DISPUTE REVIEW BOARD HEARING RECOMMENDATION

APRIL 19, 2021

PROJECT

I-75/SR 56 DIVERGING DIAMOND INTERCHANGE
PASCO COUNTY, FLORIDA
FPID 430573-1-52-01
FDOT CONTRACT NO. T7412

INTRODUCTION:

D.A.B. Constructor, Inc. (D.A.B.) is the prime contractor for the Florida Department of Transportation's (Department) I-75/SR 56 Diverging Diamond Interchange project in Pasco County, Florida (Project). The Project is Bid-Build and was bid on June 13, 2018. The first Contract Day was January 7, 2019.

American Consulting Engineers of Florida, LLC, designed the Project for the Department and is the Project's Engineer of Record (EOR). CDM Smith is the Department's Construction Engineer Inspector (CEI).

On February 2, 2021, the Dispute Review Board (DRB) for the Project received a written request from D.A.B. for a DRB Hearing and recommendation regarding entitlement for additional compensation for Extra Work and Delay resulting from the Department's failure to include a temporary drainage design that provided for safety and efficiency during construction and drainage where construction activities might divert or trap water.

A pre-hearing discussion was held on February 12, 2021, attended by the DRB members, representatives of the Department, and representatives of D.A.B. The parties agreed to the following issue statement for the Hearing:

> *"Is the Contractor entitled to additional compensation for Extra Work and Delay resulting from the Department's failure to include an adequate Temporary Drainage design that provides for 'safety and efficiency' during construction, and that provided 'drainage where construction activities might divert or trap water?"*

D.A.B. asks the DRB to provide a recommendation that entitlement exists for:

- Compensation for extra work resulting from unforeseeable conditions.
- Compensation for delay resulting from a work stoppage due to unforeseeable conditions.
- Additional Contract Time for delay due to work stoppages for unforeseeable conditions.
- Additional Contract Time for alterations to the work's character and nature that materially increased the time of performance.

At the pre-hearing discussion, the parties also agreed that the issue for the Hearing was in regard to Notice of Intent (NOI) No. 24 and related events, and that the Hearing was only for entitlement and not for quantum.

The Hearing was held on April 5, 2021, at the Department's District 7 office at 11201 N. Malcolm McKinley Drive, Tampa, Florida.

ISSUE OVERVIEW:

D.A.B. provided a written NOI No. 24 to the Department, dated April 24, 2020, stating D.A.B. intended to seek compensation for extra work and delay from the Department, in accordance with Contract Specification Section 5-12, for the impact of sheet flow runoff of stormwater over temporary critical lagging walls.

D.A.B. submitted a preliminary time extension request to the Department on October 6, 2020. As of March 19, 2021, a final time extension request had not been submitted. D.A.B. has stated as of that date, the issue had not yet been fully abated.

D.A.B. states that stormwater sheet flow off of roadway pavement resulted in washouts of earthen slopes, water saturation of soils in the areas of temporary critical lagging walls and MSE wall construction, and the failure of portions of temporary critical lagging walls. D.A.B. asserts those situations would not have occurred if the Department had provided an adequate Temporary Drainage design that provides for safety and efficiency during construction, and that provided drainage where construction activities might divert or trap water.

D.A.B. asserts that in accordance with Section 240.4 of the Florida Design Manual (FDM), the Department is required to consider temporary drainage and provide a suitable design in the Temporary Traffic Control (TTC) plan that provides for safety and efficiency during construction and drainage where construction activities might divert or trap water. D.A.B. contends the Department failed to do so.

D.A.B. also asserts the Contract Documents are to conform with all applicable design standards specified by the Department, including the FDM and Drainage Manual requirements, and if not, the Department must inform the bidders of the deviation from the governing standards in situations where such requirements cannot be met. D.A.B. asserts the Department deviated from the FDM and the Drainage Manual requirements and failed to notify bidders of the deviation, resulting in a material change to the character and nature of the work that any reasonable bidder could not anticipate.

The Department acknowledged that stormwater runoff from the pavement damaged D.A.B.'s installed work, but asserts D.A.B. was responsible to handle sheet flow that might impact construction operations. The Department asserts there has been no failure by the EOR in not providing a Temporary Drainage design for the Project as it relates to sheet flow of stormwater over temporary critical walls and any resultant damage from the sheet flow over the temporary critical walls.

The Department asserts the impacts caused by sheet flow overtopping the temporary walls was a result of D.A.B.'s failure to meet the following contractual obligations:

- Requirements of Contract Specification 7-14
- Requirements of Contract Specification 8-4.5
- Requirements of Contract Specification 120-11
- Requirements of Contract Specification 104
- Requirements of State of Florida Erosion and Sediment Control Designer and Reviewer Manual, July 2013
- Adherence to shop drawing requirements of its lagging wall subcontractor
- Requirements, notes, and expectations outlined in the Project Stormwater Pollution Prevention Plan (SWPPP)

DRB'S ANALYSIS:

DRB's Analysis of D.A.B.'s Position:

D.A.B. references three documents to support its position that, in regard to NOI No. 24, the Department is required to provide an adequate Temporary Drainage design that provides for safety and efficiency during construction and drainage where construction activities might divert or trap water:

- Florida Design Manual, Section 240.4
- FDOT Drainage Manual, Section 3.9.2
- Development Specification 104

Florida Design Manual, Section 240.4

D.A.B.'s position is that the Temporary Traffic Control (TTC) plan design, prepared by the Department's EOR and included in the Contract Documents, is to include an adequate temporary drainage design for the TTC configuration that provides for safety, efficiency, and for drainage where construction phasing activities might divert or trap water in areas that are on and/or off the roadway pavement. D.A.B. referenced Section 240.4 of the FDOT Design Manual as requiring the TTC plan to include a temporary drainage design.

