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CONSTRUCTION LAW: ITS HISTORICAL ORIGINS AND ITS TWENTIETH CENTURY EMERGENCE AS A MAJOR FIELD OF MODERN AMERICAN AND INTERNATIONAL LEGAL PRACTICE

Philip L. Bruner*

I. INTRODUCTION TO CONSTRUCTION LAW

“Construction Law” is a rapidly emerging “capstone” legal field that over the past century has subsumed principles from many traditional fields of law and has contextually created new implied rights and obligations unknown to such traditional fields. Construction law’s emergence has been driven by the extraordinary modern growth in global construction activity, which in 2020 accounted for 13% (US\$10.7 trillion) of the global gross domestic product and which by 2030 is expected to grow by another 42%.¹ This growth in construction activities engages

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1. See Graham Robinson et al., *Future of Construction*, CONSTR. L. LETTER, Jan.-Feb. 2022 at 1, 1 (the authors, members of Oxford Economics of London, opine that “a cumulative total of US\$135 trillion in construction output is forecast [globally] in the decade to 2030” and that the US is expected to contribute 11.1% or approximately US\$14.9 trillion of that global sum).

millions of firms and persons and has increased considerably the technical complexity and rapidity of changes in construction design, materials, methods, and dispute resolution.² In recent years, the judiciary has begun to recognize construction law as a “separate breed of animal”.³

II. CONSTRUCTION: HALLMARK OF HUMAN CIVILIZATION⁴

Construction and construction law both have an ancient heritage. For more than 4500 years construction has been a hallmark of the advancement of human civilization, from primitive Mesopotamian fire-brick and Egyptian cut-stone construction to the extraordinary structures of the modern built

2. Philip L. Bruner, *The Historical Emergence of Construction Law*, 34 WM. MITCHELL L. REV. 1, 9, 11-12 (2007) [hereinafter Bruner, *The Historical Emergence of Construction Law*]. Today, even homebuilding is viewed as complex. See *Erllich v. Menezes*, 981 P.2d 978, 987 (Cal. 1999) (“The [owners] may have hoped to build their dream home and live happily ever after, but there is a reason that tag line belongs only in fairy tales. Building a house may turn out to be a stress-free project; it is much more likely to be the stuff of urban legends—the cause of bankruptcy, marital dissolution, hypertension and fleeting fantasies ranging from homicide to suicide. As Justice Yegan noted below, ‘[n]o reasonable homeowner can embark on a building project with certainty that the project will be completed to perfection. Indeed, errors are so likely to occur that few if any homeowners would be justified in resting their peace of mind on [its] timely or correct completion’ The connection between the service sought and the aggravation and distress resulting from incompetence may be somewhat less tenuous than in a malpractice case, but the emotional suffering still derives from an inherently economic concern.”).

3. See *Paul Hardeman, Inc. v. Ark. Power & Light Co.*, 380 F. Supp. 298, 317 (E.D. Ark. 1974) (“[C]onstruction contracts are a separate breed of animal; and, even if not completely *sui generis*, still . . . [the] law must be stated in principles reflecting underlying economic and industry realities. Therefore, it is not safe to broadly generalize. True, general principles of contract law are applied to construction contracts, but they are applied under different operative conditions. Care must be taken, then, not to rely too uncritically on such cases as those arising from the sale of real or personal property. And even within the larger rubric of ‘construction contracts’ it is manifest that the law, if sensitive to the underlying realities, will carefully discriminate between, say, a contract to construct a home and a contract to construct a fifty-story office building; between a contract to build a private driveway and a contract to construct an interchange on an interstate highway. This is what one would expect *a priori*; this is, generally, what one finds when he reviews the actual development of the law.”).

4. Footnotes 5-17 and accompanying text are partially excerpted from Bruner, *The Historical Emergence of Construction Law*, *supra* note 2, at 1-4.

environment.⁵ Construction encouraged broad human socialization by causing people to work together to build projects and ultimately by making cities livable.⁶ Mankind's oldest surviving epic poem, written in cuneiform script on clay tablets by an unknown author, described the hallmarks of Uruk's construction advancements by about 2750 BC:

This is the wall of Uruk, which no city on earth can equal. See how its ramparts gleam like copper in the sun. Climb the stone staircase, more ancient than the mind can imagine, approach the Eanna Temple, sacred to Ishtar, a temple that no king has equaled in size or beauty, walk on the wall of Uruk, follow its course around the city, inspect its mighty foundations, examine its brickwork, how masterfully it is built, observe the land it encloses: the palm trees, the gardens, the orchards, the glorious palaces and temples, the shops and marketplaces, the houses, the public squares.⁷

Mankind's socialization led to the promulgation of rudimentary principles of law to regulate human rights and obligations arising out of societal interaction, and principles of law were promulgated to govern the built environment and the construction process. The earliest known principles of construction law were primitive and punitive. The Code of Hammurabi is said to have been created about 1792-1750 B.C.E.

5. 1 PHILIP L. BRUNER & PATRICK J. O'CONNOR, JR., BRUNER AND O'CONNOR ON CONSTRUCTION LAW § 1:1 (2021) (reviewing the historical changes in law and industry practices that have enhanced construction's complexity).

6. *Id.*; see also PLUTARCH, PERICLES (John Dryden trans., Internet Classics Archive 1994-2000) (75 A.C.E.), [<https://perma.cc/7UTR-AZLB>] ("That which gave most pleasure and ornament to the city of Athens, and the greatest admiration and even astonishment to all strangers, and that which now is Greece's only evidence that the power she boasts of and her ancient wealth are no romance or idle story, was [Pericles's] construction of the public and sacred buildings.").

7. See STEPHEN MITCHELL, GILGAMESH: A NEW ENGLISH VERSION 198-99 (2004); see also *Looted Gilgamesh Tablet, One of World's Oldest Surviving Works of Literature, Returns to Iraq*, PBS NEWSHOUR (Dec. 8, 2021), [<https://perma.cc/5ZPU-XC7W>]. Twentieth-century archaeological excavations and modern non-invasive exploratory techniques confirm that Uruk, the ruins of which lie in the Middle East's "fertile crescent" near Basra in modern Iraq, was first settled about 7,000 years ago and went on to become the largest city on earth around 3,000 years ago. See Andrew Lawler, *The Everlasting City*, ARCHAEOLOGY, Sept./Oct. 2013, at 26, 26; *The Epic of Gilgamesh: Map & Timeline*, ANNENBERG LEARNER, [<https://perma.cc/N2VH-SZXX>] (last visited Mar. 16, 2022). "At Uruk's peak, in about 2900 B.C., more than 50,000 people crowded into almost two-and-a-half square miles." Lawler, *supra* note 7, at 28.

and to be based upon even older collections of Sumerian and Akkadian laws.⁸ Under its “eye for an eye” system of justice, Hammurabi’s Code dictated that builders be punished for injuries to others caused by collapse of their buildings.⁹ The code provisions pertinent to construction state:

(229) If a builder build [sic] a house for some one, and does not construct it properly, and the house which he built fall [sic] in and kill [sic] its owner, then that builder shall be put to death.

(230) If it kill [sic] the son of the owner the son of that builder shall be put to death.

(231) If it kill [sic] a slave of the owner, then he shall pay slave for slave to the owner of the house.

(232) If it ruin [sic] goods, he shall make compensation for all that has been ruined, and inasmuch as he did not construct properly this house which he built and it fell, he shall re-erect the house from his own means.

(233) If a builder build [sic] a house for some one, even though he has not yet completed it; if then the walls seem toppling, the builder must make the walls solid from his own means.¹⁰

As classical antiquity gradually civilized the built environment, so too did it refine the law governing the built environment. By the reign of Rome’s Caesar Augustus,¹¹ construction risks inherent in building upon unsuitable soils¹² or

8. *Code of Hammurabi: Babylonian Laws*, BRITANNICA, [https://perma.cc/ZM6F-66VA] (last visited Mar. 14, 2022).

9. See *The Code of Hammurabi*, AVALON PROJECT §§ 229–33, [https://perma.cc/68N9-D5VJ] (last visited Mar. 15, 2022).

10. *Id.*; see generally Martha T. Roth, *Mesopotamian Legal Traditions and the Laws of Hammurabi*, 71 CHI.-KENT L. REV. 13 (1995). Hammurabi (circa 1810-1750 B.C.) was the sixth king of Babylonia and conquered and absorbed most of the middle east into the Babylonian Empire. See Johannes M. Renger, *Hammurabi: King of Babylonia*, BRITANNICA, [https://perma.cc/Y4MY-SYKM] (last visited Mar. 6, 2022).

11. Gaius Julius Caesar Octavianus (63 B.C.–14 A.D.), great nephew of Julius Caesar, became Rome’s first emperor and took the name Augustus by the Roman Senate. See COLIN WELLS, *THE ROMAN EMPIRE* 11-12, 14 (2d ed. 1992); Michael Grant, *Augustus*, BRITANNICA, [https://perma.cc/CB96-FQZH] (last visited Mar. 16, 2022).

12. Jesus of Nazareth, who is said to have practiced carpentry as a boy, employed widely understood metaphors in his sermons and concluded His Sermon on the Mount (circa 30 A.D.) in *Matthew 7:24-27* (New Revised Standard Version) with this admonition:

in providing incompetent management and cost control¹³ were widely recognized. Good construction practice under Roman law favored careful contractual articulation of the scope of work and allocation of construction risks.¹⁴ Roman builders had good

Everyone then who hears these words of mine and acts on them will be like a *wise man who built his house on a rock*. The rain fell, the floods came, and the winds blew and beat on that house, but it did not fall, because it had been founded on rock. And everyone who hears these words of mine and does not act on them will be like a *foolish man who built his house on sand*. The rain fell, and the floods came, and the winds blew and beat against that house, and it fell—and great was its fall!

Matthew 7:24-27 (New Revised Standard Version) (emphasis added); see Jaroslav Jan Pelikan, *Jesus*, BRITANNICA, [<https://perma.cc/VQ3S-WZMQ>] (last visited Mar. 16, 2022); THE ONE YEAR CHRONOLOGICAL BIBLE: NEW LIVING TRANSLATION (Tyndale House Publishers, Inc. ed., 2d ed. 2013).

13. See MARCUS VITRUVIUS POLLIO, *VITRUVIUS: THE TEN BOOKS ON ARCHITECTURE* 282 (Morris Hicky Morgan trans., 1960) (1914) (c. 20 B.C.). Known to history as “Vitruvius,” he was chief engineer to Julius Caesar and Emperor Augustus. John H. Lienhard, *Engines of Our Ingenuity: No. 580: Vitruvius*, UNIV. OF HOUSTON, at 00:28, [<https://perma.cc/VQP7-D9RW>] (last visited Mar. 20, 2022) (University of Houston College of Engineering radio broadcast). Thus, in his time, he was the “chief engineer of the civilized world.” *Id.* Vitruvius wrote a ten-volume treatise for Augustus on Roman construction practices, which survived the ravages of time to influence the architecture of the European Renaissance. *Id.* at 00:45. Among other things, Vitruvius proposed to Augustus that Rome resurrect an ancient ancestral law of the Greek City of Ephesus:

1. In the famous and important Greek City of Ephesus there is said to be an ancient ancestral law, the terms of which are severe, but its justice is not inequitable. When an architect accepts the charge of a public work, he has to promise what the cost of it will be. His estimate is handed to the magistrate, and his property is pledged as security until the work is done. When it is finished, if the outlay agrees with his statement, he is complimented by decrees and marks of honour. If no more than a fourth has to be added to his estimate, it is furnished by the treasury and no penalty is inflicted. But when more than one fourth has to be spent in addition on the work, the money required to finish it is taken from his property.

2. Would to God that this were also a law of the Roman people, not merely for public, but also for private buildings. For the ignorant would no longer run riot with impunity, but men who are well qualified by an exact scientific training would unquestionably adopt the profession of architecture. Gentlemen would not be misled into limitless and prodigal expenditure, even to ejections from their estates, and the architects themselves could be forced, by fear of the penalty, to be more careful in calculating and stating the limit of expense, so that gentlemen would procure their buildings for that which they had expected, or by adding only a little more.

Id.

14. VITRUVIUS, *supra* note 13, at 10 (“[P]rinciples of law . . . should be known to architects, so that, before they begin upon buildings, they may be careful not to leave disputed points for the householders to settle after the works are finished, and so that in

reason to exercise care in contracting because the Roman legal doctrine of *pacta sunt servanda* (“contracts must be honored”) imposed strict contractual liability unless non-performance was excused under the doctrine of *rebus sic stantibus* (“provided the circumstances remain unchanged”).¹⁵ These ancient principles undergird the modern law of contract and its legal doctrines of sanctity of contract, force majeure, and impracticability.¹⁶

For 1900 years following the advent of Augustus’s Imperial Rome—through Europe’s Dark Ages, Renaissance, and Industrial Revolution—construction law was subsumed by broader and more generalized fields of law and by perceptions of construction as local and parochial, invoking primarily the “law of the shop” rather than the “law of the courts.”¹⁷ Then, in the nineteenth and twentieth centuries, public demand for new construction increased exponentially and construction became the largest segment of the production sector of the global economy.¹⁸

“Building upon primitive construction techniques limited to wood, stone and masonry materials, the 19th and 20th centuries witnessed a veritable explosion in construction knowledge: new techniques, materials technologies, geotechnical exploration methods, soils classification and environmental monitoring facilities theretofore unknown.”¹⁹ This explosion of knowledge led to the demise of the “master builder” of old and to the creation

drawing up contracts the interests of both employer and contractor may be wisely safeguarded. For if a contract is skillfully drawn, each may obtain a release from the other without disadvantage.”)

