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THE ECONOMIC-WASTE DOCTRINE IN GOVERNMENT CONTRACT LITIGATION

INTRODUCTION

One important aspect of breach of contract litigation is the computation of damages. As a general rule, courts fashion remedies with the goal of placing the parties in the position they would have been in had the contract been performed, thereby satisfying expectation interests.¹ In the case of an uncompleted or non-conforming construction project, courts usually choose between computing damages based on the diminished value of the project caused by the breach or the cost of repairing the defect.² Courts typically utilize the latter formulation to satisfy the owner's expectation interests.³ However, state courts, as well as federal courts applying state law, have recognized an important exception to the cost-of-repair rule — the doctrine of economic waste.⁴ The economic-waste doctrine holds that if granting repair costs to the owner would result in "unreasonable economic waste," then the proper measure of the owner's dam-

^{1.} This is referred to as satisfying the injured party's "expectation interest." RESTATEMENT (SECOND) OF CONTRACTS §§ 344(a), 347 (1981); William H. Lawrence, Cure After Breach of Contract Under the Restatement (Second) of Contracts: An Analytical Comparison with the Uniform Commercial Code, 70 Minn. L. Rev. 713, 726-27 (1986); see also Carol Chomsky, Of Spoil Pits and Swimming Pools: Reconsidering the Measure of Damages for Construction Contracts, 75 Minn. L. Rev. 1445 n.1 (1991) (discussing the use of the "reliance interest" to compute damages).

^{2.} In many situations, the amount of damages under either formulation would be the same since the market price of a non-conforming project will reflect the costs necessary to repair it. For example, in a contract between Buyer and Seller to provide an operating automobile for \$10,000, if Seller provides an automobile without an engine (the engine costing \$3,000), Buyer is entitled to \$3,000 dollars in damages using either the cost-of-repair standard or diminished-value formula. Under cost-of-repair damages, Buyer is entitled to recover the amount sufficient to obtain the promised performance, which in this instance is the \$3,000 necessary for the engine. Similarly, under diminished-value damages, Buyer is entitled to receive the decrease in market value caused by Seller's breach. Assuming that \$10,000 is the market value of the automobile promised, the market value of the automobile will be diminished by the amount necessary to repair it — again \$3,000.

^{3.} John P. Ludington, Annotation, Modern Status of Rule as to Whether Cost of Correction or Difference in Value of Structures is Proper Measure of Damages for Breach of Construction Contract, 41 A.L.R. 4TH 131, 139, 154 (1985).

^{4.} See infra notes 50-128 and accompanying text (discussing in detail state court applications of the economic-waste doctrine).

ages should be the difference between the value of the project as promised in the contract and its value as delivered.⁵

Courts applying this doctrine seldom attempt to define the phrase "economic waste." Rather, the concept arises under the principle of substantial performance, which allows a contractor who "substantially performs" the obligations required under a contract to bring suit.7 The economic-waste doctrine becomes pertinent in two separate but interrelated situations. The first is when the cost of repairing a defect is substantially greater than the increase in value an owner would realize with the repair. For example, Buyer and Seller enter into a contract for the sale of a "red" automobile for \$10,000, but Seller breaches by delivering a green automobile. The cost to repaint the automobile is \$3,000. Assuming the market values of both a red and a green automobile are nearly equal, the cost of repainting the automobile — the "cost of repair" — is much greater than the decrease in market value caused by the breach. In such a case, cost-of-repair damages would substantially overcompensate an owner because she would not likely undertake repairs that do not increase the value of a project, or automobile, by at least the cost of making such repairs.8 In other words, the economic-waste doctrine. contrary to what the term implies, is not typically invoked under these conditions to prevent an unwise use of resources but rather is invoked to avoid granting an owner a windfall.9 In the second situa-

^{5.} RESTATEMENT OF CONTRACTS § 346(1)(a)(ii) (1932); 5 ARTHUR L. CORBIN, CORBIN ON CONTRACTS § 1089 (1964).

^{6.} Chomsky, supra note 1, at 1454.

^{7.} Richard Schepp provides an excellent description of the doctrine of substantial performance: Substantial performance is an equitable doctrine that courts in . . . most . . . jurisdictions use in construction contract cases. It is an exception to the general rule requiring complete or "perfect" performance of a contract. The purpose of the doctrine is to avoid the injustice of forfeiture by the builder and to prevent unjust enrichment of the property owner. In essence, the doctrine prevents an owner from pointing to slight deficiencies in the construction to avoid payment of the contract price. The owner is required to pay the amount owed on the contract (assuming there is a balance due) less a set-off for the amount of damages suffered by the owner as a result of the builder's breach.

Richard D. Schepp, Comment, A Call for Recognition of Owners' Subjective Valuations in Residential Construction Defect Cases, 1989 Wis. L. Rev. 1139, 1142-43 (citations omitted).

^{8.} If in the automobile color hypothetical, the court awarded Buyer the \$3,000 necessary to repaint the automobile red, Buyer would be foolish to spend the \$3,000 on repainting the automobile. Instead, Buyer would sell the green automobile for its market value of \$10,000 and buy a red automobile with the proceeds. Thus, Buyer would receive a \$3,000 windfall.

^{9.} Section 348 of the Restatement (Second) of Contracts describes the deceptive nature of the term: "'[E]conomic waste'... is a misleading expression since an injured party will not, even if awarded an excessive amount of damages, usually pay to have the defects remedied if to do so will

tion, diminished value rather than repair cost is employed when repairing a defect would require substantial destruction and reconstruction of usable property.¹⁰ In these instances, courts seek to avoid an imprudent use of resources, notwithstanding the owner's expectation interests.¹¹

While widely applied under state law, the economic-waste doctrine has had a sporadic and confusing application in construction contract litigation where the United States government is a party. The confusion arises because of the inherent tension between the economic-waste doctrine and the government contract principle of strict compliance. Strict compliance provides that the government may require a contractor to repair all defects in performance at the contractor's cost irrespective of the burden. 12 Prior to the 1992 decision in Granite Construction Co. v. United States, 13 neither the Court of Appeals for the Federal Circuit nor the United States Supreme Court had dealt with the applicability of the economic-waste doctrine to government construction contracts.¹⁴ Further, unlike in private sector case law, the policy underpinnings of the economicwaste doctrine have not been discussed in government contract cases. This Comment assesses the desirability of applying the economic-waste doctrine to government contracts.

Part I of this Comment traces the origins of the economic-waste doctrine, while Part II surveys how the doctrine is currently applied in the non-government contract context. In addition, Part II also discusses the purposes behind the economic-waste doctrine and reviews criticisms of its application. Part III then examines how the economic-waste doctrine has been applied to date in the context of government contracts. Finally, Part IV discusses both the costs and benefits of allowing government contractors to use the doctrine to excuse strict compliance with contract specifications. While the holding in *Granite* seems to indicate support for the broad applica-

cost him more than the resulting increase in value to him." RESTATEMENT (SECOND) OF CONTRACTS § 348 cmt. c (1981); see infra notes 50-78 and accompanying text (describing the disproportionate-value rule).

^{10.} See infra notes 79-102 and accompanying text (explaining the destruction rule).

^{11.} See infra notes 100-02 and accompanying text (describing the policy underpinnings of the destruction rule).

^{12.} See infra notes 170-71 and accompanying text (discussing the strict compliance doctrine in government contracts).

^{13. 962} F.2d 998 (Fed. Cir. 1992), cert. denied, 113 S. Ct. 965 (1993).

^{14.} Id. at 1007.

tion of the economic-waste doctrine to government contracts, 16 this Comment concludes that the doctrine should have a more narrow application in government contracts than the Court of Appeals for the Federal Circuit appears to currently allow. 16

I. THE ORIGINS OF THE ECONOMIC-WASTE DOCTRINE

The economic-waste doctrine finds its roots in the 1921 decision of Jacob & Youngs Inc., v. Kent.¹⁷ In that case, the defendant-owner entered into a contract with the plaintiff-builder for the construction of a country residence for a total cost in excess of \$77,000.¹⁸ A specification in the contract for the plumbing stated that "[a]ll wrought-iron pipe must be well galvanized, lap welded pipe of the grade known as 'standard pipe' of Reading manufacture." However, through neither fraud nor intent, the builder installed Cohoes pipe, which did not meet the contract specifications, in parts of the home.²⁰ Upon discovery of this breach, the owner instructed the builder to remove the non-conforming pipe and replace it with Reading pipe.²¹ The builder refused, requested that the owner pay the remaining \$3,483.46 balance on the contract, and argued that the owner's demand would have required demolition of substantial portions of the completed structure.²²

Upon the owner's refusal to pay the balance, the builder brought suit for recovery of the unpaid balance.²³ At trial, the builder offered to show that the pipe used had the same quality, appearance, cost, and market value as Reading pipe.²⁴ The trial court refused to admit this evidence and directed a verdict for the owner.²⁵ The appellate court then reversed the lower court's holding and ordered a new trial.²⁶ In a now famous opinion, Judge Benjamin Cardozo of

^{15.} See infra note 283 (arguing that under Granite the economic-waste doctrine may apply to all breach of contract situations).

^{16.} See infra notes 372-85 and accompanying text (discussing the advantages of limiting the use of the economic-waste doctrine in government contract disputes).

^{17. 129} N.E. 889 (N.Y. 1921).

^{18.} Id. at 890.

^{19.} Id.

^{20.} Id.

^{21.} Id.

^{22.} Id.

^{22. 14}

^{23.} *Id*. 24. *Id*.

^{24, 14,}

^{25.} *Id*.

^{26.} Id.

the New York Court of Appeals affirmed the appellate court's reversal and gave birth to the economic-waste doctrine.²⁷

Cardozo reasoned that evidence of the similarities between the Cohoes pipe and the Reading pipe was relevant in determining the extent of the owner's damages caused by the deviation from the contract specifications.²⁸ While Cardozo recognized that the usual measure of damages for failure to perform a contract was the cost of remedving the defect, he concluded that this measure was inappropriate when "the cost of completion is grossly and unfairly out of proportion to the good to be attained."29 In these situations, the proper measure of damages is the difference in value between the work performed and the work promised. 30 Cardozo went on to define four criteria courts should balance in determining whether unreasonable economic waste was present: "The purpose to be served, the desire to be gratified, the excuse for deviation from the letter, [and] the cruelty of enforced adherence."31 Cardozo warned, however, that "[t]here is no general license to install whatever, in the builder's judgment, may be regarded as 'just as good.' "32 Applying these principles to the facts of the case, Cardozo found that replacement of the pipes at a high cost constituted unreasonable economic waste because the difference in value between the two brands of pipe was probably nominal or zero.33

The Restatement of Contracts of 1932 incorporated the economic-waste doctrine along similar lines to those established by Judge Cardozo eleven years earlier.³⁴ Like Jacob & Youngs, the Re-

^{27.} Id. at 891-92; see Chomsky, supra note 1, at 1446 ("Judge Cardozo's opinion . . . is often cited as a foundation for the choice between 'cost to complete' and 'diminution in value.' ").

^{28.} Jacob & Youngs, 129 N.E. at 890 ("We think the evidence... would have supplied some basis for the inference that the defect was insignificant"....").

^{29.} Id. at 891.

^{30.} Id.

^{31.} Id.

^{32.} Id.

^{33.} Id.

^{34.} In § 346, the Restatement of Contracts provided:

⁽¹⁾ For a breach by one who has contracted to construct a specified product, the other party can get judgment for compensatory damages for all unavoidable harm that the builder had reason to foresee when the contract was made, less such part of the contract price as has not been paid and is not still payable, determined as follows:

⁽a) For defective or unfinished construction he can get judgment for either

⁽i)the reasonable cost of construction and completion in accordance with the contract, if this is possible and does not involve unreasonable economic waste; or

⁽ii)the difference between the value that the product contracted for would have had and the value of the performance that has been received by the plaintiff, if construc-

statement selected the cost-of-repair rule as the chief measure of damages for a breach of contract. But unlike Jacob & Youngs, the Restatement's economic-waste doctrine also provided that the cost-of-repair approach would not be available as a remedy if the performance involved "unreasonable economic waste." In these situations, the owner's damages were limited to the difference in value between the project contracted for and the value of the performance rendered. The comments to section 346 of the Restatement indicate that unreasonable economic waste was found if the cost of repair was much greater than the value of the project or if the defects could not be remedied "without tearing down and rebuilding, at a cost that would be imprudent and unreasonable." Nowhere did the Restatement attempt to account for the unique value individuals may place on a project, but rather it relied on market-determined values in setting a plaintiff's damages.

The Restatement (Second) of Contracts takes an approach to the economic-waste doctrine substantially different from the technique offered in the original Restatement.³⁹ Rather than adopting cost of repair as the primary measure of damages, section 347 of the Restatement (Second) begins with the premise that the owner is enti-

tion and completion in accordance with the contract would involve unreasonable economic waste.

RESTATEMENT OF CONTRACTS § 346 (1932).

- 35. Id.
- 36. Id.
- 37. Id.

- 39. In § 347, the Restatement (Second) of Contracts provides:
 - Subject to the limitations stated in §§ 350-53, the injured party has a right to damages based on his expectation interest as measured by
 - (a) the loss in value to him of the other party's performance caused by its failure or deficiency, plus
 - (b) any other loss, including incidental or consequential loss, caused by the breach, less
- (c) any cost or other loss that he has avoided by not having to perform. RESTATEMENT (SECOND) OF CONTRACTS § 347 (1981).

The Restatement (Second) also states:

If a breach results in defective or unfinished construction and the loss in value to the injured party is not proved with sufficient certainty, he may recover damages based on

- (a) the diminution in the market price of the property caused by the breach, or
- (b) the reasonable cost of completing performance or of remedying the defect, if that cost is not clearly disproportionate to the probable loss in value to him.

 1d. § 348(2).

^{38.} Id. cmt. b ("The law does not require damages to be measured by a method requiring such economic waste. If no such waste is involved, the cost of remedying the defect is the amount awarded as compensation for failure to render the promised performance.").

tled to receive the value lost due to the breach.⁴⁰ This section provides that "loss in value" should be measured as the difference in value between the performance promised and the value as delivered.⁴¹ In principal, this rule defines "value" in terms of the value placed on performance by the individual owner rather than a market-derived value.⁴²

However, under section 348 of the Restatement (Second), if the owner fails to establish lost value with sufficient certainty, the owner is entitled to recover cost-of-repair damages if these costs are not "clearly disproportionate to the probable loss in value." If there is a clear disproportion, the owner's recovery is limited to the diminished market price caused by the breach. Thus, the Restatement (Second) is substantially different from the original Restatement in that it initially considers the individualized value owners may place on performance before invoking an economic-waste inquiry. It is only when an owner fails to prove a personal loss in value with sufficient certainty that the Restatement (Second) allows marketplace determinations of value to dictate the computation of damages.

II. THE ECONOMIC-WASTE DOCTRINE IN NON-GOVERNMENT CONTRACTS

While both Jacob & Youngs and the Restatements provide some indication of when and how the economic-waste doctrine should apply, many state law decisions have extensively analyzed these issues. In reviewing state law applications of the economic-waste doctrine,

^{40.} Id. § 347.

^{41.} Id.

^{42.} Id. cmt. b. This section of the Restatement (Second) of Contracts provides:

[T]his requires a determination of the values of those performances to the injured party himself and not their values to some hypothetical reasonable person or on some market. . . . They therefore depend on his own particular circumstances or those of his enterprise, unless consideration of these circumstances is precluded by the limitation of foreseeability

Id.

^{43.} Id. § 348(2)(b).

^{44.} Professor Chomsky elaborates:

Under the Restatement (Second), the determination of "loss in value" to the particular owner is crucial. If proved "with sufficient certainty," it is the primary measure of recovery and the yardstick against which to measure completion cost to determine whether such costs are recoverable. In theory, at least, the Restatement (Second) thus represents a marked departure from the approach of the Restatement (First), which assumed cost to complete would be the remedy, unless cost to complete would produce "economic waste."

Chomsky, supra note 1, at 1453.

two different situations have arisen in which the diminution of value formula, rather than the cost-of-repair approach, is used to compute damages for non-performance of a construction contract. The first situation in which state courts find unreasonable economic waste is when the cost to repair or complete a project is disproportionate to the value of the proposed work. This approach is referred to as the "disproportionate-value rule." In the second situation, courts apply the economic-waste doctrine when repairing the defect will result in the destruction of usable property, a methodology which will be referred to as the "destruction rule." While these two rules may tend to overlap in many regards, the policy justifications behind each are distinct. The disproportionate-value rule is grounded in the fear of granting an owner a windfall, while the destruction rule is supported by a desire to avoid the unwise use of society's resources.

A. The Disproportionate-Value Rule

Under the disproportionate-value rule, courts limit an owner's damages to diminution of value when the cost of bringing a project up to specification is disproportionate to the value of the work. The rule has been applied by the courts in two different ways. Some courts find unreasonable economic waste if the cost of correcting a defect is grossly disproportionate to the increase in the market value of the project because of the repairs.⁵⁰ Other courts hold that eco-

^{45.} See infra notes 50-78 and accompanying text (describing the disproportionate-value rule).