Section 240.4 of the FDOT Design Manual relates to TTC plans and states a Temporary Traffic Control plan is required anytime work is being performed within, or adjacent to highways, roads and streets as specified by Florida Statute and Federal regulations. A TTC plan is comprised of specific plan sheets, references to standard (typical) layouts, and notes on roadway plans describing how traffic will be controlled through a work zone. Included in the items of information the TTC plan is to provide are the requirements for a temporary drainage design.

The Department stated the FDOT Design Manual is not a required guideline for nor referenced in the Contract with D.A.B. The Department stated that the appropriate design referenced manual, as established by FDOT under the EOR's contract and based on the FDOT Roadway Design Bulletin 17-12, is the FDOT Plans Preparation Manual. The Department further stated the only reference to temporary drainage design in both documents is a line item which notes that temporary drainage design must be addressed in the TTC

plan and that the contract TTC plan provides temporary drainage design, as needed and based on the FDOT Drainage Manual criteria, for each phase of construction. The Department contends the design references that outline the EOR's minimum guidance for preparing contract plans that address the issue before the DRB are:

1. FDOT Plans Preparation Manual, January 2017, Vol 2, Section 19
2. FDOT Drainage Manual, January 2017, Section 3.9.2

Section 19.1 of the FDOT Plans Preparation Manual, January 2017, Vol 2 states a TTC plan will accompany all plans for a construction project. The TTC plan is the final document that summarizes the considerations and investigations made in the development of a comprehensive plan for maintaining traffic through a work zone.

Section 19.2 of the FDOT Plans Preparation Manual, January 2017, Vol 2 states the TTC plans should address each phase of construction and list the required information to be provided by the TTC plan to inform the contractor. The listed information to be provided does not specifically include temporary drainage, but does state the work to be accomplished during the individual phases of construction are to be included. However, Section 19.3, 19.3.2 and 19.3.3 of the FDOT Plans Preparation Manual, January 2017, Vol 2 do note temporary drainage is to be included as a component of the TTC plan.

Section 19.3, 19.3.2 and 19.3.3 note the guidelines developed to assist in determining the level of detail and complexity for both a Level II project (Moderately complex construction project, such as reconstruction or roadways, i.e. urban or rural widening projects, projects with diversions or detours) and a Level III project (complex projects) are to include temporary drainage as a component of the TTC plan. D.A.B. indicated it believed the Project was a Level III project and the Department indicated the Project met the requirements of a Level II project. Nevertheless, both Level II and Level III projects are to include temporary drainage as a component of the TTC plan.

Section 19.1 of the FDOT Plans Preparation Manual, January 2017, Vol 2 does not address specifically whether or not "temporary drainage," as a component of the TTC plan, relates only to preventing stormwater from flooding the roadway pavement. Section 19.3.2 states that for a Level II project, which the Department contends this Project is, does require the components of the TTC plan to include special details, i.e. temporary drainage, as necessary for constructability of each individual phase of construction.

DRB Analysis:

Based on FDOT Roadway Design Bulletin 17-12, the DRB finds the appropriate design referenced manual, as established by FDOT under the EOR's contract, is the FDOT Plans Preparation Manual rather than the FDOT Design Manual.

Based on Section 19.3.2 of the FDOT Plans Preparation Manual, January 2017, Vol 2, the DRB finds that the Department's TTC plan, for this Project, is to include temporary drainage as necessary for constructability of each individual phase of construction.

FDOT Design Drainage Manual, January 2017

Section 1.1 of the FDOT Design Drainage Manual states the purpose of the manual was to set forth the drainage design standards for the Department's projects and Section 1.3 states the principal users of the manual are consultants and Department personnel who prepare Department construction plans.

Section 1.5 of the FDOT Design Drainage Manual states the hydraulic designer will provide a signed and sealed Drainage Design Report that addresses the entire project design and that the report must include a clear description of the overall stormwater management system.

Section 3.9 of the FDOT Drainage Manual relates to pavement hydraulics and Section 3.9.2 relates to pavement hydraulics spread for temporary construction.

> *"3.9.2 Spread for Temporary Construction"*
> *"Design temporary drainage, for traffic diversions and construction staging, to provide drainage where construction activities might divert or trap water and compromise safety and efficiency. Give additional attention to expected spread for areas that are; (1) flood sensitive, (2) high-speed facilities (>66 mph posted speed), or (3) using a low side barrier wall."*

D.A.B.'s position is that Section 3.9.2 relates to anywhere on the Project where water is diverted or trapped which would compromise the safety and efficiency of construction activities, i.e. stormwater sheet flow off of roadway pavement which resulted in washouts of earthen slopes, water saturation of soils in the areas of temporary critical lagging walls and MSE wall construction, and the failure of portions of temporary critical lagging walls.

