
From: John Nutbrown [jwnservices@hughes.net]
Sent: Tuesday, July 31, 2007 1:06 PM
To: Mike Kanaday; Cavendish, Scott
Cc: Rammy Cone; Jimmy Lairscey
Subject: DRB Recommendation for added work at Retaining Wall

Gentlemen:

I will forward hard copies of the signed recommendation along with the invoice for the preparation of same.

John Nutbrown
DRB Chairman

DISPUTE REVIEW BOARD RECOMMENDATION

**FINANCIAL PROJECT ID. 231919-3-52-01 & 231920-2-52-01
INTERSTATE 95 (SR-9)
PALM BEACH COUNTY**

July 10, 2007

Mike Kanaday Project Manager
Hubbard Construction Company
2269 Indian Road Building 3
West Palm Beach, FL. 33409

Eduardo Perez de Morales, PE
Resident Engineer
The Corradino Group
321 South Dixie Highway
West Palm Beach, FL. 33401

RE; I-95 (SR-9) Reconstruction from North Of SR-80 to North of Palm Beach Lakes Boulevard
Palm Beach County

Subject: Dispute over Entitlement to Compensation for Required Adjustments to Reinforced Erath Retaining Wall.

The Dispute Review Board was convened for a hearing requested by the Contractor, Hubbard Construction Company regarding entitlement for additional work required at the retaining wall and approach slab at Australian Avenue overpass. The hearing was held in the offices of the Corradino Group, 321 South Dixie Highway, West Palm Beach, FL. At 2:00 PM July 18, 2007.

CONTRACTORS POSITION

The issue being brought before the board at this time is the amount of entitlement due to the contractor. Th Corradino Group has already acknowledged with their offer of 25% compensation that this issue should be compensable. We request That the board give a determination as to the amount of compensation the dept should award to the contractor. Below are details pertaining to the conditions with which payment from the Dept is being sought.

At the onset of the project, Hubbard Construction Co. directed our Specialty supplier Reinforced Earth Company to submit shop drawings for the MSE walls that were to be constructed on the project The shop drawings were based on information given in the plans for Fin No.: 231919-3-52-01 and 231920-2-52-01 with designs by Reynolds Smith & Hills and Greenhorn & O'Mara respectively, and in accordance with FDOT Standards Index 5000.

Reinforced Earth Company produced the shop drawings, based on the information detailed in the plans. The rules that were portrayed in the plan sheets W-16,17 & IS as well as sheet A-12 dimension the coping as 2'. In the 5015 index sheets the copings are dimensioned at 2' with a minimum embedment for the precast panel of 3". The wall shop drawing and subsequent manufacture of the panels followed these guide lines. Any variance from this rule should have been addressed by the DOR if a coping would require a different dimension. If the DOR had added the detail in the plan that was provided on February 12th then the issue would have been addressed. These same 'rules' have been practiced on FDOT projects successfully for many years with out conflicts. Information obtained in the plans gave the rule for a 2' coping with the top of coping grade given on plan sheet W-3.

Hubbard Construction Company submitted to the DOR these Shop Drawings pertaining to the MSE Walls on the site and the submittal was returned approved with no comments.

Hubbard Construction Company proceeded with the construction of the MSE Wall per the approved shop drawings. On January 29, 2007 Hubbard Construction Company notified the Dept. via RFI # 118 that a conflict existed in the MSE Wall panel height and steel for the Approach Slab. In order to clear the pane) with the Approach Slab steel it would have to modified, or the MSE panels would have to be trimmed to a lower elevation than shown in the shop drawing. It also became apparent that the new coping overall height would also have to increase in order to accommodate the lowering of the MSE Panel.

With the 2 apparent options being;

A: Trimming the panels and increasing the height of the coping,
Or

B: Field bend the approach slab steel to achieve modifications that would clear the panels and maintain a 2' coping.

Hubbard Construction Company notified the Dept on February 9th 2007 that compensation was expected for the additional work that was forth coming. We proceeded with the work to make corrections and upon receipt of the "SECTION THRU APPROACH SLAB" details on February 12~ 2007, completed the work.

The claim by TCG that there was enough information in the plans is not a valid claim as demonstrated by the necessity for the DOR to provide details for the intended outcome. Sheet A-11 gives a detail with steel shown as well as dimensions for the longitudinal cross section of the approach slab while on sheet A-12 the designer gives numerous "cookie cutter" cross sections with out dimensions, and one which detailed dimensions and steel requirement details set in its own boxed area of the sheet and named 'APPROACH SLAB WITH RETAINING WALL DETAILS'. This detail showed 2' coping dimension which falls in line with the FOOT standard 5015.

