

Can the Spearin Doctrine Survive in a Design-Build World: Who Bears Responsibility for Hybrid Specifications?

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From office buildings to power plants to toll roads to hospitals, design-build construction continues to be a fast-rising wave in project delivery. Federal, state, and local agencies are increasing substantially their use of design-build procurement on public works projects, as legislative bodies nationwide pass more and more laws authorizing its use in a myriad of contexts.² And the surge to design-build continues on private works and international projects. What effect does this method have on the allocation of risks among contractors, owners, and architects/engineers?

On design-build projects, most owners and contractors generally assume that the risk of defects in specifications always falls on the design-build contractor. However, this assumption may not apply if the specifications are hybrids, or the owner has retained too much control over design of the project. This article discusses the impact of the design-build procurement method on the parties' responsibilities for accurate specifications. In reviewing several recent decisions involving design defects in the design-build contracting context, as well as decisions in other contexts involving the traditional application of the *Spearin* Doctrine, it attempts to describe a reasonable methodology for determining whether the responsibility for defects should fall on the design-builder or the owner. Finally, it analyzes related issues concerning commercial impracticability and the duty to investigate conditions.

Of course, under the more traditional model of construction

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²According to a leading commentator, construction industry professionals have estimated that design-build will eventually eclipse the more traditional project delivery approaches and account for over half of the U.S. construction market by 2015. See 2 Bruner & O'Connor on Construction Law, § 6.15 (2006); see also Quatman, *Design-Build for the Design Professional*, Ch. 1 (2001).

contracting, the owner/project sponsor hires an architect/engineering firm to design the project and prepare detailed drawings and specifications. Drawings provide the graphic portrayal of the design, setting forth the description, location, and dimensions of the project. Specifications provide a written description of the project that complements the graphic drawings, describing the physical properties and performance characteristics of the materials to be used in the project. Such detailed design documents are often termed "prescriptive specifications" or "design specifications." The owner incorporates these drawings and specifications into the construction contract and publishes them to solicit bids from contractors for the project. United States courts impose upon owners a requirement that the design specifications be clear and certain.³ In addition, most states recognize an implied warranty of specification suitability which places upon the owner the responsibility for non-performance if the specifications are defective.⁴

In contrast, on a design-build project, the owner/developer typically provides general design criteria and desired performance standards. These are commonly referred to as "performance specifications." But, the detailed construction plans and specifications are generally authored by the design-build contractor, not the owner's architect/engineer. Accordingly, the implied warranty of specifications will not ordinarily run from the owner to the design-build contractor. Instead, the design-build contractor bears the risk of non-performance if the specifications are defective. However, some contracts contain both design and performance specifications. An owner may issue design specifications for some elements of the project, and performance specifications for others. In this "hybrid" scenario, the implied warranty of specification suitability could hold the owner responsible for its design specifications, but not for those created by the design-build contractor based on the performance specifications. Alternatively, the specifications furnished by the owner, even if purported to be performance specifications, may impose such specific requirements in

³Blake Const. Co., Inc. v. U.S., 987 F.2d 743, 745, 38 Cont. Cas. Fed. (CCH) P 76478 (Fed. Cir. 1993); Baldwin-Lima-Hamilton Corp. v. Superior Court In and For City and County of San Francisco, 208 Cal. App. 2d 803, 821, 25 Cal. Rptr. 798 (1st Dist. 1962).

⁴U.S. v. Spearin, 54 Ct. Cl. 187, 248 U.S. 132, 39 S. Ct. 59, 63 L. Ed. 166, 42 Cont. Cas. Fed. (CCH) P 77225 (1918). See, e.g., Fruin-Colnon Corp., Traylor Bros., Inc. and Onyx Const. & Equipment, Inc. v. Niagara Frontier Transp. Authority, 180 A.D.2d 222, 228, 585 N.Y.S.2d 248, 253, (4th Dep't 1992); Souza & McCue Const. Co. v. Superior Court of San Benito County, 57 Cal. 2d 508, 20 Cal. Rptr. 634, 370 P.2d 338 (1962).

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terms of components, dimensions, material types or qualities, or other criteria, that the design-builder's reliance upon them in preparing its design may be viewed as justified even if defects result from such requirements. The increasing use of design-build procurement, and in general the furnishing by project owners of specifications which are a composite of both "design" and "performance" elements, muddy the application of the *Spearin* and *Blake* rules.

The issues surrounding responsibility for defects under the design-build approach are slowly working their way through the courts. There can be little doubt that in the years to come, a fuller body of decisional law will develop in the appellate courts of various states as well as the federal courts. As of right now, however, the most instructive cases on this subject come from the Armed Services Board of Contract Appeals (ASBCA) and the Veteran's Affairs Board of Contract Appeals (VABCA), as these departments have often used design-build contractors for their needs.

As a general rule, the ASBCA and VABCA have applied standard contract analysis tools to determine what the parties "reasonably believed" regarding responsibility and liability for the errors in question. Of particular importance in that regard is the level of specificity for any design specifications supplied by the government in the bid-solicitation and contractual documentation. These several cases provide a model analysis, based upon traditional contract principles, that civil courts may follow when faced with the difficult questions of liability surrounding specifications that are furnished by project owners to design-build contractors.

I. Implied Warranty of Specification Suitability: "the Spearin Doctrine"

Courts in the United States have long recognized an implied warranty that plans and specifications issued by an owner of a construction project must be suitable for the purpose intended. The leading U.S. Supreme Court case on the subject, *United States v. Spearin*,⁵ involved cross-claims by the government owner and contractor resulting from the failure of a sewer line built to specifications, but determined to be inadequate to handle the actual flows and tides encountered. The sewer failed to function because of an existing dam in an adjoining line which was unknown both to the government and the contractor. The

⁵U.S. v. Spearin, 54 Ct. Cl. 187, 248 U.S. 132, 39 S. Ct. 59, 63 L. Ed. 166, 42 Cont. Cas. Fed. (CCH) P 77225 (1918).

