DISPUTE REVIEW BOARD RECOMMENDATION

January 30, 2001

FAXED January 30, 2001

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RE: FM No. 240178-1-52-02
State Job No. 77002-3503, etc.
SR 414, Maitland Blvd.
Seminole, County
WPI 5117676, etc

Subject: Issue No. 1 – Unforeseen Conditions due to Hardpan.
Issue No. 2 – FDOT direction to repair a broken sewer line based on a submitted cost for same and subsequently refusing to pay for completed work on an unproven assumption that OHM caused the broken line.

Dear Madam and Sir:

The Owner, Florida Department of Transportation (Department), and Hubbard Construction Company, Inc. (Hubbard) requested a hearing on Issue No. 1 to **determine the amount of compensation** due Hubbard's pipeline subcontractor, IT/OHM Remediation Corp. (OHM), **for encountering excessive hardpan** on the above referenced project.

Additionally, as to Issue No. 2, the Board was to establish whether OHM was entitled to compensation for repair **of an existing sewer line on the project**. Should entitlement be established, the Dispute Review Board (Board) was not to decide the quantum of such entitlement at this time, as the parties would attempt to negotiate the value of entitlement.

Pertinent issues, correspondence and other information relating to the Department's and the Contractor's positions were forwarded to this Board for review and discussion at the hearing that was held on January 10, 2001.

CONTRACTOR'S POSITION:

The basis for a request for additional work authorization and compensation is attributable to the following specifically documented changed job conditions:

1. An **increased volume of hardpan and select fill required to be handled by the contractor, which directly affects productivity.**
2. Changed site conditions, i.e., the soils encountered were not the soils depicted in FDOT plans.

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3. Summary of Misdirection by FDOT personnel on site.
   A) Request denied for use of bedding materials due to active perched and existing water tables.
   B) Requiring density below the water table contrary to FDOT specifications.
   C) Directive to remove previously installed pipe due to lack of density at the invert elevation.
   D) Direction to use hardpan material for backfill with varying proctors.
   E) Direction by project engineer to remove cemented hardpan and replace with select fill after previous inspector-directed installation of hardpan.
4. Claim for Sanitary Sewer Reinstallation
5. Claim for Repair Beyond Our Responsibility

Overview

This document presents IT/OHM Remediation Corp.'s (IT/OHM) statement of claims for additional work performance impacts, project damages, and subcontract time impacts at the Maitland Boulevard (SR 414) extension. These additional costs were incurred by IT/OHM due to:

1) Insufficient plan data
2) Plan errors
3) Unforeseen subsurface conditions
4) Conflicting FDOT directives and associated delays

These additional work performance impacts and delays were experienced during the performance of storm drainage system and sanitary sewer system work at the above-referenced site. **These unexpected impacts extended the planned subcontract performance period,** changed much of the means and methods intended for work performance, and as a result, considerably increased OHM work performance costs.

This request for equitable adjustments is submitted to Hubbard Construction Company and the FDOT for settlement. The document has been separated into two parts: a separately bound overview for your convenience and a large volume containing all supporting information. A table of contents for the large volume is presented in Appendix A of this overview.[1]

Project Issues

IT/OHM's estimate for the stormwater drainage system and sanitary sewer system portions of this project were based upon the information contained in the contract plans and specifications provided by FDOT. In addition, **IT/OHM based its estimate upon the following standard assumptions:**

1) Designs were complete and the **project information provided was sufficient**
2) Plans and specifications were prepared correctly and work could be performed by conventional methods recognized within the construction industry

[1] See original submittal for any references to external documents.

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3) If clarifications, redesigns, additional work, conflicts, or any other **impacts arose during the work, the FDOT and its representatives would take timely action to administer, clarify, and correct these matters** to keep the project on schedule and within budget.

In addition, IT/OHM agreed to *partner* this project with Hubbard Construction and the FDOT in order to increase the level of trust and cooperation between all contract parties, to create a positive project environment, and to recognize, respect, and jointly work to achieve the goals of each party and the team. Through the establishment of this partnering agreement, all members of the team agreed to cooperate to resolve project issues in a timely manner and at the lowest level possible. In this spirit, IT/OHM site supervisors timely notified FDOT of all impacts experienced and attempted to resolve matters before they significantly impacted project work. However, the FDOT and its project representatives often failed to meet their partnering commitments and did not provide prompt responses or assistance.

