

DISPUTE REVIEW BOARD RECOMMENDATION

June 16, 2000

Faxed June 16, 2000

Mr. Gene Tharpe
PBS&J Construction Services, Inc.
11213 N. Nebraska Avenue
Building C-1
Tampa, FL.

Mr. Jeff Nelson
David Nelson Construction
3483 Alternate 19
Palm Harbor, FL. 34683

Re: Financial Project No. 258410-1-52-01, etc.
SR 93 (I-275) Widening from South of Busch Blvd. to South of Fletcher Ave.
Concrete Rehabilitation and Widening
Seventh District
Issue # 1

Dear Sirs:

The Florida Department of Transportation (Department) and David Nelson Construction Company (DNCC) requested a hearing concerning sealing of concrete pavement joints. Summaries of the Department's and DNCC's positions were delivered to the Disputes Review Board (DRB), and a hearing was held on May 22, 2000.

It should be noted that May 22, 2000 was originally scheduled as a normal DRB Meeting. The Chairman had been made aware several days prior to the meeting that the Department and DNCC had reached an impasse with regard to the joint dispute. Both DNCC and the Department were anxious for this matter to be heard as soon as possible as it was their feeling that it was in the project's best interest. The parties presented their respective positions at the meeting. Upon completion the Board took a short recess and, upon reconvening the meeting, suggested that if both parties agreed, the Board could make a recommendation based on the evidence and testimony presented at the meeting. The Department and DNCC agreed to this and a deadline of June 2, 2000 was imposed upon the parties to issue written rebuttals (if desired) to the Board.

ISSUE: The dispute as represented by the parties is comprised of four parts:

1. What type of joint is required?
2. When should the joints be developed?
3. When should the joints be sealed?
4. How are the joints to be paid for?

As the Board views the dispute, the real issue is: **If the Department requires the contractor to provide the required joints within 10 days after placing the slab, is the contractor entitled to additional compensation?**

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CONTRACTOR'S POSITION

We believe and contend that the Contract Documents indicate that all of the joint sealing is to occur at the end of the project after the slab grinding operation. The Department has directed us to seal the joints within 10 days of forming them. In doing so, **the Department has eliminated the economy of scale provided if the joints are sealed at the end of the project all at one time** resulting in our subcontractor's refusal to mobilize until he can perform in accordance with his production rates at the time of bid. **No less than three places in the plans direct us to seal joints at the end of the project.**

Timing of Joint Seal

This is consistent with the Standard Specifications which prohibit us from cleaning the joints until all other operations are complete that will damage the new seal. DNCC bid the project accordingly and subbed out the joint sealing. The Department wanted the joints sealed now contrary to the documents, and directed us to do so. Our subcontractor based his price upon one mobilization at the end and could not seal the joints at this time. DNCC began sealing the joints with their own forces and at great additional expense due to loss of economy of scale and a subcontractor familiar with this type of work. The contract refers us to Index 305 and Section 350 of the Standard Specifications for joint sealing both of which have several references to tooled joints but the Department wants them sawn. We are **unaware of any reference prohibiting the use of tooled joints**. If tooled joints are acceptable on DOT projects, then what we have done should be acceptable.

It is the intent of the contract documents that all of the joint sealing be completed at the end of the project after the grinding operation and establishes the order of operations as (1) placement of all slabs, (2) grinding of all slabs, and (3) cleaning and sealing of all joints. **Nowhere can we find does it specifically say only resealing.**

- a. **...Page 209, General Notes, Note 2-C: "...Joint Cleaning and Sealing shall be done after Slab Grinding is Complete."**
- b. **...Page 212, under the heading *Traffic Control During Concrete Slab Rehabilitation and Grinding*, Note 4: "The Contractor shall complete the cleaning of concrete slabs and sealing of concrete joints during the same lane closure used for Slab Grinding."**
- c. **...Page 96, Phase 111, Note 3: "The grinding of all concrete pavements (existing, proposed, and slab replacement) will take place after all proposed pavement and replacement is complete. The cleaning and sealing of joints will take place after the grinding of the Concrete Pavement is complete."**
- d. **...Section 350-15.6- Cleaning Joints and Cracks of the Standard specifications specifically prohibits cleaning and sealing of random cracks "until all other concrete pavement repairs have progressed to the point where those operations will not adversely affect the installation of the new seal." We believe this to be consistent with the notes directing this work to occur at the end of the project after the grinding.**

