



From risk to profit

Benchmarking and claims studies

***From Risk to Profit: Benchmarking and Claims Studies* is one of the many risk management tools available to design professionals insured in the professional liability program administered by Victor and CNA.**

For more information about the programs for design professionals from Victor, please contact your independent insurance broker, or call Victor at 301-961-9800, email us at info.us@victorinsurance.com, or visit our website at victorinsurance.com.

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Victor has developed a unique range of professional liability coverages and risk management services to assist professional service firms of all sizes respond to the needs of their clients and provide services in a manner that meets their particular practice management goals.





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Introduction

In today's complex design and construction environment, it is becoming increasingly difficult for design firms to remain profitable. To prosper, design professionals need to identify, understand, and manage their risks.

For more than 60 years, Victor and CNA have been collecting information on claims against our policyholders and analyzing the data to create risk management resources. ***From Risk to Profit: Benchmarking and Claims Studies*** looks at eight key factors, and claims studies, that Victor believes are crucial in assessing and developing appropriate responses to risk.

Why benchmarking and claims studies are important

The design professional's challenge in today's competitive environment is to find ways to become more efficient and to reduce costs while improving and expanding services. The first step in meeting this challenge is to create benchmarks of your financial and competitive position and your preferred status in both the near and distant future. The information you need includes an analysis of your firm's practice, a vision of how you want your firm to be organized and grow over the next few years, and the ability to benchmark your firm through comparison of your firm to similar firms.

From Risk to Profit will allow you to examine industry trends and emerging issues, compare your firm to peer firms, and examine your firm's experience with clients, project types, consultants, construction entities, other parties, fees, and contracts. This information will help you analyze your firm's performance compared to peer firms and against your firm's business goals.

The claims data in this publication are based on roughly 4,000 claims per year presented in five and ten-year periods from 2015 through 2024. The figures represent claims dollars paid above our policyholder's deductible obligations.

How to use this publication

This publication is divided into three major components. The first, “Industry Trends and Emerging Issues,” will help you identify key industry issues that may influence the design and construction industry in the coming years, including rising construction costs, green design and sustainability initiatives, contract structures, and project delivery methods. It will also help firms identify areas of inefficiencies to help drive meaningful change.

The second section, “Evaluating Your Risk,” looks at claims from eight different factors—client, project, consultants, contractor, other parties, fee, your firm, and contracts—and presents, where appropriate, a statistical picture, case scenarios, and risk management guidance. It is this section where firms will be able to benchmark themselves and establish future goals.

The third section, “Tools to Help Identify, Assess, and Manage Project Risks,” includes a useful risk management matrix for any project and a listing of some of Victor’s risk management resources. Used in conjunction with the first two sections, this matrix and our resources can help firms manage current project risks and measure performance over time.

Why this publication is valuable to you

The information in this publication has direct value in your firm’s management activities. It will help you identify progress as well as problems within the design and construction industry, enabling you to assess the potential for taking your firm into a successful future.

Finally, in addition to the information in this publication, additional benchmarking and claims and case studies located at Victor Risk Advisory can be used by firms attempting to mark where they are today and where they want and need to be to remain profitable and successful.



Industry trends and emerging issues

One of the defining qualities of a resilient design practice is the ability to learn, adapt, and apply lessons to an ever-shifting business environment.

The pace of change seems to be accelerating rather than stabilizing.

Architects, engineers, and other design and construction professionals now operate in a marketplace shaped by heightened geopolitical tension, persistent inflation, and an erratic policy landscape. Tariff volatility and supply-chain fragility continue to disrupt project planning while labor shortages have deepened under changing immigration rules that restrict both construction and technical talent pipelines. Firms are also confronting the rising cost of doing business as materials and borrowing costs remain stubbornly high amid renewed recession fears.

At the same time, the urgency around climate adaptation and resiliency has never been greater. Severe weather tests design assumptions. Public agencies from cities like New York and Boston to national standards bodies such as [ASCE](#) and [NIST](#) are revisiting performance criteria to reflect non-stationary climate conditions and projected hazards. Clients are increasingly asking for forward-looking solutions that anticipate non-stationary climate patterns.

[LEED v5](#) now requires climate assessments on all building types, and there's also a new ASTM standard, E3429-24, [Standard Guide for Property Resilience Assessments](#), which establishes a framework for conducting climate assessments based on projected climate data.

Meanwhile, the private sector's once strong ESG momentum—the movement among corporations to disclose and manage environmental, social, and governance performance—has slowed amid growing political pushback and regulatory uncertainty. Some companies are scaling back public ESG commitments or reframing them under different terminology, such as “resilience” or “sustainability performance,” to avoid controversy. (See, “[The Latest Dirty Word in Corporate America: ESG](#),” *The Wall Street Journal*, Jan. 9, 2024; “[Corporate America is rebranding ESG](#),” Axios, August 10, 2023; and Ivey Business School, “[Navigating Corporate Sustainability in a Time of Turbulence](#),” May 8, 2025.) For design and construction professionals, integrating ESG-related practices, such as documenting governance, ethics, and climate resilience measures, is less about satisfying insurers and more about strengthening business resilience. As more clients and investors seek partners who can demonstrate accountability and long-term value creation, these practices increasingly function as both good risk management and a competitive advantage.

Finally, technological disruption via artificial intelligence, particularly through generative and agentic AI, may be reshaping how design work gets done in the not-so-distant future. The opportunities to improve productivity and offset workforce scarcity challenges are enormous, but so are the questions about data integrity, authorship, and liability. [Progressive design-build](#) and other collaborative delivery models are gaining traction as clients seek to streamline sequential inefficiencies that have long plagued traditional processes.

In short, the challenges are multiplying, but so are the levers for innovation. The firms that recognize this moment not as a retreat to pre-pandemic norms but as an inflection point for smarter, more adaptive practice will be the ones best positioned to thrive.



Efficiency: Still an uphill struggle

The design and construction industry remains vast and structurally complex. According to the US Bureau of Economic Analysis, [construction-related industries accounted for about 4.5% of US GDP in 2024](#). The US Census Bureau reports [total construction spending exceeds \\$2 trillion annually](#) across public and private sectors. Construction payroll employment is [approximately 8.3 million in the US](#) in 2025. When broader design and professional roles are included, the construction industry ecosystem likely exceeds that number.

Despite its scale, productivity in construction has continued to lag behind nearly every other major industry. Research by McKinsey & Company and Dodge Construction Network [shows that construction labor productivity has grown at under 1% annually](#) over the past two decades, compared with more than 3% across the broader economy. The result: most large projects finish over budget and behind schedule, and fragmentation across disciplines continues to erode efficiency gains.

There are a number of reasons for productivity challenges in the industry. Here are some of the larger reasons:

- Workflows are fragmented, siloed, and habitually sequential instead of integrated and overlapping.
- Supply chains lack redundancies in the name of efficiency and cost savings.

- Procurement culture is misaligned with a legal and regulatory framework that prioritizes upfront construction costs instead of life-cycle costs.
- Adversarial contract structures lead to finger pointing instead of problem solving, which results in bloated contingencies to anticipate the worst.
- Interoperability challenges create a project development environment at odds with collaborative problem solving.
- Adoption rates of technology vary across the industry.
- Inconsistent adoption and enforcement of codes and standards create a confusing patchwork of uncertainty from jurisdiction to jurisdiction.
- [Modernized building code adoption remains inconsistent](#) (only 35% of localities across the country), hobbling communities from optimizing the latest knowledge in building science, materials science, structural engineering, fire safety, and other public health, safety, and well-being factors.
- Persistent complexity of regulation, including permitting, and the rise of NIMBY-ism slows project development.

Inefficiencies like the above continue to increase project costs and slow progress to meet housing demands and infrastructure modernization needs, including the need to address urgent climate mitigation and resiliency efforts.

Persistent talent scarcity

The industry's workforce challenges have worsened since 2022. [According to the Associated General Contractors' 2025 Workforce Survey](#), 92% of firms report difficulty finding qualified workers, and 45% say those shortages are delaying projects and driving up costs. Immigration restrictions and H-1B visa reductions will deepen the talent gap across both field and professional roles while the demand for design and construction services remains strong.

Lack of diversity and declining interest among younger generations also remain structural barriers. [Women continue to represent only 11% of the overall construction workforce](#)—and roughly 4-5% in on-site trade roles—while architecture and engineering programs are struggling to attract new entrants.

Environmental stewardship and the growing need for a resilient built environment

The National Oceanic and Atmospheric Administration (NOAA) reports that the US [experienced 27 separate billion-dollar weather and climate disasters in 2024](#), continuing an alarming shift in the frequency of large-scale disasters. These climate-driven pressures on the built environment have intensified even as federal leadership to manage

these growing risks has weakened. Policy rollbacks and funding freezes have slowed the implementation of the Inflation Reduction Act and the Infrastructure Investment and Jobs Act while new administrative actions have created uncertainty about the long-term future of climate-related incentives.

Meanwhile, science continues to move in the opposite direction. Extreme heat, wildfire, flooding, and wind events are now recurring at frequencies never experienced before. As a result, the urgency for climate adaptation has grown even as federal coordination has waned, leaving state and local governments, and design firms, to fill the void.

Globally, the building and construction sector [remains responsible for roughly 40% of all carbon emissions](#), including both operational and embodied sources. Emerging low-carbon materials and design approaches, such as [mass timber](#), [low-carbon concrete](#), and building electrification, offer meaningful pathways to carbon mitigation, but the pace of adoption is inconsistent.

Pressing necessity to adopt new technologies

Adopting advanced digital technologies is no longer an option, it's a necessity. Talent scarcity will drive the pace of adoption and usage. Whether it's generative design technologies, design for manufacturing and assembly,

virtual reality/digital reality, digital twin technology, BIM, or any artificial intelligence-based technology, firms must decide now based on resources and capacity which technologies serve their business models best to optimize resource challenges and unrelenting demand for services.

A lingering concern for many design firms has been the question of liability and increased risk exposures. There seems to be an underlying assumption by firms that risks increase with the adoption of technologies. If true, what may be missing in this risk calculus is that humans, the people in the design firm who manage the technologies, are the quality control mechanisms to mitigate risks. As long as the focus remains on enhancing the skills of the employees managing technologies and quality control protocols put into place, risks can be effectively controlled. At this point in time, choosing not to adopt technologies *could* endanger a firm's success in the market more.





Economic and supply chain headwinds

The design and construction industry continues to face significant supply chain challenges since the COVID-19 pandemic began due to ongoing tariff and economic uncertainty. The industry relies on a complex web of suppliers, contractors, and manufacturers to bring projects to life and disruptions in any part of the supply chain can have a cascading effect on project timelines, costs, and quality.

One major challenge is the availability and cost of raw materials, such as lumber, steel, and concrete. According to the [Construction Management Association of America's 2024 Supply Chain Outlook](#), global supply chain disruptions and ongoing inflation have kept key materials prices volatile, with construction inputs like cement, steel, and aggregates remaining well above pre-pandemic levels. Coupled with high demand for new construction and renovation projects, these pressures make it difficult for design and construction firms to accurately budget and plan. [Labor shortages, transportation disruptions, and regulatory delays add further complexity](#), and these factors are increasingly associated with cost escalation claims and schedule disputes.

As a result, firms are exploring new approaches to sourcing, such as using alternative materials or adopting modular construction techniques, to mitigate supply chain risks and improve project outcomes. Due diligence, effective communication, and [strong contract language](#) are essential in anticipation of these supply challenges.

Conclusion: 2025 outlook

The design and construction industry stands at a crossroads. The convergence of historic levels of economic uncertainty, workforce scarcity, political headwinds, and climate instability has created a business environment that demands more foresight, integration, and adaptability than ever before.

The inefficiencies that have long characterized project delivery can no longer be sustained in a world of rising costs, shrinking margins, and accelerating risks.

Firms that succeed will be those that build resilience into both their operations and their thinking—investing in talent development, leveraging technology responsibly (including AI tools), and embedding adaptability into every project phase. Progressive design-build and other collaborative models show that efficiency and innovation can coexist when the walls between client needs and design and construction team members come down, though it is still early and time will tell if such collaboration continues.

At the same time, the urgency of climate adaptation and resilient design has moved from optional to essential depending on a project's location and its unique physical risks to hazards based on credible climate science projection data.

While ESG enthusiasm has cooled in corporate boardrooms, design professionals remain on the front lines of helping clients anticipate and withstand a more volatile future. That role—grounded in technical expertise, professional judgment, climate-forward projection data, and ethical responsibility—will define the next decade of practice.

The path forward is not easy, but it is clear: the firms that view disruption as an invitation to lead will emerge stronger, more trusted, and better prepared to manage risks while delivering long-term value for their clients and communities.



The role of risk transfer and advisory support

As these pressures evolve, risk transfer strategies are becoming just as critical as risk mitigation efforts. Rising project costs, persistent supply chain disruptions, and climate-driven uncertainties are prompting clients to request higher professional liability limits and more robust contractual assurances. At the same time, design professionals face growing exposure to third-party claims tied to performance expectations and the failure to anticipate severe weather and other foreseeable conditions.

Victor's Risk Advisory team helps firms navigate these challenges through a combination of education, analytics, and practical support. Our [on-demand continuing education library](#), [live webinars](#), and [publications](#) provide current insights into industry trends and emerging exposures. Our [AI-backed Contract Sifter](#) service helps firms identify contractual risk hot spots before they sign, while the [AIA Climate Screening service](#)—developed with leadership and technical support from Victor—equips design firms to evaluate climate risks for specific project sites using credible projection data. And our [ESG Risk Rater](#) is designed to measure environmental, social, and governance risks across your organization.

Insurance remains an essential part of this equation, not as a substitute for risk management, but as a partner in resilience. The firms that combine proactive planning with informed coverage decisions will be best positioned to protect their employees, their projects, and their reputations in an era where volatility is the new normal.

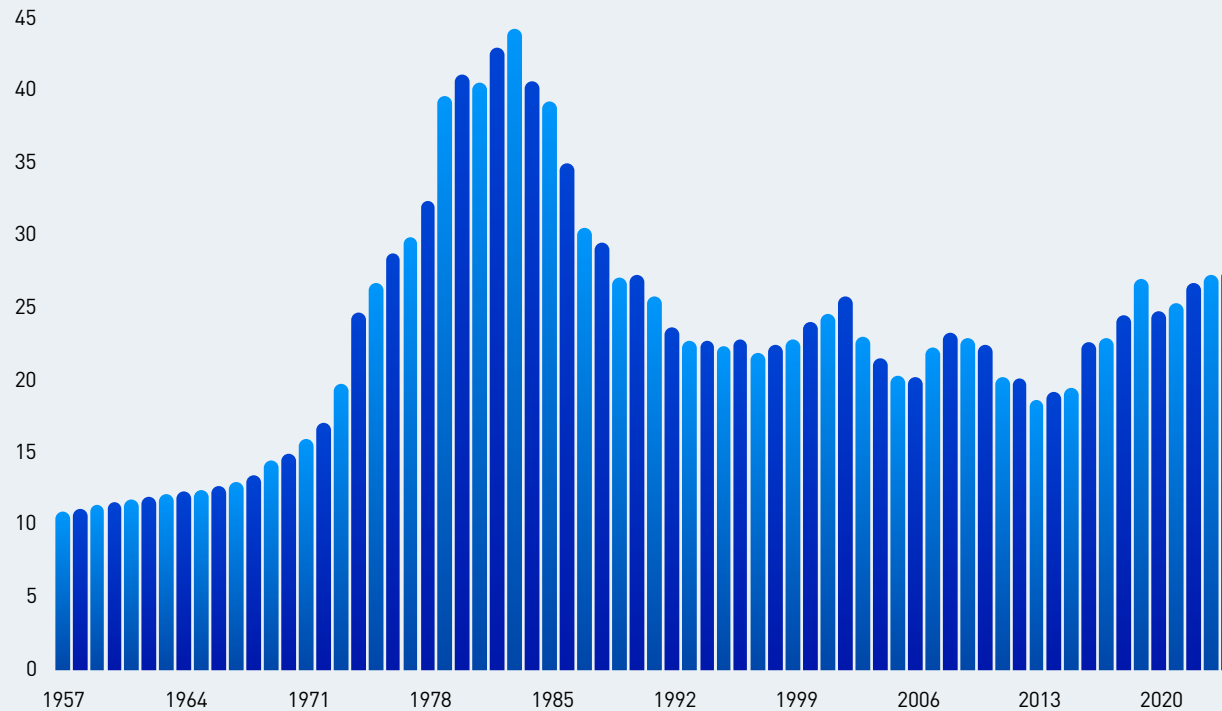
Claims trends

Looking back at claims experience can be helpful to firms as they expand their markets and enhance the range of professional services they offer. Information on the frequency and severity of claims, however, has limited usefulness for less traditional professional services because claims can only record past problems. The past, however, is a good predictor of future disputes, claims, and losses for more traditional services on common project types. For many project types, the frequency of claims might be considered a “coincident indicator” of the professional liability exposure for that project type or specific client base. The raw claims count—not just those claims that are ultimately resolved—can herald future losses. The frequency of claims indicates that, in some way, the design firm has not met expectations or has been identified as a cause of an economic loss or bodily injury. Even if claims do not result in payment by the insurer, they represent costs to the firm, distractions from the firm's practice, and damage to the firm's reputation.

Often, claims for a specific service that is less traditional, such as design subcontracting on a design-build project or reaching a target level of sustainability in design, take years to develop as a trend. Patterns are not usually readily apparent. Changes in procedures or roles or even consensus contract language may not be construed by the legal system for many years.

Still, a look at when claims are brought, how many occur and end up with payments, and what those payments average can be helpful in benchmarking professional liability exposure.