The Department's position is that Section 3.9.2 only relates to spread of stormwater onto the roadway pavement and the temporary drainage design referenced is to prevent stormwater from being diverted which would result in an unacceptable spread onto the pavement and/or prevent trapped stormwater from an unacceptable spread onto the pavement. The Department's position is that Section 3.9.2 does not relate to the spread and/or trapping of stormwater on adjacent areas off of the pavement as long as that water does not result in an unacceptable spread onto the roadway pavement.

At the Hearing, the EOR's hydraulic designer stated that an overall stormwater management system was not designed nor addressed by the TTC plans for the TTC designed phases of the Project, other than to prevent trapped stormwater from an unacceptable spread onto the roadway pavement.

DRB Analysis:

Based on the documents and evidence presented, the DRB finds that Section 3.9.2 only relates to spread of stormwater onto the roadway pavement and the temporary drainage design referenced is to prevent stormwater from being diverted which would result in an unacceptable spread onto the pavement and/or prevent trapped stormwater from an unacceptable spread onto the pavement. Section 3.9.2 does not relate to the spread and/or trapping of stormwater on adjacent areas off of the pavement during construction staging as long as that water does not result in an unacceptable spread onto the pavement. However, if the spread and/or trapping of stormwater on adjacent areas off of the pavement during construction staging might result in an unacceptable spread onto the

pavement, then according to the Department and specifically Section 3.9.2, a temporary drainage design would be required to be provided by the TTC plan to prevent an unacceptable spread onto pavement during construction staging.

Based on the documents and evidence presented, the DRB also finds that in accordance with Section 1.5, a signed and sealed Drainage Design Report was required for the entire Project design with a clear description of the overall stormwater management system. An overall stormwater management system, however, was not included in the design of the Project TTC phases, or a component of the TTC plan, as specified by Section 19.3.2 of the FDOT Plans Preparation Manual, January 2017, Vol 2.

Development Specification 104, Prevention, Control, and Abatement of Erosion and Water Pollution

In accordance with the provisions of Development Specification Section 104-1, D.A.B. has the responsibility to provide an Erosion and Sediment Control (E&SC) plan signed and sealed by a Specialty Engineer. Furthermore, D.A.B. had the responsibility to select and install temporary erosion and sediment control features in accordance with the plan for the Project and for areas outside the right-of-way where work was accomplished in conjunction with the Project and the Project permits (Southwest Florida Water Management District) to prevent pollution of water and wetlands, detrimental effects to public or private property adjacent to the project right-of-way and damage to work on the Project.

D.A.B. prepared and submitted an E&SC plan which was accepted by the Southwest Florida Water Management District. The plan showed the locations of temporary erosion and sediment control features, i.e. sediment barriers, staked turbidity barriers, floating turbidity barriers, inlet protection, and temporary coverings (artificial or sod) to control erosion, sediment, turbid discharge, and pollution of water and wetlands in conjunction with the project permits.

Also, in accordance with Contract Specification Section 5-11, D.A.B. has the responsibility to adjust, maintain, replace, or supplement selected devices as needed to ensure continuous control of erosion, sediment, turbid discharge, water pollution, and compliance with permit conditions until Final Acceptance.

Development Specification Section 104-3 requires the E&SC plan to be in accordance with Best Management Practices (BMP's) identified in the State of Florida Erosion and Sediment Control Designer and Reviewer Manual. For each phase of construction operations or activities, the plan was to include existing and proposed drainage and flow patterns and the positive drainage measures to be employed, and to install, as soon as practical, permanent drainage features.

Section I of the State of Florida Erosion and Sediment Control Designer and Reviewer Manual states the purpose of the manual is to assist designers and reviewers in providing meaningful and practical E&SC drawings as part of the Stormwater Pollution Prevention Plan (SWPPP) for the contractor to implement. The section further states the performance standards for erosion control and sediment control during grading is to retain sediment on-site with a backstop that no discharge violate the State of Florida's water quality standard for turbidity and to protect water quality and minimize erosion and sedimentation by the use of effective BMP's during and after grading. Ultimately, the guidance in the manual is to ensure the desired benefits of stormwater management systems are being achieved.

Section II of the State of Florida Erosion and Sediment Control Designer and Reviewer Manual states the E&SC plans shall identify potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharge associated with construction activity and describe and ensure implementation of BMP's which will be used to reduce the pollutants in stormwater discharge associated with construction activity and assure compliance with terms and conditions of permits.

D.A.B. stated, and Department agreed, that stormwater runoff from the pavement resulted in washouts of earthen slopes, water saturation of soils in the areas of temporary critical lagging walls and MSE wall construction, and the failure of portions of temporary critical lagging walls. The Department asserts the damage could have been prevented had D.A.B. utilized and maintained BMP's noted in the State of Florida Erosion and Sediment Control Designer and Reviewer Manual such as Rolled Erosion Control Products (RECPs), temporary slope drains, and/or diversion dikes.

Development Specification Section 104-4.6 requires D.A.B. to maintain permanent and temporary erosion and sediment control features, at no expense to the Department, until the project is completed and accepted. If reconstruction of such erosion and sediment control features is necessary, as determined by the Engineer, due to factors beyond the control of D.A.B., the Department will consider payment for replacement pursuant to Contract Specification Section 4-4, Unforeseeable Work.