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The Department claims that the Slab Replacement Details ... indicate that the sealing should be done at the time of replacement. **We disagree because it only refers to a step in the process, not a specific time. In fact, the only reference to a specific time is that the work should be completed "within the time allotted for the lane closures."**

DEPARTMENT'S POSITION

PAVEMENT - PER SQUARE METER. The work being paid under this item is described in the Standard Specifications under subarticle 352-6 and is listed as full compensation for all work described under this section including testing,

Cleaning and resealing of the existing joints is paid for under item 2350-72 **CLEANING AND RESEALING JOINTS - PER METER.** The work being paid under this item is described in the Standard Specifications under subarticle 350-20 and is listed as full compensation for all work described under this section.

The reason for listing in detail the separate and discrete items of work to rehabilitate the existing pavement is to establish the basis for the various phasing notes in the plans and how they fit into the over all scheme of things. David Nelson Construction Company in their correspondence dated April 7, 2000, has referred to plan notes, which pertain to one of the elements of the pavement rehabilitation, and has attempted to apply this note incorrectly to a different element. This has resulted in an interpretation contradictory to the intent of the plans and specifications.

To resolve this issue the Department requests that the Board hear both DNCC and the Departments position and make recommendations to answer the following four questions. The Department's position on each question is also presented.

Question No. 1 What type of joint is required?

The position of the Department is that the joints both **longitudinal and transverse surrounding the replaced slab are required.** This is specified in the Technical Special Provisions and shown on plan sheet 50 for project 258410-1 and on sheet 36 for project 258411-1. On these sheets, in the sequencing steps shown, **steps 12, 13 and 14 require the Joints to be cut, cleaned and the backer rod or tape and sealant installed according to index 305.** The design of these joints is shown in Standard Index 305. On sheet 1 of 5 joint types are shown and on sheet 2 of 5 the details of the joint's construction are shown. Sheet 1 of 5 shows that the joints types are construction joints and when two adjoined slabs are replaced in a single pour, a transverse contraction joint is required between the slabs. **For construction joints there is an unbonded face** between the new concrete and the old concrete therefore the initial saw cut of 3 mm wide by 1/4 to 1/3 of the depth of the slab is not required. **The new concrete is tooled at the Joint during it's placement and after the concrete has hardened sufficient to prevent raveling, a secondary cut is made to the dimensions shown in the upper right hand table on sheet 2 of 5 to form a groove for the backer rod or tape and sealant.** For the

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contraction joint between two slabs where no joint exist the 3mm initial cut is required within 2 hours of casting the slab to control the anticipated cracking.

In their correspondence dated April 7, 2000, DNCC contends that the detail shown on sheet 1 of 5 in index 305 shows the joint as a tooled joint with sealant only placed in the small groove left by the edging tool. They are denying that the joint construction details on sheet 2 of 5 apply to the joints created at this time. Additionally they contend that this is all the joint construction required in the unit price for slab replacement and that the secondary saw cut backer rod or tape and sealant as shown in index 305 is to be installed in the joints after grinding and paid for under the item for cleaning and resealing of joints.

Question No. 2 When should the joints be developed?

Subarticle 353-11 JOINTS in the Technical Special Provisions specifies, "do not delay saw cutting the joints more than 2 hours from the time of concrete placement." This is for the initial cut to relieve the stresses across contraction joints where more than one slab is replaced in the same pour. Initial cuts are not required for construction type joints.

For the secondary cut the Department's position is that the plans on sheet 50 for project 258410- and sheet 36 for project 258411-1 specify in the note following the listing of the 14 steps for replacing, of the slabs that the joints as mentioned in steps 12, 13 and 14 are to be done in the time allotted for the lane closure. This we contend is within the same nights operation as casting the new slab. We have, however, discussed this timing with the Designers and they have agreed that we may relax this time for seating the joints to a weekly basis provided the weather is such that excessive water and debris will not penetrate the unsealed joints in the interim.