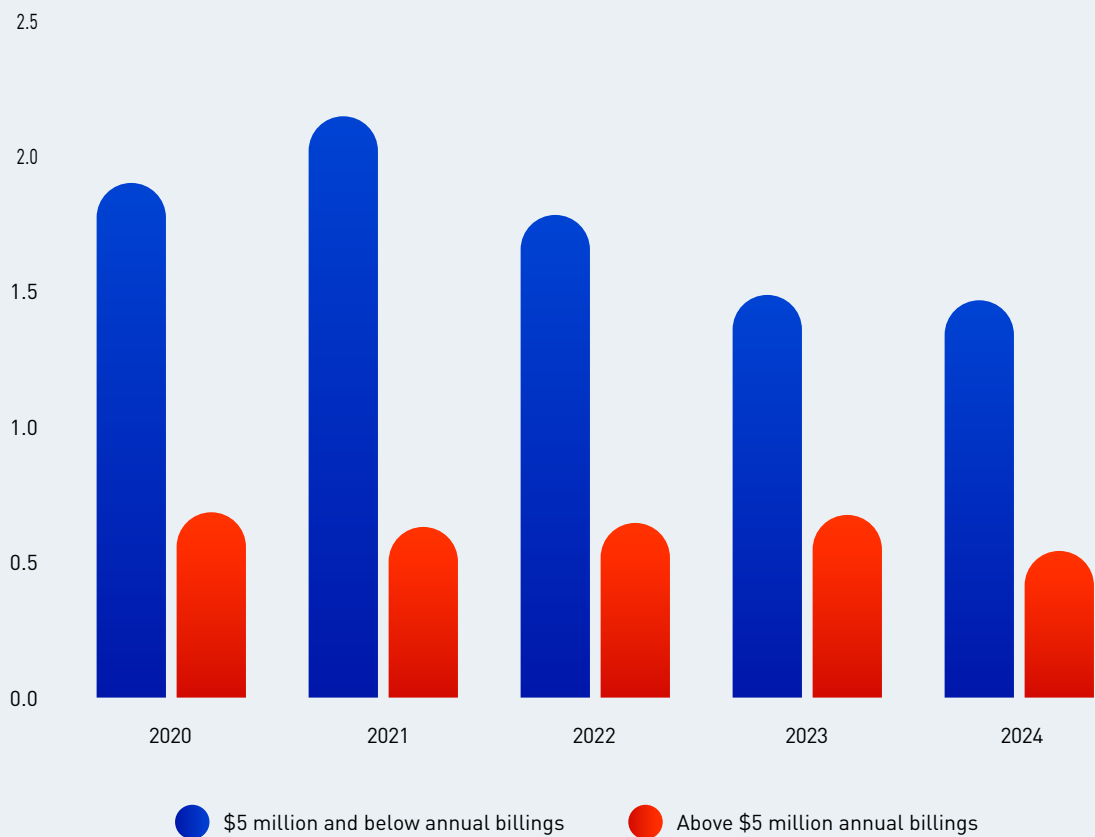
01 Reported claims per 100 firms



How frequency varies

This graph shows that the average number of claims per 100 firms insured through the Victor program peaked in 1983 during a time of high inflation. The interaction of many factors seemed to lead to the increase. But one factor seems clear: when the construction economy was vigorous and client demands led to constraints on the time allocated for design, claims followed. Reported claims should be expected to track with construction volume.

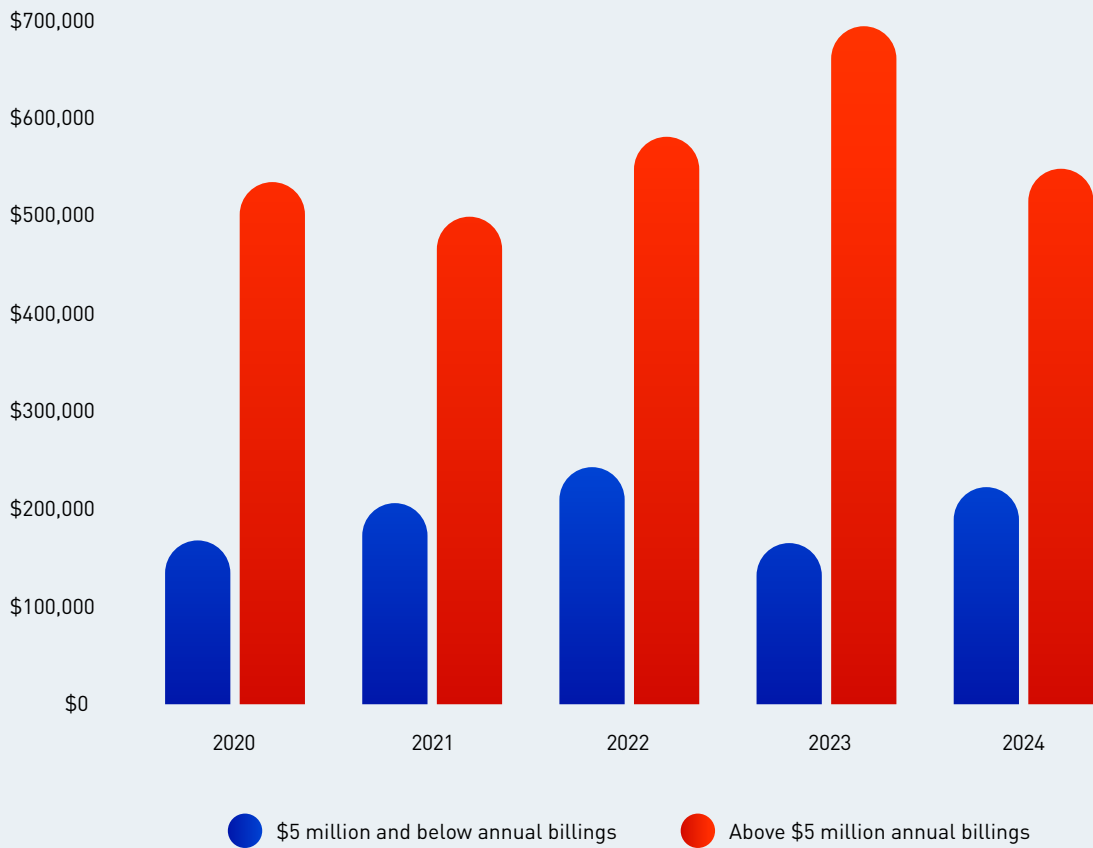
02 Claims frequency per \$10 million gross billings



How claims relate to billings

Larger firms have more claims than smaller firms. That is obvious simply because of the scale of operations and the number and size of projects. But when the frequency of claims was adjusted to a fixed-dollar basis of billings, small firms were far more likely, per dollar of revenue, to have a claim. Part of this difference was likely caused by a difference in deductible obligations. Some larger firms may not have reported disputes as claims if they sensed that the dispute could be resolved without insurer involvement.

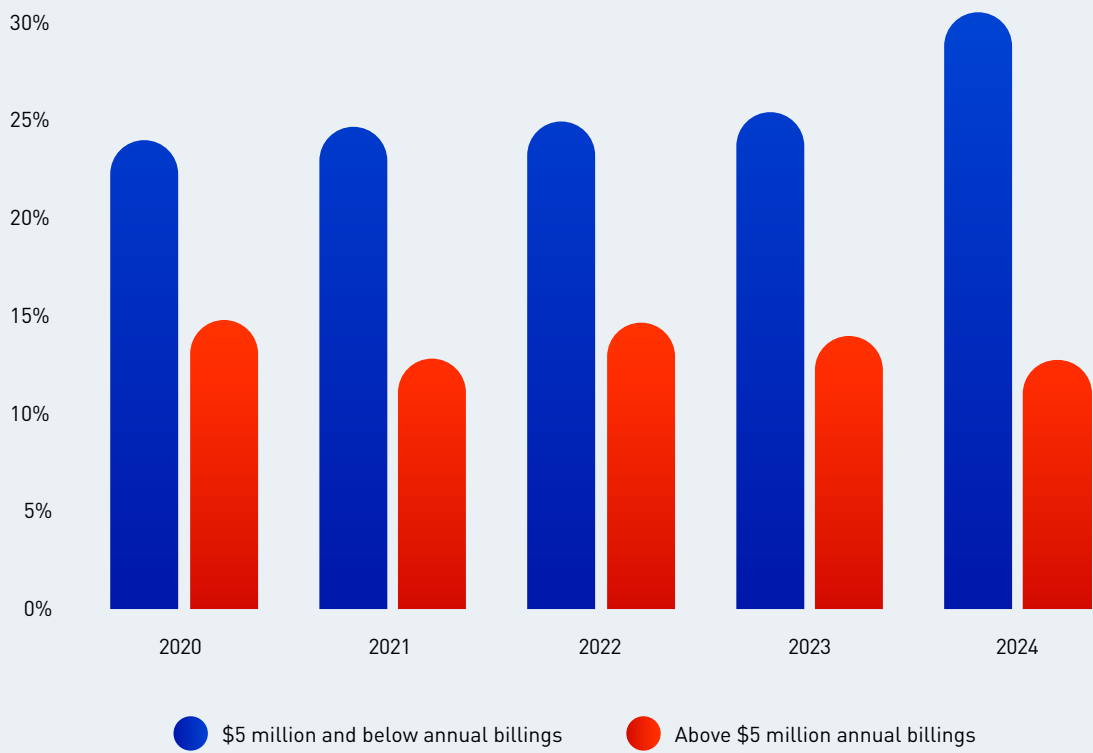
03 Average defense costs and indemnity payments



What claims cost

All disputes cost firms in lost productivity, internal costs, and professional reputation. When claims result in payment on behalf of a policyholder, the dollar costs are significant. Even for smaller firms, the average paid claim, including legal defense costs and the amount to correct harm caused by the firm’s negligence, was just over \$200,000 from 2020 through 2024. The average larger firm claim cost just over \$570,000 during that same span.

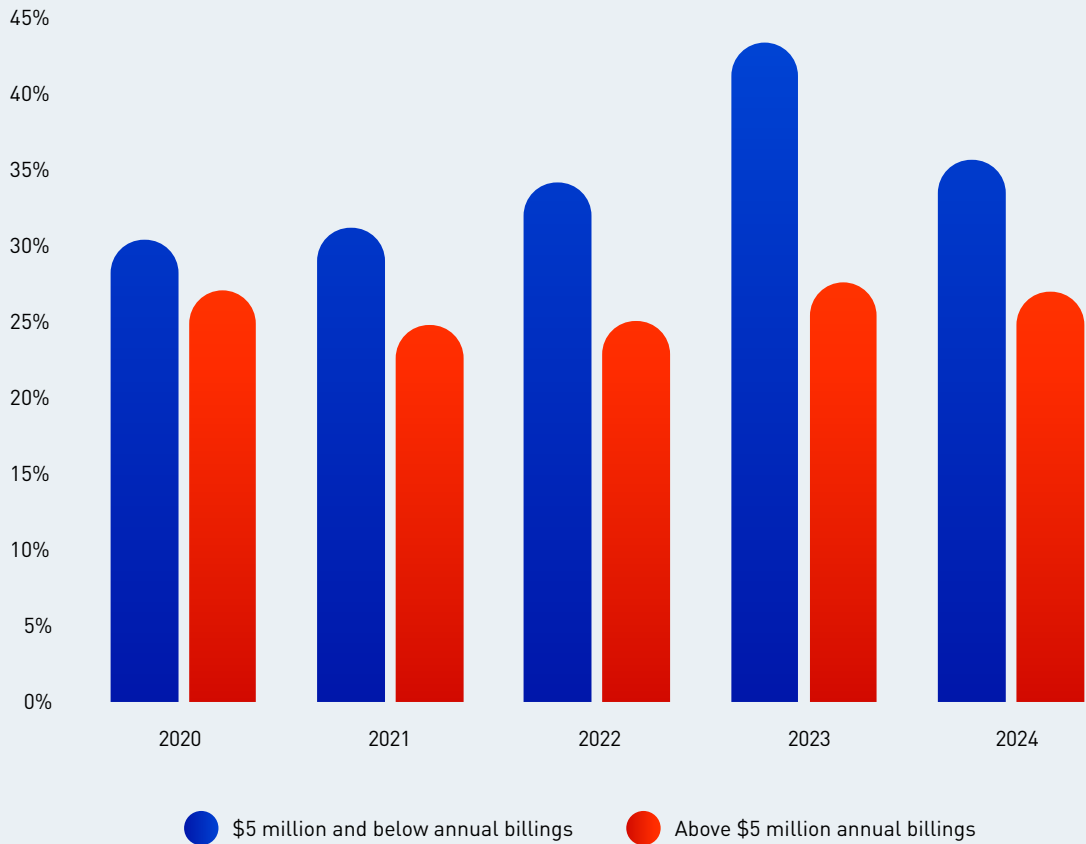
04 Claims closed with indemnity payment



How many claims are paid

Many claims are closed without payment above the firm’s deductible obligation. Nationally, from 2020 - 2024, 17.3% of all claims reported ended with CNA paying for property damage, economic loss, or bodily injury because of the policyholder’s negligence. This varied by firm size. Firms with higher deductibles absorbed much of the cost of correction or harm. For larger firms, insurance indemnity payments occurred, on average, 13.8% of the time. Smaller firms, however, required payments 25.9% of the time.

05 Claims closed with defense payment only



Even if no payment is made to correct harm, defense costs can be significant. Defense costs occurred, on average, in another third of claims. But this graph only represents the percentage of claims where insurance funds were used beyond the deductible obligation of the policyholder. Because the Victor and CNA program allows for incident reporting where CNA funds are used—without commitment of the deductible—to prevent incidents from becoming claims, those insurance costs are not documented as claims-related expenses.

Firms could argue that if payment by an insurer on behalf of policyholders for their responsibility for causing property damage or personal injury through negligence in performing or furnishing professional services happens only in 17.3% of the claims filed, the other 82.7% must not have a level of merit against the insured firms that signifies culpability. Thus, 82.7% of all claims against insured firms could be considered “meritless” using a tort liability measurement. Over 27% of these “meritless” claims, however, require defense expenditures above the firm’s deductible obligation and all could be assumed to require expenditures of time and money by the firm. This unproductive use of time and the commitment of defense funds by a firm increase costs.

Clearly, claims that result in no payment to correct damage or harm drain the design professions and the economy of productive time and force an increase in the cost of providing services to the public.

Comparing severity with frequency

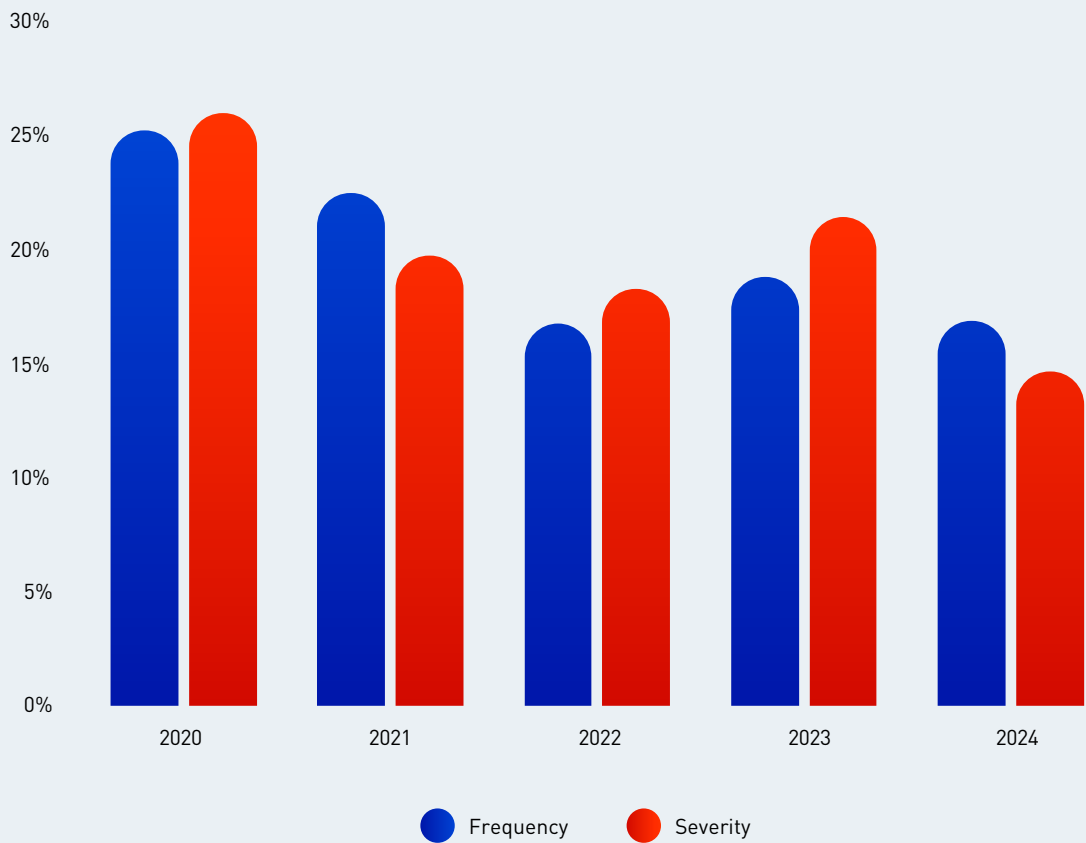
The severity of claims as an indication of the economic risk of providing services should be recognized as a long-term rather than instant measurement of loss. Usually, claims are not resolved until long after services are provided. Paid claims are a “lagging indicator” of risk and, therefore, have little predictive value for firms entering into emerging professional service sectors. Statistics on the cost of paid claims, however, are extremely valuable for those firms providing services in a mature market segment.



The following graphs show five industry sectors and compare frequency and severity. To aid understanding, the frequency of claims is indicated as a percentage of all claims in that year for the five-year period. There is no comparison between the amount of reported fees for the type of project or the number of projects in that category and the frequency of claims.

