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Legal Effect of Representations as to Subsurface Conditions

A report submitted under ongoing NCHRP Project 20-6, "Right-of-Way and Legal Problems Arising Out of Highway Programs," for which the Highway Research Board is the agency conducting the research. The report was prepared by John C. Vance, HRB Counsel for Legal Research, principal investigator, and A. Alling Jones, Research Attorney, serving under the Special Projects Area of the Board.

THE PROBLEM AND ITS SOLUTION

A major and continuing need of state highway departments and transportation agencies is to keep abreast of operating practices and legal elements of special problems involving right-of-way acquisition and control as well as highway law in general. Contractual representations of subsurface conditions to be encountered in highway construction, which prove to be incorrect after the contract has been let and work has begun, frequently become costly burdens on highway construction programs and even serious impediments to the orderly course of planning and development. The report considers the development and present status of case law concerning governmental responsibility for representing subsurface conditions to be other than in fact as found.

A careful review of the research reported herein should help highway officials to better understand the means and methods of avoiding litigation and liability as well as the current theories of defense. Recognition of the legal questions described should help highway officials when they are confronted by a contractor who has found subsurface construction conditions to be different from what was stated in the contract, plans, or specifications.

RESEARCH FINDINGS

Research findings are not to be confused with findings of the law. The monograph that follows constitutes the research findings from this study. *Because it is also the full text of the agency report, the statement above concerning loans of uncorrected draft copies of agency reports does not apply.*

I. INTRODUCTION

Contractual representations of conditions to be encountered in highway construction, which prove to be incorrect after the contract has been let and performance thereon begun, not infrequently be-

come costly burdens on highway construction programs, and even serious impediments to the orderly course of planning and development. The purpose of this study is to examine the development and present status of the case law concerning governmental responsibility for representing subsurface conditions to be other than in fact as found. It is intended by this study to indicate means and methods of avoiding litigation and liability, as well as to present theories of defense and to collate and discuss useful supportive case law.

The bibliography lists only some of the copious materials that have treated this subject. Those references given will serve, *inter alia*, to show the wide interest and concern for the subject among disciplines associated with the highway complex other than the legal profession.

Research into the problem shows that the general rules of law applied in particular decisions must be garnered from a wide spectrum of public works cases. These basic principles are examined and, where pertinent, are applied to specific cases dealing with highway construction contracts. The basic problem, as related to highway projects, is what happens to a state highway department when confronted by a contractor who has found subsurface construction conditions to be different from what was stated in the contract, plans, or specifications.

There are a number of matters tangential to the instant problem that are excluded from consideration herein. The most important omission from this study is those cases that consider fraud and deceit to be the key issue. In the older cases (nineteenth century) and treatises misrepresentation was treated as an action in fraud and deceit. This approach to the problem grew out of the necessity for a remedy at law. Today, however, cases are brought on the contract under a theory of warranty and it is generally accepted that where an element of fraud is introduced and proven there is no question as to the liability of the state for its fraudulent actions. For a review of this historically complex issue see Ames, The History of Assumpsit, 2 Harv. L. Rev. 1 (1888). For a discussion of fraudulent contracts see 166 A.L.R. 938, "What amounts to fraud on contractor, sustaining recision or action for damages under building or construction contract."

Another question that is not dealt with herein is whether there are constitutional or statutory limitations on awarding a contractor compensation over and above that called for in his contract. There is material sufficient to constitute a separate study on this problem alone. For the leading cases and principles see 88 A.L.R. 1223, "Power to allow additional compensation to public contractor over amount called for by his contract."

The present study does not contemplate what constitutes a waiver of the contractor's right to bring legal action. This question is covered in 173 A.L.R. 308, "Acceptance by building or construction contractor of payments under his contract as a waiver of right of action upon implied warranty as to conditions affecting cost." Nor is there discussion of the problems connected with the contractor's responsibility for defects in the completed project as a result of mistakes in the plans; this subject is treated in 6 A.L.R.3d 1394, "Construction contractor's liability to contractee for defects or insufficiency of work attributable to the latter's plans and specifications." Also excluded is discussion of the problem of delay pursuant to inaccuracies in the contractee's plans and specifications, or due to subsequent actions of the contractee's agents. (This problem is to be dealt with in a later paper.) Hence, this study does not deal with the issues of fraud and deceit, the possible defenses of constitutional or statutory limitations on extra compensation, waiver of right to bring suit, or other matters covered in the publications cited.

In approaching the subject matter at hand and seeking to cut through confusing complexities, it may be well to bear in mind Williston's clear and uncomplicated language:

> The real issue which should be discussed is constantly obscured by the terminology of the subject. The real issue is no less than this: When a defendant has induced another to act by representations false in fact, though not dishonestly made, and damage has directly resulted from the action taken, who should bear the loss?[1/]

This paper seeks chiefly to illustrate that in determining "who should bear the loss" the courts are united by a common *ratio decidendi* running through the cases, whether highway or nonhighway. The paper seeks to show that the hinge of decision in the cases is whether or not, on all the facts, as opposed to isolated facts, the contractor is able to show that he was *justified* in relying on the state's representations. If he can so establish he may claim a *warranty* that conditions will be found as represented, and, if he cannot so establish, he may not claim such warranty. The cases turn on the resolution of this question.

[1/] 5 Williston, Contracts, §1510, Rev. Ed. (1938).

II. THE DEVELOPMENT OF GOVERNMENTAL LIABILITY FOR REPRESENTATIONS IN CONSTRUCTION CONTRACTS

A. THE COMPENSABLE SITUATION

A general rule of liability for contractual misrepresentation by a governmental agency had its first applications in the decades surrounding the turn of the century. Of pertinent interest to this present study is a series of public works cases that form the core of the law applied in modern highway cases. The leading cases, cited again and again in various authorities, are the following:

United States Supreme Court: United States v. Gibbons, 109 U.S. 200, 27 L. Ed. 906, 3 S. Ct. 117 (1883); United States v. Utah, Nevada, and California Stage Co., 199 U.S. 414, 50 L. Ed. 251, S. Ct. 69 (1905); Hollerback v. United States, 233 U.S. 165, 58 L. Ed. 898, 34 S. Ct. 553 (1914); Christie v. United States, 237 U.S. 234, 59 L. Ed. 933, 35 S. Ct. 565 (1915); United States v. Spearin, 248 U.S. 132, 63 L. Ed. 166, 39 S. Ct. 59 (1918); United States v. Atlantic Dreding Co., 253 U.S. 1, 64 L. Ed. 735, 40 S. Ct. 425 (1920); United States v. Smith, 256 U.S. 11, 65 L. Ed. 808, 41 S. Ct. 413 (1921); MacArthur Brothers Co. v. United States, 258 U.S. 6, 66 L. Ed. 433, 42 S. Ct. 255 (1922).