Supreme Court excused the contractor's non-completion and affirmed recovery for extra costs associated with the failure, holding: "[T]he insertion of the [contract] articles presenting the character, dimensions and location of the sewer imparted a warranty that, if the specifications were complied with, the sewer would be adequate The duty to check plans does not impose the obligation to pass upon their adequacy to accomplish the purpose in view."⁶ The so-called "*Spearin* Doctrine" has been widely followed.⁷

While some cases have based the implied warranty on the owner's presumed "superior knowledge" of the work conditions, it is more commonly based on the simple rationale that the party preparing the specifications bears the risk of its inaccuracy.⁸ The implied warranty attaches to owner-furnished specifications even though the owner does not actually prepare the specifications.⁹ Thus, the owner/developer becomes, in effect, the guarantor of the plans and specifications prepared by its architect/engineer.

The implied warranty of specifications suitability covers many aspects of the adequacy of the specifications. Of particular relevance here, the owner has been held to warrant that, if the contractor follows the details specified, the desired performance objective will be achieved.¹⁰ If there is a breach of the implied warranty of specification suitability, the contractor will not be held responsible for the extra cost of providing a functional product that requires deviation from the specification.¹¹ Accordingly, a contractor will not be assessed damage for the owner's cost to

⁶248 U.S. at 137.

⁷See, e.g., *Fruin-Colnon Corp., Traylor Bros., Inc. and Onyx Const. & Equipment, Inc. v. Niagara Frontier Transp. Authority*, 180 A.D.2d 222, 585 N.Y.S.2d 248 (4th Dep't 1992); *Souza & McCue Const. Co. v. Superior Court of San Benito County*, 57 Cal. 2d 508, 20 Cal. Rptr. 634, 370 P.2d 338 (1962). See also, state-law and federal authorities collected in Richard J. Bednar, et al., *Construction Contracting*, at 429a-429f (George Washington University, 1991).

⁸*Construction Contracting*, supra note 7, at 427-428.

⁹*Construction Contracting*, supra note 7, at 428.

¹⁰*U.S. v. Spearin*, 54 Ct. Cl. 187, 248 U.S. 132, 39 S. Ct. 59, 63 L. Ed. 166, 42 Cont. Cas. Fed. (CCH) P 77225 (1918).

¹¹*J. L. Simmons Co. v. U. S.*, 188 Ct. Cl. 684, 412 F.2d 1360 (1969) (contractor entitled to recover costs incurred in engineering a solution to the defective design); *Fruin-Colnon Corp., Traylor Bros., Inc. and Onyx Const. & Equipment, Inc. v. Niagara Frontier Transp. Authority*, 180 A.D.2d 222, 585 N.Y.S.2d 248 (4th Dep't 1992).

upgrade the work to achieve suitability for its intended purpose.¹² If, for example, the project plans and specifications fail to detail a plumbing system sufficient to satisfy applicable building codes, then the owner would be obligated to pay for the extra work required to upgrade the system to comply with the building code.

II. Allocating Responsibility for Defects in the Context of Design-Build and Hybrid Specifications

Not all specifications are the subject of the implied warranty. While earlier cases engaged in a detailed examination of the transaction to ascertain the intent of the parties with respect to allocation of risk for defective design¹³ involving the government's misleading specifications for the manufacture of a product, a more recent trend has been to simply categorize the specification in question as either a design or performance specification, implying the warranty with respect to the former but not the latter.

In this way, the court's characterization of a given specification as a design or performance specification determines whether the implied warranty attaches, and essentially, which party will then prevail on the merits. Historically, the federal courts had conducted a fact-intensive, expectations of the parties-based analysis to determine whether the implied warranty arose in a specific case. The more recent trend of many courts, however, has moved toward an almost categorical labeling of the specification in question as either a design or performance specification based on only a facial analysis of the specification as written in the contract—without reference to the overall circumstances. This modern trend, or more specifically, the superficiality of the analysis it embodies, has troubled some commentators who have argued that an analysis based on a facial reading of the specification in isolation ignores the expectations of the parties, and consequently, is a much less desirable rule.¹⁴ The formulaic design vs. performance specification analysis, however, is firmly entrenched in the federal case law and the law of most states.

The *Spearin* design vs. performance specification dichotomy,

¹²U.S. v. *Spearin*, 54 Ct. Cl. 187, 248 U.S. 132, 39 S. Ct. 59, 63 L. Ed. 166, 42 Cont. Cas. Fed. (CCH) P 77225 (1918).

¹³See, e.g., *Helene Curtis Industries, Inc. v. U. S.*, 160 Ct. Cl. 437, 312 F.2d 774 (1963).

