

## Disputes Review Board Recommendation

June 16, 2016

**Mr. Patrick Flynn**  
**Ranger Construction**  
**101 Sansbury's Way**  
**West Palm Beach, FL 33411**

**Mr. Greg Dutton**  
**Volkert**  
**207 NW 2nd Street**  
**Okeechobee, FL 34972**

**Re: FN 196904-2-52-01**  
**SR-70 Widening from E of NE 31st Ave to E of NE 80th Ave.**  
**Disputes Review Board Recommendation**  
**Piling Underrun at Mosquito Creek Bridge**

Gentleman:

Ranger Construction Industries (RCI) and their Bridge Subcontractor, Leware Construction Company (LCC) requested a hearing before the Disputes Review Board concerning the underrun of piling on the project, specifically at the Westbound Mosquito Creek Bridge. Summaries of the FDOT's and RCI/LCC's positions were forwarded to the Board, and later, rebuttals to the positions expressed in the position papers. A hearing was held on June 2, 2016.

### **ISSUE:**

Is the Contractor entitled to additional compensation for pile installation at Bridge No. 910100, SR 70 Westbound over Mosquito Creek?

### **CONTRACTOR'S POSITION**

*"The 2014 Standard Specification Section 455B provides requirements for Piling. Test piles are exploratory in nature and are to be driven harder, deeper, and to a greater bearing resistance than that required for the permanent piling (455-5.12) (Tab A).*

*Structures Design Guidelines (SDG 3.5.9 [10.7.3.3] and 3.5.10 [10.7.9] recommend that the plan test pile lengths should be 15' longer than the estimated length of production piles (Tab B).*

*The 2014 Edition of the Basis of Estimates Manual also states that the design quantity is to be the total anticipated length of pile without allowances for splices, preforming, etc. (Tab C).*

*The Final Geotechnical Report for Structures (Tab D) prepared by Geotechnical and Environmental Consultants, Inc. (GEC), Page 14, Table 11 provides anticipated pile tip elevation of -70 and production pile lengths of 102' for the Mosquito Creek bridge 24" PCP.*

*The contract documents require that the Contractor submit a Pile Driving Installation Plan (PIP) in accordance with Specification 455-10 (Tab A). This document is prepared to demonstrate that the Contractor's equipment is suitable to install the piling in accordance with the Pile Data Table, Foundation Layout sheets, and the Specifications. The cranes submitted were capable of handling the test pile lengths, and therefore would be perfectly suited for installation of piling at*

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*the anticipated lengths. Our PIP was reviewed and accepted by the Department prior to beginning the work (Tab E).*

*Bridge construction on the project began with piling for the westbound bridge at Canal L-36N (910099). Test piles (24" PCP) were driven at all substructure locations. End Bent (EB) test piles were 65' long and Intermediate Bent (IB) test piles were 120' long. FDOT authorized pile lengths were 55' and 50' for the EBs and 95' for the IBs. The total authorized length for Bridge 910099 was 95.2% of the plan quantity. The authorized lengths were consistent with expectations.*

*Upon completion of piling at Canal L-36N, pile driving operations were begun for the westbound bridge at Mosquito Creek (910100). Test piles (24" PCP) were again driven at all substructure locations. End Bent (EB) test piles were 115' long and Intermediate Bent (IB) test piles were 120' long. The 120' long test pile in IB 2 was driven first. Driving was stopped with a tip elevation of -67.6, or 100' below cutoff elevation. The remaining four 115' and 120' test piles were only driven to tip elevation between -18.4 and -20.1, or 50' to 52' below cutoff elevation. The authorized pile lengths were then set at 47' for the EBs and 47' & 50' for the IBs (Tab F). Plan, anticipated, authorized, and driven lengths are graphically depicted (Tab G). The total authorized production pile lengths for Bridge 910100 was 46.8% of the plan quantity. The pile driving work for Bridge 910100 as altered by authorized lengths differs materially from that included in the original proposed construction plans and as anticipated based on FDOT guidelines and policy.*

*The contract documents provided anticipated pile lengths for each structure based on the specified test pile lengths. To further validate the anticipated pile lengths, the adjacent bridge widening for the eastbound Mosquito Creek bridge provided predetermined lengths for intermediate bent piling of 120' in accordance with SDG 3.5.9 [10.7.3.3] B (Tab B). With the information provided it would be unreasonable at time of bid to expect production pile lengths less than half of that shown in the plans. Such a large disparity is evidence of a "significant change". Specification 4-3.1 provides direction regarding a significant change (Tab H). In determining whether the work as altered differs materially, one must ask the following question: Would Leware have bid the job differently had the test pile lengths been established to drive to a tip elevation of -20 in lieu of -85 as anticipated? Clearly the answer is "Yes"; had we known the pile lengths for Westbound Mosquito Creek would be less than half the quantity shown in the plans we would have adjusted our bid unit prices accordingly to cover our costs.*