15. 5 PHILIP L. BRUNER & PATRICK J. O’CONNOR, JR., BRUNER AND O’CONNOR ON CONSTRUCTION LAW § 15:22 (2021).

16. *See id.*; *see also* RESTATEMENT (SECOND) OF CONTS. ch. 11 intro. note (AM. L. INST. 1981) (“Contract liability is strict liability. It is an accepted maxim that *pacta sunt servanda*, contracts are to be kept.”). These ancient Roman laws undergird the more recent common law principle of Sanctity of Contract. *See Dermott v. Jones*, 69 U.S. (2 Wall.) 1, 7 (1864) (“It is a well-settled rule of law, that if a party by his contract charge himself with an obligation possible to be performed, he must make it good, unless its performance is rendered impossible by the act of God, the law, or the other party. Unforeseen difficulties, however great, will not excuse him.”).

17. *See generally* HENRY OF BRACON, ON THE LAWS AND CUSTOMS OF ENGLAND (Samuel E. Thorne trans., c. 1230), [<https://perma.cc/U4S5-9TU7>]; 2 WILLIAM BLACKSTONE, COMMENTARIES, [<https://perma.cc/6SQ5-VUZG>].

18. *See* 1 BRUNER & O’CONNOR, JR., *supra* note 5, at § 1:1; Bruner, *The Historical Emergence of Construction Law*, *supra* note 2, at 11.

19. 1 BRUNER & O’CONNOR, JR., *supra* note 5, at § 1:1.

in its place of a host of specialized architectural, engineering, and project management disciplines and:

construction trades to design, manufacture and build [our] modern [built environment]—geotechnical exploration, high-strength steel, reinforced concrete, heating and ventilating, plumbing, electricity, lighting, telephones, fiber optic cables, deep caissons, elevators and escalators, fire retardation, building controls, curtainwall, roofing, and sealants, and to manufacture modern materials, such as high-strength steel, glass, plastics, and aluminum.²⁰

“Advances in construction knowledge also could be observed in new types of construction projects: hundred-story office towers, interstate highways with cloverleaf interchanges, massive dams and power plants, airports and street lighting, and subways and tunnels,” as well as 3D printed bridges and homes.²¹

“One consequence of the increased size and complexity of construction projects by the early 20th century was a heightened concern for public safety that in turn lead to governmental regulation of construction industry practices through legislative imposition of minimum qualifications” and standards enforced through designer and contractor licensing laws, building code permitting requirements, and construction-safety laws and regulations, and resulted in management of the complex construction process by distinct governmentally licensed architectural and engineering specialties—civil, structural, mechanical, electrical, geotechnical, acoustical and others—as well as a host of licensed specialty trade contractors and tradesmen to perform the work.²² Today, construction is the largest single segment of the production sector of the global economy,²³ and its economic importance and technical complexity continue to grow.

20. Bruner, *The Historical Emergence of Construction Law*, *supra* note 2, at 4-5; 1 BRUNER & O’CONNOR, JR., *supra* note 5, at § 1:1.

21. 1 BRUNER & O’CONNOR, JR., *supra* note 5, § 1:1; Mikahila L., *The Most Impressive 3D-Printed Bridges Projects*, 3D NATIVES (Nov. 5, 2021), [<https://perma.cc/BBV6-5T6E>].

22. 1 BRUNER & O’CONNOR, JR., *supra* note 5, at § 1:1; Bruner, *The Historical Emergence of Construction Law*, *supra* note 2, at 4.

23. Maria João Ribeirinho et al., *The Next Normal in Construction: How Disruption is Reshaping the World’s Largest Ecosystem*, MCKINSEY & CO., June 2020, at 1, 4.

Such extraordinary technical and managerial advances fundamentally changed the industry. New inventions led to electrification, indoor plumbing, space heating at controlled temperatures, new building materials and machinery, better structural and curtainwall systems, increased knowledge of soils characteristics, and advances in geotechnical and structural engineering and in a host of other disciplines.²⁴ The complexity of the construction process and numbers of participants in the construction process required greater overall project management skills and more careful communication among project participants.²⁵ A major challenge on every project has been the accurate communication of technically complex information to the myriad parties involved in the construction process, and the management of known and unknown uncertainties.²⁶ Construction's technological complexity was amplified by the invariably unique conditions under which projects usually are performed—most every project is unique, built to a unique design, on a unique site, by a unique aggregation of companies, operating without economies of scale in an uncontrolled environment, where productivity is affected by weather, geology, local labor skills and availability, local building codes, and site accessibility.

24. Bruner, *The Historical Emergence of Construction Law*, *supra* note 2, at 1.

25. *Id.* at 11, 13.

26. John W. Hinchey, *Visions for the Next Millennium*, in 1 CONSTRUCTION LAW HANDBOOK 31, 32 (1999) ("Construction is an inherently complex business. Even casual observers of the construction process are struck by the enormous amount of information required to construct a project. Hundreds, even thousands, of detailed drawings are required. Hundreds of thousands of technical specifications, requests for information, and other documents are needed. Complex calculations are used to produce the design. For years, this complexity dictated a labor-intensive, highly redundant methodology for doing the work. Projects were fragmented and broken into many parts. Different entities undertook different parts of a project, both for design and construction. Therefore, the construction industry became exceptionally fragmented. On a project of even average complexity, there may have been from 5 to 15 firms involved in design. From 40 to 100 companies may have been engaged in construction. Many more companies supplied materials, professional services, and other elements necessary for completion of the project. It was effectively impossible to convey the sum of knowledge necessary to construct a facility in a set of plans and specifications. Stated another way, the information technology traditionally used for construction is inadequate.").

III. “CONSTRUCTION LAW”—WHAT IS IT?

Prior to the twentieth century no such subject as “construction law” was recognized by courts or law schools anywhere in the world. Contracts were construed strictly in accordance with their textual terms under the Doctrine of Sanctity of Contract.²⁷ Disputes arising in the construction field were deemed to be subsumed by the ancient legal fields of contract law, tort law, equity law, surety law, and such statutory law as was applicable.²⁸ Even as little as fifty years ago those lawyers who represented parties in the construction field would joke that the “construction law” practice included everything except the practice of dentistry.

“Construction Law” owes its modern recognition as a separate field of law to the judiciary’s acceptance of the Doctrine of Contextual Contract.²⁹ As construction’s increasing technological and managerial complexity came to be recognized, some common law courts turned away from strict interpretation of language within the four corners of a contract and moved toward recognizing a more liberal interpretation based on the construction industry’s own experience, customs, practices, implied conditions and duties, and the factual context underlying

27. See *Dermott v. Jones*, 69 U.S. (2 Wall.) 1, 2, 7-8 (1864) (finding that this covenant was to complete the building “*ready for use and occupation* [I]t was [the contractor’s] duty to fulfil, and he was bound to do whatever was necessary to its performance. Against the hardship of the case he might have guarded by provision in the contract. Not having done so, it is not in the power of this court to relieve him The principle . . . rests upon a solid foundation of reason and justice. It regards the sanctity of contracts.”); see also Stephen A. Hess, *The Sanctity of Construction Contracts*, 1 AM. COLL. CONSTR. LAWS. J. 1, 1 (2021).

28. 1 BRUNER & O’CONNOR, JR., *supra* note 5, at § 1:3.

29. See *id.* at §§ 3.1, 3.2; *United States v. Lennox Metal Mfg. Co.*, 225 F.2d 302, 310 (2d Cir. 1955) (“Even if a word in a written agreement is not ambiguous on its face, the better authorities hold that its context, its ‘environment,’ must be taken into account in deciding what the parties mutually had in mind when they used that verbal symbol.”); see also CARL J. CIRCO, *CONTRACT LAW IN THE CONSTRUCTION INDUSTRY CONTEXT* 61-62 (2020); Karen Eggleston et al., *The Design and Interpretation of Contracts: Why Complexity Matters*, 95 N.W. U. L. REV. 91, 93 (2000) (“[L]awyers, judges, and legislatures cannot evaluate contract rules without understanding the contracts that these rules are supposed to regulate. Yet the law review literature on contracts is almost completely devoid of the positive analysis of contracts.”).

the meaning of the contract.³⁰ Courts thus began to journey along the road leading from “text” to “context”.³¹

The late 1800s and early 1900s:

witnessed the emergence of a primary judicial vehicle for development of construction law principles: the modern theory of “contextual contract,” which elastically allowed the judiciary to add contractual terms, conditions, and warranties implied by the transaction’s surrounding circumstances and complexity, and to interpret express contractual language in conformance with industry usage, custom, and practice.³²

Today, common law jurisdictions and some civil law jurisdictions recognize construction contracts as including a host of duties and conditions implied in the contract as a matter of law, such as: (1) the parties’ mutual implied duty of good faith and

30. See Carl J. Circo, *The Construction Industry in the U.S. Supreme Court: Part 1, Contract Law*, CONSTR. LAW., Spring 2021, at 6, 6 [hereinafter Circo, *The Construction Industry in the U.S. Supreme Court: Part 1*]; Bruner, *Historical Emergence of Construction Law*, *supra* note 2, at 7, 13.

31. See Circo, *The Construction Industry in the U.S. Supreme Court: Part 1*, *supra* note 30, at 6; Carl J. Circo, *The Construction Industry in the U.S. Supreme Court: Part 2, Beyond Contract Law*, 41 CONSTR. LAW., no. 3, 2021, at 5, 7-12 [hereinafter Circo, *The Construction Industry in the U.S. Supreme Court: Part 2*] (reviewing the nineteenth and early twentieth century construction cases decided by the U.S. Supreme Court that move from text to context).

32. Bruner, *Historical Emergence of Construction Law*, *supra* note 2, at 7. Oliver Wendell Holmes, one of America’s most influential Justices of the United States Supreme Court in the late nineteenth and early twentieth centuries, reminded the legal profession that:

The life of the law has not been logic: it has been experience. The felt necessities of the time, the prevalent moral and political theories, intuitions of public policy, avowed or unconscious, even the prejudices which judges share with their fellow-men, have had a good deal more to do than the syllogism in determining the rules by which men should be governed. The law embodies the story of a nation’s development through many centuries, and it cannot be dealt with as if it contained only the axioms and corollaries of a book of mathematics. In order to know what it is, we must know what it has been, and what it tends to become.

O.W. HOLMES, JR., *THE COMMON LAW* 1 (1881); see also O. W. Holmes, *The Path of the Law*, 10 HARV. L. REV. 457, 466 (1897) (“You always can imply a condition in a contract. But why do you imply it? It is because of some belief as to the practice of the community or of a class, or because of some opinion as to policy, or, in short, because of some attitude of yours upon a matter not capable of exact quantitative measurement, and therefore not capable of founding exact logical conclusions. Such matters really are battle grounds . . . where the decision can do no more than embody the preference of a given body in a given time and place. We do not realize how large a part of our law is open to reconsideration upon a slight change in the habit of the public mind.”).

fair dealing; (2) the parties' mutual duty of cooperation and non-hindrance; (3) the employer's implied duties of detailed design, document adequacy, and full disclosure of facts critical to construction; and (4) the contractor's implied duty of inquiry.³³ Thus, the content of the complex construction contract extends beyond its express written terms and conditions, plans and specifications, and related documents that are incorporated therein by reference.³⁴ Those who believe that a full understanding of the parties' rights and obligations can be gained merely by reading the four corners of the express contract are mistaken. Reading the express contract is only the beginning, and not an end, of gaining full comprehension of the parties' legally enforceable contractual rights and obligations.

"Rarely can even well-drafted construction contracts be said to be 'complete' in all respects, because contracts often fail to include provisions covering all conceivable contingencies and routinely are construed to include judicially implied terms arising from the contract's 'context' interpreted in accordance with special trade customs and practices."³⁵ "'Context' is the judicial 'gloss' applied to express contracts to determine intent and judge compliance."³⁶

Such contextual "gloss" arises out of (1) judicial *interpretation* of contract terms in accordance with accepted rules of interpretation and industry customs and

33. See 1A BRUNER & O'CONNOR, JR., BRUNER AND O'CONNOR ON CONSTRUCTION LAW § 3.4; CARL J. CIRCO, CONTRACT LAW IN THE CONSTRUCTION INDUSTRY CONTEXT 45-46 (2020).