¹⁴See, *The Spearin Doctrine: The False Dichotomy Between Design and Performance Specifications*, 25 Pub. Con. L.J. 47 (1995). The authors argue that the court's methodology of defining whether the specification is a "performance" or "design" specification is artificial and thus devoid of meaning, and conclude that "the categorical analysis has created a definitional quagmire for the courts and contracting parties." 25 Pub. Con. L.J. at 55.

despite its shortcomings, has been applied to some cases in the design-build context. In one such case, *White v. Edsall Const. Co. Inc.*,¹⁵ the Federal Circuit affirmed the ASBCA's decision of *In re Edsall Construction*.¹⁶ In the initial decision, the board had determined that the government, in supplying initial drawings of two hangar doors, had warranted that the door's design would meet the contract's performance specifications.¹⁷ When the door's design failed to meet the requirements, the design-build contractor (Edsall) pursued a claim for increased costs brought on by its reliance on the Army's initial specifications.¹⁸ Specifically, the initial drawings of the door, provided by the government for the purposes of bidding, showed the 21,000 pound doors having cables attached at three "pick points."¹⁹ In reality, the door could only functioned with cables attached to four "pick points," a fact discovered by the contractor after it won the bid.²⁰

The government's main argument on this appeal from the ASBCA was that it had disclaimed any implied warranty by stating on the drawing that "Canopy door details, arrangements, loads, attachments, supports, brackets, hardware etc. must be verified by the contractor prior to bidding."²¹ The government argued that the contractor was obligated to investigate the door design and, therefore, it bore the risk that the initial design was flawed.²²

The Federal Circuit rejected this argument, relying on the *Spearin* decision. In particular, the court noted that the drawings were impliedly warranting that a door design with three "pick points" would meet the performance specifications and the "general disclaimer" put onto the drawings was inadequate to shift the risk of inadequate design to the contractor.²³ While a contractor was still obligated to investigate "patent" ambiguities, these

¹⁵*White v. Edsall Const. Co. Inc.*, 296 F.3d 1081 (Fed. Cir. 2002).

¹⁶*In re Edsall Const. Co., Inc.*, A.S.B.C.A. No. 51787, 01-2 B.C.A. (CCH) ¶ 31425, 2001 WL 583470 (Armed Serv. B.C.A. 2001), *aff'd*, 296 F.3d 1081 (Fed. Cir. 2002).

¹⁷2001 WL 583470 at 6-7.

¹⁸*White v. Edsall Const. Co., Inc.*, 296 F.3d 1081, 1084 (Fed. Cir. 2002).

¹⁹*White*, 296 F.3d at 1084.

²⁰*White*, 296 F.3d at 1084.

²¹*White*, 296 F.3d at 1083.

²²*White*, 296 F.3d at 1083.

²³*White*, 296 F.3d at 1085.

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drawings did not disclose any such faults on their face.²⁴ Consequently, the contractor did not bear the risk that the initial design was incorrect.²⁵

Furthermore, the contract itself suggested that the door's design was a "design requirement rather than merely a performance specification" because any change in the design required the government's approval.²⁶ Thus, through contract interpretation, the Federal Circuit held that the government warranted the three "pick point" design, and was, therefore, responsible for the increased costs when that design did not function. *White* thus presents what the court regarded as a very straightforward case where the owner hired a contractor and furnished it faulty prescriptive specifications, thereby making the owner liable for the additional costs incurred by the contractor in designing and building a system that worked. The determining factors were the specificity of the drawings and the requirement that any changes to that design be approved by the owner.

However, as noted above, the distinction between design specifications and performance specifications is not always clear, and many specifications are hybrids. The general consensus of authority in the conventional design-bid-build context is that, where the owner designates particular components, dimensions, material types or qualities, or other details, the owner impliedly warrants those details.²⁷ On the other hand, where the specifications simply set forth the performance characteristics of the end product and leave to the contractor how to achieve those results, no implied warranty is said to arise.²⁸ As one commentator has summarized, "liability follows from design responsibility."²⁹

²⁴*White*, 296 F.3d at 1085.

²⁵The court interpreted the disclaimer as stating the contractor was responsible for verifying the door's "details" (like the door's weight or dimensions), but not the door's design. Thus, if these details were defective, the contractor would be responsible for costs associated with its failure to verify these particular elements of the design.

²⁶*White v. Edsall Const. Co., Inc.*, 296 F.3d 1081, 1085 (Fed. Cir. 2002).

²⁷*Construction Contracting*, supra note 7, at 432-433.

²⁸*Construction Contracting*, supra note 7, at 434; *Stuyvesant Dredging Co. v. U.S.*, 834 F.2d 1576, 34 Cont. Cas. Fed. (CCH) P 75414 (Fed. Cir. 1987). In *Stuyvesant*, affirming the Claims Court's holding that a technical provision of a dredging contract relating to the average density of materials to be removed was not a design specification, the Federal Circuit summarized as follows: "Design specifications explicitly state how the contract is to be performed and permit no deviations. Performance specifications, on the other hand, specify the results to be obtained, and leave it to the contractor to determine how to achieve

This was the approach adopted by the VABCA in another design-build case, *In re Donahoe Electric, Inc.*³⁰ In this case, the government specified that a particular machine would be used in a hospital and stated that a boiler of a particular strength would be able to operate that machine. A boiler of that strength, however, could not run the machine as intended, and the VABCA ruled that the government created an "implied warranty of specification suitability" regarding the strength of the boiler required by specifying the output of an acceptable boiler.³¹ Even though the particular boiler in the preliminary drawings was not a "prescriptive" specification (the contractor did not need to use that brand of boiler, just one that matched its output strength), the VABCA determined that it was entirely reasonable for the contractor to rely upon those specifications (as long as it lacked actual knowledge that those figures were inadequate) in selecting its own boiler, thereby imposing liability for the additional expenditure upon the government. In reaching this decision, the VABCA stated:

A properly written and administered design-build contract transfers the risk of design insufficiency from the VA to the design-builder. The owner is shielded when the design results in cost overruns or does not work . . . There are two stages in design-build contracting. First, the design-build team must determine from the conceptual drawings in the RFP, if any, and, more importantly, from the specifications, if any, what it will cost to design and build the project. Specifications included in a design-build contract, however, to the extent specific requirements, quantities and sizes are set forth in those specifications, place the risk of design deficiencies on the owner. Thus, the VA reassumed the risk and warranted the accuracy of the specifications with regard to the 196 LB/hr boiler output . . . The VA could simply have stated, 'install the Steris 3400 GFP sterilizer and a boiler to operate it.' Such a specification would have made Donahue responsible for choosing a boiler that would properly operate the sterilizer.³²

The board noted that the "Government denies liability on the ground that the Contract was a design-build contract, thus mak-

those results. *J. L. Simmons Co. v. U. S.*, 188 Ct. Cl. 684, 412 F.2d 1360, 1362, (1969). Detailed design specifications contain an implied warranty that if they are followed, an acceptable result will be produced."