*The effort to provide survey control did not change. The equipment required to drive the test pile did not change. The size and configuration of the pile template did not change. The number of pieces of piling per foundation unit did not change. The labor to predrill and set the piling did not change. The number of times the hammer was raised and set on each pile did not change. The number of cushion pads did not change. The number of piling to cut off did not change. The only change due to the excessively short piling was the actual material cost and the minimal reduction in time for driving.*

*When the method of measurement and payment is based on the material length authorized by the Department, when this quantity is over a 50% reduction from the anticipated amount, but yet the work effort is unchanged, the Department receives a windfall savings and the Contractor suffers a tremendous monetary loss. Therefore, the Department is not entitled to a windfall savings and the Contractor should not suffer a loss. With fair and equitable additional*

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*compensation allowed to the Contractor, the Department will still realize a substantial contract savings without a reduction in design life, quality, or service.”*

### **FDOT’S POSITION**

*“Per Article 4-3.1, a “significant change” does not exist because:*

*1) Per part “a”, the Engineer never determined that the character of the work as altered (quantity/length reduction) differed materially in kind or nature from that involved or included in the original proposed construction. The type of pile (square concrete), pile size (24”), and subsurface conditions remained the same.*

*2) Per part “b”, the pay item is not a Major Item of Work which is defined as any item of work having an original Contract value in excess of 5% of the original Contract amount. The plan amount for 24” pile is 2.9% of the total contract amount.*

- No direction was given to the contractor at any time regarding means or methods.*
- Pile driving effort was reduced (less pile transportation costs, less driving, less wear and tear on the equipment, less time/labor spent on the operation, less fuel consumed). These considerations were not mentioned by the contractor in their request for equitable adjustment.*
- The Geotechnical Engineer sized the test pile lengths for a worst case to account for fairly unpredictable driving in medium-dense sands and cemented sands with shell material based on the available core borings. Capacity estimation software has difficulty modeling cemented sands with shell as it is dependent upon the amount of shell present and the size of the hammer used to drive the piles. Since neither of these data points are known with certainty, the Engineer is typically conservative and plans for the worst case scenario to ensure a factor of safety is achieved with pile capacity.*
- Contractor bid the project for driving very long test piles. A crane of appropriate size was necessary to be on site to drive the long test piles.*
- Three of the four structures being constructed have piles of 95' and greater. Only the Mosquito Creek Bridge piles experienced an actual quantity change less than 50% of the estimated (bid) quantity. The other three bridge’s actual pile lengths exceeded 75% of the estimated pile lengths.*
- Since the determination by the Engineer to this point has been to deem that there has been no significant change in the character of the work and to reject the request, the contractor is obligated to “establish by clear and convincing proof that the determination by the Engineer was without any reasonable basis”. (Applicable Specification: 4-3.1)*
- The Contractor appears to be attempting to avoid the consequences of the risk involved in bidding this item.*

*The contract provisions were reviewed in detail to determine if any entitlement exists. The issue was escalated in accordance with the planned project escalation matrix 3 times – Each time the*

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*request for a revised price and/or entitlement for additional compensation was denied for a lack of contractual basis for the claim.*

*There are three major points to be made:*

*The first is that per 4-3.1 General (a), the determination by the Engineer shall be conclusive. If the determination is challenged by the Contractor in any proceeding, the Contractor must establish by clear and convincing proof that the determination by the Engineer was without any reasonable basis. The Contractor has already failed to establish this during three separate attempts at escalation. The first attempt by the contractor to submit detailed information was with the "Pile Quantity Price Request" dated 02/04/16.*

*The second is that the pay item is not a Major Item of Work as the specifications define it.*

*The third is that per 455-5.14.2.1, Structures with test piles: It is stated that the Engineer will determine final pile lengths in the field which may vary significantly from the lengths or quantities shown in the plans. This is certainly the case with this issue.*

*Another intangible point to be made is the lack of consideration by the contractor for reduced pile driving effort associated with shorter production piles: Less pile transportation costs, less driving, less wear and tear on the equipment, less time/labor spent on the operation, and less fuel consumed.*