^{46.} See infra notes 79-102 and accompanying text (discussing the destruction rule).

^{47.} When repairs to a non-conforming structure require a substantial undoing of completed work or the destruction of usable property, the cost of repair will likely be disproportionately greater to the increase in market value that can be expected from the repairs.

^{48.} See infra notes 76-78 and accompanying text (discussing the policy justifications for the disproportionate-value rule).

^{49.} See infra notes 100-02 and accompanying text (discussing the policy justifications for the destruction rule).

^{50.} Several jurisdictions support the market value approach. See Salem Towne Apartments, Inc. v. McDaniel & Sons Roofing Co., 330 F. Supp. 906, 914 (E.D.N.C. 1970) ("[Under North Carolina law,] the diminution of value rule applies to a construction contract where the cost of tearing off the roof would be prohibitive, whereas the actual loss of value to the owner due to the appearance of the roof is at most minimal."); City of Anderson v. Salling Concrete Corp., 411 N.E.2d 728 (Ind. Ct. App. 1980) (finding unreasonable economic waste in granting repair costs where the cost to bring land to conditions promised in lease was substantially greater than the market value of the land as promised); Peevyhouse v. Garland Coal & Mining Co., 382 P.2d 109 (Okla. 1962) (holding that cost-of-repair damages resulted in unreasonable economic waste where the cost to restore the land as promised in a lease was much greater than the market value of the land as promised); Thomas v. Schmidt, 648 P.2d 376 (Or. Ct. App. 1982) (finding gross economic

nomic-waste determinations turn on the cost of repairs relative to the contract price.⁵¹ However, whether a court looks at market value or contract price in its analysis, the policy justification behind limiting the owner's damages to diminished value is the same — eliminating the means by which owners can receive unfair windfalls.

An excellent example of a court's use of market value to find unreasonable economic waste is seen in Eastlake Construction Co. v. Hess. ⁵² The defendant-owner contracted with the plaintiff-builder to erect a five-unit condominium building at a contract price of \$118,600. ⁵³ Because of delays in construction and various defects in the structure, the owner withheld the builder's final payments of \$13,719. ⁵⁴ In the ensuing suit, the trial court found that the builder had breached the contract because of the defects in performance. ⁵⁵ One such defect was non-conforming kitchen cabinets. ⁵⁶ Evidence at trial indicated that the cabinets installed were valued at \$3,700, while the cabinets contracted for would have been worth \$8,725.50. ⁵⁷ Rather than awarding the owner the cost to replace the

waste in awarding cost-of-repair damages where defects in reroofing project were barely visible and caused only "aesthetic" damage to the structure); County of Tarrant v. Butcher & Sweeney Constr. Co., 443 S.W.2d 302 (Tex. Civ. App. 1969) (ruling that cost-of-repair damages resulted in unreasonable economic waste where minor deviations from a contract to build a courthouse and jail resulted in no decrease in value); Plante v. Jacobs, 103 N.W.2d 296 (Wis. 1960) (finding unreasonable economic waste in awarding approximately \$4,000 to remove and replace a misplaced wall in a residence where the market value of the home was not affected by the defect).

- 51. The contract price approach has also been applied in some jurisdictions. See Daniel v. Quick, 606 S.W.2d 81 (Ark. Ct. App. 1980) (finding no unreasonable economic waste where cost of repair was 16 percent of contract price); M. W. Goodell Constr. Co. v. Monadnock Skating Club, Inc., 429 A.2d 329 (N.H. 1981) (holding no unreasonable economic waste where cost of repair was five percent of total contract price); Rhode Island Turnpike & Bridge Auth. v. Bethlehem Steel Corp., 379 A.2d 344 (R.I. 1977) (finding no unreasonable economic waste present where cost of repair was 25 percent of the contract price).
 - 52. 686 P.2d 465 (Wash. 1984).
 - 53. Id. at 466-67.
 - 54. Id. at 467.
 - 55. Id. at 468.
 - 56. Id.
- 57. Id. The trial court also found that the contractor breached the contract specifications in nine areas where the owner was not entitled to recover any damages:
 - 1. Installation of 1-inch foam insulation under the concrete floors, rather than $1\frac{1}{2}$ inches.
 - 2. Installation of plastic rather than cast iron waste lines.
 - 3. Installation of electrical service panels in the bedrooms rather than the hallways.
 - 4. Installation of the wrong grade of felt under the siding.
 - 5. Use of insufficient caulking materials and exterior stain.
 - 6. Installation of galvanized roof jacks rather than lead roof jacks.
 - 7. Installation of acoustic ceiling materials rather than orange peel texture.
 - 8. Installation of one piece of insulation in a party wall instead of two pieces.

cabinets, the trial court limited the owner's recovery to the difference in value between the cabinets delivered and the cabinets contracted for (\$5,025.50).⁵⁸ The appellate court reversed this determination, holding that the owner was entitled to recover the cost of replacing the cabinets.⁵⁹

The Washington Supreme Court disagreed with the appellate court.60 In remanding the case to the trial court, the court held that awarding the owner the cost of replacing the defective cabinets would constitute unreasonable economic waste. 61 The court recognized that when a construction contract is defectively performed. the appropriate measure of damages is usually the cost of repairing the defect. 62 However, when "the cost of remedying the defect would far exceed the value to the injured party of the improvement," the award should be the diminution in value. 63 In such a case, "An award of the cost of repairs . . . would . . . constitute a substantial windfall to the injured party" and result in unreasonable economic waste.64 Thus, the "cost of repairs should not be awarded if that cost is clearly disproportionate to the value to the injured party of those repairs."65 The court felt the owner would receive an exorbitant benefit if permitted to recover the cost of repairing the cabinets because this cost was clearly disproportionate to the increase in market value of the structure with conforming cabinets.66

Rather than looking for a gross disproportion between repair costs and market values, some courts find unreasonable economic waste

^{9.} Installation of blown-in rock wool rather than fiberglass batts for ceiling insulation. Id. The trial court refused to award the owner damages for these defects because it found that they did not substantially affect the value of the structure. Id. However, the court did award the owner cost-of-repair damages for correcting other defects in the contractor's performance: (1) insulating waste pipes (\$807.44); (2) installing recirculating fans (\$1,031.10); (3) repairing the roof (\$4,414.01); (4) replacing balcony guardrails (\$1,580.76); (5) repairing and replacing washer and dryer closets (\$751.84); (6) replacing non-vented kitchen hood fans (\$926.53); (7) replacing interior doors (\$787.22); (8) installing cable television (\$75); and (9) installing an under-run light fixture (\$200). Id.

^{58.} Id.

^{59.} The appellate court increased the owner's damages by awarding him the cost of removing the non-conforming cabinets (\$4,060) and the cost of installing the cabinets called for in the contract (\$8,725.50). *Id.* at 469-70.

^{60.} Id. at 475.

^{61.} Id.

^{62.} Id. at 473.

^{63.} Id.

^{64.} Id.

^{65.} Id.

^{66.} Id. at 475.

The decisions in *Eastlake* and *Beik* reflect the policy underpinnings of the disproportionate-value rule. Both courts wanted to avoid granting the owners a windfall through an award of cost-of-repair

^{67. 572} P.2d 305 (Or. 1977).

^{68.} Id. at 306-07.

^{69.} Id. at 307. Plaintiffs alleged other deviations from the contract including failure to provide a wine cellar, putting green, roof garden, skylight, rental cars, and a minibus. Id.

^{70.} Id. at 310.

^{71.} Id.

^{72.} Id.

^{73.} Id.

^{74.} Id. The court cited Schmauch v. Johnston, where it was held that repair costs of \$6,290 were not economically wasteful or disproportionate for a house with a contract price of \$57,344. Schmauch v. Johnston, 547 P.2d 119 (Or. 1976). However, the Beik court advanced no specific rule or percentage for determining when repair costs are unacceptably disproportionate. Beik, 572 P.2d at 310-11.

^{75,} Beik, 572 P.2d at 310.

damages.⁷⁶ Thus, courts seem to recognize that in situations where the cost of remedying a defect is grossly disproportionate to the value attainable from the repair, an economically rational owner has a strong incentive to forego the repairs and to pocket the court's award.⁷⁷ Often, the owner could sell the non-conforming goods and keep the proceeds while using the court's award to obtain conforming goods,⁷⁸ thus creating a windfall for the owner. This policy is different from the resource efficiency interests the courts appear to serve by applying the economic-waste doctrine via the destruction rule.

B. The Destruction Rule

Courts are reluctant to award an owner the cost of repairing a project if bringing the project into compliance with the contract specifications requires usable property to be destroyed.⁷⁹ Rather than fearing overcompensation of the owner, the courts applying the destruction rule are concerned with preventing the owner from undertaking the repairs, because courts view such repairs as a wasteful use of society's resources. In situations where a court finds the amount of waste or destruction excessive, it will award the owner damages totaling the decrease in value caused by the failure to perform instead of repair costs.⁸⁰

The Florida Supreme Court in Grossman Holdings, Ltd. v. Hourihan⁸¹ dealt with a situation in which the destruction rule applied.⁸² The plaintiff-purchasers contracted with the defendant-builder for a house to be constructed in a planned development.⁸³ Both the model and the office drawings shown to the purchasers in-

^{76.} Chomsky, supra note 1, at 1459-60 n.56. Chomsky notes:

Even if not expressed, concern that the owner will receive a windfall may be the real basis for denying cost to complete as economically wasteful. "Waste" occurs only if the work is done. When they see a substantial difference between cost to complete and diminution in market value, courts may not expect the [owners] actually to undertake the completion work.

Id.

^{77.} Id. at 1459-60.

^{78.} See supra notes 8-9 and accompanying text (explaining how an award of repair costs may result in an unfair windfall to an owner).

^{79.} Chomsky, supra note 1, at 1454-55.

^{80.} See infra notes 81-102 and accompanying text (describing cases applying the destruction rule).

^{81. 414} So. 2d 1037 (Fla. 1982).

^{82.} Id.

^{83.} Id. at 1038.

dicated that the house would have a southeastern exposure, and the contract stated that the builder would build the house "substantially the same" as it appeared in the drawings and the model. Because the home was built without the exposure the purchasers desired, they sued the builder for breach of contract. The Florida Supreme Court affirmed the trial court's holding that requiring the contractor to rebuild the house with the proper exposure would constitute unreasonable economic waste. The supreme court found that awarding damages sufficient for the tearing down and rebuilding of the home in compliance with the contract would be imprudent and unreasonable and instead awarded the purchasers nominal diminished-value damages. Underlying the court's reasoning for the outcome of this case was an unwillingness to apply the law in such a way as to produce a "gross" waste of economic resources.

Similarly, in Witty v. C. Casey Homes, Inc., 89 the plaintiff-purchaser entered into a contract with the defendant-contractor for the construction of a house. 90 The contract specifications called for the use of "face brick veneer," but the contractor used defective ordinary brick. 91 The contract price of the home was \$54,566. 92

The Illinois Appellate Court found that the contractor had breached the contract by failing to provide the bricks described in the contract. The court noted that in such a case the purchaser is typically entitled to recover the cost of repairing the defect. However, "this general rule only applies where the correction or completion would not involve unreasonable destruction of the work done by the contractor . . . "95 In cases where cost-of-repair damages would require that substantial portions of a building be torn down and rebuilt, "the measure of damages is the difference in value between the work if it had been performed according to the contract

^{84.} Id.

^{85.} Id.

^{86.} Id. at 1040.

^{87.} Id. at 1039 (citing RESTATEMENT OF CONTRACTS § 346 cmt. b (1932)).

^{88 14}

^{89. 430} N.E.2d 191 (III. App. Ct. 1981).

^{90.} Id. at 192.

^{91.} *Id*.

^{92.} Id.

^{93.} Id. at 194.

^{04 14}

^{95.} Id. (quoting Brewer v. Custom Builders Corp., 356 N.E.2d 565, 571 (Ill. App. Ct. 1976)).

and that which was actually performed."98 Bringing the home up to specifications would have required the replacement of every brick in the home, the shoring up of part of the structure to diminish damage, and the removal of all exterior wood trim.97 The court found that "[t]he project could result in extensive damage to doors, door frames, window frames and a sliding glass door," resulting in excessive waste of economic resources.98 Thus, the court held that the appropriate measure of damages was the diminution in value of the house caused by the defects rather than the cost of repair.99

The decisions in *Grossman Holdings* and *Witty* reflect a position that many jurisdictions have taken concerning the computation of damages. These decisions demonstrate that courts applying the destruction rule find unreasonable economic waste when substantial portions of conforming material or property would need to be destroyed or rebuilt in an effort to repair a defect. Such courts appear to be more concerned about preventing the loss of society's resources than fulfilling the expectation interests of the owner. This concern is different from the fear of granting the owner a windfall, a fear

^{96.} Id. (quoting Brewer, 356 N.E.2d at 571).

^{97.} Id.

^{98.} Id.

^{99.} Id.

^{100.} See T.C. Allen Constr. Co. v. Stratford Corp., 384 F.2d 653 (4th Cir. 1967) (holding that the trial court, in applying North Carolina law, did not err in allowing owner to recover cost of repair where there was no evidence that defects could not be remedied without a substantial undoing or destruction of the structure); Temple Beth Sholom & Jewish Ctr. v. Thyne Constr. Corp., 399 So. 2d 525 (Fla. Dist. Ct. App. 1981) (finding proper measure of damages is cost of repair except where correction involves an unreasonable destruction of the structure); Park v. Sohn. 433 N.E.2d 651, 657 (Ill. 1982) ("[I]f correcting [defects] would entail unreasonable destruction of the builder's work, the amount by which the defects have reduced the value of the property should be the measure of damages."); Busker v. Sokolowski, 203 N.W.2d 301 (Iowa 1972) (holding costof-repair rule appropriate where repairs do not involve unreasonable destruction); Forsythe v. Starnes, 554 S.W.2d 100 (Mo. Ct. App. 1977) (finding that in home owner's suit against contractor for defective performance, the proper measure of damages is the cost of repair unless an unreasonable destruction of usable property would be involved); M. W. Goodell Constr. Co. v. Monadnock Skating Club, Inc., 429 A.2d 329 (N.H. 1981) (ruling that in the case of a defectively built ice-skating rink, the proper measure of damages is the cost of repair, except where repair would involve unreasonable economic waste by the destruction of usable property); Dobler v. Malloy, 214 N.W.2d 510 (N.D. 1973) (holding that damages are measured by the diminution of value where repairs require reconstruction of a substantial portion of the work); Drury v. Reeves, 539 S.W.2d 390 (Tex. Ct. App. 1976) (holding owner entitled to cost of repair of a faulty roof where repairs did not involve impairing the structure as a whole); DeSombre v. Bickel, 118 N.W.2d 868 (Wis. 1963) (finding owner entitled to cost of repair where defects could have been remedied without destruction of any substantial part of structure).

^{101. 5} CORBIN, supra note 5, § 1090 ("Damages measured [by the destruction rule] may not be sufficient to put the injured party in the same physical position in which he would have been put by complete performance of the contract . . . ").

which underlies the disproportionate-value rule discussed previously.¹⁰²

C. Limits of The Economic-Waste Doctrine

General patterns and limitations have developed across the various factual scenarios in which the economic-waste doctrine has been applied, thus helping to determine the applicability of the doctrine to new situations. First, courts generally will not allow a contractor to avoid liability for cost-of-repair damages when the breach is intentional or willful.¹⁰³ An example of this limitation is provided in Shell v. Schmidt. 104 In this case, the defendant-contractor entered into a contract with the United States government to build tract housing.105 The plaintiffs in this suit were third-party beneficiaries of the agreement and couples who bought similar houses in a tract built by the contractor. 106 The plaintiffs claimed that the contractor breached the contract, citing defective construction of interior and exterior walls and insufficient heating.107 At trial, the contractor offered two defenses. First, the contractor claimed that he was forced to breach the contract in some instances because of shortages in supplies and labor. 108 Second, the contractor maintained that he had

^{102.} See supra notes 76-78 and accompanying text (discussing the policies behind the disproportionate-value rule).

^{103.} See Groves v. John Wunder Co., 286 N.W. 235, 236 (Minn. 1939) ("[W]here the contractor wilfully [sic] and fraudulently varies from the terms of a construction contract, he cannot sue thereon and have the benefit of the equitable doctrine of substantial performance."); Jacob & Youngs, Inc., v. Kent, 129 N.E. 889, 891 (N.Y. 1921) ("The willful transgressor must accept the penalty of his transgression."); 5 CORBIN, supra note 5, § 1089 (stating the argument that "the 'economic waste' rule limiting recoverable damages should never be applicable in favor of a contractor whose breach was 'wilful' [sic] and 'intentional' even though it is minor in character and the value of the defective performance is 'substantially' equal to that of the promised performance."). This limitation may be seen as an extension of the "clean hands" requirement used to invoke a court's equitable powers. See Avco Delta Corp. Can. Ltd. v. United States, 484 F.2d 692, 704 (7th Cir. 1973) (discussing the need of a litigant to have "clean hands" in order to invoke a claim of substantial performance); Combustion Eng'g, Inc. v. Miller Hydro Group, 812 F. Supp. 260, 264 (D. Me. 1992) (holding that under Maine law, a contractor on a turnkey construction contract could not recover the amount allegedly owed pursuant to a substantial performance claim where the contractor was found not to have made a good-faith effort to perform); Penn Mut. Life Ins. Co. v. Bank of New England Corp., 756 F. Supp. 856, 858 (E.D. Pa. 1991) (denying a defendant's substantial performance claim where the defendant failed to satisfy the "clean hands doctrine").