Development Specification Sections 104-5 and 104-6 states the basis measurement and payment for the work specified in Development Specification 104 is a lump sum payment.

D.A.B. stated its E&SC plan does not include the design for the temporary drainage of stormwater sheet flow off of roadway pavement in the areas of temporary critical lagging walls and MSE wall construction and is not required to do so. D.A.B. stated the purpose of the E&SC plan was not to design the necessary temporary drainage system for construction phases of the Project, but only to control erosion, sediment, turbid discharge, and water pollution in accordance with permit conditions, utilizing BMP's identified in the State of Florida Erosion and Sediment Control Designer and Reviewer Manual, and based on the drainage system designed by the Department and included in the Contract Plans. Doing so would thus fullfill the requirements of Development Specification Section 104-3.

D.A.B. stated the Department's original TTC plan did not provide for D.A.B. to be able to reasonably utilize standard runoff control structures to prevent roadway stormwater runoff from preventing washouts of earthen slopes, water saturation of soils in areas of temporary critical lagging walls and MSE wall construction, and the failure of portions of temporary critical lagging walls. The design of the original TTC plan did not provide adequate space between barrier walls and the top of the embankment slope, required for the installation of the temporary critical lagging walls and MSE walls in various areas, to allow for the reasonable utilization of standard runoff control structures referenced in the State of Florida Erosion and Sediment Control Designer and Reviewer Manual.

The Department stated Development Specification 104-1 places the contractual requirement for handling stormwater sheet flow onto temporary critical walls and all elements of the work zone onto D.A.B.

The Department asserts Development Specification 104-3 places the responsibility of providing existing and proposed flow patterns and positive drainage measures for each phase of construction operations on D.A.B.

DRB Analysis:

Based on the documents and evidence presented, the DRB does not find that the terms and provisions of Development Specification 104 specify or require D.A.B. to design a temporary drainage system for any portion of the Project. The DRB finds the E&SC plan required to be provided by D.A.B. is for a planned method to control erosion, sediment, turbid discharge, and water pollution in accordance with Southwest Florida Water Management District permit conditions and with BMP's identified in the State of Florida Erosion and Sediment Control Designer and Reviewer Manual, and based on the drainage system designed by the Department and included in the Contract Plans.

Based on the documents and evidence presented, the DRB does not find that the State of Florida Erosion and Sediment Control Designer and Reviewer Manual requires the E&SC plan to provide or include a design for a temporary drainage system for any portion of the Project.

Based upon the documents and evidence presented, the DRB finds the "proposed drainage" to be included in the E&SC plan, as stated in Development Specification 104-3 (1) (h), is not a requirement that the "proposed drainage" is to be designed by D.A.B., only that the proposed drainage be included. The DRB finds that the "proposed drainage" is a reference to the "proposed drainage" as indicated by the Contract Plans. The DRB notes D.A.B.'s E&SC plan was approved without a "proposed drainage" design by D.A.B. being included.

Based on the documents and evidence presented, the DRB finds the Department's original TTC plan did not provide Temporary Drainage design in the locations where drainage could not be managed by standard Best Management Practices (BMP's) identified in the State of Florida Erosion and Sediment Control Designer and Reviewer Manual.

DRB's Analysis of the Department's Position:

The Department asserts that the impacts caused by sheet flow overtopping the temporary lagging walls was the result of D.A.B. failure to meet the following contractual obligations:

1. D.A.B. failed to adhere to the requirements of Specification Section 7-14
2. D.A.B. failed to adhere to the requirements of Specification Section 8-4.5
3. D.A.B. failed to adhere to the requirements of Specification Section 120-11
4. D.A.B. failed to adhere to the contract requirements of Specification 104
5. D.A.B. failed to adhere to the requirements of the State of Florida Erosion and Sediment Control Designer and Reviewer Manual, July 2013
6. D.A.B. failed to adhere to the shop drawing requirements of its own Subcontractor and Specialty Engineer
7. D.A.B. failed to adhere to the notes, requirements and expectations outlined in the project SWPPP

Specification Section 7-14

The Department asserts that in acordance with Specification Section 7-14, D.A.B. had the sole responsibility for the protection of the work.

Specification Section 7-14 states the Contractor will take charge and custody of the work, and take every necessary precaution against damage to the work, by the action of the elements or from any other cause whatsoever, until the Department's final acceptance of the work. The Contractor will rebuild, repair, restore, and make good, all damage to any portion of the work occasioned by any of the above causes before final acceptance of the Contract.

Regarding payment by the Department for damage to the work, the specification states the Department will have no obiligation to pay any reimbursement for damage caused by the execution or nonexcution of the work by the Contractor or its sub-contractors, or damage the Contractor was negligent in preventing. However, the Department may, at its discretion, reimburse the Contractor for the repair of damage to the work not caused by a third party and due to unforeseen causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to Acts of God, of public enemy, or of governmental authorties.