*The Department requests the Board to determine that the contractor is not entitled to a price adjustment and/or additional compensation from the Department for production pile lengths that were shorter than originally estimated."*

### **Contractors Rebuttal**

*"The Department's position is stated in eight points beginning on Page 8 of their Position Paper and repeated below. Leware responses follow:*

*Per Article 4-3.1, a "significant change" does not exist because:*

*1) Per part "a", the Engineer never determined that the character of the work as altered (quantity/length reduction) differed materially in kind or nature from that involved or included in the original proposed construction. The type of pile (square concrete), pile size (24"), and subsurface conditions remained the same.*

*The Department has never given any reasonable interpretation of "differs materially in kind or nature" and has discounted the use of "or" as written in 4-3.1 (a). In essence the Department's determination of no material change is simply based on – because we said so. As Leware stated in its position paper, within a contract, something is "material" if, by virtue of its occurrence, it would have influenced or altered decisions made by the individual entering into the contract. Clearly, had we known the pile lengths would be so grossly reduced, our unit prices would have been different to recover the cost.*

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2) Per part “b”, the pay item is not a Major Item of Work which is defined as any item of work having an original Contract value in excess of 5% of the original Contract amount. The plan amount for 24” pile is 2.9% of the total contract amount.

With the inclusion of “or” as written in 4-3.1 (a), the (b) portion of the specifications does not apply and has not been used as a basis for any additional compensation request.

- No direction was given to the contractor at any time regarding means or methods.

While no specific direction was given, the Department does require that the Contractor submit a Pile Driving Installation Plan (PIP) listing their proposed means and methods. The Department reviews, comments on, and accepts the Plan prior to beginning the work.

- Pile driving effort was reduced (less pile transportation costs, less driving, less wear and tear on the equipment, less time/labor spent on the operation, less fuel consumed). These considerations were not mentioned by the contractor in their request for equitable adjustment.

The amount of entitlement is not part of the issue and was not a deciding factor in Department denial. If it would have been, there would be no issue today as we would have negotiated a fair and equitable settlement.

- The Geotechnical Engineer sized the test pile lengths for a worst case to account for fairly unpredictable driving in medium-dense sands and cemented sands with shell material based on the available core borings. Capacity estimation software has difficulty modeling cemented sands with shell as it is dependent upon the amount of shell present and the size of the hammer used to drive the piles. Since neither of these data points are known with certainty, the Engineer is typically conservative and plans for the worst case scenario to ensure a factor of safety is achieved with pile capacity.

Granted, some Geotechnical Design Engineers are more conservative than others. In bidding a project the Contractor has no knowledge of discussions regarding “worst case”. We can only assume that production lengths will be reasonably close to the established plan quantity, a quantity that was based on the test pile lengths and in accordance with Structures Design Guidelines and the Basis of Estimates. This is exactly the reason the Department includes a specification such as 4-3.1 (a); so as to remove the risk to the Contractor of certain design assumptions and yet allow the Contractor to be able to recover his costs if such design assumptions don’t come to realization. If specification 4-3.1(a) was not included in the contract and not available to Contractors to utilize in exactly this type of situation, overall industry-wide bids would be much higher due the risk, i.e. dollars, a Contractor would now have to include in each bid.

- Contractor bid the project for driving very long test piles. A crane of appropriate size was necessary to be on site to drive the long test piles.

Agreed. Equipment requirements were submitted within the PIP. The equipment was sized and the associated costs in our bid were based on the information shown in the plans.

- Three of the four structures being constructed have piles of 95' and greater. Only the Mosquito Creek Bridge piles experienced an actual quantity change less than 50% of the estimated (bid) quantity. The other three bridge’s actual pile lengths exceeded 75% of the estimated pile lengths.

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*We agree. While the third new bridge piling have not yet been driven, the Department's assumption that the lengths will be greater than 95' supports our position that it was not reasonable for us to anticipate the grossly reduced pile lengths (less than 50% of plan quantity) that were ultimately driven at the WB Mosquito Creak Bridge.*

- *Since the determination by the Engineer to this point has been to deem that there has been no significant change in the character of the work and to reject the request, the contractor is obligated to "establish by clear and convincing proof that the determination by the Engineer was without any reasonable basis". (Applicable Specification: 4-3.1)*

*The Department also has an obligation to provide clear evidence why 4-3.1 (a) does not apply other than just saying "Denied". This has not been done. The Department has taken the position that the issue is not a "significant change" based solely on 4-3.1 (b). Using 4-3.1 (b) is simple math that can be done without any reasonable consideration. Specification 4-3.1 (a) clearly calls for the question: "Would Leware have bid the job differently had the test pile lengths been established to drive to a tip elevation of -20 in lieu of -85 as anticipated? Clearly the answer is "Yes".*