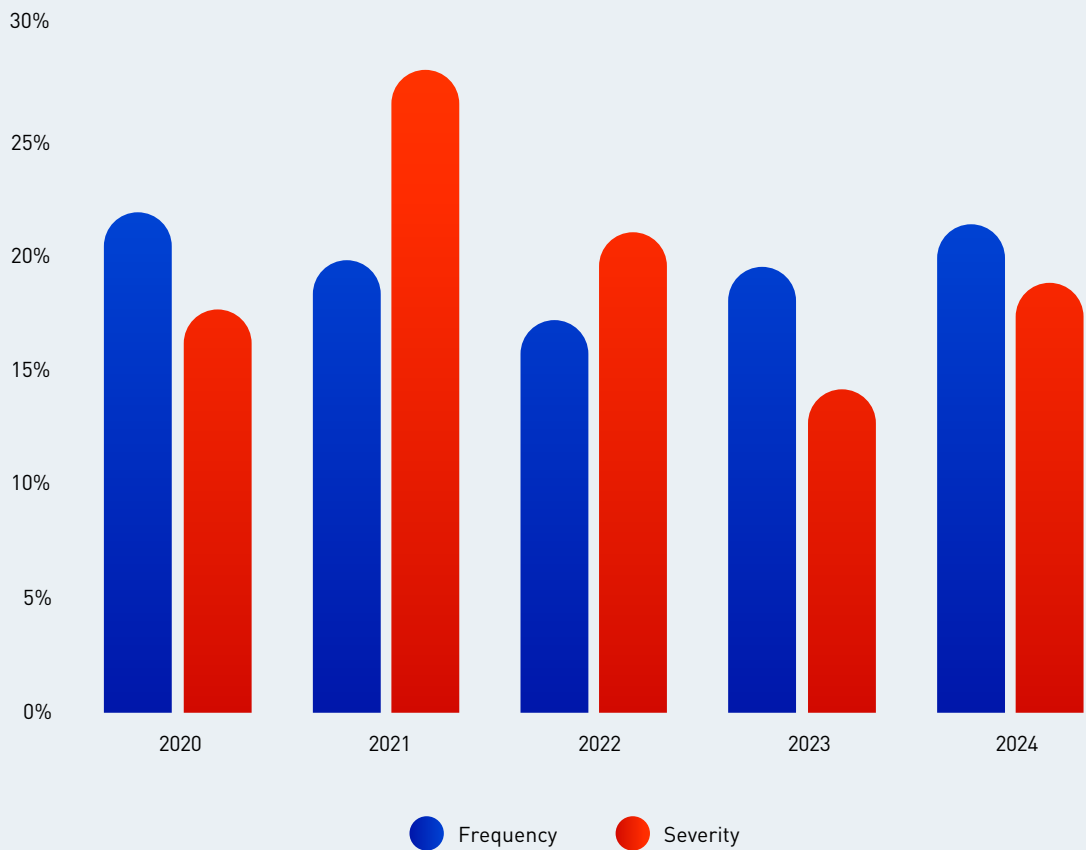
The comparison of the percentage of severity—the percent of all the defense and indemnity costs paid when an indemnity payment was made on behalf of a policyholder—to the indicated percentage of frequency can be helpful. The severity percentages shown for a specific year indicate the percentage of the five-year total of all costs for claims closed in that year. Therefore, they may actually relate to claims from an earlier year. Still, the comparison between the percentages of frequency and severity can indicate that claims cost more on some projects.

06 Residential project claims



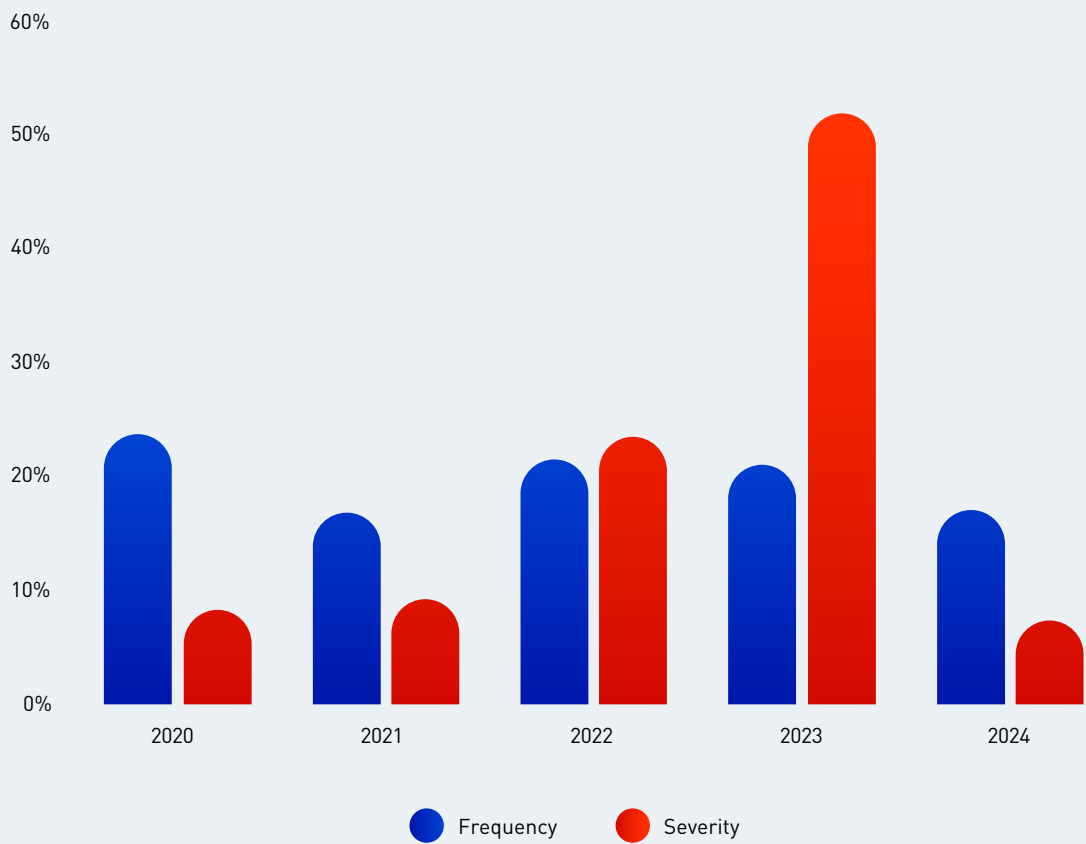
Residential projects, including condos, apartments, and single-family and townhouse structures, not only represented a high severity to frequency ratio, but when compared to reported billings for professional services, these projects were at the top of the risk-to-reward ratio. Although most claims for this project type were brought against architects as the prime design professionals, direct and interprofessional claims against mechanical and structural engineers accounted for a high level of paid losses.

07 Highway project claims



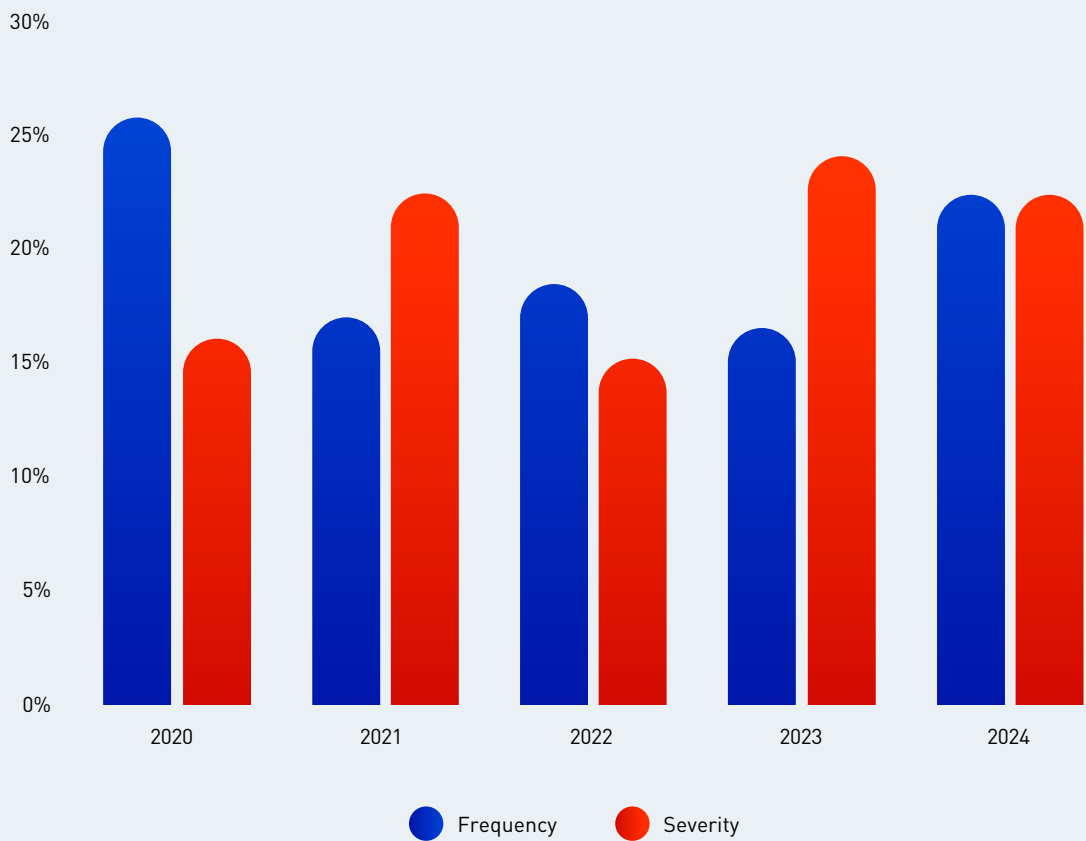
Unlike most other project types, highway-related claims of negligence included a significant proportion of user injury claims. Often, peaks in severity, such as in 2021, were the result of significant bodily injury claims. The frequency often lags a few years behind funding, and for non-bodily injury claims, seems to be highly dependent on client procedures and the pressure of the political system for cost recovery as a problem develops.

08 Schools/colleges project claims



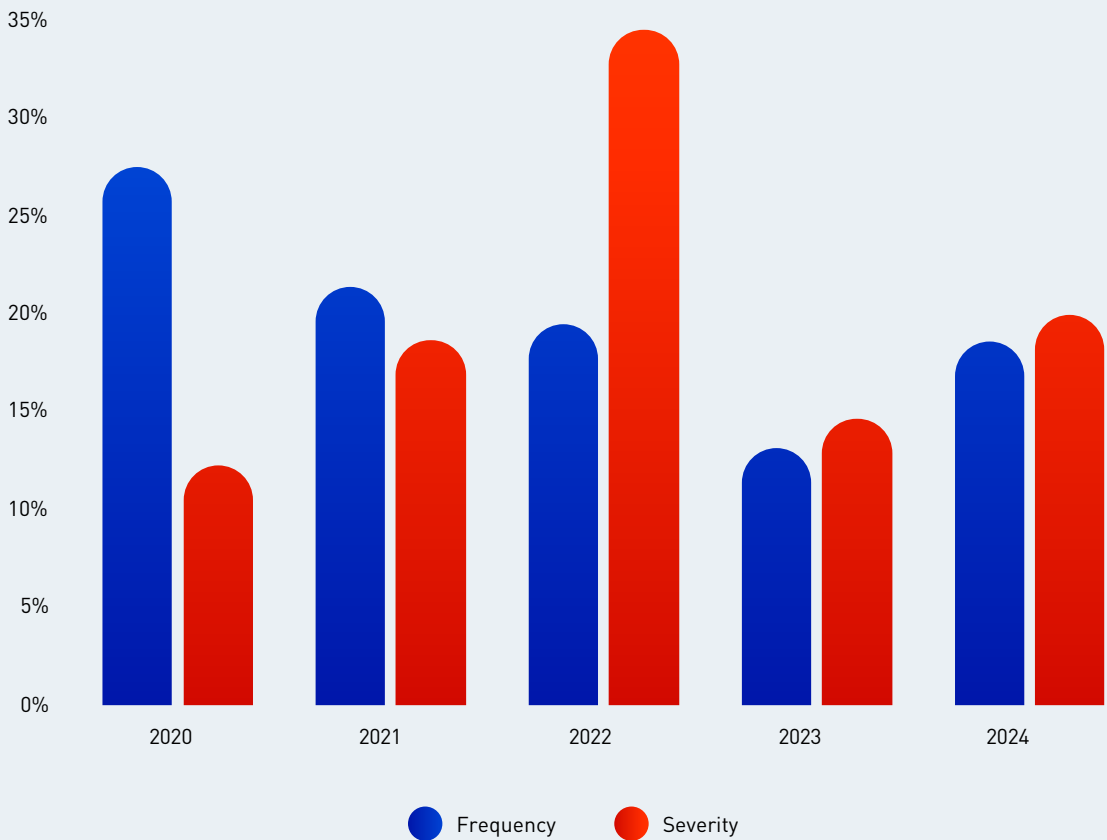
Both the claims frequency and severity for school projects seem to be driven by problems with delays and extras and plumbing/HVAC/fire protection system problems. Although mold-related claims were a component of the overall frequency, such claims were not significant components of either the number of claims brought or the resolution costs for those claims. The severity in certain years may have resulted from a building boom and less skilled contractors.

09 Healthcare facility project claims



The severity statistics for this project type were often driven by the coincidence of extremely large claims. This appears to be the situation in 2023 and 2024 where large projects resulted in expensive claims. As with other institutional projects, mechanical systems were the biggest source of claims and a costly component of the severity of those claims. In frequency alone, 28% of all claims during this period alleged negligence in plumbing/HVAC/fire protection design.

10 Commercial and retail project claims



Commercial and retail projects, ranging from banks to stores to office buildings, often are seen as having a good risk-to-reward ratio—the risk of loss is not disproportionate to the fees. But claims were quite common, and even though some did not result in indemnity payments, they did consume time and defense costs. Economic loss claims, often from delayed openings, added to the severity problem. Losses were often related to interior construction, plumbing/HVAC/fire protection problems, and building superstructure.

Evaluating your risk

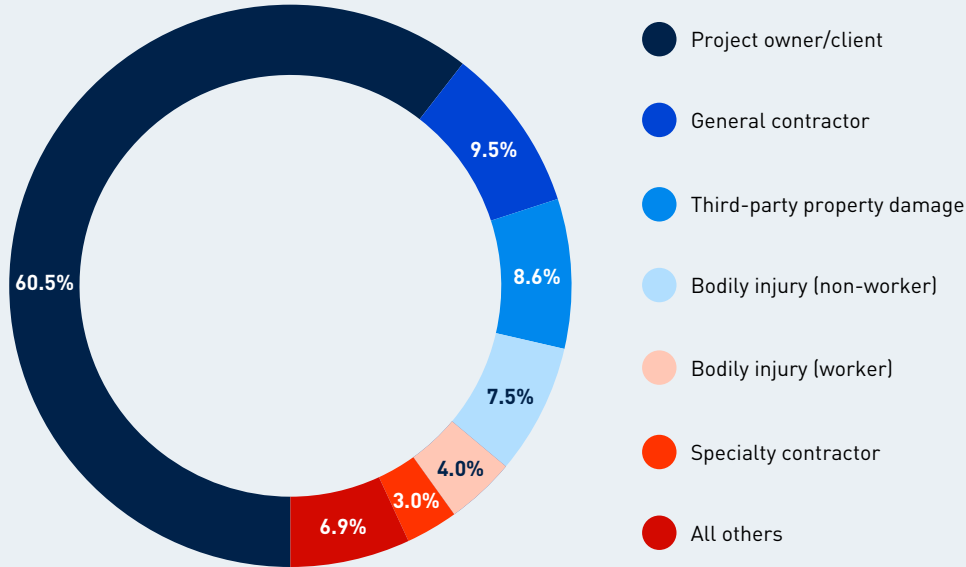
The client

Perhaps the most important step in assessing potential risks for any project is to evaluate your client. Clients often spend great effort in evaluating potential design professionals. They do this because the selection of the right design professional is a crucial first step in maximizing the potential success of any project. The same is true for design firms.

Since close to two-thirds of claims against design professionals in the Victor program originated from the project owner/client, design professionals should take the same level of care in the selection of their clients. It is not surprising that the project owner is the largest source of claims against design professionals since in most situations it is the project owner that has retained the design professional. Therefore, it is with the project owner that design professionals have a direct obligation.

Design firms need to be thorough in their evaluation before deciding to work with a particular client, whether the client is the project owner or a general contractor that has retained the design professional for a design-build project. Design firms should select clients that understand, appreciate, and value the services of design professionals. This can help avoid claims alleging professional negligence, disputes involving fees, and other potential disputes that may arise during the design or construction of a project.

11 Frequency of claims by claimant ID (2015 - 2024)



Client: Case scenarios

Litigious client

An interior designer agreed to work for a client that was frequently involved in litigation. The client did not approve of the antique French floor that was moved to his Palm Beach estate from a chateau in France. He filed suit and refused to budge from his initial demands. It was estimated that the cost for taking the case through trial could exceed \$400,000. The interior designer and client finally agreed to a settlement of \$235,000 and a waiver of the interior designer's \$70,000 in fees. In addition to the \$235,000 settlement, the insurer also paid more than \$250,000 in legal and expert fees.

Joint and several liability

A municipality hired a civil engineer to design a pedestrian walkway across a 12-lane highway. One night, a vehicle struck two minors as they crossed the highway. Although the engineer's design included crosswalk warnings, it was alleged that the warnings were not large enough. The injuries were very serious, resulting in an estimated jury verdict of \$20 million. The department of transportation and the city each had statutory caps of \$250,000 per child. Because of the joint and several liability laws in the state, the engineer could have been responsible for the entire settlement, even if the engineer was found to be only 1% negligent. The case settled for \$3.5 million.