Federal: Pitt Construction Co. v. City of Alliance, 12 F.2d 28 (C.C.A. 6, 1926); Sheridan-Kirk Contract Co. v. United States, 53 Ct. Cl. 82 (1917); Bates Construction Co. v. United States, 56 Ct. Cl. 49, 274 F. 659 (1921); George F. Pawling Co. v. United States, 62 Ct. Cl. 123 (1926); Dunbar & Sullivan Dredging Co. v. United States, 65 Ct. Cl. 567 (1928).

State: Ariss-Knapp Co. v. Sonoma County, 238 P. 752 (Cal. 1925); Semper v. Duffey, 227 N.Y. 151, 124 N.E. 743 (1919); Foundation Co. v. State, 233 N.Y. 177, 135 N.E. 236 (1922); Lentilhon v. City of New York, 102 App. Div. 548, 92 N.Y.S. 897 (1905); Atlanta Construction Co. v. State, 103 Misc. 233, 175 N.Y.S. 453 (1918); Maney v. Oklahoma, 150 Okla. 77, 300 P. 642 (1931).

The general rule of law established in this body of cases is that when a contractor for a public works project accepts representations made in contract plans and specifications as being truly representative of construction conditions, specifically relying on the accuracy of the representations in making his bid, he is entitled to additional compensation for extra work and expense, above that agreed on in the contract, that is necessitated by a discrepancy between the actual conditions encountered on the job site and their representation in the plans and specifications.

The first instance in which the United States Supreme Court uses language inferring an implied warranty of construction conditions is in United States v. Gibbons, 109 U.S. 200, 27 L. Ed. 906, 3 S. Ct. 117 (1883), where it was held that a representation was made on which the contractor was "entitled to rely for the purpose of estimating the probable cost of the work to be done." Precedent for this rule comes from a case between private contractors, Dermott v. Jones, 2 Wall. 1, 69 U.S. 762 (1865), in which judgment was rendered in *quantum meruit*. Subsequent cases put contracting agencies of the government and construction contractors on an equal footing with private, individual parties to construction contracts. Thus, the same rules applicable in ordinary commercial contracts between individuals will be looked to in cases involving public works contracts. See Hollerback and Atlanta Construction Co., *supra*.

The general rule asserting liability of the government is made especially binding where the representation in question is determined to be "positive." See Utah, Nevada, and California Stage Co., Hollerback, Christie, and Atlanta Construction Co., *supra*. The courts have not announced a general rule as to what constitutes a positive representation. Rather, the determination of whether a representation is positive or not is based on the particular facts of each individual case. In Utah, Nevada, and California Stage Co. the representation was made as to the number of mail stations to be served by the coach company. The controversy in Christie centered around boring sheet data in a contract for lock and dam construction. In Atlanta Construction Co. the challenged representations concerned materials located in a highway borrow pit. The holding in Hollerback indicates that any representation of a condition essential to the contract is construed as positive.

Claims of misrepresentation, as demonstrated by the cases cited, arise out of and are based on any number of fact situations (e.g., incorrect notes on specifications, inaccurate profiles of construction sites, faulty sounding and boring reports). The failure of the information, of whatever nature, to represent the construction conditions correctly can give rise to liability whether contained in advertisement materials, in solicitation of bids, or as an integral incorporated part of the formal contract. To be representative of the entire construction area, the information must be held out as indicative of a general description. Even so, where it is explicitly shown that the information is intended to represent only specific locations on the job site, enough data may be pre-

sented from which contractors, in figuring their bids, are justified in making an inference as to the general, over-all conditions. The distinction between a specific and general representation constitutes in many instances a fine line of differentiation.

B. ELEMENTS NECESSARY FOR RECOVERY

Of the cases hereinbefore cited Christie perhaps yields the most instruction in respect to the elements necessary for a contractor to establish in order to recover in an action for misrepresentation. Although the Court does not present a hard-and-fast formula, the following clearly appears from the body of the decision.

The first and paramount element is a positive representation. The body proper of the formal contract, or information incorporated by reference into the contract, must contain some reference to conditions presently existing at the site of construction. This representation must be material to the bargain. It must be basic to the work to be done under the contract. Otherwise, the representation would be trivial and its accuracy inconsequential. Next, in making his bid for the job, the contractor must rely on the accuracy and veracity of the representation and must be justified in his reliance. Then, the actual conditions encountered on the job site must differ from their description in the contract. Finally, the discrepancy between the actual conditions encountered and their representation in the contract must result in damages suffered by the contractor, in the nature of an additional expense, extra work, increased materials, or augmented labor necessary to complete the project as specified in the contract.

All of these elements are crystalized in the facts appearing in Christie. There was a positive representation of materials to be excavated in constructing the locks and dams called for in the contract. The representation was basic to the work, for without the excavation the locks and dams could not be built. The contractor relied on the representation of conditions in figuring his bid, and justifiably so because of lack of time in which to verify the representations by personal investigation. Then, material substantially different from that described in the contract was encountered once the job was started. This material was decidedly more costly to excavate, which damaged the contractor to the extent of extra work necessary to complete the excavation. All of the elements leading to liability were present and established. As a result, judgment was awarded the contractor.

C. THE NONCOMPENSABLE SITUATION

In some of the earlier cases decided against the contractor, the rule was laid down that when contractual representations are meant to be merely suggestive of construction conditions, or the contract explicitly states they are to be taken only as estimates, purportedly to put bidders on an equal basis, then the contracting agency of the government is not to be held accountable for discrepancies between contract representations and the actual conditions encountered on the job. See Semper, Bates, Pawling, Foundation, Ariss-Knapp, Lentilhon, and MacArthur, *supra*.

In Semper and Pawling the contractor was expressly responsible for corroborating the representations. The contract agreed on in Semper contained a clause to the effect that the contractor acknowledge that the information indicating all conditions affecting work, labor, and materials necessary for the job had been secured by his own personal investigation and research, and expressly disavowed any reliance on state highway department estimates.

The court in Lentilhon decided that the contractor was to assume the risk as to the nature and quantity of work to be performed because the representations were only approximate estimates prepared by the authorities for the guidance of bidders. In Foundation the boring sheet in controversey was deemed not to be the type of information on which the bidder might rely when required to make an independent investigation. Any reliance on the government's figures was done at the contractor's risk. Likewise, in Ariss-Knapp the contractor was apprised of the fact that the estimates were only approximate and was required to certify that he had satisfied himself as to conditions affecting work.

