Slaying the Jurisprudential Beast: Virginia's Flawed Multi-Factor Approach to Differentiating Ordinary Building Materials from Equipment and Machinery under Code Sec. 8.01-250

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SLAYING THE JURISPRUDENTIAL BEAST: VIRGINIA’S FLAWED MULTI-FACTOR APPROACH TO DIFFERENTIATING “ORDINARY BUILDING MATERIALS” FROM “EQUIPMENT” AND “MACHINERY” UNDER CODE § 8.01-250

MEREDITH RENEGAR*

Virginia Code section 8.01-250 voids all claims against design professionals, contractors, subcontractors, and suppliers arising out of defective improvements to real property when not brought within five years of the incorporation of that improvement. However, manufacturers and suppliers of ill-defined “equipment” and “machinery” are exempted from the statute’s protection. Given the relatively short statute of repose for improvements to real property in the Virginia Code, the threshold question of whether something is “equipment” or “machinery” has been a central issue in many tort cases before the Virginia courts.

Through a line of cases originating with the Supreme Court of Virginia’s 1985 decision in Cape Henry Towers, Inc. v. National Gypsum Co., Virginia courts have assembled a multi-factor test to distinguish the term of art, “ordinary building materials,” from “equipment” or “machinery.” This Comment argues that this sprawling and continuously growing factor-based approach, in which no one factor is controlling, is overly cumbersome and nebulous. It leads to inconsistent applications and results that offend modern ideals of advancement and technology.

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To combat such an unworkable approach, this Comment proposes a two-fold alteration—called the "classified common-sense approach"—to replace the current jurisprudence. Within this approach, the Virginia legislature would first supplement section 8.01-250 with an amendment or guiding document that classifies real property into broad groups, i.e., manufacturing structures, warehouse facilities, single family dwellings, high-rise domiciles, etc. Second, the proposed approach requires that within the legislatively-established classification system of improvements to real property, the courts would apply common-sense notions of "ordinary building materials" and "equipment" rather than the current multi-factor analysis. This construction of Virginia’s statute of repose offers more guidance and a simpler application than the current test, and recognizes increasing technical advances in building technology.

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"In extraordinary times, the ordinary takes on a glow and wonder all of its own."

INTRODUCTION

Construction spending in the United States totaled $816 billion in 2010. Of that figure, public construction spending accounted for approximately $307 billion, private nonresidential spending for approximately $267 billion, and private residential spending for approximately $242 billion. In 2012, the Commonwealth of Virginia issued 26,700 building permits for both single and multi-family dwellings. As of March 2013, the number of building permits issued in Virginia was four percent higher than the number issued by that same time in 2012. These statistics demonstrate that despite the recent economic downturn, there remains plenty of traffic, and thus plenty of potential liability, within the marketplace for improvements to real property.

The statute of repose delineated in Virginia Code section 8.01-250 nullifies all claims against design professionals, contractors,

1. MIKE A. LANCASTER, HUMAN. 4, at 22 (2011).
3. Id.
5. Id.
7. See Kevin Carmichael, Housing Puts U.S. Economy on Firmer Footing, GLOBE & MAIL (Sept. 19, 2012, 7:30 PM), http://www.theglobeandmail.com/report-on-business/economy/economy-lab/housing-puts-us-economy-on-firmer-footing/article4553423 (charting homebuilder confidence at a six-year high); Amy Guthrie, Cemex Says U.S. Sales Improving, WALL ST. J. (July 20, 2012 1:07 PM), http://online.wsj.com/article/SB10000872396390444464304577538980567924836.html (tracing the sales of the world’s third-largest cement company and noting that the increase in volume sales to the United States evidences a heightened demand in American construction markets, including the residential housing sector); see also id. (correlating an improved housing market with construction rates growing at double-digit rates).
8. In Virginia, an improvement to real property may stem from any effort or money expended pursuant to the betterment of the property or the immediate benefit of the dweller or possessor. See Cullop v. Leonard, 33 S.E. 611, 612 (Va. 1899). Broadly, any structural extension or augmentation to a building that could reasonably supplement its functional value is an improvement. Wiggins v. Proctor & Schwartz, Inc., 330 F. Supp. 350, 352 (E.D. Va. 1971), superseded by statute, VA. CODE ANN. § 8.01-250 (2009).
subcontractors, and suppliers arising out of defective or unsafe improvements to real property if the claim is not brought within five years of the incorporation of that improvement. This exception, added in 1973 to counteract what the Virginia General Assembly saw as an undesirable result of Wiggins v. Proctor & Schwartz, Inc., eliminates manufacturers or suppliers of "equipment" and "machinery" from the statute's protection. Although the amended statute explicitly excludes "equipment" and "machinery" from its protection, it fails to specify what qualifies as "equipment" or "machinery." The applicability of the statute of repose is thus contingent upon what is included in the categories of "equipment" and "machinery." Subsequent judicial discussion of this provision and exception has thus been largely definitional.

Through a series of cases beginning with the Supreme Court of Virginia's 1985 decision in Cape Henry Towers, Inc. v. National Gypsum Co., the Virginia courts have constructed an ever-growing list of various characteristics that ostensibly help to separate "ordinary building materials" from "equipment" and "machinery." Within the

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9. VA. CODE ANN. § 8.01-250; see also JOHN H. CRADDOCK, JR. & NICOLE HARDIN BRAKSTAD, COMMONWEALTH OF VIRGINIA CONSTRUCTION LAW COMPENDIUM 9 (2012), available at http://www.uslaw.org/files/Compendiums2012/Construction/Virginia_Constructio n_Compendium_12.pdf (observing that the statute of repose provides a termination date for construction liability regardless of the cause of action involved). In total, forty-five states have enacted statutes comparable to Virginia Code section 8.01-250.


11. Compare VA. CODE ANN. § 8-24.2 (1964) (containing no mention of "equipment" or "machinery"), with id. § 8.01-250 (2009) (stating that the limitation of the statute is not applicable to those individuals who manufacture or supply "equipment" or "machinery" that has been incorporated into or affixed to a structure upon real property).

12. See id. § 8.01-250 (2009) (failing to include either an explicit definition section or a more organic definition of the relevant terms).

13. See Jamerson v. Coleman-Adams Constr., Inc., 699 S.E.2d 197, 199 (Va. 2010) (remarking that cases subsequent to the 1973 amendment have concentrated on whether the items and products at issue were "equipment or machinery" or "ordinary building materials").


15. See infra Part I.D (describing the evolution of the case law and the various factors that the courts consider in their analyses).
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current framework,\(^\text{16}\) no factor or group of factors is controlling; rather, the specific facts of each case drive the analysis.\(^\text{17}\)

This Comment argues that the current factors-based approach to distinguishing “ordinary building materials” from “equipment” and “machinery” for purposes of Virginia Code section 8.01-250 is overly complex and burdensome. As a result of the test’s increasing length and involvedness, courts selectively employ various factors, circumstantial evidence becomes increasingly dispositive, and the test produces outcomes that are sometimes inconsistent with both modern ideals and each other.\(^\text{18}\) Remedying this effect will likely require both legislative and judicial action.

To simplify the test and yield more consistent results that do not offend modern notions of advancement and technology, this Comment proposes a two-part alteration to the current “ordinary building materials” jurisprudence. First, the legislature should consider supplementing Code section 8.01-250 with an amendment or guiding document under which real property is classified into broad groups, i.e., manufacturing structures, warehouse facilities, single family homes, high-rise domiciles, etc. Second, the current six-factor judicial test should be simplified such that, within the legislatively-established classification system of improvements to real property, common-sense notions of “ordinary building materials” and “equipment” dictate the designation of items. This “classified common-sense approach” would ensure not only a less cumbersome application, but also that results remain cogent with the underlying nature of the structure as well as consistent with advancements in technology.

Part I of this Comment provides a brief overview of the original statute prior to its 1973 revision and chronicles the impetus for and development of the “equipment or machinery” exception. This Part then tracks the creation of the term of art, “ordinary building materials,” as first articulated in Cape Henry Towers and details the jurisprudence that has developed as a result of the courts’ attempts to

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\(^{16}\) The current test applies six different factors and examines both the nature of the product itself and the actions of the manufacturer in the production, distribution, and installation of the product. See infra notes 88-93 and accompanying text.

\(^{17}\) Jamerson, 699 S.E.2d at 199 (“[Courts] have not held any single characteristic or set of characteristics as determinative of the issue. Each case has been and must be decided based on its own circumstances.”).

\(^{18}\) See infra Part II (asserting that the current test is overly cumbersome, comprises conflicting judicial standards, and produces results inconsistent with evolving conceptions of what is ordinary).
distinguish “ordinary building materials” from “equipment” and “machinery.”

Part II compares and contrasts how courts have applied this test throughout history, analyzes the consistency of the results, and then surveys the test’s inconsistencies with modern notions of technological advancement. Part III considers Justice Mims’ proposed “common-sense approach” as articulated in his concurrence in *Jamerson v. Coleman-Adams Construction, Inc.*\(^9\) This Part also suggests that the common-sense approach accounts for neither the effect of technological advancements on modern notions of what is essential to a structure, nor the underlying nature and purpose of a structure. Finally, this Part proposes a new test—the “classified common-sense approach”—and considers the potential benefits and drawbacks of such an approach.

In closing, this Comment recommends that due to the complications of the current test, the phrase “ordinary building materials” has become a problematic term of art. Instead of continuously augmenting the test with additional factors and variables, this Comment concludes that the combination of an amended statute and a simpler judicial test would allow for easier application, more consistent results, and lower litigation rates.

