



WITNESS INTERVIEW TRANSCRIPT

Corradino Group

Miami, FL

HWY18MH09

(47 pages)

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

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Investigation of:

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PEDESTRIAN BRIDGE COLLAPSE
MIAMI, FLORIDA
MARCH 15, 2018

Accident No.: HWY18MH009

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Interview of: ALEXIS MOLINA
Corradino Group

Sweetwater City Hall
Sweetwater, Florida

Monday,
April 9, 2018

APPEARANCES:

KENNETH BRAGG, Accident Investigator
National Transportation Safety Board

DAN WALSH, Senior Highway Accident Investigator
National Transportation Safety Board

REGGIE HOLT, Senior Bridge Engineer
Federal Highway Administration

MARK CROFT, Vice President of CEI
Corradino Group

DOUG CREST, Attorney
(On behalf of the Corradino Group)

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I N T E R V I E W

(10:25 a.m.)

MR. BRAGG: Today is Monday, March 9, 2018. The time is 10:25 a.m. and we are located in the Sweetwater City Hall building in Sweetwater, Florida.

My name is Kenneth Bragg. I'm an investigator from the Office of Highway Safety with the National Transportation Safety Board. I'm going to go around the room, starting to my right, and ask everyone to state their name and organization.

MR. WALSH: Dan Walsh, National Transportation Safety Board.

MR. HOLT: Reggie Holt, Federal Highway Administration.

MR. CROFT: Mark Croft (ph.), the Corradino Group.

MR. CREST: Doug Crest (ph.), the attorney for the Corradino Group.

MR. MOLINA: Alexis Molina, senior inspector, Corradino Group.

MR. BRAGG: Okay.

INTERVIEW OF ALEXIS MOLINA

BY MR. BRAGG:

Q. Mr. Molina, what do you do for your company? What's your position?

A. Senior inspector.

Q. Senior inspector? And in layman's terms, what do you -- tell me what that is in layman's terms. What do you do?

A. Well, my background you're talking about, right?

1 Q. Yes.

2 A. You know, well, I graduated for civil engineering in 1988 in
3 Cuba. I start, like, inspector in 2002 here in Miami. And I'm
4 senior inspector from 2007. And I start with Corradino Group in
5 -- 3 years ago.

6 Q. Okay. And what's the name of the, what's the name of the
7 company again?

8 A. Corradino Group.

9 Q. Spell it for me, please.

10 A. C-O-R-R-A-D-I-N-O.

11 Q. Okay. And this is, this is more so for the transcriber.
12 Spell your last name, please.

13 A. Yes. A-L-E-X-I-S.

14 Q. Okay, that's your first name.

15 A. My first name.

16 Q. Okay, and last --

17 A. M-O-L-I-N-A.

18 Q. Okay. And how long have you been with them, the company?

19 A. Three years.

20 Q. Three years. When did you become involved in this project?

21 A. July 6, 2017, I start the project.

22 Q. And what's your role in the project?

23 A. Senior inspector.

24 Q. Senior inspector? And describe briefly what you, what you've
25 done in the project.

1 A. Well, like, verification inspection. Means I be part of the
2 CEI team as construction engineer inspection. My main role there
3 was about post-tension, but also working on other parts of the
4 project like piledriving, concrete, et cetera. But basically it's
5 more about post-tension.

6 Q. Okay. And what was your involvement in the move from the
7 fabrication position to over the roadway?

8 A. Yeah, the last day, right?

9 Q. Yes.

10 A. The last day. The move. Well, I was working Saturday the
11 10th from 8:00 to 5:00. So I served the move and was checking the
12 MOT, the detour signs. But basically I was there for check the
13 stress, tendons, PT bars element 11 and 2.

14 Q. Okay.

15 MR. BRAGG: And I'm going to let Dan -- you want to go ahead
16 and start something?

17 MR. WALSH: Okay. Dan Walsh, NTSB.

18 BY MR. WALSH:

19 Q. Were you present during the initial tensioning of the bridge
20 at the construction site before the move --

21 A. Yes.

22 Q. -- when the falsework was in place? Were you -- did you
23 observe that initial tensioning?

24 A. Yes.

25 Q. Okay. What did you observe during that initial tensioning?

1 A. In general, all the --

2 Q. Yes.

3 A. -- post-tension elements of the bridge --

4 Q. Correct.

5 A. within stressing, right?

6 Q. Correct.

7 A. Because I was dividing the installation and the stressing.

8 Q. Correct.

9 A. And grouting. Okay. Stressing, basically the more important
10 thing is check the elongation, because the elongation is a
11 confirmation that the, that the force required for each tendon is
12 transferred to the tendon. So I assert the good condition of the
13 equipment. I assert and verify that the constructor followed the
14 procedures that they submitted. Also the specification and the
15 plans. So it's basically that. And do my log field, you know, my
16 -- record that information.

17 Q. During your assessment, do you verify the maximum tensioning
18 that is performed? So do you, do you verify the maximum 280 kips?

19 A. Yes. Yes, I have to verify if the calibration is right and
20 check the load the contractor submitted and check if that jack has
21 that -- and also see the gauge, if they follow that pressure.