The general tenor of the decisions from these various jurisdictions culminated in the principles enunciated by the United States Supreme Court in MacArthur Brothers Co. v. United States, 258 U.S. 6, 66 L. Ed. 433, 42 S. Ct. 255 (1922). This was an action for breach of contract based on representations in a contract to build a canal at Sault Sainte Marie, Michigan. The alleged misrepresentation occurred in the government's contractual assurance that part of the work could be done "in the dry." The facilities for such work "in the dry," constructed under a separate contract by another company, proved to be inadequate, which necessitated completing all of the work on the canal "in the wet" at greatly increased expense to the contractor.

In response to this petition the government averred there had been no misrepresentation, or if there had been the plaintiff was bound by the contract to take certain actions on his own behalf to become familiar with work conditions, thus exonerating the government from any liability for misrepresentations arising out of the contract. In examining this position the Supreme Court looked to the contract instrument, setting forth and emphasizing the following provisions:

> It is understood and agreed that the quantities given in these specifications are approximate only, and that no claim shall be made against the United States on account of any excess or deficiency, absolute or relative, in the same. No allowance will be made for the failure of a bidder or of the contractor to estimate correctly the difficulties attending the execution of the work.
>
> It is expected that each bidder will, prior to submitting his bid, visit the site of the work, examine the local conditions, inform himself as to the accessibility of the work, ascertain the character of the material to be excavated, consult the plats on file at the U.S. Engineer office at Sault Sainte Marie, Mich., and obtain such available information as will assist him to make an intelligent bid, and failure of a bidder to make such examination may be held to be sufficient reason to reject his bid.
>
> The contractor must construct and maintain all necessary cofferdams, furnish suitable and adequate pumping plant, and do all the pumping required to unwater all areas where work is to be done in the dry, and no special payment will be made therefor, the above work and expense being considered as incident to the general work covered by the contract prices of other items.
>
> The United States assumes no responsibility whatsoever for loss of life, property or contractors' time, due to the failure of any part of the cofferdams, dikes, or the pumping plant.

The Supreme Court stated that these provisions of the contract would unquestionably overcome and repel the contentions of the contractor's petition in light of the accepted facts that the contractor made an independent investigation of the job site after receiving the advertisements for the project and before making its bid, that the job site had been personally inspected by the president and engineer of the company, and that although work had been in progress for two years on the indicated pier facilities that were to support the contractor's cofferdams it was evident that preparations for constructing the canal were uncompleted.

The decision in MacArthur is particularly significant in that the Supreme Court identified fact elements present in prior cases that led to liability, and, which being absent in MacArthur, led to the result of nonliability. The Court enumerated such fact elements as follows:

> The elements which existed in each of the cited cases are absent from the case at bar. In the case at bar the government undertook a project and advertised for bids for its performance but there was no knowledge of impediments to performance, no misrepresentation of the conditions, exaggeration of them nor concealment of them, nor, indeed, knowledge of them. To hold the government liable under such circumstances, would make it insurer of the uniformity of all work and cast upon it responsibility for all the conditions which a contractor might encounter and make the cost of its projects always an unknown quantity.

The effect of the decision in MacArthur is to provide a solid basis on which to make determinations concerning the contractual process for public works projects, and especially highway projects, that will help avoid costly litigation and prohibitive judgments. The determinations should focus on the description of the subsurface conditions at the job site. If the contract clearly and forcefully states that all figures are estimates or approximations, if there is a full disclosure of all information known about the construction site, if an independent investigation by the contractor is required and sufficient time is allowed for the conduct and completion thereof, if there is a specific disclaimer of particular conditions rather than a general exculpatory clause covering the entire project, and if the contractor is required to attest to having satisfied himself as to construction conditions by reliance on his own facts and figures, then the principles of MacArthur should prevail and liability will be averted. This is sound law, never having been modified or overruled. It has been applied in recent highway cases. The subsequent section of this paper shows its direct application and usefulness for highway lawyers today.

III. THE MODERN VIEW: WUNDERLICH AND BEYOND

A. DETERMINING THE ISSUE

In the decades that have passed since the formative years of the early cases the legal principle of governmental liability for misrepresentation of subsurface conditions in construction contracts has found wide application in situations throughout the United States. Not the least of these applications has been the construction of highway projects, especially in recent years. A detailed investigation of every available case up to the present indicates either very little or no modification in the rules announced in the earlier cases. Thus, reference to the myriad interim cases studied is believed to be unnecessary. This will allow concentration on the highly significant recent decisions. Before turning to such cases, a statement may be in order with respect to what will be found therein; this statement is equally applicable and germane to the cases hereinbefore discussed.

It is apparent from a study of all the cases in this field, whether early or recent, that much of the seeming confusion stems from differences in terminology employed by the courts. In the rules laid down and tests employed by the courts the difference in semantics is far wider than the difference in substance. Although in the ordinary case the result is arrived at by the application of more than one rule or test (see IV. Conclusion for an enumeration of the same), the rules or tests themselves, when stripped of differences of verbiage, admit of both uniformity and clarity. And most particularly, as indicated at the outset of this paper, all the rules and tests, although variable and ranging, are directed to the resolution of one crucial question. The central issue in all the cases is whether upon application of the varying rules and tests to the facts, it is shown that the contractor was justified in placing reliance on the state's representations.

If the wording of the contract, plans, and specifications and the circumstances under which the contract was advertised, bid, and let are such that the contractor was justified in placing reliance on the highway department's statements, then he may claim a warranty that conditions as actually found will be as represented. On the other hand, if the language of the contract and circumstances surrounding its award do not entitle him to rely on the accuracy of the highway department's statements, he may not then claim a warranty that conditions as actually found will be as represented.

The determination of this issue is the linchpin of decision in the cases.

B. FEDERAL CONTRACTS AND THE NEW YORK APPROACH

Before examination of the recent decisions, brief mention is required of the approach to resolution of the problem adopted in federal contracts, and by the case law in the State of New York.

1. In federal contracts there are provisions that allow for changes in the contract, either the price paid for the work or the time allowable for its completion, once subsurface conditions that differ substantially from their representation in the contract are encountered and the project engineer in charge has been duly notified in writing. This is known as an equitable adjustment under the contract due to a changed condition, a subsurface and latent defect or hidden condition against which the government insulates the contractor. Typical contract clauses implementing this type of solution are set out in 4 McBride & Wachtel, Government Contracts, §29.20 (1969). In studying the construction of such clauses and the validity of their use see Wm. A. Smith Contracting Co., Inc. v. United States, 412 F.2d 1325 (Ct. Cl. 1969).