I. BACKGROUND

A. Distinction Between Statutes of Repose and Limitation

Virginia Code section 8.01-250 contains a statute of repose for improvements to real property.\(^20\) Although closely related, statutes of repose differ from statutes of limitation in that they create a substantive right to be free from liability after the passage of a certain period of time.\(^21\) Statutes of limitation, on the other hand, generate only a procedural bar to a remedy.\(^22\) Furthermore, contrary to

\(^{19}\) 699 S.E.2d 197, 201 (Va. 2010) (Mims, J., concurring).
\(^{21}\) Shadburne-Vinton v. Dalkon Shield Claimants Trust, 60 F.3d 1071, 1075 (4th Cir. 1995) (explaining that within a statute of repose, the timeframe for bringing a claim is effectively transformed into a substantive element of the plaintiff’s cause of action); 54 C.J.S. Limitations of Actions § 7 (2013) (clarifying that statutes of repose imbue parties with a substantive right to be unencumbered by the threat of any potential liabilities subsequent to a legislatively-determined date).
\(^{22}\) Shadburne-Vinton, 60 F.3d at 1075 (identifying statutes of limitations as tools of public policy and court management, which do not imbue defendants with any right to be immune from liability, although this may be their practical effect); 63B AM. JUR.
statutes of limitations, statutes of repose begin to run from the incidence of a legislatively-determined event, regardless of the accrual of any cause of action.23

Generally, statutes of repose reflect an underlying legislative policy judgment that actors should not face an everlasting threat of civil liability for their previous acts or omissions.24 Therefore, the time limits associated with various statutes of repose fluctuate, as each legislature must determine an acceptable period of protracted liability.25 The oft-criticized effect of statutes of repose is that some plaintiffs' claims dissolve prior to their discovery or before they come into fruition.26 Nevertheless, legislatures effectuate statutes of repose because they foster the goals of finality and certainty in legal dealings.27

Section 8.01-250 is a construction statute of repose that shields contractors, architects, and project engineers from stale claims by extinguishing protracted liability for workmanship.28 It alters the substantive rights and obligations of the parties to any litigation emerging from an unsafe condition of an improvement to real property more than five years after the incorporation of that improvement.29 This five-year period represents not only the

2d Products Liability § 1490 (2013) (detailing statutes of limitations as affirmative defenses that extinguish the remedy but not the fundamental right).

23. 54 C.J.S. Limitations of Actions § 7 (comparing the conditional bar on a cause of action not brought within a specified time period in a statute of limitations with the absolute bar arising after a specified time period in a statute of repose).

24. Hess v. Snyder Hunt Corp., 392 S.E.2d 817, 819–20 (Va. 1990) (reasoning that a construction project can last for years after its completion and that a defendant should not be subject to potential liability when evidence may have since been lost or witnesses' memories faded); see Commonwealth v. Owens-Corning Fiberglas Corp., 385 S.E.2d 865, 867 (Va. 1989) (commenting that statutes of repose are one of three genres of statutory enactments that are intended to bar stale claims); Sch. Bd. of Norfolk v. U.S. Gypsum Co., 360 S.E.2d 325, 328 (Va. 1987) (adding that the expiration of the statutory period and subsequent termination of the rights of plaintiffs is intended to protect defendants from liability for torts listed in the statute).

25. See, e.g., IDAHO CODE ANN. § 5-241 (2010) (six-year statute of repose for actions arising out of improvements to real property); MO. ANN. STAT. § 516.097 (West 2002) (ten years); VA. CODE ANN. § 8.01-250 (five years).

26. W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS § 90, at 168 (5th ed. 1984) (noting that while some statutes of repose have been invalidated, most jurisdictions have upheld the constitutionality of repose legislation).

27. See Jay M. Zitter, Annotation, Validity and Construction of Statute Terminating Right of Action for Product—Caused Injury at Fixed Period After Manufacture, Sale, or Delivery of Product, 30 A.L.R.5th 1 (1995) (listing cases that found statutes of repose rationally related to a permissible state objective, such as protecting liability insurance companies from an increasing number of product liability claims).

28. See DAVID M. HOLLIDAY, AMERICAN LAW OF PRODUCTS LIABILITY § 47:94 (3d ed. 2013) (purporting that a statute of repose truncates liability at the point at which a party would be unfairly prejudiced in defending against charges of deficiency).

29. VA. CODE ANN. § 8.01-250; Sch. Bd. of Norfolk, 325 S.E.2d at 328 (declaring that
legislature's endorsement of ideals of finality and certainty, but also the judgment that requiring a defense against charges of defective design or construction after five years is unfairly prejudicial.  

### B. The Original Virginia Statute of Repose and the Development of the Exception

The Virginia General Assembly codified the original version of Virginia's statute of repose for improvements to real property in 1964 within Virginia Code section 8-24.2. The original statute contained only the first full paragraph of the current statute and stated:

No action... arising out of the defective and unsafe condition of an improvement to real property... shall be brought against any person performing or furnishing the design, planning, surveying, supervision of construction or construction of such improvement to real property more than five years after the performance or furnishing of such services and construction.

In 1971, the U.S. District Court for the Eastern District of Virginia first interpreted section 8-24.2. In *Wiggins*, the plaintiff was allegedly injured by a two-ton jute-picking machine that had been installed in a factory fourteen years earlier. Noting that the machine was an “essential component of... [the] manufacturing process” and was “affix[ed]... to a heavy concrete foundation... by means of heavy hold-down bolts,” the court held that the machine was an

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the substantive rights bestowed by Virginia’s statue of repose may not be impaired by retroactive application of the statute).  

30. See Caldwell v. Commonwealth, 94 S.E.2d 537, 540 (Va. 1956) ("It is elementary that an act creating a statutory offense, to be valid, must specify with reasonable certainty and definiteness the conduct which is commanded or prohibited, that is, what must be done or avoided, so that a person of ordinary intelligence may know what is thereby required of him."). See generally 82 C.J.S. Statutes § 86 (2013) (advancing that "[c]ertainty is one of the prime requisites of a statute"); *supra* note 27 and accompanying text (noting that legislatures favor finality in legal relationships).  

31. HOLLIDAY, *supra* note 28, § 47:94 (recognizing the application of repose provisions to defend against actions for contribution and indemnity as well as in actions for latent or patent deficiencies).  

32. VA. CODE ANN. § 8-24.2 (1964) (codified as amended at VA. CODE ANN. § 8.01-250 (2009)).  

33. Id.  

34. Wiggins v. Proctor & Schwartz, Inc., 330 F. Supp. 350, 351 (E.D. Va. 1971), superseded by statute, VA. CODE ANN. § 8.01-250; see Cape Henry Towers, Inc. v. Nat'l Gypsum Co., 331 S.E.2d 476, 479 (Va. 1985) (observing that while the Supreme Court of Virginia had not yet been called on to consider the impact of section 8-24.2, the U.S. District Court for the Eastern District of Virginia had done so in 1971 in *Wiggins*).  

improvement to real property, and the party constructing it was thus entitled to the protection of the five-year restriction.\textsuperscript{36}

Following the \textit{Wiggins} decision, dispute erupted within the Virginia legislature as lawmakers realized courts could construe the statute in a manner that was considerably broader than originally intended.\textsuperscript{37} As a result, the General Assembly re-codified former title 8 to the current title 8.01 and added a second paragraph to the provision which notes, "The limitation prescribed in this section shall not apply to the manufacturer or supplier of any equipment or machinery or other articles installed in a structure upon real property...."\textsuperscript{38} While the provision's amended version clearly and explicitly excluded manufacturers and suppliers of "equipment" and "machinery" from the statute's protection,\textsuperscript{39} the question remained as to what would fall into the categories of "equipment" or "machinery."\textsuperscript{40}

C. The Creation of the Term of Art: "Ordinary Building Materials"

By explicitly establishing the class of "equipment or machinery," Virginia Code section 8.01-250 implies the existence of a correlative class: those improvements \textit{not} qualifying as "equipment" or "machinery."\textsuperscript{41} Virginia legislators, however, did not coin any particular designation or term for those improvements not qualifying as "equipment" or "machinery."\textsuperscript{42} Instead, the Supreme Court of Virginia, in its 1985 \textit{Cape Henry Towers} decision, crafted a referent that

\begin{itemize}
\item[36.] \textit{Id.} at 353.
\item[37.] \textit{See} Jordan v. Sandwell, Inc., 189 F. Supp. 2d 406, 413 (W.D. Va. 2002) (explaining that the court's decision in \textit{Wiggins} "caused considerable legislative gnashing of teeth," as Virginia's legislators felt that the federal court had altered the nature of the statute from a real improvements statute of repose to a general products liability statute of repose); \textit{Cape Henry Towers}, 331 S.E.2d at 479 (recounting an unpublished 1973 report of the House of Delegates Committee for Courts of Justice emphasizing that the provision was never intended to safeguard manufacturers of equipment or machinery and that the \textit{Wiggins} decision was an "erroneous interpretation").
\item[38.] \textit{Va. Code Ann.} § 8.01-250.
\item[39.] \textit{Id.}; see \textit{Cape Henry Towers}, 331 S.E.2d at 479 (stating that the amendment was effected in clear response to \textit{Wiggins} and with the apparent goal of supplanting the \textit{Wiggins} ruling).
\item[40.] \textit{See} Jamerson v. Coleman-Adams Constr., Inc., 699 S.E.2d 197, 199 (Va. 2010) (acknowledging that cases subsequent to the 1973 amendment have revolved around whether the products or items at issue were "equipment" and "machinery").
\item[41.] \textit{See generally} 73 AM. JUR. 2D Statutes § 120 (2013) (explicating the statutory interpretation doctrine of \textit{expressio unius est exclusio alterius}, whereby the expression of one thing implies the exclusion of another).
\item[42.] \textit{See} \textit{Va. Code Ann.} § 8.01-250 (making no mention of any particular nomenclature for the class of improvements not qualifying as "equipment or machinery").
\end{itemize}
would come to shape all subsequent applications and interpretations of Virginia Code section 8.01-250.48

