

DISPUTE REVIEW BOARD RECOMMENDATION

October 12, 1999

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RE: SR-9 (SR-9A)(I-95); from SR-5/US-1 to a Point N. of Golden Glades
FIN No. 251662 1 52 01
Project No. (old) 87270-3534
Federal Project ID: 0951 495 I
WPI (old) 6141894
Contract No. 20391
District # 6 - Dade County

On September 30, 1999, at the request of the Contractor, Gilbert Southern Corporation (GSC), and the Florida Department of Transportation (FDOT), the Dispute Review Board (DRB) held a dispute hearing to consider the Drill Shaft Casing dispute.

Both GSC and the FDOT presented testimony, copies of data, and other documents, prior to and during the hearing. In particular, the DRB requested copies of computation sheets, from the FDOT, for pay items Nos. 2455-107-4 (Casing F&I 1070mm Dia.) and 2354-70 (Patching Portland Cement Concrete Pavement), which are incorporated and made a part of this decision.

ISSUE #1 - DRILLED SHAFT CASING DISPUTE

The DRB was requested to review the plans and specifications relating to the installation of the drilled shafts for the Bridge over SW 25th & 26th Roads to determine if the contract specified, and the Contractor could legitimately expect, to install the drilled shafts at that location utilizing pay item 2455-107-4 Casing (F&I) (1070mm Dia.). If there was ENTITLEMENT by GSC for the disputed issue; GSC and FDOT would negotiate the time and value.

CONTRACTOR'S POSITION:

The contract documents indicate that permanent casings be used with the drilled shafts on the I-95 Bridge Widening, as shown on sheet C-5 of the plans, which individually itemizes both **quantity** and **location** for each **drill shaft bid item**. The bid **quantity** for item 2455-88-4 - **Drilled Shaft (1070mm DIA)** and bid item 2455-107-4 - **Casing (Furnish and Install)(1070mm Diameter)**, is **identical - 87 meters**. Thus, the contract documents indicate that permanent casings at each drill shaft were intended. In support of its position, GSC submitted FDOT's pay item quantity sheet 6 and plan sheet C-5, Drilled Shaft Details. The quantity included in the bid for the casing matches the quantity bid for the drilled shaft.

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Furthermore, GSC contends that the **close proximity of the drilled shafts** to the existing bridge could **jeopardize the integrity of existing structure**, thus indicating that the permanent casing was to be utilized to provide protection for the existing foundations. GSC viewed the casing as a contractually mandated protection feature for the adjacent bridge. There is no indication in the plans that the casing was to be a contingency item.

GSC provided a letter from Case Atlantic (the drilled shaft subcontractor) listing MacArthur Causeway, Hallandale Beach Bridge, 13th Street Bridge, Venetian Causeway, 17th Street Bridge, and numerous bridges leading to Key West as projects known to have used permanent casing for their drilled shafts.

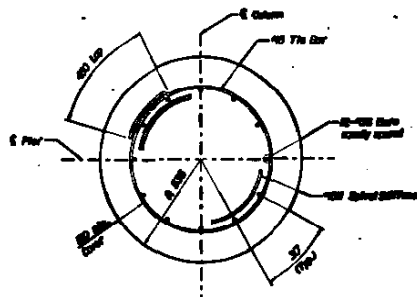
GSC submitted its original Drill Shaft Installation Plan, based on the use of permanent casing per bid, to the FDOT for approval, and it was rejected by FDOT together with a request to resubmit the plan without the use of permanent casing. The revised and resubmitted Drill Shaft Installation Plan accepted by the FDOT was based on the wet method, which deleted the permanent casings, changed installation conditions, and added additional costs.

The contract documents indicated permanent casing being required in the drilled shafts on this project. In any case, the contract documents were **ambiguous and without knowing the intentions of the designer the Contractor could only rely on the information available to them at the time of bid**. Thus, because of the significant change in scope of work, and additional costs involved in the revised Drill Shaft Installation method, and the additional measures needed to protect the adjacent bridge, GSC feels that it is entitled to compensation for the required additional cost, and time.

