

Ultimate I-4 Project
FDOT Contract No. E5W13
FIN No. 432193-1-52-01

Dispute Review Board Recommendation
Damage to Fiber Optic Network Issue
August 8, 2017

INTRODUCTION:

I-4 Mobility Partners (I4MP) is the Concessionaire for the Florida Department of Transportation's (Department) Ultimate I-4 Project (Project). Skanska-Granite-Lane, a Joint Venture (SGL), is I4MP's contractor for the Project.

At 9:59 AM on September 29, 2016, a failure was detected in strands of the Fiber Optic Network (FON) on the Central Florida Expressway (CFX) within the Project limits. Once SGL verified the failure, communication was temporarily rerouted through a secondary line. Communication was lost for only a few minutes. SGL completed permanent repairs to the damaged FON at 3:08 PM on September 29, 2016.

I4MP and SGL requested a Dispute Review Board (DRB) Hearing and DRB recommendation regarding a dispute with the Department regarding the interpretation of the following Contract Documents:

- Table 4.1, Element 4.1.15 of Volume II – Technical Requirements Section 4 – Operations and Maintenance Requirements
- Article 6.2.13 of Volume II – Technical Requirements Section 4 – Operations and Maintenance Requirements

The Department contends the temporary mitigation of the defect was not achieved until repairs were completed to the damaged FON at 3:08 PM on September 29, 2016, a period of 5 hours and 9 minutes. As a result, the Department assessed two Noncompliance Points, a \$36,000 Construction Availability Fault Adjustment, and one Noncompliance Instance for the event.

I4MP and SGL contends available resources were utilized for temporary mitigation of the defect which was achieved within the specified time frame as defined in Table 4.1 - Element 4.1.15 (within 4 hours). Temporary rerouting communication through a secondary line was actually accomplished within a few minutes, thus the assessments by the Department are not valid and should be withdrawn.

The question put forth to the DRB for a recommendation by I4MP/SGL is:

Should the Department withdraw its assessed two Noncompliance Points, \$36,000 Construction Availability Fault Adjustment, and one Noncompliance Instance for the event?

The Department stated the crux of the dispute is whether the Temporary Mitigation Performance Measures for FON apply to a singular damaged fiber cable, or to the fiber optic network that the damaged fiber optic cable in question is part of.

The DRB hearing was held on August 1, 2017, at the Project office of I4MP in Maitland, Florida. Representatives of the Department, I4MP, and SGL in attendance were:

Department:

Loreen C. Bobo, I-4 Ultimate Construction Program Manager - FDOT
Michael Gwynne – HNTB-COS
Keith Brockman – RS&H-Design

I4MP/SGL:

Jan van de Meene, Chief Executive Officer – I4MP
J.K. (Brook) Brookshire, III, Project Director – SGL
James M. Wedding, Commercial Manager – SGL
Doran Bosso, Commercial Director - SGL

POSITIONS OF THE PARTIES:

I4MP / SGL POSITIONS

- SGL took all necessary steps to mitigate and restore temporary communication to the FON in accordance with the Concessionaire Agreement.
- A proper reading of Volume II – Technical Requirements, Section 4 – Operations and Maintenance requirements, Article 6.2.13, supports SGL’s position that ‘temporary mitigation’ simply requires a restoration of communication through the FON.
- The entire network is comprised of fiber optic cable, conduit, pull boxes, communication equipment, and ancillary equipment necessary to provide a functional system. All elements are vital components for communication.

- Secondary (redundant) fiber lines have been established in the event one or more of the network components fail.
- SGL's performance obligations related to the FON are detailed at Table 4.1.
- The use of a secondary line is consistent with Section 4-6.2.13's directive to use all available resources to provide temporary mitigation.
- Section 4-6.2.13 does not preclude the use of the secondary line to restore communication through the FON.
- There are several methods to restore communication, such as the use of a secondary line.
- The Concessionaire agreement does not prohibit the use of a secondary fiber optic line to reestablish communication.
- Temporary mitigation cannot be identical to a permanent repair of the damaged fiber optic cable and/or strand. If the actual repair of the damaged cable/strands were required to be completed within the Cure period identified in table 4.1, then the temporary mitigation language in element 4.1.15 would have no meaning.