Insufficient funds

A small town retained a civil engineer to design a new sewer system. The town wanted additional components and eventually ran out of money. The town sued the engineer for cost overruns of \$1.2 million. The engineer was still owed fees of \$350,000. Although there was no liability on the part of the engineer, the town could not release their claim as long as they still owed fees to the engineer. The engineer was finally forced to compromise his fee claim, accept partial payment from the town's insurer, and collect the remainder of fees over a period of years.

Poor client selection

An architect agreed to design a condo project for a developer that was new to town and had no ties to the community. The developer's emphasis was on cheap, fast construction with little concern for quality. He paid low fees and refused to allow the architect to provide construction contract administration services. Several years after the units were sold, the homeowners association filed suit, alleging numerous design and construction defects. The developer had left town and did not have insurance. Despite minimal liability, the design team contributed over \$2 million to settle the claim.





Risk management guidance

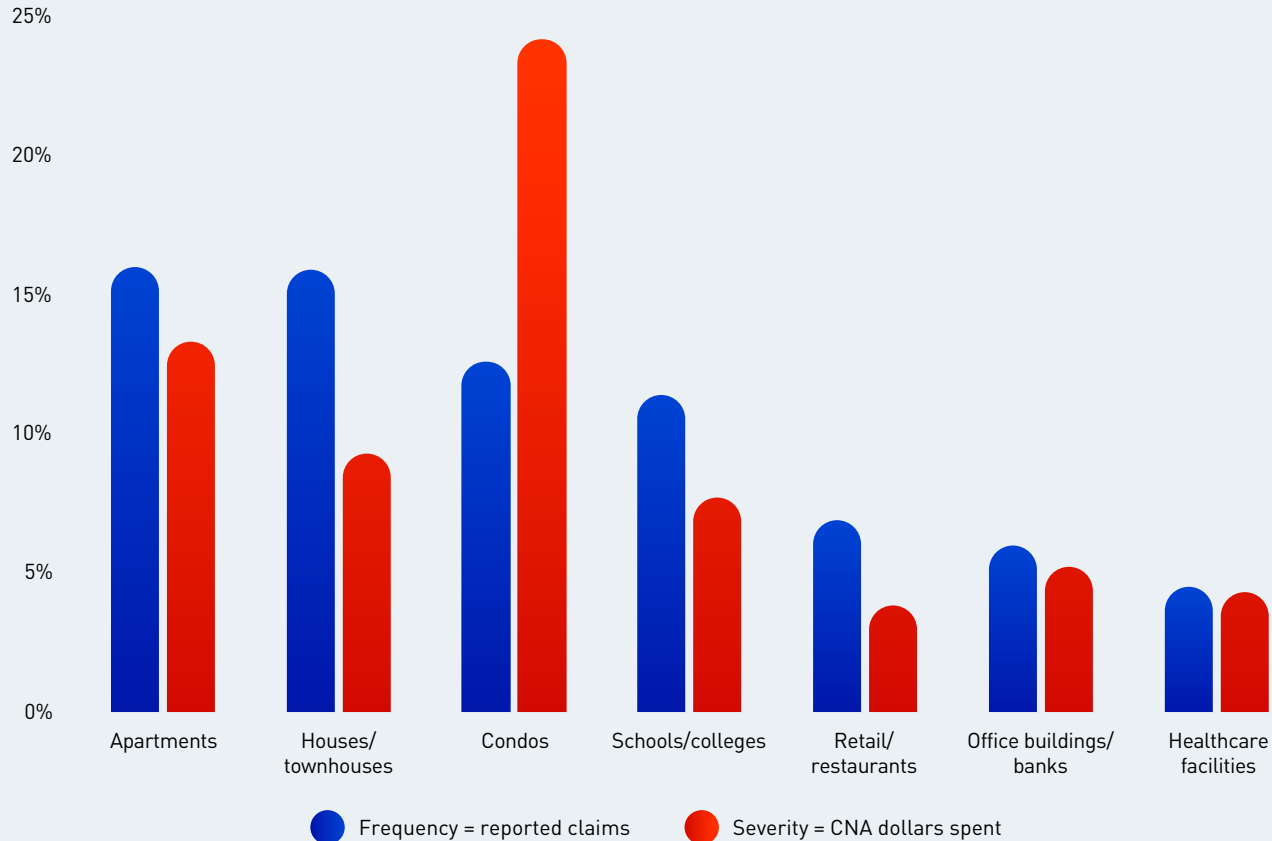
There are a number of different factors to consider when assessing potential risks that a particular client may present for a given project. There are certain crucial factors that should be considered for all clients. They include the client's:

- financial strength;
- clarity of project objectives;
- experience with this project type;
- experience with your firm;
- claims history;
- decisive decision maker; and
- attitude toward the project and design professional.

These factors are covered in more detail in the client evaluation portion of the [Risk Management Matrix on page 59](#). Addressing these factors and others that you experience can help you evaluate your clients and the potential risks they present.

The project

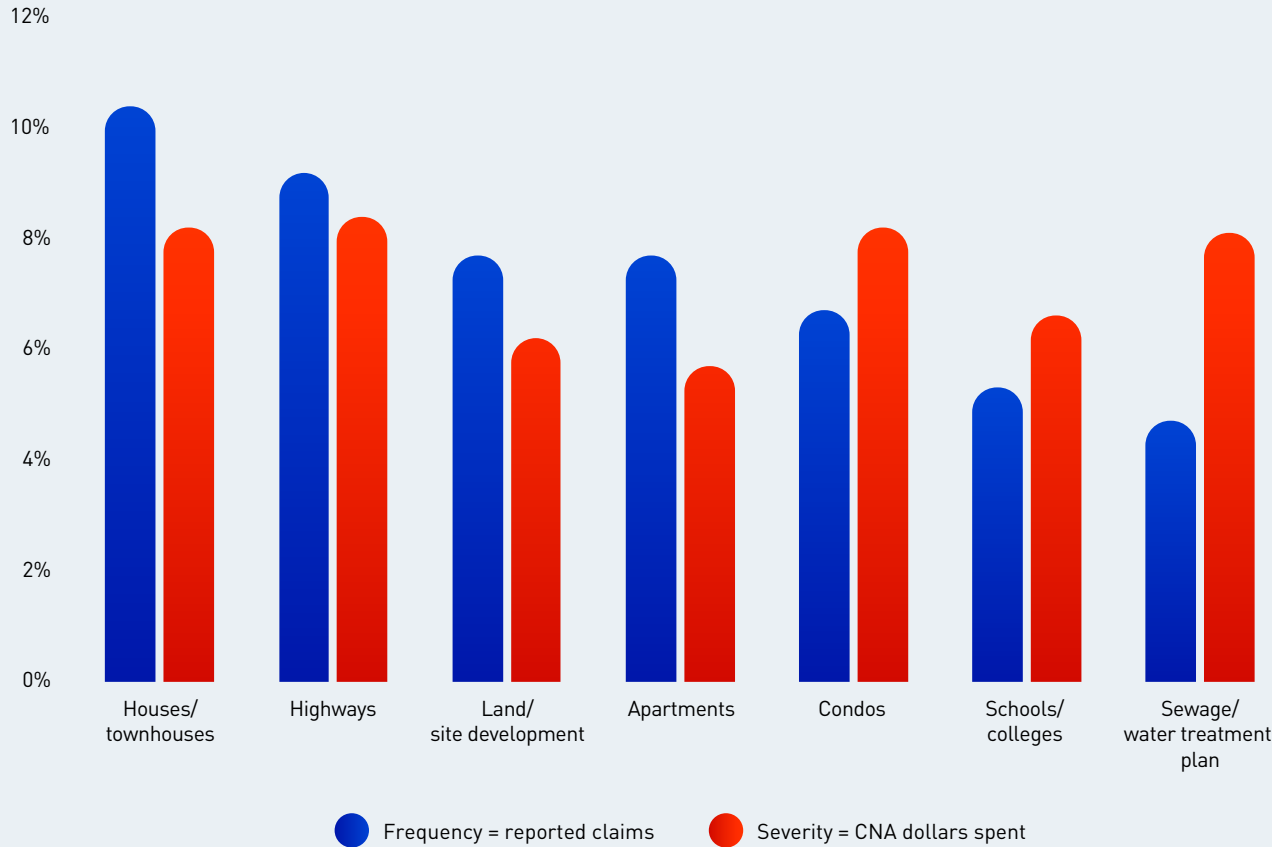
12 Architects: Claims by project type (2015 - 2024)



No two projects are alike. Even if your practice is concentrated on one particular project type, such as schools, no two sites are alike so the projects themselves will be different.

After evaluating your client, it is important to evaluate the project. Some projects are riskier than others in terms of the frequency (reported claims) and severity (costs paid by CNA) of claims. For example, according to the charts on pages 25 and 26, residential projects (apartments, houses/townhouses, and condos) were a relatively high risk for both architectural and engineering services.

13 Engineers: Claims by project type (2015 - 2024)



Another factor to consider is the region in which a particular project is located. For example, in the East, apartment projects represented the highest frequency of claims (21.2%) for larger firm architects, but in the Midwest, schools/colleges projects (19.5%) had the highest frequency of claims for larger firm architects. In the South (18.8%) and West (15.7%), condos had the highest frequency of claims within the same group.

For more information on the frequency and severity of claims for various projects in each region, refer to the following benchmarking studies:

Larger firms (annual billings above \$5 million)

- [Architecture firms](#)
- [Engineering firms](#)

Smaller firms (annual billings \$5 million or less)

- [Architecture firms](#)
- [Engineering firms](#)

Project: Case scenarios

Architect's negligence

An architect provided design services for an upscale, high-rise condominium project. The firm's contract was for design and shop drawing review, but no construction site visits. Soon after the building was occupied, water intrusion (one of the most common claims on condo projects) was discovered, primarily through windows and balcony doors. Experts were hired by the homeowners association, and the estimated cost to repair the numerous construction and design defects was \$30 - \$45 million. Allegations against the architect involved approval of EIFS, balcony slope issues, and negligent approval of shop drawings. The architect's exposure was significant in view of the size of the claim and the low policy limits of several co-defendants. The architect settled for \$1.7 million in addition to paying \$450,000 in expenses.

Engineer's under-design

A structural engineer retained by a design-build contractor rushed to complete the preliminary design on a state-owned bridge project. The contract was awarded, but it was noted that the engineer had under-designed the steel by 75%. Unfortunately, the bid and award were based on the preliminary design. The contractor was unable to pass onto the state the cost of the additional steel and labor. Although the contractor recognized that the error was the result of the rush—from the start of preliminary design to notice to proceed was less than three months—this was a clear case of engineer liability with damages exceeding the engineer's \$2 million policy.

Betterment

School projects generate a high number of claims in terms of frequency (reported claims) and severity (dollars spent). Mold and mildew developed in a North Carolina school. The allegation against the engineer was that the HVAC system was insufficient to handle local humidity levels. The engineer designed a fix that would have cost \$300,000, but the school's "emergency fix" cost \$1.5 million. Despite arguments of betterment and failure to mitigate damages, the arbitrator's award against the engineer was \$750,000.

Documentation error

Hospital and healthcare projects also generate a large number of claims. The biggest problem areas often relate to the design of the HVAC system. In a 186-unit senior living center in the Southwest, there was inadequate power to the HVAC units in patient rooms. During design, the design professional provided incorrect data for the HVAC power requirements, which was the basis for the electrical design of the HVAC system. The design professional paid \$450,000 to settle this claim.

Risk management guidance

There are several factors to consider when evaluating a project. These factors should help you identify which projects may pose a greater risk and give you clues on how to properly respond, whether it is through specific contract language or a change in fees for professional services.

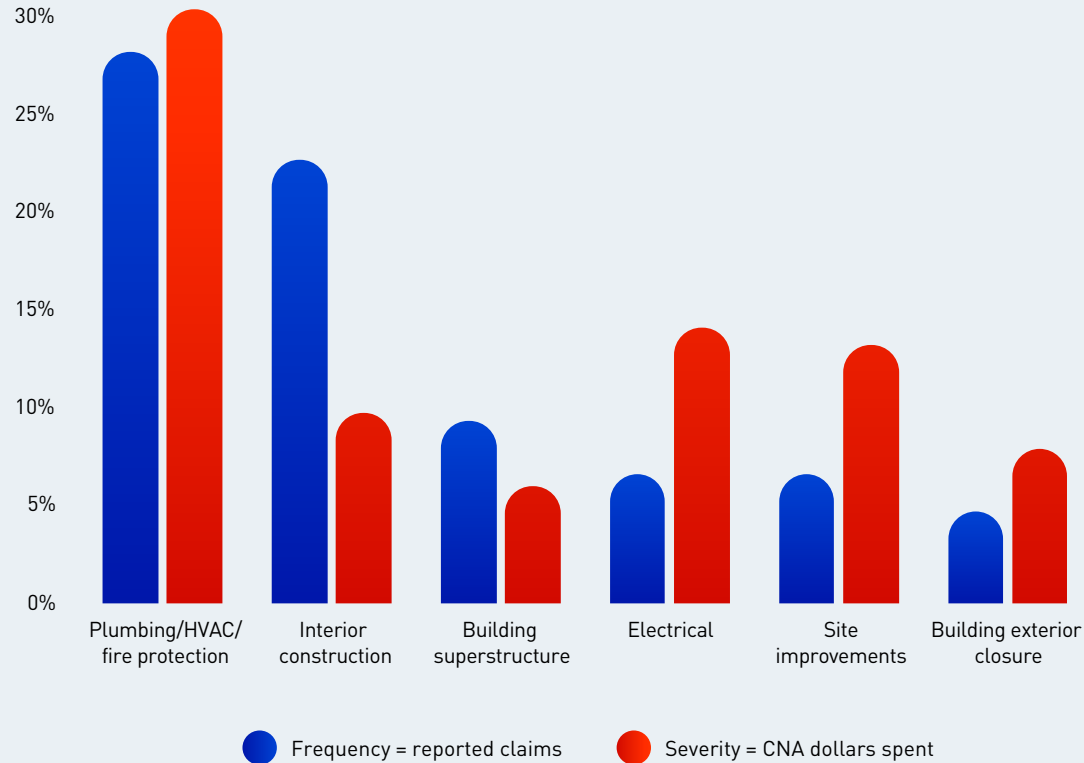
Factors to consider when evaluating your project include:

- project type;
- project delivery method;
- geographic and regional considerations;
- environmental concerns;
- potential users and occupants; and
- political and community sensitivity.

The *Risk Management Matrix* includes more detailed questions to consider when [evaluating your project on pages 60 and 61](#). Understanding potential risks that your project may present is a crucial first step in taking appropriate actions to respond to those risks.



14 Healthcare facilities: Claims by problem area (2015 - 2024)

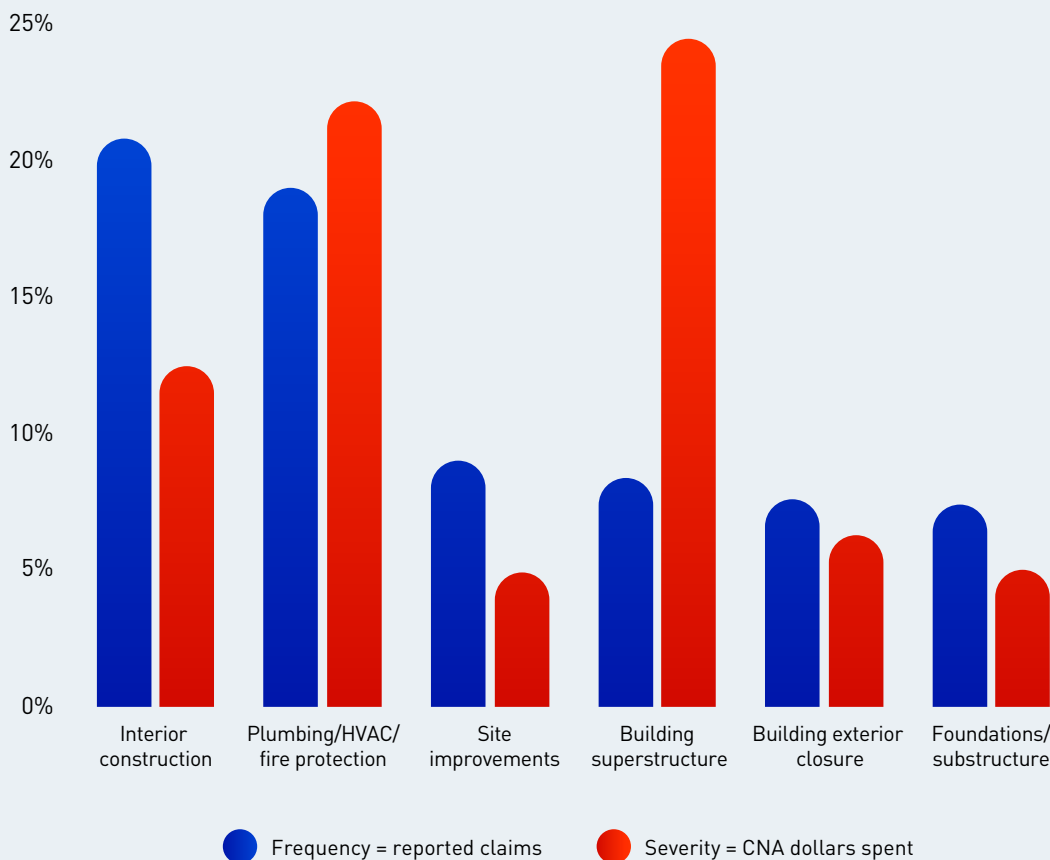


The biggest problem area surrounding healthcare facilities was plumbing/HVAC/fire protection systems. From 2015 through 2024, they represented 28.2% of all healthcare facility claims and 30.4% of all insurance company dollars spent. Interior construction was also another problem area, with 22.7% of the frequency and 9.7% of the severity.