22 Q. So go step by step how you do that. Do you, do you actually
23 look at the gauge to verify that the, that the maximum kip has
24 been reached or -- was it 280 kips? Was that the maximum?

25 A. Is different. Depends. Because the -- remember, the

1 strands, we have transverse tendons, we have longitudinal tendons
2 and we have PT bars. So --

3 Q. Okay, just --

4 A. -- it's in the records.

5 Q. Just for the PT bars.

6 A. Okay.

7 Q. Was that a maximum 280 kips for the, for the PT bars, do you
8 recall?

9 A. No, I don't recall that. In fact it's in, it's in the
10 records, you know. It's in the --

11 Q. Okay. But you do verify, looking at the gauge, whether that
12 meets specifications.

13 A. Yes. Sure.

14 Q. Okay. And you -- did you do that on the initial tensioning
15 that was done --

16 A. Yes.

17 Q. -- at the -- when the falsework was underneath the bridge at
18 the construction site?

19 A. Oh you're talking about all the stressing operation?

20 Q. Right. Just the initial --

21 A. Yes. I was present all the time. Yeah.

22 Q. So did you find the initial tensioning met specifications?

23 A. Yes. Based on the log, based on the, on the procedurals and
24 based on the log, the contractors who made it, yes.

25 Q. Okay. When was that initial tensioning done on the, on the

1 main span? Do you recall the day the initial tensioning --

2 A. Well, basically installation -- I have -- installation was
3 from when I, when I start, July 2017, from January '18. So they
4 start stressing in the middle of January. Stressing and grouting.
5 They have to combine both because they need to have 14 days
6 between stressing and grouting.

7 Q. So initial tensioning of the bridge was in January 2018.

8 A. Right.

9 Q. Okay. Was it done -- how many days did it take?

10 A. Well, they done with the stressing on -- around February. I
11 don't know exactly the name. It's in, it's in the records, you
12 know.

13 Q. Right. Around February.

14 A. Yeah, February. I recall that the last day that they grouted
15 was February 20. I remember that.

16 Q. And how long does it take to do tensioning of, say, one PT
17 bar? How long does it generally take?

18 A. Well, that varies too much, because depends how hard is it in
19 the cavity of the blister, how hard is to put the jack, you know?
20 So that varies too much, you know. I can't tell you one exact
21 time, because it could be 15 minutes, it could be one hour.
22 Because they need to remove, they need to move again, they need to
23 clean, put the jack again. So it's a process that varies too
24 much, you know.

25 Q. It varies -- okay. How would you put a minimum and maximum

1 time on it? It could vary from --

2 A. One PT bar, for example?

3 Q. Yeah.

4 A. One bar.

5 Q. Right.

6 A. So from where? From they install the jack or from all the
7 process? Because they need the crane, take the jack on top, fix
8 it, fix it again, move again, put it back, so --

9 Q. Just the --

10 A. In general? In general?

11 Q. In general. In general, time frame including the, including
12 the crane, and then a time frame just for the PT bar itself. Just
13 a rough approximation.

14 A. Probably 30 minutes from 1 hour and a half, probably.

15 Q. Okay. Okay. All right.

16 A. Yeah, that varies too much because, depending on the
17 (indiscernible) of the bar, depending on the jack, how heavy it
18 is.

19 Q. Okay. After the initial tensioning was done to the, to the
20 main span, did you observe any cracks on the main span of the
21 bridge?

22 A. Yes. The first, the first crack that I observed was in --
23 and reported was February 13. And that was small cracks in the
24 middle of the truss element 10 and 3. And was after the
25 contractor stressed elements 11 and 2, and also they already

1 stressed the longitudinal tendons in the deck. So small cracks,
2 when I say small, I'm talking about 0.004 to 0.006. I know
3 because I checked with the little card that I have. And that's
4 classified, like, cracks A. So I report that info to my PA and to
5 my senior inspector about that. That was the first crack that I
6 observed. February 13, around --

7 Q. Did you, did you take photographs --

8 A. Yes, sure.

9 Q. -- of those cracks? Do you still have those photographs?

10 A. I put everything in the server, in the BPA server. I have to
11 check in my computer if I download it. But they have it. They
12 have it.

13 Q. Okay, and we would like a copy of that, of those photographs.

14 A. Okay. All right.

15 Q. Okay? We're requesting, officially requesting now a copy of
16 those photographs, if we can have them.

17 MR. MOLINA: Okay. If I have them, I have them.

18 MR. WALSH: Have a copy of those photographs.

19 MR. CREST: And just so I'm clear, just specifically those
20 photos from that day?

21 MR. WALSH: No. Well, we'll be, we'll be wanting, you know,
22 all photographs for all --

23 MR. MOLINA: Okay.

24 MR. WALSH: As this, as this proceeds, from that time frame
25 to the collapse, we would like all of those photographs, and

1 categorized by day when they were taken, each day they were taken.