Stormwater Drainage System Installation

The stormwater drainage system portion of project work included the installation of piping and structures as indicated within the project plans. The labor and equipment types, means and methods, as well as the expected production rates and daily crew performance period, were based upon the contract subsurface soil conditions data, as enclosed within Sections V.C. and VIC of the large volume. **The soil conditions data contained within the "Roadway Soil Survey" plan sheets and the "Roadway Cross Sections" plan sheets indicated that sandy soils exist as the predominate subsurface soil condition.** These plan sheets also indicated that **trace amounts of weakly cemented hardpan** may be encountered within specific areas, but that most of these suspected materials were located within the roadway subgrade. **Soil borings did not extend through pipe invert depths, as is typically provided and would be expected.** The IT/OHM estimate was prepared on the basis of these expected predominate sandy soils.

As IT/OHM crews performed storm drainage system work, they encountered the expected sandy soils and installation proceeded accordingly. However, as IT/OHM crews began storm drainage work west of Rose Avenue, **they encountered very hard, highly cemented materials that were extremely difficult to excavate.** FDOT project representatives were notified immediately, as this material was not indicated within the contract soils information. The FDOT project inspectors did not fully investigate this matter, but instead directed IT/OHM to continue with work accordingly. To continue with the work, IT/OHM implemented the use of heavy duty excavator buckets. Even with the use of heavy duty equipment, it was necessary to replace worn and broken teeth due to this hard, highly cemented material.

Backfill and Compaction Operations

Following the difficulties encountered when excavating these materials, further complications arose during the backfill and compaction operations. As shown in Section VI photographs in the large volume, the **materials were hard, unyielding, variable sized "clods", and were unsuitable for use as backfill material.** FDOT project representatives stated the materials were **suitable for use as backfill and directed that they be used.** Further, they directed that the clods be broken up into sizes suitable for backfill use. Despite

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disagreements with the directed use of these materials, IT/OHM implemented further additional and extraordinary equipment and labor efforts, in an effort to achieve specified compaction criteria. **IT/OHM crews spent weeks compacting pipe runs that should have been completed in days.** This also proved unsuccessful, as repeated failed density tests were issued by the FDOT testing technician. IT/OHM even questioned if the proctors being used were representative of the area materials.

The **specified density requirement could not be achieved,** even though the compaction efforts exceeded the intent of the specification. IT/OHM crews were then instructed to remove and replace these "failed" materials. This compounded the backfill and compaction difficulties as the materials were now so badly crushed from overcompaction efforts that the specified density requirement was impossible to achieve. These FDOT directives were a daily occurrence and created enormous cost impacts to IT/OHM excavation, backfill and compaction operations.

These matters were repeatedly brought to the FDOT's attention and discussed during the weekly progress meetings. However, **FDOT representatives did not take any action.** IT/OHM requested special on-site meetings and initiated intent to claim correspondence. IT/OHM was then able to arrange site investigations with the FDOT. IT/OHM excavated piping areas for inspection by the FDOT project representatives. Soon after the first of these on-site soils investigations, the FDOT concluded that these materials were unsuitable for use as backfill and required removal, disposal, and replacement with suitable backfill materials.

The extensive extra work during these operations and subsequent redirection of effort placed a burden upon IT/OHM and Hubbard Construction to locate and supply suitable backfill materials to these piping areas. No Work Order or Supplemental Agreement was issued or has been issued to date by the FDOT to compensate IT/OHM for this extra work. In the best interest of project progress, Hubbard provided suitable clean sandy backfill materials to IT/OHM, even though they also did not anticipate these hardpan materials when estimating/bidding project work. Hubbard has expended considerable resources and expense to import significant quantities of suitable materials for the backfill operations.