DEPARTMENT'S POSITIONS:

- In accordance with Volume II, Section 4.6.2.13 of the Concessionaire Agreement, when damage to the FON occurs, I4MP is obligated to provide temporary mitigation of the defect within the specified time frame as detailed in volume II, Section 4 tables 4.1 and table 4.3 of the Agreement.
- The associated Temporary Mitigation Performance Measures are to restore communication through the FON.
- The associated cure period for damage to the FON under Table 4.1 is 4 hours.
- I4MP failed to meet the Temporary Performance Requirements of 4 hours as specified in Element 4.1.15 of Table 4.1.
- The Temporary Mitigation Performance Measures for FON are applicable to an individual damaged fiber optic cable, and that the existence of any communication redundancy within the associated fiber optic network is immaterial given the definition of FON under the Agreement.
- In all cases, the Agreement defines the FON to be synonymous with the individual fiber optical cable, including its strands.

- Under Volume II, Section 2.A of the Agreement and in concert with the defined terms under the Agreement, restoration of communication through the FON requires restoration of communication through the specific fiber optic strands that have been damaged.
- The existence of a redundant communication pathway has no bearing as to whether the applicable Temporary Mitigation Performance Measures for FON were met.
- If the intent of the Agreement was to rely on any existing redundant fiber optic cable communication pathways, the definitions under the Agreement would not focus on strands within a fiber optic cable, and the temporary mitigation performance requirement would not specify restoring communication through the FON, as opposed to using an undefined term such as ‘fiber optic network’, or ‘fiber communication network.’
- Given that the cure period of 4 hours was not met for the implementation of the applicable Temporary Mitigation Measures for FON on September 29, 2016, the related event constitutes a Noncompliance under Volume I, Section 7 and Appendix 5, Re. 6.2 of the Agreement. The event also constitutes a Construction Availability Fault under Volume I, Appendix 3-C, Table B.
- The Department stated at the DRB hearing that if the secondary strand by which the communication was temporarily restored within a few minutes was located within the same cable as the damaged strand, then the Department’s assessed two Noncompliance Points, \$36,000 Construction Availability Fault Adjustment, and one Noncompliance Instance for the event would be withdrawn since Temporary Mitigation Performance would have been restored in less than 4 hours through the FON or cable which was damaged.
- The Department also stated at the DRB hearing that if the secondary strand by which the communication was temporarily restored within a few minutes was not located within the same cable as the damaged strand, then the Department’s assessed two Noncompliance Points, \$36,000 Construction Availability Fault Adjustment, and one Noncompliance Instance for the event would remain since Temporary Mitigation Performance would not have been restored in less than 4 hours through the FON or cable which was damaged.
- The Department acknowledged at the DRB hearing that the field devices could be connected by more than one fiber optic cable containing fiber optic strands utilized to connect the field devices.
- The Department further stated at the DRB hearing that if a ‘dark fiber’, an unutilized optic fiber, had been damaged and the damage had not been temporarily restored within 4 hours within the same cable, the Department would not assess Noncompliance Points, Construction Availability Fault Adjustment, or one Noncompliance Instance for the event.

DRB ANALYSIS:

In accordance with Article 6.2.13 – Fiber Optic Network (FON) of Volume II – Technical Requirements, Section 4 – Operations and Maintenance Requirements;

“When damage to the FON occurs, Concessionaire shall use all available resources to provide temporary mitigation of the defect within the specified time frame as detailed in Table 4.1 and 4.3. This Temporary Mitigation Performance Measure is to restore communication through the FON.”

In accordance with Volume II – Technical Requirements, Section 2 – Project Requirements and Provisions for Work:

“Fiber optic Network (FON) means the fiber optic cable that will contain fiber optic strands utilized to connect to field devices. This includes the MFON and UFON.”

“Managed Fiber Optic Network (MFON) means the fiber optic strands in the cable utilized by Concessionaire to connect to field devices.”

“Unmanaged Fiber Optic Network (UFON) means the fiber optic stands in the cable unutilized by Concessionaire to connect to field devices. This includes FDOT utilized fibers, local agency utilized fibers, and dark fibers.”