2 MR. MOLINA: Okay.

3 BY MR. WALSH:

4 Q. And can you give a sense -- I mean, did you take photographs,
5 I mean, every day?

6 A. Every day.

7 Q. Every day. Okay.

8 A. That's one of the -- our role, like, as senior inspector.

9 You know, take pictures of operations and everything that happened
10 there. That was the first cracks.

11 Q. We'd like to have those photographs, and categorized by each
12 day. Did you make, did you make emails? Did you send emails --

13 A. Well, that day, that day -- sorry. That day I sent pictures
14 and the PA, in case of that first cracks, my PA and my senior
15 project engineer told me send the report by email to them, and we
16 going to pass to the prime contractor that you are. But I did
17 that for that specific report. So I have pictures showing the
18 location and the classification of the, of the cracks.

19 Q. That's great. And that was sent to Mr. Urdaneta? Was
20 that --

21 A. Yeah. Rafael Urdaneta.

22 Q. Rafael.

23 A. And Jose Morales.

24 Q. Okay. So both Rafael -- that was sent to both Rafael and
25 Jose.

1 A. Yes.

2 Q. Okay. We would like a copy of those emails --

3 A. Okay.

4 Q. -- and that correspondence. And all correspondence regarding
5 those photographs that were taken.

6 A. Okay.

7 Q. Not only on that day, but each day that you had sent a
8 correspondence to Rafael and Jose regarding those photographs. So
9 is -- I just want to summarize, just to make clear that -- on
10 February 13, when the restressing -- no, when the stressing was
11 done to number 2 --

12 A. Two and eleven was stressed.

13 Q. Two and eleven.

14 A. Two and eleven. And some longitudinal tendon in the deck.

15 Q. Okay. Number 2 and number 11, and the longitudinal, and
16 longitudinal --

17 A. Longitudinal PT strands.

18 Q. PT strands?

19 A. Yeah.

20 Q. In the deck.

21 A. In the deck, yes.

22 Q. Once that was done, then you observed cracks --

23 A. Right.

24 Q. -- between 10 and 3.

25 A. Yes, that's between element 10 and 3. In the middle of the,

1 of the truss, small cracks around the element.

2 Q. Okay. Around 10 and 3.

3 A. Yes.

4 Q. Around 10 you saw --

5 A. In the report it's exactly, you know, the -- okay, the
6 distance from the, from the deck and the specific width of those
7 cracks.

8 Q. Okay. That's great.

9 A. And the location too.

10 Q. Okay. Do you recall being onsite Saturday, February 24 at
11 the -- on the construction site?

12 A. February 24.

13 Q. When they -- Saturday, February 24 when they were removing
14 the falsework from the middle and going -- removing the falsework
15 going out --

16 A. And leaving just the shoring.

17 Q. Right. And leaving the shoring. Do you recall being --

18 A. I don't remember if I'm being there because, at that time I
19 was different assignment on (indiscernible) Avenue. So I don't
20 remember exactly that day.

21 Q. That day. Okay.

22 A. I have to check my dailies.

23 Q. That's all right. Okay. I'm just -- if you were there, if
24 you were there then at that time, did you observe -- do you
25 remember a loud popping noise? Do you recall ever being on the

1 construction site and hearing a loud popping noise --

2 A. No, no.

3 Q. -- at any time?

4 A. February, no. If I'd been there, I don't remember that. No.

5 Q. Okay. Were you present for the destressing of the PT bars on
6 number 2 and then number 11 --

7 A. Yes.

8 Q. -- after the move?

9 A. Yes.

10 Q. You were present for that. Okay. And did you -- were they
11 destressed according to the specifications?

12 A. Yes.

13 Q. Okay. Did you observe any cracks on the span after the
14 destressing?

15 A. Well, before, really. Well, before the completion of the,
16 completion of the distress, and after they set the span in its
17 final position. I was checking the span and the deck, and I
18 observed cracks and some damage in the deck in the north side of
19 the span. I took pictures and informed the PA and the senior
20 project engineer automatically. And also showed to the -- showed
21 the damage to the, to the senior project manager, Rodrigo Isaza,
22 that day. I showed him.

23 Q. I'm sorry, what was his name again?

24 A. Rodrigo.

25 Q. Rodrigo.

1 A. He was the senior project manager. He was there. He was
2 during --

3 Q. The senior project --

4 A. He's the project manager. Project manager.

5 Q. The senior project manager with MCM.

6 A. Yes.

7 Q. Rodrigo.

8 A. I showed him too because he was in the jobsite that day.

9 Q. You showed that to him.

10 A. Yes.

11 Q. And that was after the move?

12 A. After the move.

13 Q. That was after the move --

14 A. Yes.

15 Q. -- with the transporter still underneath.

16 A. No.

17 Q. No. The transporters were removed.

18 A. The transporters were removed, and I was checking -- walking
19 the deck, checking every -- you know, monitoring any other cracks
20 and whatever. And I observed that cracks in the -- new cracks and
21 the bigger cracks, that I said before, in the north side of the,
22 of the span. Is around the element -- or just in the truss
23 element 11.

24 Q. Okay. And so that same request. We'd like a copy of those
25 photographs --

1 A. Okay.

2 Q. -- from that time as well. We're requesting those
3 photographs as well. Did you observe the cracks? Were they --
4 had they grown? Had the cracks grown? Were they wider?