Despite the additional efforts still required to excavate these highly cemented hardpan materials, IT/OHM was encouraged that backfill and compaction efforts could proceed as originally intended with suitable sandy materials. In an effort to recover lost project time, **IT/OHM requested permission for thick lift compaction** in accordance with Specification 125-8.4 in granular materials, which were now being imported for backfill operations. The FDOT **project representatives denied this request** and stated that the backfill operations were not to exceed 6-inch lifts. This directive by the FDOT was without just cause or merit, and only further contributed to project schedule and cost impacts.

Following further meetings and discussions with the FDOT, it was our understanding that IT/OHM would submit all additional work performance costs incurred upon completion of the stormwater drainage system work in areas of unforeseen subsurface conditions, again, due to the extensive scope and then unknown extent of this additional work. As such, the scope of the many storm drainage system additional work performance impacts have been detailed as much as possible and based upon actual dates and costs.

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Sanitary Sewer System Installation

In reference to the sanitary sewer system impacts detailed within Section VII, the additional work performance impacts experienced by IT/OHM were again due to conflicting directives issued by FDOT project representatives. Much the same as the storm drainage system, IT/OHM was **directed to use the hard, highly cemented hardpan materials encountered as backfill materials.** When the specified density requirement could not be achieved, even after implementing extraordinary labor and equipment efforts, IT/OHM was instructed to remove and replace these materials. As detailed within Section VIID, IT/OHM was directed to "digout" and recompact sanitary sewer piping and structures up to four times with "hardpan" materials that were previously deemed by the FDOT as unsuitable for use as backfill materials during the stormwater drainage system installation. IT/OHM was **finally able to achieve specified compaction criteria by use of suitable backfill materials provided by Hubbard Construction,** but only after considerable additional time and costs were expended.

Costs Incurred

IT/OHM has calculated the additional work performance damages in accordance with prior practices and industry accepted methods. All mark-ups are in accordance with current FDOT guidelines. Each claim section contains previously submitted or a separate calculation of costs, as well as supporting documentation. **Damages to IT/OHM total $166,319.95, from March 29 through November 16, 1999, and are summarized in the following table and Section III of this claims presentation.**

As an alternate approach to the measured mile, the following information is based on cost incurred due to changed conditions as verified by the attached geological report (Section 2). This approach is shown in Section 1.

Sections 3A through 3E are submitted to call attention to the repeated requests for direction, information, and the conflicting orders given to OHM personnel on site. The data is to highlight the occurrences and not to be abusive, derogatory, or belittling to any individual. OHM is still trying to maintain a partnering position but seeks fair compensation for the costs incurred due mainly to change physical conditions.

DEPARTMENT'S POSITION/*OHM REBUTTAL:*

The Contractor, Hubbard Construction Company (HCC) has filed a Total Cost Claim for their Subcontractor, IT/OHM Remediation Services Corporation. This document will address each of the allegations that are referred to in the November 20, 2000 letter from OHM Remediation Services to Mr. John Dukes.

1. **An increased volume of hardpan and select fill required to be handled by the Contractor, which directly affects productivity.**

The Subcontractor claims that the **boring logs did not accurately depict the sub-surface conditions** and as a Result an excessive amount of hardpan material was encountered during excavation and installation of storm drainage and sanitary sewer.

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OHM REBUTTAL:

FDOT boring logs depicted a minimum depth for highway construction and not utility installation where greater depths were required. They were inaccurate as herein shown, i.e., plastic material vs. highly cemented hardpan with blow counts of 50 for 3 to 6" of penetration, which is nearly refusal. Also, full face of excavation was hardpan and not the thin layers as depicted on FDOT plans, which required a greater difficulty of removal. These facts constitute significant change. (See PP2-1)

The results of our analysis indicate that an **additional volume of hardpan material may have been encountered beyond what should have been reasonably expected** at the time of preparation of the bid. We, therefore, performed calculations using the Contractors survey data to determine the quantity of all the hardpan material that was removed and replaced during his pipe laying operations.

Using the above quantity of 7,335 Cubic Yards, the Department compensated the Contractor for this extra work in the amount of $53,083.04 by Unilateral Supplemental Agreement. This Supplemental Agreement was forwarded to the Contractor on November 28, 2000. It includes compensation for removal of the unsuitable material at the Contract unit price of $4.00/cy and replacement with clean fill material at a unit price of $3.13/cy for a total of $7.13/cy to remove and replace the hardpan material, plus 1.5% for Bond. Please note that placement and compaction of the pipe backfill material should have been expected and included in the original bid price for the pipe. We, therefore, believe that the above unit price is very reasonable and fully compensates the Contractor for the extra work associated with the removal and replacement of the additional hardpan material.