The previous discussion on project evaluation noted that project type was an important factor to consider when evaluating potential risks. The next step in evaluating your project is to examine the problem areas that are typically associated with any particular project type. This is an important step as the problem areas associated with a given project will help you determine how you may want to respond to a specific risk.

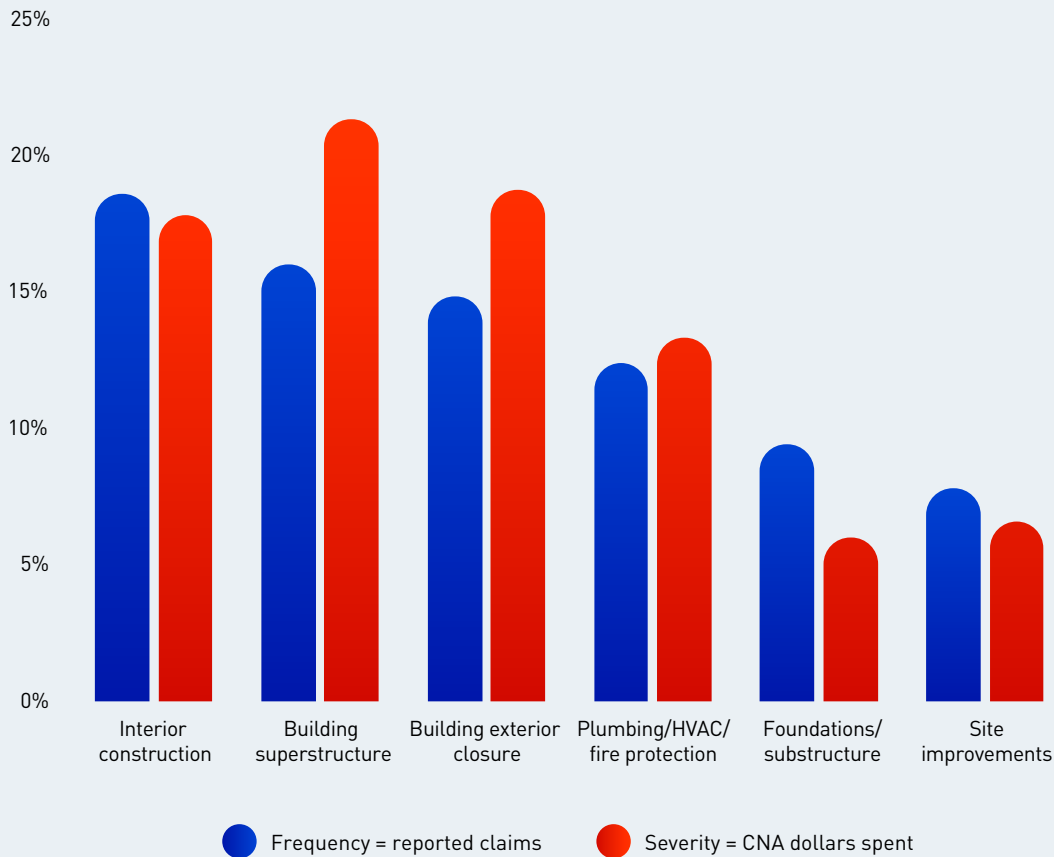
For example, the chart to the left indicates that for healthcare projects, plumbing/HVAC/fire protection systems, interior construction, and building superstructure issues had the three highest claims frequency rates. If you are the prime professional on a healthcare project and you are considering retaining the services of an MEP engineer, the chart indicates that you should consider MEP engineers that have successfully provided professional services for healthcare facilities. Retaining an MEP engineer that understands the problem area needs for a healthcare facility may help minimize the likelihood of claims in those areas.

15 Commercial/retail projects: Claims by problem area (2015 - 2024)



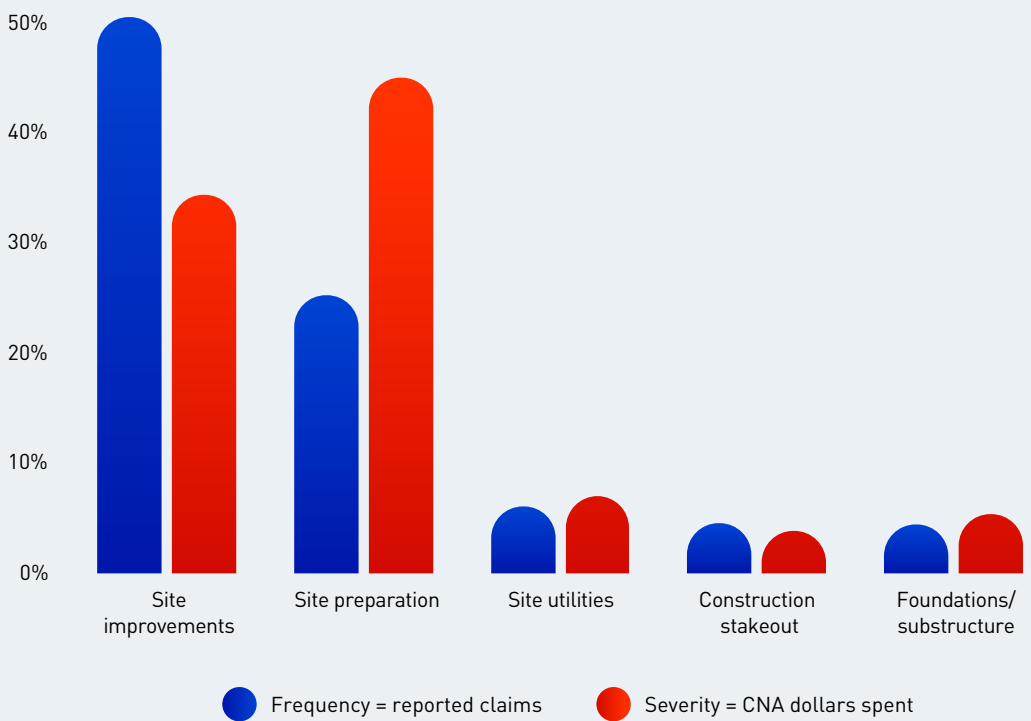
For commercial and retail projects, interior construction was a big problem area, accounting for 20.8% of the claims frequency and 12.5% of the claims severity. Plumbing/HVAC/fire protection systems were also a big problem area, with 19.0% of the claims frequency and 22.2% of the dollars spent.

16 Residential projects: Claims by problem area (2015 - 2024)



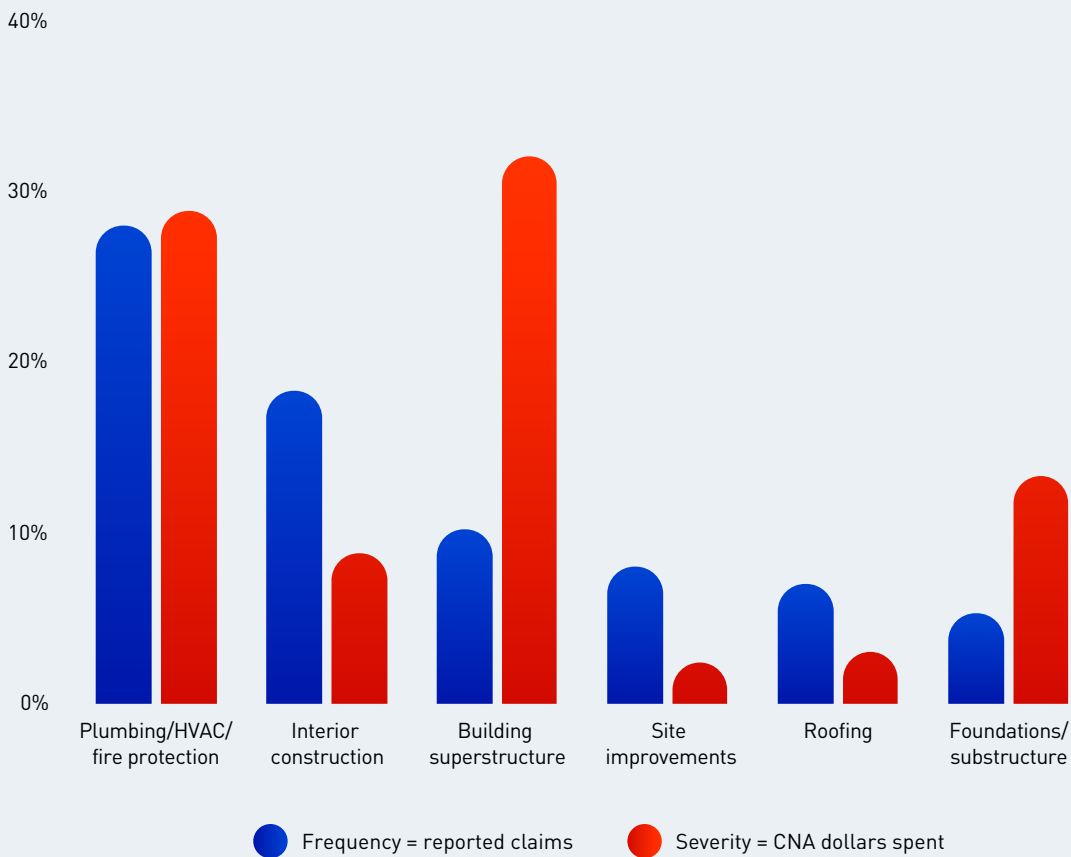
The worst problem areas for residential project types were interior construction, which was first in claims count (18.6%) and third in dollars spent percentages (17.8%). Building superstructure was second in claims count (16.0%) and first in dollars spent (21.3%) percentages, with building exterior closure third in claims count (14.8%) and second in dollars spent percentages (18.7%). All three were significant problem areas for design firms.

17 Highway projects: Claims by problem area (2015 - 2024)



Site improvements and site preparation for highway projects were big problem areas, with site improvements accounting for 50.6% of the claims count and 34.4% of the dollars spent and site preparation issues accounting for 25.3% of the claims count and 45.1% of the dollars spent.

18 Schools/colleges projects: Claims by problem area (2015 - 2024)



Plumbing/HVAC/fire protection systems represented the highest claims count (28.0%) and second highest dollars spent percentages for schools/colleges projects (28.9%). Problems with high humidity levels due to faulty design and the potential for mold and mildew issues may have been a contributing factor to the high frequency and severity of HVAC claims on school projects. And while building superstructure claims were third in frequency with 10.2% of claims filed, they had the highest severity percentage at 32.1%.

Consultants

Selection of consultants is another important factor to consider when assessing potential risks. A project may require other design professionals to provide particular professional services. As was discussed in the previous section on evaluating your project, consulting design professionals may be providing design services for portions of the project that have represented significant problem areas for that project type.

Since prime design professionals are vicariously liable for the professional services provided by the consultants they select, it is important that design professionals give careful consideration to the selection of their consultants. Should a claim arise out of the services provided by consultants, and any of those consultants are uninsured or underinsured, the prime design professional will be vicariously liable for damages.

Unfortunately, it is difficult to track the frequency and severity of claims against the prime design professional due solely to vicarious liability exposure, but exposure does exist and consultant selection is an important consideration for proper risk management.

Should a claim arise out of the services provided by consultants, and any of those consultants are uninsured or underinsured, the prime design professional will be vicariously liable for damages.



Consultants: Case scenarios

Limitation of liability

A contractor made a claim against a city for \$1 million in extra costs. The city settled with the contractor and looked to the engineer for contribution. The engineer contributed \$500,000, but believed any exposure it had was related to services performed by the engineer's geotechnical consultant. The engineer attempted to subrogate against the geotechnical consultant, but ran into problems because the contract between the engineer and geotechnical consultant contained a \$25,000 limitation of liability clause. The engineer was only able to recover \$25,000.

Vicarious liability

A large university retained an engineer to design a co-generation plant. The engineer's only exposure was the vicarious liability created by a structural engineering consultant that failed to adequately determine the structural loads for the design-build client. The consultant paid the entire \$250,000 policy, leaving the engineer to pay the remainder of the \$2.5 million claim.

Poor documentation and insufficient consultant insurance

A client retained an architect to design a manufacturing plant, warehousing space, and administrative offices. Several years after the project was completed, the client filed an arbitration demand against the architect and contractor for construction defects. Although many of the allegations against the architect involved the structural components of the design, the structural engineer could not be forced into arbitration. In addition, although the structural engineer had been insured when retained by the architect, the engineer had since dropped professional liability insurance. The structural engineer could not afford to help the architect defend the structural allegations. Of the \$2 million in alleged damages, \$1.6 million related to a cracked concrete floor. The client had insisted on a maintenance-free, crack-proof floor. There was no documentation in the architect's file informing the client that this was not feasible.

The cost of the arbitration was prohibitive. The arbitrators would meet for two weeks and then recess for four months. After three sessions, although less than 50% complete, the architect had already spent \$163,000 in expenses and estimated paying an additional \$70,000 before the end of the hearings. Because the arbitrators seemed to have difficulty understanding the differences between the duty of care owed by a design professional as compared to the liability of a contractor, a decision was made to settle the claim for \$350,000. The architect then had to negotiate with the uninsured structural engineer. After filing a lawsuit and spending another \$44,000 in expenses, the architect finally reached a settlement with the engineer more than two years later. The engineer agreed to pay \$25,000 plus ten annual payments of \$10,000 for a total contribution of \$125,000.

Risk management guidance

Consultant selection, and the professional services consultants provide, are important considerations in managing the risks of any project. Consultants play a vital role in the success or failure of a project, and prime design professionals need to be aware of their vicarious liability exposure.

When selecting consultants, consideration should be given to:

- availability of qualified consultants;
- past experience with a consultant;
- consultant's reputation;
- adequate insurance;
- ability to meet project constraints;
- compatible systems between the consultant and prime design professional; and
- client-selected and client-controlled consultants.

More information on factors to consider when [evaluating consultants can be found on page 62](#).



Contractor

According to Victor and CNA program statistics, the general contractor was responsible for bringing 9.5% of all claims directly against design professionals from 2015 through 2024. However, there were other design entities that made a claim against the design professional, including subcontractors, specialty contractors, and design-build contractors.

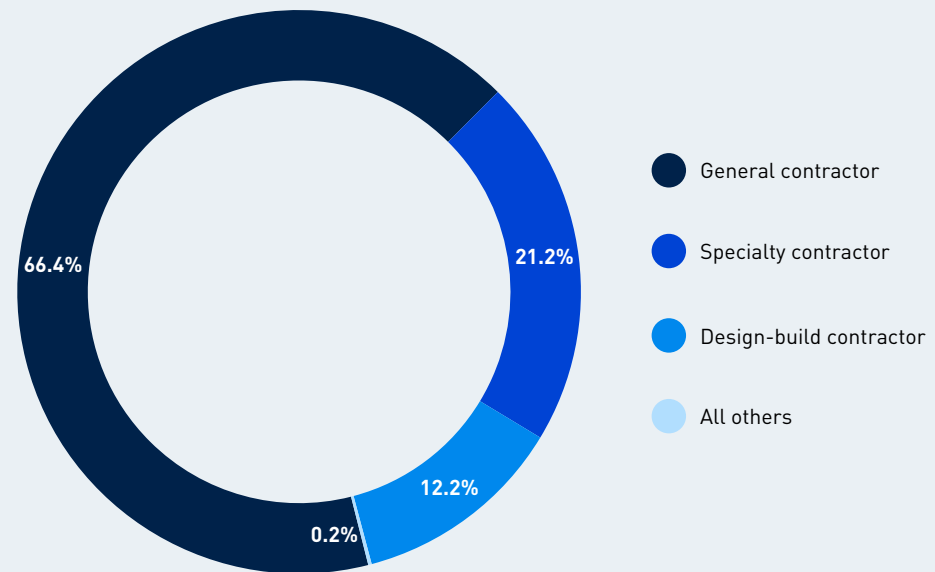
As the graph to the left indicates, when looking at a group of construction contractors and other construction-related entities as claimants, the general contractor was responsible for 66.4% of claims against design professionals and specialty contractors accounted for 21.2% of the claims against design professionals.

Although the design professional has no direct say in the selection of the contractor in a design-bid-build situation, the design professional can provide information about a contractor to the client. The information the design professional provides can help the client make an informed decision and select the most qualified contractor for the project. A qualified contractor performing construction can be a significant risk management factor.

For design-build projects where the design professional has been retained by a design-build contractor, design professionals should look at the factors related to contractors, but also at the factors related to client evaluation since the design-build contractor is the design professional's client. Victor has [additional resources](#) available related to design-build risks.

...the general contractor was responsible for 66.4% of claims against design professionals...

19 Contractor as claimant: Claims by frequency (2015 - 2024)



Contractor: Case scenarios

Inexperienced contractor

A \$22 million project for a university science center ran into problems almost immediately because of a contractor that had never before worked on this type of project. The project came in almost seven months behind schedule, at which time the contractor filed suit for \$7 million, citing 1,800 RFIs as “proof” of the claim. The majority of the problems resulted from the contractor’s lack of coordination, the university architect’s interference, and problems with the mechanical/electrical/plumbing (MEP) design. Unfortunately, the MEP consultant’s insurance policy was depleted by previous claims. The claim settled for \$2.2 million, funded by the university, the architect, and what was left of the MEP’s policy.

Low bid contractor

On school projects, contractor selection is usually based on competitive bidding. This process sometimes motivates contractors to underbid projects, resulting in shortcuts, substitutions, and change orders. In one case, after completing the project six months late, the contractor filed suit against the school district, alleging that the architect provided improper advice on lead paint and asbestos abatement, structural steel fabrication, and gas line location.

The contractor also alleged that the architect delayed in approving roofing materials. The contractor’s claim was for \$3 million on a \$6 million project. The school district and architect paid \$600,000 each.