The court in Cape Henry Towers looked to legislative intent and found that, at its heart, the 1973 amendment was attempting to distinguish between “equipment or machinery” and what the court called “ordinary building materials.”44 At the time, the court did little to define this term of art or differentiate it from “equipment” or “machinery” and simply noted two things. First, “ordinary building materials” are generally incorporated into improvements to real property by design professionals and contractors outside the control of their manufacturers or suppliers.45 Second, “equipment” and “machinery,” unlike “ordinary building materials,” are usually subjected to quality-control measures and manufacturer’s warranties, which are voidable if the “equipment or machinery” is improperly installed or operated.46 Applying these two distinctions, the court found that the four-by-eight foot exterior building panels used in the construction of the Cape Henry Towers condominium buildings were “ordinary building materials” within the meaning of the statute.47 In other words, the manufacturer was entitled to the five-year protection offered through the statute of repose.48

43. See Cape Henry Towers, 331 S.E.2d at 480 (referring to the type of improvements not falling into the class of “equipment” and “machinery” as “ordinary building materials”); see also Jameson, 699 S.E.2d at 199 (explaining that since the Cape Henry Towers decision, which was the first case to address the 1973 amendment, Virginia courts have analyzed whether the item at issue was “equipment” and “machinery” or an “ordinary building material”).

44. Cape Henry Towers, 331 S.E.2d at 480 (“We conclude that the General Assembly intended to perpetuate a distinction between, on one hand, those who furnish ordinary building materials... and, on the other hand, those who furnish machinery or equipment.”).

45. Id.; see also City of Richmond, Va. v. Madison Mgmt. Grp., 918 F.2d 438, 445 (4th Cir. 1990) (applying this factor and expanding upon it by holding that although the defendant manufacturer of cement water pipes did not actually install the pipes, the defendant “exercised control over the structural integrity of the pipes” by assisting the engineer in designing and developing the “shop drawings and lay schedules” for installation, and the pipes were thus more like “equipment” than “ordinary building materials,” as the pipes were not “outside the control” of the defendant). Note that the Richmond court failed to explain how the defendant’s assisting the engineer with shop drawings and lay schedules translated into an exercising of control. See id. at 445 (jumping from the defendant’s involvement with shop drawings and lay schedules to the conclusion that the statute of repose did not bar the plaintiff’s claim).

46. Cape Henry Towers, 331 S.E.2d at 480.

47. See id. at 481 (affirming the ruling of the lower court, the Circuit Court of the City of Virginia Beach).

48. Id. at 477–78.
D. Post-Cape Henry Towers: Attempts to Distinguish “Ordinary Building Materials” from “Equipment” and “Machinery”

After the Supreme Court of Virginia’s initial analysis of Virginia Code section 8.01-250, a series of cases followed in which the judiciary grappled with the concept of “ordinary building materials” and attempted to delineate the definitional boundaries of “ordinary building materials” as opposed to “equipment” and “machinery.” Three years after its decision in Cape Henry Towers, the Supreme Court of Virginia ruled in 
Grice v. Hungerford Mechanical Corp.\(^{49}\) that an electrical panel box and its component parts (including the panel enclosure, the bus bar, the circuit breakers, and the grounding material) were “ordinary building materials.”\(^{50}\) The court relied loosely on its initial analysis in Cape Henry Towers, but also noted that the instructions and plans for integrating the items into the structure came not from the manufacturer, but rather, from the architects and design professionals involved in the project.\(^{51}\) In so doing, the court enumerated an additional factor relevant for distinguishing “ordinary building materials” from “equipment” and “machinery”: whether the manufacturer produced the item for a specific purpose or provided explicit directions for the installation of the item.\(^{52}\)

\(Grice\) was only the beginning of the test’s expansion. In 1998, the Supreme Court of Virginia heard \(Luebbers v. Fort Wayne Plastics, Inc.\)\(^{53}\) In \(Luebbers\), the estate of a swimmer who died in a private swimming pool accident brought an action against the manufacturer of various structural components used in the pool’s construction, including vinyl pool liners and steel braces.\(^{54}\) In holding that these items were “ordinary building materials,” the court expounded upon the quality control and warranty test enunciated in Cape Henry Towers.\(^{55}\) It emphasized that quality-control measures must be formalized and

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49. 374 S.E.2d 17 (Va. 1988).
50. Id. at 19 (affirming the trial court’s judgment that the items at issue were “ordinary building materials” within the meaning of section 8.01-250 and stating that the plaintiff’s claims against the manufacturer were therefore time-barred).
51. See id. at 18–19.
52. Compare id. at 19 (considering, for the first time, whether the item at issue was manufactured for a specific project or whether the item was accompanied by instructions or guidance for its installation into that specific project), with Cape Henry Towers, 331 S.E.2d at 478–80 (omitting any consideration regarding the effect of custom manufacturing or specific instructions).
54. Id. at 911–12.
55. See id. at 913; Cape Henry Towers, 331 S.E.2d at 480 (noting that “equipment” and “machinery,” unlike “ordinary building materials,” are usually subjected to quality-control measures as well as manufacturer’s warranties, which are voidable if the “equipment” or “machinery” is improperly installed or operated).
warranties must be specific in order to tip the scales towards "equipment or machinery." 56

The Luebbers court also attempted to apply the specific design test articulated in Grice. 57 However, in attempting to apply this test, the court actually enunciated a new factor based on the fungibility of the product at issue. 58 In its evaluation of the vinyl pool liners and steel braces, the court noted that the manufacturer did not design the items for use in a particular pool. 59 Rather, the court found that these vinyl pool liners and steel braces were generally interchangeable with other component products within the private swimming pool construction industry and were "clearly fungible." 60 The court concluded that the items at issue were "ordinary building materials" and their manufacturers were thus entitled to the protection of the statute. 61 Through this reasoning, the court

56. See Luebbers, 498 S.E.2d at 913 (stating that simply reviewing a product after its completion or warranting a product against general defects in workmanship is not the kind of "close quality control" that courts associate with "equipment" or "machinery"). The court refused to recognize a system of "close quality control" where the defendant manufacturer merely warranted that the materials were free from general defects in workmanship and welding. Id.; see also Jamerson v. Coleman-Adams Constr., Inc., 699 S.E.2d 197, 200 (Va. 2010) (declining to find a system of "close quality control" where a licensed welder briefly reviewed the welds of a fire pole and platform after assembly). The court refrained from recognizing an independent manufacturer's warranty where the alleged warranty was not documented, was never communicated to the purchaser, and was merely a policy of the manufacturer to stand behind its work. See id.

57. See Luebbers, 498 S.E.2d at 913 (indicating that Fort Wayne, a manufacturer of structural component materials for in-ground swimming pools, produced interchangeable parts which were accompanied by general installation manuals); Grice v. Hungerford Mech. Corp., 374 S.E.2d 17, 18 (Va. 1988) (establishing that whether the manufacturer produced the item for a specific purpose or provided explicit directions for the installation of the item is another factor relevant for the distinction of "ordinary building materials" from "machinery" and "equipment"); see also Jamerson, 699 S.E.2d at 200 (declining to find that the manufacturer had provided specific instructions where the "installation instructions" for a fire pole and platform consisted only of suggested types of bolts that could be used to install the pole and platform).

58. See Luebbers, 498 S.E.2d at 913 (alleging to analyze specific design but actually discussing fungibility). The difference between the specific design test and the fungibility test is nuanced: the specific design test focuses on the manufacturer's acts and intentions, while the fungibility test, which is more product-centric, focuses less on the actions of the manufacturer and more on the nature of the item itself. Compare id. (applying the fungibility test and concentrating on the characteristics of the swimming pool components), with Grice, 374 S.E.2d at 19 (applying the specific design test and concentrating on the fact that decisions regarding the quality of components for an electrical box were made by the architect and not the manufacturer).

59. See Luebbers, 498 S.E.2d at 913 (commenting that the distributors periodically bought the products in bulk to be used in the construction of future swimming pools as per the plans and desires of specific clients).

60. Id. ("Individually, these items served no function other than as generic materials to be included in the larger whole . . . ").