²⁹Paul D'Aloisio, *The Design Responsibility and Liability of Government Contracts*, 22 Pub. Con. L.J. 515, 567 (1993).

³⁰*In re Donahue Elec., Inc.*, V.A.B.C.A. No. 6618, 03-1 B.C.A. (CCH) ¶ 32129, 2002 WL 31927907 (Veterans Admin. B.C.A. 2002).

³¹2002 WL 31927907 at 12.

³²2002 WL 31927907 at 12.

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ing the Contractor entirely responsible for properly sizing the boiler." It related further that the government "argues that [contractor] had no right to rely on the VA's 50% drawings." The board rejected this argument as overly simplistic, observing that "[at] a minimum, the drawings were provided as guidance/concepts for the design-build bidders" and that a note placed on the drawings that they were "information only" was not consistent with that.³³ For example, assume a hypothetical office building with hybrid specifications which provide detailed architectural and structural plans, but specify that HVAC, electrical, and fire safety systems will be done on a design-build basis by the contractor. In such a case, the division of responsibility for accurate design is fairly clear. But, what if the owner-prescribed architectural/structural design does not allow sufficient space in the building walls and ceilings for the HVAC, electrical, and fire safety systems? Must the design-build contractor cure the defect at its expense?

In cases like this where it is difficult to pigeon-hole the specification into the "design" or "performance" categories, other factors and contract interpretation devices can be examined to determine the intention of the parties regarding allocation of design liability. Those other factors include actions and discussions relating to contract formation, including examination of the completeness of the contract plans; the circumstances surrounding the bidding; the amount of development and testing the contractor is expected to perform; the contractor's representations regarding its expertise; the terms of the contract; and the knowledge regarding design information that each party brings to the contract. They also include the prior course of dealings between the parties, where applicable, as well as customs of the industry.³⁴

The strongest case for application of the warranty involves complete design by the owner; superior knowledge and/or expertise by the owner of site and other conditions; a relatively short period of time for contractors to review and evaluate the specifications; a contractor without represented design expertise; no provisions in the contract requiring actual design of the involved component by the contractor; and rigid control of and involvement by the owner in the construction process (e.g., approval of shop drawings, and unwillingness to accept changes in

³³2002 WL 31927907 at 12.

³⁴The Design Responsibility and Liability of Government Contracts, *supra* note 29, at 527-536.

design.) All of these factors tend to show that an owner intended to have control over and responsibility for the design. In a case where the owner did not retain control over the design, *Aleutian Constructor v. United States*, the Court of Claims held that a roofing specification was a performance specification because it gave the contractor substantial latitude in the roof design, observing that "[e]ven though a contract may contain some design specification, when a crucial element of a contract requires the contractor to use its own expertise and ingenuity, a *Spearin* warranty does not arise as to that element of the contract."³⁵

Thus in the hypothetical office building example above, which involved design-build of some but not all building systems, the implied warranty could be imposed on the design elements provided by the owner. Specifically, a court could consider the following factors: the owner hired an architect/engineer to provide architectural and structural plans; the A/E is an expert in the field; the owner issued detailed specifications and plans for the building spaces, walls and ceilings; and contractor did not design them. Therefore, under the implied warranty, the contractor should be entitled to rely on the accuracy of owner's design and should not be held liable for the incompatibility of the design-build systems, as long as the contractor followed the details specified by the owner.

In *AAB Joint Venture v. United States*,³⁶ the design-build contractor won an equitable adjustment claim for over \$900,000 after the court ruled that the government had provided defective specifications. The plaintiff was awarded the design-build contract for a military storage base in Israel.³⁷ Included in the bidding specifications from the government were technical requirements regarding the size of the stones that should be used as groundfill, as well as "performance specifications" regarding the density of the groundfill as measured by the standards of the American Association of State Highway and Transportation Officials (AASHTO).³⁸ After contract award, the contractor determined that the specifications could not produce the desired result and

³⁵ *Aleutian Constructors v. U.S.*, 24 Cl. Ct. 372, 379, 37 Cont. Cas. Fed. (CCH) P 76203, 1991 WL 211506 (1991). In so holding, the court stated: "Government contracts not uncommonly contain both design and performance specifications. [Citation omitted.] The application of a *Spearin* implied warranty of adequacy is appropriate when the particular contract specification in question most properly can be characterized as a design specification."

³⁶ *AAB Joint Venture v. U.S.*, 75 Fed. Cl. 414 (2007).

³⁷ *AAB Joint Venture*, 75 Fed. Cl. at 416.

³⁸ *AAB Joint Venture*, 75 Fed. Cl. at 417.