OHM REBUTTAL:

The so called contractor's calculated volume of 7,335 cubic yards in incorrect. OHM has not been compensated. The calculated volume by OHM and Hubbard Construction Company was in excess of 10,000 cubic yards, and it was calculated at $5 and not $4 a Cubic Yard. (See PP 1-2 & 1-3)

The **Department is willing to agree there was an additional amount of hardpan material encountered than was expected at bid time.** We are in disagreement, however, as to what should have been reasonably expected at bid time. The **Contractor claims** their estimate was prepared on the basis that **they would experience predominantly sandy soils.** We believe this was an inaccurate assumption based on the following information provided in the contract documents.

OHM REBUTTAL:

The bid units used by OHM were based on notes that stated stratum six should be treated as plastic material due to the potential for perched groundwater. Difficult excavation should be anticipated and may require special equipment and/or procedures. OHM's bid did take plastic materials and groundwater into consideration when preparing bid unit price.

1. The soil survey report on Plan Sheets 40 and 41 indicate the presence of hardpan material as Stratum Number 6. The plan cross sections indicate Stratum Number 6 at the following stations: 205+00; 206+00; 207+00; 208+00; 213+00; 214+00; 215+00; 216+00; 217+00; 218+00; 219+00; 220+00; 221+00; 222+00; 223+00; 224+00; 225+00; 226+00; 227+00; 228+00; 229+00; 231+00; 374+00; 375+00; 376+00; 378+00; 379+00; 382+00; 383+00. *(Some of these stations indicate hardpan material to be several feet in thickness.)*

2. Note Number 4 on Plan Sheet 40 states "*Difficult excavation should be anticipated and may require special equipment and/or procedures.*"

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OHM REBUTTAL:

This is inaccurate. This information is taken out of context and the entire reference is not shown. It is shown above at the appropriate point. This note does not mention hardpan or cemented materials and deals with plastic soils in perched groundwater tables.

3. Standard Specification 2-4, Examination of Plans, Specifications, Special Provisions and Site of Work states that, "Details pertaining to boring, as shown on the plans, are not guaranteed to be more than a general indication of the materials likely to be found adjacent to holes bored at the site of the work, approximately at the locations indicated. *The Contractor shall examine boring data, where available, and make his own interpretation of the subsoil investigations and other preliminary data, and shall base his bid on his own opinion of the conditions likely to be encountered."*

OHM REBUTTAL:

Access to the construction site and site data were not readily available to the subcontractor. FDOT plans were the only documents available. Note that the typical FDOT information for highway construction does not take depth of utilities and what they will encounter into consideration. Most borings were only 5 feet in depth. OHM's bid submission to HCC does not apply as prima facie evidence since HCC and FDOT had already established unit rates. And FDOT boring data was inaccurate, as shown in documents in this claim.

We are also in disagreement as to the method of calculating the costs associated with this work. The **Contractor utilizes the "Measured Mile"** type analysis to determine his costs. **He compares productivity in unaffected sandy soil areas with productivity in hardpan areas.** This is an inaccurate assessment because the Contractor is comparing areas without hardpan to areas where the plans clearly depicted a certain depth of hardpan, which the Contractor claims was inaccurate. It is logical to assume that the areas where the plans depicted some hardpan would take longer to excavate than areas that did not depict any hardpan.

Additionally, the **Measured Mile method is inappropriate because it transfers all of the additional costs above what was expected to the Department.** *There could be numerous reasons why the actual costs exceeded the expected costs that would have nothing to do with the Department.* These reasons could include management and labor inefficiencies along with an **inappropriately low bid.**

OHM REBUTTAL:

Please note that OHM's final request for compensation submitted to the DRB is not based on the measured mile but on bid unit costs for special functions, i.e. excavation backfill. Note that OHM's contract for labor and equipment only, using percentage of bid units eliminates daily costs encountered for inefficiencies. OHM only used the percentage of difficulty as requested for increases based on units used in extending original bid.