34. See Carl J. Circo, *The Evolving Role of Relational Contract in Construction Law*, CONSTR. LAW., Fall 2012, at 16, 16-17 ("[R]elational principles mean, for example, that construction lawyers should take note of behavior that reflects certain norms characteristic of contractual or exchange relationships, such as customs and expectations, reciprocity, and a commitment to harmonize conflict and to preserve relationships, even when those values require some sacrifice of individualistic interests. And they suggest that we should ask relational questions: To what extent are the relationships founded on past experiences and the prospects for ongoing or future dealings? . . . Broadly speaking, a relational approach counsels litigants, courts, arbitrators, and mediators to look past formal legal rules to explore and grapple with the relational context of a construction dispute. For example, when contrasted with traditional contract law, relational contract is more committed to the duties of good faith and fair dealing, the significance of industry customs, and the availability of detrimental reliance remedies.").

35. 1A BRUNER & O'CONNOR, JR., *supra* note 33, at § 3.2.

36. *Id.*

usages; and (2) judicial imposition as a matter of law of *implied* rights and obligations, conditions and warranties that assure fairness within the context of the parties' expressly contracted responsibilities.³⁷

“Construction law today is a primordial soup in the ‘melting pot’ of the law—a thick broth consisting of centuries-old legal theories fortified by statutory law and seasoned by contextual legal innovations reflecting the broad factual ‘realities’ of the modern construction process.”³⁸ It is the “contextual” environment of construction that gives the construction contract uniqueness among the wide world of contracts.³⁹ Given their unique transactional contexts, construction contracts are recognized by the world of contract law as a “separate breed of animal”.⁴⁰ Moreover, jurisdictions such as the states of Florida, Texas, and Arizona and the Province of Ontario, Canada, recognize “Construction Law” as a sufficiently complex and unique legal specialty that is worthy of specialized professional bar certification.⁴¹

37. *Id.*

38. Bruner, *The Historical Emergence of Construction Law*, *supra* note 2, at 13-14.

39. See Thomas Stipanowich, *Restructuring Construction Law: Reality and Reform in a Transactional System*, 1998 WIS. L. REV. 463, 480-81 (1998) (“The concept of a law of construction contracts, separate and apart from the mainstream [] contract, gained acceptance only in recent decades with the emergence of large national and international engineering and construction companies, a corps of practitioners specializing in construction contract matters, and the beginning of a body of pertinent scholarship. Reinforcing these historical realities may be the traditional robust individualism of construction contractors. More significant may be the construction industry’s heavy reliance upon internal sources of norms, embodied chiefly in the standardized contract and adherence to private ‘governance mechanisms’ such as arbitration and mediation that acknowledge and serve relational interests and concerns.”).

40. *Paul Hardeman, Inc. v. Ark. Power & Light Co.*, 380 F. Supp. 298, 317 (E.D. Ark. 1974).

41. See *Construction Defect Law Specialization*, STATE BAR OF ARIZ., [https://perma.cc/EE24-6KNL] (last visited Mar. 11, 2022); *Construction Law*, TEX. BD. OF LEGAL SPECIALIZATION, [https://perma.cc/3W65-77RR] (last visited Mar. 11, 2022); see also Amend. to the Rules Regulating the Fla. Bar, 875 So. 2d 448, 540-41 (2004) (mem.), which establishes standards by which a Florida lawyer may become a “Board Certified Construction Lawyer” and which defines “Construction Law” as follows:

“Construction law” is the practice of law dealing with matters relating to the design and construction of improvements on private and public projects including, but not limited to, construction dispute resolution, contract negotiation, preparation, award and administration, lobbying in governmental hearings, oversight and document review, construction lending and insurance,

Under the weight of a century of contextual experience, “construction law” has become:

a “capstone” subject, a towering legal edifice built out of modern statutes, “contextual” common law principles of and foundational legal concepts sustaining and binding the multitude of parties—architects, engineers, contractors, subcontractors, material suppliers, material manufacturers, sureties, insurers, code officials, and tradesmen—typically engaged in varying degrees on construction projects.⁴²

The types of unique legal relationships in the construction industry include:

- (1) express and implied contractual relationships among multiple parties engaged on the same project;
- (2) tort relationships, rights, and obligations where contractual privity does not exist or professional or public duties supersede;
- (3) suretyship relationships invoking equitable principles governing rights and duties under construction bonds and bonded construction contracts;
- (4) insurance relationships invoking principles applicable to products insuring construction and design risks, such as builders’ risk policies;
- (5) agency principles applicable to construction industry participants and their representatives;
- (6) design professional rights and liabilities created by common law and statutory duties;

construction licensing, and the analysis and litigation of problems arising out of the Florida Construction Lien Law, section 255.05, Florida Statutes, and the federal Miller Act, 40 U.S.C. § 270.

See also THE L. SOC’Y OF ONT., STANDARDS FOR CERTIFICATION CONSTRUCTION LAW 1 (2018), [<https://perma.cc/Z46B-FKUV>], which defines the “Construction Law Specialty” as follows:

The practice of construction law encompasses the representation of participants in the construction industry and includes the negotiation and formation of contracts, provision of legal advice on construction and infrastructure matters, representation with regards to tenders or proposals, preparation of documents, representation in proceedings and the resolution of disputes including, alternative dispute resolution and litigation.

42. Bruner, *The Historical Emergence of Construction Law*, *supra* note 2, at 14.

(7) construction lender-borrower relationships and liabilities pertaining to project financing;

(8) special rights and obligations created by statutes governing mechanic's liens, public contractor bonds, and award of public contracts by bidding or negotiation;

(9) special rights and obligations arising under the Uniform Commercial Code governing relationships for the purchase of construction materials and equipment; [and]

(10) special public duties created by building codes, licensing laws, and health and safety laws[.]⁴³

“Some academicians view ‘construction law’ incorrectly as mere ‘advanced contract law’—a misunderstanding that arises from viewing ‘construction law’ through the prism of a historically narrow academic discipline rather than through the kaleidoscope of complex legal and factual issues inherent in the construction process itself.”⁴⁴ Construction contracts necessarily must be construed in transactional context, because they address a host of complex issues unique to construction, such as:

(1) Originality of each construction project as to siting, design objectives, construction requirements, design and construction professionals, and ownership;

(2) Novelty of construction risks such as unforeseen site conditions, scheduling and coordination of numerous subcontractors and material suppliers, frequent changes in project design, deviations in construction work and specialized payment security afforded by surety bond and mechanics lien laws;

(3) Rapid technological advances in building materials, systems, techniques and equipment;

(4) Statutory mandates promoting competition and various social objectives in the award of public contracts;

(5) Use of multiple project delivery methods, such as competitive sealed bidding, which invokes legal principles of “firm bid” and promissory estoppel in unique applications, or other more collaborative project delivery

43. *Id.* at 15 (reproduced with permission of the author and the William Mitchell Law Review. Quotations within the list are omitted for readability).

44. *Id.* at 14.

methods unique to construction such as teaming, partnering, alliancing and design-build and its variants, which may add responsibilities and risks for financing, operation and maintenance obligations, cost reimbursement with or without a guaranteed maximum price, and contract negotiation;

(6) Different design standards, building codes and licensing requirements applicable in different jurisdictions and types of projects;

(7) Unusual varieties of construction contract pricing arrangements, such as fixed price, force account, time and material, cost reimbursement with or without a guaranteed maximum price, unit prices based on estimated quantities, and contract clauses authorizing price adjustments for extra work or other compensable events, all of which can be paid either in partial payments as work progresses or in a single lump sum upon completion;

(8) Special construction cost principles and job cost accounting procedures;

(9) Complex “critical path” concepts for measuring construction time, scheduling the work, and determining causation and compensability of delay and entitlement to additional time;

(10) Legal principles unique to construction damage measurement, such as substantial performance, betterment, economic waste, accepted formulas for extended home office overhead and extended usage of contractor-owned equipment, and unsegregated damage approaches that recognize construction’s imperfect world;

(11) Legal “fault lines” between common-law legal theories of contract, tort, and equity, as applied to the same claims;

(12) Legal “fault lines” dividing common-law and statutory principles applicable to different aspects of construction contracting, such as between general common-law principles governing design and construction, and the Uniform Commercial Code governing the purchase of construction equipment and materials;

(13) Judicial or legislative public policy prohibitions in some jurisdictions against the use of certain stringent clauses such as those addressing “no damage for delay,” indemnification,

“pay if paid” clauses and other provisions invoking penalties or forfeitures;

(14) Multitude of parties involved in the construction process, each with its own written or oral contract;

(15) Use of massive contract documents typically involving hundreds of pages of specifications and blueprints to describe the work to be performed;

(16) Customs and practices unique to the construction industry;

(17) Construction contract formation necessarily is dependent upon and must be preceded by selection of a project delivery method aimed ultimately at achieving the owner’s fundamental objectives of price, quality, and time amid the uncertainties and complexities of the construction process; and

(18) If ambiguous, the contract will be interpreted under long-standing “contextual” trade customs and practices;

(19) The extraordinary variety of “implied conditions” and “implied warranties” that are found in construction contracts;⁴⁵

(20) technical issues of scope of work, changes, and proof of causation of delay and of loss; and

(21) issues unique to dispute resolution by arbitration, mediation, adjudication, dispute review boards, structured negotiation, and other dispute resolution methods.

IV. IMPACT OF MULTIPLE HUMAN MINDSETS THAT ADD TO CONSTRUCTION’S COMPLEXITY⁴⁶

Modern construction’s factual and legal complexity and contextual considerations require broad industry education among all participating members of such complexity to avoid communication problems among the different segments of the construction industry. One extraordinary non-legal characteristic of the construction industry that differentiates it from other fields

45. 1A BRUNER & O’CONNOR, JR., *supra* note 33, at § 3:2 (reproduced with the author’s permission. Quotations within the list are omitted for readability).

46. Part IV is excerpted from 1 BRUNER & O’CONNOR, JR., *supra* note 5, at § 1:2.

of human endeavor and adds complexity to the construction process has been the marked differences among its participants in mindset, training, and approach to construction problems—psychological and cultural considerations that have contributed significantly to the construction industry’s litigiousness in the twentieth century. Contractors characteristically are practical, independent, and hard-headed personalities who enjoy “getting their hands dirty.” Architects, more often than not, are perceived as ethereal “right brain” visionaries in search of aesthetic beauty in architectural design, uncomfortable with the “hurly-burly” of the construction process and willing, in the face of modern complexities and risks of liability, to abdicate their ancient role as “master builder.” In contrast to architects, engineers typically are perceived as viewing the world from the “left brain,” thinking of problem-solving as a mathematical exercise, and having a perceived literal outlook. Owners usually are less experienced with the construction process than the other participants, and can be inflexible, assertive, and demanding because they bear substantial risks in financing the project, look to design professionals and construction managers to protect their interests, and expect completion of the project strictly conforming to their requirements.

In contrast to these mindsets, lawyers and judges rarely view disputes as all black or all white, inevitably identify different shades of gray in their search for fairness and equity, and ponder amid the shifting sands of construction industry practices and mores whether circumstances warrant enforcement of or excuse from contractual obligations willingly assumed. To construction parties, desirous of clarity and even literalism in their legal relationships, the uncertainty created by such shades of gray has raised to mythical status, the celebrated “one-armed lawyer”, a lawyer who gives straightforward advice without saying “on the one hand . . . but on the other hand” The fundamental differences in mindsets, outlooks and approaches to contract interpretation between construction industry participants and lawyers were highlighted by Max E. Greenberg, one of the mid-twentieth century “deans” of the American Construction Bar, in a classic construction law lecture entitled “It Ain’t Necessarily So”:

There is a basic difference in the training and thinking of lawyers and engineers. It is a difference which you must understand, if you want to comprehend how and why lawyers—which includes judges—arrive at conclusions which may appear to you to be entirely contrary to the clear and express provisions of a contract.

Engineers deal basically, with the immutable laws of nature. You are taught to look a fact in the face and to accept it without equivocation. Steel has certain qualities. It has certain defined stresses and strains, and while you may devise means to employ its qualities to your purpose, you can't change it. You accept it for what it is. It is a fact. Wood has certain qualities which you employ, but can't change. It's a fact. The varying types of soil have definite qualities. You may employ them within the limitations of those qualities. You cannot change it. It's a fact.

Lawyers, however, deal with vagaries of the human mind. We seek an indefinable, elusive something, called Justice. Justice depends merely on our sense of fairness. It may mean different things in different ages, or different things in the same age under different circumstances; it may mean different things to different people in the same age and circumstances.

In a situation where transportation may mean survival and the sole means of transportation is a horse, the stealing of a horse may have serious consequences and hanging may be considered just. However, in a society depending primarily on automobiles, tractors and power equipment, the same act of stealing a horse, does not have serious consequences; hanging would not be considered just. In a community where its economic life depends on the ready transferability of title to lumber, it may be considered just that the title to stolen lumber conveyed to an innocent purchaser be deemed valid, although in another community, in which lumber does not form the basis of its economic life, the transfer of title to stolen lumber may not be deemed valid.⁴⁷

47. Max E. Greenberg, *It Ain't Necessarily So*, 40 MUN. ENG'RS. J. 50, 50-51 (1954) (a speech presented on April 28, 1954 to the municipal engineers of the City of New York).