2. The adjustment of equities between the state and the contractor is arrived at in New York by distinguishing between quantitative and qualitative differences resulting from misrepresentation. If a change is quantitative the contract provisions allowing additional compensation at the unit bid price will prevail. If the change is qualitative (i.e., it differs materially from the kind of work called for in the contract) the contractor will be entitled to compensation for extra work on a *quantum meruit* basis. See Tufano Contracting Corp. v. State, 25 App. Div. 2d 329, 269 N.Y.S.2d 564 (1966), which follows Depot Construction Co. v. State, 23 App. Div. 2d 707, 257 N.Y.S.2d 230 (1965), and cases cited at p. 232, *aff'd* 19 N.Y.2d 109, 278 N.Y.S.2d 363, 224 N.E.2d 866 (1967). As this is the only jurisdiction where such an approach has been taken, further delineation of the advantages or disadvantages of such a solution is left to the interest of the reader.

C. THE WUNDERLICH DECISION

The case of Wunderlich v. State, 56 Cal. Rptr. 473, 423 P.2d 545 (1967) should be considered a watershed decision in which the seeming confusion that had previously shrouded the issue of misrepresentation of subsurface conditions was substantially clarified, the applicable rules of law were ex-

plained and related anew to the earlier cases, and the explication of a *ratio decidendi* for similar cases was adumbrated.[2/]

The cause of action in Wunderlich was breach of warranty with respect to a source of materials for use in a highway construction project. The facts in the case were as follows:

In April 1954 plaintiffs, as prospective bidders on the project, were furnished by the California Department of Public Works a copy of the "Special Provisions, Proposal and Contract," a document that provided detailed specifications for the construction of the highway project, and which provided further that the work was to be done in accordance with the department's "Standard Specifications."

Pertinent portions of the Special Provisions read as follows:

> Chapter II. Special Requirements (a) General. Attention is directed to Section 6 of the Standard Specifications.... (c) Local Materials. Attention is directed to Section 6, articles (b) and (f), of the Standard Specifications....
>
> Samples indicate that material of satisfactory quality for the production of imported base material, gravel blanket material, and mineral aggregate for plant-mixed surfacing and cement treated base, may be obtained left of approximate Station 615. Arrangements have been made for the Contractor to obtain material at the above location at a price not to exceed 3/4-cent per ton for material removed from the site and used in the work.

Section 6 of the Standard Specification provided in part:

> (b) ... When sources of materials to be furnished by the Contractor are designated in the special provisions, the Contractor shall satisfy himself as to the quantity of acceptable material which may be produced at such locations, and the State will not assume any responsibility ... as to the quantity of acceptable material at the designated location.
>
> If tests have been made by the State of other locations in the vicinity, the results ... are available to the Contractor or to prospective bidders on inquiry at the office of the district in which the work is situated.... This information is furnished for the Contractor's or the bidder's convenience only and the State does not guarantee such tests and assumes no responsibility whatsoever as to the accuracy thereof or the interpretation thereof stated in the test records....
>
> Should the Contractor elect to obtain material from sources designated in the special provisions, he shall pay such charges as are specified....

In addition, Section 2 of the Standard Specifications, "Proposal Requirements and Conditions," provided that:

> (c) ... The bidder shall examine carefully the site of work.... It will be assumed that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality and quantities of the work to be performed and materials to be furnished, and as to the requirements of these specifications, the special provisions, and the contract.

The remainder of the section declared that the state will not guarantee or accept responsibility for the accuracy of preliminary investigations or their interpretation where made by the state "in respect to foundation or other design."

The state conducted a "job-showing" at the project site at which plaintiff contractors were represented by their estimator. The representative of the Division of Highways of the Department of Public Works brought with him copies of the plans and specifications, and test reports of mineral sources convenient to the project site. One of the documents was an interdepartmental memorandum dealing with the condition of these sources. Plaintiffs' estimator was aware that test reports used to compile the memorandum were available for inspection at the Division's district office, but he used the memorandum alone, after a brief inspection of the area, in forming an opinion as to the adequacy of the sources.

[2/] For a discussion of the effect of the decision in E. H. Morrill Co. v. State, 56 Cal. Rptr. 479, 423 P.2d 551 (1967), the companion case to Wunderlich decided the same day, see separate articles by Kingsley Hoegstedt and Ross D. Netherton in Hwy. Res. Circular No. 66 (1967).

Plaintiffs chose to use the so-called "Wilder pit," about which the controversy centered, as a source of the specified materials. With reference to that pit the memorandum provided:

> Submitted herewith is information concerning possible local material sources for the project.... This information has been developed during the investigation for borrow sites and possibly would be of value to the prospective bidders for this project.... Hillside Left of Station 600D to 625D.
>
> This hillside is composed of rather loosely compacted sand and gravel ranging from 4 inches to dust. A layer of blow sand covers the base of the hill and apparently exists in spots on the slope as some test holes encountered considerable coarse material while others were practically all sand.
>
> Tests indicate that after processing, to meet the grading requirements, the material is suitable for imported base material, cement-treated base aggregate, gravel blanket, and plant-mixed surfacing aggregate....
>
> This source is well located as far as economy of hauling is concerned considering a single source of material for the entire length of the project. With this in mind, a borrow agreement was negotiated with the property owners by the Right of Way Department for the material on the hillside Left of Station 595D to Station 615D.

The memorandum reproduced the results of tests taken in the area of the Wilder pit, stating: "Tests on this material indicate that the material has the following qualifications: ... 'Passing a No. 4 sieve ... 55-88%.'" Material passing a No. 4 sieve--containing four wires to the inch--established a demarcation between "gravel" and "sand" for the purposes of the project requirements.

Prior to commencing operations, plaintiffs studied other potential sources in the project area, but determined ultimately to use the Wilder pit. A few weeks after beginning work plaintiffs complained to the state's resident engineer that necessary materials could not be produced at the bid price from the pit and that it was composed of too much sand. They demanded that the state provide another plant at a different location. The resident engineer ran tests at the pit in June 1955; results ran from 47.1 percent to 96.4 percent passing a No. 4 sieve. The engineer determined that plaintiffs had not exhausted all the acceptable material at the designated source and refused to approve a shift. Plaintiffs completed the project, first bringing in new equipment for the Wilder site, then using materials from more distant sources.

Plaintiffs contended that the information furnished by the state with reference to conditions in the Wilder pit constituted a representation and warranty that sufficient suitable material would be available at the pit to complete the project, and that in fact the state misrepresented the conditions, requiring plaintiffs to undertake excess processing at the pit and to ultimately utilize more remote materials sources, with consequent increased costs.

The state asserted that what it represented by the statements reproduced above was only that tests had been taken, that they were accurately reported, and that they did, indeed, indicate that the Wilder pit was a potential source of materials for the project. The trial court, finding that the state had warranted the content of the Wilder pit and had breached that warranty, ordered that plaintiffs recover in excess of $600,000 in damages.