61. Id.
distinguished fungibility from the specific design test and implied that higher levels of fungibility are generally associated with "ordinary building materials."\(^{62}\) That is, "ordinary building materials" are generally interchangeable with other similar products.\(^{63}\)

In 2000, the Supreme Court of Virginia interpreted the statute in \textit{Cooper Industries, Inc. v. Melendez}.\(^{64}\) In \textit{Cooper}, a Navy employee sued a switchgear manufacturer for burn injuries caused by the explosion of a circuit breaker during a submarine pier renovation project.\(^{65}\) Here, the court used two aspects of the burgeoning case law in this area\(^{66}\): the \textit{Cape Henry Towers} definition of "ordinary building materials"\(^{67}\) and the \textit{Luebbers} fungibility test.\(^{68}\) In designating the products as "equipment," the court partially focused on the fact that the industrial circuit breakers and switchgears were components of the docked submarines' electrical systems.\(^{69}\) That is, they were not essential elements of the pier itself.\(^{70}\) Noting this distinction, the court determined that the products were not actually "incorporated into [the] construction work" as required by the \textit{Cape Henry Towers} definition of "ordinary building materials."\(^{71}\)

The court's decision also relied on considerations of fungibility, as the manufacturer of the switchgear had designated the use of a particular breaker in its materials list.\(^{72}\) Notably, the court looked to the purpose of the items and deemed the circuit breaker and switchgears' provision of electricity to the docked submarines to be an adjunct function—a function distinct from the construction or

\(^{62}\) See \textit{id.} (referencing fungibility apart from any specific design plans on behalf of the manufacturer).

\(^{63}\) See \textit{id.} (explaining that the materials incorporated into the swimming pool were generic materials and were not unique to the project).

\(^{64}\) 537 S.E.2d 580 (Va. 2000).

\(^{65}\) \textit{Id.} at 582.

\(^{66}\) \textit{Id.} at 588-90.

\(^{67}\) \textit{Cape Henry Towers, Inc. v. Nat'l Gypsum Co.}, 331 S.E.2d 476, 480 (Va. 1985) (concluding that the legislature intended to maintain a distinction between furnishers of ordinary building materials and furnishers of machinery or equipment).

\(^{68}\) See supra notes 58-63 and accompanying text.

\(^{69}\) See \textit{Cooper}, 537 S.E.2d at 590.

\(^{70}\) \textit{Id.} (describing the characterization of the industrial circuit breakers and switchgears as essential to the existence of the pier as a "mischaracterization").

\(^{71}\) \textit{Id.} at 588, 590 (quoting \textit{Cape Henry Towers}, 331 S.E.2d at 480) (emphasizing the location of the circuit breakers, which were installed under the deck of the pier, and of the switchgears, which were affixed to the rails of the pier).

\(^{72}\) \textit{Id.} at 589-90 (insisting that the manufacturer's specification of a "K-Don" breaker created the presumption that the breaker and switchgear were "mated component[s]," and as a result the products were not fungible or generic (alteration in original)).
existence of the pier itself. The court thereby enunciated a new consideration—the adjunct function.

In 2010, the Supreme Court of Virginia again examined the framework for analyzing section 8.01-250. In Jamerson, a fireman suffered injuries after a firehouse pole and platform collapsed beneath him. Before concluding that the pole and platform were "ordinary building materials," the court applied multiple factors distinguishing "ordinary building materials" from "equipment" or "machinery," including the Cape Henry Towers "ordinary building materials" definition. However, in response to the plaintiff's claim that the pole and platform had been specially designed for the firehouse and were thus more like "equipment" or "machinery," the court expanded upon and attempted to clarify the fungibility test. The court noted that a product does not need to be a practical duplicate of all other competitor products to be characterized as fungible.

One year after the Jamerson decision, the Virginia Supreme Court attempted to interpret and clarify the statute's multi-factor test in Royal Indemnity Co. v. Tyco Fire Products. In this case, the insurer of an apartment complex sued a manufacturer of allegedly defective sprinkler heads after a fire damaged the property. The court applied four factors of the test, including the adjunct function and specific instructions analyses, the Cape Henry Towers definition of

73. See id. at 590 (contending that in relation to Pier 23, the circuit breakers and switchgears were discrete items not a part of the pier's electrical system, but rather a part of the electrical systems of the submarines, which functioned in lieu of the submarines' engines or generators).

74. See id. (considering explicitly for the first time any adjunct functions of the item at issue); see also Grice v. Hungerford Mech. Corp., 374 S.E.2d 17, 18–19 (Va. 1988) (failing to explicitly consider any adjunct functions of the item at issue).


76. Id. at 200 (indicating that the pole and platform served as a manner of entry that was essential to and integrated into the firehouse structure).

77. Id.

78. See id. at 200–01.

79. See id. (explaining that a novel or tailored structural product is not per se excluded from the class of "ordinary building materials"). "For example, a non-standard ramp, door, or set of stairs built to certain specifications to allow access to or in a home does not by virtue of that one-of-a-kind nature transform . . . ordinary building materials into machinery or equipment." Id.

80. 704 S.E.2d 91 (Va. 2011).

81. Id. at 92–93.

82. See id. at 96 (holding that sprinkler heads are not functional components of a structure and finding instead that they are installed into larger sprinkler systems to serve an adjunct function—protection from fire).

83. See id. (observing that the individually shipped sprinkler heads were accompanied by "technical data sheet[s]" that contained information and instructions for installation).
“ordinary building materials,”\(^8\) and the quality-control and independent-warranty assessments.\(^8\) However, the court made no substantive alterations or expansions to any of the factors.\(^8\) Rather, the court administered each of the enumerated factors and found that in each case the sprinkler heads were more like “equipment” and “machinery” than “ordinary building materials.”\(^8\)

Overall, between 1985 and 2011, Cape Henry Towers and its progeny have established a six-pronged test for distinguishing between “ordinary building materials” and “equipment” or “machinery” and have thus established the bounds of Virginia Code section 8.01-250. Under this test, courts ask whether the item (1) is unincorporated from the construction work;\(^8\) (2) was under the control of its manufacturer during its installation;\(^9\) (3) was subject to close quality control at the factory or subject to manufacturer’s warranties;\(^9\) (4) was manufactured for a specific project and was accompanied by instructions or guidance for its installation into that specific project;\(^9\) (5) is non-fungible;\(^9\) and (6) serves an adjunct purpose.\(^9\) In applying these factors, courts have given no guidance other than concluding that affirmative answers to the above-mentioned questions are generally indicative of “equipment” and “machinery,” while negative answers to these questions are generally indicative of “ordinary building materials.” Theoretically, each question within this scheme is simple, but in practice, without more guidance as to their collective application, these questions have produced a complex web of jurisprudence for courts and litigants to navigate.\(^9\)

\(^8\). See id. (refusing to deem sprinkler heads essential components of buildings or other structures).

\(^8\). See id. (announcing that sprinkler heads are clearly within the class of products that are produced under the scrutiny of close quality control and bound by independent manufacturers’ warranties).

\(^8\). See id. at 96–97 (accepting the current jurisprudential framework and merely applying the factors to the fact pattern at hand).

\(^8\). See id. at 96.


\(^9\). See id.

\(^9\). See id.


In the Supreme Court of Virginia's 2010 *Jamerson* decision, Justice Mims outlined his assault on the "ordinary building materials" jurisprudence in a concurring opinion. He noted that due to the legislature's failure to define statutory terms, the judiciary's interpretation attempts have been unhelpful, if not futile. Justice Mims responded to the majority's admission that the jurisprudential test lacks structure and pinpointed the lack of structure as the root of the problem. Furthermore, Justice Mims chastised the court's hesitancy to define the statute's relevant terms. He noted that nothing within the language of the provision suggests that the legislature intended courts to deconstruct intricate improvements to real property element-by-element and classify each item as either an "ordinary building material" or a piece of "equipment" or machinery.

In place of the current complex "ordinary building materials" jurisprudence, Justice Mims has advocated for a common-sense understanding of the plain language of the statute. He maintained that, ideally, the legislature would define prominent terms, but noted that in the absence of such legislative thoroughness, courts should turn to complementary Code sections for guidance. In that vein,
Justice Mims referenced and suggested a definition found in the Virginia Uniform Statewide Building Code. Within that Code, the idea of “equipment” is not explicitly defined, but it is outlined through ostensive definition, such that readers are provided with examples of items qualifying as “equipment” and “machinery.” Overall, although Justice Mims’ criticism and subsequent suggestion have done much to illuminate the troubles and unviability of the current jurisprudence, there is more to be said on the matter.

II. THE CURRENT TEST FOR “ORDINARY BUILDING MATERIALS” AS DERIVED FROM CAPE HENRY TOWERS AND ITS PROGENY IS UNWORKABLE

A. The Current Test Is Unnecessarily Cumbersome Due to Its Overwhelming Number of Factors and Lack of Guidance

Two separate but related issues contribute to the current test’s cumbersome application. First, the sheer multitude of factors makes the test difficult to use. Generally, when judicial tests are overly cumbersome or involve a host of factors, courts often become bogged down and selectively apply the prongs of the test, potentially producing inconsistent results. The Cape Henry Towers line of cases is no exception: the Cape Henry Towers court applied three factors;
the Grice court applied two factors; the Luebbers court applied three factors; the Cooper court applied three factors; the Jamerson court applied four factors; and the Royal Indemnity Co. court applied four factors.106

The second aspect contributing to the test’s cumbersome nature is the lack of guidance for applying its six prongs. Over the years, the Virginia Supreme Court has gone out of its way to emphasize the test’s nebulous quality and variability.107 The court noted in its 2010 Jamerson decision that in parsing the classes of “ordinary building materials” from “equipment” and “machinery,” the outcome of any particular case will be fact-driven and not based on any one prong of the test.108 Therefore, although the court has indicated that no prong of the test will be outcome-determinative, the court still provides no guidance on how to resolve conflicting prongs of the test or how to determine the appropriate number of factors to apply.109

As a general rule, a court’s failure to provide adequate guidance regarding the application of a multi-factor test inevitably results in confusion about which factors are necessary and sufficient for a complete and thorough application of the test.110 Such failure can also cause courts difficulty in resolving tension among the various factors.111 Lastly, complex factor-based tests that include no guiding