Question No. 3 When should the joints be sealed?

This is answered in the response to question no. 2.

Question No. 4 How are the joints to be paid for?

Subarticle 353-14 BASIS OF PAYMENT provides that all the work specified in the Technical Special Provisions and will include all joint construction will be paid under Item No. 2353-70 CONCRETE PAVEMENT SLAB REPLACEMENT-per cubic meter. The Department contends that the work to replace the slabs including the sawing and sealing to form the complete joints is included under pay item 2353-70.

In conclusion the Department's position is:

1. That all the joints both longitudinal and transverse, construction and contraction developed during the slab replacement are to be saw cut¹, tape or backer rod positioned and sealant installed according to Standard Index 305.

¹ During the hearing, the Department allowed that the joints could be formed to the proper dimensions.

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2. That plan sheets 50 for project 258410-1 and 36 for project 258411-1 show the phasing, sequencing and detail the work for the replacement of concrete pavement slabs.
3. That except as may be otherwise permitted by the Department the **joints are to be completed before opening the pavement to traffic.**
4. That the cost of all joint construction is included in the pay item for slab replacement Item No. 2353-70 according to section 353 of the Technical Special Provisions.

DRB FINDINGS

This dispute has arisen out of the item in the contract for "Sawing and Resealing"

1. Index No. 305 of the FDOT Standard Index for Roadway and Traffic Design Standards is specific in the types of joints required. There is to be no deviation from that shown in the index without the Engineer's approval. Although the Contractor might be able to form the joint, the **tooled joint presently being provided does not meet the required dimensioning.**
2. Subarticle 353-11 of the Technical Special Provisions requires the initial saw cut to be performed within two hours of concrete placement except that it is not required at a construction joint.
3. The secondary saw cut (i.e. the formation of the joint) is to be constructed according to sheet 50 for project 258410 and sheet 36 for project 258411. These sheets mention a sequence of 14 steps for the slab replacement and the joint construction. Following these steps is a note that the Department contends requires the joint to be constructed within the time frame allowed for the lane closure. **There is ambiguity here as to the timing issue.** There are numerous referrals in the plans which state that the "Cleaning and Sealing" of joints shall take place after the grinding of the slabs is complete. Absent of a delineation between the terms "Clean and Seal" and "Clean and Reseal" the **bidder could have construed that all joint sealing was to be performed at one time after the grinding operation was complete.** This is especially true since **on other projects of this nature in Florida (Duval and Dade Counties) the secondary joint formation did not occur until after grinding operations had taken place.**

In DNCC's Exhibit C, Phase 3, Note 3 states:

"The grinding of all concrete pavements (existing, proposed and slab replacement) will take place after all (emphasis added) proposed pavement and replacement is complete. The cleaning and sealing of joints will take place after the grinding [sic] of the concrete pavement is complete."

4. Subarticle 353-14, Basis of Payment states that joint construction and sealing of slabs is to be paid under the cubic meter price for concrete pavement replacement. Therefore, **the Department should receive one fully developed sealed joint at all required new joints in the price of the slab.**

replacement. Therefore, **the Department should receive one fully developed**

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DRB RECOMMENDATION

Based upon the information provided at the hearing and a review of the contract documents the Board recommends as follows:

- The type of joint should be constructed per Index 305.
- The construction joints are not specified to be fully developed until after all grinding is complete.
- The initial joint construction and sealing of the slab replacement joints is included in the unit price (per square meter) of the concrete replacement.
- Under the **ambiguous language** contained in the contract DNCC would have the following options:
 1. Permanently Saw and Seal within 10 days of pouring the slab.
 2. Seal temporarily and **assume any damages** that may result.
 3. Do not perform any sealing until after grinding and **assume any damages**.

Ultimately, the **contractor must preserve and protect the work** in accordance with Section 7-11, Preservation of Property, of the Standard Specifications.