5 A. Yeah.

6 Q. Did they --

7 A. Some, yes.

8 Q. Some had grown.

9 A. Yeah, you had the difference between -- because the crack
10 process was three. First was February 13 after the stressing PT
11 bars 2 and 11 and the longitudinal. That's the first time that
12 some cracks appear in the, in the structures, you know. The
13 second was after removing all the shoring on all the formwork.
14 That cracks was observed for the PA and reported by him, but just
15 after remove the formwork. And the last crack was observed by me
16 March 10 after place the span in its final position.

17 Q. Okay. What would you categorize the cracks on February 13 as
18 being?

19 A. Small cracks, class A. Means 0.04 to 0.06 [sic].

20 Q. So small cracks, class A.

21 A. Yes.

22 Q. Class A. And class A is --

23 A. From 0.004 inch to 0.006 inch. It was small and was in
24 certain height in certain position of the element -- truss element
25 2 -- 3 and 10.

1 Q. Okay, perfect. Okay. And then what --

2 A. In the report is the exact location, I'm pretty sure.

3 Q. Okay. Thank you. And then what would you classify the
4 cracks at the time of removing the shoring and falsework?

5 A. Well, I don't know -- I observed the cracks, but really the
6 report was performed by the PA. In that case I don't classify the
7 cracks. It was bigger than this one.

8 Q. Bigger than class A.

9 A. Yes. And was in another location. Was not the same crack.
10 The same crack remains the same. That I observed February 13 was
11 the same. They don't grow up. Just appear new cracks in the
12 bottom between the truss element and the deck.

13 Q. Okay. So the class A cracks at 10 and number 3 did not grow
14 as --

15 A. No.

16 Q. -- when removing the shoring and falsework.

17 A. No.

18 Q. They stayed the same.

19 A. No.

20 Q. Okay. But the cracks -- but when removing the shoring and
21 falsework between the truss were class A?

22 A. No, no. It's bigger.

23 Q. They're bigger than class A?

24 A. Yeah. So I can't tell you exactly because I don't measure.
25 I take pictures. The PA and part of the team take pictures and

1 report, and make the report. I did that report.

2 Q. They were bigger than class A.

3 A. Yeah.

4 Q. And where were they again?

5 A. Well, some -- in the picture it shows exactly some was in
6 between the PT element -- the truss element and the deck. And
7 some are in an angle. But just in that location, you know. Just
8 in the bottom within the connection, the -- between the tendon --
9 I mean, sorry. The truss and the deck. Just right there. Not on
10 the top. I don't see any in the top. At that time. I don't know
11 if --

12 Q. Okay, thank you. And then what would you classify the cracks
13 as being on March 10?

14 A. It's bigger than those ones.

15 Q. What would you classify them being?

16 A. It's set on classification based on A, B, C, D. I think it's
17 -- I don't, I don't remember exactly the classification for the
18 bigger, but it was more than half-inch in some cases.

19 Q. More than a half-inch.

20 A. Yes. Quarter, half. Something like that.

21 Q. More than half-inch on March 10.

22 A. Yes. I just take picture and send to the PA and the project
23 engineer. I don't make that report.

24 Q. You didn't make that report.

25 A. No, just send the picture and inform.

1 Q. Okay. And was that the last time --

2 A. The last day that I was there.

3 Q. That was the last day. You weren't -- you didn't do any
4 observe or classification of cracks from -- between March -- after
5 this to the day of the collapse.

6 A. No, no. I wasn't there. That was my last day.

7 Q. Okay. Okay, and that -- on March 10, it was after placement
8 was done and the transponders had been removed.

9 A. Yes.

10 Q. Okay. Can you recall, after it was placed and the
11 transponders were removed, when the distressing took place on
12 number 2 and number 11?

13 A. When exactly?

14 Q. Yeah. When did it, when did --

15 A. Well, really they start the operation, you know, moving the
16 equipment, all that, after 1:30 or 2:00 because they finish and
17 then start removing the equipment around 12:30, 1:00.

18 Q. 12:30 or 1:00 is when they removed the --

19 A. The final -- yeah, the Barnhart. The company started moving
20 all the transporters. Yes.

21 Q. Transponders about 12:30 or 1:00.

22 A. Around there.

23 Q. They removed the --

24 A. The transport, yes.

25 Q. -- transporters.

1 A. Transporters. Yeah.

2 Q. And then when did the destressing occur to number 2 and
3 number 11?

4 A. Okay, the whole process? Probably from 1:30 or 2:00 to 5:00.

5 Q. 1:30 to 5:00.

6 A. Yes.

7 Q. Okay. And the move, the move was -- when did the move start?

8 A. Well, I don't know exactly the time. I wasn't there. But
9 the plan was do it during the first hour of the Saturday. But I
10 don't know exactly the time because that very -- the operation
11 start Friday night. That's only I know.

12 Q. Right, started --

13 A. But I don't know exactly at what time they start moving the
14 span. I don't know.

15 Q. Do you know when it was moved into place?

16 A. Say again?

17 Q. Do you know when the main span was moved into place?

18 Approximately what time was that moved into place, approximately?

19 A. Exactly the time that they set?

20 Q. Yes.

21 A. Around 12:30.

22 Q. Around 12:30.

23 A. Yeah.

24 Q. Okay. So you weren't present for the restressing of bar
25 number 11 on Thursday, March 15, the day of the collapse?