DRB Analysis:

Based on the documents and evidence presented, the DRB finds that notwithstanding that Specification Section 7-14 requires D.A.B. to take "every necessary precautions against damge to the work," the Department's failure to provide a temporary drainage design for the TTC plan places an unreasonable burden on D.A.B. to prevent the stormwater sheetflow of water into its work zones. That is, without having a temporary drainage design to prevent water from flowing off the paved ramp areas into its work zones, D.A.B. could not reasonably be expected to control the flow of the great quantities of water in the ramp areas and keep it from damaging D.A.B.'s work with the utilization of typical BMP measures.

Specification Section 8-4.5

The Department asserts D.A.B. failed to conduct operations and maintain the work in such a manner to provide adequate dranage.

Specification Section 8-4.5 states that the contractor is to conduct the operations and maintain the work in such condition to provide adequate drainage at all times and to not obstruct existing functioning storm sewers, gutters, ditches, and other run-off facilities.

DRB Analysis:

Based on the documents and evidence presented, the DRB finds D.A.B. was to provide adequate drainage in accordance with the drainage system shown in the Contract Plans and not to obstruct existing functioning storm sewers, gutters, ditches, and other run-off facilities except as possibly noted by the Contract Plans and Documents.

Specification Section 120-11

The Department asserts D.A.B. failed to perform maintenance and protection of earthwork construction in accordance with Section 104 as required by Specification 120-11.

Specification Section 120-11 states the contractor is to perform maintenance and protection of earthwork construction in accordance with Section 104.

Development Specification 104 states the contractor is to adjust, maintain, replace, or supplement selected devices as needed to ensure continuous control of erosion, sediment, turbid discharge, water pollution, and compliance with permit conditions until Final Acceptance.

Specification Section 120-11 further states that while construction is in progress, the contractor is to maintain adequate drainage for the roadbed at all times and to maintain a shoulder at least 3 feet wide adjacent to all pavement or base construction in order to provide support for the edges.

DRB Analysis:

Based on the documents and evidence presented, the DRB finds D.A.B.'s adjustment, maintenance, replacement, or supplement of specific selected devices to control erosion, sediment, turbid discharge, and water pollution is not relevant to the Hearing issue in the ramp areas where the Department did not provide a temporary drainage deign to prevent the stormwater sheetflow into D.A.B.'s work zones. The DRB notes that, although the Department showed some areas in D.A.B.'s work zones may have had certain slopes without sod and other areas may have lacked maintenance of sandbags, etc., such conditions were not the driving force that resulted in damage to D.A.B.'s work, i.e. the lack of a temporary drainage design was the primary driving force of the damage to D.A.B.'s work. If anything, the aforesaid conditions may affect any quantum D.A.B. seeks, but not its entitlement in the first instance.

State of Florida Erosion and Sediment Control Designer and Reviewer Manual, July 2013 and Development Specification 104

The Department stated the State of Florida Erosion and Sediment Control Designer and Reviewer Manual calls for diversion and slope protection measures and diverting and controlling runoff waters is D.A.B.'s obligation responsibility under the terms of Specification 104 and by reference in the State of Florida Erosion and Sediment Control Designer and Reviewer Manual.

Section I of the State of Florida Erosion and Sediment Control Designer and Reviewer Manual states the purpose of the manual is to assist designers and reviewers in providing meaningful and practical E&SC drawings as part of the Stormwater Pollution Prevention Plan (SWPPP) for the contractor to implement. The section further states the performance standards for erosion control and sediment control during grading is to retain sediment on-site with a backstop that no discharge violate the State of Florida's water quality standard for turbidity and to protect water quality and minimize erosion and sedimentation by the use of effective BMP's during and after grading. Ultimately, the guidance in the manual is to ensure the desired benefits of stormwater management systems are being achieved.

Section II of the State of Florida Erosion and Sediment Control Designer and Reviewer Manual states the E&SC plans shall identify potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharge associated with construction activity and describe and ensure implementation of BMP's which will be used to reduce the pollutants in stormwater discharge associated with construction activity and assure compliance with terms and conditions of permits.

The Department asserts D.A.B.'s E&SC plan only provided perimeter measures for the final configuration and inlet protection and did not provide diversion measures needed to keep runoff from flowing into the work zone nor interim phases as required by Specification Section 104-1.

DRB Analysis:
The DRB's findings of this assertion by the Department have been addressed in the DRB's analysis of D.A.B.'s Position section herein related to Development Specification 104.

The Department asserts D.A.B. failed to provide specific elements in its E&SC plan for existing and proposed drainage and flow patterns and positive drainage measures as required by Specification Section 104-3.

DRB Analysis:
The DRB's findings of this assertion by the Department have been addressed in the DRB's analysis of D.A.B.'s Position section herein related to Development Specification 104.

The Department asserts D.A.B. failed to timely and effectively implement supplemental features as required by Specification 104-1. The Department stated that at its direction, D.A.B. subsequently installed sandbags as an effective diversion and conveyance channel. However, D.A.B. in some instances did not adequately install and/or maintain the sandbags and/or diversion and conveyance channel which resulted in washouts to earth slopes.

DRB Analysis:
The DRB's findings of this assertion by the Department have been addressed in the DRB's analysis of D.A.B.'s Position section herein related to Development Specification 104 and sections herein regarding Specification Section 120-11.

The Department asserts D.A.B. failed to maintain erosion control features as shown in NPDES monitoring reports and as required by Specification Section 104.1.