Should the Department elect to require the contractor to permanently seal the joints prior to grinding the contractor would be entitled to an equitable adjustment to the contract.

The Board appreciates the cooperation by all parties involved and the information provided to make this recommendation. Please remember that failure to respond to the DRB and the other party concerning your acceptance or rejection of the DRB recommendation within 15 days will be considered acceptance of the recommendation.

I certify that I participated in all of the meetings of the DRB regarding the Dispute indicated above and concur with the findings and recommendations.

Respectfully Submitted,

Disputes Review Board

Rammy Cone; DRB Chairman
John H. Duke Sr.; DRB Member
Jimmy Lairscey, P.E.; DRB Member

SIGNED FOR AND WITH THE CONCURRENCE OF ALL MEMBERS:



Ashley R. Cone; DRB Chairman



**General Contractors
Heavy Construction
Engineers
Site Work**

"An Equal Opportunity Employer"

FAXED
June 20, 2000

Mr. Rammy Cone; Chairman, Disputes Review Board
ARC Construction Services
3409 McKay Avenue
Tampa, Florida 33609

Re: FPN 258410156201 (SPN 10320-3465 & 10320-3466); FAP No. 2757-345 I & 2757-347 I [FO]; SR 93 (I-275 from South of Busch Blvd. To South of Fowler Avenue)
Hillsborough County
Board Recommendation on Joint Sealant at Slab Replacement

Dear Mr. Cone:

We are in receipt of the Board's recommendation regarding the above-referenced matter and are proceeding in accordance with the direction in the Contract Documents and sealing these joints upon completion of the slab grinding. We concur and acknowledge that we must preserve and protect the work within our control or responsibility in accordance with Section 7-11, Preservation of Property, of the Standard Specifications. However, we must clarify that we cannot be held responsible for any damages resulting from any design issues. In an effort to accommodate the Department's wishes to modify the contract and seal the joints as soon as practical, we are currently in discussions with our subcontractor about the possibility of mobilizing to seal the joints when there is enough quantity to justify his expenses; provided we are not held responsible for any damages to said joints resulting from the grinding operation. At this time, the Department has elected not to pursue its' option of requesting a price for sealing these joints at an accelerated time.

If you have any questions or comments, please contact me.

Sincerely,



Jeffrey D. Nelson
Project Manager

Cc: Mr. Jimmy Lairscey; DRB Member
Mr. John Duke; DRB Member
Mr. Gene Tharp; PBS&J
R. Sharkey
MOF
Pcf #81
Field

David Nelson Construction Co.

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Palm Harbor, FL 34683



An employee-owned company

June 28, 2000

Construction Managers
Consulting Engineers

Mr. Rammy Cone, Chairman Disputes Review Board
ARC Construction Services
3409 McKay Avenue
Tampa, Florida 33609

RE: FPN: 258410 1 52 01 / SPN 10320-3465 / WPI 7143140
FPN: 258411 1 52 01 / SPN 10320-3466 / WPI 7143141
Federal Project: 2757 345 1 / 2757 347 1
SR-93 (I-275) from South of Busch Blvd. to South of Fletcher Ave.
County: Hillsborough

Dear Mr. Cone:

With reference to the Disputes Review Board's recommendations in the matter of the concrete pavement slab replacement joint sealing, the Department respectfully request that the Board confirm or clarify as appropriate our understanding of the various parts of the ruling. Following is our interpretation and understanding of the ruling.

The first point is the type of joint to be constructed. The joints shown on the plans and as described in Standard Index 305 are to be constructed longitudinally and transversely through and around the replaced slab. The joint type is as shown on sheet one of the Index and the details for the joint construction is specified and described on sheet 2 of the Index.

Point two, the construction type of joint, as would occur transversely and longitudinally where the replacement concrete joins the existing slabs or previously placed replacement slabs, are not specified to be developed by making a saw cut joint groove, installing tape or backer rod and installing joint sealant until after the grinding operation.