^{104. 330} P.2d 817 (Cal. Dist. Ct. App. 1958).

^{105.} Id. at 818.

^{106.} Id.

^{107.} Id. at 818-19.

^{108.} Id. at 819.

substantially performed the contract because the values of the homes as built were at least equal to the value of the homes as promised. The contractor therefore argued that damages should be computed according to the diminished value rule. The California District Court of Appeals rejected the contractor's argument and held that the cost-of-repair rule was the appropriate measure of damages because the contractor had intentionally breached the contract. In so holding, the court explained that "[p]roof of lack of willfulness is a necessary component . . . to 'trigger' the invoking of the value rule, vis-à-vis the cost rule . . . "112"

Second, courts will not invoke the economic-waste doctrine if the structure as delivered is neither functional nor safe, 113 a situation which the New York Court of Appeals faced in Bellizzi v. Huntley Estates, Inc. 114 There, the plaintiff-purchaser entered into a contract with the defendant-contractor for the construction of a home in accordance with a demonstration model which had, among other features, an attached garage with a driveway to street level. 116 Due to unexpected rock below ground, the contractor constructed the driveway of the purchaser's home with a grade of over 22 percent. 116 Uncontested evidence indicated that a grade of 12 percent was the permissive maximum grade. 117 Thus, the purchaser's driveway was "so steep that [it could not] be used safely and conveniently." 118 In finding that the purchaser was entitled to recover repair costs, the court rejected the contractor's argument that repairing the driveway would involve unreasonable economic waste. 119 The court found that

^{109.} Id.

^{110.} Id.

^{111.} Id. at 822.

^{112.} Id. at 823.

^{113.} See, e.g., Jones v. Elliot, 108 N.W.2d 742 (Neb. 1961) (finding no economic waste where a defective foundation for a grain elevator could have had disastrous results); Dobler v. Malloy, 214 N.W.2d 510 (N.D. 1973) (holding that no economic waste existed where a house, as constructed, was susceptible to flooding); Prier v. Refrigeration Eng'g Co., 442 P.2d 621 (Wash. 1968) (finding no economic waste where repairs to an ice arena were necessary to protect the foundation of the structure); Trenton Constr. Co. v. Straub, 310 S.E.2d 496 (W. Va. 1983) (declaring that a contractor's failure to install a moisture barrier in a house, resulting in moisture problems, did not amount to economic waste); see also Ludington, supra note 3, at 212-25 (discussing additional cases).

^{114. 143} N.E.2d 802 (N.Y. 1957).

^{115.} Id. at 803.

^{116.} Id.

^{117.} Id.

^{118.} Id.

^{119.} Id. at 804.

when a defect leaves the owner with a structure that is partially unsafe or unusable, the proper measure of damages is the cost of repair, as it would be unjust to allow the contractor to avoid its contractual duties.¹²⁰

The final situation in which some courts are reluctant to apply the economic-waste doctrine occurs when the contract is for a structure, such as a residence, that incorporates important aesthetic or personal interests. 121 These courts feel that where the owner intends to use the structure for a personal residence, granting repair costs is the sole method of making the owner whole. Such a condition was found by the Arkansas Supreme Court in Carter v. Quick. 122 In that case, the defendant-contractor agreed to build the plaintiff-purchaser a home for \$25,000, which was to be used as a family residence.123 The purchaser sued the contractor for breach of contract because of defectively laid brick which would have cost the plaintiff \$4,000 to repair. 124 The contractor alleged that the cost-of-repair rule was not the appropriate measure of damages because the value of the house, even with the defects, was greater than the original contract price.125 The court rejected the contractor's argument and awarded repair costs to the purchaser. 126 The court found that where the owner intends to use the structure for a dwelling, the repair costs are the correct measure of damages. 127 In explaining the policy behind this limitation on the use of the economic-waste doctrine, the court reasoned that "the interest of the owner is in having defective construction corrected so that he and his family may enjoy a properly constructed dwelling and he is not concerned with offsetting any loss on a possible resale of the property. In such a case,

^{120.} Id.

^{121.} See Edenfield v. Woodlawn Manor, Inc., 462 S.W.2d 237 (Tenn. Ct. App. 1970) (rejecting economic-waste argument for defects in an air conditioner in the apartment where plaintiff intended to live); see also Ludington, supra note 3, at 212 (discussing cases rejecting the economic-waste doctrine). But see Grossman Holdings, Ltd. v. Hourihan, 414 So. 2d 1037 (Fla. 1982) (finding homeowner's recovery limited by the economic-waste doctrine to the diminished value of a home built with an improper orientation); Witty v. C. Casey Homes, Inc., 430 N.E.2d 191 (Ill. App. Ct. 1981) (holding homeowner entitled only to recover diminished-value rather than cost-of-repair damages where a contractor built a home with ordinary brick rather than face brick veneer).

^{122. 563} S.W.2d 461 (Ark. 1978).

^{123.} Id. at 462.

^{124.} *Id*.

^{125.} Id. at 465.

^{126.} Id.

^{127.} Id.

aesthetic values are properly involved."128 Thus, courts may refuse to allow a contractor to avoid providing repair costs via the economic-waste doctrine when the breach is intentional, when the structure is unsafe or unusable, or when repair costs are the only method of satisfying the owner's expectation interests.

D. Criticism of The Economic-Waste Doctrine

While applied by many jurisdictions, the economic-waste doctrine has not been free from criticism. The primary criticism of commentators is that, in some situations, diminished-value damages may not sufficiently compensate the owner for injuries suffered due to a breach of contract.¹²⁹ Professor Carol Chomsky contends that the current economic-waste doctrine gives courts too much discretion in determining what constitutes unreasonable economic waste.¹³⁰ The economic-waste doctrine allows the fact-finder, whether a judge or jury, to impose its valuation of contract and defective structures to the exclusion of the actual value held by the injured party.¹³¹ For

Upon his inspection of the completed house, Horse discovered to his dismay that through an innocent error, HOD had constructed the home with six-foot, eight-inch doorways. Horse's dream home was now just another house.

Horse sued HOD in state court, which found that HOD had breached the construction contract. However, the court only awarded Horse nominal damages, reasoning that it would be economically wasteful to force HOD to pay the cost of having the doorways enlarged because the home's market value was not affected by HOD's mistake.

Clearly, the finding of unreasonable economic waste in this case leaves the owner under-compensated for his injuries, since it forces him to either keep the defective house or sell it and be forced to leave the lot, which held special value for him.

- 130. Chomsky, supra note 1, at 1460-69.
- 131. Professor Chomsky explains:

Courts rejecting cost to complete as constituting economic waste seem to base their decision on two interrelated premises: First, granting cost of completion would overcompensate the owner because the lower diminution in market value more accurately establishes the harm from the breach. Second, expenditure of cost to complete would be an unreasonable use of resources. Instead of using the owner's valuation of the injury caused by breach, both of these premises substitute the factfinder's judgment of

^{128.} Id.

^{129.} See Schepp, supra note 7, at 1139-40 (setting up a whimsical hypothetical fact situation to illustrate how applying the economic-waste doctrine may leave an owner under-compensated). In summarizing the story, the names and locations have been changed to more accurately reflect the interests of this author.

[&]quot;Horse" Grant is a six-foot, ten-inch power forward for a very successful midwestern professional basketball team. With the bonus money from last year's championship, Horse decides to build his dream home on a unique lot inherited from his parents. After visiting the model homes of several local builders, Horse signs a construction contract with Houses of Distinction (HOD). Horse is excited about the home because the arched doorways are six feet, eleven inches high in the center, which allows him to walk through them without ducking. Every other home he toured had standard six-foot, eight-inch doorways, causing Horse to frequently bump his head.

example, if the owners in *Grossman Holdings*¹³² desired a home with a southeastern exposure on that particular lot for special religious reasons, an award of diminished-value damages rather than repair costs allows the court to substitute its perception of the value of the structure for that of the owners in determining damages. Thus, in some circumstances, owners do not receive just compensation for their injuries.¹³³ Chomsky makes a similar argument against the use of market values to determine whether a proposed repair would result in unreasonable economic waste.¹³⁴ Similar to the scenario where a fact-finder's judgments are imposed, an owner may be under-compensated if the value the market attributes to performance is substituted for the owner's value.¹³⁶

A second argument against the use of the economic-waste doctrine centers around the economic efficiency of future contractual transactions. In describing this argument, Chomsky begins with the assertion that the remedies and rules a court supports affect how parties will conduct future transactions. According to Chomsky, Encouraging parties to allocate resources efficiently is one possible aim for a contract remedy. The effect of legal rules on future contracts can be broken down into three areas: (1) contract formation costs; (2) informal dispute resolution costs; and (3) litigation costs. With the economic-waste doctrine, contract formation costs remain low, while informal dispute resolution costs and litigation cost are very high. As for contract formation costs, under the cur-

the worth of contract performance.

Id. at 1462. While §§ 347-348 of the Restatement (Second) of Contracts appear to mandate the use of the owner's valuation of performance as the primary measure of damages, Chomsky points out that few jurisdictions have adopted these provisions. Id.

^{132. 414} So. 2d 1037 (Fla 1982); see supra notes 81-88 and accompanying text (discussing the Grossman Holdings decision in detail).

^{133.} Chomsky, supra note 1, at 1462-63.

^{134.} Id. at 1474.

^{135.} Id. at 1462-63 ("[T]he substitution of fair market value for cost to complete sacrifices the value choices of the owner to those of the marketplace. As a result, the owner is not fully compensated for the injury caused.").

^{136.} Id. at 1470-76.

^{137.} Id. at 1472. This idea assumes that the parties have a correct understanding of the court's rules. With construction contracts, "The contractor is in the business of performing construction services and generally has reason to know important legal rules controlling the operation of the business." Id. at 1473. However, the other party is often an individual homeowner with little knowledge of the subject. Id.

^{138.} Id. at 1470.

^{139.} Id. at 1472.

^{140.} Id. at 1474-75.

rent economic-waste doctrine, where the cost of repair is disproportionately great, the contractor will only have to pay diminished-value damages.¹⁴¹ For this reason, contractors have little incentive to provide for a different measure of damages in the contract, and absolutely no incentive to call the owner's attention to the damages issue. This helps keep contract formation costs low.¹⁴²

However, the economic-waste doctrine encourages the expenditure of substantial resources in the event of a breach because of the considerable discretion the courts have in fashioning remedies under the economic-waste doctrine.143 The courts tend to award diminished-value damages if repair costs exceed the value of performance,144 but repair costs may also be awarded if the owner can convince the court of the necessity of completing the performance. 145 Since the decision of the court will turn on the subjective judgments of the fact-finder, "each party may be encouraged to believe that it can convince the factfinder to select its preferred method of damage valuation," thus increasing litigation costs. 148 Additionally, litigation involving the determination of market values of property and the estimate of completion costs require the testimony of experts, which adds to litigation costs. 147 Finally, since such litigation will likely involve large sums of money and turn on the court's subjective valuations, the losing party has a strong incentive to appeal and hope that the appellate panel will employ a more favorable valuation.¹⁴⁸

This survey of state law demonstrates that the economic-waste doctrine has emerged as an important consideration when courts fix damages for breaches of construction contracts. Courts are willing

^{141.} See supra notes 50-78 and accompanying text (explaining the disproportionate-value rule). 142. Professor Chomsky elaborates this point:

Because the courts' current rule on damages leads most often to an award of the lesser diminution in fair market value, the contractor has little or no reason to raise the issue of damages when entering the contract. The owner, who probably assumes that she will truly get what she is promised and is unaware of the possible limitation on damage awards, will also not likely raise the issue. . . The present rule thus promotes little attention to damages in the contract and therefore results in no formation costs during contract negotiations.

Chomsky, supra note 1, at 1474.

^{143.} Id. at 1474-75.

^{144.} See supra notes 50-78 and accompanying text (explaining the disproportionate-value rule).

^{145.} See supra notes 121-28, 132-33 and accompanying text (describing cases where courts refuse to apply the economic-waste doctrine because the owner has shown an important interest in demanding repairs).

^{146.} Chomsky, supra note 1, at 1475.

^{147.} Id. at 1475-76.

^{148.} Id. at 1476.

to deny owners repair costs when such awards will likely be pocketed by owners as a windfall or will encourage an unwise use of society's limited economic resources. However, courts often refuse to apply the economic-waste doctrine when a contractor intentionally breaches a contract, when safety is at issue, or when only repair costs can make the owner whole. While the results reached through the use of the economic-waste doctrine often appear just, this doctrine has been criticized by commentators on the grounds that it does not sufficiently compensate owners for their injuries and promotes inefficiencies in the contracting systems. The identification of the policies and criticisms behind the economic-waste doctrine is necessary to evaluate the costs and benefits of applying this doctrine to government contract litigation.

III. THE ECONOMIC-WASTE DOCTRINE IN GOVERNMENT CONTRACTS

This section addresses the use of the economic-waste doctrine in government contract litigation. First, however, it is important to cover some basic background information about government contracts. Specifically, a description of the litigation process, the various types of contract specifications, and the strict compliance rule is helpful in analyzing the use of the economic-waste doctrine in government contracts.

Upon accepting a bid, a government contract is administered through an authorized representative of the government called a contracting officer ("CO"). When a contractor has a dispute with the government regarding the contract, he is required to first file a claim with the CO. If dissatisfied with the decision rendered by the CO, the contractor has the option of bringing suit with either

^{149.} See supra notes 50-102 and accompanying text (discussing the disproportionate-value and destruction rules).

^{150.} See supra notes 103-28 and accompanying text (discussing the limits of the economic-waste doctrine).

^{151.} See supra notes 129-48 and accompanying text (discussing in detail the scholarly criticisms of the economic-waste doctrine).

^{152.} The Contract Disputes Act of 1978 defines a contracting officer as "any person who, by appointment in accordance with applicable regulations, has the authority to enter into and administer contracts and make determinations and findings with respect thereto. The term also includes the authorized representative of the contracting officer, acting within the limits of his authority" 41 U.S.C. § 601(3) (1988).

^{153.} Id. § 605(a) ("All claims by a contractor against the government relating to a contract shall be in writing and shall be submitted to the contracting officer for a decision.").

the Board of Contract Appeals ("Board" or "BCA") of the agency that is administering the contract, ¹⁵⁴ or with the United States Court of Federal Claims ("Claims Court"), formerly the United States Claims Court. ¹⁵⁵ A decision by a Board or the Claims Court may be appealed to the United States Court of Appeals for the Federal Circuit ("Federal Circuit"). ¹⁵⁶ Ultimately, the United States Supreme Court reviews decisions of the Federal Circuit. ¹⁵⁷

As in the private sector contract context, 158 the government implicitly warrants its contract specifications against defect. 159 This simply means that a contractor need not fear liability for breach provided it fully complies with contract specifications, even if full compliance results in a structure or good which fails to perform its

154. Id. § 607(d). The statute provides:

Each agency board shall have jurisdiction to decide any appeal from a decision of a contracting officer (1) relative to a contract made by its agency, and (2) relative to a contract made by any other agency when such agency or the Administrator has designated the agency board to decide the appeal.

Id. Pursuant to 41 U.S.C. § 609(b) (1988), "notwithstanding any contract provision, regulation, or rules of law to the contrary, the decision of the agency board on any question of law shall not be final or conclusive" Id. Thus, Board decisions do not have controlling precedential force. However, as discussed infra, Board level decisions are frequently cited to support both court and Board decisions.

155. Id. § 609(a)(1). The statute states:

Except as provided in paragraph (2), and in lieu of appealing the decision of the contracting officer under section [41 U.S.C. § 605] to an agency board, a contractor may bring an action directly on the claim in the United States Claims Court [United States Court of Federal Claims], notwithstanding any contract provision . . . to the contrary.

Id. Prior to the creation of the United States Claims Court in 1982 (now known as the United States Court of Federal Claims), a contractor could bring an action to the United States Court of Claims. George M. Coburn, The Contract Disputes Act of 1978 132-33 (1982).

156. Appeals from an agency board decision to the United States Court of Appeals for the Federal Circuit are provided by 41 U.S.C. § 607(g)(1) (1988). Appeals from the Claims Court to the Federal Circuit are authorized under 28 U.S.C. § 1295(a)(3) (1988). Prior to the creation of the United States Court of Appeals for the Federal Circuit in 1982, Board decisions were appealed to the United States Court of Claims via its appellate jurisdiction. COBURN, supra note 155, at 111.