DRB Analysis:
The DRB's findings of this assertion by the Department have been addressed in the DRB's analysis of D.A.B.'s Position section herein related to Development Specification 104 and sections herein regarding Specification Section 120-11.

The Department asserts that at its direction, D.A.B. subsequently installed sandbags as an effective diversion and conveyance channel. However, D.A.B. in some instances did not adequately install and/or maintain the sandbags and/or diversion and conveyance channel which resulted in washouts to earth slopes.

DRB Analysis:
The DRB's findings of this assertion by the Department have been addressed in the DRB's analysis of D.A.B.'s Position section herein related to Development Specification 104 and sections herein regarding Specification Section 120-11.

Requirements of Temporary Critical Walls Shop Drawings

The Department stated D.A.B.'s shop drawings for the temporary critical walls prepared by D.A.B.'s temporary critical wall subcontractor, Hayward Baker, alerted D.A.B. of its responsibility to install and maintain temporary contol measures to prevent water from overtopping the temporary walls.

The shop drawings include a typical cross section of the temporary critical wall which shows the top of soldier piles being a minimum of 1 foot higher in elevation than the ground line at the back of the wall.

General Note No. 5 on the shop drawing stated the general contractor shall install and maintain slopes, erodion, sediment, and dust control.

General Note No. 7 on the shop drawing stated the general contractor/owner shall install and maintain drainage control measures such as a swale, berm, curb, sandbags, etc. to drain water away from the top and bottom of the slope for the duration of the slope life and that at no time shall water be allowed to flow over the top of the wall. The drainage measure will be installed prior to Hayward Baker's mobilization.

The Department asserts D.A.B. failed to to construct the temporary walls in accordance with key details, such as top of wall elevation and the one-foot of free-board detail and failed to divert water and maintain drainage control measures to drain water away from the top and bottom or the slope.

DRB Analysis:

Based on the documents and evidence presented, the DRB finds the small variances noted between the actual top of temporary critical wall elevations and the the ground line elevation at the back of the temporary critical wall and those elevations depicted on the shop drawings did not result in the washouts of earthen slopes, water saturation of soils in the areas of temporary critical lagging walls and MSE wall construction, and the failure of portions of temporary critical lagging walls. Where the top of the soldier piles extended above the ground line at the back of the temporary critical walls, as indicated on the shop drawings, may have stopped water from overtopping the wall, but in fact would result in water being trapped behind the wall and the saturation of soils in the areas back of the temporary critical lagging walls causing failure of portions of temporary critical lagging walls.

Based on the documents and evidence presented, the DRB finds General Notes 5 and 7 do not address who is responsible, D.A.B. or the Department, for the design of temporary drainage or other drainage measures.

Project Stormwater Pollution Prevention Plan (SWPPP)

The Department stated the Contract Plans include the Stormwater Pollution Prevention Plan (SWPPP) and, as required by Development Specification Section 104-3, D.A.B.'s E&SC plan was to be incorporated into the Department's SWPPP. The Department stated the SWPPP provided in the Contract Plans alerted D.A.B. to the need to plan and schedule its work while timing construction activities to limit potential impacts from seasonal climate changes or weather events.

The Department asserts D.A.B. did not sequence its work during the optimal weather season and suggests it should have done so or install significant erosion control efforts to include stormwater diversion.

DRB Analysis:

From the very beginning of the DRB's participation with the Project, the parties have acknowledged that the specified Contract Time allocated for the Project to be constructed was limited for the amount of work and sequencing of the work to be performed. Although D.A.B. was responsible for scheduling and sequencing its work, the Department dictated the Contract Time allowed to construct the Project.

Based on the documents and evidence presented, the DRB finds D.A.B., as a result of the necessary sequencing of work activities, had limited periods in which to plan and perform the various work activities required to construct the temporary critical walls and MSE walls in order to complete the Project within the Contract Time allowed. Thus, the baseline schedule indicates portions of those activities to be performed during the wetter seasons of the year.

The issue of erosion control efforts and design of stormwater diversion is addressed in other portions of the DRB's analysis section herein.

"Assertions" noted in D.A.B.'s Position Paper

In its Rebuttal Paper, the Department addressed 19 statements D.A.B. made in its Position Paper. The DRB's analysis of each are as noted below:

D.A.B. Assertion 1: "... to achieve density on AASHTO A-3 classified select material in the first few lifts of backfill of Wall 4. The Contractor removed and replaced the backfill material multiple times in an effort to achieve density. The Contractor spent more than three weeks achieving compaction on the first three lifts of material at the bottom of the Wall 4 envelope. Comparatively, the Contractor is now achieving density on a single lift with less than a single day's effort."

DRB Analysis: The DRB finds this is a quantum issue and not relevant to entitlement of the Hearing issue.

D.A.B. Assertion 2: "Gaines in compaction efficiency ceased as the rainy season approached."

DRB Analysis: The DRB finds this is a quantum issue and not relevant to entitlement of the Hearing issue.

D.A.B. Assertion 3: “Progress on Wall 4 was significantly ahead of the progress of the three other quadrants of the interchange. The Contractor encountered identical conditions with the foundations beneath the MSE Walls 1, 3, and 7 as were encountered on Wall 4.”