Point three, the initial saw cut as shown in Index 305 for contraction type joints and the sawing of the joint groove (secondary saw cut), installing tape or backer rod and installing joint sealant for all of the joints surrounding and through the replacement slabs are included in the cost of the slab replacement under pay item number 2353-70 Concrete Pavement Slab Replacement per cubic meter.

Point four, DNCC has the option of:

1. Providing the permanent joint seals per Index 305 within ten days of slab replacement and receive full payment for the slab replacement quantity.
2. Temporarily seal the joints at DNCC's own cost and assume the responsibility for any damages which may result from not providing permanent joint seals as shown in Index 305. DNCC will not receive payment for a portion of the slab replacement quantity commensurate with the cost of the permanent join construction until the joints are completed.

with the cost of the permanent join construction until the joints are completed.

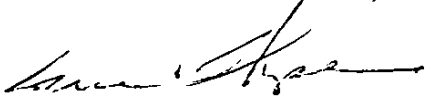
3. Do not perform any permanent joint sealing until after grinding and assume the responsibility for any damages which may result from not providing permanent joint seals as shown in Index 305. Do not receive payment for a portion of the slab replacement quantity commensurate with the cost of the permanent joint construction until the joints are completed.

Point 5, DNCC must preserve and protect the work in accordance with Section 7-11, Preservation of Property of the Standard Specifications.

Point 6, Should the Department elect to direct DNCC to permanently cut and seal the joints prior to the grinding operations, DNCC would be entitled to receive payment for the included cost under pay item 2353-70 plus only the additional cost incurred for mobilization of the sealing operations more frequently than would ordinarily be required if they performed the sealing after the grinding operation is completed and any increase in cost because of loss of economy of scale.

Please confirm our understanding in this matter.

Sincerely,
PBS&J Construction Services, Inc.



Donald E. (Gene) Tharpe
Senior Project Engineer

PBS&J-116

C: Mr. Jimmy Lairacey DRB Member
Mr. John Duke, DRB Member
Mr. Jeffery Nelson, DNCC
Ms. Pam DelNegro, FDOT
file 258410 4.4 / 4.4p / 4.4f corr
file 258411 4.4 / 4.4p / 4.4f

HP Fax Series 900
Plain Paper Fax/Copier

Fax History Report for
Duke at EMSI
407-876-4595
Jul 03 2000 5:07pm

Last Fax

<u>Date</u>	<u>Time</u>	<u>Type</u>	<u>Identification</u>	<u>Duration</u>	<u>Pages</u>	<u>Result</u>
Jul 3	5:06pm	Sent	18639939664	0:39	1	OK

Result:

OK - black and white fax

HP Fax Series 900
Plain Paper Fax/Copier

Fax History Report for
Duke at EMSI
407-876-4595
Jul 03 2000 5:05pm

Last Fax

<u>Date</u>	<u>Time</u>	<u>Type</u>	<u>Identification</u>	<u>Duration</u>	<u>Pages</u>	<u>Result</u>
Jul 3	5:04pm	Sent	18639939664	1:00	1	OK

Result:

OK - black and white fax

ARC

CONSTRUCTION

3409 McKay Ave. Tampa, FL 33609

SERVICES, INC.

Phone 813-876-8084 Fax 813-870-9537 Email Raycandy@aol.com

July 11, 2000

**Mr. Gene Tharpe, Senior Project Engineer
PBS&J Construction Services, Inc.
11213 N. Nebraska Ave.
Bldg. C-1
Tampa, FL.**

**Re: FN 258410-1-52-01 and 258411-1-52-01
Dispute Review Board issue #1
Concrete Joints, Request for Clarification**

Dear Mr. Tharpe,

On June 16, 2000, the Board issued its recommendation on the subject issue. On June 20, 2000, David Nelson Construction Company (DNCC) wrote the Board concerning that recommendation. The Board found that DNCC's letter did not misconstrue the Board's recommendation and felt that no response was necessary.

The Board is in receipt of your letter, dated June 28, 2000, requesting confirmation and/or clarification of the recommendation issued to the Department and DNCC. I have been in contact with Mr. Duke and Mr. Lairscey regarding this. Please find the Board's responses below. In some instances, the Board found the question/comment confusing. In such cases the question is rephrased by the Board in hopes of informing you of our interpretation of the question.