- *The Contractor appears to be attempting to avoid the consequences of the risk involved in bidding this item.*

*Leware has built or has under contract 726 bridges on 520 projects over the past 46 years. Risk is part of our business. To suggest that we are attempting to avoid the consequences of risk is insulting and unprofessional. Beyond that, it appears the Department does not understand what "risk" is and how it is allocated in its own construction contracts; however, we are confident the Board, based on their numerous years of experience in the construction industry, does. We are sure the Board is well aware of the history of specification 4-3.1(a) and how and why it is contained in most every construction contract in the nation, not just FDOT. Going back to the early 1900's starting with U.S. vs. Spearin (known today as the Spearin Doctrine) and subsequent precedences, owners use contract provisions such as 4-3.1(a) to make contracts more "risk neutral". Meaning, without such provisions, the Contractor would take on the risk of these unforeseen and unreasonably expected occurrences in their base bid price since there was no contract provision allowing recovery. This led bid prices to include all risk costs, but in more instances than not, the risk event did not occur resulting in the owner paying for something that did not happen. With the inclusion of a "materially differing" provision, the risk of such occurrence no longer needs to be absorbed solely by the Contractor and thus included in the bid leading to higher bids. Ultimately, the owners, in this case FDOT, get lower bid prices across the board because a contractor knows he does not need to include the risk, i.e. \$, in his bid but still has a way to recover his costs if such an event were to occur. Therefore, it is not Leware "attempting to avoid the consequences of the risk". We are simply seeking an adjustment to the payment item to recover costs as a result of the very type of occurrence specification 4-3.1(a) was intended to cover.*

*The Department's Conclusion is stated in three points on Page 10 of their Position Paper.*

*Responses follow:*

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*The first is that per 4-3.1 General (a), the determination by the Engineer shall be conclusive. If the determination is challenged by the Contractor in any proceeding, the Contractor must establish by clear and convincing proof that the determination by the Engineer was without any reasonable basis. The Contractor has already failed to establish this during three separate attempts at escalation. The first attempt by the contractor to submit detailed information was with the "Pile Quantity Price Request" dated 02/04/16.*

*Conclusive determination must be supported by reason. The Department has not offered a reason for denial other than 4-3.1 (b) (major item of work). Article 4-3.1 (a) (character of work... differs) has not been addressed or defined by the Department. The Department's denial in three separate escalation meetings with the decision-maker being a Department employee does not strengthen or affirm the denial by the project personnel. This is the exact reason a Dispute Review Board is established. We have provided sound reasoning, fact analysis and contractual basis for finding entitlement on this issue. Conversely, the Department's lack of all three is clear and convincing proof their denial is without any reasonable basis.*

*The second is that the pay item is not a Major Item of Work as the specifications define it. Request for additional compensation is not based on Major Item of Work definition.*

*The third is that per 455-5.14.2.1, Structures with test piles: It is stated that the Engineer will determine final pile lengths in the field which may vary significantly from the lengths or quantities shown in the plans. This is certainly the case with this issue.*

*While the Department has continued to focus 4-3.1(b) and the definition of Major Item of Work they have neglected to acknowledge the threshold for "significant" as being an increase or decrease of 25%. Anything greater than that would be unanticipated. Obviously, the 53% underrun in piling for Mosquito Creek WB is more than "significant" and could not be anticipated.*

*Another intangible point to be made is the lack of consideration by the contractor for reduced pile driving effort associated with shorter production piles: Less pile transportation costs, less driving, less wear and tear on the equipment, less time/labor spent on the operation, and less fuel consumed.*

*Again, the amount of entitlement or method of preparation is not part of the issue presented to the Board. The issue is simply entitlement.*

*Specification 4-3.1(a) is included in the contract for exactly this type of situation. Our position paper and rebuttal establish the essential elements to prove entitlement on this issue. The Department has offered no such basis for their denial."*

### **Department's Rebuttal**

*"• Page 3 (Conclusion), Paragraph 1: "The contract documents provided anticipated pile lengths for each structure based on the specified test pile lengths. To further validate the anticipated pile lengths, the adjacent bridge widening for the eastbound Mosquito Creek bridge provided predetermined lengths for intermediate bent piling of 120' in accordance with SDG 3.5.9 [10.7.3.3] B (Tab B). With the information provided it would be unreasonable at time of bid*