Using as one of many examples a contractual “no damage for delay” clause, Greenberg observed:

Now when you, as engineers, read a contract which in plain understandable English states the [owner] shall not be liable for damages for delays, resulting from any cause whatsoever and that the sole remedy of the contractor shall be an extension of time, that, to you, with your type of background and training is a fact; it means what it says. But to us, as lawyers “It ain’t necessarily so.” Our sense of fairness may impose limitations on the effectiveness of that clearly expressed provision.

[T]he effectiveness of a contract provision excusing the owner from liability for damage for delays . . . must yield when it conflicts with a basic, though perhaps not expressed, rule of law which implies that the owner will do its share toward getting the contract completed within the time specified. Every contract imposes obligations on both sides. The [owner], when it requires a contractor to perform within a set period, by that fact alone, itself assumes the obligation to give the contractor the site on time to approve drawings or samples within the time one ought normally expect them to be approved, to let its other independent contracts in such time and to require the performance thereof in such periods as will enable all the coordinated contracts to be completed within the time specified; to have adequate funds available to proceed with the work.

In other words, we as lawyers, do not consider it fair, that simply because it is provided that the owner shall not be liable for delays, that it can thereby take an unfair advantage of the situation and thereby impose expense on the contractor due to the owners failure to diligently and fairly maintain its share of the bargain.⁴⁸

Those people in the construction industry who look for certainty within the four corners of the contract, without focusing on the factual complexities of the construction process or the legal complexities and context imposed by judicially created implied contractual conditions outside the four corners of the written contract often have been sources of, rather than solutions to,

48. *Id.* at 51-52.

problems. Thus, differences in perspective, outlook, training and objectives of the parties simply exacerbate an already technologically complex construction process.

V. CONSTRUCTION LAW AND THE NATIONAL AND INTERNATIONAL CONSTRUCTION BAR

For much of the 20th century, lawyer specialization in construction law was self-taught under the necessity of providing adequate legal representation to construction industry clients. The extent of specialization depended upon the number of such clients and the frequency of their legal matters. Lawyers representing contractors, design professionals, owners and sureties typically learned “construction law” from the unique perspectives of the clients they served.⁴⁹

For more than 100 years, the impact of construction’s complexity upon courtroom trial of construction disputes has been well recognized. Both lawyers and judges inexperienced in construction⁵⁰ acknowledge frustration in dealing with

49. 1 BRUNER & O’CONNOR, JR., *supra*, note 5, at § 1:5.

50. *See* E. C. Ernst, Inc. v. Manhattan Constr. Co., 387 F. Supp. 1001, 1006 (S.D. Ala. 1974), *aff’d in part, vacated in part*, in which a federal judge offered parties before him at a pretrial conference this sage advice:

Being trained in this field [of construction], you are in a far better position to adjust your differences than those untrained in [its] related fields. As an illustration, I, who have had no training whatsoever in engineering, had to determine whether or not the emergency generator system proposed to be furnished . . . met the specifications, when experts couldn’t agree. That is a strange bit of logic. . . . The object of litigation is to do substantial justice between the parties litigant, but the parties litigant should realize that, in most situations, they are by their particular training better able to accomplish this among themselves.

See also Blake Constr. Co. v. C. J. Coakley Co., 431 A.2d 569, 575 (D.C. App. 1981) (“[E]xcept in the middle of a battlefield, nowhere must men coordinate the movement of other men and all materials in the midst of such chaos and with such limited certainty of present facts and future occurrences as in a huge construction project such as the building of this 100 million dollar hospital. Even the most painstaking planning frequently turns out to be mere conjecture and accommodation to changes must necessarily be of the rough, quick and *ad hoc* sort, analogous to ever-changing commands on the battlefield. Further, it is a difficult task for a court to be able to examine testimony and evidence in the quiet of a courtroom several years later concerning such confusion and then extract from them a determination of precisely when the disorder and constant readjustment, which is to be expected by any subcontractor on a job site, bec[a]me so extreme, so debilitating and so

construction's complexities.⁵¹ The messiness and complexity of construction disputes are legendary.⁵² Prior to the mid-twentieth century, the organized bar played no role in the development of construction law.⁵³ "The American Bar Association, which was organized in the 19th century, offered no committee focusing

unreasonable as to constitute a breach of contract between a contractor and a subcontractor. This was the formidable undertaking faced by the trial judge in the instant case . . .").

51. See *Kiewit-Atkinson-Kenny v. Mass. Water Res. Auth.*, No. 011920BLS, 2002 WL 31187691, at *12 (Mass. Sept. 3, 2002), in which the court expressed its frustration at the parties' request for the court to interpret technical contract language:

The contract language . . . is sprawled over hundreds of pages and contained in several documents, not all speaking consistently with one another; and the "record" is massive, covering literally thousands of pages. The burden placed upon this Court is immense, and, it fears, after all of its attempts to give fair attention and correct rulings to the various issues, whichever side does not prevail will first seek reconsideration and thereafter will ultimately appeal, and may well argue that material facts remain in dispute. In short, this memorandum and the orders it produces may turn out to be an exercise in futility driven by a hugely over-litigated case. . . . Here, a single judge—not a panel of experts in the subject of tunnel construction—is asked to resolve the issues because the parties themselves refuse to accept the decisions of their contractually assembled team of experts.

52. See *Decker & Co. v. West*, 76 F.3d 1573,1575 (Fed. Cir. 1996), in which the court noted the messiness common to construction disputes:

This is one of those messy government [construction] dispute cases in which, during the performance of the contract, neither of the parties acquitted themselves with pure grace. Working through the detailed record of such a case causes one to understand better the ancient curse of a plague o' both their houses.

53. See *Stipanowich*, *supra* note 39, at 490–91 (opining at great lengths on this issue and providing the following: "Early in the history of the Republic, commercial lawyers came to dominate the ranks of the American bar. The alliance of the bar with mercantile interests had an immediate, profound impact on procedures for trying commercial cases, including a dramatic curtailment of the use of juries and a clear identification of commercial law with the universal law of nations. Bar organizations and prominent practitioners played pivotal roles in the evolution of the UCC; roles that have continued to the present day. By way of contrast, the organized bar played no significant role in the historic development of construction contract law for the simple reason that a national construction bar did not coalesce until the period following World War II. Prior to this time, it appears, there were relatively few lawyers specializing in construction. In the post-war era the expanding volume of public and private construction, the development of new technologies, and changes in the law (such as reforms to third-party practice and limitations on privity defenses) dramatically increased the volume of construction-related litigation. The effect of these trends was exacerbated by increasing competition, which often caused bidders to take projects at unreasonably low prices, as well as economic downturns such as the energy crisis of the early 1970s. Finally, the development of the interstate highway system permitted many contractors to perform more work in strange communities, where there were fewer personal and professional relationships encouraging informal solutions to job problems.").

specifically upon construction law until the mid-20th century, when” a small group of surety counsel and lawyers in the Tort and Insurance Practice Section organized the Fidelity and Surety Law Committee “for the purpose of meeting annually to review developments in the law of suretyship, a subject sufficiently broad to encompass construction bonds, fidelity bonds and other surety instruments.”⁵⁴ “In 1965, the American Bar Association organized a new section, the Public Contract Law Section, to focus on issues of federal and state procurement” through committees addressing procurement of construction, supplies, military hardware and other objects of public procurement⁵⁵

“Taking its cue from the Public Contract Law Section[’s]” organization of a Construction Committee, “the American Bar Association’s Litigation Section thereafter organized a Construction Litigation Committee.”⁵⁶ By the mid-1970s, lawyers in the Fidelity and Surety Law Committee, the Public Contract Law Section and the Construction Litigation Committee all recognized that the American Bar Association needed an organization that focused upon all issues and aspects of “construction law,” not just public contracts, surety bonds or construction litigation.”⁵⁷ “In February 1976 . . . the American Bar Association formed the Forum Committee on the Construction Industry⁵⁸ (now called Forum on Construction Law).”⁵⁹ “From its original 1976 membership of 168 lawyers, the Forum’s membership comprised about 6,000 as of 2015.”⁶⁰ Many state bar associations have also formed construction law sections or committees.⁶¹ The total membership of the American

54. 1 BRUNER & O’CONNOR, JR., *supra* note 5, at § 1:5.

55. *Id.*

56. *Id.*

57. *Id.*

58. See Ralph Kaskell, Jr., *The Genesis of the ABA Forum Committee on the Construction Industry*, CONSTR. LAW., Jan. 1988, at 15, 15.

59. 1 BRUNER & O’CONNOR JR., *supra* note 5, at §1.5.

60. *Id.*

61. Construction law sections or committees have been formally organized by state bar associations in more than half of the states (Arizona, California, Colorado, Connecticut, Florida, Georgia, Illinois, Indiana, Iowa (*Construction Law Section*, IOWA STATE BAR ASS’N, [<https://perma.cc/FDB2-XMS7>] (last visited Mar. 12, 2022)), Kentucky, Louisiana, Minnesota, Missouri, Montana, Nebraska, New Jersey, New York, North Carolina, Ohio, Oregon, South Carolina, Tennessee (*Construction Law Section*, TENN. BAR ASS’N,

construction law bar as of 2015 appears to exceed 35,000 lawyers.⁶²

The formation in 1989 of The American College of Construction Lawyers illustrated the development of construction law as a recognized area of legal specialization.⁶³ Fifty-six preeminent American construction lawyers founded the College to recognize those “who have demonstrated skill, experience and high standards of professional and ethical conduct in the practice, or in the teaching, of construction law, and who are dedicated to excellence in the specialized practice of construction law.”⁶⁴ Internationally, “construction law” also has become recognized as a global legal specialty, as evidenced by the formation in 2014 of the International Academy of Construction Lawyers,⁶⁵ a professional group comprised of distinguished lawyers and

[<https://perma.cc/SYL6-2QYM>] (last visited Mar. 12, 2022)), Texas, Utah, Virginia, Washington, and Wisconsin, *see* 1 BRUNER & O’CONNOR JR., *supra* note 5, at §1.5); and by various county and local bar associations (e.g., Atlanta, Austin, Boston, Chicago (*Construction Law & Mechanics Lien Subcommittee*, CHI. BAR ASS’N (Feb. 7, 2022), [<https://perma.cc/2XLP-M7E2>]), Columbus (*Construction Law Committee*, COLUMBUS BAR ASS’N, [<https://perma.cc/4N9M-6U82>] (last visited Mar. 6, 2022)), Dallas, Houston, Jacksonville (*Construction Law*, JACKSONVILLE BAR ASS’N, [<https://perma.cc/YH2V-62L8>] (last visited Mar. 12, 2022)), Kansas City, Philadelphia (*Construction Law Committee*, PHILA. BAR ASS’N, [<https://perma.cc/98DL-Y25U>] (last visited Mar. 12, 2022)); San Diego, San Francisco, Allegheny County, Los Angeles County (Teresa Hillery, *Real Property Section*, L.A. CNTY. BAR ASS’N., [<https://perma.cc/U27T-BEKA>] (last visited Mar. 12, 2022)), New York City (*Construction Law Committee*, N.Y.C. BAR ASS’N, [<https://perma.cc/V539-ZR25>] (last visited Mar. 12, 2022)), Maricopa County, Marin County (*Section: Construction Law*, MARIN CNTY. BAR ASS’N, [<https://perma.cc/EPS4-LCMT>] (last visited Mar. 12, 2022)), Nassau County (*NCBA Committees*, NASSAU CNTY. BAR ASS’N, [<https://perma.cc/PY6B-8WDR>] (last visited Mar. 12, 2022)), Orange County (*Construction Committee*, ORANGE CNTY. BAR ASS’N, [<https://perma.cc/L836-5KEA>] (last visited Mar. 12, 2022)), Palm Beach County (*Construction Law Committee*, PALM BEACH CNTY. BAR ASS’N., [<https://perma.cc/Z7RX-XB27>] (last visited Mar. 12, 2022)), Westchester County (*Construction Law Committee*, WESTCHESTER CNTY. BAR ASS’N, [<https://perma.cc/7MZ6-SY5K>] (last visited Mar. 12, 2022)), *see* 1 BRUNER & O’CONNOR, JR., *supra* note 5, at §1.5).

62. Thousands upon thousands of American lawyers hold themselves out as practicing “construction law,” as evidenced by a search for “construction lawyers” on FindLaw or Martindale, or for “construction law” or “construction lawyers” on search engines such as Google, Yahoo, or MSN. 1 BRUNER & O’CONNOR, JR., *supra* note 5, at §1.5.

63. *See History/Mission*, AM. COLL. CONSTR. LAWS., [<https://perma.cc/Z3UC-UT3A>] (last visited Mar. 12, 2022).

64. *Welcome*, AM. COLL. CONSTR. LAWS., [<https://perma.cc/6ZJN-ZU7L>] (last visited Mar. 12, 2022).