Uninsured contractor

A client retained an architect to design a manufacturing plant, warehousing space, and administrative offices. Several years after the project was completed, the client filed an arbitration demand against the architect and contractor for construction defects. Although many of the allegations against the architect involved the structural components of the design, the structural engineer could not be forced into arbitration. In addition, although the structural engineer had been insured when retained by the architect, the engineer had since dropped professional liability insurance. The structural engineer could not afford to help the architect defend the structural allegations. Of the \$2 million in alleged damages, \$1.6 million related to a cracked concrete floor. The client had insisted on a maintenance-free, crack-proof floor. There was no documentation in the architect’s file informing the client that this was not feasible.

Improper maintenance and construction oversight

Many mold claims that are caused by construction error and lack of maintenance can still involve design professionals.

Three years after completion of a multi-unit senior citizen facility, mold was discovered in the mechanical rooms of several units. The mechanical rooms were typically kept locked and were not opened unless the heat malfunctioned. Investigation revealed that the condensate discharge pipes were improperly placed over the drains. This error allowed water to saturate the wallboard and seep into the wall and ceiling space of the lower units. In addition, during construction, duct tape was placed over the drains during the gypcrete installation and was never removed. Because the architect provided construction phase services and allegedly did not provide sufficient maintenance advice, a contribution to the settlement was offered during mediation of the claim.





Risk management guidance

Although the client will have the final say in the selection of a contractor for a particular project, unless that project is designer-led design-build, the design professional plays a vital role in providing clients with information to assist them in their selection of a contractor.

Factors to consider when evaluating a contractor include:

- compliance with requirements from a prequalification list;
- approach to the bidding process, if an open bid project, and adequacy of the bid;
- financial strength of the contractor; and
- experience with project type.

Using the four evaluation factors above can help identify areas of potential risks with any given contractor. For more information on factors to consider when evaluating a contractor, please refer to the [Risk Management Matrix on page 63](#).

Other parties

On any given project, there are other parties that will influence or have a stake in the outcome. As part of the evaluation of the potential risks of any project, design professionals must factor in these other parties.

As the [chart on page 23 indicates](#), 8.6% of claims against design professionals from 2015 through 2024 came from third parties for property damage and 7.5% of claims were for bodily injuries of non-construction workers. These types of claims can vary widely and often include claims that the design of the project caused excessive water run-off damaging an adjoining property to the bodily injury of a user of the project because the design professional failed to specify a non-slippery surface in the project's public areas.

Client-retained consultants such as geotechnical engineers, surveying professionals, and construction managers should also be considered. Although retained by the client, design professionals will rely upon and often coordinate professional services with client-retained consultants.

Evaluation of third parties, which will include occupants and users of the project, adjoining and neighboring properties, as well as consultants retained by the client, is an important step in evaluating the potential risks of any project.

...8.6% of claims against design professionals...came from third parties for property damage...

Other parties: Case scenarios

Non-construction worker injury

Although claims by “others” are a relatively smaller percentage of claims against design professionals, these claimants need to be considered on projects such as parks, swimming pools, libraries, and court houses where the end user is the general public. A 14-year old boy was paralyzed after sledding into a handrail designed by a landscape architect for a public park. There did not appear to be any liability on the part of the landscape architect, whose design included protective shrubbery. It was determined that either the boy was sledding down the stairs or someone removed the shrubbery after design. In view of the extensive injuries and the jury appeal of the plaintiff, the landscape architect agreed to contribute \$460,000 to the \$1.5 million settlement.

Uninsured other parties

A civil engineer provided site design services for development of upscale single-family residences.

The site was considered sensitive because a portion of the area bordered a creek that was prone to flooding. To accommodate this sensitivity, houses in certain locations were set back from the creek. Both the geologist and geotech retained by the developer agreed that the design would not cause erosion. Several years later, after two years of exceptionally heavy rainfall, the force of the water in the channel eroded the banks and threatened homes. Although the engineer had minor exposure based on the design, the geologist, geotech, and developer had no insurance. The engineer paid the majority of the claim.

Poor communication and coordination

When multiple parties are involved in a project, it is imperative that everyone's roles and responsibilities are clearly defined in their respective agreements with the client and in the construction general conditions. On a project involving a court house renovation, a county entered into four prime contracts with four separate contractors in addition to a construction manager (CM). At many critical junctures during construction, communication was virtually non-existent. Serious delays resulted and with the project not even 50% complete, the county exercised its contractual right to claim liquidated damages and placed all four contractors on notice. Before long, each contractor had filed suit against the county, the CM, the other contractors, and the architect for delay damages. The architect convinced the parties to mediate, but no one was optimistic. At the end of two days, the county and the CM paid the four contractors a total of \$480,000. The architect escaped with no payment.

Copyright infringement

The first architect on a mixed-use condo project was terminated after completing conceptual and schematic drawings. Although the client assured the second architect that he had permission to use the plans, there was nothing in writing. The second architect had to use the plans as far as the footprint of the building as that had already been submitted to the civil engineer for permitting. The second architect then started anew on the rest of the design with input from the client as to the number and type of units and overall look of the building. The first architect sued the client and second architect for copyright infringement. Although there were significant differences between the two designs, there were also significant similarities. The claim settled for \$100,000 with a \$30,000 contribution from the second architect.



Risk management guidance

Claims arising out of other parties that may have an interest in the project are not uncommon. It is important for design professionals to evaluate the potential risks other parties may present by considering the following factors:

- what consultants the client will retain;
- whether the project will have an impact on adjoining and neighboring properties; and
- what factors regarding the project's users and occupants should be considered.

Please refer to the other parties section of the [Risk Management Matrix on page 64](#).

Fees

The establishment and receipt of proper fees for design services is another important consideration in evaluating potential risks for a project. When design professionals do not receive appropriate fees necessary to provide the professional services agreed to with the client, the temptation may be to minimize the time on certain aspects of the professional services in an attempt to control costs. Inadequate fees for professional services ultimately go against the client's interest for a successful project.

For this reason, it is important that the design professional agree to fees that are adequate to cover the professional services to be provided. Because most projects change not only during the design phases, but also during the construction phase, it is important that the design professional have language in the agreement for professional services that allows for the charging of additional fees for a change in or addition to services.

Finally, in addition to evaluating if the fees are adequate for the professional services to be provided, it is equally important that fees are invoiced and collected in a timely fashion. Checking the financial capability of the client and the client's history in paying other design professionals can give an indication as to how long a client takes to pay its bills and the likelihood that fees might not be collected when due.

Because some fee disputes between the design professional and client can result in a client's "retaliatory" claim against the design professional, establishing the appropriate fees for the services to be provided and evaluating a client's ability and willingness to pay in a timely manner may help avoid some professional liability claims.

Inadequate fees for professional services ultimately go against the client's interest for a successful project.

Fees: Case scenarios

Poor documentation and limited site visits

In an effort to save money, many clients limit the number of site visits by the design professional. On a project for a high-end residence, the client and interior designer made many modifications without the architect's knowledge, including changes to the venting of a third-floor fireplace. These changes were not obvious to the architect during his limited site visits. Five years after completion, the house was completely destroyed by a fire that was traced to the fireplace; damages exceeded \$2 million.

Unfortunately, the architect's poor file documentation made it difficult to defend against allegations regarding the agreed-upon level of construction services and he was forced to contribute significantly to the settlement.

Negligence and uninsured client

A geotechnical engineer was paid \$120 to provide a letter concerning the stability of a slope adjacent to a subdivision of homes. The letter stated that the slope was stable. Two years later, the slope gave way and a rockslide destroyed one home and resulted in two others being declared unsafe. Experts agreed that the slope was unstable. The developer was uninsured and refused to negotiate, thus instigating litigation, which included the geotechnical engineer, who was the only viable defendant. The geotech settled for his \$250,000 policy limit.

Improper fee collection

An architect, retained by a developer on a high-end commercial project, did not comply with the terms of his own contract. Although he had been invoicing the client for his fees on a regular basis, the client had not paid the invoices and the architect was now owed \$350,000 at the end of the job. When the architect filed suit for his fees, the client counter-sued, alleging negligent design. Although the architect eventually won the counterclaim, he was forced to spend \$60,000 in defense costs and had to compromise his fee claim.



Risk management guidance

Since the professional services to be provided and the time spent providing those services are critical factors in determining the fees for a project, evaluating the fees is an important consideration in identifying potential risks.

Factors to consider with evaluating professional fees include:

- adequacy of the fees for professional services;
- mechanisms relating to an increase in fees for changes in services or additional services; and
- mechanisms for timely invoicing and receipt of fees.

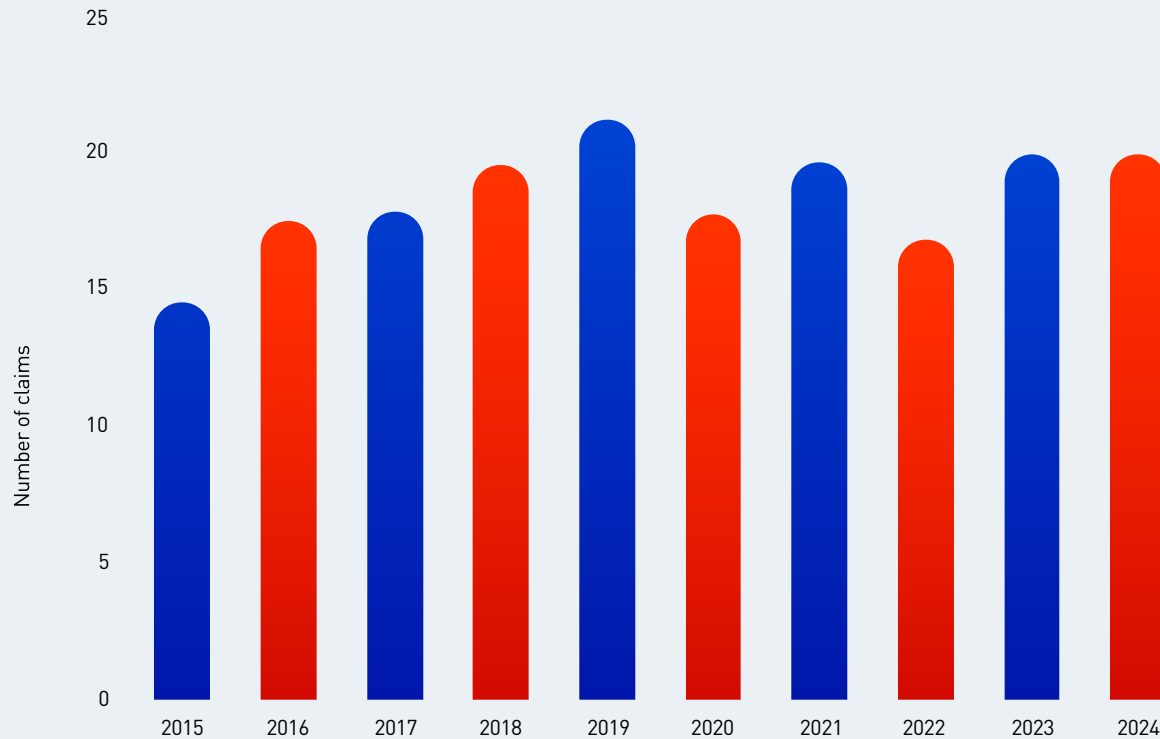
Use the fees component of the [Risk Management Matrix on page 64](#) to help you further evaluate your potential risks.

Fee claim leads to counter-claim

An engineer filed suit against his client for \$10,000 in outstanding fees. Although the client had never complained about the engineer's services, now faced with a fee claim, he counter-sued, alleging dissatisfaction with the engineer's design for a wastewater system. The engineer spent his \$5,000 deductible defending the allegations and then compromised his fee claim by 50%, resulting in a net loss of \$10,000.

Your firm

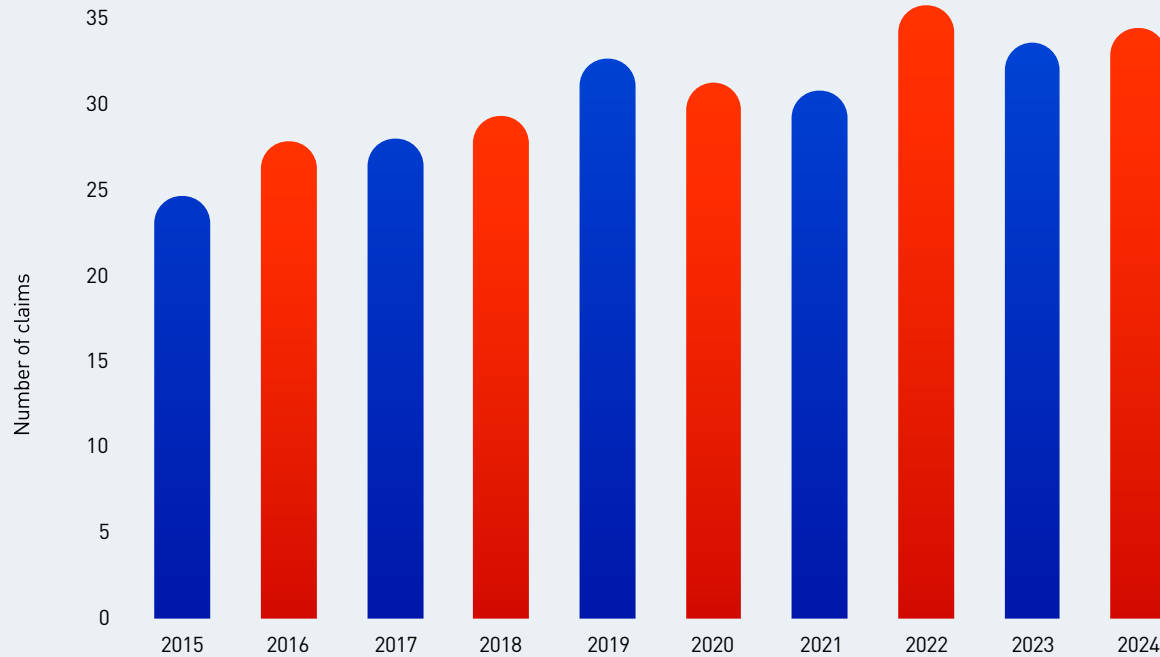
20 Architects: Claims frequency per 100 firms



Of all the various factors design professionals should consider when evaluating potential risks for a project, arguably the most important and the one design professionals have the most control over is their own firm. Self-evaluation as to whether a project is one that a firm can manage is a crucial question in evaluating potential risks.

Historical data and the charts on pages 45 and 46 indicate that the frequency of claims for architects and engineers has been rising in recent years. It has been suggested by some experts that one factor that may be contributing to this increase in frequency is the rapid pace of construction during this period and design firms taking on projects that they do not have the capacity to manage properly.

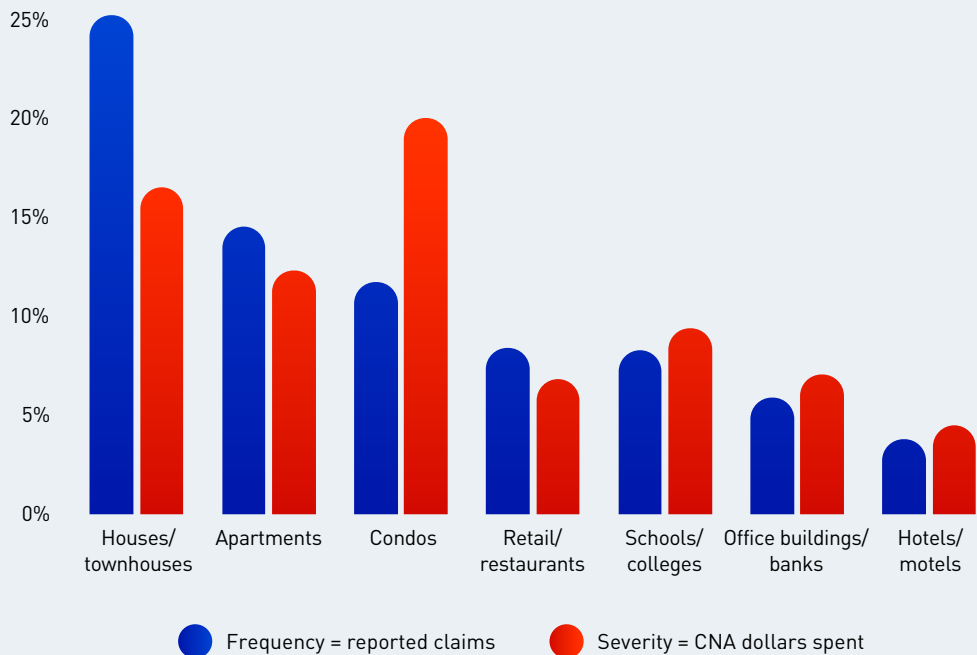
21 Engineers: Claims frequency per 100 firms



One possible result of firms taking on projects without adequate capacity to do so or experience with a particular project type could be documents that did not meet the professional standard of care or the firm's quality standards, which may lead to claims.