FDOT'S POSITION:

GSC is not entitled to compensation for the changed conditions and additional costs due to implementation of the revised Drill Shaft Installation wet method and in support thereof the FDOT states as follows:

Section A-A sheet C-5 of the project plans does not show casing to be used in its cross section details:



SECTION A-A
1070 Ø Shaft with 10-100 Bars

Pay Item 2455-107-4, Casing (F&I)(1070 mm Diameter) was **intended** as a **contingency item** for unforeseen conditions.

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Pay Item 2455-107-4, **Casing (F&I)(1070 mm Diameter)** was **not intended** as a **protection item** for the adjacent existing bridge since the existing piling were in a configuration that would not bring them in conflict with the proposed drilled shafts.

Section B455-3.5 Permanent Casing Method determines that the permanent casing method shall be used only when required by the plans, and the project plans do not specify this method.

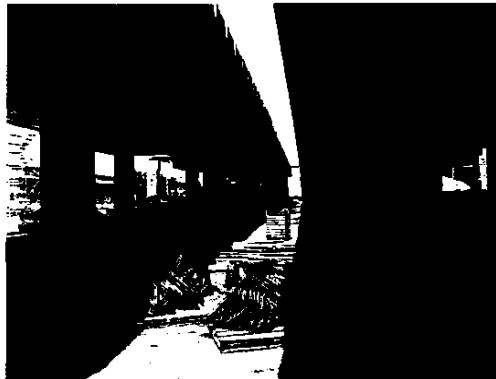
Drill Shafts on this project were **not designed as end bearing shafts**, but instead as skin friction shafts, thus **any casing left in place** would adversely affect the load bearing capacity of the structure and a **new redesign of the shaft would be required**;

The Department's District Geotechnical Engineer advises that permanent casings have never been used in South Florida. The borings on sheet A-14 show some sand at the top and limestone at the bottom which is typical of South Florida. If the borings had indicated all sand, then possibly the contractor could have thought that permanent casing was required;

The Department has approved the contractor's revised Drilled Shaft Installation Plan for installation without the use of permanent casing.

DRB FINDINGS

The site for the installation of the drilled shafts is extremely tight and requires that the Contractor take care not to damage or otherwise undermine the integrity of the adjacent structures:



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A thorough review of sheet C-5 of the project plans shows unit quantities and descriptions for drilled shaft casing (1070 mm Diameter).

	No.	Name	Quantity	Unit	Est.	Bid
	3	PLA				C-5

ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
Pier 2 Drilled Shaft 0.970 m Diameter	m	0.600
Casing 0.970 m Diameter	m	0.600
Pier 3 Unclassified Shaft Excavation 0.970 m Dia.	m	0.925
Drilled Shaft 0.970 m Diameter	m	0.600
Casing 0.970 m Diameter	m	0.600
Pier 4 Unclassified Shaft Excavation 0.970 m Dia.	m	0.925
Drilled Shaft 0.970 m Diameter	m	0.600
Casing 0.970 m Diameter	m	0.600
Pier 5 Unclassified Shaft Excavation 0.970 m Dia.	m	0.927
Drilled Shaft 0.970 m Diameter	m	0.783
Casing 0.970 m Diameter	m	0.783
Pier 6 Unclassified Shaft Excavation 0.970 m Dia.	m	1.088
Drilled Shaft 0.970 m Diameter	m	0.875
Casing 0.970 m Diameter	m	0.875
Pier 7 Unclassified Shaft Excavation 0.970 m Dia.	m	1.180
Drilled Shaft 0.970 m Diameter	m	0.928
Casing 0.970 m Diameter	m	0.928
Pier 8 Unclassified Shaft Excavation 0.970 m Dia.	m	1.271
Drilled Shaft 0.970 m Diameter	m	1.088
Casing 0.970 m Diameter	m	1.088
Pier 9 Unclassified Shaft Excavation 0.970 m Dia.	m	1.363
Drilled Shaft 0.970 m Diameter	m	1.088
Casing 0.970 m Diameter	m	1.088
Unclassified Shaft Excavation 0.970 m Dia.	m	1.363

Nowhere on sheet C-5 is there any mention that casing unit quantities are to be used “temporary only for installation” or as “contingency for unforeseen conditions”. The locations and quantities for the casings match the quantities for the drilled shafts.

Sheet 2 of the project plans item list, pay item no. 2455-107-4, Casing (F&I) (1070 mm Diameter) also fails to indicate that this item is either temporary or contingent for unforeseen conditions.