65. INT’L ACAD. OF CONSTR. LAWS., [<https://perma.cc/8KYC-A94C>] (last visited Mar. 13, 2022).

judges from around the world. Moreover, construction lawyers in various countries have formed professional construction law associations, such as The Canadian College of Construction Lawyers,⁶⁶ Society of Construction Law of the United Kingdom,⁶⁷ Society of Construction Law (Gulf),⁶⁸ Society of Construction Law Singapore,⁶⁹ Society of Construction Law Australia,⁷⁰ Society of Construction Law Hong Kong,⁷¹ and the European Society of Construction Law.⁷² National bar associations have organized construction law committees (e.g., Canadian Bar Association, International Bar Association);⁷³ and, international law associations have formed construction committees (e.g., International Bar Association, Inter-Pacific Bar Association).⁷⁴ With the rise of such professional colleges, associations, and committees, lawyer listing organizations have recognized “construction law” as a specialty for ranking law firms and lawyers.⁷⁵ The beginnings of “construction law” as a recognized field of legal practice and study, and the development

66. THE CANADIAN COLL. OF CONSTR. LAWS., [https://perma.cc/PY6L-DY37] (last visited Mar. 13, 2022).

67. SOC’Y OF CONSTR. L., [https://perma.cc/4YNB-D9TK] (last visited Mar. 13, 2022).

68. SOC’Y OF CONSTR. L. (GULF), [https://perma.cc/3DMC-2D4X] (last visited Mar. 13, 2022).

69. SOC’Y OF CONSTR. L. SING., [https://perma.cc/UUH6-REAY] (last visited Mar. 13, 2022).

70. SOC’Y OF CONSTR. L. AUSTL., [https://perma.cc/BPG6-YGR4] (last visited Mar. 13, 2022).

71. SOC’Y OF CONSTR. L. H.K., [https://perma.cc/2248-PPVS] (last visited Mar. 13, 2022).

72. EUR. SOC’Y OF CONSTR. L., [https://perma.cc/6AKH-YMYK] (last visited Mar. 13, 2022).

73. *Construction and Infrastructure Law*, THE CANADIAN BAR ASS’N, [https://perma.cc/R34V-53JM] (last visited Mar. 13, 2022); *International Construction Projects Committee*, INT’L BAR ASS’N, [https://perma.cc/CCN2-BJBC] (last visited Mar. 13, 2022).

74. *International Construction Projects Committee*, *supra* note 73; *International Construction Projects*, INTER-PACIFIC BAR ASS’N, [https://perma.cc/8K5B-5W32] (last visited Mar. 13, 2022).

75. *Best Lawyers for Construction Law in America*, BEST LAWS., [https://perma.cc/S43K-C4BZ] (last visited Mar. 14, 2022); *USA—Nationwide Construction Legal Rankings*, CHAMBERS & PARTNERS, [https://perma.cc/67KL-6QA8] (last visited Mar. 14, 2022); *Construction Litigation Law Super Lawyers Related Attorneys*, SUPER LAWS., [https://perma.cc/8WT3-9ZJK] (last visited Mar. 14, 2022); *Construction 2020—Legal Marketplace Analysis*, WHO’S WHO LEGAL (Apr. 3, 2020), [https://perma.cc/QK77-A9Q8].

of an American “construction law bar” thus properly can be identified with the last half of the twentieth century. From these beginnings, the construction law bar has steadily developed.

A major reason for construction law specialization is that construction’s factual complexity has caused difficulty for lawyers and many judges not skilled in the field to understand the factual and legal underpinnings of construction disputes, a perception that has led the construction industry to resolve disputes by arbitration, mediation, and other forms of Alternate Dispute Resolution (“ADR”).⁷⁶ Arbitration has been and continues to be the dominant dispute resolution forum for construction disputes in international construction and in many local controversies.⁷⁷ In 1985, United States Supreme Court Chief Justice Warren E. Burger reaffirmed judicial support for arbitration in this sage advice given to the American legal profession:

The obligation of the legal profession is, or has long been thought to be, to serve as healers of human conflicts. To fulfill that traditional obligation means that there should be mechanisms that can produce an acceptable result in the shortest possible time, with the least possible expense and with a minimum of stress on the participants. That is what justice is all about. . . . My overview of the work of the courts from a dozen years on the [D.C.] Court of Appeals and now 16 in my present position, added to 20 years of private practice, has given me some new perspectives on the problems of arbitration. One thing an appellate judge learns very quickly is that a large part of all the litigation in the courts is an exercise in futility and frustration. A large proportion of civil disputes in the courts could be disposed of more satisfactorily in some other way. . . . My own experience persuades me that in terms of cost, time, and human wear and tear, arbitration is vastly better than conventional litigation for many kinds of cases.⁷⁸

76. Philip L. Bruner, *Rapid Resolution ADR*, CONSTR. LAW., Spring 2011, at 6, 6-7 [hereinafter Bruner, *Rapid Resolution ADR*].

77. *Id.* at 13.

78. Warren E. Burger, *Using Arbitration to Achieve Justice*, 40 ARB. J. 3, 3-4, 6 (1985) (remarks before the American Arbitration Association and the Minnesota State Bar

Since Chief Justice Burger's clarion call, use of arbitration and other forms of ADR have expanded considerably.⁷⁹

VI. CONSTRUCTION LAW AND ACADEMIA

Not until the twentieth century did a few legal academicians take note of "construction law" as a field distinct from "contract law" and urge more significant study of its issues.⁸⁰ For much of the twentieth century, most academic works touching on construction law were prepared for instruction of design or engineering professionals rather than for the education of lawyers.⁸¹ Although popular contract case books and the Restatement (Second) of Contracts contained references to numerous cases involving construction contracts and disputes, the cases were considered only from the general perspective of "contract law."⁸² The decades-old call for more significant academic study of the construction industry continues to be voiced in the present:

Legal and economic scholars have devoted little attention to an industry—construction—that seems to offer valuable lessons about the organization of economic activity. Major construction projects are generally initiated, and

Association on August 21, 1985). One of those many kinds of cases surely is Construction Law.

79. Bruner, *Rapid Resolution ADR*, *supra* note 76, at 8-9.

80. For example, in 1931, Professor Edwin W. Patterson of Columbia Law School noted the need for construction law scholarship because of "[t]he economic importance of the building industry, the frequency of litigation involving this type of contract, and the inadequacy of judicial analyses of the complex problems of [construction] damages" See Edwin W. Patterson, *Builder's Measure of Recovery for Breach of Contract*, 31 COL. L. REV. 1286, 1287 (1931).

81. See generally Justin Sweet, *A View from the Tower*, CONSTR. LAW., July 1999, at 41 (1999) [hereinafter Sweet, *A View from the Tower*]. Justin Sweet, Professor Emeritus of the Boalt Hall School of Law at the University of California-Berkeley, was one of the early pioneers in gaining recognition of construction law as a distinct legal subject. He authored JUSTIN SWEET, SWEET ON CONSTRUCTION LAW (1997) and co-authored with Mark Schneier, JUSTIN SWEET & MARC M. SCHNEIER, LEGAL ASPECTS OF ARCHITECTURE, ENGINEERING AND THE CONSTRUCTION PROCESS (9th ed. 2013). When he first began to take an interest in construction law, Professor Sweet was struck by the dearth of legal scholarship and legal treatises, and the absence of law course offerings on Construction Law.

82. See, e.g., RESTATEMENT (SECOND) OF CONTS. § 347 (AM. L. INST. 1981) (citing *Limbach Co. v. Ten Hoeve Bros.*, 126 F.Supp.3d 105 (D.D.C. 2015)); *id.* (citing *Marchesseault v. Jackson*, 611 A.2d 95 (Me. 1992)).

proceed, without governmental central planning, without organized, formal markets for the exchange of services, and without hierarchical top-down control within a single firm. Many of the characteristics that have long been associated with the construction industry are now increasingly observed in outsourcing by traditional firms and, by the extension of that process, in the virtual firm. Construction projects reflect a system of economic organization involving a high degree of contracting, both formal and informal, rather than formal integration. This contracting may take place under conditions of high uncertainty; conditions may be constantly changing and ex ante specification of rights and obligations is often difficult at best. Construction projects also provide insights into the role of teams of individuals from different firms; into the networks of relationships that produce such teams; into a “culture of collaboration” that seems vital to successful teamwork; into trust, reputation, and other such informal, nonlegal mechanisms that affect collaboration; and, in a minor way in this study, into the role of written contracts.⁸³

Academia’s benign neglect of the study of construction law has been attributed variously to:

- (1) The perceived uniqueness and local nature of the construction industry;
- (2) The industry’s trade customs and practices that require consideration of contextual issues, specialized knowledge and legally implied rights and duties;
- (3) The perception that construction’s technical disputes involve the “law of the shop” rather than the “law of the courts,” to be settled either by architects as quasi-judges or by arbitrators;
- (4) The variations in applicable “construction law” legal principles between and among different jurisdictions;
- (5) The construction industry’s historic preference for mandatory arbitration or other non-judicial dispute

83. William A. Klein & Mitu Gulati, *Economic Organization in the Construction Industry: A Case Study of Collaborative Production Under High Uncertainty*, 1 BERKELEY BUS. L.J. 137, 138-39 (2004).

resolution methods involving peer experience and expertise;⁸⁴ and

(6) The unwillingness of legal academicians to master the factual complexities of construction and the legal complexities created by its numerous disjointed contractual and legal relationships.⁸⁵

“[A]cademic scholars in the early 21st century still play an insignificant role in the development of construction law.”⁸⁶ Some universities outside the United States, such as Kings College London, University of Strathclyde, and University of Melbourne Law School, offer graduate degree programs in construction law, and some foreign law schools offer an undergraduate course on construction law.⁸⁷

84. 1 BRUNER & O’CONNOR, JR., *supra* note 5, at § 1:4 (reproduced with the author’s permission. Quotations within the list are omitted for readability).

85. *Id.*; see also Justin Sweet, *Standard Construction Contracts: Academic Orphan*, CONSTR. LAW., Winter 2011, at 38, 41 (“Much of this lack of scholarly interest is traceable to the methods law schools use to gather a staff. Young teachers, particularly at the national and top-ranked state schools, are recruited from the Ivy League schools. These recruits increasingly have advanced degrees and, as a rule, have been clerks to outstanding judges. Most have not had any practical law firm experience. They are not likely to have any experience in construction law planning or disputes. You will have to look far and wide to find a full-time law professor who devotes his research to construction law. Most construction law courses at law schools are taught by practitioners as adjuncts or lecturers.”).

86. 1 BRUNER & O’CONNOR, JR., *supra* note 5, at § 1:4; see also Paula Gerber, *The Teaching of Construction Law and the Practice of Construction Law: Never the Twain Shall Meet?*, 20 LEG. EDUC. REV. 59, 59-60 (2010) (“The overwhelming majority of major law firms in the United States and Australia promote construction law as one of their areas of expertise. However, the overwhelming majority of law schools in these two jurisdictions do not offer construction law as a subject in their JD or LLB programs. How can it be that an area of law, that is so widely practised, is not widely taught? The dearth of construction law courses in law schools is in stark contrast with the plethora of construction law offerings in the engineering, architecture and building facilities. It appears that universities are producing construction professionals who have an understanding of the law regulating their industry, but not lawyers who have the knowledge to advise and represent clients on construction-related issues.”).

87. See Matthew Bell & Paula Gerber, *Passing on the Torch of Learning in the ‘Primordial Soup’ of Construction Law: Reflections from the Construction Law Academic Forum, 2012*, CONSTR. L. INT’L, Oct. 2012, at 26, 27-28 (summarizing an academic forum on construction law and the growth in construction law teaching and scholarship around the globe); see also *SCL International Construction Law Courses Worldwide*, SOC’Y OF CONSTR. L., [<https://perma.cc/U5T2-QK82>] (last visited Mar. 16, 2022) (listing colleges outside the United States offering construction law); *LL.M. in Construction Law*, LLMGUIDE, [<https://perma.cc/5PAT-D9HV>] (last visited Mar. 4, 2022).

“As for the teaching of construction law in American law schools, as of 2010 only about 26 out of 233 law schools accredited by the American Association of Law Schools offer any course on construction law.”⁸⁸ At those twenty-six schools, it appears that only two United States law schools offer construction law courses taught by full-time faculty,⁸⁹ and the remainder are taught as third-year electives by adjunct professors. The adjunct professors universally are legal practitioners who have specialized in construction law during their careers.⁹⁰ The complexities of construction law and the construction process have generally been viewed by all but a handful of full-time legal scholars as a morass to be avoided. Pepperdine University Law School Professor Thomas Stipanowich, who along with Professor Justin Sweet of the University of California Berkeley, have been among the few full-time academics to tread into the complexities of construction law. Professor Stipanowich has aptly observed:

Th[e] scholarly and pedagogical obliviousness [of academia], while not confined to construction contracts, cannot be explained on the basis that such transactions are unimportant—the construction industry has for some time been the largest single production activity in the United States—or less academically rich than other commercial fields. Unless the explanation is a perverse form of intellectual snobbery, it must be a pervading ignorance of the practical significance of and academic challenge presented by the field of construction law—or a reflection of the inherent complexity (real and perceived) of principle and practice in this arena. Although today’s attorneys and

88. 1 BRUNER & O’CONNOR, JR., *supra* note 5, at § 1:4; *see also* Gerber, *supra* note 86, at 61.