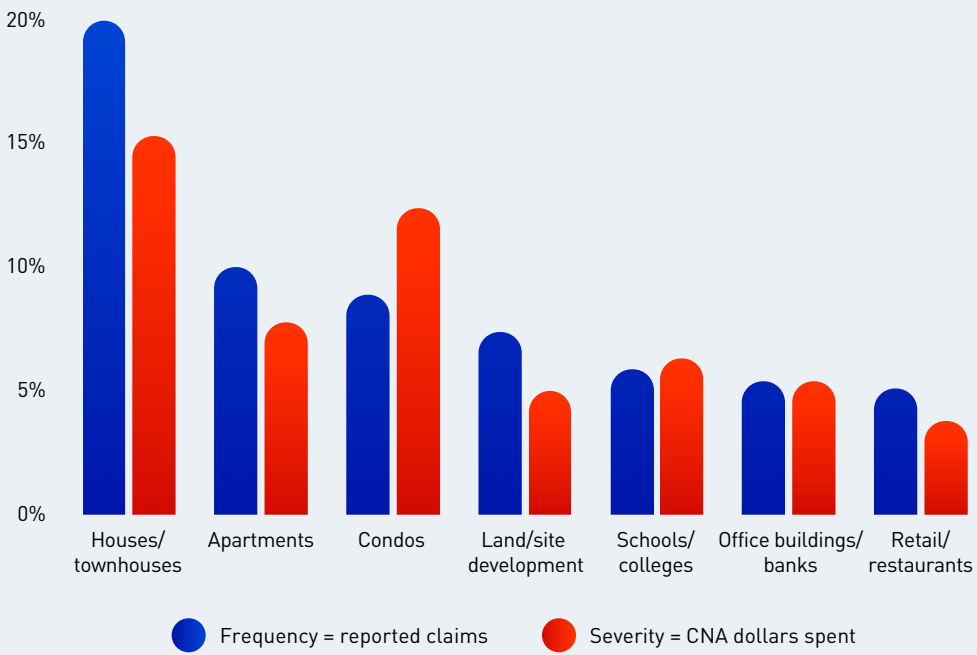
Using the factors on the following pages as they relate to your firm can help identify potential areas of risk.

22 Smaller architects: Claims by project type (2015-2024)

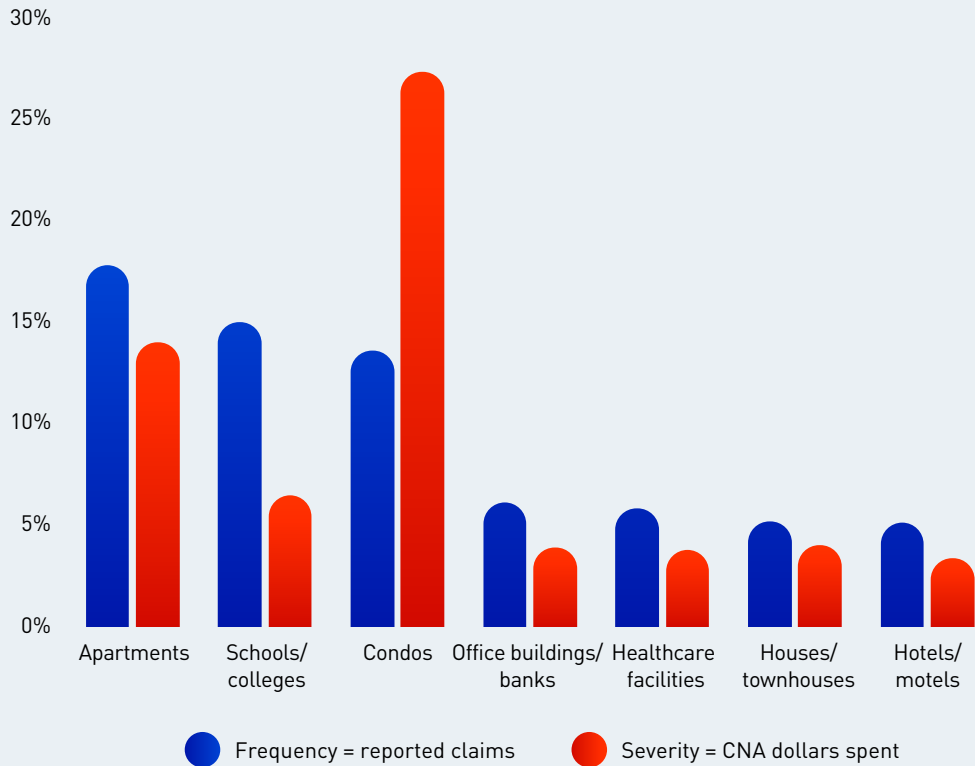


Smaller firms = annual billings \$5 million and below

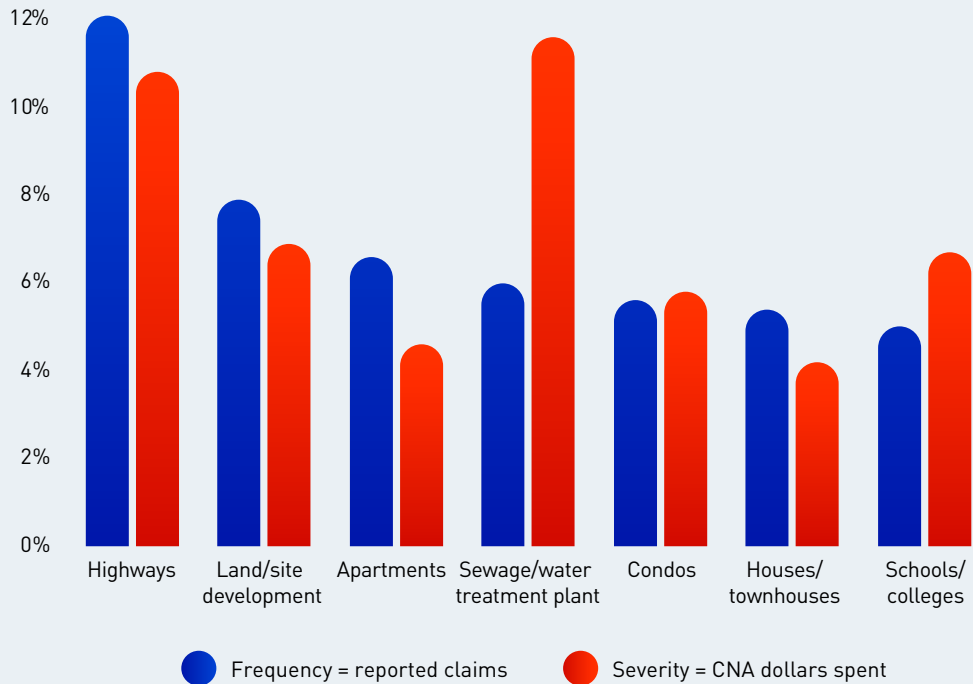
23 Smaller engineers: Claims by project type (2015-2024)



24 Larger architects: Claims by project type (2015-2024)



25 Larger engineers: Claims by project type (2015-2024)



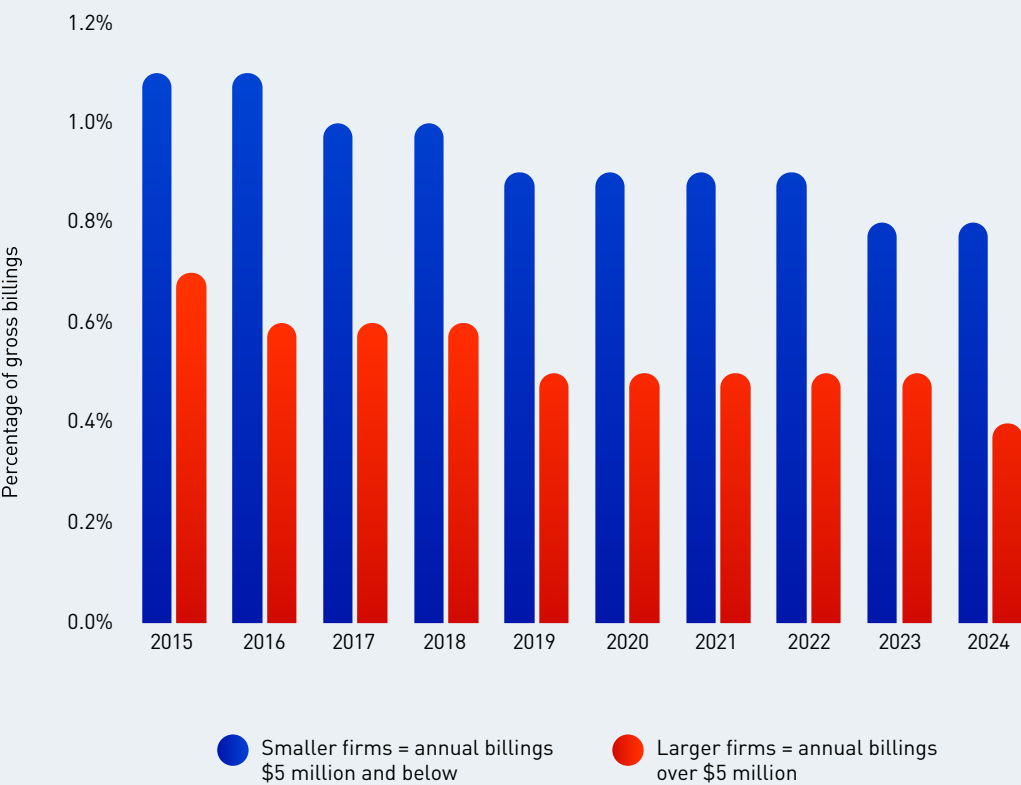
Larger firms = annual billings over \$5 million

26 Per-claim limits of architectural firms: May 2025



Another important factor to consider when evaluating your firm is to understand your firm’s insurance coverages, limits, and deductibles. Proper insurance coverage and deductibles as well as adequate policy limits are factors to consider when making a final analysis on a potentially high-risk project.

27 Percentage of deductibles to gross billings for architectural firms



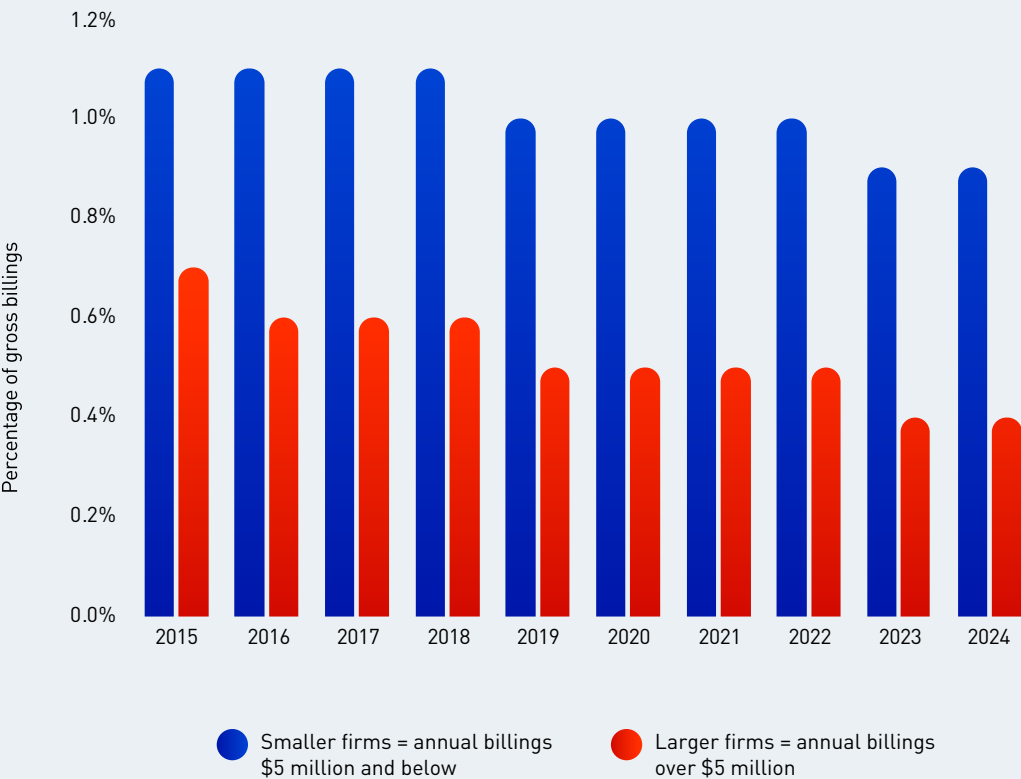
The graphs on pages 47-52 can help firms benchmark their statistics against their peers. These graphs can also help design professionals educate their clients regarding policy limits that may be contractually required by illustrating what other design professionals typically carry.

28 Per-claim limits of engineering firms: May 2025



In the final analysis of your firm, the deductibles and limits your firm decides upon is a decision based on many factors. Each firm is different and each firm's attitude toward risk is different; there is no magic number or formula. Firms must decide for themselves what is prudent for them.

29 Percentage of deductibles to gross billings for engineering firms



Firms should consider if the clients they provide professional services to and certain projects are riskier than others. Does the firm have adequate capacity and experience to provide professional services for these clients and projects? How a firm answers these questions will help determine a firm’s appetite for risk and, therefore, what deductible and policy limits may be appropriate.

Your firm: Case scenarios

Negligence in on-site visits

An eager young employee of a landscape architecture firm visited the site on a daily basis to watch and learn the process of constructing a 17-mile block wall that he had helped design. Unfortunately, he never noticed that the general contractor had changed the specified type of irrigation and built the wall out of materials that had not been specified. Several years later when a claim was made, the firm tried to argue that all of the damages were the contractor's responsibility and that the landscape architect had only limited construction phase services. Those arguments proved worthless when a subpoena revealed daily photographs taken by the employee that clearly showed that construction was not in compliance with the design.

Lack of experience with requested service

An engineer was retained to perform a Phase I environmental study for a client wanting to purchase property on which to build warehouses. Although Phase I studies typically do not include a full wetland determination, the client asked the engineer to do so. The engineer concluded that the property was not considered to be in a wetland.

After purchasing the property, the client learned that the Corps of Engineers and other experts disagreed with the engineer's assessment. Because the engineer did not have extensive experience in wetland determination, the engineer settled the claim for \$350,000.

Risk management guidance

A firm's self-evaluation of potential risks may be difficult to do, but it is an important step in evaluating a project's potential risk. Declining to provide professional services on a high-profile project with a generous fee because the firm does not have the proper experience or capacity may be difficult. But in the long term, this may be the right decision to mitigate potential risks.

Factors to consider when evaluating your firm include:

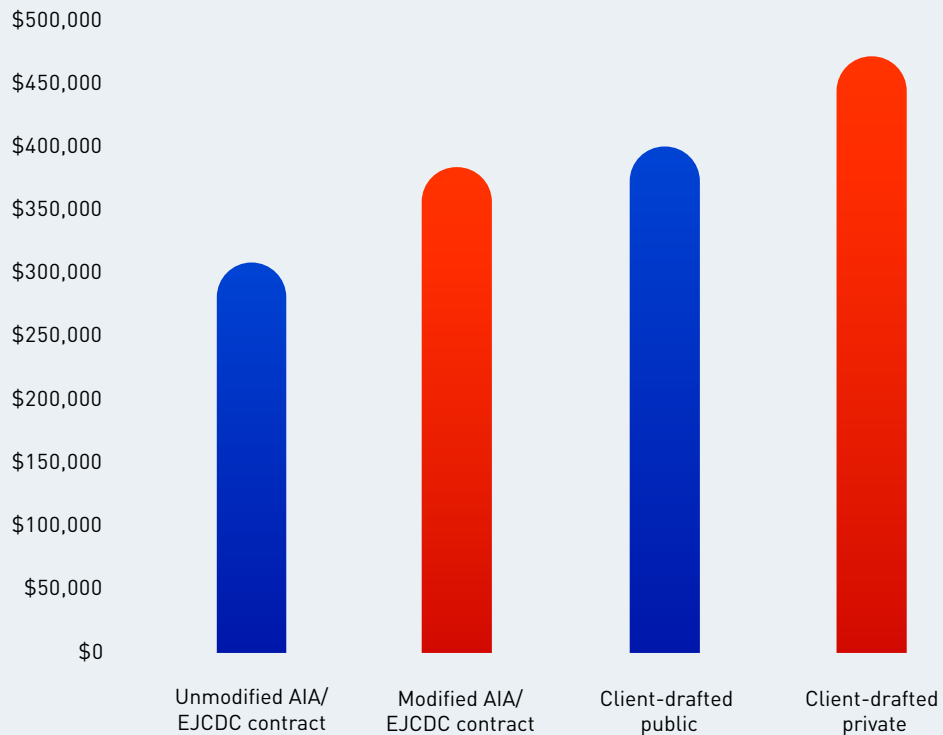
- your firm's capacity; and
- your firm's experience with this project type.

More information on factors to consider when evaluating your firm can be found in the [Risk Management Matrix on page 65](#).



Contracts

30 Claims by selected contract type: Average indemnity payment (2015 - 2024)



Contracts are arguably the most important risk management tool at a design professional's disposal. A well-drafted contract allocates risks to the party that is in the best position to manage those risks, assigns responsibility to only one party, and addresses the authority to execute that responsibility, when appropriate. These are a few of the many factors that must be considered when evaluating your professional services agreement.

Conversely, a contract that shifts risks and responsibilities to the party that is not in the best position to manage those risks can be a source of claims. Contractual language that: raises the standard of care beyond the common law standard; lacks a clear scope of services; requires the design professional to warrant or guarantee professional services; or has insurance requirements that are beyond the scope of professional liability coverage are a few examples that could increase a firm's risk.

Victor offers policyholders a range of tools, including [Managing Risk Through Contract Language](#) and [Contract Sifter](#), to help evaluate contracts.

Contract: Case scenarios

Express warranty

A client retained a mechanical engineer to design an HVAC system to correct humidity problems at an existing public school. The engineer's design was constrained by the school's cost-driven directive to use as much of the existing system as possible. When the school district later sued the architect for roofing problems, the architect cross-complained against the engineer, claiming that the roof problems were the result of high humidity. Because the engineer's contract contained what amounted to a warranty that humidity levels of 60% would be maintained, a level that was not achievable given the constraints, the engineer paid \$300,000.

Mandatory arbitrator

A state department of transportation (DOT) made an \$800,000 claim against a civil engineer, alleging unsafe guardrail design. The claim was impossible to settle because the engineer's contract with the DOT required that the DOT manager act as the arbitrator on any claim. Despite appeals to the court, the court upheld the requirement, stating that the engineer knew the provision was there when he signed the contract. The claim settled for the engineer's policy limits despite the engineer's defense that the DOT assumed full responsibility when it changed the engineer's design to a less expensive one.