It is the DOR's responsibility to note in the plans if part of the system will not be "Typical" to the item or differs from the Standard Index as well as insure that the information in the plans is located sufficiently within differing elements of work so that the entire project becomes intertwined without conflict. By reviewing the submittal the DOR has the obligation to insure that the separate facets of the work are blended together and any oversights by the contractor or his subrogate are avoided. If not for this approval and review process the contractor would have no need to provide shop drawings to the DOR

Hubbard Constriction Company submitted to the Dept. the additional cost of \$15,854.03 incurred. After review by TCG it was recommended the HCC be compensated 25% or \$3,963.51. Hubbard Construction Company disagrees with the evaluation by TCG and has declined this offer.

DEPARTMENTS POSITION

Background

As part of the I-95 widening project from SR 80 to north of Palm Beach Lakes Blvd, the Australian Avenue Bridge over I-95 is being replaced. As part of that replacement, MSE Retaining Walls are proposed for the southeast and northwest corners of the approaches (Exhibit A). The Contract Plans provide the details necessary for the Contractor's Wall Supplier to develop fully detailed shop drawings as required, including, but not limited to plan and elevation view, top of coping elevation, top of leveling pad elevation, bend points, pipe penetrations, etc. The Contract Plans also show the existence of a raised sidewalk on the approach slab. Article 548-6.1 requires the Wall Supplier to develop fully detailed shop drawings, requires the Contractor to verify all pertinent retaining wall

information prior to finalizing the shop drawings, and requires the Contractor to bring to the Engineer's attention any conflicts not shown in the Contract Drawings.

HCC used The Reinforced Earth Company as its Wall Supplier. Shop Drawings were developed, reviewed and stamped by HCC, and submitted to the designer (RSH) for approval. RSH completed the review required by the Specifications and returned the drawings to HCC. HCC proceeded with wall construction without notifying the Engineer of any potential conflicts.

After completing the Australian Avenue Bridge and Wall W-1, HCC submitted RFI #118 (Exhibit B) requesting information on how to correct a conflict between the approach slab reinforcing and the MSE wall panels. RSH responded that the conflict was due to the fact that this approach slab has a raised sidewalk that was not taken into consideration by the Wall Designer and because of the raised sidewalk, the top of the MSE panels was now 0.8' too high. HCC sent this response to Reinforced Earth who stated that they followed the details in the plans and that the design is correct. HCC forwarded that response to TCG with the additional comment "***The shop drawing designer believes he is correct with the parameters given to him in the wall plans. It appears from the response to the RFI that the EOR is saying the wall designer would have had to use the bridge plans to get the correct parameters***" (Emphasis added)(Exhibit C).

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The "bridge plans" referred to by HCC are specifically Sheets A-12, B-28, B-30, B-46, B-47, and B-48

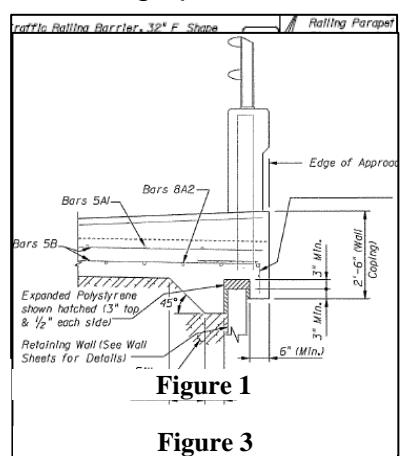


Figure 1
Figure 3

(Exhibit D), all of which show that the approach slab has a raised sidewalk. HCC also claims that the section through the approach slab with retaining wall as shown on A-12 does not correctly detail the situation in this case with a raised sidewalk (Figure 1). Sheet A-12 is FDOT Standard Index S-900, and it includes Section B-B "Approach Slab with Raised Sidewalk" (Figure 2) which details of coping would be the raised sidewalk. Standard Index was RSH only to add the Quantities (original S-

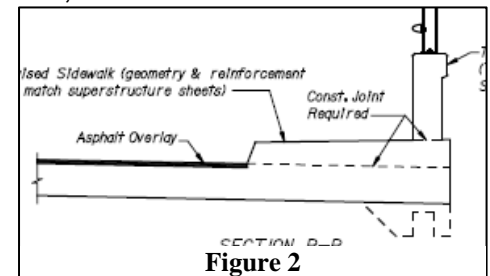


Figure 2

"Sidewalk" how the top affected by This FDOT modified by Estimated 900 Sheet

2 of 2 is attached as Exhibit E for comparison). In an effort to assist with the resolution of this issue, RSH issued a detail showing how the section thru the approach slab and retaining wall would look had it been detailed with the raised sidewalk (Figure 3 & Exhibit F).