157. 28 U.S.C. § 1254 (1988).

158. James E. Harrington et al., The Owner's Warranty of the Plans and Specifications for a Construction Project, 14 Pub. Cont. L.J. 240, 241 (1984) ("When the owner of a construction project furnishes a set of detailed specifications to be followed by his contractor in carrying out the work on a project, he is deemed by law to impliedly warrant that those plans and specifications are accurate and suitable for their intended use.").

159. Blake Constr. Co., GSBCA No. 3590, 73-1 B.C.A. (CCH) ¶ 9819, at 45,894 (Dec. 1, 1972) ("Where the Government orders a structure to be built and in doing so prepares the project specifications, it does so upon the presumed expertise of the Government and implicitly warrants that if specifications are complied with, satisfactory performance will result.") (citing J. D. Hedin Constr. Co. v. United States, 347 F.2d 235 (Ct. Cl. 1965)).

designated purpose. Further, under certain circumstances, a contractor may be entitled to recover damages against the government if the government's specifications are faulty. 160 However, the rules behind this warranty are highly technical in the government contract context because of its relevance to the government contractor defense.¹⁶¹ The guidelines established through extensive litigation hold that the government's warranty only extends to contract specifications that are "design" in nature. 162 Design specifications "set forth precise measurements, tolerances, materials, in process and finished product tests, quality control, inspection requirements, and other specific information."163 Under a design specification, the government is responsible for the design, engineering, and performance of the item described in the specification.¹⁶⁴ Conversely, under a "performance" specification, "the contractor accepts general responsibility for design, engineering, and achievement of the stated performance requirements."165 Performance specifications "set forth operational characteristics desired for the item. . . . [D]esign, measurements and other specific details are not stated nor considered important so long as the performance requirement is met."166 The final type of specification found in a government contract is a "purchase description," in which the contract "designate[s] a particular manufacturer's model, part number, or product."167 As with design specifications, the government's warranty of suitability extends to purchase descriptions. 168 Frequently, a purchase description is followed by the phrase "or equal," which allows a contractor to substitute an item of equal performance and quality characteristics

^{160.} *Id.* ("The party who drafts the contract specifications is responsible for them and for losses suffered by the other party because of defects in such specifications.") (citing Austin Co. v. United States, 314 F.2d 518 (Ct. Cl. 1963)).

^{161.} The government contractor defense protects contractors providing military equipment to the government from liability under state product liability laws for injuries to third parties resulting from a contractor's compliance with government-provided or -approved "design" specifications. David B. Dempsey & Janet Z. Barsy, Government Contractor Liability for Design Defects After Boyle, 19 Pub. Cont. L.J. 405, 406 (1990).

^{162.} Id. at 406.

^{163.} Monitor Plastics Co., ASBCA No. 14447, 72-2 B.C.A. (CCH) ¶ 9626, at 44,971 (Aug. 3, 1972).

^{164.} Id.

^{165.} Id.

^{166.} Id.

^{167.} Id.

^{168.} Id.

for the designated item. 169

A fundamental principle of government contract law is the rule of strict compliance. 170 Under the strict compliance rule, the government is entitled to require the contractor to repair any defect in performance at the contractor's own cost. 171 However, despite the strict compliance rule, the economic-waste doctrine has been raised occasionally in government contract litigation since the 1960s. 172 The situations in which the economic-waste doctrine can surface in the government contract context differ from situations in which it is used in state law. Unlike the state law cases discussed in the previous sections, 173 government contract cases invoking the economic-waste doctrine may involve situations in which the contractor sues to recover costs incurred from repairing a non-conforming structure. In other words, the "economic waste" may have already occurred and the contractor is trying to have the government cover the costs. 174

Notwithstanding this difference, the analysis of the economic-waste doctrine employed by the courts and appeals boards in government contract litigation is very similar to the analysis applied by state courts. This section surveys how the Court of Claims (the predecessor to the Federal Circuit) and the various Boards of Contract Appeals have applied the economic-waste doctrine prior to the

^{169.} Id.

^{170.} JOHN CIBINIC & RALPH C. NASH, ADMINISTRATION OF GOVERNMENT CONTRACTS 571 (2nd ed. 1985) ("[T]he Government is entitled to enforce strict compliance with its specifications.").

^{171.} See Cascade Pacific Int'l v. United States, 773 F.2d 287, 291 (Fed. Cir. 1985) ("[T]he Government, just as any other party, is entitled to receive that for which it contracted and has the right to accept only goods that conform to the specification."); see also American Elec. Contracting Corp. v. United States, 579 F.2d 602 (Ct. Cl. 1978) (applying the strict compliance doctrine to a dispute over a purchase description); H.L.C. & Assoc. Constr. Co. v. United States, 367 F.2d 586 (Ct. Cl. 1966) (discussing the strict compliance doctrine); Farwell Co. v. United States, 148 F. Supp. 947 (Ct. Cl. 1957) (discussing the strict compliance doctrine).

^{172.} See infra notes 176-284 and accompanying text (reviewing government contract cases which apply or discuss the economic-waste doctrine).

^{173.} See supra notes 50-128 and accompanying text (describing state law cases applying and discussing the economic-waste doctrine).

^{174.} For example, in Granite Constr. Co. v. United States, 962 F.2d 998, 1000 (Fed. Cir. 1992), cert. denied, 113 S. Ct. 965 (1993), the contractor brought suit against the government after the government had required it to replace defective material. The contractor did not directly argue that the government should not have taken an "economically wasteful" course of action, but rather claimed that the government should have been responsible for the replacement costs because the government's request constituted unreasonable economic waste. Id. Contra Toombs & Co., ASBCA Nos. 34590 et al., 91-1 B.C.A. (CCH) \$\frac{1}{2}3,403\$ (Sept. 18, 1990) (finding economic waste where the government charged repair costs against the contractor but failed to repair the defects).

Federal Circuit's recent holding in *Granite Construction Co. v. United States*. ¹⁷⁵ In addition, this section describes the Federal Circuit's decision in *Granite* and focuses on the extent to which the economic-waste doctrine is an exception to strict compliance.

A. Court of Claims Cases

Unlike state law, the Court of Claims had few occasions to evaluate the use of the economic-waste doctrine in government contracts. The Court of Claims first encountered an economic-waste situation in Farwell Co. v. United States. 176 The plaintiff Farwell entered into a contract with the Army Corps of Engineers ("Corps") to install all of the mechanical work in a Veteran's Administration Hospital in Shreveport, Louisiana.177 While the contract's plumbing specifications called for Farwell to use only pipes made of brass or copper, 178 Farwell began performance "using type B copper tubing instead of 'brass or copper pipe' as called for in the specifications."179 Upon discovering this, the Corps ordered Farwell to suspend work while they determined if the materials utilized met the contract specifications. The Corps determined that the copper tubing did not conform;180 however, to avoid additional delays in the project, the Corps chose to accept the copper tubing and made an equitable adjustment of \$35,184.96 in the contract price, the difference in the market value of conforming pipe and type B copper tubing. 181 Farwell protested this adjustment by claiming that since the type B copper tubing was considered satisfactory for the project, the Corps was unjustified in reducing the contract price. 182

The Court of Claims rejected Farwell's argument and held that the Corps was entitled to withhold the difference in value between

^{175. 962} F.2d 998 (Fed. Cir. 1992), cert. denied, 113 S. Ct. 965 (1993).

^{176. 148} F. Supp. 947 (Ct. Cl. 1957). This case was heard on a direct appeal from the decision of the CO, and thus the Court of Claims sat pursuant to its trial jurisdiction.

^{177.} Id. at 948.

^{178.} Id. This contract specification came from the Corps Standard Guide Specifications. The specification at issue in this case stated, "Brass or Copper: Pipe used for domestic hot and cold water, return circulating hot water, and chilled water, except underground pipe 3 inches in diameter and larger, shall be brass or copper." Id. (quoting United States Corps of Engineers, Standard Guide Specifications § 300.02 (1947)).

^{179.} Id.

^{180.} Id.

^{181.} Id.

^{182.} Id.

the tubing used and the pipe specified in the contract.¹⁸³ The court stated that the government has a right to expect what it contracted for, and a contractor has no right to substitute materials which it judges to be satisfactory for the project.¹⁸⁴ It reasoned that allowing a contractor to make such judgments defeats the entire purpose of developing contract specifications.¹⁸⁵ Additionally, the court determined that it would be unfair to allow Farwell to recover the contract price without adjustment because it would create an incentive for contractors to submit bids calculated upon the assumption that they can substitute cheap alternatives for specified materials.¹⁸⁶ Thus, the court concluded that since Farwell's bid was based on the use of tubing rather than pipe, the contract price should be reduced accordingly.¹⁸⁷

Nine years later, the Court of Claims, in dicta, addressed the application of the economic-waste doctrine in government contracts in *H.L.C. & Associates Construction Co. v. United States.* ¹⁸⁸ In that case, H.L.C. contracted with the Department of the Navy ("Navy") to construct a housing project of 450 units in Quantico, Virginia. ¹⁸⁹ The contract specifications called for H.L.C. to install 3-wire conductors in the air-conditioning outlets within the units. ¹⁹⁰ H.L.C.'s

It is of no concern to plaintiff why the Government specified brass or copper "pipe" instead of "tubing," and it was not within plaintiff's province to substitute its judgment for that of the Government by deciding that tubing was satisfactory when pipe was specified. The Government may have many reasons for requiring pipe instead of tubing, but in any event the specifications called for pipe and the Government had a right to expect that pipe would be used. In other words, why have a contract if either party could change the terms thereof to suit his particular whim. The easier method would be to say "just build us a good building," then leave it up to the court in the inevitable ensuing lawsuit to determine whether the materials used were suitable. This is just what contracts are meant to prevent

Id.

185. Id.

186. Id. at 950 ("We should not create the opportunity for bidders on Government contracts to underbid their competitors by calculating bids on less expensive materials and later support their bid by saying the materials used conform with the technical requirements of the contract specifications and are not of inferior quality.").

187. Id.

188. 367 F.2d 586 (Ct. Cl. 1966). This case was heard on a direct appeal from the decision of the CO, and thus the Court of Claims sat pursuant to its trial jurisdiction.

189. Id. at 587.

190. Id. The specifications called for 3-wire conductors because tenants were expected to provide their own air-conditioning units. Some units operated on 110 volts and others at 220 volts, and the government required three-wire conductors because they offered the flexibility to support either type of air-conditioning unit. Id.

^{183.} Id. at 949.

^{184.} Id. The court further noted that:

electrical subcontractor was in the process of installing 2-wire conductors when the Navy discovered the deviation from its specifications and demanded the replacement of the work with conforming 3-wire conductors in the portions of the project still under construction. H.L.C. sought an equitable adjustment in price to cover the costs associated with tearing out and replacing the conductors, but the CO denied H.L.C. any additional compensation. 193

The Court of Claims found that the government was entitled to strict compliance with its contract specifications.¹⁹⁴ The court rejected H.L.C.'s argument that the Navy was required to accept the conductors installed because, by installing 2-wire conductors, they had substantially performed the contract specifications.¹⁹⁵ The court concluded that 2-wire conductors did not substantially conform to the requirements of the contract.¹⁹⁶

The court added, in dicta, that it was not clear that the substantial performance principles derived from state law applied to government contracts. 197 According to the court, "The essence of the [substantial performance] doctrine is to prevent forfeiture, and the test of forfeiture usually is that the owner's requirement, if followed, would amount to economic waste. 198 However, the court indicated that the substantial performance doctrine did not apply because H.L.C. had already received the full contract price and [n] case ha[d] been cited . . . wherein a contractor ha[d] been allowed payment in addition to the contract price on the basis of alleged substantial performance. 1999 Thus, the court found the doctrine inapplicable in this case.

^{191.} Id. The defect was discovered when a tenant in a completed phase of the project connected a 110-volt unit to a 220-volt outlet and blew a fuse. Id.

^{192.} Id. The court noted that "[t]he rewiring work necessitated tearing out wallboard, base-boards, and portions of ceilings in order to gain access to concealed wiring, and after replacement of the wire, the torn out portions had to be patched and painted." Id. at 597.

^{193.} Id. at 587.

^{194.} Id. at 599.

^{195.} Id.

^{196.} Id. at 600. The court added that:

It is true, of course, that the 2-wire conductors, as installed, delivered 240 volts, and that the circuit could be reduced to 120 volts and was therefore flexible. The fact remains that the changeover contemplated by the Navy's design was imbued with safety features superior to those inherent in the changeover of the 2-wire conductor installation.

Id. at 599.

^{197.} Id. at 600.

^{198.} Id.

^{199.} Id.

The Court of Claims in American Electric Contracting Corp. v. United States²⁰⁰ again grappled with the use of the economic-waste doctrine when it addressed a contractor's right to substitute materials when a contract incorporates a qualified products list.²⁰¹ In American Electric, the plaintiff was awarded a contract by the Department of the Navy to upgrade an aircraft carrier berthing facility in San Diego, California.²⁰² The contract price was \$889,161,²⁰³ and it required the plaintiff to install a number of electric-power receptacles along a pier in order to supply power to the vessels.204 The contract specification for these items called for receptacles of a brand recognized on a qualified products list. 205 Only receptacles made by Viking Industries appeared on the list.²⁰⁶ The plaintiff offered to install another brand of receptacle which it considered the functional equivalent of Viking's product, but the Navy refused to accept the plaintiff's alternative connectors, insisting that they did not conform to the contract requirements.207 The plaintiff purchased the Viking receptacles and asked the Navy to adjust the contract price by \$51,874, the difference in cost between the Viking product and the plaintiff's initial choice.208

In denying the plaintiff relief, the Court of Claims held that "the Government is entitled to obtain precisely what it contracts for as long as it does not mislead the contractor." The court added that when a contract specification lists an item by name, the contractor may assume that the brand name establishes the item's standard of quality. Thus, the contractor is permitted to substitute a func-

^{200. 579} F.2d 602 (Ct. Cl. 1978). This case was heard on an appeal from the decision of the Armed Services Board of Contract Appeals, and thus the Court of Claims sat pursuant to its appellate jurisdiction.

^{201.} Id. A qualified products list is another term for a purchase description specification. See supra notes 167-69 and accompanying text (describing purchase descriptions).

^{202.} American Elec., 579 F.2d at 604.

^{203.} Id.

^{204.} Id.

^{205.} Id.

^{206.} Id. at 605.

^{· 207.} Id. The Navy claimed that it had troubles in the past with the receptacles plaintiff proposed to use. Further, the Viking receptacle was specifically designed for the Navy and had a solid performance record. Id. at 605-06.

^{208.} Id. at 605.

^{209.} Id. at 608.

^{210.} Id. Many Board decisions apply this rule. See, R.R. Mongeau Eng'rs, Inc., ASBCA No. 29341, 87-2 B.C.A. (CCH) ¶ 19,809 (Apr. 14, 1987) (coke breeze material for missile silo); Central Mechanical, Inc., ASBCA Nos. 29360, 29514, 84-3 B.C.A. (CCH) ¶ 17,674 (Sept. 14, 1984) (hot water boiler); Atlas Fabricators, Inc., ASBCA No. 17556, 75-2 B.C.A. (CCH) ¶ 11,350

tional equivalent. However, the court concluded that based on the Navy's past experience with the plaintiff's proposed receptacle, it was reasonable for the Navy to reject the item.²¹¹

B. Board of Contract Appeals Cases

The Boards of Contract Appeals for various federal agencies have also had opportunities to consider the application of the economic-waste doctrine in the government contract context. The Armed Services Board formally adopted the economic-waste doctrine in its 1974 decision in Valley Asphalt Corp.²¹² In this case, Valley entered into a \$78,058 contract with the government to repave a runway at Wright-Patterson Air Force Base in Ohio.²¹³ The contract specifications incorporated extremely precise elevation requirements, and tolerances in the final grade elevations were very small.²¹⁴ Valley failed to comply with the contract specifications for elevations, and the contracting officer reduced the contract price by \$32,725, the cost of repairing the defects.²¹⁵ In its defense, Valley contended that the specifications were impossible to meet in some areas and that requiring repair of the defects was wasteful since the runway as delivered was functional.²¹⁶

In holding that the government was not entitled to diminish the contract price by the cost of repair, the Board determined that the proposed repairs would have involved economic waste.²¹⁷ The court stated that while the government is entitled to expect compliance with contract specifications, when a contractor "substantially performs," the government cannot require repairs that do not increase the value of the project proportionately.²¹⁸ In this case, the Board found that "the value of the runway as completed [wa]s, insofar as elevations are concerned, not measurably less than the value of the

⁽June 27, 1975) (practice bombs); Blake Constr. Co., GSBCA No. 3590, 73-1 B.C.A. (CCH) ¶ 9819 (Dec. 1, 1972) (system of post-tensioning columns and girders in construction project); Solis Enters., Inc., VABCA No. 1576, 84-3 B.C.A. (CCH) ¶ 17,606 (Sept. 6, 1984) (window screens).