89. University of Arkansas, *Recently Offered Courses*, UNIV. OF ARK. SCH. OF L., [<https://perma.cc/R5FL-HA2L>] (last visited Mar. 16, 2022); University of Detroit Mercy, *Troy Harris*, UNIV. OF DETROIT MERCY, [<https://perma.cc/VG4X-L3ZK>] (last visited Mar. 16, 2022).

90. *See* John W. Ralls, *Teaching Construction Law*, CONSTR. LAW., Summer 2009, at 3, 3; Allen L. Overcash, *The Case for Construction Law Education*, CONSTR. LAW., Summer 2009, at 5, 5; Lawrence C. Melton, *What We Teach When We Teach Construction Law*, CONSTR. LAW., Summer 2009, at 8, 8. All three authors were practicing lawyers serving as adjunct professors, and their articles were published in a special edition of the ABA Forum on Construction Law publication, *The Construction Lawyer*, to address the subject of teaching by Forum lawyers serving as adjunct professors.

industry actors have much greater access to treatments of pertinent legal subjects than their predecessors, much more can be done to enhance the level of scholarly treatment and interdisciplinary discussion of legal rules.⁹¹

“Construction law is ideally suited to be taught as a ‘capstone’ or a ‘transition’ course to third year law students because of its [broad] focus on problems cutting across numerous principles of common law and statutory law well beyond” merely “contract law.”⁹² Legal academicians are beginning to call for a restructuring of the entire approach to legal education by requiring law students in their third year to take “capstone” or “transition” courses, such as construction law, that compels students to address complex issues in discrete fields of law just as they will in the actual practice of law.⁹³ In recent years, American law schools have begun to recognize the importance of broadening law school curricula to stay current with society’s development. From the perspective of the Academy, law schools are expected to stay current in educating students about major newly developing fields of law. As Elena Kagan, now Associate Justice of the U.S. Supreme Court, said when she became the new Dean of Harvard Law School and presented her “State of the School” Address on September 17, 2003:

[T]he world is changing, and in response to those changes, the law is changing and becoming ever more specialized and complex. We need to expand the faculty because the world

91. See Stipanowich, *supra* note 39, at 496-97.

92. 1 BRUNER & O’CONNOR, JR., *supra* note 5, at § 1:4; see generally Bruner, *The Historical Emergence of Construction Law*, *supra* note 2.

93. See Troy Harris, *Training International Construction Lawyers: A Proposal*, *CONSTR. L. INT’L*, Mar. 2012, at 41, 41-43; Jon Sonsteng et. al., *A Legal Education Renaissance: A Practical Approach for the Twenty-First Century*, 34 *WM. MITCHELL L. REV.* 303, 450-51 (2007) (proposing that third year law students should be required to take twenty-eight credits of “Transition Courses,” which will add “substantial value to [their first and second year] experience by requiring students to be responsible professionals, address complex and real-world challenges, and produce substantial, concrete manifestations of their learning. [The transition course will provide] the finishing touch to the law school experience.”); Jeffrey E. Lewis, “Advanced” *Legal Education in the Twenty-First Century: A Prediction of Change*, 31 *U. TOL. L. REV.* 655, 658-59 (2000) (“Students [in transition courses] will develop an expertise as a result of a systematic and progressively sophisticated study of a discrete area of practice, and what better opportunity for the development of the fundamental skill of ‘thinking like a lawyer!’ Substance and method can be taught and learned in a thoroughly harmonious and complimentary fashion.”).

of law is expanding and we need to cover everything important that is happening in it.⁹⁴

VII. CONSTRUCTION LAW'S TRENDS TOWARD GLOBAL HARMONIZATION⁹⁵

The exponential growth of international commerce in the worldwide free market economy over the last half of the twentieth century has highlighted the need for a harmonized set of legal principles governing the relationships of parties involved in the design and construction of projects located anywhere in the world.⁹⁶ The search for this “holy grail” of harmonization is following eight principal paths:

94. *Kagan Delivers ‘State of the School’ Address*, HARV. L. TODAY, Jan. 2004, at 4, 4. Justice Kagan left Harvard in 2009 to become U.S. Solicitor General under President Obama and became an Associate Justice of the Supreme Court in 2010. *See Associate Justice of the U.S. Supreme Court—Elena Kagan*, COMM. ON THE JUDICIARY, [https://perma.cc/SQC9-AY86] (last visited Mar. 18, 2022). Harvard has yet to offer courses related to Construction Law. *Harvard Law School Course Catalog: 2021-2022 Academic Year*, HARV. L. SCH., [https://perma.cc/PSM8-TC6K] (last visited Mar. 20, 2022).

95. Part VII is partially excerpted from 6 PHILIP L. BRUNER & PATRICK J. O’CONNOR, JR., BRUNER & O’CONNOR ON CONSTRUCTION LAW § 20:3 (2021).

96. *See* James D. Wilets, *A Unified Theory of International Law, the State, and the Individual: Transnational Legal Harmonization in the Context of Economic and Legal Globalization*, 31 U. PA. J. INT’L L. 753, 755-56 (2010) (proposing a “unified theory of international law” that recognizes linkages between the law of international institutions and private commercial law in order to harmonize legal rules and norms for both sovereign entities and individuals); Matthew Bell & Jeremy Coggins, *Beyond the Nutcracker Suite: International Harmonisation of Construction Industry Payment Legislation*, 32 INT’L CONSTR. L. REV. 186, 187 (2015); Donald Charrett, “*A Common Law of Construction Contracts*”—*Or Vive La Différence?*, 29 INT’L CONSTR. L. REV. 72, 72 (2012); John S. Vento & Carina Y. Ohara, *Practical Considerations and Risks for U.S. Companies Contracting Across Borders*, in INTERNATIONAL CONSTRUCTION LAW: A GUIDE FOR CROSS-BORDER TRANSACTIONS AND LEGAL DISPUTES 13, 13-38 (2009) (examining from the United States’ perspective key issues and legal concepts applicable to international construction contracts); Louis F. Del Duca, *Developing Global Transnational Harmonization Procedures for the Twenty-First Century: The Accelerating Pace of Common and Civil Law Convergence*, 42 TEX. INT’L L.J. 625, 627-33 (2007) (discussing transnational harmonization trends in and among different legal systems as the result of UNIDROIT, UNCITRAL, the International Chamber of Commerce, the Council of Europe, the European Union, the Hague Conference, and others); Michael Douglas, *The Lex Mercatoria and the Culture of Transnational Industry*, 13 U. MIAMI INT’L & COMP. L. REV. 367, 383-85, 389-92 (2006); MOHAMED A.M. ISMAIL, GLOBALIZATION AND NEW INTERNATIONAL PUBLIC WORKS AGREEMENTS IN DEVELOPING COUNTRIES: AN ANALYTICAL PERSPECTIVE (2011) (discussing the impact of globalization of project delivery methods, primarily in civil law jurisdictions governing construction services in the Middle East).

- (1) compilation of comparative studies to assure understanding of the similarities and differences of legal concepts originating in different regions and countries and publication of such comparative studies in scholarly journals, such as *The International Construction Law Review*;⁹⁷
- (2) development by international organizations of model legislation for adoption by individual nations;⁹⁸
- (3) development of standard international construction contract forms by private international organizations such as FIDIC [“Fédération Internationale Des Ingénieurs-Conseils” or “International Federation of Consulting

97. Numerous comparative law articles on issues important to international construction have been published in *The International Construction Law Review*, which was founded by Humphrey J. Lloyd, former Judge of England’s Technology and Construction Court. See *His Honour Humphrey Lloyd QC*, ATKIN CHAMBERS, [<https://perma.cc/8JYW-E4NK>] (last visited Mar. 18, 2022). Other important journals include *The International Lawyer*, (*About The International Lawyer*, INT’L L. REV. ASS’N, [<https://perma.cc/JHS7-T7FD>] (last visited Mar. 18, 2022)); *The International Journal of Legal Information* (*International Journal of Legal Information*, CAMBRIDGE UNIV. PRESS, [<https://perma.cc/V9H6-PD2U>] (last visited Mar. 18, 2022)); *Construction Law International* (*Construction Law International*, INT’L BAR ASS’N, [<https://perma.cc/E6TT-SBN5>] (last visited Mar. 18, 2022) (published by the IBA International Construction Projects Committee)); and a host of other international law journals published in the United States and around the world. Other publications abound. See INTERNATIONAL CONSTRUCTION LAW: A GUIDE FOR CROSS-BORDER TRANSACTIONS AND LEGAL DISPUTES (Wendy Kennedy Venoit et al., eds. 2009) (a 400-page compendium addressing the major issues in cross-border transactions arising in the construction field).

98. See U.N. Comm’n on Int’l Trade L., UNCITRAL Model Law on Public Procurement (2014), [<https://perma.cc/4DPK-5LQN>] [hereinafter UNCITRAL Model Law on Public Procurement]; U.N. Comm’n on Int’l Trade L., UNCITRAL Model Legislation Provisions on Privately Financed Infrastructure Projects (2004), [<https://perma.cc/PU4V-V2ZG>] [hereinafter UNCITRAL Model Legislation Provisions]; U.N. Comm’n on Int’l Trade L., UNCITRAL Model Law on Procurement of Goods, Construction and Services with Guide to Enactment (1994), [<https://perma.cc/G85Q-YPGU>] [hereinafter UNCITRAL Model Law on Procurement of Goods]; U.N. Comm’n on Int’l Trade L., UNCITRAL Model Law on Procurement of Goods and Construction (1993), [<https://perma.cc/JHX8-QBGB>] [hereinafter UNCITRAL Model Law on Procurement of Goods and Construction] (offering a model procurement code). See also *International Construction Measurement Standards: Global Consistency in Presenting Construction Costs*, INT’L CONSTR. MEASUREMENT STANDARDS COAL. (July 2017), [<https://perma.cc/32C3-AK2X>].

Engineers”)],⁹⁹ ENAA,¹⁰⁰ and ICE¹⁰¹ and by private national organizations whose forms are used internationally, such as JCT,¹⁰² AIA,¹⁰³ EIC [(“European International

99. As an organization comprised of consulting engineers from over seventy countries, the FIDIC documents are the most widely accepted in the world. These documents include among others the (1) *Client/Consultant Model Services Agreement 5th Ed (2017 White Book)*, INT’L FED’N OF CONSULTING ENG’RS, [https://perma.cc/XUB4-TY9E] (last visited Mar. 18, 2022); (2) *Construction Contract MDB Harmonised Ed (Version 3: June 2010 Harmonised Red Book)*, INT’L FED’N OF CONSULTING ENG’RS, [https://perma.cc/7XBE-SUBX] (last visited Mar. 18, 2022); (3) *Works of Civil Engineering Construction 4th Ed 1987 Red Book*, INT’L FED’N OF CONSULTING ENG’RS, [https://perma.cc/3EF3-S99Y] (last visited Mar. 18, 2022) (the “Red Book”); (4) *Electrical and Mechanical Works*, INT’L FED’N OF CONSULTING ENG’RS, [https://perma.cc/AD2G-GJY4] (last visited Mar. 18, 2022) (the “Yellow Book”); (5) *Design-Build and Turnkey 1st Ed (1995 Orange Book)*, INT’L FED’N OF CONSULTING ENG’RS, [https://perma.cc/YD84-JC7Q] (last visited Mar. 18, 2022) (the “Orange Book”); (6) *EPC/Turnkey Contract 2nd Ed (2017 Silver Book)*, INT’L FED’N OF CONSULTING ENG’RS, [https://perma.cc/NN6U-WQ9F] (last visited Mar. 18, 2022) (the “Silver Book”); (7) *Works of Civil Engineering (1987 Red Book) Subcontract 1st Ed (1994)*, INT’L FED’N OF CONSULTING ENG’RS, [https://perma.cc/3XP8-BYZ9] (last visited Mar. 18, 2022); and (8) *DBO Contract 1st Ed (2008 Gold Book)*, INT’L FED’N OF CONSULTING ENG’RS, [https://perma.cc/7ZT9-QGCZ] (last visited Mar. 18, 2022) (the “Gold Book”).

100. The Engineering Advancement Association of Japan, Toranomon, Takagi Building 7-2, Inshi-shinbashi T-chome Minato-ku, Tokyo 105, Japan. *Engineering Advancement Association of Japan*, ENNA (Mar. 18, 2019), [https://perma.cc/2D47-9XN7]. ENAA [annually] publishes its International Contract for Process Plant Construction and International Contract for Power Plant Construction. See generally A R (Tony) Marshall, *Process Plant Construction: The ENAA Model Form of Contract (2010 Edition)—Comments and Comparisons*, 28 INT’L. CONSTR. L. REV. 138 (2011).