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brought suit seeking the additional \$900,000 dollars it expended to meet the AASHTO standards. Specifically, the contract stated that stones measuring six inches would be adequate to meet the AASHTO standards, but, in reality, the contractor needed to grind the stones down to less than three inches in order to meet the required density standards at a substantial cost it had not included in its bid.³⁹

In ruling in favor of the design-builder, the court first determined that the contract, reasonably interpreted, required that the plaintiff use the AASHTO standards.⁴⁰ The government argued that the AASHTO standards were merely "performance" specifications, and the plaintiff could have met a similar performance standard using the six-inch stones. The court rejected what it described as this "strained reading of the contract," stating:

The Court doubts that a reasonable contractor would understand the subtle distinctions proffered by Defendant and does not think it fair to require as much. The contractor should be able to rely on a reasonable interpretation of the contract. It is common practice in earthworks contracts to specify the density test to be used.⁴¹

Consequently, the design-builder was required to meet the AASHTO standards, using the AASHTO test to determine the required density of the groundfill.

After showing that using the AASHTO test was a required specification, the contractor then proved that the AASHTO standards could not be met given the material specifications for rock size.⁴² Thus, the court concluded that the government's specifications were defective, breaching "an implied warranty by the government that, when the contract contains design specifications, satisfactory contract performance will result if the contractor follows those specifications."⁴³ Since the contractor relied on the six-inch stone size to formulate its bid, the contractor was entitled to an equitable adjustment.⁴⁴

Thus, even though this was a design-build contract, the contractor could reasonably rely on the initial specifications from the government in formulating the bid. This case highlights once again that the hybrid situation arising when a design-build proj-

³⁹AAB Joint Venture, 75 Fed. Cl. at 425.

⁴⁰AAB Joint Venture, 75 Fed. Cl. at 426.

⁴¹AAB Joint Venture, 75 Fed. Cl. at 426.

⁴²AAB Joint Venture, 75 Fed. Cl. at 426.

⁴³AAB Joint Venture, 75 Fed. Cl. at 428.

⁴⁴AAB Joint Venture, 75 Fed. Cl. at 431.

ect includes detailed specifications can result in disputed responsibility for the consequences of unworkable designs. In reaching its judgment, the court relied on traditional contract interpretation, to determine the design-build contractor's and owner's reasonable expectations and applied the *Spearin* implied warranty to determine the contractor was entitled to an equitable adjustment.

In the case *Acquest Government Holdings U.S. Geological, LLC v. General Services Administration*,⁴⁵ before the Civilian Board of Contract Appeals (CBCA), the board denied summary judgment for both the design-build contractor and the government, finding that the contractual obligations were contradictory and impossible to resolve as a matter of law. At issue was a design-build-lease contract for a facility that included animal holding rooms.⁴⁶ When the facility was finished, these rooms lacked proper ventilation or heating systems. The contractor filed suit, claiming reimbursement for the additional \$936,000 it expended to make the animal holding rooms functional.⁴⁷

The main issue centered on the initial specifications provided by the government. As part of the bidding procedure, the government included drawings of the proposed facility, including the animal holding rooms. The government claimed these drawings were only "30% complete," whereas the design-build contractor argued that adhering to those drawings (upon which it based its bid) made reaching the performance specifications impossible.⁴⁸ Since its adherence to the drawing had, in fact, resulted in an unworkable facility, the question was whether the government had warranted those drawings or if it had successfully shifted the risk of the defective designs to the design-builder.

The Solicitation for Offers (SFO) stated that the included drawings were meant to show "design intent only" and should not be relied upon.⁴⁹ However, that same SFO also stated:

All offers shall meet the requirements of this SFO and associated schematic design drawings. Any proposed variances must be submitted with a specific description in writing with the offer. If the

⁴⁵ACQUEST GOVERNMENT HOLDINGS U.S. GEOLOGICAL, LLC, APPELLANT, v. GENERAL SERVICES ADMINISTRATION, RESPONDENT CBCA 439, 07-1 B.C.A. (CCH) ¶ 33576, 2007 WL 1498805 (U.S. Civilian BCA 2007).

⁴⁶2007 WL 1498805, at 1.

⁴⁷2007 WL 1498805, at 1.

⁴⁸2007 WL 1498805, at 2.

⁴⁹2007 WL 1498805, at 8.

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Government receives no variances, then the offer will be considered to meet all the requirements of the SFO and associated schematic.⁵⁰

Compounding the confusion, the design-build contractor's president submitted an affidavit stating that these drawings were "developed far beyond any previous design-build project he had worked on for the Government."⁵¹ The contractor argued that this meant that the government was warranting the 30% drawings and that the design-build contractor could rely on them in making its bid. Faced with this conflicting information, the court found that the contract was clearly ambiguous.

The court could not resolve the dispute on summary judgment, summarizing the arguments by stating: "Appellant contends that the specifications were purely design specifications, while respondent contends that the specifications were purely performance specifications."⁵² Given the ambiguity discussed above, the court noted that the "SFO is not a model of clarity," thus there was evidence in the record that supported both interpretations of the contract.⁵³ In particular, there was a "genuine dispute" over whether the contractor was at liberty to change the initial design in its subsequent drawing.⁵⁴

This case underscores the point that careful contract drafting is essential to the design-build approach. The ambiguity over whether something was a required element, or merely a suggested starting point, left the risk allocation uncertain, with both parties claiming they were not responsible for the unacceptable result. The hybrid model of design-build contracting, then, does not eliminate the need for precisely defined initial specifications and explicit directions for whether and how they are to be incorporated into the final design.

III. Contractor's Obligation to Investigate and Advise

Even when the implied warranty of specification suitability is deemed to arise, the contractor is not wholly immunized from defects in design. "Claims based upon breach of implied warranty of specification will not be successful if the contractor had actual

⁵⁰2007 WL 1498805, at 8.

⁵¹2007 WL 1498805, at 9.

⁵²2007 WL 1498805, at 10.