^{211.} American Elec., 579 F.2d at 609.

^{212.} ASBCA No. 17595, 74-2 B.C.A. (CCH) ¶ 10,680 (May 30, 1974).

^{213.} Id. at 50,758.

^{214.} Id. at 50,760.

^{215.} Id. at 50,767.

^{216.} Id. at 50,766.

^{217.} Id. at 50,770. The board cited with approval the decision in Jacob & Youngs, Inc. v. Kent, 129 N.E. 889 (N.Y. 1921).

^{218.} Valley Asphalt, 74-2 B.C.A. (CCH) ¶ 10,680, at 50,770.

completed runway as promised."²¹⁹ Therefore, the government's proposal to bring the runway into compliance with the contract specifications "amount[ed] to unreasonable economic waste."²²⁰ Consequently, the government was only permitted to nominally adjust the contract price to reflect the difference in value.²²¹ The Board found it relevant that Valley had acted in good faith throughout its performance by attempting to satisfy the contract requirements.²²²

Subsequently, the Valley decision was further refined in Eller Construction, Inc.²²³ In this case, the Agriculture Board rejected a contractor's claim that the government erroneously required replacement of concrete work performed on an irrigation ditch.²²⁴ The Board held that the government's authority to require replacement of defective work "[is] not absolute and must be exercised reasonably."²²⁵ Thus, according to the Board, the government could not properly require strict compliance "[i]f the value of the completed structure [was] not measurably less than the structure promised, or if the removal of the structure would [have] result[ed] in 'unreasonable economic waste . . . '"²²⁶ In such a situation, the Board concluded that "the Government may be entitled to only the equivalent of nominal damages, or minor repair[s], and not removal of the entire structure."²²⁷ This reasonableness standard has been applied in several other Board decisions.²²⁸

^{219.} Id.

^{220.} Id.

^{221.} Id.

^{222.} Id. ("[Valley's] failure to meet required place elevations was not intentional, and its attempt to meet those requirements was consistently in good faith. Literal fulfillment of the plan elevation requirements is not to be implied by law as a condition under the facts as we see them.") (citations omitted).

^{223.} AGBCA No. 77-171-4, 83-2 B.C.A. (CCH) ¶ 16,560 (May 18, 1983).

^{224.} Id. at 82,367.

^{225.} Id. (emphasis added).

^{226.} Id. From the facts of this case, the Board determined that Eller had breached the contract specifications because the concrete walls they had installed were severely "honeycombed" (the presence of undesired air pockets in poured concrete, which increases permeability and reduces durability). Id. at 82,362.

^{227.} Id. at 82,367.

^{228.} See Tom Page & Co., ASBCA No. 22208, 80-2 B.C.A. (CCH) ¶ 14,729 (Sept. 23, 1980) (finding that the government is entitled to require repair when a contractor provides a non-conforming concrete foundation for a structure); Stallings & McCorvey, Inc., ASBCA No. 22668, 78-2 B.C.A. (CCH) ¶ 13,339 (July 10, 1978) (finding that the government is entitled to strict compliance with a contract specification that called for one-inch in 12-inch slope for a roof where the contractor had calculated its bid on the assumption of a one-half-inch in 12-inch slope); Arnold M. Diamond, Inc., ASBCA No. 15063, 73-2 B.C.A. (CCH) ¶ 10,359 (Nov. 9, 1973) (hold-

In Toombs & Co., 229 the Armed Services Board defined the situations in which the economic-waste doctrine is appropriately applied to government contracts. Toombs entered into a contract with the Department of Health and Human Services to renovate several school buildings at Fort Wainwright and Eielson Air Force Base in Alaska.²³⁰ One part of the contract required Toombs to place sheet metal boots in the floor where the air ducts terminated at the grilles.²³¹ When Toombs poured the concrete around the boots, they were not properly braced and became dented up to 21/4 inches.232 The government noted this problem and instructed Toombs to replace the boots because they failed to comply with the "Material and Workmanship" specifications in the contract.233 The government alleged that "the deformed boots increased the static resistance to air flow, causing the fan to 'work harder,' reducing its useful life and increasing energy costs."234 Upon Toombs's refusal to replace the boots, the government deducted \$20,000 from the contract price, which was the cost of replacing the defective boots.²³⁵ The government, however, never actually replaced the boots.²³⁶

In holding that the government erroneously charged Toombs with the replacement costs, the Board held that the government's right to require replacement of non-conforming work "is limited by the rule of economic waste." The Board stated that economic waste occurs when the government requires replacement of non-conforming work that has no adverse aesthetic impact or proven operational or sanitary disadvantages. Supported by the fact that the government had failed to replace the boots on its own, the Board found that no

ing that it is unreasonable for the government to require replacement of defective concrete portions of a pier where the contractor proved that proposed repairs satisfied the contract specifications at a much lower cost); Allen M. Campbell Co., Gen. Contractors, ASBCA No. 16934, 72-2 B.C.A. (CCH) ¶ 9639 (Aug. 9, 1972) (holding that the government is entitled to require strict compliance with plumbing specifications); Coac, Inc., IBCA No. 1004-9-73, 74-2 B.C.A. (CCH) ¶ 10,982 (Dec. 6, 1974) (finding that it is within the government's discretion to require replacement of a defectively constructed sewer pumping station).

^{229.} ASBCA Nos. 34590 et al., 91-1 B.C.A. (CCH) ¶ 23,403 (Sept. 18, 1990).

^{230.} Id. at 117,420.

^{231.} Id. at 117,432.

^{232.} Id.

^{233.} Id.

^{234.} Id.

^{235.} The Government called for the replacement of 15 boots at a cost of \$1,503 per boot. Id.

^{236.} Id.

^{237.} Id. at 117,432-33.

^{238.} Id. at 117,433.

such impacts were present in this case.²³⁹ Thus, the government was only entitled to charge Toombs for the diminished value of the non-conforming work, which the government had failed to prove.²⁴⁰

In some Board decisions where issues of safety are raised, the economic-waste doctrine is not applied in order to allow a contractor to avoid repair and replacement costs.²⁴¹ For example, in *Hunter Ditch Lining*,²⁴² the Agriculture Board allowed the Forest Service to require Hunter to rebuild a drainage ditch and parking lot that failed to meet contract specifications by applying the unsafe condition exception to the economic-waste doctrine.²⁴³ The Board held that unreasonable economic waste was not present because "Forest Service officials [had] specifically determined that unless built as designed, the parking lot would be unsafe for the recreational vehicles and boat trailers expected to use it"²⁴⁴ The Board concluded that "[u]nder these circumstances, the Forest Service was entitled to strict compliance with the contract drawings, without regard to [Hunter's] opinion of the technical necessity for the rework."²⁴⁵

A similar conclusion was reached in Pacific Western Construction, Inc.²⁴⁶ In this case, the government contracted with Pacific to build a helicopter landing pad.²⁴⁷ Due to defects in the construction of the pad, loose pockets of material were found. These pockets of "loose rocks would fly about and create a significant hazard to aircraft and nearby personnel."²⁴⁸ As a result of this unsafe defect, the Armed Services Board concluded that the runway was unacceptable for its intended purpose.²⁴⁹ Under these conditions, the Board con-

^{239.} Id. ("The deformed boots had no adverse aesthetic impact, and the alleged operating cost and sanitary impacts are unproven. On this record, the replacement of the boots at \$1,503 per boot is economic waste, a conclusion which the Government's own inaction on replacement to date confirms.").

^{240.} Id.

^{241.} This also appears to be the rule the Court of Claims applies. See, e.g., H.L.C. Assoc. Constr. Co. v. United States, 367 F.2d 586 (Ct. Cl. 1966) (holding that the government is entitled to require replacement of non-conforming 2-wire conductors where specified 3-wire conductors incorporated superior safety features).

^{242.} AGBCA No. 87-391-1, 91-2 B.C.A. (CCH) ¶ 23,673 (Jan. 10, 1991).

^{243.} Id. at 118,565.

^{244.} Id.

^{245.} Id.

^{246.} ASBCA No. 28462, 86-2 B.C.A. (CCH) ¶ 18,816 (Dec. 31, 1985).

^{247.} Id. at 94,816.

^{248.} Id. at 94,821.

^{249.} Id. The Board added that:

Such a condition produced a clear hazard to helicopters using the hoverway and any personnel or ground equipment in the path of flying rock The helicopter

1993]

cluded that requiring Pacific to repair the pad did not constitute unreasonable economic waste.²⁵⁰

Some authority at the Board level also suggests that the economic-waste doctrine is inapplicable where the government can attach strong aesthetic value to exact compliance. In Bromlev Contracting Co., 261 the contractor, as part of a historical restoration. entered into a contract with the government to perform roof reslating and masonry repointing on the Post Office and Courthouse in Martinsburg, West Virginia.252 The contract specifications for the slate roof called for the use of gray shingles, which had to be approved upon inspection by the government for proper color.263 Bromley submitted shingles to the government with a "greenish cast," and they were subsequently rejected as non-conforming.254 In concluding that the government was not required to accept the nonconforming shingles, the General Services Administration Board noted the importance of strict compliance in this historical restoration contract.²⁵⁵ Based on the significance of the aesthetic quality of the slate to the project, the Board held that "a contractor has no right to substitute a different item for a contractually specified one even where the substituted item is functionally equivalent or equal to the specified one."256 Thus, in addition to the safety exception to the economic-waste doctrine, when the Government can establish a strong aesthetic reason for requiring strict compliance, the doctrine will not apply.257

hoverway was unsuitable for its intended purpose, since it could not safely be used. As [delivered], it did not substantially comply with contract requirements and the Government properly rejected it.

Id. at 94,824.

250. Id.

251. GSBCA No. 6965, 85-3 B.C.A. (CCH) ¶ 18,428 (Sept. 20, 1985).

252. Id. at 92,529.

253. Id. at 92,531.

254. Id. at 92.532-33.

255. Id. at 92,541. The court noted in its decision that:

[T]he selection of slate color was the choice of the drafter of the specifications. [Bromley] knew this project involved historical restoration and that the contact required the slate's color to be the same as or similar to that of the existing slate. [Bromley] acknowledged that slate color was a "prime requisite of this contract."

Id.

256. Id.

^{257.} See Toombs & Co., ASBCA Nos. 34590 et al., 91-1 B.C.A. (CCH) ¶ 23,403, at 117,433 (Sept. 18, 1990) (citing the lack of an adverse aesthetic impact as a factor weighing in favor of applying the economic-waste doctrine where the government demanded that a contractor repair deformed air duct boots which were hidden from view).

C. The Granite Decision

The Federal Circuit, unlike the Court of Claims and the various Boards, has had limited exposure to the economic-waste doctrine. In 1992, the Federal Circuit announced its first decision on the applicability of the economic-waste doctrine to government contract litigation in Granite Construction Co. v. United States. 258 On October 26, 1976, Granite entered into a \$36,263,924 contract with the Army Corps of Engineers ("Corps") for the construction of a lock and dam near Aberdeen, Mississippi.²⁵⁹ The walls of the dam consisted of giant concrete monoliths, 260 and the contract called for the placement of polyvinylchloride ("PVC") waterstop in the vertical joints between the walls to prevent leakage. 261 The specifications for the waterstop material required that it meet the detailed requirements of CRD-C 572-74.262 This specification described performance characteristics of an off-the-shelf waterstop that the Corps had previously determined would satisfy all such projects.²⁶³ General Provision ("GP") 10(b) of the contract, which is a clause the government is required by law to place in all of its construction contracts, required Granite to replace, without charge, any non-conforming material, "unless in the public interest, the Government consents to accept such material or workmanship with an appropriate adjustment in the contract price."264 After about 10 percent of the waterstop ("Saf-T-Grip" or "STG" brand) was permanently

^{258. 962} F.2d 998 (Fed. Cir. 1992), cert. denied, 113 S. Ct. 965 (1993). This case was heard pursuant to the Wunderlich Act, 41 U.S.C. §§ 321-22 (1978), predecessor to the Contract Disputes Act of 1978, 41 U.S.C. §§ 601-613 (1988).

^{259.} Granite, 962 F.2d at 1000.

^{260.} Id.

^{261.} Id.

^{262.} Id. at 1001 ("[CRD-C 572-74] contained detailed requirements for testing samples of the finished waterstop, including tensile strength, ultimate elongation, low temperature brittleness, stiffness in flexure, and accelerated extraction, and stated that the waterstop may be rejected if it failed to meet any of the requirements of the specification.").

^{263.} Granite Constr. Co., ENGBCA No. 4496, 89-1 B.C.A. (CCH) ¶ 21,447, at 108,072 (Dec. 19, 1988).

^{264.} Granite, 962 F.2d at 1005. The government is required to include a provision like the GP-10(b) clause in all of its fixed-price construction contracts which are expected to exceed a small purchase limitation pursuant to a provision in the Federal Acquisition Regulation which provides:

The Contractor shall, without charge, replace or correct work found by the Government not to conform to contract requirements, unless in the public interest the Government consents to accept the work with an appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

⁴⁸ C.F.R. § 52.246-12(f) (1986).

embedded in the walls, the Corps tested the waterstop and determined that it did not meet the contract specifications.²⁶⁵ The Corps then instructed Granite to remove and replace all waterstop.²⁶⁶ Granite proposed several repair schemes short of removal of the STG waterstop,²⁶⁷ but the Corps rejected each proposal because it entailed leaving the non-conforming STG waterstop in place.²⁶⁸ Granite performed the replacement and filed a claim with the contracting officer for the cost of the repair work — \$3.8 million — which was denied.²⁶⁹ At the hearing before the Corps of Engineers Board on this case, Granite produced an expert witness who testified that, although STG waterstop did not meet the contract specifications, it was more than adequate for the project's requirements.²⁷⁰

266. Granite, 962 F.2d at 1000.

267. Id. at 1004. The court described some of these methods:

Granite first submitted a "cut and splice" method. This method involved splicing Vinylex waterstop, which had been approved by the Corps for other projects, onto the STG waterstop already embedded in the concrete. The proposal was rejected on the ground that it did not comply with the contract specifications. . . . Granite next proposed a "rerouting method," whereby it would embed additional conforming waterstop into the concrete. The Corps rejected this and all other remedial proposals by Granite, because the STG waterstop did not meet the contract specifications.

Id.

268. Id.

269. Id. at 1000.

270. Id. at 1005-06. Professor Jerome Raphael, who had more than 18 years of civil engineering experience including association with fifty dam construction projects, testified that STG water-

^{265.} Granite, 962 F.2d at 1000. The facts leading up to the filing of this case are quite interesting. On March 4, 1977, Granite ordered 7,100 feet of waterstop from a sub-contractor (Vimco) who had purchased the waterstop from STG. Granite Constr. Co. v. United States, 22 Cl. Ct. 831, 834 (1991). The Corps requested four samples of the waterstop for testing, and they were found to meet the contract specifications. Id. In October 1977, Granite received the first shipment of STG waterstop. Id. A government inspector looked over the materials in November but did not perform any quality checks. Id. at 835. On November 19, a Granite quality control engineer certified that all waterstop conformed with the contract. Id. It was not until Granite first began to embed the STG waterstop on April 3, 1978, that the Corps noticed some differences between the material being embedded and the samples they tested. Id. However, on April 27, STG certified that the waterstop being embedded was from the same lot as the samples the Corps had tested. Id. In May, Granite realized that STG had failed to provide sufficient quantities of waterstop to complete the project and ordered additional materials from STG, which arrived around June 1, 1978. Id. STG certified that the waterstop from this second shipment was from the same lot as the first shipment. Id. Although Granite believed that the Corps was doing periodic tests of the waterstop during this time period, in reality no tests were made. Id. The Corps never told Granite that any tests of the waterstop were being conducted once installation began, and Granite was never asked to provide additional samples. Id. In early June 1978, the Corps performed tests on the second shipment of STG waterstop and discovered that four out of five samples failed to meet the contract specifications. Id. On June 22, the Corps notified Granite of the failure and directed them to stop work, even though Granite had already embedded about 10 percent of the waterstop from both the first and second shipments. Id. Granite then provided the Corps with samples from the first shipment, and they verified that the waterstop did not meet the contract specifications. Id.