HCC chose to resolve the situation by cutting the top panels of the MSE wall down to allow for the proper placement of the reinforcing steel, and requested that TCG track costs as they intend to claim for the extra work. TCG tracked the costs in accordance with the Specifications, and HCC subsequently submitted a claim for extra costs. TCG reviewed the submission and determined that HCC was not entitled to any additional cost due to all of the necessary information being present in the Contract Plans. In an effort to resolve the situation without escalating it further, TCG offered HCC 25% entitlement to close the issue out (Exhibit G). HCC declined to accept and escalated this to the DRB.

The error here is in the preparation and review of the shop drawings by the Wall Designer and HCC. HCC, by their own admission, only provided the Wall Designer with the wall plans and not the entire Contract Plan set. While it may have been missed by RSH during the shop drawing review, the Specification makes it the Contractor's responsibility.

Review of the Contract

Standard Specifications for Road and Bridge Construction (2004) Section 5-1.4.6.1 Contractor Responsibility for Accuracy and Coordination of Shop Drawings (pg. 30) states in part:

“Coordinate, schedule, and control all submittals, with a regard for the required priority, including those of the various subcontractors, suppliers, and engineers, to provide for an orderly and balanced distribution of the work.

“Coordinate, review, date, stamp, approve and sign all shop drawings prepared by the Contractor or agents (subcontractor, fabricator, supplier, etc.) prior to submitting them to the Engineer of Record for review. Submittal of the drawings confirms verification of the work requirements, units of measurement, field measurements, construction criteria, sequence of assembly and erection, access and clearances, catalog numbers, and other similar data. Indicate on each series of drawings the specification section and page or drawing number of the Contract plans to which the submission applies. Indicate on the shop drawings all deviations from the Contract drawings and itemize all deviations in the letter of transmittal. Likewise, whenever a submittal does not deviate from the Contract plans, clearly state so in the transmittal letter.”

Standard Specifications for Road and Bridge Construction (2004) Section 5-1.4.6.2 Scope of Review by Engineer (pg. 31) states:

“The Engineer of Record's review of the shop drawings is for conformity to the requirements of the Contract Documents and to the intent of the design. The Engineer of Record's review of shop drawings which include means, methods, techniques, sequences, and construction procedures are limited to the effects on the permanent works. The Engineer of Record's review of submittals which include means, methods, techniques, sequences, and construction procedures does not include an in depth check for the ability to perform the work in a safe or

efficient manner. Review by the Engineer of Record does not relieve the Contractor of responsibility for dimensional accuracy to ensure field fit and for conformity of the various components and details.”

Standard Specifications for Road and Bridge Construction (2004) Section 5-2 Coordination of Contract Documents (pg. 34) states in part:

“These Specifications, the plans, Special Provisions, and all supplementary documents are integral parts of the Contract; a requirement occurring in one is as binding as though occurring in all. All parts of the Contract are complementary and describe and provide for a complete work.”

Standard Specifications for Road and Bridge Construction (2004) Section 548-6.1 Construction Requirements General (pg. 620) states:

“Due to the unique nature of the structure and concept, procure from the Wall Supplier fully detailed shop drawings, technical instructions, guidance in preconstruction activities and on-site technical assistance during construction. Closely follow any instructions from the Wall Supplier, unless otherwise directed by the Engineer. Submit a copy of any instructions from the Wall Supplier to the Engineer. Verify all pertinent retaining wall information (soil parameters, wall alignment, utility locations, conflicting structures) prior to the Wall Supplier finalizing shop drawings. Bring any conflicts not shown in the Contract Documents to the Engineer’s attention.”

Department’s Position

By HCC’s own admission (Exhibit C) they only provided the Wall Plans to their wall supplier and did not provide any other Bridge Plans. Without the Bridge Plans, the MSE wall supplier had no way to know that the plans required a raised sidewalk across the approach slab. The Wall Supplier thereby erred when dimensioning the top row of wall panels in the shop drawings, and later by supplying wall panels 0.8’ too high. HCC erred by not providing the Wall Supplier with the information they needed to prepare accurate shop drawings, and HCC also failed to catch the error during their review of the shop drawings. The Wall Plans are correct in their detailing of the Top of Coping Elevation and that is not in dispute. The Bridge Plans show that there is a raised sidewalk and the details needed to correctly construct the MSE wall panels. If the designer erred, it was only in failing to catch the Wall Supplier’s mistake in the wall shop drawings, which does not make it the designer’s responsibility. The fact that RSH provided an additional detail in response to an RFI from the Contractor is not an admission of an error or omission by RSH, but simply an attempt to clarify and illustrate one solution to the problem created by HCC. HCC did not submit the RFI until after all MSE panels were set and they were forming up the approach slab.