For these reasons we performed calculations to determine the actual quantity of hardpan that was removed. We then compensated the Contractor for excavating, disposing of and replacing this material using a very generous unit price.

OHM REBUTTAL:

Who determines "generous unit price" if the removal costs were part of the bid and the select fill was settled by unilateral agreement with the general contractor, HCC and FDOT. OHM did not concur with the agreement, and in fact objected to it on the basis of unit prices, the number of units (CY), and that significant change was applicable. Also, the unit price was actually reduced from $5 CY, as originally proposed by FDOT

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2. **Changed site conditions, i.e., the soils encountered were not the soils depicted in FDOT plans.**

Based on careful review of the plans, it is our opinion that the Contractor should have expected a certain amount of hardpan material within the pipe trenches. The information cited in section one of this paper supports that opinion.

The Contractor has alleged that the **hardpan material was "harder" than indicated in the plans.** As stated above Standard Specification 2-4, Examination of Plans, Specifications, Special Provisions and Site of Work states that "Details pertaining to boring, as shown on the plans, are not guaranteed to be more than a general indication of the materials likely to be found adjacent to holes bored at the site of the work, approximately at the locations indicated. The Contractor shall examine boring data, where available, and make his own interpretation of the subsoil investigations and other preliminary data, and shall base his bid on his own opinion of the conditions likely to be encountered."

Additionally, the following plan notes clearly demonstrate that this material would be difficult to excavate and require specialized equipment.

1. Project 75011-3508 on plan sheet 5A Note 2 states "Estimated 2235cy of unclassified material to be displaced by the storm sewer system not included in the quantities shown above. Unclassified material may contain Stratum #6 Hardpan. ***Specialized equipment and/or procedures may be required to facilitate removal.***

2. Project 75011-3508 on plan sheet 40 Note #4 states ***"Difficult excavation should be anticipated and may require specialized equipment and/or procedures.***

OHM REBUTTAL:

FDOT boring logs depicted a minimum depth for highway construction and not utility installation where greater depths were required. They were inaccurate as hereinafter shown, i.e. plastic material vs. highly cemented hardpan with blow counts of 50 for 3 to 6" of penetration, which is nearly refusal. Also, full face of excavation was hardpan and not the thin layers as depicted on FDOT plans, which required a greater difficulty of removal. These facts constitute significant change. (See PP2-1)

Based on the above information, the Department believes that there was ample information to indicate that this material would be difficult to excavate and require specialized equipment and procedures. Along with this it should have been expected that the hardpan excavation would proceed at a slower production rate than regular sandy soil.

The only changed condition is that the hardpan layer was in some cases of greater thickness and in some cases at greater depths than depicted in the plans. Therefore, we believe we have fully compensated the Contractor for this extra work as stated in section One of this paper.

OHM REBUTTAL:

The greater the thickness of the hardpan where the full face of the excavation is hardpan with blow counts in the 50's for 3 to 6 inches constitutes a changed condition. A contractor can not break out full face as with thin layers. The shovel only scratches the face. This material is <u>not</u> plastic material, as specified. (See PP 2-1)

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3. **Misdirection by FDOT personnel on site.**

   A. Request denied for use of bedding materials due to active perched and existing water tables.

It is the Contractor's responsibility to dewater the area in order to maintain proper backfilling operations. The Contractor's dewatering system was in most cases not adequate to handle the existing conditions.

OHM REBUTTAL:

125.4.4.1 Pipe Trench Excavation: Where wet conditions are such that dewatering by normal pumping methods, including wellpoint, would not be effective, then this requirement may be modified by the Engineer and any select bedding material needed which is not available from the grading will be paid for as unforeseeable work as provided for under 4-4. See sworn affidavit by R. Dunn of 8-28-99, PP 3-4, PP 3-22, PP 3-23 and daily logs on PP 3-26 and 3-28.