106. See supra Part I.C–D (describing the evolution of the “ordinary building materials” judicial test).
107. See Jamerson, 699 S.E.2d at 199 (“As reflected in [the Cape Henry Towers line of cases], we have identified various characteristics of the items in question, which, in a specific case, led to the determination that these items were or were not ordinary building materials. Nevertheless, we have not held any single characteristic or set of characteristics as determinative of the issue. Each case has been and must be decided based on its own circumstances.”).
108. Id.
109. See supra Part I.C–D (detailing the current state of the test but making no indication of any prevailing framework for the application of the test); see, e.g., Royal Indem. Co. v. Tyco Fire Prods. LP, 704 S.E.2d 91, 96 (Va. 2011) (applying four of the “ordinary building materials” factors but providing no formula for weighing the factors against each other and issuing no justification for the particular factors selected).
110. See Paulsen, supra note 105, at 1200 (discussing the Supreme Court’s current five-factor test for stare decisis and noting that generally, because the importance of each factor in a multi-factor test is unclear and the correlation between factors is not catalogued, “[n]o factor is necessarily necessary” and “[n]o factor is sufficient”).
111. See Beebe, supra note 104, at 1645–46 (observing that multi-prong tests containing an abundance of factors may in fact overburden the judiciary’s capacity to balance conflicting facets and “may simply result in the stampeding of less significant factors”); see also Aaron Xavier Fellmeth, Civil and Criminal Sanctions in the Constitution and Courts, 94 GEO. L.J. 1, 36 (2005) (decrying a flaw in the concept of multi-factor tests, as it is seldom apparent how clashing or antithetical prongs should be reconciled).
framework often decay and collapse into unilateral court decisions.\textsuperscript{112} Similarly, the judicial test for "ordinary building materials" is a complex matrix of variables that is devoid of guidance. As such, it faces all of these concerns, invites these problems into its application, and ultimately undermines its own legitimacy\textsuperscript{113} by producing conflicting results.\textsuperscript{114}

B. The Current Test Comprises Conflicting Judicial Standards that Produce Inconsistent Results

The current judicial test for "ordinary building materials" allows for conflicting judicial standards and inconsistent outcomes.\textsuperscript{115} In comparing the \textit{Cooper} and \textit{Jamerson} decisions, although both courts purported to apply the fungibility test, the courts' standards for fungibility differed quite significantly.\textsuperscript{116} In \textit{Cooper}, the court held that because the switchgear manufacturer had named a certain breaker for use in its materials list, the two items were presumed to be mated, and the circuit breaker was thus non-fungible and was more like "equipment" than "ordinary building materials."\textsuperscript{117} The \textit{Cooper} court withheld the "fungible" label from the circuit breaker simply by virtue of the fact that the switchgear manufacturer's materials list suggested the use of a particular breaker, despite there being no

\textsuperscript{112} See Fellmeth, \textit{supra} note 111, at 36-37 (conceding that multi-prong tests may produce cogent direction when all or most of the prongs support one outcome, but insisting that this is an extremely rare occurrence and maintaining that in the majority of circumstances a multi-factor test usually produces a discretionary test that provides negligible value to the judiciary and "a subjective judgment [that] is merely clothed with the legitimacy of an ostensibly reasoned decision"). \textit{See generally} Reinsurance Co. of Am. v. Administratia Asigurarilor de Stat, 902 F.2d 1275, 1283 (7th Cir. 1990) (Easterbrook, J., concurring) (espousing a "reluctan[ce] to accept an approach that calls on the... judge to throw a heap of factors on a table and then slice and dice to taste"); Alex E. Rogers, \textit{Clothing State Governmental Entities with Sovereign Immunity: Disarray in the Eleventh Amendment Arm-of-the-State Doctrine}, 92 \textit{COLUM. L. REV.} 1243, 1273 (1992) (characterizing multi-factor tests as exemplifications of "ad hoc balancing" rather than judicial standards).

\textsuperscript{113} See supra notes 107-109 and accompanying text (citing the lack of guidance within the "ordinary building materials" jurisprudential framework).

\textsuperscript{114} See infra Part II.B (describing the current test's inconsistent results and standards).


\textsuperscript{117} \textit{Cooper}, 537 S.E.2d at 590.
indication that the actual breaker itself had been customized or tailored in any way for use with the manufacturer’s switchgear.\textsuperscript{118}

The court in \textit{Jamerson}, however, concluded that a firehouse platform and pole, which had been made-to-order for the particular space, were still fungible and were thus “ordinary building materials.”\textsuperscript{119} The \textit{Jamerson} court justified its ruling by noting that a product’s customized attributes do not automatically remove the product from the class of fungible “ordinary building materials.”\textsuperscript{120} Notwithstanding the judiciary’s efforts to explain or rectify the two assessments, these two cases demonstrate fundamentally differing approaches to the concept of fungibility, and the inevitability of conflicting results.\textsuperscript{121} By employing divergent judicial standards, the courts infused confusion and uncertainty into the “ordinary building materials” jurisprudence, thus marring doctrinal clarity and predictability for litigants and industry players.\textsuperscript{122} This unpredictability runs contrary to the most basic intentions of a statute of repose and is therefore an unacceptable consequence of the current “ordinary building materials” test.\textsuperscript{123}

C. The Current Test Produces Results that are Incompatible with Modern Technological Ideals and the Evolution of “Ordinary”

In further display of the unworkable nature of the “ordinary building materials” jurisprudence, the current test also produces results that are inconsistent with modern conceptions of infrastructure and advancing technologies. As technology advances, so do society’s notions about what is “ordinary.”\textsuperscript{124} “Ordinary” is not a stagnant concept; rather, it is fluid and dynamic.\textsuperscript{125} Thus, what was

\begin{itemize}
\item \textsuperscript{118} See id.
\item \textsuperscript{119} \textit{Jamerson}, 699 S.E.2d at 201.
\item \textsuperscript{120} \textit{Id.} at 200-01.
\item \textsuperscript{121} Compare \textit{id.} at 200 (allowing obviously-customized products to be categorized as “ordinary building materials”), \textit{with Cooper}, 537 S.E.2d at 590 (excluding from “ordinary building materials” stock products that interact with other customized products).
\item \textsuperscript{123} See generally supra Part I.A (chronicling the broad legislative values of finality and certainty underlying statutes of repose).
\item \textsuperscript{124} See generally Susan W. Brenner, \textit{Law in an Era of Pervasive Technology}, 15 WIDENER L.J. 667, 670 (2006) (contending that the ramifications of technology permeate through culture and alter everyday life in both drastic and nuanced ways).
\item \textsuperscript{125} Cf. Jeffrey W. Childers, \textit{Kyllo v. United States: A Temporary Reprieve from Technology-Enhanced Surveillance of the Home}, 81 N.C. L. REV. 728, 768 (2003) (explaining that the “in general public use” standard that the \textit{Kyllo} Court employed
once considered "ordinary" may now be antiquated or even irrelevant, and what was once revolutionary and unprecedented may now be commonplace. In the same vein, features of certain items, products, or structures that were once considered novel or even groundbreaking may now be standard additions.

In applying the current "ordinary building materials" test, courts disregard the nuanced concept of technological evolution as it affects societal perceptions of the ordinary. In City of Richmond, Virginia v. Madison Management Group, Inc., for example, the U.S. Court of Appeals for the Fourth Circuit deemed cement piping used in the construction of a city's water transmission main to be "equipment" and "machinery" for purposes of the statute of repose. Although there are many complex considerations involved in the successful installation of a water transport system, the actual pipes that make up such a system remain mere conduits or tubes. The first individuals attempting to establish water transmission systems may have faced a progressive and daunting feat, but with the passage of

to analyze sense-enhancing technological instruments "is fluid and will change with advances in technology").

126. See, e.g., Bianca Bosker, You’re Out: 20 Things That Became Obsolete This Decade, HUFFINGTON POST (May 25, 2011, 7:20 PM), http://www.huffingtonpost.com/2010/12/22/obsolete-things-decade_n_800240.html (classifying travel agencies, CDs, and VHS tapes as examples of things that are no longer commonplace).


129. 918 F.2d 438 (4th Cir. 1990).

130. Id. at 445; see also supra note 45 (stating that because the pipes were subject to close quality control at the factory, the court found that the pipes were more like "equipment" than "ordinary building materials"; therefore, the statute of repose did not bar the city's claim).

131. See, e.g., Mark E. Hughes, All About Watermains—An Insider’s View, PDHONLINE 18 (2012), http://www.pdhcenter.com/courses/c198/c198content.pdf (detailing the many concerns of successful water-main construction including the proximity to sewer lines and storm drains, the distance from topsoil, and the climate of the installation site).