⁵³2007 WL 1498805, at 10.

⁵⁴2007 WL 1498805, at 11.

or constructive knowledge of the defects prior to award."⁵⁵ If the errors or omissions in the specification are sufficiently "patent" or "obvious," courts will find that the contractor should have known or discovered their existence and deny recovery for breach of the implied warranty.⁵⁶

On the other hand, the contractor is not normally under a duty to conduct an independent investigation of the adequacy of specifications.⁵⁷ Therefore, a contractor does not have a common law duty to conduct a diligent inquiry into the adequacy of the specifications to conform to any given site condition, but is only required to discover and notify the owner with respect to those errors or conditions that the contractor actually knew were defective or were so patent or obvious that the contractor should have known of the defects.⁵⁸

At least one design-build case pointed to the duty to investigate, as derived from a reasonable interpretation of the contract, to determine liability. In the *Lovering-Johnson Inc.*,⁵⁹ the Navy drafted preliminary drawings that included the size of the drainage pipes. The contractor assumed that these drawings were accurate in making its bid when a minor investigation would have revealed the pipes were much larger than the drawings indicated, meaning its plans for the drainage system were not sufficient to handle the water passing through the site.⁶⁰ The board ruled there was no "implied warranty of specification suitability" because the sketches were not usable for construction, and the contract specifically gave the contractor the responsibility to

⁵⁵Construction Contracting, supra note 7, at 438. See also, *Johnson Controls, Inc. v. U. S.*, 229 Ct. Cl. 445, 671 F.2d 1312, 29 Cont. Cas. Fed. (CCH) P 81930 (1982).

⁵⁶See, e.g., *Allied Contractors, Inc. v. U. S.*, 180 Ct. Cl. 1057, 381 F.2d 995 (1967).

⁵⁷*John McShain, Inc. v. U. S.*, 188 Ct. Cl. 830, 412 F.2d 1281 (1969).

⁵⁸See, e.g., *Blount Bros. Const. Co. v. U. S.*, 171 Ct. Cl. 478, 346 F.2d 962, 972-973 (1965) (custom and practice of contractors in bidding projects under time restraints provides degree of insulation in spotting hidden ambiguities in bid documents); *Foothill Engineering, IBCA 3119-A*, 94-2 B.C.A. (CCH) P 26732 (Interior B.C.A. 1993) ("test for discovery of the ambiguity of specification . . . is the context of a reasonable but busy prospective bidder attempting to prepare a responsive, timely and competitive bid.")

⁵⁹In re *Lovering-Johnson, Inc.*, A.S.B.C.A. No. 53902, 05-2 B.C.A. (CCH) ¶ 33126, 2005 WL 3100998 (Armed Serv. B.C.A. 2005).

⁶⁰2005 WL 3100998 at 20.

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design the system to meet “performance specifications.”⁶¹ Thus, in terms of deciding liability, a court may look to the duty of investigation or design as designated by the contract as a way to determine if it was reasonable for the contractor to rely on specifications from the owner.

In *United Excel Corp.*,⁶² the Veterans Affairs Board of Contract Appeals (VABCA) granted summary judgment in favor of the government against a design-build contractor who claimed defective specifications caused it to underbid the project by \$112,818.⁶³ Specifically, the contract called for the delivery of a surgical suite that used air diffusers to maintain a sterile operating table.⁶⁴ The dispute arose from the contractor’s decision to use aluminum diffusers and the government’s stated requirement that stainless steel diffusers be used instead.⁶⁵

The Request for Proposals (RFP) was indisputably ambiguous. The same document stated in one section that “aluminum or stainless steel” units were allowed in the operating suite, while also stating in another that the “Operating Room Air Distribution Devices . . . Shall be fabricated of . . . stainless steel.”⁶⁶ The contractor claimed that this ambiguity was a design defect, making the government responsible for the additional cost of installing the stainless steel diffusers since its bid was based on the cheaper aluminum diffusers.

The VABCA rejected the contractor’s argument completely. First, it noted that the contractor had “actual knowledge” of the ambiguity, rendering any distinction between “patent” and “latent” ambiguity meaningless.⁶⁷ Thus, the contractor had a duty to inquire into the ambiguous specifications, rather than making a unilateral choice to install the aluminum diffusers.

The contractor argued that “because this was a design-build” contract, it was entitled to choose aluminum diffusers if they met the “design intent.”⁶⁸ The board rejected this argument. The contract stated that the contractor was required to follow the

⁶¹2005 WL 3100998 at 20.

⁶²In re *United Excel Corp.*, V.A.B.C.A. No. 6937, 04-1 B.C.A. (CCH) ¶ 32485, 2003 WL 22977508 (Veterans Admin. B.C.A. 2003).

⁶³2003 WL 22977508, at 1.

⁶⁴2003 WL 22977508, at 1.

⁶⁵2003 WL 22977508, at 4.

⁶⁶2003 WL 22977508, at 3–4.

⁶⁷2003 WL 22977508, at 7.

⁶⁸2003 WL 22977508, at 7.

RFP specifications, including the requirement of stainless steel diffusers. As the board stated:

We also see nothing in the case law, and [the contractor] has provided none, for the proposition that the well settled law relating to contract interpretation is suspended or abrogated in a design-build contract . . . [the contractor] was not relieved of its obligation to inquire about the aluminum stainless steel diffuser discrepancy because the Contract was design-build.⁶⁹

Finally, in response to the contractor's argument that this result was unfair because it would "unduly punish contractors where a contractor is forced to bid on plans and specifications that, by definition, are incomplete," the board found nothing that would "permit us to ignore the Contract language and establish a new rule of allocating the risk that a patent ambiguity exists in the specification of a design-build RFP."⁷⁰ Consequently, the government won summary judgment and the design-build contractor was responsible for the increased costs.