The decision of the trial court was reversed by the Supreme Court of California. A concise statement of the legal principles under consideration was made by the Court as follows:

> We have heretofore recognized liability based on a theory of breach of an implied warranty when a governmental agency represents as a fact what in fact does not exist, and the claimant is damaged by its reliance on the assertion. "When a state makes a contract with an individual, it is liable for breach [of] its agreement in like manner as an individual, ... A contractor of public works, who, acting reasonably, is misled by incorrect plans and specifications issued for bids and who, as a result, submits a bid which is lower than he would have otherwise made may recover in a contract action for extra work or expenses necessitated by the conditions being other than as represented." (Souza & McCue Constr. Co. v. Superior Court (1962) 57 Cal. 2d 508, 510, 20 Cal. Rptr. 634, 635, 370 P.2d 338, 339). On the other hand, if one agrees to do a thing possible of performance "he will not be excused or become entitled to additional compensation, because unforeseen difficulties are encountered." (United States v. Spearin (1919) 248 U.S. 132, 136 39 S. Ct. 59, 61, 63 L. Ed. 166).

> The crucial question is thus one of justified reliance. If the agency makes a "positive and material representation as to a condition presumably within the knowledge of the government, and upon which ... the plaintiff had a right to rely" the agency is deemed to have warranted such facts despite a general provision requiring an on-site inspection by the contractor. (Hollerback v. United States (1914) 233 U.S. 165, 172, 34 S. Ct. 553, 556, 58 L. Ed. 898). But if statements "honestly made" may be considered as "suggestive only," expenses caused by unforeseen conditions will be placed on the contractor, especially if the contract so stipulates. (Underscoring supplied.)

Looking to the contract statements, and the special provisions included therein, the Court concluded there was no positive representation relating to the materials contained in the borrow pits, and commented that boring data were merely indicative of the general area about which specific deductions might be made, in the knowledge that any such deductions might prove erroneous. The Court here emphasized the binding importance of the contract's special provisions, particularly when the contractor is required to satisfy himself as to the quantity of acceptable material, and specific disclaimers of state responsibility for the quantity of acceptable material.

In conclusion the Court relieved the state of liability for the discrepancy that arose from its description of the borrow pit area and the actual conditions encountered by the contractor. The element of justified reliance was spotlighted, while implied warranty was deemed inapplicable under the circumstances shown:

> ... Although there is some evidence that plaintiffs "relied" on the alleged representations as to the character of the Wilder pit, the question is whether, under the circumstances of the indefinite nature of the statements and the existence of exculpatory provisions, the bidder could justifiably rely on the statements. It does not appear that plaintiffs could have done so, and the state is not responsible for the subjective interpretation placed upon the information by bidders. When there is no misrepresentation of factual matters within the state's knowledge or withholding of material information, and when both parties have equal access to information as to the nature of the tests which resulted in the state's findings, the contractor may not claim in the face of a pertinent disclaimer that the presentation of the information, or a reasonable summary thereof, amounts to a warranty of the conditions that will actually be found. (Emphasis supplied by the Court.)

The major impact of this ruling is not to nullify, overrule, or modify the principle announced in the Hollerback--Christie series of cases, that liability is imputed to the state where a positive assertion of fact in relation to construction conditions results in pecuniary harm to the successful bidder on the contract. Rather, this decision serves to restate and reaffirm the concept enunciated in the Semper--Pawling series of cases which led to the United States Supreme Court ruling in MacArthur, to the effect that where no positive representation is made, and the contract explicitly states in the plans and specifications that all figures used and conclusions reached from the configurations contained therein are merely estimates used to approximate the job, and where the contractor is required by the terms of the contract to conduct his own investigation of construction conditions in order to satisfy himself of the adequacy of the plans and specifications, then the state does not warrant the veracity of its statements, and the contractor is not justified in claiming reliance thereupon.

In the light of the huge sums being sought by contractors as damages in cases of this nature, the importance of this position taken by the California Supreme Court cannot be too highly emphasized for those attorneys whose job it is to protect the public interest. The elements distinguishable in Wunderlich (e.g., the absence of a positive representation, actions required of the contractor by specific provisions in the contract, and a specific disclaimer of responsibility on the part of the state for the accuracy of test data) are of signal importance not only to the defense of claims against the state, but also in advising and counseling as to steps necessary to be taken to provide protection in the award of construction contracts.

D. THE RECENT CASES

Since the landmark decision in Wunderlich there have been several cases based on the same issues with similar factual situations that cite and discuss the holding in Wunderlich. See Haggart Construction Co. v. State Highway Commission, 427 P.2d 686 (Mont. 1967); Ashton Co. v. State, 454 P.2d 1004 (Ariz. 1969); Alpert v. Commonwealth, 258 N.E.2d 755 (Mass. 1970); Kiely Construction Co. v. State, 463 P.2d 888 (Mont. 1970); Peter Salvucci & Sons, Inc. v. State, 268 A.2d 899 (N.H. 1970); J. A. Thompson & Son, Inc. v. State, 465 P.2d 148 (Hawaii 1970). Decisions favoring the contractor outnumber decisions favoring the state by two to one. Nevertheless, there are salient points in the

adverse cases that indicate implicitly how liability on the part of the state might have been avoided. Viewed along with the cases that directly follow Wunderlich these decisions provide new insight into the problem of warranty of highway construction conditions based on justifiable reliance.

1. Conflicting or Ambiguous Statements Construed Against the State

In Haggart Construction Co. v. State Highway Commission, 427 P.2d 686 (Mont. 1967), the cause of action was a contractor's claim for additional expenses incurred in the completion of a road construction contract. After having received a notice to bid, the contractor procured the several pertinent documents related to the proposed project, including copies of the bid proposal, a plan and profile, the proposed general contract, and a report entitled "Available Surfacing Materials." Based on test drillings and laboratory analyses conducted by the Highway Commission, these documents indicated the existence of surfacing materials that would meet standards established by the contract in quantitites sufficient to fulfill the contract in an economical manner. After work was begun on the contract it was discovered that the gravel in the locations shown in the contract was unsuitable for the use intended and could not be processed to meet the quality standards of the contract. The expenses incurred in obtaining suitable materials from other sources amounted to $147,000 and were claimed as damages by the contractor.

The contract itself contained certain exculpatory clauses using the following language:

> The Commission will provide test data concerning quality and quantity but will make no guaranty in any respect as to quality and quantity of material produced.... If the contractor elects to use any or all of such indicated sources ... the contractor shall be wholly and completely responsible for the quality and quantity of any and all materials supplied and furnished.... The contractor may use any indicated source he chooses, but it shall be his responsibility, and his alone, to produce satisfactory material....

Another exculpatory clause was used in the report describing "Available Surfacing Materials":

> The data shown herein represents condensed information from the laboratories and as reported by the field forces regarding the source of surfacing materials for this project. It does not constitute a guarantee by the state highway commission of the quality or quantity of the material as shown.