The Department respectfully requests that the Board rules in the Department’s favor and provides 0% entitlement to HCC, based on the Contract. The Department’s offer to cover 25% of the cost to remediate HCC’s error was an attempt to settle the issue, acknowledging the fact we missed the MSE wall supplier’s error in the shop drawing review process. This offer, however, does not create an entitlement for the Contractor, and it has been retracted as a settlement offer.

CONTRACTORS REBUTTAL

In the matter, of entitlement for pay on the Australian bridge MSE Wall and Approach Slab conflict, TCG claims in error that the wall supplier and Shop Drawing Designer Reinforced Faith Company was not in receipt of the needed documents in order to properly design the wall in conjunction with the bridge.

In TCG's creative interpretation of their Exhibit "C", they claim that HCC admitted that only the wall plans were provided and no bridge plans were provided. This is an incorrect assumption on the part of HCC, as REC had obtained the entire plan set from the Dept at their own expense. HCC did not have to supply any portion of the plans to REC and according to the detailed dimension information with the plans the wall panels were correct. In Specification 5-2 on the last line it states; "*Computed dimensions govern over scaled dimensions*" With that in mind when the design was done, given to HCC and reviewed (per Article 548-6 I), the dimensioned details in the plans missed not only HCC's and REC's understanding of the *intent of the design* (Spec 5-14.6.2) but the steel supplier (who undoubtedly had all of the plans) as well, as evident by their manufacture of the steel per the dimensioned detail on sheet A-12

TCG contends that the reason for index S 900 to be modified was for Estimated Quantity's only, yet if they were modifying this index why was a dimensioned element of construction that turns out to be non-existent within this project allowed to remain in the index without being crossed out and the intended detail not expanded upon.

TCG states *HCC chose to resolve the situation by cutting the top of the panels*. This is an errant statement as can be seen by reading their "Exhibit C" which clearly shows that more than one option was being considered and discussed.. HCC suggested 2 viable repairs to the conflict:

1. Have the steel bent up and over the panel and continue with a 2' coping.
2. Trim the MSE wall panel to allow for clearance and modify, the coping so that minimum embedment oldie panel could be maintained

It was the EOR who made the approval to trim the panel instead of bending the steel.

HCC is in disagreement with the Department's Position in that

1. HCC made no admission on what was, or was not, provided to REC.
2. Since the Wall Designer had the bridge plans the wall shop drawings were designed based on dimensioned details within said *complete* plan set.
3. The Wall Supplier did not err except in the interpretation of *the intent of the design* (Sec 5-1.4.6.2)
4. HCC did not err in the information provided to the Wall Supplier since they had procured the *complete* Plan set themselves.
5. HCC did not fail to catch the error but did misinterpret the intent of the design..
6. The designer erred in not providing clear and concise information in the plan set (Wall and Bridge) and not insuring that the specialty work had the details required to convey the proper intent of the design.
7. The design provided was required to facilitate the proper construction of the approach Slab and wall coping and was not created by HCC but the differing elements of the project not being sufficiently detailed within the Contract Documents so as to provide a non-equivocal understandings of the Designer's intent

DEPARTMENTS REBUTTAL

The basis for Hubbard's position can be broken down into three arguments. Those arguments are:

1. TCG offered 25% entitlement to HCC so therefore HCC must be entitled to payment;
2. The Contract Plans and Standard Index only show a 2'0" coping, so that is what they planned on using; and
3. The Designer "Approved" the shop drawings as submitted.

I will break these arguments down below.

TCG Offered 25% Entitlement

HCC states that TCG "acknowledged with their offer of 25% compensation that this issue should be compensable." This statement is totally incorrect. First of all, TCG has not agreed that the amount HCC is requesting, \$15,854.03, is the actual cost of the work performed. Quantum is not at issue in front of the Board. As stated in our Position Paper, the offer of 25% was made in an attempt to settle the issue and no acknowledgement of blame or compensability was ever provided. The 25% was

arrived at because 25% of \$15,854.03 is approximately the amount that is being charged by the Board to hear this issue. TCG believes actual entitlement is 0%.

