, construction manager, contractors, and consultants are all covered by one insurance arrangement. OCIP insurance packages offer reduced premiums because of very good anticipated loss experience and economies of scale. Without an OCIP, an owner's total direct construction cost could be locked in by a construction contract that makes each contractor responsible for its own insurance. But the project owner has not eliminated the risk completely. Major contractor-caused liabilities can fall back on the owner by inventive legal action, particularly in the case of third party actions. Therefore, an owner using an OCIP attempts to control risk by assuming a proactive position of responsibility and leadership for work site safety.

Ten Departments of Transportation (DOTs) have used some form of controlled insurance on one or more of their projects. DOTs are using CIPs both for individual transportation projects and for groups of projects. A controlled insurance program (1) provides a single point of contact for all liability issues; (2) if properly designed, can prevent insurance coverage gaps or redundancies; and (3) should reduce underwriting and claims administration expenses. The results of such a program are a safer jobsite (2.5 million man-hours in Ohio with an incident rate of 0.17 as compared to a national average of 4.7); and lower construction cost ($30 million saved in Utah, 2% of construction cost saved in Florida).

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Administrative Burden

When using an owner-controlled insurance program, owners face increased administrative burdens. It is clear that administering an OCIP requires extra effort from the project staffs of both the contractor and owner. Careful negotiations with the OCIP provider/broker can minimize the time requirements of the project staff. In the majority of cases, the broker handless most of the added burden of the safety program development and contractor/subcontractor enrollment. The broker usually provided an on-site representative to oversee the safety program and the initial filing of claims. By contract, general contractors are typically required to employ their own safety manager. Additionally, most owners hire safety engineers for their OCIP projects. These engineers supplement the insurance and general contractor safety teams.

Contractor Concerns

Some owners have the attitude that the OCIP is just another business deal and that the contractors must participate because they are bound by contract. Agencies need to understand that a project OCIP can have significant impacts to a contracting firm beyond the life of that single project. Consequently, contractors do not view OCIPs simply as another contract provision. When an owner's OCIP administrator fails to perform, it is the contractor who incurs the residual consequences of increased business cost, and those consequences can extend far into the future. The safety record of the project will affect the contractors' experience modification factor for three years. In the case of commercial general liability coverage that is not aligned with the state's statue of repose, the contractor will be left in the position of trying to purchase insurance for the gap period, and such insurance may not be available at reasonable rates.

The Associated General Contractors of America, in its publication ''OCIPs Look Before You Leap! A Contractor's Guide to Owner Controlled Insurance Programs'' (AGC 2001), identifies some of the administrative burdens that OCIPs impose on contractors:

- Getting payroll audits performed in a timely and accurate manner;
- Getting at least quarterly loss runs (reports generated by insurance companies displaying losses incurred);
- Getting unit statistical information (the report of premiums and loss data, including reserves, provided to the rating bureaus) filed promptly;
- Setting up meetings between OCIP administrators and subcontractors;
- Ensuring that subcontractors enroll in the OCIP;
- Ensuring that subcontractors provide certificates of insurance;
- Ensuring that subcontractors provide timely payroll reports;
- Ensuring that subcontractors provide any other documentation that the program may require; and
- In some instances, ensuring that subcontractors make appropriate deductions.

If the owner-hired brokers and third party OCIP administrators do not consider the contractor to be the customer, there will be problems. To avoid such trouble, the Utah Department of Transportation included the insurance carriers in the partnering process for the I-15 reconstruction project.

Conclusions

The first challenge in using an OCIP is to develop an understanding of the risk management benefits that a controlled insurance program can bring to a large project. Both the owners (transportation departments) and the contracting community must be educated about benefits and how such programs function. The owner should encourage questions from all affected parties in order to gain understanding and acceptance. Communication is a critical component of success.

The second challenge is to find the right broker/administrator. The selected broker must have a thorough understanding of construction and construction claims. The broker must also have access to the international insurance marketplace. The owner must ensure that the program components and roles of responsibility are established before bidding the project.

The third challenge is to structure the OCIP for the particular department of transportation and project. All construction projects have their unique features, but large projects usually have both unique construction features and unique risk exposures. The OCIP cannot be structured until the department has a solid understanding about construction means and methods.

Based on surveys of Departments of Transportation and contractors engaged in projects using OCIPs, owners were pleased with the cost savings and job safety. Coordination of insurance to the satisfaction of the contracting community requires advance planning for the OCIP's structure and the availability of policies with the bid documents.

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Maybe the most knowledgeable person concerning OCIPs was Mr. Gary E. Bird, of Tempe, Arizona. Gary had written extensively about owner-controlled insurance programs, and we intently studied his publications. His work provided critical guidance in structuring our study. On the morning of September 11, 2001, Gary Bird reported to the upper floors of the World Trade Center for his first day at work with Marsh, Inc. *Requiescat in pace*.

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