The Supreme Court of Montana, in construing these particular clauses of the contract, stated that the provisions were quite clear and that there could be no doubt that their purpose was to absolve the Commission from guaranteeing the quality and quantity of the borrow source materials. Nevertheless, the court went on to point out that an inconsistency existed between these exculpatory clauses and those parts of the contract establishing the existence and availability of acceptable surfacing material. It was held that those statements relating to the sources, quantity, and quality of surfacing materials did indeed constitute a warranty of construction conditions on which the contractor was justified in relying under the conditions present, notwithstanding the exculpatory sections of the contract. The issue thus was narrowed to a consideration of whether the exculpatory clauses constituted a proper defense. Under the circumstances involved it was held they did not, the basic rationale of the decision being that the seemingly contradictory position presented by the Commission to the contractor in the contract would be construed most unfavorably toward the drafter of the contract (i.e., the Highway Commission).

The Court discussed at length the decision in Wunderlich, and in arriving at its decision in favor of the contractor distinguished the fact situation in Wunderlich as follows:

1. The language in the Wunderlich contract was considered to be much more conservative and cautionary, falling short of a construction that would constitute warranty.

2. Statements concerning materials available were deemed to be only suggestive or "merely indications" in the California case, whereas definite assertions as to matters of fact were found to have been made in Haggart.

3. In Wunderlich the contractor was provided ample opportunity and was contractually required to examine and inspect the job site and to "satisfy himself" of the availability and nature of source material.

In the light of these distinguishing characteristics it would appear that the result in this case

could have been avoided had there been strict observance of the rules announced in Semper, Pawling, and MacArthur. The contract should have explicitly stated that all contractual representations were "approximate estimates" and "merely suggestive" of construction conditions. In addition, the contractor should have been required to satisfy himself as to the accuracy of the state's information, and given ample and sufficient time to conduct his own independent investigation.

2. Insufficient Time to Investigate

In a subsequent Montana case, Kiely Construction Co. v. State, 463 P.2d 888 (Mont. 1970), the evidence was so overwhelming as to allow a directed verdict on a claim for extra expense incurred as a result of erroneous estimates for a crushing operation in a rock quarry and the availability of concrete aggregate sand needed for paving. Where the Highway Commission's Available Surfacing Materials Report indicated that eight test holes of 30 feet deep had been drilled to show a solid granite rock base, it was shown that in fact only surface samples had been taken. This might have been the determinative factor, bordering on an issue of fraud, had not the trial court allowed the Highway Commission to amend its original answer to the complaint, removing their previous denial of failure to drill test holes and admitting that in fact no holes had been drilled to any depth.

This development allowed a narrower examination of the doctrine of justifiable reliance, especially in relation to the element of time allowed the contractor to make his own determination regarding construction conditions. As a matter of undisputed fact it was shown that the contractor had only 12 days to prepare his estimates and present his bid. Considering this confining circumstance, the Court held that it was absolutely necessary for the contractor to rely on the state reports in preparing his bid because it would have been virtually impossible to work up accurate estimate data in the short time allowed. The Court said that inasmuch as the reports were distributed to bidders in an attempt to induce the submitting of lower bids it was unreasonable for the state to contend that the successful bidder could not rely on the figures provided. The import of this decision is, stated simply, that if a contractor is required independently to corroborate data concerning the construction conditions on a highway project it is essential for him to have sufficient time to conduct his investigation.

The State of New York considered the element of time in independent investigations somewhat earlier than the present case. In Faber v. City of New York, 222 N.Y. 255, 118 N.E. 609 (1918), the Court introduced the concept of "reasonable opportunity," in ruling in favor of the contractor. However, in Weston v. State, 262 N.Y. 46, 186 N.E. 197 (1933), recovery was denied when it was shown that the contractor had the same opportunity as the state to investigate. More recently, in John Arborio, Inc. v. State, 41 Misc. 2d 145, 245 N.Y.S.2d 274 (1963), the Court somewhat facetiously commented that it would seem to be a better solution to require a bidder to engage in a guessing game on his own rather than entrap him with presumably accurate data on which he had no right of reliance. Also, in Yonkers Contracting Co. v. New York State Thruway Authority, 45 Misc. 2d 763, 257 N.Y.S.2d 781 (1964), the Court ruled that a general exculpatory clause would not bar a claim for misrepresentation where no adequate opportunity for conducting an independent study of subsurface conditions had been allowed the contractor. However, where a cursory inspection of the job site (instead of the usual time-consuming, complicated, and expensive process of investigation) reveals patent inconsistencies with representations in the contract then the contractor would not be allowed recovery on the grounds of inadequate opportunity. Warren Brothers Co. v. New York State Thruway Authority, 34 App. Div. 2d 97, 309 N.Y.S.2d 450 (1970).

3. Positive Representation; Ambiguities; Insufficient Time to Investigate

Another of the recent cases that looks to Wunderlich for guiding principles is Peter Salvucci & Sons, Inc. v. State, 268 A.2d 899 (N.H. 1970). An apparent attempt to resolve ambiguities in the invitation to bid on a highway project resulted in sending the following telegram to all prospective bidders who had obtained copies of the plans, profiles, test borings, and soil data relating to the jobs:

> IN RE: FRANCONIA PROJECT 100Z-3 (2) [JOB A]. FREE GRAVEL AND BORROW MAY BE OBTAINED FROM NATIONAL FOREST LAND. AREAS MUST BE REPLANTED. COST $50.00 PER ACRE.
>
> JOHN O. MORTON
> COMMISSIONER

After commencement of construction the plaintiff was denied the right to obtain the required borrow by widening the slopes of the roadbed, a previously standard practice, and was also denied the right to obtain free gravel and borrow from the National Forest land, which necessitated the acquisition of large quantities of gravel and borrow from other locations. A Master's recommendation of a damage award in the amount of $111,114 was accepted by the trial court, and judgment was rendered for that amount, plus interest and costs.

In reviewing and affirming this judgment the Supreme Court of New Hampshire declared that the telegram from the Commissioner of Highways to prospective bidders constituted a positive, material representation on which the contractor was entitled to rely in preparing the bid that was submitted and accepted, asserting that had it been known that the use of National Forest land would be denied, the bid would have been correspondingly higher. The following factors were considered germane to this determination.