2'0" Coping in Plans and Standards

HCC's second argument is that the Contract Plans and Standard Index did not show a coping size of anything other than 2'0". As stated in our Position Paper, the plans clearly show a raised sidewalk on the approach slab on Sheets A-12, B-28, B-30, B-46, B-47, and B-48. The Specifications clearly state in Article 548-6.1 that the Contractor is to "(v)erify all pertinent retaining wall information (soil parameters, wall alignment, utility locations, conflicting structures) prior to the Wall Supplier finalizing shop drawings. Bring any conflicts not shown in the Contract Documents to the Engineer's attention." That Specification clearly puts the responsibility onto the Contractor and Wall Supplier to verify that the wall can be constructed as the Designer of Record intends. All of the information in the plans shows that there is a raised sidewalk present on the approach slab. HCC believes that because there was not a specific detail shown in either the Contract Plans or the Standard Index depicting a raised sidewalk upon an approach slab, they have no responsibility to neither design the wall correctly in that location, nor verify that what they have designed will be constructible. They also believe that there was not enough information in the plans "as demonstrated by the necessity for the DOR to provide details for the intended outcome." The detail provided (Position Paper Exhibit F) was provided as an effort to close RFI #118, and because HCC requested it, not because it was necessary or missing from the plans. The details shown are "typical" details and it is up to the Contractor and Wall Supplier to design a wall system which will meet the intent of the Contract Plans.

Designer "Approved" the Shop Drawings

HCC's third argument is that the MSE Wall shop drawings were submitted to the Designer of Record and that "the submittal was returned approved with no comments." This argument is flawed in that it does not agree with the Specifications. Article 5-1.4.6.1 states that prior to submitting shop drawings to the Engineer of Record, the Contractor is to "(c)ordinate, review, date, stamp, **approve** and sign all shop drawings..." (emphasis added). The Specifications therefore make it the **Contractor's** responsibility to **approve** the shop drawings prior to submitting to the DOR. Article 5-1.4.6.2 outlines the scope of the DOR's review, and states "(t)he Engineer of Record's review of the shop drawings is for conformity to the requirements of the Contract Documents and to the intent of the design... Review by the Engineer of Record **does not relieve the Contractor of responsibility for dimensional accuracy to ensure field fit and for conformity of the various components and detail**" (emphasis added). Nowhere within that Specification, or anywhere in the Contract, does it state that the DOR is responsible to "approve" the shop drawings. The DOR reviewed the drawings and found that they did meet his **intent**. It was HCC who failed to find the error in the shop drawings and determine that they were not constructible as detailed.

Conclusion

In conclusion, the extra work that was necessary to resolve the conflict between the approach slab and the MSE Wall panels was strictly HCC's doing. HCC sent incomplete plans to their Wall Supplier, they did not review the shop drawings submitted by the Wall Supplier to ensure that they would work, they did not catch the mistake while the wall was being constructed, and finally, they refuse to acknowledge any responsibility for their mistakes, and are placing the blame on the DOR for his failure to catch *their* mistake.

In summary, we do not believe the Contractor has demonstrated their basis for entitlement under this Contract for this issue before the Board, and respectfully request the Board rule on that basis.

BOARDS FINDINGS

Statements in the position papers were made alleging that HCC did not furnish the wall fabricator enough information to properly detail the wall at the location in question. It was stated during the hearing that HCC did not furnish the wall fabricator the proper plan sheets. Testimony was given stating that HCC did not furnish any planes to the wall fabricator as he had purchased a complete set of his own from FDOT and had in his shop all required drawings.

Even though the Department does not relieve the Contractor of full review of all shop drawings and the stamping as well signing each sheet for correctness the Designer of Record has the responsibility to give all parties proper information to correctly interpret his design and be given enough information to construct the work. It was not until the supplemental detail section 021209119-001 was provided was the matter cleared up. Had this detail section been part of the original design drawings this current problem would never have come about. The typical generic details shown in the plans do not show anything close to the actual construction details required for construction.

The Board contends that there have been errors on both sides of the table during the review process by all parties. The Board questions the Constructability Review and how thoroughly it was conducted at the proper time. It also questions if enough information was provided to allow the reviewer to catch the error and lack of sufficient information.

BOARDS RECOMMENDATION

After a thorough examination of all documents pertaining to this matter the Board finds the Contractor is **ENTITLED** to recover all additional costs suffered by this omission of detail. The Designer of Record has a responsibility to provide enough detail to allow the Contractor to construct the project as it was originally designed. This was not done in this case.

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 the Hearings of the DRB regarding the Dispute indicated above and concur with the findings and recommendations.
Respectfully submitted,

Dispute Review Board

John W. Nutbrown, Chairman
Rammy Cone, Member
Jimmie Lairacey, Member

DRB Chairman