This case emphasizes that traditional contract principles still apply to the design-build context, and contractors must still inquire about any patent ambiguities in bid solicitation documents. Although the contractors are expected to have more discretion and bear more responsibility for delivering the project according to the goals of the owner, the design-build contractor may not choose to simply ignore the owner's specifications, even under circumstances where the contract itself is indisputably ambiguous.

IV. Doctrine of Commercial Impracticability and Assumption of the Risk

In the design-build context, the owner creates performance specifications and requires the contractor to design and build the project to meet those specifications. However, for technological or financial reasons, the contractor may find it impossible to complete the project pursuant to the owner's specifications. Under the doctrine of commercial impracticability, courts in the United States may excuse a contractor's non-performance in such a situation and provide an equitable adjustment to compensate the contractor.⁷¹

In a limited number of cases, U.S. courts have applied the doc-

⁶⁹2003 WL 22977508, at 7.

⁷⁰2003 WL 22977508, at 7-8.

⁷¹But it should be noted that a finding of commercial impracticability or impossibility of performance is not required in order for the implied warranty to apply. In *Appeal of Dynallectron Corporation-Pacific Div.*, A.S.B.C.A. No. 11766,

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trine to void contracts that are commercially senseless to enforce.⁷² The court in *Oak Adec, Inc. v. United States* set forth a four-prong test applicable to federal government contracts.⁷³ The court evaluated the following:

- 1) whether any contractor was able to comply with the specifications;
- 2) whether the specifications require performance beyond the state of the art;
- 3) the extent of the contractor's efforts in meeting the specifications; and
- 4) whether the contractor assumed the risk that the specifications might be defective.⁷⁴

The fourth factor is relevant to the design-build context. Generally, the risk falls on the party responsible for drafting the specifications. Accordingly, if the contractor designs and submits detailed plans on a project, it bears the risk of nonperformance notwithstanding impracticability.⁷⁵ Further, if the contractor amends or otherwise redesigns the owner's specifications, it will bear the risk if such changes make the contract impracticable.⁷⁶

However, a different analysis may apply if the project involves hybrid specifications. If the owner issues design specifications which make the performance specifications impossible to implement successfully, and the incompatibility is neither known to the contractor nor patent at the time of bidding, the risk should fall on the owner. For example, in the HVAC hypothetical above,

A.S.B.C.A. No. 12271, 69-1 B.C.A. (CCH) ¶ 7595, 1969 WL 585 (Armed Serv. B.C.A. 1969), the ASBCA warned against the confusion that can ensue from characterizing defective specifications cases under the impossibility of performance doctrine: "There is no necessity in this case for a leap into the complicated, turbulent and esoteric seas of 'impossibility.' As a matter of grammar, when deficient specifications preclude fabrication of an item, it may be said that performance is 'impossible.' But that is not the set of circumstances which create the legal doctrine of impossibility of performance, as we understand it."

⁷²*Transatlantic Financing Corp. v. U.S.*, 363 F.2d 312, 1966 A.M.C. 1717, 3 U.C.C. Rep. Serv. 401 (D.C. Cir. 1966); *Moyer v. City of Little Falls*, 134 Misc. 2d 299, 510 N.Y.S.2d 813, 814 (Sup 1986). See also U.C.C. § 2-615; Restatement 2d of Contracts §§ 261 to 71 (1981).

⁷³*Oak Adec, Inc. v. U.S.*, 24 Cl. Ct. 502, 504, 37 Cont. Cas. Fed. (CCH) P 76220, 1991 WL 249959 (1991).

⁷⁴*Oak Adec, Inc.*, 24 Cl.Ct.at 504. See also, *Blount Bros. Corp. v. U.S.*, 872 F.2d 1003, 35 Cont. Cas. Fed. (CCH) P 75646 (Fed. Cir. 1989).

⁷⁵*U.S. v. Wegematic Corp.*, 360 F.2d 674, 3 U.C.C. Rep. Serv. 372 (2d Cir. 1966).

⁷⁶See *Austin Co. v. U. S.*, 161 Ct. Cl. 76, 314 F.2d 518 (1963).

the specifications are a hybrid of design specifications for the building structure and walls and performance specifications for the design of the HVAC systems. If the design-builder is unable to meet the performance specifications for the HVAC system because of defects in the owner's design specifications for the building structure, it could seek to invoke the doctrine of impracticability. The design-builder would have to show that despite its diligent efforts, it could not design and construct the HVAC system because of defects in the owner's design specifications. If the design-builder prevails, its failure to deliver satisfactory performance would be excused.

The principle of assumption of risk, or lack thereof, was a significant factor that helped the design-builder win on its claim against the government in the case of *M.A. Mortenson Company*.⁷⁷ In this case, in the RFP, the government prepared and furnished to the design-builder "Concept Submittal" drawings, stipulated to be 35% complete, for a medical clinic replacement facility.⁷⁸ Included in the footing plan was an indication of reinforcing steel and concrete quantities and the explicit statement that the contractors could rely on those figures for pricing their bids. After being awarded the contract and performing design work, however, the design-builder determined that the materials needed had been substantially underestimated and that the structure could not be built for that cost. The board framed the issue as "whether the Government warranted the adequacy of the information on the [Concept Submittal] Drawings (specific sizes and quantities of structural concrete and reinforcing steel) for purposes of proposing on the construction phase of the work."