> We hold that this telegram was subject to the interpretation placed on it by the plaintiff because of the findable ambiguity in the National Forest provisions contained in the contract; the inquiry made of the highway department concerning the cost and conditions upon which materials located in Forest Land could be obtained; the wording of the telegram itself; the time when and circumstance under which it was issued; the evidence of the prevailing practice of permitting materials to be obtained by widening of the slopes; and the testimony that it is advantageous to both the contractor and the state to obtain materials on or near the job site....
>
> The above factors, plus the positive wording of the telegram signed by the Highway Commissioner ...; and the date on which it was issued; lead us to hold that the telegram did not require, nor provide, the time for additional or independent verification by the plaintiff of this specific representation pertaining to the availability of materials and superseded any general exculpatory provision in the contract or specifications. "When a bidder is allowed insufficient time within which to make a personal study, the state cannot invoke the general exculpatory clauses to exonerate itself from liability. Particularly is this true in a case ... where no specific warning is given in connection with the particular item the representation of which is in question; or in a situation where the bidder has not time to make a personal and detailed inspection." (Citations omitted.)

4. Positive Representation; Nondisclosure; Insufficient Time to Investigate

Alpert v. Commonwealth, 258 N.E.2d 755 (Mass. 1970), was a case involving discrepancies in the estimate for excavation of material unsuitable for the highway fill or fill foundation, together with an inaccurate determination of the amount of borrow available from a pit in reasonable proximity to the job site.

The contract included an exculpatory clause, "Article 4, Examination of Plans and the Location," which read as follows:

> Statements as to the condition under which the work is to be performed, including plans, surveys, measurements, dimensions, calculations, estimates, borings, etc., are made solely to furnish a basis for comparison of bids, and the Party of the First Part [The Commonwealth] does not guarantee or represent that they are even approximately correct. The contractor must satisfy himself by his own investigation and research regarding all conditions affecting the work to be done and labor and material needed and make his bid in sole reliance thereon.

In the construction of this clause the Court went so far as to suggest that if the Department of Public Works had actually intended that the contractor be solely responsible for conducting an independent investigation to determine the estimates, it should have omitted the specifications in question from the preliminary quantity sheets. The Court ruled that the Department's action in positively representing a specific quantity of unsuitable material for excavation constituted a statement on which the contractor had the right to rely. In holding that the Department was liable for breach of warranty, the Court also relied on the factor of nondisclosure, pointing out that the Department had failed to make available information it had on hand in various boring reports and logs, and soil samples, and failed to disclose that the boring data given to bidders were from only a very small area of the job site. A further ground of holding was insufficiency of time to make an investigation. The Court noted that the bid preparation period was only 21 days, and found that the conduct of adequate independent soil analyses and tests would have required a period of 2 1/2 to 3 months. All these facts taken together led to the conclusion that the contractor was placed in the position of having to rely on the Department's representations.

5. Cases Following Wunderlich and Decided in Favor of the State

The remainder of the recent cases are on the state's side of the ledger, and follow closely the principles set forth in Wunderlich. A thorough familiarity with the facts in these cases and a clear understanding of the rationale of decision should help both in the defense of claims against the state and in making policy determinations pointed to avoiding involvement in this costly type of litigation.

Ashton Co. v. State, 454 P.2d 1004 (Ariz. 1969), is the usual claim arising out of a highway construction contract. In the bidding process the State Highway Department supplied the contractor with certain information that indicated that borrow material would be necessary on the project. It was stated that the borrow pit shown on the original plans would prove inadequate, but that a supplemental pit location would be provided. Information sheets describing the borrow pits and giving the results of tests carried out by the state were provided by the materials division. On the basis of the data contained in the information sheets and after personal inspection of the site the contractor submitted a proposal that was accepted.

The introduction to the information sheets provided by the materials division contained specific disclaimers and denials of responsibility for the correctness of the information provided. The sheets also stated that the information divulged therein was for planning purposes only and not to be considered part of the contract. In addition, the standard specifications, considered to be a part of the contract, provided in part that quantities given in bidding schedules were to be considered approximate only. Again, in a different section, it was clearly stated that information furnished by the materials division was for informational purposes only and was not to be construed as a guaranty of the job site or conditions found there, especially in relation to the quantity or depth of acceptable material usable as borrow.

In ruling favorably for the state and upholding these disclaimers of liability, the court acknowledged that the preparation of estimates by those experienced in construction work is not an exact science, and it was conceded to be a common experience in highway construction work to have overruns or underruns of borrow material. It was noted that in previous cases ruling for the contractor it had been shown that the contractor was either misled by affirmative statements that proved to be false, or that it appeared that certain facts were known by the government but not passed on to the contractor.

The trial court was upheld in its finding from the evidence that the contractor failed in carrying its burden of proof, showing neither breach of contract by the state, nor negligence on behalf of the materials division in their conversion of the volumetric quantity of borrow, nor any indication of fraud by the state, nor unjust enrichment to the state, nor any mistake, either mutual or unilateral, so grave as to require reformation of the contract.

In reviewing the entirety of the contract and drawing its conclusion the Court stated:

> [The] bid proposal recited the fact of personal inspection of the work site and [the] understanding that the quantities mentioned in the proposal were approximate only. The contract contained an express disclaimer of misunderstanding or deception as to the character of the materials or estimates of quantities. We do not conceive that the statement of estimated tonnage is a "positive and material representation as to a condition within the knowledge of the government." (Hollerback v. United States... 34 S. Ct. at 554.)
>
> [The] materials information furnished to [the contractor] clearly indicated the basis upon which the tonnage estimate had been made, i.e. a density report on material taken from one test hole.
>
> The representation relied upon by Ashton is not cast in the form of a positive assertion of fact, but is given as an estimate, and there was full disclosure of the basis for the estimate. We therefore conclude that the disclaimer provision relating to quantities of material is controlling.... The contract entered into between these parties was at arm's length; it required Ashton to make its own investigation concerning the character of the materials and conditions surrounding the work. No facts are presented which would justify surcharging the state for the risk which Ashton had undertaken by its contract. We find no breach of implied warranty.

Another decision with results favorable to the state was rendred in J. A. Thompson & Son, Inc. v. State, 465 P.2d 148 (Hawaii 1970). This was an action to recover additional costs on the ground that damages resulted from misrepresentation of facts material to the contract and failure to disclose all material information in the possession of the state.

The plaintiff was awarded a contract to construct a certain four-lane highway, including excavation work at a cost of 54.6 cents per cubic yard, for a total cost estimate of $156,702. During the completion of the contract a subsurface condition of solid rock was encountered for which the contractor claimed an additional excavation cost of 45.4 + cents per cubic yard, increasing the total to approximately $1.00 per cubic yard, or $287,000, just short of double the original estimate.