132. See Water Main Definition, DICTIONARY.COM, http://dictionary.reference.com/browse/water-main (last visited Aug. 10, 2013) (defining a "water main" as "a main pipe or conduit in a system for conveying water").

time and advancing technologies, this task has become routine and ordinary.134

Moreover, it is necessary to separate the complexity of the overall task or idea from the potential complexity of the specific products used to accomplish the task.135 From this perspective, the broader task of providing and transporting water to the public is the complex endeavor, while the cement piping is just one of many simpler components that makes the task logistically possible. The Fourth Circuit ignored the progression of modern piping, its relative simplicity, and its commonality in improvements to real property.136

Thus, the Richmond court's designation of cement pipes as machinery rather than "ordinary building materials" is contrary to modern notions regarding advancements in technology and the evolution of the "ordinary."137

Unfortunately, the Fourth Circuit is not the only court to apply the "ordinary building materials" test in a manner that produces results inconsistent with modern ideas. The Supreme Court of Virginia applied the test to sprinkler heads in its 2011 Royal Indemnity Co. decision.138 In classifying the sprinkler heads as "equipment" and "machinery," the court noted that fire prevention was, in fact, an adjunct function.139 When pressed, however, the concept of adjunct functions leads to two related concerns.140 First, the adjunct function reasoning necessarily views buildings and other improvements in their most rudimentary form—refusing to allow any technological advancement to "attach" to or be associated with the structure itself. Rather, the test requires that if the item or product at issue contributes anything supplementary to structural existence or architectural integrity, then it serves an adjunct purpose and is more

134. See generally Hughes, supra note 131 (detailing established best-practices for installing and maintaining a water main); supra notes 124–128 (recounting the advancement of technology as it relates to the evolution of the concept of "ordinary").
135. See, e.g., JOHN LOCKE, AN ESSAY CONCERNING HUMAN UNDERSTANDING 159–62 (Roger Woolhouse ed. 1997) (enunciating the theory of ideas whereby every complex idea can be analyzed and broken down into component parts or simpler ideas).
136. City of Richmond, Va. v. Madison Mgmt. Grp., 918 F.2d 438, 444–45 (4th Cir. 1990) (stating that because pipes are "relatively sophisticated discrete materials" and are "more like equipment and less like ordinary building materials," the statute of repose did not apply to the manufacturers).
137. See generally supra notes 124–128 (discussing improvements in technology as they pertain to the advancing concept of "ordinary").
139. Id. at 94, 96.
140. See generally Cooper Indus., Inc. v. Melendez, 537 S.E.2d 580, 590 (Va. 2000) (considering the functions of switchgears and circuit breakers to exemplify flaws in the adjunct function analysis).
like “equipment” and “machinery” than an “ordinary building material.” In *Royal Indemnity Co.*, the court ruled that sprinkler heads performed a distinct job and were not necessary construction elements. As time passes, however, society expects more from modern structures and buildings. Today, through building codes and regulations, legislatures express this expectation. Thus, if we perceive law as an “index of social thought,” the adjunct function test’s restrictive approach to structures and improvements is fundamentally at odds with society’s modern ideals of advancement and the betterment of structural standards.

The second concern with the adjunct function factor of the “ordinary building materials” test centers on its potentially peculiar results. If fire protection products are not “functional component[s] in the construction” of buildings, then what other features may be deemed to serve adjunct functions? In addition to the structural function of allowing entry into a building, do doors serve an adjunct function in protecting those buildings from the elements? Is insulation more like “equipment” and “machinery” because it fortifies against extreme temperatures yet is nonessential to the most basic physical structure of the building? When carried to its logical conclusion, the hypothetical results of the adjunct function

141. See, e.g., *id.* (classifying a circuit breaker’s provision of electricity to a nuclear submarine pier as an adjunct function that was distinct from the construction of the pier itself).


143. See Andrew Alpern, Note, Statutes of Repose and the Construction Industry: A Proposal for New York, 12 CARDozo L. REV. 1975, 2003 (1991) (declaring that with time, “technology has changed, [and] so too have the attitudes towards structures”). Gone are the days in which society regarded catastrophes such as the Triangle Shirtwaist Fire as an acceptable part of life. See Saru Jayaraman, From Triangle Shirtwaist to Windows on the World: Restaurants as the New Sweatshops, 14 N.Y.U. J. LEGIS. & PUB. POL’Y 625, 629 (2011) (noting that prior to the fire, various strikes and movements aimed at increasing fire safety and bettering workplace conditions had failed; Arthur F. McEvoy, The Triangle Shirtwaist Factory Fire of 1911: Social Change, Industrial Accidents, and the Evaluation of Common-Sense Causality, 20 LAW & SOC. INQUIRY 621, 623, 629 (1994) (recounting how the factory fire, which killed 146 people as they tried to escape through the building’s inward-opening doors and single full-length staircase, acted as a catalyst for progressive era factory and building reforms).

144. See, e.g., Virginia Receives High Ranking for Building Code, WAFB (June 12, 2012, 6:01 PM), http://www.wafb.com/story/18731943/virginia-receives-high-ranking-for-building-code (describing Virginia’s new Code provision, which requires all new construction to abide by specific wind-bracing requirements by strategically placing anchor bolts to secure a building’s framing to its foundation for hurricane protection).

145. McEvoy, supra note 143, at 625.


147. *Royal Indem. Co.*, 704 S.E.2d at 96 (declining to categorize fire-protection products as integral to the construction of the apartment building at issue).
test appear to answer “yes” to such questions. To a certain extent, however, most items or components can be reasoned to serve an adjunct purpose in some manner.\(^{148}\) Such an ad hoc analysis is unhelpful in attempting to provide meaningful classifications\(^{149}\) and, again, offends modern notions regarding the advancement of ordinary technology and construction norms.\(^{150}\)

The inconsistent manner in which the Fourth Circuit and the Supreme Court of Virginia have applied the adjunct function test, while philosophically interesting, has had a practical consequence as well. These inconsistencies trickle down to litigants and trial courts, causing widespread confusion,\(^{151}\) generating uncertainty about potential liabilities,\(^{152}\) and fostering excess appellate litigation.\(^{153}\) A statute of repose is meant to reduce potential liability over time, but such unpredictability undermines that purpose.\(^{154}\) Not surprisingly, at least one member of the bench has criticized the burdensome nature of the test, as well as the resulting contradictions and undesirable consequences of the “ordinary building materials” jurisprudence.\(^{155}\)

\(^{148}\) See generally Jo Anne Hagen, An Overview of U.S. Import/Export Regulations—Part I, Exports, COLO. LAw., July 2003, at 75, 77 ("Many products have dual uses ... ").

\(^{149}\) See generally Rogers, supra note 112, at 1273 (maintaining that ad hoc reasoning does not provide for or contribute to judicially manageable standards within the context of the arm-of-the-state doctrine).

\(^{150}\) See generally supra notes 124–128 and accompanying text (examining progressing technology and its transformative effect on notions of what is "ordinary").

\(^{151}\) See Jamerson, 699 S.E.2d at 201 (Mims, J., concurring) (asserting that confusion regarding the jurisprudence is clear in virtue of the sheer number of cases in which the courts have grappled with the test).

\(^{152}\) See generally Richard H. Fallon, Jr., Foreword: Implementing the Constitution, 111 HARV. L. REV. 54, 81 (1997) (concluding that the possibility of broad ranges of reasonable disagreement regarding the application of constitutional multi-factor balancing tests creates uncertainty and heightens the "burdens of litigation"); Rogers, supra note 112, at 1272 (discussing how the use of ill-guided and multifarious tests within the arm-of-the-state doctrine has created unpredictability for litigants and lower courts).

\(^{153}\) See Royal Indemn. Co. v. Tyco Fire Prods. LP, 704 S.E.2d 704 S.E.2d 91, 99 (Va. 2011) (Mims, J., concurring) (noting that the court has ruled on the definition of "ordinary building materials" seven times in twenty years, and predicting that, since the analysis is still unclear, there will likely be more cases to come).


\(^{155}\) See Royal Indem. Co., 704 S.E.2d at 99 (Mims, J., concurring) (criticizing the "ordinary building materials" jurisprudence); Jamerson, 699 S.E.2d at 201 (Mims, J., concurring) (same).
III. ALTERNATIVE APPROACHES

A. Justice Mims’ Supplemented Common-Sense Approach: Less Cumbersome But Still Unworkable

Through his 2010 and 2011 concurrences in Jamerson and Royal Indemnity Co., Justice Mims of the Supreme Court of Virginia established and reaffirmed his opposition to the current “ordinary building materials” jurisprudence and proposed a supplemented “common-sense” approach. On the merits, Justice Mims’ alternative proposal offers several benefits. His suggested interpretation of the test is simple, readily applied, and eradicates the complex formulation developed over the course of a quarter of a century’s worth of jurisprudence. More simplistic judicial tests generally produce fewer appeals and reversals and foster greater judicial predictability. This simplicity benefits plaintiffs deciding whether to file suit as well as corporations deciding whether to enter the market to make improvements to real property. Moreover, Justice Mims’ suggestion avoids the “gamesmanship” that more complex judicial tests often encourage and, instead, increases the probability that settlements will actually express a claim’s legal and factual merits.

Justice Mims’ approach does, however, face a number of issues. First, his suggested definitions of “equipment” and “machinery” both utilize the very terms they purport to define. Circular definitions

156. See supra Part I.E (recounting Mims’ criticism of the current test’s overcomplexity and lack of guidance and detailing his suggested solution stemming from a plain reading of the statute of repose).


158. See, e.g., Hertz Corp. v. Friend, 559 U.S. 77, 94 (2010) (asserting that, in the context of jurisdictional statutes, complex judicial tests produce appeals and reversals, while simple rules promote predictability).

159. Id.; see also Sandra Berns, Judicial Decision Making and Moral Responsibility, 13 ADEL. L. REV. 119, 123 (1991) (arguing that if judicial decision making is arbitrary, then laws are unable to supply the certainty necessary for individuals to plan their behavior rationally and further their own interests).