A perched water table and varying thickness of hardpan reduce the effectiveness of well points for dewatering. Refer to Florida Department of Transportation Standard Specifications for Road and Bridge Construction, 1991, Pipe Bedding: When undercutting is required in order to remove unsuitable material (either hard or soft), the trench shall be backfilled to a point 6 inches above the bottom of the pipe, with suitable granular material which will form a firm bed for the bottom of the pipe. Such bedding material shall be coarse sand or other suitable granular material obtained from the grading operations on the project, or a commercial material if no suitable material is thus available.

B. Requiring density below the water table contrary to FDOT specifications.

The Department did not require acceptance testing below the water table but the Contractor is still required to place and compact the material in order to achieve sufficient density. Article 125-8.3 states the requirements for backfilling pipe culverts and 125-8.3.3 specifically covers backfilling under wet conditions. **No Department specification waives the requirement to properly place backfill below the water table.**

OHM REBUTTAL:

Properly placed backfill was not the claim, instructions by FDOT to achieve density is the claim, as verified by:

Memo to Bill Adams, HCC, 7-8-99, Pp. 3-7
Memo to Sid Van Landingham, 8-15-99, PP 3-9
Daily log, 7-8-99, PP 3-10 and 3-11.

C. Directive to remove previously installed pipe due to lack of density at the invert elevations.

The Contractor has records that indicate a 24" pipe was laid without proper "compaction under it". Subsequently, this pipe was required to be removed and replaced in order to satisfy the requirements set forth in the Contract documents.

It is clear in the Department's specifications that the Contractor is responsible for assuring that the finished product is in accordance with the plans and specifications. Article 5-3 states "In the

event the Engineer finds the materials, or the finished product in which the materials are used, or the work performed are not in reasonably close conformity with the plans and specifications and have resulted in an inferior or unsatisfactory product, the work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor."

OHM REBUTTAL:

See daily logs, PP 3-19 and 3-20 in reference to the confusion arising from conflicting direction and orders from both the FDOT representative and engineer and the HCC representative.

D. Direction to use hardpan material for backfill with varying proctors.

There is no written correspondence on this issue and FDOT project personnel deny verbally directing the Contractor to utilize the hardpan material for backfill material. Project personnel did require the Contractor to comply with the Contract requirements as stated below.

Article 125-8 of the Special Provisions requires that all backfill material be of a quality acceptable to the Engineer and shall be free of all large lumps, wood, and other extraneous material.

OHM REBUTTAL:

Please refer to the affidavits by R. Dunn of 8-28-99, PP 3-21, 3-22, 3-23 and daily logs PP 3-26 and 3-28.

E. **Directions by the Project Engineer to remove cemented hardpan and replace with select fill after previous FDOT inspector directed installation of hardpan.**

As stated above, Article 125-8 of the special Provisions requires that all backfill material be of a quality acceptable to the Engineer and shall be free of all large lumps, wood, and other extraneous material. In order to assist the Contractor in completing the project, **the Department personnel agreed that areas contained excessive hardpan material could be removed and replaced with select fill.** This work was paid for as described earlier by a Unilateral Supplemental Agreement.

OHM REBUTTAL:

OHM was not paid for areas where hardpan was used and then removed as backfill materials or select materials replaced and recompacted.

See Memo to Sid Van Landingham, 8-13-99, PP 3-31
Letter to Bill Adams, HCC, 8-4-99, PP 3-32
Meeting Notes 8-30-99, PP 3-35
Daily log, PP 3-37

4. **FDOT direction to repair a broken sewer line based on a submitted cost for same and subsequently refusing to pay for completed work on an unproven assumption that OHM caused the broken line.**

This issue has not been discussed as a part of this claim. It is a recent issue that surfaced when the Department discovered that a sewer pipe had been damaged at Station 207+00

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approximately 40 feet of centerline. The Department requested the Contractor supply a cost estimate to repair the pipe in the event that the party responsible for the damages could not be identified. The pipe was repaired and subsequently **we discovered from our records that the Contractor had previously excavated a "pothole" at this location.** Due to the fact that there was no other excavation work performed, it is obvious the pipe was damaged during the potholing operation.