Plaintiff claimed reliance on a boring log included in the project plans, which was allegedly deceptive because it did not copy the exact wording of the actual log as prepared and kept by the highway department. A comparison of the actual log and the version that appeared in the plans is as follows:

Depth (ft)	Actual Boring Log	Log in Plans
0-15	Hard, dry, red clay with decomposed lava rock.	Red clay with decomposed lava rock.
15-30	Hard rock and yellow, gray, black clay slightly plastic with decomposed lava rock.	Slightly plastic red and yellow, gray, black, clay with decomposed lava rock.
30-32	Brown, yellow slightly plastic damp clay with medium hard decomposed lava rock and little red and black clay.	Slightly plastic brown, yellow clay with decomposed lava rock and red and black clay.
32-40	Little hard red clay with hard basalt borders.	Red clay with basalt borders.
40-80	Firm brown clay with hard basalt borders or cracked basalt strata mixed with very red clay.	Brown clay with basalt borders or cracked basalt strata with red.
	Cored hole from 40-80' samples in bags marked Hole No. 6 40-80'	(No entry at all.)

In Syllabus Point Number 3 the Supreme Court of Hawaii summarized succinctly the theory of breach of warranty. It stated that the elements necessary for recovery are as follows: (1) representation of facts; (2) the facts prove to be inaccurate or nonexistent; (3) the claimant has relied on the representation; and (4) the claimant has suffered damages because of his reliance on the information given. (This statement of essential elements parallels that set forth in §11B, *supra.*) In affirming judgment entered below for the State, the Court emphasized that these elements had not been shown. In this case a concept of the "reasonable engineer" was introduced, whereby the contractor, being of reasonable intelligence and having supposedly had special technical training in his field of business, should have been aware that a subsurface condition of rock would have been encountered because the log sheet disclosed the presence of "basalt borders" or strata. It was recognized that the use of the word "basalt," commonly called "blue rock," was to indicate the presence of hard rock. Also, the contractor was assumed to be cognizant of the fact that samples of basalt border or cracked basalt strata were obtainable only by boring, all of the information on the testing and results thereof in possession of the State having been made available to the contractor.

Under the Standard Specifications in the contract the contractor was required to carefully examine and inspect the site of the contemplated work, and to satisfy himself as to the actual nature of conditions to be encountered. It was also shown that the contract informed the plaintiff that any statements related to test logs and the results of such testing were merely the opinion of the highway department, which assumed no responsibility for the sufficiency or accuracy of the test results or other preliminary investigations of the nature of subsurface conditions.

In summary, the court concluded:

> [W]e hold that "when there is no misrepresentation of factual matters within the state's knowledge or withholding of material information as to the nature of the tests which resulted in the state's findings, the contractor may not claim in the face of a pertinent disclaimer that the presentation of the information, or a reasonable summary thereof, amounts to a warranty of the conditions that will actually be found." (Citations omitted.)

IV. CONCLUSION

The case law dealing with the legal effect of representations as to subsurface conditions is not infrequently viewed as presenting a bleak canvas of confusion. It is submitted that this is not

required, and that the cases hereinbefore reviewed and discussed yield certain clear instruction as to positive guidelines that should be followed, both in the preparation of highway construction contracts in such manner as to provide protection for the state, and in handling of the defense of suits brought against the state for breach of warranty.

A. PREPARATION OF CONTRACTS

In the preparation and award of highway construction contracts the following considerations should be kept in mind:

1. Care should be taken to avoid presenting disclosures of information in such manner that they are susceptible of being legitimately interpreted or construed to be positive assertions of fact. Although this may present a measure of difficulty in some instances, the difficulty is far from insurmountable, being principally one of terminology. It has been seen in the cases reviewed herein that the courts place reliance on and give emphasis to the use of such phrases as "approximate only," "suggestive only," "estimates only," "merely indications," and words of like import.

2. At the same time, equal care must be taken to avoid the pitfall of nondisclosure. Failure to disclose pertinent information in possession of the state has, as shown herein, proved fatal in numerous cases.

3. The cases illustrate that specific disclaimers of particular critical representations are given weight by the courts. Insofar as the general exculpatory clause is concerned, the most effective means of making the same binding is to require in clear and unequivocal language that the contractor shall, on the basis of his own independent investigation, *satisfy himself* that actual subsurface conditions are the same as represented. It is perhaps particularly useful to require him to attest that he has so satisfied himself on the basis of his own independent investigation.

4. To make the requirement of an independent investigation fully binding on the contractor, it is essential that he be given sufficient time to make a thorough investigation. It is recognized that in actual practice this is not always the case, and it is emphasized that the courts have frequently seized on this fact to relieve the contractor of the obligation to make an independent investigation required by the terms of the contract.

5. Care should be taken to avoid ambiguities and inconsistencies in the contract, plans and specifications, etc., because the contract may be construed against the state and in favor of the contractor.

6. It is of chief importance that the state be able to demonstrate that it has acted in good faith in all its dealings with the contractor.

B. DEFENSE OF LAWSUITS

In preparing the defense of a suit against the state for breach of warranty as to subsurface conditions, the following questions should be considered, and the responses thereto carefully analyzed:

1. Does the contract contain language that may legitimately be construed as constituting a positive representation or representations, or does the contract, on the other hand, clearly and forcefully state that the words and figures therein employed are estimates or approximations only?

2. Do the representations relate solely to specific locations, or are they so worded that a legitimate inference may be drawn that they are intended to represent conditions over the entire construction area?

3. Are the representations contained in the contract material and essential to the bargain between the state and the contractor?

4. Did the contractor in fact rely on the representations to his injury and detriment?

5. Does the contract contain a specific disclaimer of the accuracy of particular representations, or is disclaimer restricted to a general exculpatory clause covering the whole project?

6. Does the contract require that the contractor make his own independent investigation and satisfy himself that actual conditions do not differ from those as represented? If so, is he required to so attest?

7. Was the contractor given ample and sufficient time to make his own independent investigation as to actual subsurface conditions?

8. Does the contract contain ambiguities or inconsistencies that might be construed against the state?

9. Has there been a full disclosure of all pertinent information in possession of the state without any concealment or exaggeration of known conditions?

10. Did the state act in whole good faith in all its dealings with the contractor and refrain from making any knowing misrepresentations?

In the adjustment of equities between the state and the contractor and the determination of "who should bear the loss,"[3/] each and all of the foregoing tests have been applied by the courts with more than a fair degree of consistency, as shown by the cases hereinbefore set forth. It is by the application of these tests, none of which should be slighted or overlooked, that determination is made whether or not the record read as a whole supports the conclusion that the contractor was justified in relying on the state's representations, and whether or not a warranty will be implied that subsurface conditions as found will be as represented.

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APPLICATIONS

The foregoing research should prove helpful to highway administrators, their legal counsels, right-of-way engineers, advance planning staff, and construction engineers. Highway officials are urged to review their own right-of-way acquisition programs, advance acquisition procedures, and specification preparation process to determine how this research can effectively be incorporated in a meaningful way. Attorneys should find this paper especially useful in their work as an easy and concise reference document in construction contractual litigation cases.