DRB Analysis: The DRB finds this is a quantum issue and not relevant to entitlement of the Hearing issue.

D.A.B. Assertion 4: “Moisture contents of the in-situ soil beneath the wall envelopes were extremely high, and the material would not support the weight of equipment or men.”

DRB Analysis: Based on the documents and evidence presented, the DRB finds that moisture contents of the in-situ soil beneath the wall envelopes were extremely high, and the material would not support the weight of equipment or men is a condition that occurred.

D.A.B. Assertion 5: “The Contractor suspended MSE wall construction in all four quadrants of the interchange, the Contractor’s MSE Wall subcontractor demobilized from the project, while the Contractor searched for a solution.”

DRB Analysis: The DRB finds this is a quantum issue and not relevant to entitlement of the Hearing issue.

D.A.B. Assertion 6: “On April 21, 2020, the Contractor and FDOT were forced to perform an emergency closure of Ramp B-1 due to washouts adjacent to the travel lanes that ultimately caused a temporary critical wall failure along the ramp.” As the project experienced increasing inclement weather, temporary critical walls continued to experience failures from this point forward."

DRB Analysis: The DRB findings on this item is addressed in other portions of the DRB’s analysis.

D.A.B. Assertion 8: "Pool noodles were cut to size and used to plug the Lift/Drain slots in the temporary concrete barrier wall. While not entirely successful, this technique allowed the Contractor to control where the stormwater entered the work zone with relative precision. By controlling the entrance point of stormwater, constant maintenance requirements were minimized as the washouts became localized.”

DRB Analysis: The DRB findings on this item is addressed in other portions of the DRB’s analysis.

D.A.B. Assertion 9: “However, the stormwater from the travel way still entered and flooded the work zone and maintained high moisture levels within the wall envelope and subgrade that remained unabated. This saturation continued to prevent the progress of the critical MSE wall work.”

DRB Analysis: The DRB finds this is a quantum issue and not relevant to entitlement of the Hearing issue.

D.A.B. Assertion 10: “The Contractor consulted with numerous industry experts, the MSE wall engineer of record (“EOR”), and our subcontractor’s advice and concluded that gravel backfill was needed to continue constructing the MSE walls. After numerous conversations with FDOT and attempts to garner FDOT’s approval for the use of gravel backfill, it appeared that we were at an impasse. Finally, in a meeting on October 5, 2020, the District 7 Secretary directed the use of gravel backfill on the MSE walls. This decision came after more than six months of no progress on the MSE walls. After the Secretary’s direction to use gravel to overcome issues with saturated backfill, the Department retreated from this direction and attempted to impose restrictive limitations to the locations and extent that gravel was used in the backfill, saying that any use beyond these restrictions was “for the Contractor’s convenience.”

DRB Analysis: The DRB finds this is a quantum issue and not relevant to entitlement of the Hearing issue.

D.A.B. Assertion 11: “In early October, the Contractor received unprecedented pushback from FDOT for the project’s lack of progress, which seemed to come in juxtaposition to the restrictive limitations for gravel backfill. At the time of the October 5th meeting, the Contractor was aware of the pending Notice of Intent to Default, subsequently issued on November 4, 2020. The Contractor proceeded with the immediate and necessary use of gravel backfill to ensure that progress was made and avoid being found in default.”

DRB Analysis: The DRB finds this is a quantum issue and not relevant to entitlement of the Hearing issue.

D.A.B. Assertion 12: "Both parties agree that MSE wall work was suspended due to excessive moisture in the soils within the MSE wall envelope. FDOT’s concurrence is notable because they provided a significant number of weather and recovery days during the work suspension period. The excessive moisture content was caused by stormwater runoff overtop of the temporary critical walls that dispersed within the work zone and, more specifically, within the MSE wall backfill envelope."

DRB Analysis: The DRB finds a portion was addressed in other portions of the DRB’s analysis and a portion is quantum issue and not relevant to entitlement of the Hearing issue.

D.A.B. Assertion 13: “FDOT is required to provide a temporary drainage design that provides “drainage where construction activities might divert or trap water and compromise safety and efficiency.” (Florida Department of Transportation Drainage Manual, Section 3.9.2).” The Drainage Manual clearly lays out the Engineer’s obligations regarding temporary drainage and is written to work in perfect harmony with the contract specifications. The specific design obligations for the EOR and specific contractual obligations for the Contractor as related to temporary drainage are outlined on the table below.”

DRB Analysis: The DRB findings on this item is addressed in other portions of the DRB’s analysis.

D.A.B. Assertion 14: "The complete lack of temporary drainage facilities, level of adequacy is not in question; none are depicted in the drawings."

DRB Analysis: The DRB findings on this item is addressed in other portions of the DRB's analysis.

D.A.B. Assertion 15: "This condition caused a safety concern for both the traveling public and the Contractor's employees."

DRB Analysis: The DRB findings on this item is addressed in other portions of the DRB's analysis.

D.A.B. Assertion 16: "Most areas on the project contain soils from Stratum 2 and 3, which are specifically indicated to be "likely to retain excess moisture and may be difficult to dry and compact."

DRB Analysis: The DRB findings on this item is addressed in other portions of the DRB's analysis.