1 A. No. I wasn't there.

2 Q. You weren't, you weren't present for that. Who was present
3 from BPA --

4 A. I don't know.

5 Q. -- for that?

6 A. I don't know.

7 Q. Was there any, was there --

8 A. I suppose that is the team that was there, you know. I don't
9 know if they -- I don't know. I wasn't there, so I don't know
10 exactly who was there.

11 Q. If you weren't -- you know, if you weren't inspecting the
12 restressing from your firm, who else from your firm would be -- do
13 the --

14 A. You talking about Corradino?

15 Q. Yeah.

16 A. No, the only one in that project was me.

17 Q. Was you.

18 A. But that -- my last day was 10th, so I'm starting another
19 assignment, so --

20 Q. All right. So there really was nobody there to observe the
21 restressing on Thursday, March 15. There was nobody from
22 Corradino that was observing the restressing that was being
23 performed by VSL.

24 A. No. Not that I know.

25 MR. WALSH: That's all I have.

1 MR. BRAGG: Before we move on, quick follow-up question for
2 the March 15. Did you have knowledge that they were going to do
3 the restressing on --

4 MR. MOLINA: No.

5 MR. BRAGG: -- the 15th?

6 MR. MOLINA: No.

7 MR. BRAGG: Did no one consult with you about that?

8 MR. MOLINA: No.

9 MR. BRAGG: Okay.

10 MR. HOLT: Reggie Holt, Federal Highway.

11 BY MR. HOLT:

12 Q. I guess there are a lot of phases as far as casting this
13 bridge, prefabricating it and the post-tensioning, both
14 longitudinal transfers, both bars and strand. Just for our notes
15 -- we've looked at the plans, but we haven't found it. They don't
16 always align one to one. Could you kind of walk us through the
17 post-tensioning sequencing --

18 A. Yes.

19 Q. -- for the project overall in that bridge element?

20 A. They follow exactly the sequence.

21 Q. Hum?

22 A. You talking about if they follow the sequence?

23 Q. Yes.

24 A. Yes.

25 Q. So what was -- I mean, could you walk us through when they --

1 what post-tensioning operation was done first? Was it the bottom
2 deck tendons and then the bars, then the soffit? Were all the
3 bottom deck tendons done all at once, or were they, were they
4 phased? Just could you, could you walk us through --

5 A. Yes, yes.

6 Q. -- (indiscernible) tendons and how it worked?

7 A. Yeah, let me try to talk it slowly.

8 Q. Yeah, yeah, that's fine. Yeah, yeah, yeah.

9 A. Because I --

10 Q. We're going to take notes.

11 A. Okay. Yes, yes.

12 Q. It'll be nice to understand them.

13 A. Okay. Well, when I start July 6, they already set some PT
14 bars. PT bar ducts. So basically they installed PT bar ducts
15 first. After that, they install the longitudinal PT strands on
16 the deck, in the deck, that consist in the 12 tendons. Okay? Two
17 of the tendon is ECI-12. Means 12 strands. And the rest was 19
18 strands, okay? The PT, the PT bars they install, really was 12
19 trusses, 12 elements on the trusses. But only we have eight PT
20 bars working in the truss.

21 So after they installed the ducts, built around the ducts in
22 the longitudinal, they installed the transverse tendon. There was
23 65 transverse tendons. That is a flat duct with only four
24 strands. In that case, they installed temporary strands in the
25 transverse for protect the ducts when they pour.

1 So after all that section was finished -- means longitudinal,
2 transverse and PT bars -- they start pouring, okay? They pour the
3 deck, and after that they pour the trusses. After finishing the
4 pouring, they formed and poured the canopy. Before pour the
5 canopy, sorry, they install the eight longitudinal PT strand in
6 the canopy.

7 Q. Okay, so don't want to interrupt. So when you said "place,"
8 not stressed.

9 A. No, just install.

10 Q. Just install, so --

11 A. Installation of the ducts.

12 Q. The ducts and the strands are in the ducts, but not stressed.

13 A. No, just installation.

14 Q. Just installation. Okay.

15 A. Just installation of the ducts. They don't, they don't push
16 the strand yet. They only push on the strand in the transverse
17 just for protect the duct when they place the concrete. So
18 because it's a flat duct. In the transverse was flat ducts.

19 Q. Right.

20 A. Okay? So after all the post-tension system (indiscernible).
21 I'm talking about ducts. They start pushing. Pushing means the
22 process to put the strands inside. That was another part of the
23 -- they start installing. But they installing first two -- they
24 install first -- the process was install the strands of the D1L
25 and D1R. That means the first two longitudinal tendons in the

1 deck. And install that, and do the frisson test in one of them,
2 the D1L. The frisson test.

3 After they do that, they install also two -- that's the
4 sequencing, right? Two tendons in the canopy. That was the --
5 C2L. Sorry. And C2R. So they continue installing in that
6 process, you know, installing all the strands. After installing
7 all of the strands, they installing also -- the sequence is more
8 clear, because they have to, they have to have 14 days between
9 installation and stressing and grouting. So they jump in, you
10 know. So I'm not talking exactly the -- they follow the
11 sequencing, but they jump in between grouting and stressing.