101. The Institute of Civil Engineers. *Institution of Civil Engineers*, INST. OF CIV. ENG’RS, [https://perma.cc/G9VC-9B8Q] (last visited Mar. 18, 2022). ICE publishes the Engineering & Construction Contract, also known as the “New Engineering Contract,” which includes (1) an engineering and construction contract between the project owner and prime contractor, (2) an engineering and construction subcontract, (3) a professional services contract between the project client and all design professionals, and (4) an adjudicators contract under which an adjudicator is retained to decide disputes arising under the other contracts. See Mathias Fabich et al., *The NEC4 Contract—Fit for Purpose for International Use?*, 35 INT’L CONSTR. L. REV. 28 (2018) (discussing the NEC4 contracts from the perspective of European International Contractors (“EIC”)); *NEC Contracts*, INST. OF CIV. ENG’RS, [https://perma.cc/QF8J-HZYM] (last visited Mar. 18, 2022).

102. Joint Contracts Tribunal, comprised of the Royal Institute of British Architects, Royal Institution of Chartered Surveyors, Association of District Councils, and Association of Consulting Engineers in the United Kingdom. *About JCT*, JOINT CONTRS. TRIBUNAL, [https://perma.cc/WT9V-J43G] (last visited Mar. 18, 2022). JCT Documents, promulgated for use in the United Kingdom, have influence elsewhere. See *id.*

103. American Institute of Architects, 1735 New York Avenue, N.W., Washington, D.C. 20006-5292. AIA contract documents are the most widely used private building contract documents in the United States. See *About AIA*, AM. INST. OF ARCHITECTS, [https://perma.cc/DE4N-HGUR] (last visited Mar. 18, 2022); see also *Industry Forms of Agreement*, DLA PIPER, [https://perma.cc/QU6H-LZD5] (Apr. 1, 2021).

Contractors”)]¹⁰⁴ and MBA [(“Master Builders of Australia”)],¹⁰⁵ and ICC [(“International Chamber of Commerce”)],¹⁰⁶

(4) promulgation of financing requirements, which mandate the use of specified standard international construction contract forms, by international financing organizations such as the World Bank¹⁰⁷ and its regional development banks for Europe, Asia, Inter-America and Africa;

(5) publication of contracting guidelines by international organizations, such as UNCITRAL [(“United Nations Commission on International Trade Law”)]¹⁰⁸ and OECD [(“Organisation for Economic Co-operation and Development”)],¹⁰⁹

104. *Contract Conditions*, EUR. INT’L CONTRACTORS, [https://perma.cc/8FTQ-7R9V] (last visited Mar. 18, 2022).

105. *ABIC Suite*, MASTER BUILDERS OF AUSTL., [https://perma.cc/F78X-KKSH] (last visited Mar. 18, 2022) (in conjunction with the Australian Institute of Architects).

106. See Volker Mahnken & Martin Kurtze, *Plant Construction and the ICC Consortium Agreement*, CONSTR. L. INT’L, Mar. 2018, at 25, 26 (discussing the recent ICC Model Contract Consortium Agreement published by the International Chamber of Commerce in 2016).

107. *What We Do*, THE WORLD BANK, [https://perma.cc/NS3C-UYWM] (last visited Mar. 18, 2022). The World Bank’s financing requirements mandate that all projects financed through the World Bank, the International Bank for Reconstruction and Development, or the International Development Association be governed by the World Bank’s standard bidding documents for works. See *Standard Procurement Documents: An Overview for Practitioners*, THE WORLD BANK (Nov. 1, 2016), [https://perma.cc/A27P-R7Z5].

108. U.N. COMM’N ON INT’L TRADE L., [https://perma.cc/7ZT8-KU9S] (last visited Mar. 18, 2022). UNCITRAL has been in the forefront of the development of international trade law and, pertinent to construction law. See UNCITRAL Model Law on Public Procurement, *supra* note 98; UNCITRAL Model Legislative Provisions, *supra* note 98; UNCITRAL Model Law on Procurement of Goods, *supra* note 98; UNCITRAL Model Law on Procurement of Goods and Construction, *supra* note 98 (offering a model procurement code); U.N. COMM’N ON INT’L TRADE L., UNCITRAL LEGAL GUIDE ON DRAWING UP INT’L CONTS. FOR THE CONSTR. OF INDUS. WORKS, U.N. Sales No. E.87.V.10 (1987).

109. *Who We Are*, ORG. FOR ECON. COOP. AND DEV., [https://perma.cc/MTC2-NME7] (last visited Mar. 19, 2022).

(6) standardization of legal rights and obligations by international treaty, such as CIGS,¹¹⁰ IGSCL,¹¹¹ and the New York Convention;¹¹²

(7) creation of international “restatements” of contract law, such as the UNIDROIT principles of international commercial contracts¹¹³ and the CECL Principles of European Contract Law,¹¹⁴ which are intended to provide guidance to legislative and judicial bodies for enactment of contract law or for the interpretation of contracts;¹¹⁵ and

(8) “Transjudicialism” among jurisdictions.¹¹⁶

110. United Nations Convention on Contracts for the International Sale of Goods (1980) which, although applying only to the sale of goods and not to construction contracts, has established basic legal principles accepted by many of the world’s major trading nations. U.N. COMM’N ON INT’L TRADE L., U.N. CONVENTION ON CONTRS. FOR THE INT’L SALE OF GOODS, U.N. Sales No. E.10.V.14 (2010); *see also United Nations Convention on Contracts for the International Sale of Goods (Vienna, 1980) (CISG)*, U.N. COMM’N ON INT’L TRADE L., [https://perma.cc/ESE9-LWY3] (last visited Mar. 19, 2022). The convention is one of the crowning achievements of UNCITRAL.

111. United Nations Convention on Independent Guarantees and stand-by letters of credit, which has focused on differences between the European approach to direct bank guarantees and the American approach to stand-by letters of credit. U.N. COMM’N ON INT’L TRADE L., U.N. Convention on Independent Guarantees and Stand-By Letters of Credit (1996), [https://perma.cc/LX9R-96K6].

112. U.N. COMM’N ON INT’L TRADE L., U. N. Convention on the Recognition and Enforcement of Foreign Arbitral Awards (1958), [https://perma.cc/G9JV-75ZW].

113. The UNIDROIT Principles are available on the worldwide web at INT’L INST. FOR THE UNIFICATION OF PRIV. L., UNIDROIT PRINCIPLES OF INTERNATIONAL CONSTRUCTION CONTRACTS (4th ed. 2016), [https://perma.cc/44JT-QMRW]; *see also* Donald Charrett, *The Use of Unidroit Principles in International Construction Contracts*, 30 INT’L CONSTR. L. REV. 507, 507 (2013).

114. COMM’N ON EURO. CONT. L., PRINCIPLES OF EUROPEAN CONTRACT LAW PARTS I AND II 2 (2000). Principles of European contract law may be found at EURO. UNION, THE PRINCIPLES OF EUROPEAN CONTRACT LAW 2002 (PARTS I, II, AND III) 1 (2002), [https://perma.cc/84UN-BNVC].

115. 6 BRUNER AND O’CONNOR ON CONSTRUCTION LAW, *supra* note 95, at § 20:3.

116. “Transjudicialism”—consideration of law from foreign jurisdictions in deciding local disputes—is of increasing interest to the world’s national judiciaries and administrative regulators. *See* ANN MARIE SLAUGHTER, A NEW WORLD ORDER 75-78 (2004). Networks of national government regulators and lawyers are beginning to develop “transnational networks” with respect to various areas of law. *See id.* at 1-4; Symposium, *The Rise of Transnational Networks*, 43 INT’L LAW. 137, 137, 175-76, 205 (2009); *see also* Justice Sandra Day O’Connor, *Keynote Address*, 96 AM. SOC’Y INT’L L. 348, 350-51 (2002) (“Although international law and the law of other nations are rarely binding upon our decisions in U.S. courts, conclusions reached by other countries and by the international community should at times constitute persuasive authority in American courts. This is sometimes called ‘transjudicialism.’ . . . While ultimately we must bear responsibility for interpreting our own laws, there is much to learn from other distinguished jurists who have

The collective influence of these eight paths on the development of principles of international construction law is far larger than the sum of its parts, as they all are converging on a common goal of a harmonious global construction law. Although much work remains to be done, the end is not in doubt:

[T]he construction industry is becoming increasingly international in scope. As it does, its focus is shifting towards large infrastructure projects in developing countries. As a general practice, the law applicable to construction contracts has tended to be that of the place of performance, that is, the law of the country where the construction project is located. . . . The lack of a well-developed body of construction law in [developing] countries capable of handling the kinds of disputes that arise in large international projects makes it more desirable that the governing law of international construction contracts be a body of law common to, and understood by, the international construction community—a sort of *lex constructionis*. Having such a body of law operate within the international construction community would ameliorate the uncertainty that results from subjecting the parties to inadequate national construction law. In turn, greater certainty and predictability would facilitate more participation in international construction projects.¹¹⁷

VIII. LEGAL TREATISES ON CONSTRUCTION LAW¹¹⁸

To bring a semblance of understanding and harmony to the great mass of construction law precedent and statutes is the function of a legal treatise, which can be of significant value to judges, academicians and practicing lawyers in getting to the heart of relevant legal principles and issues. A “treatise” has a

given thought to the same difficult issues that we face here [in the United States]. . . . The fact is that international and foreign law are being raised in our courts more often and in more areas than our courts have the knowledge and experience to deal with. There is a great need for expanded knowledge in the field, and the need is now.”).

117. Douglas, *supra* note 96, at 383-84.

118. Footnotes 118-28 and accompanying text are excerpted from 1 BRUNER & O’CONNOR, JR., *supra* note 5, at § 1:7.

dictionary meaning of a “systematic, usually extensive written discourse on a subject.”¹¹⁹

Legal treatises have played a vital role in the development of the common law for more than eight centuries. Of the origins and purposes of treatises, Sir Winston S. Churchill, in his distinguished work, *The Birth of Britain*, reminds us:

About the year 1250 a Judge of Assize named Henry of Bracton produced a book of nearly nine hundred pages entitled *A Tract on the Laws and Customs of England*. Nothing like it was achieved for several hundred years, but Bracton’s method set an example, since followed throughout the English-speaking world, not so much of stating the Common Law as of explaining and commenting on it, and thus encouraging and helping later lawyers and judges to develop and expand it. Digests and codes imposed in the Roman manner by an omnipotent state on a subject people were alien to the spirit and tradition of England. The law was already there, in the customs of the land, and it was only a matter of discovering it by diligent study and comparison of recorded decisions in earlier cases, and applying it to the particular dispute before the court.¹²⁰

Bracton’s treatise¹²¹ was followed centuries later by those of Coke, Blackstone,¹²² and other legal luminaries whose early works laid a general foundation upon which were built the specialized edifices we know today. None of the early treatises over a 500-year span, however, made any mention of legal principles of construction law. In Blackstone’s case the omission is particularly telling, because he was trained as an architect prior to going into law and frequently used architectural metaphors in his legal writings.¹²³

Over the centuries construction law appears to have been viewed as a local and parochial branch of contract and real estate law, with disputes resolved informally consistent with a “law of

119. See THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 1906 (3d ed. 1992).

120. SIR WINSTON S. CHURCHILL, *THE BIRTH OF BRITAIN* 224 (10th prt. 1966).

121. See HENRY OF BRACTON, *supra* note 17.

122. See 2 WILLIAM BLACKSTONE, *supra* note 17.

123. See Wilfrid Prest, *Blackstone as Architect: Constructing the Commentaries*, 15 YALE J. L. & HUMANS. 103, 123-24 (2003).

the shop” rather than under a recognized “law of the courts.” Without the benefit of treatises or of codifying statutes, the law has tended to evolve somewhat haphazardly because of the judicial tendency to grasp at any legal principle—not always the most appropriate principle—likely to produce a fair result under the circumstances and within the time available. Over 100 years ago in a time of few statutes and fewer treatises, American philosopher William James observed:

Law courts, indeed, have to decide on the best evidence attainable for the moment, because a judge’s duty is to make law as well as to ascertain it, and (as a learned judge once said to me) few cases are worth spending much time over: the great thing is to have them decided on *any* acceptable principle, and got out of the way.¹²⁴

Not until the nineteenth century did commercial law become sufficiently specialized to encourage authors to write treatises about the law of different fields of commerce having contextualized norms for specialized types of transactions. Construction was one such specialized commercial field of endeavor, and authors responded in the late nineteenth century. The first nineteenth century American treatise to address construction was written by Augustus Parlett Lloyd, who published in 1888 a 480-page work entitled, *A Treatise on the Law of Building and Buildings*, of which about half was devoted to building contracts and what might be considered “construction law” in today’s parlance while the balance addressed leases, easements and other real estate matters. Lloyd noted the dearth of scholarly writing on the subject of building in observing:

Possibly the most remarkable omission in the literature of law in this country is the absence of any work upon buildings, building contracts, and leases. The subject is one of great importance, not only to the legal profession, but to fully three fourths of the general population, who are interested in building operations, whether as purchasers, architects, artificers, or contractors. Numerous books have

124. William James, *The Will to Believe*, in *THE WILL TO BELIEVE AND OTHER ESSAYS IN POPULAR PHILOSOPHY* 20 (1897). Oliver Wendell Holmes, Jr. is suspected of being the “learned judge.”

appeared from time to time containing theoretical, historical, and artistical views of architecture and the art of building, but no American writer has yet compiled the building laws of our country to any practical extent.¹²⁵