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*to expect production pile lengths less than half of that shown in the plans. Such a large disparity is evidence of a 'significant change'."*

*The specifications define a significant change and this issue does not meet the definition. The contractor is arguing that the pile length underrun differs materially from the original plans. Specification 4-3.2 (a) addresses a change in the nature of the material, not in its quantity.*

- *Page 3 (Conclusion), Paragraph 2, 1st - 8th Sentence: "The effort to provide survey control did not change. The equipment required to drive the test pile did not change. The size and configuration of the pile template did not change. The number of pieces of piling per foundation unit did not change. The labor to predrill and set the piling did not change. The number of times the hammer was raised and set on each pile did not change. The number of cushion pads did not change. The number of piling to cut off did not change."*

*These statements support the fact that the driving of shorter length piles did not change materially "in nature or in kind" from the original intent of the contract for this item. In determining if an item suffers a "significant change" due to a change in quantity but does not change materially in nature or in kind [i.e. 4-3.2 (a) is not satisfied], 4-3.2 (b) is then addressed. If the item's change in quantity does not then satisfy 4-3.2 (b), then a "significant change" does not exist and there is no entitlement to an alteration of the unit price of the item."*

### **Dispute Review Board Findings & Discussion**

Specifications submitted by the parties were as follows:

#### **4-3 Alteration of Plans or of Character of Work.**

4-3.1 General: The Engineer reserves the right to make, at any time prior to or during the progress of the work, such increases or decreases in quantities, whether a significant change or not, and such alterations in the details of construction, whether a substantial change or not, including but not limited to alterations in the grade or alignment of the road or structure or both, as may be found necessary or desirable by the Engineer. Such increases, decreases or alterations shall not constitute a breach of Contract, shall not invalidate the Contract, nor release the Surety from any liability arising out of this Contract or the Surety bond. The Contractor agrees to perform the work, as altered, the same as if it had been a part of the original Contract.

The term "significant change" applies only when:

(a) The Engineer determines that the character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction, or

(b) A major item of work, as defined in 1-3, is increased in excess of 125% or decreased below 75% of the original Contract quantity. The Department will apply any price adjustment for an increase in quantity only to that portion in excess of 125% of the original Contract item quantity in accordance with 4-3.2 below. In the case of a decrease below 75% the Department will only apply a price adjustment for the additional costs that are a direct result of the reduction in quantity.



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In (a) above, the determination by the Engineer shall be conclusive. If the determination is challenged by the Contractor in any proceeding, the Contractor must establish by clear and convincing proof that the determination by the Engineer was without any reasonable basis.

**Board Finding** – Clearly “item (b)” above is not an issue. Both parties agree to this. With respect to “item (a)”, the Board does not believe the Contractor has provided clear and convincing evidence that “*the work as altered differs materially in kind or nature from that involved or included in the original proposed construction.*” “The work” itself has not differed “materially in kind or nature”. The pile driving operations were performed as anticipated except for quantity. No additional steps were needed, such as using a punch to break through a rock ledge, or casing and grouting the holes due to sandy conditions.

### **455-5.14 Pile Lengths:**

455-5.14.1 Test Pile Length: Provide the length of test piles shown in the Plans or as directed by the Engineer.

### **455-5.14.2 Production Pile Length:**

455-5.14.2.1 Structures with Test Piles: When test pile lengths are shown in the Plans, the production pile lengths are based on information available during design and are approximate only. The Engineer will determine final pile lengths in the field which may vary significantly from the lengths or quantities shown in the Plans.

**Board Finding** – This specification clearly states that production pile can vary significantly from the quantities stated in the plans. It does not address compensation if this situation occurs (one way or the other). That is found in other areas of the contract.

**455-5.14.3 Authorized Pile Lengths:** The authorized pile lengths are the lengths determined by the Engineer based on all information available before the driving of the permanent piles, including, but not limited to, information gained from the driving of test piles, dynamic load testing, static load testing, supplemental soil testing, etc. When authorized by the Department, soil freeze information obtained during set checks and pile redrives may be used to determine authorized pile lengths for sites with extreme soil conditions. The Contractor may elect to provide piling with lengths longer than authorized to suit his method of installation or schedule. When the Contractor elects to provide longer than authorized pile lengths, the Department will pay for the furnished length as either the originally authorized length or the length between cut-off elevation and the final accepted pile tip elevation, whichever is the longer length.