12 But after all was installed, they start stressing in that way
13 that I'm talking before. They're stressing first two tendons in
14 the, in the deck. That was D1L and D1R. And stressing also the -
15 - and stressing those two. Sorry. They're stressing those two
16 first. Okay. And after stressing those two, they start stressing
17 number 2. PT bars number 2 and number 11. That was the second in
18 the sequence. Yeah, first two tendons in the deck, and 2 and 11
19 in the canopy. In the canopy, no. The trusses. After that, they
20 start stressing the rest of the longitudinal tendons in the deck.
21 It was from D2L to D6L and from D2R to D6R.

22 Q. So if I'm understanding correctly, so I guess -- so you say
23 you did deck then soffit tendons, and they worked from the middle,
24 D1, Canopy 1, and they worked out. So two -- top two, bottom two,
25 top two, bottom, all the way --

1 A. No, they -- right. Yeah. Okay, two in the deck.

2 Q. Right.

3 A. Two in the canopy.

4 Q. Right.

5 A. Plus number 2 and number 11 PT bars. That was the first

6 process.

7 Q. So 2 and 11 PT bars.

8 A. Yes.

9 Q. They were the only PT bars --

10 A. At that moment, yes.

11 Q. No other diagonal bars, truss element bars were stressed.

12 Just those two. Okay.

13 A. Just 2 and 11.

14 Q. Okay. So after that, then --

15 A. After that, they completed stressing the rest of the

16 longitudinal tendons in the deck. Means from D2L to D6L and from

17 D2R to D6R. They finish stressing that.

18 Q. Nothing in the canopy.

19 A. No. Not yet.

20 Q. And then they did -- okay, rest of -- okay. Got it.

21 A. After that, they start stressing the transverse tendon

22 alternative. One here -- okay, one, two, three. Like that. As

23 per plan and as per sequence. When finished stressing the

24 transverse tendon, they come back to the canopy and start

25 stressing from PT bar element 3 to 10. Yeah, they did in the

1 canopy 2 and 11 first. And after finish the transverse, they do
2 3, 5, 6, 7, 8 and 10. Because 4 and 9 don't have tendons.

3 Q. So that -- okay, then they did the PT bars and diagonals.

4 Okay. You still had a couple canopy, right?

5 A. Yes. That was the last one. The last one was the C3L and
6 C3R. In the canopy, they only stressed C2L, C2R, C3L and C3R.

7 They leave the two others, the C3 and the C4, for when they
8 finished another part of the back span and connect together.

9 Yeah.

10 Q. All right. Okay, so then you moved the bridge. It was set
11 on the temporary bearings.

12 A. Right.

13 Q. Right? And then detensioning of the (indiscernible).

14 A. Yeah. The plan showed detension -- for that reason, PT 2 and
15 PT 11, they don't grout it. They grout in the rest and they leave
16 this one destressed by plans, number 2 and number 11.

17 Q. Now the plans called out for stressing of the vertical bars
18 coming through the pier?

19 A. Yes.

20 Q. They were not stressed? Was that --

21 A. I don't, I don't see that. I don't see that.

22 Q. So there was no --

23 A. I can't tell you yes or no, but I know they have the bars --

24 Q. The bars. Yeah.

25 A. I saw the bars in the, in the pylon.

1 Q. Right. Right.

2 A. But I don't see that, I don't see --

3 Q. But you weren't aware of any kind of reason why they varied
4 from the plans for the vertical tensioning --

5 A. No. I don't --

6 Q. -- and the pier.

7 A. I do not.

8 Q. Okay. All right, that helps. Thank you for clarifying that.

9 So I guess the next, I guess, theme -- I guess going back to the
10 restressing, I noticed that the access to diagonal 2 and 11, the
11 cavities, were jackhammered out. And you didn't have the nice
12 clean access. So what was the reason that there wasn't, there
13 wasn't a formed cavity at those two locations and there was a
14 jackhammered access?

15 A. The reason?

16 Q. Um-hum.

17 A. I don't know. I don't know. I just know that they can't fit
18 with the jack and they need to clean around in the blister and
19 they need to clean around. But I don't know the reason, what
20 happened. Is it (indiscernible) or --

21 Q. Was there, was there a cavity when you stressed them the
22 first time?

23 A. Yes, yes. They need to -- always they need to -- they spend
24 a lot of time trying to fit in the blister. Try to for get room
25 for the, for the jack. So they need to clean and jack and, you

1 know, the (indiscernible) broke a little bit around for make room
2 for put the jack.

3 Q. Oh so a cavity was made, but the cavity wasn't sized properly
4 for the ram, is what you're saying.

5 A. Right.

6 Q. Okay. All right. So it wasn't an afterthought. It was a
7 poorly sized cavity. Okay. Makes sense. So it's my
8 understanding that you are a sub, the BPA, to Corradino Group.

9 A. Yes.

10 Q. And you were brought in primarily because they needed a
11 certified PT inspector?

12 A. I don't know about this.

13 Q. Well, you're a -- you (indiscernible) --

14 A. Yeah, I'm certified.

15 Q. You're certified.

16 A. But I don't know that process, you know. I'm just a senior,
17 you know.

18 Q. Well, no, no, I understand. I'm just -- other than the
19 retensioning operation that you, that you were not present for,
20 were you present for all other post-tensioning operations --

21 A. Yes.

22 Q. -- on the bridge? So there was no tendon stressed on the
23 bridge --

24 A. Without me? No.

25 Q. -- without you.

1 A. No.

2 Q. So the only one performed without you there to observe was
3 the retensioning that happened right before the collapse.