CEI's Understanding:

"The first point is the type of joint to be constructed. The joints shown on the plans and as described in Standard Index 305 are to be constructed longitudinally and transversely through and around the replaced slab. The joint type is as shown on sheet one of the Index and the details for the joint construction is specified and described on sheet 2 of the Index."

Board's Confirmation/Clarification:

Your understanding is correct.

CEI's Understanding:

"Point two, the construction type of joint, as would occur transversely and longitudinally where the replacement concrete joins the existing slabs or previously placed replacement slabs, are not specified to be developed by making a saw cut joint groove, installing tape or backer rod and installing joint sealant until after the grinding operation." (Emphasis added)

slabs, are not specified to be developed by making a saw cut joint groove, installing tape

Board's Confirmation/Clarification:

The Board has never specified that the joint had to be developed by saw cutting, although saw cutting is certainly one way to construct the joint (only that the ultimate joint must meet the dimensions specified in Index 305). For the purposes of this answer/clarification we will assume that the term "saw cutting" means "development of the joint". Although it may have been the intent of the Designer to have the joint sealed immediately after placing of the slab (in the time allotted for the lane closure), the Board on page 5 of 6 has stated that there exists within the contract documents an ambiguity as to the timing of the Cleaning and Sealing/Resealing of the joint. The Board does not believe that the plans adequately specify what time frame the joint is to be fully developed.

Your understanding is correct.

CEI's Understanding:

"Point three, the initial saw cut as shown in Index 305 for contraction type joints and the sawing of the joint groove (secondary saw cut), installing tape or backer rod and installing joint sealant for all of the joints surrounding and through the replacement slabs are included in the cost of the slab replacement under pay item number 2353-70 Concrete Pavement Slab Replacement per cubic meter."

Board's Confirmation/Clarification:

Your understanding is correct.

CEI's Understanding:

"Point four, DNCC has the option of

- 1. Providing the permanent joint seals per Index 305 within ten days of slab replacement and receive full payment for the slab replacement quantity.*
- 2. Temporarily seal the joints at DNCC's own cost and assume the responsibility for any damages which may result from not providing permanent joint seals as shown in Index 305. DNCC will not receive payment for a portion of the slab replacement quantity commensurate with the cost of the permanent joint construction until the joints are completed.*
- 3. Do not perform any permanent joint sealing until after grinding and assume the responsibility for any damages which may result from not providing permanent joint seals as shown in Index 305. Do not receive payment for a portion of the slab replacement quantity commensurate with the cost of the permanent joint construction until the joints are completed."*

Board's Confirmation/Clarification:

The Board was never requested or tasked with recommending when (and how much) payment was to be made. We do not believe that was the question posed to the Board at the hearing.

CEI's Understanding:

"Point 5, DNCC must preserve and protect the work in accordance with Section 7-11, Preservation of Property of the Standard Specifications."

"Point 5, DNCC must preserve and protect the work in accordance with Section 7-11,

Board's Confirmation/Clarification:

Your understanding is correct.

CEI's Understanding:

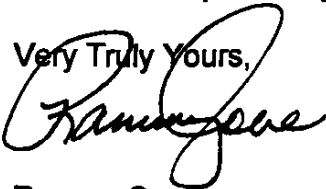
"Point 6, Should the Department elect to direct DNCC to permanently cut and seal the joints prior to the grinding operations, DNCC would be entitled to receive payment for the included cost under pay item 2353-70 plus only the additional cost incurred for mobilization of the sealing operations more frequently than would ordinarily be required if they performed the sealing after the grinding operation is completed and any increase in cost because of loss of economy of scale."

Board's Confirmation/Clarification:

Although the parties did not request of the Board a quantification of entitlement, the above elements should be addressed when computing an equitable adjustment.

The Board hopes that you will find the above Confirmations/Clarifications helpful.

Very Truly Yours,



Rammy Cone
Chairman

cc: John Duke, DRB
Jimmy Lairscey, DRB
Jeff Nelson, DNCC
file