160. See Hertz Corp., 559 U.S. at 94 (“Complex tests produce appeals and reversals, encourage gamesmanship, and, again, diminish the likelihood that results and settlements will reflect a claim’s legal and factual merits.”).

161. See Jamerson, 699 S.E.2d at 205 (Mims, J., concurring) (suggesting reference to the Virginia Uniform Statewide Building Code, which defines “equipment” as “plumbing, heating, electrical, ventilating, air-conditioning and refrigeration equipment, elevators, dumbwaiters, escalators and other mechanical additions or
often produce fallacies and ambiguities. They provide no actual value, as individuals unfamiliar with the term at issue gain no helpful insight. Thus, insofar as Mims' definitions incorporate the terms they claim to define, they provide little to no clarification and leave litigants and the judiciary equally uninformed.

Second, Mims' proposed solution does not account for the effect of technological advancements on modern notions of structural essentials. Although Mims argues first for a common-sense understanding of equipment and machinery as used in the statute, he notes that in difficult or ambiguous cases, courts should turn to the Virginia Uniform Statewide Building Code, which defines "equipment" as "plumbing, heating, electrical, ventilating, air-conditioning and refrigeration equipment, elevators, dumbwaiters, escalators and other mechanical additions or installations." Mims goes on to note that the term "machinery" includes things such as "manufacturing machinery, printing presses, [and] large computers."

As discussed at length above, technological advancements and their integration into common use change the way individuals think about what is "ordinary." Alterations in the "ordinary" foster the evolution of standard amenities. As individuals become installations" (emphasis added) (quoting VA. CODE ANN. § 36-97 (2009))); see also id. (insisting that "[m]achinery clearly includes . . . manufacturing machinery, printing presses, [and] large computers" (emphasis added) (quoting VA. CODE ANN. § 36-97)).

162. See ROBERT J. GULA, NONSENSE: RED HERRINGS, STRAW MEN AND SACRED COWS: HOW WE ABUSE LOGIC IN OUR EVERYDAY LANGUAGE 145 (2007) (noting that because the circular definition is untenably narrow, and thus uninformative, it is often called the "question-begging definition"); Steven S. Nemerson, Alcoholism, Intoxication, and the Criminal Law, 10 CARDOZO L. REV. 393, 427 (1988) (remarking that the problems inherent in circular definitions are "readily apparent").

163. LYNN SILIPIGNI CONNAWAY & RONALD R. POWELL, BASIC RESEARCH METHODS FOR LIBRARIANS 57 (5th ed. 2010) (cautioning against the use of circular or "spurious" definitions, such as defining "library use" as "using the library" because they provide no real value or additional clarity to the reader).

164. See WILLIAM HUGHES & JONATHAN LAVERY, CRITICAL THINKING: AN INTRODUCTION TO THE BASIC SKILLS 48 (5th ed. 2008) (providing, as an example, that a definition of "golf ball" that references the "game of golf" would be of little use to anyone unfamiliar with the game); see also David B. Cruz, "Just Don't Call It Marriage": The First Amendment and Marriage as an Expressive Resource, 74 S. CALIF. L. REV. 925, 1002. (2001) ("The circular definitional argument is little more than legal ipse dixit."); Mike Roberts, The Constitutionality of Gaming in Tennessee, 61 TENN. L. REV. 675, 690 (1994) (disparaging circular definitions as "tautological conundrum[s]").

165. Jamerson, 699 S.E.2d at 205 (Mims, J., concurring) (advocating a "return to first principles . . . [and] the plain language of the statute").

166. VA. CODE ANN. § 36-97; see Jamerson, 699 S.E.2d at 205 (Mims, J., concurring).


168. See supra notes 124-128 and accompanying text.

169. See, e.g., A World Secured, supra note 128 and accompanying text (articulating the zipper's famed transformation into a standard and ubiquitous amenity).
acustomed to these amenities or features, the common notion of what is essential advances as well.\textsuperscript{170} By associating "common sense" with enumerated lists of items taken to encompass proverbial examples of equipment and machinery, Justice Mims suggests the use of a reference list that is sure to be outpaced by society's advancing common-sense understanding of equipment and machinery.\textsuperscript{171}

Lastly, in dictating what is or is not an "ordinary building material" for purposes of the statute, Mims' suggested test gives no consideration to the underlying nature or purpose of the structure.\textsuperscript{172} The nature and purpose of a structure, however, will necessarily dictate the requisite features, qualities, and materials of that structure.\textsuperscript{173} For example, a wharf or pier will require different component items than a water treatment plant, a manufacturing facility, a single-family dwelling, a high-rise office building, or a simple storage warehouse.\textsuperscript{174} Each of these structures will require a distinct set of components so that the builder may successfully construct it to fulfill the purpose for which it was erected.\textsuperscript{175} What is considered to be "ordinary building materials" for one structure may not be ordinary for another.\textsuperscript{176} As a result, a certain amount of relativity is required in practice, but such a consideration is omitted

\textsuperscript{170} See generally Sharon Johnston & Mark A. Peacock, Developing Professionalism Across the Generations, in \textit{Teaching Medical Professionalism} 150, 154-55 (Richard L. Cruess et al. eds., 2009) ("[L]ifestyle expectations change as slowly or quickly as the surrounding social and cultural milieu change.").

\textsuperscript{171} See generally Alpern, supra note 143, at 2003-04 (asserting that utilizing a definitional approach to determine what constitutes an "improvement" to real property is unlikely to respond to society's interests over time).

\textsuperscript{172} See Jamerson, 699 S.E.2d at 201-06 (Mims, J., concurring) (recommending a common-sense, plain-language approach but failing to account for the varying construction needs of differing structures).


\textsuperscript{174} Compare, e.g., Ed Acker, \textit{Warehouse}, \textit{Whole Building Design Guide} (Oct. 12, 2011) http://www.wbdg.org/design/warehouse.php (providing design and construction guidance for warehouses, which must incorporate components to accommodate loads of materials, handling of equipment, and needs of operating personnel), with Brian Conway, \textit{Office Building, Whole Building Design Guide} (July 22, 2010) http://www.wbdg.org/design/office.php (providing design and construction guidance for office buildings to achieve objectives such as safety, comfort, and aesthetics).

\textsuperscript{175} See, e.g., supra note 174 (describing the usual necessities and components of office buildings and warehouse facilities).

from Justice Mims' proposed approach. In failing to account for the varying underlying nature of structures, Justice Mims' suggestion to return to a supplemented common-sense and plain meaning test represents an overly simplistic view.

B. Slaying the Jurisprudential Beast: The "Classified Common-Sense Approach"

To avoid the various pitfalls of the current approach and the issues generated by Justice Mims' suggested approach, both the legislature and the judiciary will likely need to contribute to reform. The classified common-sense approach offers one such framework. Under this model, the Virginia General Assembly should consider drafting a guiding document or issuing a supplementary amended provision to section 8.01-250, whereby improvements to real property are broken into groups of structures sharing similar characteristics, i.e., manufacturing structures, warehouse facilities, high-rise domiciles, etc.

With the addition of a structured classification scheme, the judiciary should then follow Justice Mims' common-sense approach. Thus, in characterizing products as either "equipment," "machinery," or "ordinary building materials," courts will be able to eliminate the complex factor-based approach and rely on more intuitive notions of "ordinary building materials" for each general

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177. See Alpern, supra note 143, at 2003 (asserting that law should be responsive to the changing society it is designed to serve (quoting John Wagner Assocs. v. Hercules, Inc., 797 P.2d 1123, 1129 (Utah Ct. App. 1990))).
179. See supra Part II.A-C (outlining the cumbersome nature of the current approach as well as its inconsistent results).
180. See supra Part III.A (condemning Mims' approach for utilizing circular definitions, failing to account for advancements in technology and notions of "ordinary," and failing to account for the underlying nature or purpose of structures).
181. See, e.g., INT'L BLDG. CODE §§ 303-312 (Int'l Code Council 2009) (creating a system of classification within the model building code such that different classes of structures are held to varying levels of safety depending on the nature of their construction and use). See generally WILLIAM F. FRANKENA, Some Beliefs about Justice, in PERSPECTIVES ON MORALITY: ESSAYS OF WILLIAM K. FRANKENA 93, 94 (K. E. Goodpaster ed. 1976) ("[T]here is one principle of... justice on which there seems to be general agreement, namely, that like cases or individuals are to dealt with in the same way or treated alike, or that similar cases are to be treated similarly.").
182. Cf. Alpern, supra note 143, at 2003-04 (recognizing that unlike pure definitional approaches, which may fail to address situations not contemplated at the time of drafting, common-sense approaches grant courts the flexibility to deliver justice in a manner that is consistent with both unforeseen fact patterns and changing "attitudes towards structures").
type of structure. Approaching the question of "ordinary building materials" from a common-sense position will grant the necessary level of fluidity and relativity needed to ensure that the results are commensurate with advancing levels of technology and notions of what is structurally essential. It will also eliminate large levels of uncertainty and unpredictability for litigants. Eliminating substantial uncertainty from "ordinary building materials" jurisprudence will ensure that the test generates results that comply with the underlying policy of statutes of repose.

Just as any other methodology, this proposed "classified common-sense" approach possesses both benefits and drawbacks. In terms of benefits, it retains all of the traditional advantages of common-sense approaches. Moreover, unlike the current judicial test and Justice Mims' version of the common-sense approach, a classified common-sense approach allows for unqualified evolution of what constitutes an "ordinary building material." Because the proposed test does not reference determinate definitions, which may become antiquated or irrelevant over time, it retains the flexibility to accommodate advancing technologies and changing societal attitudes. Furthermore, the test respects the varied purposes of different structures. By establishing classes of improvements or

183. See generally RICHARD POSNER, THE PROBLEMS OF JURISPRUDENCE 77 (1990) ("Our most confident knowledge, therefore, is intuitive, because intuitions lie at the base of all our proofs and reasoning and because it is always possible to make a mistake in the process of proof itself . . . .")