4 A. Yes.

5 Q. Okay. Thank you. Before I get off the post-tensioning, I'll
6 make sure. Just as far as the processes, when you observed --
7 when they're stressing, let's say, the bars in particular, there
8 was a ram, there's a pump, there's gauges. And the gauges have
9 numbers and --

10 A. Yes.

11 Q. So do you, as part of your oversight, do you look at the
12 gauge identifier and make sure that it aligns with the ram and the
13 pump that's being used?

14 A. Right. That's the first that I have to see. If the jack is
15 in good condition and the gauge is in good condition and it's
16 matched with the calibration, so I have to make sure that it's
17 calibrated. You know, have 6 month calibrated at least, say, 6
18 month. And I have to check that and compare it with the log, the
19 log submitted by the contractor. If they going to do it with this
20 jack, it's this jack? Yes, correct. It's in good condition.
21 It's calibrated. Perfect.

22 Q. So if you have a curve for BSR016 (ph.) -- that's a -- so you
23 check that the ram is that, the gauge has an identifier and you
24 have the calibration curve for those two operations, and that's --

25 A. Correct.

1 Q. You check that all those are --

2 A. Yes. Yes.

3 Q. Okay, the -- you said you've measured elongations. I mean,
4 for these PT bars and the fairly short elongations, were they --
5 in general are pretty difficult to measure? I mean, they're
6 within the accuracy of, you know --

7 A. I know.

8 Q. -- an eighth of an inch, a quarter-inch, right? It's not
9 like a long strand where you get, you get a very long reading. So
10 were they -- I mean, was that typically the case? Was it -- I
11 mean, if we look at the logs, it would say, like, eighth-inch,
12 eighth-inch, a quarter-inch, a quarter-inch, every time you would
13 go to whatever increment was prescribed? I mean, it's --

14 Q. Yeah, it's hard, but the -- well what the, what the -- we did
15 was I don't measure. I was observing the measuring and just
16 record in my log, my field logs, to verify, after they submitted
17 the certification package, that they submit the same information.
18 But the PT, the PT post-tension level 2 that was there, the
19 technician -- and the foreman in this case too -- they measure,
20 you know. So the same people try to measure always. And even
21 it's hard, they know how to do it, and always they do the same.
22 So the consistency who do it and how do it is important there.

23 So I don't measure. I just verify is it -- okay, all right.
24 It's 1, 6, 8. All right, 1, 6, 8. Theoretical, theoretical.
25 It's in between 7 -- plus/minus 7 percent. That's okay. I know

1 it's hard, because when you mark. But if you follow the same
2 people and, you know, the same people do the measuring and do it
3 from the same location and consistency, that's more accurate, you
4 know.

5 Q. Understood. (Indiscernible) so the real meaningful data is
6 the final elongation, right? So that's the one that --

7 A. Yes.

8 Q. And that was, and that was all -- fell within the -- was it
9 the 5 percent or something?

10 A. Seven. It's 7.

11 Q. Seven percent.

12 A. Seven plus/minus. Yeah, the thing there is they submit a
13 log, you know. For example, it's not the same (indiscernible) 6A,
14 but you -- when you convert to sixteenths, and the 7 percent is
15 either be -- you know, for that reason, the logs probably, the
16 certification that they submitted, is a little different. It's
17 the same number. It's just the spreadsheet in itself do it by
18 sixteenths and check the range between 7 is -- but it's right. At
19 least my log, my field log, I compare with the certification that
20 was submitted, and was okay, you know.

21 Q. So the elongation was fine --

22 A. The elongation was--

23 Q. -- on 11 in particular, right?

24 A. Yes, 11. Yes.

25 Q. All right. (Indiscernible) finish post-tension --

1 A. In my logs I put notes in something -- you know,
2 (indiscernible) logs, you know. Some notes about that, you know.
3 About the elongation and the --

4 Q. Okay. So you kept, you kept stressing all your --

5 A. Yeah, I did my own, my own field log.

6 Q. Right. Right. We can add that to what we need and would
7 like to see. Can you add those to the record?

8 A. I put it in the server to the --

9 Q. Right. Okay.

10 A. I spend my last, like, 4 days in the job, 4 or 5 days,
11 organizing and reorganizing, you know, all the information
12 (indiscernible). And it's there in the server, BPA server.

13 Q. Okay. Okay, that finishes my post-tensioning questions. I
14 guess now I'll go back to the cracking.

15 A. Okay.

16 Q. Like the last theme I want, I want to touch on. So based on
17 your timeline, the first cracking that was observed on diagonals
18 -- tendon 3 after stressing bars 2 and 11.