The board dismissed the government's assumption-of-the-risk defenses stating as follows: "At its most basic, the Government's interpretation is that appellant assumed the risk of any cost growth in connection with the structural concrete and reinforcing steel when it agreed to a fixed price for the construction phase. As the Government recognizes, this interpretation effectively reads the Changes clause out of the contract." The board ruled that, by creating such a specific plan and asking the contractors to rely on it for their estimates, the government had warranted the specifications and was responsible for paying for the additional materials. Thus, once again, the specificity of the contract

⁷⁷Appeal of M.A. Mortenson Co., A.S.B.C.A. No. 39978, 93-3 B.C.A. (CCH) ¶ 26189, 1993 WL 261019 (Armed Serv. B.C.A. 1993).

⁷⁸M.A. Mortenson Company, 93-3 B.C.A. (CCH) P 26189, 1993 WL 261019 at 2.

and bid solicitation documents determined which party would bear the risk of imperfect specifications.

The approach used by the government in the *Mortenson* case reflects one of the many different variations utilized in the design-build contracting world. As noted in one treatise: "[one] variation finds the owner retaining a design professional to provide a preliminary design as part of the design-build request for proposals. This approach is sometimes known as 'bridging,' 'design/design-build,' 'design-build-bid,' or 'design-draw-build.' For some owners, the preparation of a preliminary design helps them crystallize and communicate program criteria."⁷⁹

This "design/design-build" approach was the one used by the government to develop the "35% drawings" in *Mortenson*, as well as the "30% drawings" involved in *Acquest*,⁸⁰ and the "50% drawings" in *Donahoe Electric*.⁸¹ What these and other cases seem to show is that the further the government has developed the preliminary design (whether assessed in percentage-of-design-complete terms or otherwise), the more likely that the implied warranty of specification suitability will be determined to exist with respect to particular elements of that design.

Closely akin to theories that design-build contractors assume the risk of deficiencies in design furnished by owners are explicit waivers of the implied warranty of the owner's design specifications. Many design-build contracts include provisions to the effect that the owner disclaims any implied warranty as the suitability of the design documents furnished by it, whether they be labeled "conceptual," "preliminary," "bridging," "criteria," or otherwise.⁸² To date, there is little guidance in terms of case law as to the enforceability of such provisions. One suspects that

⁷⁹2 Bruner & O'Connor on Construction Law at § 6:15.

⁸⁰ACQUEST GOVERNMENT HOLDINGS U.S. GEOLOGICAL, LLC, APPELLANT, v. GENERAL SERVICES ADMINISTRATION, RESPONDENT. CBCA 439, 07-1 B.C.A. (CCH) ¶ 33576, 2007 WL 1498805 (U.S. Civilian BCA 2007).

⁸¹In re Donahoe Elec., Inc., V.A.B.C.A. No. 6618, 03-1 B.C.A. (CCH) ¶ 32129, 2002 WL 31927907 (Veterans Admin. B.C.A. 2002).

⁸²The American Institute of Architects' recently revamped design-build contract form, AIA document A141-2004, Standard Form of Agreement Between Owner and Design-Builder, defines the "Project Criteria" furnished by the owner to be documents that "may describe the character, scope, relationships, forms, size and appearance of the Project, materials and systems and, in general, their quality levels, performance standards, requirements or criteria, and major equipment layouts," and provides that such Project Criteria are included in the "Design-Build Documents [that] form the Design-Build Contract." (AIA A141, § 1.1 and Exhibit A, Terms and Conditions, § A.1.1.2.) The form does not

clashes between the *Spearin* implied warranty line of authority and attempts to contractually waive it, in the context of design-build contracting where the design-builder (definitionally) is viewed as the ultimate designer, will be fertile ground for disputes. Of course, the resolution of these cases will depend on the statutory and decisional law of any given jurisdiction as well as the particulars of the contract and the design element in dispute. The authorities discussed in this article suggest that some of the factors that will be considered by courts in making their decisions will be the level of specificity and completeness of the owner-furnished specifications in terms of the particular element alleged to give rise to a defect and whether such specifications were expressed as requirements that the design-builder was not free to vary.

V. Conclusion

As seen above, the modern models of design-build and hybrid construction contracts present unique issues with respect to owner and contractor responsibility for specifications. The *Spearin* Doctrine remains relevant in this context, but its application must be adapted to the wide variety of design-build contracting approaches so that it fairly addresses the reasonable expectations of the contracting parties. Owners and contractors alike should evaluate its impact and the doctrine of impracticability in their respective solicitations and proposals. There are no "bright-line" tests applicable to design issues involving specifications furnished by owners to design-build contractors, nor hybrid specifications generally. If the contract is structured with hybrid specifications, the risk of defective specifications may be allocated between the owner and contractor. When these issues reach the courts in the context of design-build contracts, the formulaic approach which has been followed by many modern courts of determining whether an implied warranty exists by attempting simply to brand any given specification as either "design" or "performance" should be eschewed for a fact-based analysis which ap-

explicitly address any waiver of a warranty of specifications suitability. In Exhibit A, § A.1.2.2, it provides the following allocation of responsibility: "The Design-Builder shall be entitled to rely on the completeness and accuracy of the information contained in the Project Criteria, but not that such information complies with applicable laws, regulations and codes, which shall be the obligation of the Design-Builder to determine. In the event that a specific requirement of the Project Criteria conflicts with applicable laws, regulations and codes, the Design-Builder shall furnish Work, which complies with such laws, regulations and codes. In such case, the Owner shall issue a Change Order to the Design-Builder unless the Design-Builder recognized such non-compliance prior to execution of this Agreement and failed to notify the Owner."

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plies traditional principles of contract interpretation in order to ascertain the parties' reasonable expectations about who should bear the risk.