The United States Claims Court affirmed the Board's conclusions.²⁷¹

On appeal, the Federal Circuit held that based on the testimony of the expert, the Board and the United States Claims Court erred in holding that the replacement of the STG waterstop did not constitute unreasonable economic waste.²⁷² The Federal Circuit found that while the government usually has the right to require strict compliance with contract specifications, GP-10(b) of the contract placed a duty on the Corps to consider the "public interest" in determining whether to force replacement of non-conforming material.²⁷³ The court interpreted this duty to include an obligation to consider the STG waterstop relative to the performance requirements of the Aberdeen project.²⁷⁴ Thus, the Corps breached its duty to the public interest imposed under GP-10(b) when it failed to assess the STG waterstop in light of the project requirements.²⁷⁶ Consequently, the court concluded that the Corps's rejection of the STG waterstop was "arbitrary and capricious."²⁷⁶

The court found, however, that Granite had the burden of proving that the existing work or the proposed remedial work substantially complied with the contract specifications.²⁷⁷ It further found that Granite had satisfied this burden through the expert testimony provided at the Board hearing.²⁷⁸ The court stated that the Corps may not require strict compliance with contract specifications under GP-10(b) when the existing work or the remedial work meets its intended purpose, and when replacement of the work is economically wasteful.²⁷⁹ The court concluded that STG waterstop was clearly adequate for the Aberdeen dam and that replacement of the waterstop was "an economically wasteful course of performance."²⁸⁰ Therefore, Granite was permitted to recover the costs for the remedial work offset by the nominal difference in value between con-

stop exceeded the project safety margin by twenty-fold and could withstand forty times the water pressure that would ever exist at Aberdeen. Id.

^{271.} Granite Constr. Co. v. United States, 22 Cl. Ct. 831, 842 (1991).

^{272.} Granite, 962 F.2d at 1006.

^{273.} *Id.* at 1005.

^{274.} *Id*.

^{275.} Id.

^{276.} Id.

^{277.} Id.

^{278.} Id. at 1005-06.

^{279.} Id. at 1007.

^{280.} Id. at 1008.

forming material and STG waterstop.281

With one quick but bold stroke, the Federal Circuit formally sanctioned the use of the economic-waste doctrine by the various contract appeals boards and federal courts. The failure of the United States Supreme Court to grant certiorari on the issue of the applicability of the economic-waste doctrine to government contract litigation suggests that the *Granite* ruling is unlikely to change in the near future.²⁸² Unfortunately, the Federal Circuit's broad language and failure to discuss the general policy considerations underlying the holding left many important questions unanswered for future disputes. The most critical issue is the extent to which the strict compliance doctrine is undermined by the economic-waste doctrine. A reasonable reading of *Granite* would suggest that the economic-waste doctrine applies notwithstanding strict compliance.²⁸³ In other

^{281.} Id.

^{282.} United States v. Granite Constr. Co., 113 S. Ct. 965 (1993).

^{283.} In Granite, the Federal Circuit began its discussion of the applicability of the economic-waste doctrine to the case by indicating that it had found "no decision by this court which has considered the doctrine of economic waste" Granite, 962 F.2d at 1007. However, the court went on to cite two old United States Court of Claims cases for the proposition that the economic-waste doctrine influenced the holdings in previous federal court decisions. Id. (citing H.L.C. & Assoc. Constr. Co. v. United States, 367 F.2d 586 (Ct. Cl. 1966); Eastern S.S. Lines v. United States, 112 F. Supp. 167 (Ct. Cl. 1953)). Therefore, the court asserted that "there is ample authority for holding that the government should not be permitted to direct the replacement of work in situations where the cost of correction is economically wasteful and the work is otherwise adequate for its intended purpose." Id. (citing Farwell Co. v. United States, 148 F. Supp. 947 (Ct. Cl. 1957); Toombs & Co., ASBCA Nos. 34590 et al., 91-1 B.C.A. (CCH) ¶ 23,403 (Sept. 18, 1990)). This language seems to indicate that as long as a contractor can show that the non-conforming work is adequate for its intended purpose, the economic-waste doctrine is applicable irrespective of the strict compliance doctrine.

Subsequent Board decisions have picked up on this language. See L. D. Docsa Assoc., Inc., ASBCA No. 45267, 1993 ASBCA LEXIS 167, at *7-8 (May 11, 1993) (quoting the adequate for-intended-purposes language in Granite in finding that the government's repair order was proper); Armada/Hoffler Constr. Co., DOTBCA Nos. 2437, 2461, 93-1 B.C.A. (CCH) ¶ 25,446 (Sept. 21, 1992) (quoting Granite and finding the government's order of repair unreasonably economically wasteful); Ball, Ball, & Brosamer, Inc., IBCA No. 2103-N, 93-1 B.C.A. (CCH) ¶ 25,287 (July 27, 1992) ("[The government] cannot direct replacement of work when the cost of correction is economically wasteful and the work is adequate for its intended purpose."). Additionally, the Federal Circuit engaged in its economic waste inquiry based on a duty it found imposed on the Corps under the "public interest" clause of the contract, GP-10(b). Granite, 962 F.2d at 1005. As indicated earlier, such a "public interest" clause must be incorporated into all of the government's fixed-price construction contracts that exceed a small purchase limitation under the Federal Acquisition Regulation. See supra note 260 (quoting 48 C.F.R. § 52.246-12(f) (1986)). Thus, under Granite the economic-waste doctrine is arguably codified into federal regulations and may be invoked in all contracts covered by the regulation. See Supreme Court Deals Blow to Government Contracting Power, UPI, Jan. 11, 1993, available in LEXIS, Nexis Library, UPI File (describing the argument made by Granite that the government can effectively overturn the Granite decision by changing federal regulations).

words, the Boards of Contract Appeals and Federal Courts will not allow the government to charge a contractor for repair costs when a contractor successfully shows that such repairs involve unreasonable economic waste. Rather, the government's recovery will be limited to diminution in value.²⁸⁴ This Comment proceeds on the assumption that *Granite* represents such a situation.

IV. ANALYSIS

A central argument of this Comment is that the current economic-waste doctrine pronounced in Granite substantially undermines the government's ability to administer contracts. However, it does not suggest that the economic-waste doctrine should be completely divorced from government contract litigation. Rather, this Comment supports an economic-waste exception to the doctrine of strict compliance which is carefully tailored to cope with the unique circumstances inherent in government contracting. Before criticizing the current rule and proposing a narrower one, the policies supporting an economic-waste doctrine must be identified. This can be accomplished by highlighting the similarities and differences between the way the economic-waste doctrine and its rationales are employed in both the government and non-government contract contexts. Once the justifications for the economic-waste doctrine are identified, a critique of the doctrine as it currently stands is possible. Based on this critique, a narrower economic-waste exception to strict compliance will be seen as more desirable for effective government contracting.

A. Similarities between Government and Non-Government Contract Economic-Waste Doctrines

A comparison of the cases employing the economic-waste doctrine in the government contract and non-government contract areas reveals that, in many instances, the government contract decisions have borrowed ideas advanced in the state law cases.²⁸⁵ For exam-

^{284.} However, as will be explained *infra*, the economic-waste doctrine as currently applied to government contracts seems to have the same exceptions as the economic-waste doctrine in the non-government contract context, including exceptions for unsafe conditions, intentional breaches, and important aesthetic considerations. See *infra* notes 315-35 and accompanying text.

^{285.} One strong indication of this fact is an increasing number of citations to state law cases in government contract decisions in this area. For example, the Federal Circuit cited Jacob & Youngs, Inc. v. Kent, 129 N.E. 889 (N.Y. 1921), in *Granite* for the proposition that economic

ple, some government contract cases discussing economic waste appear to utilize the disproportionate-value rule.²⁸⁶ while other decisions analyze economic waste based on the destruction rule.287 In addition, many of the rules that limit the application of the economic-waste doctrine in state law decisions have also been applied to limit the economic-waste doctrine in government contract cases.²⁸⁸ However, the policy justifications behind the application of the economic-waste doctrine in government contract cases are not always the same as their state law counterparts. As will be demonstrated below, government contract decisions applying the economicwaste doctrine are guided solely by the policy concern of preventing the unwise use of resources.²⁸⁹ Preventing the government from obtaining an unfair financial windfall is simply not a relevant consideration in most government contract cases because the government has either already required repair or expressed a sincere desire to undertake repairs. These differing policy concerns should dictate how the economic-waste doctrine can be more advantageously applied in the government contract context.

1. The Disproportionate-Value Rule Revisited

The decisions in Valley Asphalt Corp.²⁹⁰ and Granite Construction Co. v. United States²⁹¹ appear to incorporate the disproportionate-value rule. In Valley Asphalt, the Board denied the government the right to recover repair costs and limited recovery to diminished value when it found that repairs to the runway would have failed to materially increase the value of the project and would have involved a substantial expenditure on the part of the contractor.²⁹² This holding closely resembled the Washington Supreme Court's use of mar-

waste will be found when the cost to remedy a defect is disproportionate to the loss in value caused by the defect. Granite, 962 F.2d at 1007. Valley Asphalt also cited Jacob & Youngs as the basis for the economic-waste doctrine. Valley Asphalt Corp., ASBCA No. 17595, 74-2 B.C.A. (CCH) ¶ 10,680, at 50,770 (May 30, 1974).

^{286.} See infra notes 290-97 and accompanying text (discussing how some government contract cases appear to be utilizing the disproportionate-value rule).

^{287.} See infra notes 307-14 and accompanying text (discussing several government contract cases applying the destruction rule).

^{288.} See infra notes 315-35 and accompanying text (discussing the limitations on the use of the economic-waste doctrine in government contracts).

^{289.} See infra notes 298-306 and accompanying text (discussing the policies behind the economic-waste doctrine in government contracts).

^{290.} ASBCA No. 17595, 74-2 B.C.A. (CCH) ¶ 10,680 (May 30, 1974).

^{291. 962} F.2d 998 (Fed. Cir. 1992), cert. denied, 113 S. Ct. 965 (1993).

^{292.} Valley Asphalt Corp., 74-2 B.C.A. (CCH) ¶ 10,680, at 50,770.

ket value to make determinations of economic waste in Eastlake.293 The Eastlake court found it unreasonably wasteful to replace defective kitchen cabinets where the cost of these repairs was grossly disproportionate to the increase in value the owner would have realized with conforming cabinets.²⁹⁴ Therefore, the rule of law from both decisions appears to be that an owner may not recover cost-of-repair damages and is limited to diminution in value where repairs will not increase the value or utility of a project in proportion to the repair costs. Similarly, in Granite, the Federal Circuit found it relevant that the contractor was required to spend approximately 10 percent of the contract price to strictly comply with the contract specifications.²⁹⁵ This analysis seems to parallel the court's proportionality discussion in Beik.296 where the court compared the repair costs to the contract price and found that no unreasonable economic waste was present.²⁹⁷ Thus, both courts' economic-waste analyses compare repair costs to the contract price.

Although application of the rule is similar, the policies behind the government contract cases applying the disproportionate-value rule differ from those in state cases. The government contract cases do not reflect an interest in preventing the owner, which in these cases is the government, from obtaining a windfall because generally no windfall is possible. As previously discussed, the disproportionate-value rule is utilized in state law cases to avoid granting an owner an unfair windfall.²⁹⁸ Cases like *Eastlake* deny repair costs to owners where a court assumes that an owner will pocket repair costs and obtain an unfair windfall by leaving the project unrepaired.²⁹⁹ Such an assertion is not warranted in a case like *Granite*, where the government actually required that the repairs be made.³⁰⁰ If a repair has previously been executed, the government by definition cannot receive a financial windfall because any financial value the gov-

^{293. 686} P.2d 465 (Wash. 1984); see also supra notes 52-66 and accompanying text (discussing the Eastlake decision).

^{294.} Eastlake, 686 P.2d at 475.

^{295.} Granite, 962 F.2d at 1000.

^{296. 572} P.2d 305 (Or. 1977); see also supra notes 67-75 and accompanying text (discussing the Beik decision).

^{297.} Beik, 572 P.2d at 310.

^{298.} See supra notes 76-78 and accompanying text (discussing the policies behind the disproportionate-value rule).

^{299.} Eastlake Constr. Co. v. Hess, 686 P.2d 465, 473 (Wash. 1984).

^{300.} Granite Constr. Co. v. United States, 962 F.2d 998 (Fed. Cir. 1992), cert. denied, 113 S. Ct. 965 (1993).

ernment has received would already be expended on repair. Further, in cases like *Valley Asphalt*, where the record clearly indicated that the government was determined to undertake repairs on the runway with or without a grant of repair costs from the Board,³⁰¹ no windfall is possible because the government has demonstrated how it intends to use the court's award.

Additionally, because of the subject matter of government contracts, the mechanisms for realizing a windfall are not present. Since the subjects of most government contracts are simply not fungible, the government, unlike private parties, cannot sell the defective project and purchase a conforming project with the proceeds while pocketing repair costs as a windfall. Therefore, the reviewing forums need not fear that the government will pocket repair costs in lieu of initiating repairs. Thus, cases like *Granite* and *Valley Asphalt* can only be justified by the policy of preventing, or deterring, the unwise use of resources which, in non-government contract cases, serves as the policy justification for the destruction rule, the disproportionate-value rule. However, the Board in *Toombs & Co.* To did appear to contemplate an interest in preventing the government from receiving an unfair windfall. The Board in *Toombs* held that the government erroneously charged the contrac-

^{301.} Valley Asphalt Corp., ASBCA No. 17595, 74-2 B.C.A. (CCH) ¶ 10,680, at 50,761 (May 30, 1974).

^{302.} Government contracts frequently involve the construction of what economists call "public goods." Public goods are items — such as bridges, roads, and dams — which everyone is entitled to use whether or not they pay for the item. Thus, no market incentive exists to create such goods, because by definition even those who fail to pay for the good may benefit. As one author has noted:

Some goods and services cannot be provided through the price system because there is no way to exclude citizens from consuming the goods whether they pay for them or not. For example, there is no way to prevent citizens from benefiting from national expenditures on defense whether they pay money toward defense or not. Consequently, the price system cannot be used to provide such goods; no one will pay for them since they will receive them whether they pay or not. . . . The Government provides many public goods. Such goods are consumed collectively, or jointly, and it is inefficient to try to price them in a market. They tend to be indivisible; thus they frequently cannot be split into pieces and be bought and sold in a market.

EDWIN MANSFIELD, ECONOMICS: PRINCIPLES, PROBLEMS, DECISIONS 64 (5th ed. 1986). Thus, both theoretically and practically, government projects have no market value because the public has no incentive to purchase them.

^{303.} The court's determination that the contractor could recover repair costs from the government could be said to deter future wasteful decisions by the government.

^{304.} See supra notes 100-02 and accompanying text (discussing the policies served by the destruction rule).

^{305.} ASBCA Nos. 34590 et al., 91-1 B.C.A. (CCH) ¶ 23,403 (Sept. 18, 1990).

tor with replacement costs for metal boots, and found it relevant that the government had failed to undertake the repairs or express any desire in making them. 306 Thus, only in instances where it is shown that the government will not make the required repairs will the court look at the windfall rationale for applying the economic-waste doctrine to a government contract dispute. However, as the previous discussion indicates, the economic-waste doctrine has generally not been employed in government contract decisions to serve the public policy interests of the disproportionate-value rule. Therefore, the use of the doctrine must be justified on other grounds.

2. The Destruction Rule in Government Contracts

In Granite, the Federal Circuit applied the economic-waste doctrine in order to avoid penalizing a contractor for a government decision that involved the undoing of substantial portions of completed work and destruction of usable resources.³⁰⁷ This analysis mirrors the holdings in Grossman Holdings308 and Witty.309 In Grossman Holdings, the court found unreasonable economic waste in allowing the owner to recover repair costs to rebuild a home with the desired exposure.310 Similarly, the court in Witty refused to award the owner the costs necessary to replace defectively laid brick because such action would have entailed extensive waste and damage to usable property.311 Granite differs from cases like Witty and Grossman Holdings because in Granite repairs had already taken place, 312 whereas in Witty and Grossman Holdings they had not.313 Unlike the courts in Witty and Grossman Holdings, which effectively prevented an unwise use of resources by limiting the owners to diminished-value damages, the Granite court could not prevent the wasteful replacement of the waterstop. Therefore, the Granite court was forced to achieve its policy objective of preventing the wasteful use

^{306.} Id. at 117,433.

^{307.} Granite Constr. Co. v. United States, 962 F.2d 998, 1007 (Fed. Cir. 1992), cert. denied, 113 S. Ct. 965 (1993).

^{308. 414} So. 2d 1037, 1038 (Fla. 1982); see also supra notes 81-88 and accompanying text (discussing the Grossman Holdings decision).

^{309. 430} N.E.2d 191 (III. App. Ct. 1981); see supra notes 89-99 and accompanying text (discussing the Witty decision).

^{310.} Grossman Holdings, 414 So. 2d at 1039.

^{311.} Witty, 430 N.E.2d at 194.

^{312.} Granite Constr. Co. v. United States, 962 F.2d 998, 1000 (Fed. Cir. 1992), cert. denied, 113 S. Ct. 965 (1993).

^{313.} Witty, 430 N.E.2d at 192; Grossman Holdings, 414 So. 2d at 1038.

of society's resources through deterrence. In other words, the *Granite* decision deters the government from engaging in wasteful activity in the future by penalizing it for undertaking a wasteful activity in the disputed situation.³¹⁴ Thus, the public interest in avoiding the wasteful use of economic resources has been advanced by the use of the economic-waste doctrine in government contracting.