D.A.B. Assertion 17: "The EOR failed to account for this consideration, as the Contract Documents include absolutely no measures to prevent stormwater runoff from entering the MSE wall excavations. The Drainage Manual is clear; this must be considered and abated in all designs."

DRB Analysis: The DRB findings on this item is addressed in other portions of the DRB's analysis.

D.A.B. Assertion 18: "FDOT is required to consider temporary drainage requirements and provide a suitable design in the Temporary Traffic Control Plan ("TTCP"). This requirement is set forth in the Florida Design Manual ("FDM"), Section 240.4. Phased construction results in unique flow patterns that must be accounted for to ensure the traveling public's safety and the "safety and efficiency" of construction. The FDM and Design Manual formalize the requirement to consider these temporary flow patterns in all FDOT TTCP designs. FDOT has maintained that the temporary drainage design for the project, or complete lack thereof along the ramp alignments, is adequate and that no impact has occurred beyond "typical weather impacts."

DRB Analysis: The DRB findings on this item is addressed in other portions of the DRB's analysis.

D.A.B. Assertion 19: "Due to the quantity and consistency in which FDOT issued weather days during the period in question, it is evident that the Contract Documents lacked the necessary consideration for the "efficiency" of construction as required by the Drainage Manual. Efforts to dewater the area were ineffective but had FDOT provided a design that complies with their own publications' requirements; dewatering would not be necessary."

DRB Analysis: The DRB finds a portion was addressed in other portions of the DRB's analysis and a portion is quantum issue and not relevant to entitlement of the Hearing issue.

DRB's Conclusive Analysis of D.A.B.'s and the Department's Positions:

Based on the documents and evidence presented, the DRB finds:

1. The Contract Documents do not specify or require D.A.B. to design a temporary drainage system for any portion of the Project.

2. The Contract Documents require D.A.B. to provide adequate drainage in accordance with the drainage system shown in the Contract Plans and to adjust, maintain, replace, or supplement selected devices as needed to ensure continuous control of erosion, sediment, turbid discharge, water pollution, and compliance with permit conditions until Final Acceptance.

3. D.A.B.'s adjustment, maintenance, replacement, or supplement of specific selected devices to control erosion, sediment, turbid discharge, and water pollution, where the devices are able to be reasonably placed, is not relevant to the Hearing issue and is not the primary driving force causing damage to its work.

4. In accordance with Section 1.5, the EOR was required to provide a signed and sealed Drainage Design Report for the entire Project design with a clear description of the overall stormwater management system. An overall stormwater management system, however, was not included in the design of the Project's TTC phases, or as a component of the TTC plan, as necessary for constructability of each individual phase of construction and as specified by Section 19.3.2 of the FDOT Plans Preparation Manual, January 2017, Vol 2. The absence of such design is reasonably interpreted to indicate that drainage could be managed without a temporary drainage design for those areas.

5. The Department's original TTC plan did not provide for D.A.B. to be able to reasonably utilize standard runoff control structures to prevent roadway stormwater runoff from preventing washouts of earthen slopes, water saturation of soils in various areas of temporary critical lagging walls and MSE wall construction, and the failure of portions of temporary critical lagging walls.

6. D.A.B. was not alerted to the critical fact that the Department's design did not address temporary draining necessary for constructability of each individual phase of construction, or the fact that runoff stormwater from the adjacent roadway pavement was directed into the construction areas of temporary critical walls and MSE walls.

7. The existing soils in the areas of various MSE walls and specification acceptable MSE backfill material, which D.A.B. chose to utilize, was sensitive to moisture content, therefore, obtaining the required density for those MSE wall foundation soils and the selected backfill material was problematic given the volume of runoff stormwater entering the immediate work area.

8. D.A.B. was not given notice by the Department that the Department's design had not considered the effects of the Project's drainage design on work areas of the temporary critical walls and MSE walls.

9. Elements of either parties' positions that related to quantum (monetary compensation and/or time impacts) are irrelevant to entitlement and not a consideration by the DRB.

DRB RECOMMENDATION:

In accordance with the agreement by D.A.B. and the Department that the issue for this DRB Hearing is related to NOI No. 24 and only related to entitlement, the DRB recommends the following:

> D.A.B. is entitled to additional compensation for Extra Work and Delay for washouts of earthen slopes, water saturation of soils in the areas of temporary critical lagging walls and MSE wall construction, and the failure of portions of temporary critical lagging walls caused by stormwater sheet flow off of roadway pavement due to the Department's absence of a Temporary Drainage design.

The DRB recommendation is based upon the information presented to the DRB by both parties in their position and rebuttal papers, by their testimony at the DRB Hearing, and the DRB's analysis of that information.

This DRB recommendation is a unanimous recommendation of the DRB members: Matthew L. Michalak, Dr. Ralph Ellis, Jr., P.E., PhD, and Roger J. Peters.

Matthew L Michalak Digitally signed by Matthew L Michalak Date: 2021.04.19 08:45:04 -04'00'

Matthew L. Michalak

Ralph D Ellis Digitally signed by Ralph D Ellis Date: 2021.04.19 09:24:57 -04'00'

Dr. Ralph Ellis, Jr., P.E., PhD

Roger J Peters Digitally signed by Roger J Peters Date: 2021.04.20 15:47:54 -04'00'

Roger J. Peters