Ambiguous contract terms

A city retained a landscape architect to design a park. Although it was clear that the landscape architect's specifications were ignored during construction, a dispute arose regarding her on-site responsibilities. The city argued that she was to be on site on a daily basis. The landscape architect understood her responsibility to be on site only during actual planting. The ambiguous contract language made the claim difficult to defend and resulted in a claim settlement by the landscape architect of \$625,000 plus \$82,500 in expenses.

Clear scope of services

A structural engineer was paid a nominal fee to inspect a retaining wall. His scope of services merely stated, "provide all necessary structural engineering services." Several years later, the property owner, getting ready to sell the property, discovered seismic issues with an existing building. His attorney, in reviewing the property owner's records, found the structural engineering agreement that promised to "provide all necessary structural engineering services." The attorney sent a letter accusing the engineer of failing to detect the seismic issues. Although this claim was eventually closed without a payment, the engineer would have benefited from an agreement that related to the specific services he was going to provide regarding only the retaining wall.

Risk management guidance

Well-written contracts can help firms manage risk. However, contracts that unfairly shift risks to a party that cannot control those risks can be a source of claims for design professionals. It is important that design professionals evaluate their professional services agreement to identify sources of potential risks and develop an appropriate response.

Factors to consider when evaluating a professional services agreement include:

- having a clear scope of services;
- balancing responsibility and authority;
- having clear payment terms;
- having a clear and equitable termination provision;
- having an equitable dispute resolution provision; and
- balancing risk and reward.

For more information on factors to consider when evaluating your contract, please refer to the contract section of the [Risk Management Matrix on page 66](#).

Tools to help identify risks

Risk management matrix

Suggestions for using the matrix

Why use a risk management matrix? The risk management professionals at Victor and CNA believe that a matrix provides you with a systematic approach to analyzing and assessing risks. This matrix is designed to help you identify and quantify risks and then describe the techniques available to manage those risks. When properly implemented, a matrix can help individual members of the same firm address risk management from a common perspective.

Completing the matrix

The basic structure of the matrix corresponds to the fundamental four-part approach to risk management: identification, assessment, response, and control.

Each title box identifies the basic categories of risk inherent in most projects: client, project, consultants, contractor, other parties, fees, your firm, and contracts. Client-related issues are identified and assessed first because the majority of claims (more than 60% each year) are brought by clients.

The bold subtitles identify specific types of issues within each broad category. We have identified some of the more risk-intensive issues—in other words, those previously demonstrated to start or aggravate claims. This matrix can be customized for individual firms and for each project. The description under the subtitle contains details on the issues we have defined.

Step 1: Assessment

Moving to the first column, risk is first assessed quantitatively. We think it will be beneficial to rank each risk identified on a scale from 1 to 10—1 signifying a very low-risk issue and 10 signifying a very high-risk issue. Using the numeric scale should enable a summary of the intensity of the risk when analyzing the project as a whole because risk intensity “scores” from each category can be added up. However, please feel free to develop your own system—perhaps a simpler “low,” “medium,” and “high” scale. Over time, you will find the rating system that works best for you.

Step 2: Firm analysis

The second column permits you to take the risk assessment further. We believe the best use of this column is to view it as an opportunity to clarify your response in the preceding column by adding any notes, questions, or concerns you may have about each issue. Few issues are simple enough to be categorized effectively using only a quantitative scale.

Step 3: Response

The third and last column is probably the most important because it is here that you determine how to respond to each of the risks previously identified and assessed. Risk management strategies you might employ include:

- following your firm’s policy to concentrate on specific project types to garner expertise;
- seeking repeat clients with whom you have already established a rapport;
- creating a system of effectively communicating with your client on a regular basis; and
- consistently documenting that communication to confirm your mutual understanding in writing.



Some of the information you will need to complete the matrix may be unavailable in its entirety as you begin to consider undertaking a new project. However, the matrix is designed to facilitate the fourth step of risk management: control. The matrix can be updated and reassessed as the project progresses.

Step 4: Overall assessment

There are summary lines (“Overall assessment”) within each broad category of risk identified. These lines permit two types of analysis. First, you may determine after looking at the first category or two that a project is simply too risky—even with all of the risk management tools available to you, you cannot find a way to effectively manage the risks. If you find this to be the case, your best risk management strategy is to avoid the project altogether. The other reason for the individual summary lines is that once you have completed the entire matrix, you will be able to go back and assess which aspects of the project are most risky. This will help you in devising your overall risk management strategy.

The final step in completing this matrix is to carry each of the summary lines down to the last section, “Overall assessment.” This allows you to have a clear, concise picture of the risks associated with the project. Your final analysis can be entered in the line labeled “Result.” Then, based on this final analysis, you can complete the “Recommendation” section.

Step 5: Recommendation

The “Recommendation” section is analogous to a traffic light:

- **“Proceed” is a green light**—this project should go smoothly as long as you follow the risk management strategies you have defined.
- **“Proceed with Reservation(s)” is a yellow light**—in this case, you have some concerns, but no clear plan yet for addressing these concerns. This may happen because you do not have enough information to effectively complete the matrix. You have two options: (1) obtain the needed information or (2) establish appropriate contingencies to assess and manage the risks as the project progresses.
- **“Proceed Only with Change(s)” is another yellow light**—in this case there are a few issues that concern you, but these can be addressed with a few changes. You can check these recommended changes off right on the matrix as they are made.
- **“Do Not Proceed” is a red light**—there are too many risks or not enough strategies to manage the risks to consider contracting for this project.

We hope this matrix provides you with a helpful tool in managing your firm’s risks. You can refine it and update it over time to make it most useful to you. Remember: firms that tend to profit the most are firms that learn to most effectively manage their risks.

CLIENT	QUANTITATIVE	QUALITATIVE	RISK RESPONSE
1. Financial strength: Will the client be able to afford your firm's services? The project? You may be able to obtain a dun & bradstreet or other financial report on your client to help you assess its financial strength.			
2. Clear project objectives: Are the client's objectives for the project clear? It may be prudent to assist the client in defining objectives to avoid "shooting at a moving target" later.			
3. Experience with project type: Is the client familiar with the construction process in general? This type of project specifically? You have probably already found that some clients require more attention than others.			
4. Experience with your firm: Is this a repeat client with whom you have had an opportunity to establish a general rapport and comfort level regarding the construction process?			
5. Claims history: Does this client have a reputation for being difficult to work with or for making claims against design professionals? Investigating how the client has handled other projects or business disputes can give you a feel for how cooperative the client may be.			
6. Single decisive decision maker: Clients that comprise a committee (school boards, homeowners associations, civic or religious groups, or even a couple) can be troublesome unless a single decisive decision maker is appointed.			
7. Attitude toward project and you: Are the client's expectations realistic? Do you have a good feeling about the client? Are there open lines of communication between the two of you?			
8. Other			
Overall client assessment			

PROJECT	QUANTITATIVE	QUALITATIVE	RISK RESPONSE
1. Project type: Certain project types have more risks than others. Residential, particularly condo projects, large public-use centers, and land/site development projects bring about the highest number of claims.			
2. Project size and duration: Does the size or duration of the project pose additional risks? In general, the larger the project or the longer its duration, the greater the risk will be.			
3. Adequate financing: Does the client have adequate funding or is it attainable? How does the client anticipate managing cash flow?			
4. Design complexity: Is your firm capable of managing the required complexity of the design?			
5. Construction complexity: Is the project team capable of managing the complexity of the construction?			
6. Unique requirements: Are there unique project requirements that could pose more risk? For example, is it a new or state-of-the-art project?			
7. Scope of services: Will you be hired to provide the full scope of services you think is needed for the project? Will you be providing at least some construction phase services? Often, your presence at the construction site can help mitigate potential problems.			
8. Schedule: Are there particular scheduling issues, such as meeting a developer's projections for selling the property, that may increase the risk? Is the overall project timeframe adequate?			

PROJECT	QUANTITATIVE	QUALITATIVE	RISK RESPONSE
9. New products and technologies: Will new products or technologies be required or expected in the design and construction of the project? Have these products or technologies been adequately researched and tested?			
10. Delivery mode: Are you comfortable with the mode of project delivery (design-bid-build, design-build, etc.)? Have the roles and responsibilities of the parties been adequately defined?			
11. Geographic considerations: Are there geographic considerations (e.g., earthquakes, hurricanes, mudslides, freezing temperatures, etc.) that may increase the risk?			
12. Environmental concerns: Are there environmental issues that you know or suspect may arise in the course of the project? Is the project team prepared to address these issues?			
13. User attributes: Is this project the type from which users may generate future claims? Is there a likelihood of dissatisfied end-users? Are class action lawsuits possible?			
14. Community sensitivity: Is there any perceived opposition or sensitivity in the community that could pose problems?			
15. Other			
Overall project assessment			

CONSULTANTS	QUANTITATIVE	QUALITATIVE	RISK RESPONSE
1. Availability of qualified consultants: Are there qualified consultants available when you will need their services?			
2. Your experience with consultants: Does your firm have experience with these consultants? Are these consultants with whom your firm has or can develop compatible working relationships?			
3. Reputation: Do these consultants have strong, positive reputations?			
4. Adequately insured: Are these consultants adequately insured? The gap created by an uninsured or under-insured consultant most likely will have to be filled by your firm's insurance.			
5. Capacity: Do these consultants have the needed capacity to undertake the project?			
6. Compatible systems: Are your firm's systems compatible with those of your consultants?			
7. Shared values: Do your consultants share the same values as your firm? How much time will you have to devote to team building?			
8. Client-controlled: Are you being asked to work with consultants selected by the client? Will you have coordination responsibilities for consultants not under your control?			
9. Other			
Overall consultants assessment			

CONTRACTOR*	QUANTITATIVE	QUALITATIVE	RISK RESPONSE
1. Prequalifications list: Will some contractors be prequalified? If so, in your professional opinion, are there acceptable considerations in formulating the list of prequalified firms?			
2. Bidding process: How will the bidding process be undertaken? How will the bid(s) be awarded?			
3. Your involvement in selection: Do you believe you will have sufficient input to assist the client in reviewing the bids and selecting the contractor?			
4. Adequate bid: Is the contractor bidding responsibly?			
5. Adequate financial strength: Has the contractor demonstrated adequate financial strength to procure the necessary bonds and to complete the project?			
6. Experience with project type: Does the contractor have sufficient experience with this project type and the anticipated site conditions?			
7. Other			
Overall contractor assessment			

*If you do not know initially who the Contractor is, it is essential to complete this analysis once the Contractor is known.

OTHER PARTIES	QUANTITATIVE	QUALITATIVE	RISK RESPONSE
1. Construction manager: Will there be a construction manager? Has the construction manager's role been adequately defined? Is the construction manager sufficiently qualified to undertake this role?			
2. Special consultants: Are any special (e.g., geotechnical or abatement) consultants required? To the best of your knowledge, are these consultants capable? Are you accepting vicarious liability for these consultants? If so, are you appropriately compensated and protected?			
3. Other			
Overall other parties assessment			

FEES	QUANTITATIVE	QUALITATIVE	RISK RESPONSE
1. Adequate fees: Are your fees adequate for the required services? Will they cover costs and provide a profit?			
2. Additional services: Are there fee provisions for contingent additional services?			
3. Other			
Overall fees assessment			

YOUR FIRM	QUANTITATIVE	QUALITATIVE	RISK RESPONSE
1. Capacity: Does your firm have the capacity to undertake the project? If you do not have a sufficient number of qualified employees, can you supplement your existing staff by hiring additional employees or consultants?			
2. Experience with project type: Does your firm—and do the available project team members—have sufficient positive experience with this project type? Under similar conditions?			
3. Other			
Overall your firm assessment			



CONTRACT	QUANTITATIVE	QUALITATIVE	RISK RESPONSE
1. Clear scope of services: Does the proposed professional services agreement provide a clear and sufficiently detailed scope of services?			
2. Balance of responsibility and authority: Do all of the proposed contract forms (e.g., client/prime consultant, prime consultant/subconsultant, client/general contractor) establish clear and distinct responsibilities balanced by the authority to carry out those responsibilities?			
3. Clear payment terms: Are the payment terms clearly delineated, including terms for additional services and reimbursable expenses?			
4. Clear, equitable termination provision: Is there a provision that establishes fair terms for terminating the contract should that become necessary?			
5. Equitable dispute resolution provision: Does the contract contain dispute resolution provisions (e.g., good faith negotiation or mediation) that are fair and balanced?			
6. Balance of risks and rewards: Does the overall contract fairly allocate risks and rewards? Imbalances may be addressed by negotiating well-drafted indemnity, limitation of liability, or waiver of damages clauses.			
7. Insurance issues: Are there provisions that create insurance coverage questions or uninsurable professional or general liability exposures? You may wish to ask a representative of your insurance carrier to review any questionable provisions.			
8. Other			
Overall contract assessment			

OVERALL	QUANTITATIVE	QUALITATIVE	RISK RESPONSE
1. Client			
2. Project			
3. Consultants			
4. Contractor			
5. Other parties			
6. Fees			
7. Your firm			
8. Contract			
9. Result			

RECOMMENDATION

☐ **Proceed**

☐ **Proceed with reservations(s)**

☐ **Proceed only with change(s)**

☐ **Do not proceed**

Preparer's signature:

Date:

Victor Risk Advisory

We provide a wide range of resources through Victor Risk Advisory that can be used to help firms identify and manage risks. We have highlighted a few of these resources that can supplement the Risk Management Matrix and the claims information found in this publication.

Victor Risk Advisory includes our [comprehensive continuing education program](#). The e-learning education component provides accredited coursework on risk management topics for design professionals of all types and design firms of all sizes. In addition, the courses have been packaged to address the learning needs of these four roles within a firm:

1. Associate
2. Project design professional
3. Project manager
4. Senior manager

Each role has a dedicated curriculum with accredited learning units that can be completed in a timeframe designated by firm leadership. Courses are accredited by national and state regulatory bodies to meet CE/PDH requirements (hours vary by state). Any and all courses included within the Victor recommended curricula can be accessed and used individually as firms see fit.



What it does for you

Firms spend considerable time, money, and resources defending and managing claims. Firms can reduce these costs and mitigate their risks with Victor Risk Advisory. It was created in response to requests from our insureds that embedding stronger risk management practices into firm culture was challenging and an easy solution was needed. Victor Risk Advisory responds to this need by helping firms:

- Reduce the cost and effort of providing risk management training to employees
- Expedite onboarding/training for new employees
- Offer on-demand educational platform
- Support employees' needs to optimize tracking and reporting of CE credits
- Avoid and mitigate liability claims
- Improve project efficiency, performance, and client satisfaction
- Maintain a strong financial outlook by managing emerging business risks
- Optimize strategic planning with sound risk management protocols
- Protect reputation and brand

Save money

Victor Risk Advisory can save firms money in several ways:

- **\$2,300 continuing education savings:** up to \$2,300 per licensed employee in course offerings, plus savings on time, travel, and related expenses
- **Potential premium savings:** while subject to underwriting criteria and state guidelines, some firms may earn premium credits through their continuing education efforts
- **Long-term savings:** embedded risk management culture will lead to fewer claims and long-term premium stability

Benchmarking information and claims/case studies

Throughout this publication, we have discussed eight different factors to consider when evaluating potential risks. For each of these factors, we have included case scenarios to illustrate the importance of evaluating that factor in terms of identifying potential risks. Where appropriate, we have also included graphs to help firms better understand when potential risks may occur and to provide a benchmark against peer firms.

Victor's [benchmarking and claims/case studies](#) also serve as valuable risk management resources. Victor's benchmarking studies contain information on smaller and larger architectural and engineering firms in the Victor programs as well as information on a national and regional level.

Victor's library of claims/case studies includes information on many different project types, services provided, and studies used for various legislative efforts.

Contract review tools

This publication noted that the review of a professional services agreement is an important factor in identifying potential risks. Victor has published a variety of resources to help policyholders identify potential areas of risk in their professional services agreements.

Contract Sifter

This market-changing offering combines Victor's insurance coverage and risk management expertise with Legal Sifter's artificial intelligence-powered contract review software.

[Victor Contract Sifter](#) provides you with a fast and easy way to spot potential coverage issues and receive actionable guidance on common issues that relate to insurability in professional services agreements. Victor is leveraging AI to expand the accessibility of its contract review services and to provide you with access to real-time and practical risk management guidance.

Managing Risk Through Contract Language

This [contract guide](#) helps policyholders understand underlying legal and practice management concerns, and equips the design professional with rational arguments and analytical tools to use in developing and negotiating professional services agreements.

Model Provisions Guide

A quick reference tool, our [Model Provisions Guide](#) will help you review and negotiate common risk allocation issues in contracts.

Intro to Professional Liability Insurance

[Intro to Professional Liability Insurance](#) is meant to help design professionals educate their clients on the basics of professional liability coverage.

Staking Out Your Future: Managing Professional Liability Exposure

[This resource](#), published in conjunction with the American Congress on Surveying and Mapping (ACSM), is meant to encourage surveyors to take advantage of the professional services agreement as the most effective tool in risk management. It covers ALTA/ACSM standards and provides a sample contract for professional surveying services.



About Victor

Victor Insurance Managers LLC is the world's largest managing general underwriter with locations in the US, Canada, UK, Netherlands, Germany, Italy, and Australia. It handles more than \$3.7 billion USD in premium on behalf of numerous insurance carriers, through a large network of more than 20,000 active insurance agents and brokers. With deep, specialized underwriting expertise, the company provides a wide range of insurance coverage – from specialty property and casualty and professional liability insurance to group and retiree benefits. Victor is committed to building on 65-plus years of experience to develop products that address risk in new and evolving areas. For more information, visit victorinsurance.com.

Visit Victor Risk Advisory to learn more.

This document is for illustrative purposes only and is not a contract. It is intended to provide a general overview of the program described. Please remember only the insurance policy can give actual terms, coverage, amounts, conditions and exclusions. Program availability and coverage are subject to individual underwriting criteria.

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