Table 4.1 of Volume II - Technical Requirements, Section 4 – Operations and Maintenance Requirements, states that for Element 4.1.15, Asset FON, the Cure Period for both FDOT Reported Event and Concessionaire Reported Event is 4 hours and that the Minimum Performance Requirements is that the *“FON shall meet the temporary mitigation performance requirements set forth in Section 4.6.2.13 of the Technical Requirements.”*

Both parties acknowledged that damage to the Fiber Optic Network (FON) occurred at 9:59 AM on September 29, 2016, that communication was restored via a secondary line (strand) within a few minutes, and that a permanent repair of the damaged fiber optic cable and/or strand was achieved in approximately 5 hours.

Neither party was able to state whether or not the secondary fiber optic strand by which the communication was temporarily restored within a few minutes was located within the same cable that contained the damaged strand or whether the secondary strand, by which the communication was temporarily restored within a few minutes, was located in another fiber optic cable.

The Department stated at the DRB hearing that if the secondary strand by which the communication was temporarily restored within a few minutes was located within the same cable as the damaged strand, then

the Department's assessed two Noncompliance Points, \$36,000 Construction Availability Fault Adjustment, and one Noncompliance Instance for the event would be withdrawn since Temporary Mitigation Performance was restored in less than 4 hours through the FON or cable which contained the damaged strand.

The Concessionaire Agreement definition of FON is the fiber optic cable that contains fiber optic strands utilized to connect field devices including fiber optic stands utilized and/or strands not utilized by the Concessionaire to connect to field devices including FDOT utilized fibers, local agency utilized fibers, and dark fibers.

The Department stated that its interpretation of Article 6.2.13 is the Temporary Mitigation Performance Measure is to restore communication through the specific damaged fiber optic cable which contains the specific damaged strand. The Department's interpretation is not clearly stated by Article 6.2.13. Article 6.2.13 does not specifically state that the Temporary Mitigation Performance Measure is to restore communication through the specific damaged fiber optic cable which contains the specific damaged strand.

In accordance with the Concessionaire Agreement definition of FON, a cable that is utilized to connect field devices, but does not contain fiber optic strands, would not be a FON. Thus, the words 'the FON' as used in Article 6.2.13 can be interpreted to mean the use of fiber optic cable that contains fiber optic strands utilized to connect field devices rather than the use of cable that does not contain fiber optic strands.

Since it was acknowledged by the Department that more than a single fiber optic cable can be utilized to connect field devices, the Agreement definition of FON (fiber optic cable that will contain fiber optic strands utilized to connect to field devices) can be interpreted to mean more than a single cable. Thus, the term FON as used in Article 6.3.13 can be interpreted to mean any fiber optic cable containing fiber optic strands utilized to connect to field devices, not just one cable, and not just the fiber optic cable containing the damaged strand. The Temporary Mitigation Measure can be interpreted to be to restore temporary communication within 4 hours through either the damaged fiber optic cable or the damaged fiber optic strand or through another undamaged fiber optic cable or undamaged fiber optic strand connect to field devices.

Furthermore, the wording of Article 6.2.13, "*....Concessionaire shall use all available resources to provide temporary mitigation of the defect within the specified time frame.....*" can be interpreted to mean the Concessionaire is to use available resources, which could be any available fiber optic cable that contains fiber optic strands utilized to connect to field devices.

DRB RECOMMENDATION:

This DRB recommendation is based upon the information presented to the DRB by both parties in their position 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: Bill Deyo, DRB Chairman, William E. Waddell, DRB Member, and Matthew L. Michalak, DRB Member.

The DRB recommendation is that the Temporary Mitigation Performance Measures for FON per Table 4.1 - Element 4.1.15 can be interpreted to mean to restore temporary communication within 4 hours either through the damaged fiber optic cable or the damaged fiber optic strand or through an undamaged fiber optic cable or undamaged fiber optic strand connect to field devices.

The parties acknowledged that I4MP/SGL did restore temporary communication within 4 hours either through the damaged fiber optic cable or the damaged fiber optic strand or through an undamaged fiber optic cable or undamaged fiber optic strand connect to field devices. Therefore, the DRB recommendation is the Department should withdraw the assessed two Noncompliance Points, \$36,000 Construction Availability Fault Adjustment, and one Noncompliance Instance for the event.

Submitted by and for the DRB

/s/ Bill Deyo

Bill Deyo, DRB Chairman