OHM REBUTTAL:

OHM's previous recitation of multiple facts in this claim clearly substantiate it's position and vindicate it's claim. The multiplicity of factual evidence rejects any claim that "...it is obvious the pipe was damaged during the potholing operation." The pipe in question was evidently damaged, along with several other pipes in the area, during installation by the contractor who was performing work in the adjoining subdivision. Orange County videotapes show numerous serious installation problems with the pipe, all of which have been relayed to HCC and FDOT as unacceptable. Any pipes laid in this area by OHM have been accepted

FDOT SUMMARY

As stated above the **Department does believe the Contractor encountered an additional amount of hardpan material than was expected at the time of bid.** We have carefully analyzed this issue and determined a fair and equitable compensation. Unfortunately, we cannot guarantee the Contractor earn his anticipated profit. We can only assure that the information provided in the plans is clear and accurate and when additional work is necessary we compensate the Contractor in a fair and reasonable manner. Therefore, any additional costs incurred by the Contractor are not the Department's responsibility but due to circumstances beyond our control.

OHM SUMMARY REBUTTAL

OHM has attempted to fully communicate the basis of the original and subsequent claims for compensation through changed site conditions. It has done this through extensive documentation trails, including data depicting hardpan limits, daily logs, video tapes, drilling locations, memos, supplementary reports and other materials. It has asked for redress no less than two dozen times through documented site and weekly progress meetings, memos, correspondence and discussions at the partnering meetings.

OHM has clearly shown through professional, geological analysis that blow counts in excess of 50 for 3" to 6" penetration, which is considered near refusal, is not. plastic material as the plan notes indicate.

That the soils encountered in section 3 were 3.28 times more than quantities shown on plans.

That test pits video taped and witnessed by FDOT show about 97 feet of hardpan that required different removal because of full-face excavation.

That the disparity between instructions and directions given to OHM by the HCC and the FDOT representatives, fully documented, created additional costs.

That the alternate use and rejection of hardpan as a sometimes suitable then sometimes unsuitable material is not permitted under FDOT specifications.

OHM has clearly demonstrated that the basis for it's claims for additional compensation stemmed from unforeseen physical conditions and unforeseen circumstances beyond it's control, both of which constitute a significant changed condition. Likewise, some of these soil data conditions were beyond FDOT's control. However, FDOT has responsibility for the lack of information provided to OHM and OHM is entitled to and has demonstrated a sound basis for compensation for this and for cause-related issues set forth herein.

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DEPARTMENT'S REBUTTAL:

REBUTTAL TO THE CONTRACTOR' S POSITION PAPER
STORM DRAINAGE AND SANITARY SEWER SYSTEM CLAIM

As we stated in our Position Paper, we have compensated the Contractor in the amount of $53,083.04 for the extra work associated with this issue. We believe that this is a very generous amount that fully compensates for any extra work that was encountered.

Many of the Contractor's allegations were addressed in our Position Paper. The attached rebuttal will serve to address the portion of the issues that were not addressed in our original paper.

In the Contractor's Position Paper he alleges the Department's representatives **directed the use of the hardpan material as backfill. This** is an **incorrect statement**. The Department did not direct the use of the material. The Contractor was only directed that (if the material was used) the large "clods" must be removed per specification. The Contractor can always, at his discretion, remove questionable material and replace it with clean backfill material.

The Contractor states the Department **rejected the use of thick lift compaction** without just cause or merit. It is a policy of the Florida Department of Transportation not to allow thick lift compaction for backfill of pipe. This policy exists to ensure that all piping is placed properly and to avoid settlement or displacement of the pipe during backfill operations. The decision to reject the use of thick lift compaction was based on very sound and just reasoning that has been established to ensure pipe is placed to avoid leaking and associated settlement of the Department's roadways.

In Section Two of the Contractor's Position Paper, he alleges "changed site conditions". The Department's Geotechnical Office has carefully reviewed this issue and they concur with our position that it is clear the **Contractor should have expected difficult excavation**. They also agree that the **hardpan may have been more extensive** than shown in the plans which **justifies our previous payment** to the Contractor in the amount of $53,083.04. A copy of the memorandum from our Geotechnical Office is included for review.