3. Similar Limitations to the Application of The Economic-Waste Doctrine

Both government and non-government contract decisions recognize limitations on the application of the economic-waste doctrine. Government contract cases employ many of the same limitations to the economic-waste doctrine that are found in the non-government context. For example, the Armed Services Board's reference to the contractor's good faith in attempting to satisfy the contract specifications in *Valley Asphalt* seems to indicate, as in the non-government context, that a contractor cannot invoke the economic-waste doctrine if breach of the contract specifications was willful or intentional. This is consistent with the California appellate court's analysis in *Shell v. Schmidt*, 316 where evidence of a lack of willfulness was necessary to invoke an economic-waste inquiry. 317

In addition, the General Services Administration Board in *Bromley*³¹⁸ recognized that in cases where strict compliance is supported by an important aesthetic interest, the economic-waste doctrine is inappropriate.³¹⁹ *Bromley* held that the government was entitled to strict compliance with a contract specification for roof tiles

^{314.} The court's decision in no way deters the government from obtaining an unfair financial windfall, because where the government has made repairs or is determined to require such repairs, no financial windfall is available. See supra notes 290-96 and accompanying text. The economic-waste doctrine only pertains to the prevention of the unwise use of resources and not to the prevention of the government's obtaining financial windfalls at the cost of the contractor where the government has made or is determined to make repairs.

^{315.} Valley Asphalt Corp., ASBCA No. 17595, 74-2 B.C.A. (CCH) ¶ 10,680, at 50,770 (May 30, 1974) ("[Valley's] failure to meet required plan elevations was not intentional, and its attempt to meet those requirements was consistently in good faith."); see also supra notes 212-22 and accompanying text (discussing the Valley Asphalt decision).

^{316. 330} P.2d 817 (Cal. Dist. Ct. App. 1958); see supra notes 104-12 and accompanying text (discussing the Shell decision).

^{317.} Shell, 330 P.2d at 823.

^{318.} Bromley Contracting Co., GSBCA No. 6965, 85-3 B.C.A. (CCH) ¶ 18,428 (Sept. 20, 1985).

^{319.} Id. at 92,529; see also supra notes 251-57 and accompanying text (discussing the Bromley decision).

on an historic restoration project.³²⁰ This holding appears to parallel the Arkansas Supreme Court's reluctance to invoke the economic-waste doctrine in litigation surrounding the construction of a personal residence in *Carter v. Quick.*³²¹ In both situations, personal or aesthetic interests outweighed the courts' concern with avoiding unreasonable economic waste.

Finally, the Armed Services Board's decision in *Pacific Western Construction*, *Inc.*³²² adopted the position that the government is entitled to strict compliance where a defect in a structure results in a dangerous condition.³²³ In this case, a defect in a helicopter landing pad resulted in the potential for dangerous loose gravel.³²⁴ The New York Court of Appeals, in *Bellizzi v. Huntley Estates*, *Inc.*,³²⁵ adopted a similar rule in the non-government contract context.³²⁶ In *Bellizzi*, the contractor's breach of the contract specifications left the owner with a driveway which could not be safely used.³²⁷ Therefore, neither in the non-government nor in the government contract context is the economic-waste doctrine appropriate where a breach produces a dangerous condition.

On the surface, the use of the economic-waste doctrine in government contract cases appears to parallel its use in state law decisions. The borrowing of state law ideas in government contract cases probably accounts for many of the similarities.³²⁸ Like state law cases, government contract decisions apply the economic-waste doctrine when either the government proposes, or has required, repairs which are grossly disproportionate to the increase in value expected by the repair,³²⁹ or repairs which will result in an unwise use of re-

^{320.} Id. at 92,541.

^{321. 563} S.W.2d 461 (Ark. 1978) (holding that an owner who intended to use a structure as personal residence was entitled to repair costs for defectively laid brick even where the value of the home with the defects was greater than the contract price); see also supra notes 122-28 and accompanying text (discussing the Carter decision).

^{322.} ASBCA No. 28462, 86-2 B.C.A. (CCH) ¶ 18,816 (Dec. 31, 1985).

^{323.} Id.; see also supra notes 246-50 and accompanying text (discussing the Pacific W. decision).

^{324.} Pacific W., 86-2 B.C.A. (CCH) ¶18,816, at 94,821.

^{325. 143} N.E.2d 802 (N.Y. 1957).

^{326.} Id.; see also supra notes 114-20 and accompanying text (discussing the Bellizzi decision).

^{327.} Bellizzi, 143 N.E.2d at 803.

^{328.} See supra note 285 and accompanying text (describing government contact cases which specifically cite state law decisions to support economic-waste inquiries).

^{329.} See supra notes 290-97 and accompanying text (describing government contract decisions which appear to be applying the disproportionate-value rule).

sources.³³⁰ Further, the application of the doctrine is avoided in cases where the breach is willful,³³¹ the government has a strong aesthetic justification for requiring strict compliance,³³² or the project, as delivered by the contractor, is dangerous.³³³ However, upon close inspection, the policy justifications which underlie the doctrine are not identical in the government contracting and private contracting contexts. Rarely can the government receive a windfall if awarded repair costs. Thus, the public interest in preventing owners from being overcompensated for their damages is not present in government contract disputes.³³⁴ Therefore, the economic-waste doctrine is justified in government contracting decisions solely on the policy of preventing the unwise use of resources.³³⁵

B. Criticisms of The Economic-Waste Doctrine in Government Contracts

Many of the same criticisms that commentators have made about the economic-waste doctrine in the private setting apply to government contracts as well.³³⁶ The economic-waste doctrine will frequently leave the government insufficiently compensated for its injuries resulting from a breach.³³⁷ Further, the economic-waste doctrine as applied to government contracts increases economically inefficient costs associated with contracting by increasing both contract formation costs and litigation costs.³³⁸ Additionally, the doc-

^{330.} See supra notes 307-14 and accompanying text (describing government contract decisions which appear to be applying the destruction rule).

^{331.} See supra notes 315-17 and accompanying text (reviewing government contract decision where good faith was required as a precondition to applying the economic-waste doctrine).

^{332.} See supra notes 318-21 and accompanying text (describing government contract decision refusing to apply the economic-waste doctrine where the government's call for strict compliance was supported by an important aesthetic interest).

^{333.} See supra notes 322-24 and accompanying text (examining government contract decision refusing to apply the economic-waste doctrine where a defect in performance resulted in a hazard-ous condition).

^{334.} See supra notes 298-306 and accompanying text (explaining in detail why the government cannot in most instances receive unfair windfalls through contract remedies).

^{335.} See supra notes 303-04, 307-14 and accompanying text (describing the public interests served by the use of the economic-waste doctrine in government contract litigation).

^{336.} See supra notes 129-51 and accompanying text (discussing criticisms of the economic-waste analysis as applied in non-government contract cases).

^{337.} See supra notes 129-35 and accompanying text (describing how the economic-waste doctrine can leave an owner under-compensated in non-government contract cases).

^{338.} See supra notes 146-48 and accompanying text (discussing how the economic-waste doctrine results in high litigation costs but low contract formation costs in non-government contract cases).

trine as it currently stands seriously undermines the government's ability to engineer and administer its contracts.

1. Under-Compensation of the Government

Similar to the private context, limiting the government to diminution-in-value damages may leave the government under-compensated for its injuries due to defects in performance. Granite provides a clear example of this phenomenon. As a result of the Federal Circuit's ruling, the government was forced to reimburse the contractor for the costs of bringing the project up to contract specifications. with nominal reductions for the difference in value between the nonconforming waterstop and the specified material. 339 Since government contract projects involve the construction of public goods without market values,340 the boards and courts cannot award a contractor the difference in value between the project promised and the project delivered. Thus, a court is forced to offset the contractor's damages by the difference in the value of materials used, which in a case like Granite will be nominal.341 Put simply, the government is required to spend substantially more than it bargained for to receive what was promised in the contract, which results in a form of waste in itself. In the alternative, the government is forced to pay full contract price for a non-conforming project.

Often the contracting officer will require repairs to the project notwithstanding the result of litigation. The reviewing forum must then determine who should bear monetary responsibility for this activity. Assuming that a court finds that such repairs are not an unwise use of society's resources, the contractor who breached the contract should bear the cost. Unlike in state law cases, when the government desires to make repairs or has already undertaken a repair, the danger of granting the government a windfall is not present. A finding by a board or court that the government should cover repair costs, nominally reduced by the difference in value be-

^{339.} Granite Constr. Co. v. United States, 962 F.2d 998, 1008 (Fed. Cir. 1992), cert. denied, 113 S. Ct. 965 (1993).

^{340.} See supra note 302 and accompanying text (discussing the idea that public goods are incapable of obtaining a market value).

^{341.} Although the government was able to offset the contractor's damages by the difference in value between the waterstop used and the waterstop promised, this amount was negligible when compared to the \$3.8 million that the contractor stood to recover as the cost of repairing the dam.

^{342.} See supra notes 299-303 and accompanying text (explaining why the government usually will not receive a windfall when it has made repairs or plans on making repairs in the future).

tween conforming and non-conforming material, is wholly unjustified. Such a result leaves the government under-compensated for its injuries and fails to accomplish any identifiable public policy objective.

A finding that the repairs are a wasteful use of society's resources presents a more difficult challenge for boards and courts. But, as discussed below, allowing a contractor to avoid covering repair costs under the guise of the economic-waste doctrine — even when the repairs are arguably wasteful — is a harmful precedent, because it encourages abusive bidding and inefficient contracting costs in addition to leaving the government under-compensated.

2. Abusive Bidding and Performances

The current economic-waste doctrine in government contracts allows for substantial abuses in the bidding process that threaten to thwart the efficient administration of government contracts. Under the rule in Granite, a contractor is free to substitute materials which it feels are "good enough" for a project even where the contract incorporates detailed design specifications.³⁴³ This was the situation the Court of Claims attempted to avoid in Farwell.344 In that case, the court expressed the fear that if a contractor could ignore a contract specification and provide a substitute that it felt was "good enough," the opportunity would be created "for bidders on Government contracts to underbid their competitors by calculating bids on less expensive materials and later support[ing] their bid by saying the materials used conform with the technical requirements of the contract specifications and are not of inferior quality."345 These fears were realized under Granite, since a contractor can "rationally decide to submit a bid based on less expensive material or workmanship that did not meet contract requirements if he believe[s] that he could later convince a court that the nonconforming work [is] adequate for its intended purpose and that correction would be unnecessarily expensive."346

^{343.} See supra notes 283-84 and accompanying text (arguing that Granite represents a rejection of the strict compliance doctrine when unreasonable economic waste is found).

^{344.} Farwell Co. v. United States, 148 F. Supp. 947 (Ct. Cl. 1957); see supra notes 176-87 and accompanying text (discussing the Farwell decision).

^{345.} Farwell, 148 F. Supp. at 950.

^{346.} Petition for Certiorari at 19, Granite Constr. Co. v. United States, 962 F.2d 998, 1008 (Fed. Cir. 1992), cert. denied, 113 S. Ct. 965 (1993) (No. 92-545) [hereinafter Petition for Certiorari].

The argument could be made that no bidder would gain an unfair advantage in this environment since all bidders would eventually make the same material substitutions and submit low bids as well. However, such a condition would not correct the problems the government faces. Rather, this situation would substantially increase the government's contracting costs, as the government would bear the burden of evaluating the technical necessity of each specification for the project. Currently, the government does not develop precise specifications for each project, but rather develops uniform specifications,³⁴⁷ as exemplified by the waterstop specifications in *Granite*. Rather than developing waterstop specifications for each dam project, the Corps developed waterstop specifications that would be applicable to all such projects.348 Uniform specifications allow the government to realize economies of scale not possible if the government was required to undertake individual requirement testing.349 If contractors are free to challenge these specifications, the government would be forced to "reinvent the wheel every time it undertakes a new . . . project."350 This increase in cost would significantly outweigh any potential savings realized by lower bids.351

The current economic-waste doctrine also encourages government contractors to adopt abusive contract performance strategies. Under *Granite*, a court tests for the presence of economic waste by looking at the repair costs relative to the contract price and at the amount of destruction and rebuilding that repairs would require. As a practical matter, the amount of rebuilding required, and thus the

^{347.} Id. at 20.

^{348.} Id. The government noted that:

The specifications for waterstop set forth in the Corps' contract with Granite were not developed specifically for the Aberdeen lock and dam. Rather, those specifications were developed by the Corps for use at all waterway projects. We are advised that the Corps first undertook development of uniform standards for waterstop in the 1950's, in response to several instances in which the water sealant used in then-existing waterway projects failed. The standards have subsequently been periodically revised in light of developments in testing methods and materials science.

Id. (citations omitted).

^{349.} Id. at 21.

^{350.} Id.

^{351.} Sizeable decreases in bidding based on cheaper materials are not likely to occur because a contractor is forced to check the adequacy of the cheaper material for the project. A contractor would be forced to undertake such an examination, which would likely involve expensive engineering and architectural analysis, because if a reviewing body later finds that the material is inadequate for the project's requirements, the contractor would be required to cover the repair costs.

^{352.} Granite Constr. Co. v. United States, 962 F.2d 998, 1008 (Fed. Cir. 1992), cert. denied, 113 S. Ct. 965 (1993).

repair cost, increases as additional construction takes place after a breach. As a result, if a contractor realizes it has breached the requirements of the contract before the government has found the mistake, the contractor has an additional incentive to hide the nonconformity for as long as possible in an effort to increase the cost of repair.353 Although a contractor will likely be prevented from utilizing the economic-waste doctrine where it has acted in bad faith. 354 a contractor has an incentive to remain as ignorant as possible of potential defects because as repair costs increase, the chance a court will find that the correction constitutes unreasonable economic waste also increases.355 Under these conditions, a contractor can actually create unreasonable economic waste where none would have existed if the contractor had merely reported the breach at the time it occurred.356 This problem serves to increase the financial burden on the government in two ways. First, costs to the government would be higher because the government will be forced to absorb more and larger repair bills. Second, the government would be forced to employ additional manpower to monitor and inspect performance in an effort to counter this problem. Clearly, the economic-waste doctrine opens opportunities for contractors to abuse

^{353.} Petition for Certiorari, supra note 346, at 19. For example, Government and Contractor enter into a ten million dollar contract for the construction of a school. Immediately after completing the foundation, Contractor discovers that the waterproofing material innocently applied to the foundation, while adequate to protect the foundation, does not satisfy contract specifications. At this stage, repair of the defect would cost the contractor \$90,000 and would require little destruction of the structure. Assuming Government requires repair at this stage, Contractor's economic-waste defense would be weak. Thus, Contractor decides not to notify Government of the defect and commences construction on the foundation. Government finally discovers the defect on its final inspection of the completed structure. At this stage, repairing the defect would require substantial destruction of the completed structure costing five million dollars. Contractor's economic-waste defense is now significantly stronger.

^{354.} See supra notes 315-17 and accompanying text (discussing the bad faith exception to the economic-waste doctrine).

^{355.} Petition for Certiorari, supra note 346, at 20.

^{356.} Imagine that after winning a bid, but before beginning construction, a contractor realizes its bid does not conform with the contract specifications, and that in order to meet contract specifications it must employ an engineer to redesign the defective portion. Under Granite, the contractor would find it advantageous to forego redesigning the defective portion and instead begin construction in the hope that the government will not discover the defect until it becomes economically wasteful to fix it. In this scenario, the government would be forced to accept the defective project or pay to repair the defect out of its own pocket. Alternatively, if there were no economic-waste doctrine defense available, the contractor, upon finding the defect, would simply ask the CO for an upward adjustment in price and then redesign the project before beginning construction, thus saving the government significantly more money than in the above hypothetical. If the contractor began construction without redesigning the project, he would risk having to pay for the redesign and the rebuilding costs once the government found the defect.

the bidding process and circumvent their contractual duties.

3. Contract Efficiency

The current economic-waste doctrine is highly inefficient because it encourages both heightened litigation and contract formation costs. As previously discussed, economic-efficiency analysis assumes that a court's relevant precedent and rules will influence how parties form and perform contracts as well as when and how parties will litigate contract disputes.³⁶⁷ Economic-efficiency analysis is uniquely applicable to government contract rules because both the government and the contractor will have knowledge of the court's or the board's rules, and because the government undertakes a large number of projects. Contrast this situation with the non-government contract context in which an owner is often ignorant of legal rules; he will not change his conduct due to a court's ruling because he is unlikely to enter into a substantial number of construction contracts.358 Litigation costs are high under the current economic-waste doctrine in government contracts because, as seen above, a contractor is free to attack the necessity of contract specifications.359 In light of Granite, anytime the government finds a defect in performance and the CO decides that the contractor should repair the defects at its own expense, the contractor has everything to gain and little to lose by contesting such a decision on the ground that it is economically wasteful. Since these cases often involve substantial sums of money, both the government and the contractor have a strong incentive to appeal adverse holdings with hope the appellate review may be more sympathetic to their position. Further, this litigation necessitates determinations of engineering requirements and project value requiring costly expert testimony. 360 If the economicwaste doctrine was not available to a contractor (except perhaps in very limited circumstances), the contractor would have little incentive to contest adverse decisions by a CO because the contractor

^{357.} See supra notes 136-48 and accompanying text (discussing the application of economic-efficiency analysis to non-government contracts).