Within five working days after driving all the test piles, completing all load tests, completing all redrives, and receiving all test reports, the Engineer will furnish the Contractor an itemized list of authorized pile lengths. Use these lengths for furnishing the permanent piling for the structure. If the Contractor is willing to start his pile driving operations in zones consisting of at least four test piles designated by the Engineer, and if the Contractor so requests in writing at the beginning of the test pile program, the Department will furnish pile lengths for these designated phases within five working days after driving all the test piles, completing all load tests, completing all redrives, and receiving all test reports for those designated zones. The Engineer will furnish the driving criteria for piles within three working days of furnishing pile lengths.

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On multiple phase projects, the Engineer will not furnish pile lengths on subsequent phases until completing the piling on initial phases.

### **455-11 Method of Measurement (All Piling).**

#### 455-11.2 Prestressed Concrete Piling:

455-11.2.1 General: The quantity to be paid for will be the length, in feet, of prestressed concrete piling furnished, driven and accepted according to the authorized lengths list, including any additions and excluding any deletions thereto, as approved by the Engineer.

455-11.2.2 Furnished Length: The furnished length of precast concrete piles will be considered as the overall length from head to tip. Final pay length will be based on the casting length as authorized in accordance with 455-5.14.3 subject to provisions of 455-11.2.3 through 455-11.2.8, 455-11.8, 455-11.9 and 455-11.13.

455-11.2.3 Build-ups: The lengths of pile build-ups in excess of 2 feet, authorized by the Engineer, measured from the plane of cutback or the joint between the sections, to head of build-up, will be included in the quantities of piling.

455-11.2.4 Piles Requiring Cut-offs: No adjustments in the length, in feet, of piling will be made if cut-offs are required after the pile has been driven to satisfactory bearing.

### **455-12 Basis of Payment (All Piling).**

455-12.2 Prestressed Concrete Piling: Price and payment will be full compensation for the cost of furnishing and placing all reinforcing steel, predrilled holes, furnishing the material for and wrapping pile clusters with wire cable where so shown in the Plans and grouting of preformed pile holes when shown in the Plans.

455-12.4 Test Piles: Price and payment will be full compensation for all incidentals necessary to complete all the work of this item except splices, build-ups, pile extractions and preformed pile holes authorized by the Engineer and paid for under other pay items or payment methods. The cost of all additional work not listed above necessary to ensure required penetration and attain required bearing of the test piles will be included in the price bid per foot of test pile, including driving and all other related costs.

Further, in their rebuttal, RCI/LCC introduced case law, specifically *U S v. SPEARIN*, commonly known as The Spearin Doctrine. While the record is too voluminous to cite here, the Board selected the following excerpts for consideration:

- *“Where one agrees to do, for a fixed sum, a thing possible to be performed, he will not be excused or become entitled to additional compensation, because unforeseen difficulties are encountered... But if the contractor is bound to build according to plans and specifications prepared by the owner, the contractor will not be responsible for the consequences of defects in the plans and specifications.”*

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- *“This responsibility of the owner is not overcome by the usual clauses requiring builders to visit the site, to check the plans, and to inform themselves of the requirements of the work...”*

While the Board accepts the findings in Spearin we recognize that this is not part of the contract. The Board believes however that the spirit of the Owner’s specifications does not intend that the contractor be responsible for the unknown. As examples, 4-7.3 (Differing Site Conditions), and 8-4.9 (Contaminated Materials) address additional compensation for the unknown. In this contract, the planned pile lengths were established conservatively long by the Dept. with consideration for the unpredictable (unknown) behavior of the soils.

### **Additional Findings and Comments**

1. When specifically queried during the hearing LCC stated that this issue was not a case of Differing Site Conditions. Mr. Waugh did state that it was unforeseen.
2. LCC stated that they had no problem with the Geotechnical engineer’s recommendations. A copy of the Geotech’s pre-bid report indicates the following:

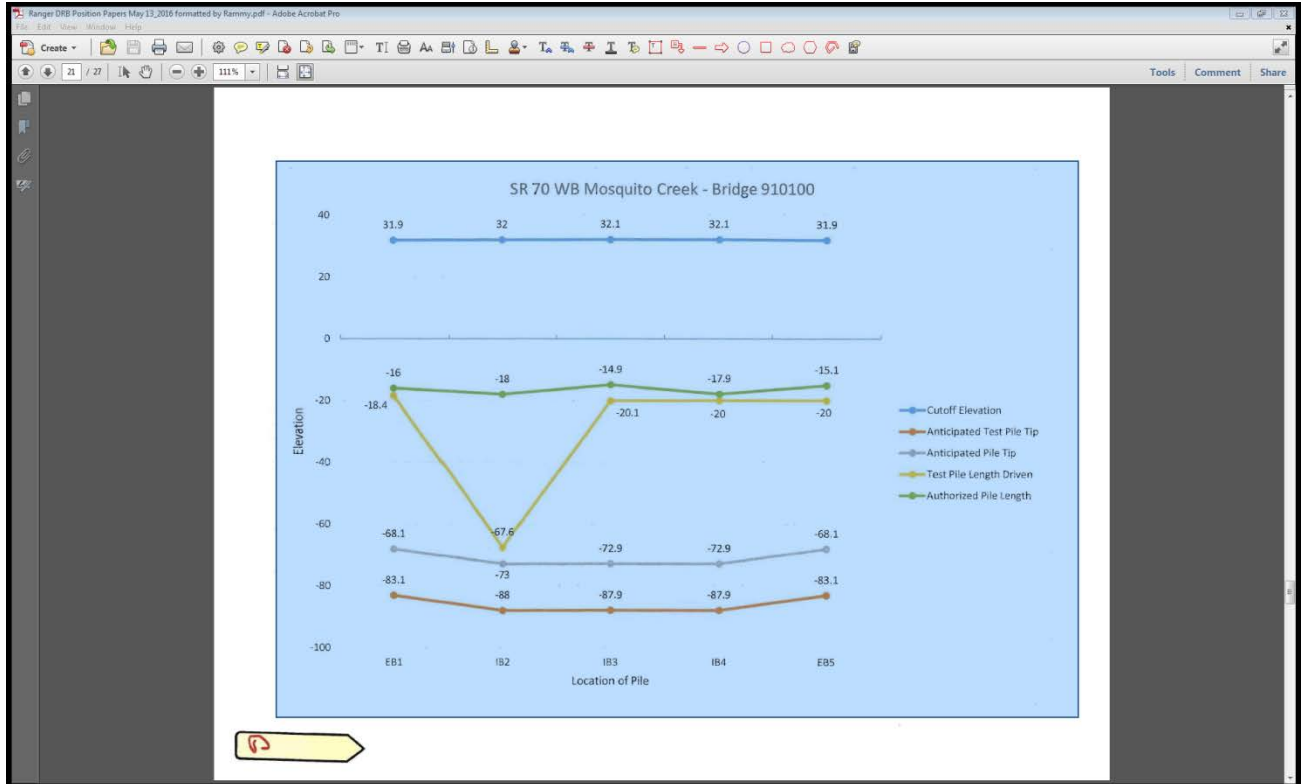
Mosquito Creek: 24-inch {WB} & 18-inch {EB} Square PPC Pile Design Parameters

Location	Bridge No.	Bent No.	Nominal Bearing Resistance (tons)	Anticipated Pile Tip Elevation (ft NGVD29)	Minimum Pile Tip Elevation (ft NGVD29)	Pile Cut-Off Elevation (ft NGVD29)	Required Preform Elevation (ft NGVD29)	Anticipated Production Pile Length (ft)
Mosquito Creek (WB)	910100	EB 1 & 5	193	-70	-10	+31.9	-5	102
		IB 2	193	-70	-10	+32.0	-5	102
		IB 3	193	-70	-10	+32.1	-5	102
		IB4	193	-70	-10	+32.1	-5	102
Mosquito Creek (EB)	910095	EB 1 & 4	80	-20	-10	+31.9	-5	52
		IB 2 & 3	136	-75	-10	+32.0	-5	107

This report was not contained in the contract documents; but, along with verbal testimony, did explain the conservative approach utilized when establishing the quantity of production pile in the bid documents. Again, this was not part of the bid documents and the Contractor had no knowledge of this prior to bid.

3. The Board asked LCC if there were any other specifications or contractual language that might apply to the issue and the answer was “No”.
4. A graphical representation of the actual vs. planned pile lengths was supplied by LCC (see next page)

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Based on the testimony and evidence provided the Board has no choice but to recommend **No Entitlement**.

Pursuant to the Three Party Agreement:

*“The recommendations will be based on the pertinent Construction Contract provisions and the facts and circumstances involved in the dispute or claim. Either the DEPARTMENT or the CONTRACTOR, or both, may seek reconsideration of a recommendation to the BOARD. However, reconsideration will be allowed only when there is new evidence to present.”*

This recommendation was not unanimous and a Dissenting Opinion is attached hereto.

The Board reminds the parties that they can continue to negotiate this issue regardless of the Board’s recommendation should other facts and/or specifications be deemed pertinent to the situation.