Lloyd's treatise was followed shortly thereafter by T. M. Clark's treatise, *Architect, Owner and Builder Before the Law* (1894). Clark was a Fellow of the American Institute of Architects and also had earned a law degree. In 1894, he authored a 400-page treatise on the law applicable to building contracts, the preface of which begins with this acknowledgement of the factual and legal complexities of construction disputes and of the unsuitability of courtroom litigation generally as a method for resolving such disputes:

It seems to be agreed among lawyers that no controversies, as a rule, are tried before courts with so little satisfaction to the litigants and their counsel as building cases. The lawyer finds them usually so technical as to require an amount of special study on his part quite disproportionate to their importance; while the parties to the controversy often suffer, or think they suffer, as much through what they regard as their counsel's inability to understand building matters as through what their counsel, with more reason, considers their own inexcusable ignorance and neglect of the legal principles relating to their business. These difficulties are, obviously, such as can be relieved, to a considerable extent, by means of a book presenting the most important decisions of the courts in building cases, with the principles on which the decisions are based.¹²⁶

In England, the earliest construction treatise was *Hudson's Building and Engineering Contracts* (1891),¹²⁷ an 800-page work

125. A. PARLETT LLOYD, *A TREATISE ON THE LAW OF BUILDING AND BUILDINGS* iii (1888).

126. T.M. CLARK, *ARCHITECT, OWNER AND BUILDER BEFORE THE LAW* iii (1894).

127. See Philip L. Bruner, *Book Review: Hudson's Building and Engineering Contracts, 12th Edition*, 28 INT'L CONSTR. L. REV. 379 (2011) (book review). An 1891 review note of *Hudson's* in London's *The Law Journal* offered this observation:

This book is an attempt to treat exhaustively a highly complicated and technical subject, but, owing to the double training which the author has undergone, first as architect, and, secondly, in his present profession [as a lawyer], he is perhaps the only writer who could have treated it so successfully.

written by an author who was both an architect and lawyer. The treatise presented some legal principles we recognize today as within the field of “construction law”—the over-arching field of jurisprudence encompassing the law governing the rights and obligations of participants engaged in the building and construction process: employers, contractors, subcontractors, sureties, architects, engineers, material and equipment suppliers, code officials, insurers, and others—and the conditions under which they worked. *Hudson’s* is now in its fourteenth edition.¹²⁸ Another highly authoritative English construction law treatise is *Keating on Construction Contracts* (11th ed., 2020), which is edited and co-authored by Sir Vivian Ramsey, the distinguished former barrister and Queen’s Counsel, and former Chief Judge of England’s Technology and Construction Court, together with his former colleagues at Keating Chambers in London.¹²⁹ A third recent English treatise is *Construction Law* (3d ed. 2020) by Julian Bailey, a recognized English barrister in the construction law field.¹³⁰ Other nations also are producing treatises. India is the recent beneficiary of Kachwaha and Rautray, *The International Comparative Legal Guide to: Construction & Engineering Law* (2019), which addresses construction and engineering laws and regulations in thirty-two jurisdictions, as well as commentary about commonly-used contract forms and the

Hudson on Building Contracts, L.J. (London), May 9, 1891, at 311, 317 (book review). Perhaps evidencing Academia’s early disinterest in construction law was the brief 1891 review given *Hudson’s* in London’s *Law Quarterly Review*, a publication edited by Sir Frederick Pollock, Oxford’s Professor of Jurisprudence and the distinguished author of the treatise *Principles of Contract* (1876):

The subject of this portly volume is too technical to admit of more than summary notice here. It appears to contain everything that persons who have to do with building contracts can reasonably want to know, and such a work well executed (as this appears to be) may save much trouble even to a lawyer trained in the use of the ordinary indexes and digests.

The Law of Building and Engineering Contracts and of the Duties and Liabilities of Engineers, Architects, Surveyors, and Valuers, July 1891, L. Q. REV., at 199, 288 (book review).

128. ATKIN CHAMBERS, HUDSON’S BUILDING AND ENGINEERING CONTRACTS (14th ed. 2019).

129. KEATING ON CONSTRUCTION CONTRACTS (Stephen Furst, QC & Sir Vivian Ramsey, QC eds., 11th ed. 2020).

130. JULIAN BAILEY, CONSTRUCTION LAW (3d ed., 2020).

Indian Law of Contracts as codified in the Indian Contract Act of 1872.¹³¹

Notwithstanding some United States recognition of construction law in the late nineteenth century and early twentieth century as a fertile field for American writing and scholarship, construction law scholarship languished in the United States for the first three quarters of the twentieth century.¹³² After the formation of the Forum on Construction Law in 1976, practitioners began to author and publish articles on aspects of construction law. In 1983, a group of construction lawyers wrote individual chapters edited by Steven G. M. Stein of Chicago, which was published in loose-leaf binders under the title of *Construction Law*. In 1992, Professor Justin Sweet, The John H. Boalt Professor Emeritus of Law at the University of California, Berkeley, and one of a handful of eminent American legal academicians to devote a career to the study and teaching of construction law in the last half of the twentieth century, looked forward to the twenty-first century and called for:

[A] treatise which systematically collected the leading cases, stated their holdings accurately, summarized the case law correctly, evaluated basic legal principles with wisdom, and

131. Sumeet Kachwaha & Dharmendra Rautray, *India*, in THE INTERNATIONAL COMPARATIVE LEGAL GUIDE TO: CONSTRUCTION & ENGINEERING LAW 2019 106, 106 (6th ed. 2019), [<https://perma.cc/5TMG-TZ3F>].

132. See Sweet, *A View From the Tower*, *supra* note 81, at 41 (“[In 1967] there were, to my knowledge, no law courses called construction law. I don’t recall a law faculty meeting where a professor asked ‘Where can we get a construction law teacher?’ as we often did for established academic fields. In the library stacks (for you younger readers, those were shelves in the library where we kept ‘hard cover’) at Berkeley there were perhaps ten dusty books that covered the space of a century.”); see also Philip L. Bruner, *Construction Law: The Historical Perspective*, in CONSTRUCTION LAW (William Allensworth et. al., eds. 2009) (quoting Justin Sweet, *Construction Law: The Need for Empirical Research*, 23 CONSTR. LITIG. REP. 3, 5 (2002)) (“The best and often only empirical work comes out of the law schools. Law teachers can involve statisticians and sociologists in their studies. . . . Yet you can count on one hand the number of full-time teachers of Construction Law, maybe not even that many. Law teachers come out of certain schools, clerk for important judges, and are interested mainly in Public Law. This pool does not produce many teachers who want to spend their time in Construction Law.”); Justin Sweet, *Standard Construction Contracts: Academic Orphan*, CONSTR. LAW., Winter 2011, at 38, 41 (“Much of this lack of scholarly interest is traceable to the methods law schools use to gather a staff. Young teachers . . . are not likely to have any experience in construction law planning or disputes. You will have to look far and wide to find a full-time law professor who devotes his research to construction law.”).

described the functions of legal rules and contracting practices that relate to construction law . . . could become such an authoritative treatise. It would be invaluable to the legal profession and the construction industry, similar to *Prosser on Torts* or *Corbin on Contracts*.¹³³

For the remainder of the twentieth century, practitioners and scholars wrote of the need for more academic scholarship in the field¹³⁴ and contributed scholarly articles on construction law and dispute resolution.

In 2002 the American treatise, *Bruner and O'Connor on Construction Law* (2002, updated annually)¹³⁵ was first published as seven volumes and now is twelve volumes and 11,000 pages. It endeavors to address comprehensively the major issues of modern American construction law, to illuminate those issues in relevant factual and historical context, and to offer a brief “road map” to international construction law, a subject worthy of its own multi-volume treatment. Illumination of issues in relevant factual and historical context is helpful because construction law has derived much of its uniqueness from factual blends of industry experience, customs, practices, and perceptions of foreseeable risk that have shaped evolving principles of the common law and statutory law. Since its publication in 2002, the treatise has been cited by more than 500 published opinions of the

133. Justin Sweet, *Blueprint for an Authoritative Treatise on American Construction Law*, CONSTR. LAW., Apr. 1992, at 11, 11.

134. See Stipanowich, *supra* note 39, at 496–97 (“This scholarly and pedagogical obliviousness [of academia], while not confined to construction contracts, cannot be explained on the basis that such transactions are unimportant—the construction industry has for some time been the largest single production activity in the United States—or less academically rich than other commercial fields. Unless the explanation is a perverse form of intellectual snobbery, it must be a pervading ignorance of the practical significance of and academic challenge presented by the field of construction law—or a reflection of the inherent complexity (real and perceived) of principle and practice in this arena. Although today’s attorneys and industry actors have much greater access to treatments of pertinent legal subjects than their predecessors, much more can be done to enhance the level of scholarly treatment and interdisciplinary discussion of legal rules.”).

135. Reviews of the treatise upon its publication in 2002 include James F. Nagle, *Bruner and O'Connor on Construction Law*, CONSTR. LAW., Fall 2002, at 46 (book review); Donald G. Gavin, *Have Bruner and O'Connor Done for Construction Law What Prosser Did for Torts?*, 32 PUB. CONT. L. J. 925 (2003) (book review); James P. Groton, *An Encyclopedia of Construction, Dispute Prevention and Dispute Resolution Wisdom*, DISPUTE RESOL. J., Aug.–Oct. 2003, at 87 (book review); *Construction Law Builds a Treatise*, L. QUADRANGLE NOTES, Fall/Winter 2003, at 54 (book review).

United States Circuit Courts of Appeal, Federal District Courts, Federal and State Courts of Claims, State Supreme, Appellate and Trial Courts, and U.S. Commonwealth and Territorial Courts.

IX. THE PASSAGE OF “CONSTRUCTION LAW” LEARNING TO FUTURE GENERATIONS

“Construction Law” clearly has become a “separate breed of animal” that is recognized as addressing complex legal issues arising in one of the global economy’s major fields of endeavor.¹³⁶ The subject surely will continue to develop rapidly under the impetus of our expanding world economy and its rapid technological advances.

Construction law does deserve much greater attention across Academia. From the perspective of Academia, law schools do need to stay up to date about newly developing major fields of law. As Justice Elena Kagan reminded the legal academy in 2003 upon her becoming the new Dean of Harvard Law School: “[T]he world of law is expanding and we need to cover everything important that is happening in it.”¹³⁷ Construction law should be included in law school curricula as a third-year “capstone” course to acquaint students with analyses of complex legal issues that they are likely to confront in the practice of law.

From the perspective of the legal profession, construction lawyers for generations have “given-back” their knowledge to the profession, to academia and to the construction industry: (1) by accepting adjunct professor positions to teach construction law courses at law schools; (2) by participating in and lecturing on construction law at legal education conferences and other professional and business meetings; (3) by writing scholarly articles for publication in widely-read, juried journals; (4) by

136. *Paul Hardeman, Inc. v. Ark. Power & Light Co.*, 380 F. Supp. 298, 317 (E.D. Ark. 1974).

137. *Kagan Delivers ‘State of the School’ Address*, *supra* note 94, at 4. Justice Kagan left Harvard in 2009 to become U.S. Solicitor General under President Obama, and became an Associate Justice of the Supreme Court in 2010. *About the Court: Current Members*, U.S. SUP. CT., [<https://perma.cc/G4GQ-RRQG>] (last visited Mar. 20, 2022). Harvard has yet to offer a course on Construction Law. *Harvard Law School Course Catalog: 2021-2022 Academic Year*, *supra* note 94.

promoting legislation where needed to assure fairness in the construction process; and (5) by serving as arbitrators or becoming judges available to hear and decide complex construction cases and to write decisions to provide legal precedent for those later seeking to apply the law and understand the construction process and contracts' contextual and implied provisions.

May the contributions of Academia, the judiciary, and the legal profession, through their writings and teaching, continue to provide the foundational building blocks upon which to continue building construction law. In passing down wisdom to present and future generations through their writings and teaching, legal scholars, judges and lawyers give meaning to the observation expressed by Roman Engineer Vitruvius, the "chief engineer" of the civilized world, to Emperor Augustus over 2000 years ago:

It was a wise and useful provision of the ancients to transmit their thoughts to posterity by recording them . . . so that they should not be lost, but, being developed in succeeding generations through publication in books, should gradually attain in later times, to the highest refinement of learning. And so the ancients deserve no ordinary, but unending thanks, because they did not pass on in envious silence, but took care that their ideas of every kind should be transmitted to the future in their writings.¹³⁸

138. VITRUVIUS, *supra* note 13, at 195. Known to history as "Vitruvius," he was chief engineer to Julius Caesar and Emperor Augustus Caesar. Lienhard, *supra* note 13, at 00:28. Thus, in his time, he rightfully could be called at the height of Rome the "chief engineer of the civilized world." *Id.* Vitruvius was a historian as well as an architect and engineer. *Id.* Vitruvius wrote his ten volume treatise for Augustus on Roman construction practices. *Id.* at 00:45. His treatise survived the ravages of time to influence the architecture of the European Renaissance 1400 years later. His writings offer an illuminating window through which to observe practical design and construction of the Roman civilization in the first century Anno Domini.