^{358.} See supra note 137 (discussing the information advantage contractors have over owners in non-government contract disputes).

^{359.} Petition for Certiorari, supra note 346, at 20 ("[T]he prospect that a court may later determine that it was 'economically wasteful' to require correction of nonconforming work gives contractors a significant incentive to litigate even when . . . the fact of noncompliance is undisputed.").

^{360.} Id. at 20 n.14.

would have little prospect of obtaining a more favorable judgment from a board or court.

Unlike in the non-government context, the current economicwaste doctrine also results in high contract formation and administration costs for the government. These cost are high for three reasons. First, formation costs are high because the government can no longer create uniform contract specifications and expect strict compliance by a contractor since a contractor can now utilize cheaper, non-conforming materials or designs and claim the alternative is sufficient for the project's requirements. Under Granite, the government must evaluate the precise technical requirements of each project if it wants the specifications to withstand litigation.³⁶¹ This dramatically increases formation costs since the government enters into so many contracts. Second, contract administration costs are high because the government is forced to employ more individuals than would otherwise be necessary to administer contracts. As previously explained, the current economic-waste doctrine provides an incentive for contractors to hide defects in performance in an effort to drive up repair costs.³⁶² This incentive forces the government to employ additional personnel to inspect and monitor performance to counteract the contractor's temptation to hide defects.363 Third, the economic-waste doctrine allows a contractor to challenge government design specifications if the contractor breaches a specification but feels the rendered performance is adequate for the project's requirements. As a result, the government has a strong incentive to incorporate more performance and fewer design specifications into its contracts.³⁶⁴ In other words, the government will simply allow the contractor to engineer more aspects of the project because it would be wasteful for the government to spend money on engineering de-

^{361.} Granite Constr. Co. v. United States, 962 F.2d 998, 1005 (1992), cert. denied, 113 S. Ct. 965 (1993) (holding that the Corps had a duty to evaluate the adequacy of STG waterstop for the Aberdeen dam project).

^{362.} See supra notes 352-56 and accompanying text (noting that the higher a contractor can make repair costs after a breach, the more likely a board or court is to find economic waste).

^{363.} See supra note 356 (discussing the government's need to more carefully monitor and inspect performance). The argument can be made that if the government more carefully monitors and inspects a contractor's work, the number of breaches will be reduced, resulting in corresponding reductions in litigation costs. However, this assertion is based on the premise that inspection and monitoring are effective in detecting breaches. Such an assertion may be unwarranted where breaches are often subtle and contractors are encouraged to obscure them.

^{364.} See supra notes 162-66 and accompanying text (discussing the characteristics of design and performance specifications).

sign specifications when the contractor will re-engineer the project. Although design specifications are expensive for the government to develop because it must invest the money to engineer them,³⁶⁵ the government actually saves money in the long-run due to economies of scale when it can use the same design specification for many projects.³⁶⁶ As the amount of engineering left to the contractor increases, the cost a contractor faces in performing increases, which in turn increases the cost to the government. The government loses a large source of potential financial savings when it can no longer effectively incorporate multi-application design specifications into its contracts. Thus, the current economic-waste doctrine results in both high litigation and contract formation costs.

C. The Benefits of the Current Economic-Waste Doctrine

Although the primary focus of this section has been to identify the various short-comings of applying the economic-waste doctrine to government contracts, there are advantages to the current practice which warrant comment. Allowing a contractor to employ the economic-waste doctrine reduces the inefficient use of society's resources in two ways. First, if a contractor protests a contracting officer's decision to repair a defective structure when in fact the structure as delivered is adequate for its intended purpose, a board or court decision finding unreasonable economic waste will prevent the destruction and rebuilding of otherwise usable structures. The Armed Services Board accomplished such a result in Valley Asphalt.³⁶⁷ When the Board found that the value of the airport runway as delivered was not measurably less than the value of the promised runway, the Board prevented the government from forcing the contractor to undertake costly and wasteful repairs.³⁶⁸ Similar waste has been averted by other board-level decisions. 369 These re-

^{365.} See supra note 348 and accompanying text (describing the process which the Army Corps of Engineers utilized in developing the design specification for waterstop).

^{366.} See supra notes 347-51 and accompanying text (discussing the advantages of uniform design specifications).

^{367.} ASBCA No. 17595, 74-2 B.C.A. (CCH) ¶ 10,680 (May 30, 1974).

^{368.} Id. at 50,770.

^{369.} See Toombs & Co., ASBCA Nos. 34590 et al., 91-1 B.C.A. (CCH) ¶ 23,403 (Sept. 18, 1990) (denying government repair costs for non-conforming air ducts in a school renovation project where the breach resulted in no adverse aesthetic impact or proven operational or sanitary disadvantages); Arnold M. Diamond, Inc., ASBCA No. 15063, 73-2 B.C.A. (CCH) ¶ 10,359 (Nov. 9, 1973) (preventing the government from requiring replacement of defective concrete portions of a pier where the contractor proved that the proposed repairs satisfied the contract specifi-

sults also suggest that the doctrine serves the more limited advantage of protecting government contractors from arbitrarily harsh government decisions. However, such waste is only avoided if the government fails to make the repairs.³⁷⁰ Also, in preventing the government from recovering repair costs, the doctrine avoids the improvident use of resources by deterring the government from engaging in future wasteful activities. When, as in *Granite*, a contractor successfully recovers repair costs — offset nominally by the difference in value between the materials used and promised — from the government,³⁷¹ the government will less likely require a contractor to undertake similar repairs in future contracts. Thus, the doctrine prevents not only the imminent waste of resources, but also discourages future waste.

D. Adopting a Narrower Economic-Waste Doctrine

In order to remedy the adverse impacts caused by the current economic-waste doctrine in government contracts, this Comment proposes that one change be made to the current rule. Specifically, reviewing forums should refrain from applying the economic-waste doctrine when the government expresses a genuine intent to undertake a repair. Thus, boards and courts should apply the strict compliance doctrine when the government has already required repairs or when the government adequately persuades them repairs will be initiated regardless of the outcome of the litigation. This change will help limit abuses by contractors in the bidding and performance stages and drastically reduce expected litigation costs. Turther, contractors will be prevented from circumventing the government's uniform design specifications, thereby allowing both the government and society to enjoy the efficiency advantages of such provisions. Under this proposed change, contractors will remain free to chal-

cations at a much lower cost).

^{370.} It is conceivable that the government may choose to undertake repairs even in the face of a board or court decision that prevents the government from charging the contractor for such economically wasteful repairs. In such a case, waste is not avoided, but the expense for the waste is merely shifted from the contractor to the government.

^{371.} Granite Constr. Co. v. United States, 962 F.2d 998, 1008 (Fed. Cir. 1992), cert. denied, 113 S. Ct. 965 (1993).

^{372.} See infra notes 375-85 and accompanying text (describing the advantages of limiting a contractor's ability to invoke the economic-waste doctrine).

^{373.} See infra notes 377-79 and accompanying text (arguing that limiting a contractor's ability to invoke the economic-waste doctrine encourages the government to develop efficient uniform design specifications).

lenge the necessity of suggested repairs when the government has not demonstrated a genuine interest in making repairs, which eliminates the potential for the government to obtain an unfair windfall, as seen in *Toombs*.³⁷⁴ Additionally, a contractor will remain free to supply "functional equivalents" when a contract specification incorporates purchase descriptions. This change will ameliorate many of the problems identified in the previous section and improve the overall efficiency of government contract administration.

As explained, allowing government contractors to challenge a contracting officer's decision to repair a defect in a project on the grounds that it is economically wasteful results in many problems. 376 The most serious of these problems is the fact that this essentially permits contractors to ignore the contract specifications and provide what they feel is "just as good." ³⁷⁸ Preventing contractors from invoking economic waste when a contracting officer finds repairs necessary would effectively eliminate these problems. Under this rule, contractors would no longer find it advantageous to submit low bids incorporating cheaper, non-conforming materials on the assumption that a board or court will find a contracting officer's order to replace these materials economically wasteful. As a result, the government can expect to see more accurate bidding, for if a contractor submits a low bid based on cheaper, non-conforming materials, the contractor will face the threat of having to pay for repairs once the nonconformity is discovered.

A second advantage of this proposed change is that in the event of a breach, the government would receive full compensation for its injuries. Unlike the current situation where the government may only be entitled to the difference in the value of materials,³⁷⁷ preventing the contractor from contesting a CO's decision to repair a defect based on the economic-waste doctrine guarantees the government the opportunity to be made whole. Further, such a rule would ensure the integrity of efficient uniform design specifications. Where the current economic-waste doctrine discourages the develop-

^{374.} ASBCA Nos. 34590 et al., 91-1 B.C.A. (CCH) ¶ 23,403 (Sept. 18, 1990); see also supra notes 229-40, 305-06 and accompanying text (discussing the *Toombs* decision).

^{375.} See supra notes 336-66 and accompanying text (describing the disadvantages of applying the economic-waste doctrine to government contracts).

^{376.} See supra notes 343-46 and accompanying text (discussing the realization of the court's warnings in Farwell under the current economic-waste doctrine).

^{377.} See supra notes 339-40 and accompanying text (arguing that damages computed using the difference in value between conforming and non-conforming materials are likely to be nominal).

ment of uniform design specifications because a contractor can successfully challenge its necessity in the case of breach,³⁷⁸ the proposed rule would allow a CO to require strict compliance with such specifications. This result would compel the government to develop additional design specifications which would decrease the engineering expenditures necessary for future projects.³⁷⁹

Of course, the argument can be made that preventing a contractor from challenging a decision to repair a defect on the grounds of the economic-waste doctrine would encourage the government to require repair of all defects regardless of actual necessity. According to this argument, not only would such a practice lead to the unnecessary waste of society's resources, but would require government contractors to subsidize this waste. While it can be argued that the proposed rule could result in some waste of resources not present under the current rule, the argument suffers from several short-comings. First, the notion that the proposed rule encourages the government to require repairs no matter how minor the defect is not completely accurate. Contracting officers are charged with a duty to consider the "public interest" when considering solutions for a defect. 380 Since the CO does not personally stand to benefit financially from a decision to require repairs, she has little incentive to require truly frivolous repairs, particularly in light of her obligation to the public interest. Thus, if a non-conforming structure was truly adequate for its intended purpose and repairs would involve substantial destruction and rework, a CO would likely forego repairs and accept diminished-value damages because repairs would not be worth the delay. Second, since contractors know they may be forced to pay for repairs in the event of a breach, they will be more careful to strictly comply under the proposed change than under the current rule. This should reduce the total quantity of potential repairs requested by CO's. Finally, unlike the current rule which encourages contractors to keep on building once a defect is discovered in order to increase repair costs,381 the proposed rule would encourage contractors to

^{378.} See supra notes 343-46 and accompanying text (arguing that the current economic-waste doctrine permits a contractor to circumvent uniform design specifications).

^{379.} See supra notes 347-51 and accompanying text (arguing that the current economic-waste doctrine increases contracting costs to the government by discouraging the use of uniform design specifications).

^{380.} Granite Constr. Co. v. United States, 962 F.2d 998, 1005 (Fed. Cir. 1992), cert. denied, 113 S. Ct. 965 (1993).

^{381.} See supra notes 352-56 and accompanying text (arguing that as repair costs increase the

disclose defects quickly to minimize any repair costs they may face. In turn, the government's expenditures for inspecting and monitoring construction would be reduced because the contractor's incentive to hide, or remain ignorant of, defects for as long as possible is eliminated.

The proposed change will result in greater overall contract efficiency in government contracts compared to the current economic-waste doctrine. As demonstrated in the previous section, the current rule results in high contract formation costs and administration costs, as well as large litigation costs. Formation costs are high because the government must evaluate the precise technical requirements for each project rather than relying on uniform design specifications. Contract administration costs are high because the government is required to extensively monitor performances to offset the contractor's incentives to hide non-conformance in an effort to raise repair costs. Moreover, litigation costs are high because the contractor is free to challenge a CO's decisions requiring repair, the litigation itself is costly in nature, and the parties are likely to undertake expensive appeals.

In contrast, contract formation, administration, and litigation costs would be comparatively lower under the proposed rule. Formation costs would be low because, unlike under the current rule, the government could rely on economically efficient uniform design specifications to reduce engineering costs. Uniform design specifications may be costly to engineer in the short-term, but in the long run they should reduce overall engineering expenditures. Contract administration costs are lower under the proposed rule since the government would be able to reduce monitoring and inspection staffs because the incentives for contractors to hide defects to increase repair costs are reduced. Finally, litigation costs would be dramatically lower under the proposed rule because a contractor could not challenge a CO's decision to require repairs and expect to

likelihood that a reviewing body will find that repairs constitute unreasonable economic waste also increases).

^{382.} See supra notes 357-66 and accompanying text (discussing the inefficiencies of the current economic-waste doctrine).

^{383.} See supra notes 343-51 and accompanying text (arguing that under the present economic-waste doctrine, the government cannot rely on uniform design specifications).

^{384.} See supra note 356 (arguing that the current economic-waste doctrine will force the government to hire additional inspection personnel to more closely monitor performance).

^{385.} See supra notes 359-60 and accompanying text (arguing that the present economic-waste doctrine encourages large litigation expenditures).

prevail. Therefore, litigation is an unattractive prospect for contractors under the proposed rule. As a result, limiting the application of the economic-waste doctrine as proposed would result in more efficient administration of the government's contracts.

Conclusion

When fashioning remedies for a breach of contract, courts are typically guided by a desire to place the parties in the position they would have been had the contract been properly performed.³⁸⁶ For the most part, this means granting an owner the costs necessary to repair the defects in performance.³⁸⁷ However, beginning with Judge Benjamin Cardozo's analysis over seventy years ago, courts and legal scholars began to realize that blindly awarding an owner repair costs could run afoul of paramount public policy. As the economicwaste doctrine developed over time, two separate but often interrelated policy considerations emerged as justifications for limiting an owner's recovery to diminished-value damages rather than traditional cost-of-repair damages. In situations where the cost of repairing a defect greatly exceeds the increase in value that an owner could expect from such repairs, courts have realized that owners would find it beneficial to skip repairs and pocket the award as a financial windfall.388 Due to such considerations, courts limit an owner's recovery to diminution of value in order to prevent this unjust enrichment.389 Additionally, the courts have determined that in cases where repairing a substantially performing structure required extensive destruction of useable property, society's best interests are served through preventing such waste by limiting an owner's recovery to diminished-value damages. 390 Thus, in the non-government contract context, the economic-waste doctrine has been a powerful tool for courts to advance society's concerns. Courts have used economic waste to prevent resourceful owners from using insignificant defects in performance to gain unjust compensation at the expense of contractors. Further, courts have used the economic-waste doc-

^{386.} See supra note 1 and accompanying text (discussing expectation and reliance interests).

^{387.} See supra note 3 and accompanying text (discussing courts' preference for awarding cost-of-repair damages).

^{388.} See supra notes 50-78 and accompanying text (analyzing of the disproportionate-value rule).

^{389.} See supra notes 76-78 and accompanying text (discussing the policy underpinnings of the disproportionate-value rule).

^{390.} See supra notes 79-102 and accompanying text (describing the destruction rule).

trine to prevent individuals from undertaking courses of action that make wasteful use of society's resources.

Recognizing the trend in state law, both the contract appeals boards of some federal agencies and the federal courts have begun to apply the principles of the economic-waste doctrine to government contract disputes as an exception to the longstanding rule of strict compliance. 391 Unfortunately, the agency boards and federal courts have not been sufficiently sensitive to the unique characteristics of government contracting in applying the economic-waste doctrine to government contracts. These judicial bodies have not fully realized that the policy considerations that shape the doctrine in the non-government context may not apply as smoothly to the government contract setting. Consequently, the current rule allows the government to remain substantially under-compensated for its injuries while encouraging contractors to circumvent the bidding process and engage in other abusive conduct. 392 Under the current rule, any benefit which is realized from the use of the economic-waste doctrine is countered by detrimental effects on the government's ability to administer its contracts efficiently. 393

This Comment intended to explore the application of the economic-waste doctrine to government contracts. The foregoing analysis has demonstrated that through limiting the ability of a contractor to employ the economic-waste doctrine, the government can more easily maintain the quality of its construction projects as well as maintain the integrity of the bidding system. Additionally, through the adoption of a narrower economic-waste doctrine, agency boards and federal courts can reduce the government's overall contracting costs while simultaneously maintaining an economically efficient government contract system.

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^{391.} See supra notes 176-284 and accompanying text (describing government contract cases discussing or applying the economic-waste doctrine).

^{392.} See supra notes 335-60 and accompanying text (discussing the disadvantages of the economic-waste doctrine as currently applied to government contracts).

^{393.} See supra notes 357-66 and accompanying text (highlighting the inefficiencies the current economic-waste doctrine creates in the government contracting process).