The first correspondence from the Subcontractor that the Department is aware of is dated September 9, 1999. This correspondence alleges "insufficient project plans information" that impacted the Subcontractor. In this letter there is no mention of "misdirection by FDOT personnel on site" yet, according to the Contractor's field notes, the misdirection occurred prior to this date. The Department questions why (if the alleged misdirection was such a significant issue) was it not addressed within this letter.

We have reviewed the density test results in order to determine possible reasons for the Contractor's low production. Page 41 of the Department's Density Log Book indicates, the Contractor was using a **material with an optimum moisture of 13**, however, the material in the field consistently shows a moisture content between 7 and 11. This low moisture content may explain why the density could not be achieved.

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MEMO
DATE: November 9, 2000
TO: Calvin Landers
FROM: Brian Bixler
COPIES TO: J.Foshee File
SUBJECT: S.R. 414 Hardpan Issue

After reviewing the Contractor's claim package and the contract plans, this office offers the following comments:

- For project # 75011-3508 on sheet 5A note #2: "Estimated 2235 cu. yds. of unclassified material to be displaced by the storm sewer system not included in the quantities shown above. **Unclassified material may contain Stratum #6 - Hardpan. Specialized equipment and/or procedures may be required to facilitate removal."**
- For project # 75011-3508 on sheet 40 note # 4: " **Stratum 6 should be treated as a plastic material due to potential for perching groundwater. Difficult excavation should be anticipated and may require specialized equipment and/or procedures."**

In addition, there are 9 notes pertaining to hardpan shown in the plans for 77002-3523.

- Sheet # 7, Note # 2
- Sheet # 57, Note # 4
- Sheet # 12, Note #2 (SR 414/SR 434)
- Sheet # 13 Pay Item Note # 120-6 (SR 414/SR 434)
- Sheet # 115, Note # 10 (SR 414/SR 434 Soil Survey Sheet)
- Sheet # S-18 & S-19, Note # 4
- Sheet # T-20 & T-21, Note # 4

This office agrees the hardpan stratum may have been more extensive than shown in the plans. **The five foot (avg) deep auger borings stopped short of the depth of the pipe.** Three of the six twenty foot auger borings showed stratum # 6 at various depths and thickness.

But the potential for difficult excavation and the potential for perched groundwater was clearly identified in the notes listed above.

Although the **soil description shows "weakly cemented" in its verbiage, this does not change the fact the notes addressed both issues.** These notes clearly state the contractor should expect perched groundwater and difficult to excavate hardpan

CONTRACTOR'S REBUTTAL:

Included under Department's position.

BOARD FINDINGS:

Issue No. 1:

- The Board was not apprised of the extent of this hardpan issue during the life of the project by either the Contractor or the Department
- Presentations by both parties were lacking in clarity and adequate reasoning as to justification for their respective appraisal of damages. In addition, sufficient backup documentation of total costs impacts were not provided by the Contractor nor did the Department attempt to verify or contest these cost in case future entitlement was awarded

DISPUTE REVIEW BOARD RECOMMENDATION

- The information contained in the plans pertaining to hardpan was not clear or accurate.

Issue No. 2:

- There is insufficient proof that OHM was responsible for damaging the sewer line.

BOARD RECOMMENDATION:

As to Issue No. 1:

Based on the materials supplied to the Board and presentations to the Board at the DRB hearing, **the Board finds that OHM is due $ 52,979.36 in additional compensation over and above the amount included to the unilateral supplemental agreement.**

As to Issue No. 2:

Based on the materials supplied to the Board and presentations to the Board at the DRB hearing, **the Board finds entitlement to the Contractor's position and encourages the parties to negotiate equitable compensation to OHM for the repair.**

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.

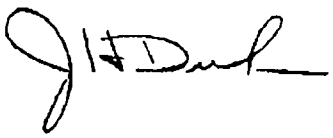
I certify that I have participated in all of the meetings of this DRB regarding Issue No. 1 and concur with the findings and recommendations.

Respectfully Submitted

Disputes Review Board

John H. Duke, Sr.; DRB Chairman
Lance D. Lairscey, P.E.; DRB Member
Dallas L. Wolford, DRB Member

SIGNED FOR AND WITH THE CONCURRENCE OF ALL MEMBERS:



John H. Duke, Sr.; DRB Chairman