This Board sincerely appreciates the cooperation of all parties and the information presented for its review in making this recommendation.

Please remember that a response to the DRB and the other party of your acceptance or rejection of this recommendation is required within 15 days. Failure to respond constitutes an acceptance of this recommendation by both parties.

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I certify that I have participated in all of the meetings of this DRB regarding the issue and concur with the findings and recommendations.

Respectfully Submitted,

Disputes Review Board  
Rammy Cone; DRB Chairman  
Ron Klein, DRB Member  
Pat McCann; DRB Member

SIGNED FOR AND WITH THE CONCURRENCE OF ALL MEMBERS:



Rammy Cone  
DRB Chairman

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### Dissenting Opinion

This Board Member does not agree with the Majority Recommendation. The reasoning is as follows:

The 3 Party Agreement states in part:

*“The recommendations will be based on the pertinent [emphasis added] Construction Contract provisions and the facts and circumstances involved in the dispute or claim.”*

The Majority discounted any other provisions to the Contract other than what was presented at the DRB Hearing. This Member believes that all Contract provisions as well as any laws may be applied as a resource to be used when making a recommendation. As such, the following opinions are offered and believed to be “*pertinent*” to the issue:

Section 4-4 of the Standard Specifications states:

#### *4-4 Unforeseeable Work.*

*“When the Department requires work that is not covered by a price in the Contract and such work does not constitute a “Significant Change” as defined in 4-3.1, and the Department finds that such work is essential to the satisfactory completion of the Contract within its intended scope, the Department will make an adjustment to the Contract. The Engineer will determine the basis of payment for such an adjustment in a fair and equitable amount.”*

Clearly, neither party could have predicted that the piling would so drastically underrun. However, when bidding a project, a Contractor must make many assumptions, one of which is that the plans and specifications are accurate. In this case they were not. The plans were in error. Much discussion was made during the Hearing that the Geotechnical Engineer used a conservative approach in determining the production pile lengths. This is not germane to the issue at hand. It was not mentioned in the contract and was not part of the contract. One can understand his conservative approach but the fact remains it was in error and the contractor should not be held responsible.

Section 4-3.1 was referred to in the presentation by both parties and conflicting opinions were voiced. This section clearly grants the Engineer the right to make any changes to the work for successful completion thereof. It goes on to discuss *substantial change* and *significant change*. The disagreement between the parties involves the terminology “...*character of the work as altered differs materially in kind or nature from that involved or included in the original proposed construction...*” The Contractor believes it is a significant change; the Department believes that it is not. This bears the question: “*What is the definition of character of the work?*” The obvious answer is that the Contractor was required to supply labor, equipment, material, etc. to drive a certain number of piling. He bases his bid on the aforementioned scope (character); he figures the cost, applies markup, and arrives at a fixed price which he then divides by the plan quantity to attain the unit price. When the plan quantity goes down, the unit price goes up.

Several synonyms for the word “*character*” are: “*nature, make-up, disposition, and atmosphere*”. This Member agrees that the physical “*nature*” of the work has not changed. However, one could argue that by lowering the quantity of piling by 53% changed the “*disposition*” of the situation enough that the pricing was affected through no fault of the Contractor. Therefore it is a change to the scope of work.

## Disputes Review Board Recommendation

Section 4-3.2 of the specifications is also relevant. The first paragraph states:

*“The Engineer reserves the right to make alterations in the character of the work which involve a substantial change in the nature of the design or in the type of construction or which materially increases or decreases the cost or time of performance. Such alteration shall not constitute a breach of Contract, shall not invalidate the Contract or release the Surety.”*

Again, the Engineer is well within his rights to decrease the quantity by 53%. However, that change is indeed **substantial** and increased the unit cost of performance.

With regard to Spearin, the Majority believes that it is not part of the Contract. This Member disagrees as Spearin is a decision of the United States Supreme Court. The Court basically said that there is an implied warranty by the owner as to the accuracy of the plans and specs. As everyone knows, this is the court of last appeal; in essence it is law. Further, Standard Specification 7-1.1 states in part:

*“Become familiar with and comply with all Federal, State, county, and city laws, by-laws, ordinances, and regulations that control the action or operation of those engaged or employed in the work or that affect materials used.”*

In summary, the Minority believes the Contractor is **Entitled** to additional compensation for the work. The change was significant and substantial. Additionally, this Member opines that, should the Contractor decide to pursue this issue through other means (i.e. arbitration or litigation), this recommendation will be overturned. It is therefore recommended that the two parties enter into negotiations for settlement.