184. See Alpern, supra note 143, at 2003-04 (advancing a common-sense approach to the idea of "improvements to real property" because it is flexible enough to keep pace with changing technologies and attitudes towards structures).

185. See generally CLIFFORD GEERTZ, LOCAL KNOWLEDGE: FURTHER ESSAYS IN INTERPRETIVE ANTHROPOLOGY 91 (1983) (maintaining that any individual "with faculties reasonably intact can grasp common-sense conclusions," as the endeavor allows for "no acknowledged specialists," but is rather "open to all"); Terry A. Maroney, Emotional Common Sense as Constitutional Law, 62 VAND. L. REV. 851, 861 (2009) (reflecting on arguments rooted in common sense as accessible and egalitarian).

186. See supra note 154 and accompanying text (discussing the underlying policy justifications for statutes of repose, which center on eliminating high levels of uncertainty associated with the threat of unlimited potential liability).

187. See supra notes 157-160 and accompanying text (specifying that the simplicity of common-sense approaches provides greater predictability, avoids gamesmanship, and increases the likelihood that settlements will reflect a claim's legal and factual merits).

188. See supra notes 124-137, 168-171 and accompanying text (outlining the inability of the current test and the supplemented common-sense test to account for the evolvement of the concept of ordinary).

189. See Alpern, supra note 143, at 2003-04 (delineating the distinctive ability of pure common-sense approaches to account for changing technologies and societal attitudes).

190. See id.
structures, the test permits the purpose and logistical necessities of each structure to independently define what is "ordinary" for that particular genre without altering the standards of others.\textsuperscript{191}

On the other hand, the proposed test faces a few potential drawbacks. Drafting the guiding document or generating the classification scheme for real property would be work-intensive for the legislature, and reaching an agreement regarding the specifics of such a scheme could take significant time and energy.\textsuperscript{192} This downside, a potential drain on the resources and patience of elected officials, does not weigh heavily on the substantive merits of the suggested approach. The fact that a proposed suggestion or alternative is more burdensome to effectuate is not itself a reason to dismiss the suggestion.\textsuperscript{193}

Potentially more problematic, the "classified common-sense approach" could present practical difficulties as individuals attempt to sort real property into the established categories. Properties that serve dual purposes or that have been repurposed may defy clear-cut classification and could therefore be challenging to categorize.\textsuperscript{194} Depending on the number of improvements presenting this challenge, classifying such improvements could add a varying level of complexity to the proposed test.\textsuperscript{195} However, in these scenarios, the appearance of complexity may be more pronounced than the reality.\textsuperscript{196} In either case, where buildings or structures serve multiple purposes or have been repurposed, there will be a broader range of

\textsuperscript{191} See, e.g., ALLEN \& IONO, supra note 173, at 4–5 (explaining that one of the benefits of the International Building Code's use of "occupancy groups" is that it allows for differing standards in ordinary safety features across the various groups).

\textsuperscript{192} See Fallon, supra note 152, at 82 ("[R]ules, which aspire to determine multiple outcomes in advance, are typically harder to formulate than standards or balancing tests."). See generally Patricia E. Salkin, The Politics of Land Use Reform in New York: Challenges and Opportunities, 73 ST. JOHN'S L. REV. 1041, 1063 (1999) (confirming that the amount of time necessary to enact reform may strain resources).

\textsuperscript{193} See Linn Farms & Timber Ltd. v. Union Pac. R.R., 661 F.3d 354, 361–62 (8th Cir. 2011) (arguing that the Supreme Court in Jones v. Flowers, 547 U.S. 220 (2006), did not reject an alternative merely because it was more burdensome).

\textsuperscript{194} See, e.g., Rich Walker, A Repurposing Design Approach: Adaptive Reuse for Green, Budget-Conscious Building, ARCHITECT'S GUIDE TO GLASS & METAL, Mar.–Apr. 2011, at 6, 6–7 (discussing the process of converting and adapting existing buildings for new purposes).

\textsuperscript{195} See Amir N. Licht, The Maximands of Corporate Governance: A Theory of Values and Cognitive Style, 29 DEL. J. CORP. L. 649, 673 (2004) (contending that "greater complexity is associated with a greater number of relevant elements worthy of consideration").

\textsuperscript{196} See infra note 197 and accompanying text (maintaining that complexity need not result because the class of "ordinary building materials" will simply flex to accommodate the dual natures of the building).
items that could be included in the class of "ordinary building materials." 197

Converted lofts provide a useful example of how a classified common-sense approach might work in practice. In a converted factory loft, residual piping or ductwork may be exposed in the residential space. 198 While these items might be outside the realm of "ordinary building materials" for a newly-built structure, 199 in the case of a converted or repurposed structure such as a loft, the class of "ordinary building materials" would merely be expanded to include historical features of the structure, such as residual piping or ductwork. 200 Thus, although the classified common-sense approach may allow for some uncertainty for litigants whose particular improvements to real property elude a clear-cut categorization, it promotes more certainty than the current judicial test and is therefore more consistent with the underlying purpose of the statute of repose. 201

Overall, although the suggestion found within a "classified common-sense approach" may not eradicate every issue currently associated with the "ordinary building materials" test, it is a starting point for reform that avoids much of the current test's burdensome application, 202 unpredictability, and inconsistent results. 203

197. Cf. INT'L BLDG. CODE § 302.1 (Int'l Code Council 2009) (establishing a categorization structure for buildings based on their occupancy purposes and announcing that where buildings possess characteristics of multiple occupancy groups, the structures must comply with all of the requirements applicable to each group).


200. See supra note 197 and accompanying text (providing that within the classified common-sense approach, the class of "ordinary building materials" flexes to accommodate any residual markers of a structure's previous use).

201. See supra note 154 and accompanying text (examining the underlying policy justifications for statutes of repose, which center on eliminating for individuals the high levels of uncertainty associated with the threat of unlimited potential liability).

202. Compare Part II.A (outlining the unwieldy nature of the current test and multi-factor tests generally), with Part III.B (discussing the classified common-sense approach, in which common sense drives the outcomes within the framework of predefined classes of structures).

203. Compare supra note 112 and accompanying text (insisting that multi-factor tests that lack accompanying guidance often result in unilateral ad hoc decisions), with supra note 185 and accompanying text (asserting that common-sense approaches grant certainty and predictability to litigants, as common sense is
litigants, practitioners, and judges continue to work to improve Virginia Code section 8.01-250 and consider both problems and alternative options, however, the jurisprudential test for "ordinary building materials" will likely continue to adapt until it produces consistent results and harmonizes with both advancing technologies and the statute's underlying purpose.\(^{204}\)

**CONCLUSION**

The court-constructed idea of "ordinary building materials" has become a problematic term of art. Over the decades, as the Virginia courts have endeavored to distinguish "ordinary building materials" from "equipment" and "machinery," the judicial analysis has become increasingly burdensome. Although the courts have ostensibly altered and amended the test in an effort to unify the results, the current six-factor test remains overly complex and cumbersome, and produces inconsistent and counterintuitive results. Moreover, it is unclear if the current framework of the test is comprehensive—are the six factors exclusive, or are they merely illustrative?

These defects and uncertainties should compel both the legislature and judiciary to reconsider their respective contributions to the current statute of repose found in Virginia Code section 8.01-250. The legislature and judiciary should strive for an effective and principled test that delivers more than a cursory level of guidance and avoids the current complex matrix of variables. The current test's inconsistent results and negative consequences demonstrate that selectively employing factors and hoping that the proverbial needle on the scale points decisively towards either "equipment," "machinery," or "ordinary building materials," is untenable.

The legislature and judiciary should work together to simplify the existing analytical marathon currently required to classify products. To solve the problems associated with the current test, the legislature

\(^{204}\) Cf. Hertz Corp. v. Friend, 559 U.S. 77, 94–95 (2010) (justifying the Court's use of the simpler "nerve center" test over a more complex "general business activities" test when determining a corporation's principal place of business for jurisdictional purposes because the nerve center test provides administrative simplicity, and legislative history suggests that a simpler test is preferred).

204. See Mark R. Kramer, Comment, *The Role of Federal Courts in Changing State Law: The Employment at Will Doctrine in Pennsylvania*, 133 U. PA. L. REV. 227, 238 (1984) (pronouncing that "common law rules adapt over time"); see also BENJAMIN N. CARDOZO, THE NATURE OF THE JUDICIAL PROCESS 23 (1921) ("The rules and principles of case law have never been treated as final truths, but as working hypotheses, continually restated in those great laboratories of the law, the courts of justice. Every new case is an experiment; and if the accepted rule which seems applicable yields a result which is felt to be unjust, the rule is reconsidered.").
should pass an amendment or guiding document that classifies real property into basic groups. Within these categories, courts would then apply common-sense notions of "ordinary building materials," "machinery," and "equipment" such that classifications would reflect the underlying nature of the structure and technological advancements. This clear and simple approach would not only allow for easier application, more consistent results, and lower litigation rates, but would also honor the underlying spirit of predictable, time-limited liability in which the General Assembly passed Virginia Code section 8.01-250.