2455	18	PROTECTION OF EXISTING STRUCTURES	LS	.000	.000	.000	.000	1.000
2455	88	DRILLED SHAFT (1070MM DIA)	MM	.000	87.000	.000	.000	87.000
2455	107	CASING (F&I) (1070MM DIA.)	MM	.000	87.000	.000	.000	87.000
2455	122	EXCAVATION UNCLASSIFIED SHAFT (1070MM DIA)	MM	.000	87.000	.000	.000	87.000

The quantities for the casing match the quantities for the drilled shaft. The Board could not find, and the Department could not point out, any note on the plans or specifications that indicated that this bid item was a “contingent” item. While the designer of record for the FDOT may have intended for the respective casings to be either temporary or contingent upon unforeseen conditions, those intentions were not communicated to the prospective Contractor. Thus, the Contractor had no way of knowing the intentions of the FDOT at the time of bid preparation and submittal that this item was other than a permanent casing (indeed if this was to have been temporary casing it would not have been paid for as a separate pay item).

A review of the mandatory pre-bid, and pre-construction conferences records reveals that this issue was not mentioned by any bidders or the FDOT.

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At the DRB hearing it was brought up by the designer that there was at least one other item on the project (2354-70 Patching Concrete Pavement) for which significant contingent quantities were included in the bid proposal.

A review of the FDOT "Comp Book" for pay items No. 2455-107-4 and 2354-70 provided to the DRB by the FDOT at the time of hearing reveals that pay item No. 2354-70, under "remarks" shows that this item has 46.41 percent added for contingencies.

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PAY ITEM NO. 2354-70				06/94
FINAL				REMARKS
AREA	WIDTH	LENGTH	AREA	
66.76				SEE PAVEMENT REPAIR QUANTITY SHEETS
85.98				173.03 IS THE QUANTITY FROM THE ORIGINAL SURVEY. ADD 46.41% FOR CONTINGENCIES.
16.46				USE 153.3 M2
3.05				
0.78				
173.03M2				

In comparison, the computation sheet for item 2455-107-4, under "remarks" shows no mention made to any contingencies, nor contemplation of temporary usage of casings.

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PAY ITEM NO. 2455-107-4			06/94
ORIGINAL	FINAL	OVER UNDER RUN	REMARKS
METER OR NUMBER	METER OR NUMBER (EA)		
870			

2455-107-4 Casing (1070 mm Diameter)

Per ID	Casing Quantity (m)
2	11
3	11
4	11
5	11
6	11
7	11
8	11
9	11

Total Casing: 87 m

Total Casing: 87 m

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Thus, while admittedly, the computation sheets were not available to GSC prior to its submittal of bid, they show and support the view that, while the designer of record may have intended for the casings to be used as temporary or as contingent upon unforeseen conditions, it was not mentioned in writing on any bid documents from which GSC could rely to make its bid.

As to the allegation by the FDOT that the drill shafts on this project were not designed as end bearing shafts, but instead as skin friction shafts, absent the ability and/or invitation to submit a redesign of project components the Contractor must base his bid on the plans provided. There was no information contained in the bid documents which stated the designer's methodology in determining what foundation was appropriate for this location. While a prudent competent Contractor may be able to catch some errors or impute some intentions of the Owner, this permanent casing issue was not readily discernable at the time of bid.

Finally, the argument that Section A-A on sheet C-5 does not show a casing merely creates an ambiguity in that were the circumstances reversed the Owner could look to the table contained on that same page to support its position.

RECOMMENDATION

The Dispute Review Board finds that GSC could and did legitimately expect to install the drilled shafts at the plan locations utilizing pay item 2455-107-4 Casing (F&I) (1070mm Dia.) and recommends that the Department and the Contractor negotiate equitable compensation and time net of the cost included in its bid. This may extend to additional measures needed to protect the adjacent structure.

The Board appreciates the cooperation by all parties involved and the information provided to make this recommendation.

Respectfully Submitted,

John H. Duke, Sr.
Jim D. Vest
Jorge J. del Valle, Esquire

SIGNED FOR AND WITH THE CONCURRENCE OF ALL MEMBERS:

John H. Duke, Sr.
DRB Chairman