19 A. Yes.

20 Q. Right? Whereabouts was this cracking? Was it at the
21 interface? I mean, the location, general location?

22 A. Well, it's in the report. But it's around the middle of the,
23 of the element.

24 Q. So both are around -- some are mid-height, so not at the, not
25 at --

1 A. Not at the bottom. Not at the bottom.

2 Q. Somewhere within the length of the element.

3 A. Yes, yes. It's that location I measure that's in the report.

4 And the picture is referenced to east, north.

5 Q. Okay. So when that happened, you only had two bottom, two
6 deck and two canopy tendons stressed on the bridge overall, so --
7 right? Because that's --

8 A. There were 13. No, they already, they already stressing the
9 rest of the longitudinal too.

10 Q. I thought you did two deck and two canopy, and then you did
11 PT bars and diagonals 2 and 11. Then you did the deck after that.

12 A. Yes. I observed the crack after that, you know.

13 Q. Oh the -- did the PT bars 2 and 11 and (indiscernible) --

14 A. Not exactly. Not --

15 Q. -- deck happen all in the same day or --

16 A. No, no, no. I don't, I don't know if it happened on the same
17 day. I observed day after, you know. Okay. You know, it's not
18 exactly after stress --

19 Q. Okay, it wasn't directly after, but it was --

20 A. No, no, no, no.

21 Q. Okay. So to my understanding, you weren't on the bridge
22 February 24 with the second identification of additional cracking.
23 Because we talked about first cracking, which happened --

24 A. Wasn't around -- the report was --

25 Q. On the 13th.

1 A. -- February 13. In the first one, the first crack. The
2 second, and was reported by the PA, was after removing all the
3 shoring.

4 Q. Right.

5 A. The shoring in the deck and the scaffold. And the last one
6 that I observed was March 10.

7 Q. Right. Just back to the second one. Did you, after hearing
8 about this, did you go up and observe --

9 A. Yes.

10 Q. -- the secondary crack?

11 A. All the team observed those cracks.

12 Q. Okay. On the 24th, the one I'm talking about.

13 A. I don't --

14 Q. The form removal. Did you -- were you up deck? Did you see
15 those cracks?

16 A. I don't remember is that -- exactly that day. I don't
17 remember. I have to check the report performed by the PA. But I
18 don't remember if it was exactly 24th, 28th --

19 Q. Well, not the date, but did you see that cracking that
20 happened due to falsework removal, independent of the day?

21 A. Yes. Yeah, I saw it.

22 Q. And where was that cracking?

23 A. Where?

24 Q. Yeah.

25 A. At different places. Tendon 2 and 11 also in the location in

1 the bottom. I think I saw -- I said "I think," because I did, I
2 didn't the report, you know. I saw some cracks around that area.
3 And that's what I recall. I have to check, but I didn't the
4 report. That specific report was the PA.

5 Q. Okay, that's fine.

6 A. But I saw the cracks, yes.

7 Q. And they were generally located in diagonals 2 and 11.

8 A. Yes.

9 Q. And were they category A or below --

10 A. I can't, I can't tell you like that. I say I know in the
11 first inspection I did, I use -- because it's very small --

12 Q. Right, right.

13 A. -- I used the card that shows -- when you have the small
14 cracks, you have that card that shows the line. But the rest was
15 visible big cracks, you know, so I don't, I don't take that
16 measure. At least in the second, in the second time that the
17 cracks appear.

18 Q. So obviously -- so then greater than an A.

19 A. Yes, yes, yes.

20 Q. You could see it from (indiscernible).

21 A. Yes. Yes.

22 Q. You'd be 10 feet away and you'd see a visible crack.

23 A. That's right. And you're going to see, you're going to see
24 in the pictures, yeah.

25 Q. At 2 and 11. And they were at what locations? Along 2 and

1 11, the --

2 A. Yes, around those two (indiscernible).

3 Q. Top? Bottom?

4 A. No, on the bottom. Only on the bottom. I don't know if -- I
5 think I saw -- I don't recall exactly if it's on the top. But I
6 saw the pictures that the PA sent. It's perfectly clear where the
7 crack is.

8 Q. So the FDOT cracking goes from A to D, right? Or something
9 like that? Or it'd be on the, on the higher end of that.

10 A. Yes, yes, yes, yes. But I can't say exactly --

11 Q. (Indiscernible).

12 A. -- what classification it is.

13 Q. (Indiscernible) --

14 A. I know the first one because I did -- you know, I put the
15 card there so --

16 Q. Well, just to get a general feel, it was on the upper end of
17 what FDOT --

18 A. It's bigger than that.

19 Q. Hum?

20 A. Bigger than A, that classification.

21 Q. Oh yeah, yeah, yeah. So prior to the detensioning operation
22 after setting, did you survey the bridge --

23 A. Yes.

24 Q. -- to make sure that no additional cracking was incurred
25 during the move?

1 A. Yes.

2 Q. And did you --

3 A. No, everything remains -- you say after the detension or
4 before?

5 Q. Before detensioning, after the move. So they moved it,
6 right?

7 A. Um-hum.

8 Q. And it was set. And then you detensioned it. Was there an
9 assessment of the bridge's condition after move, after bridge set,
10 but before detensioning?

11 A. That's the cracks that I just reported. There is the bigger
12 cracks up here and some open a little more. So I send -- take a
13 picture and send it and inform the PA and the senior project
14 leader.

15 Q. But that was after detensioning. Or was that before --

16 A. Before and during. But okay. Was started before. I know
17 because I take pictures so I know when more or less, you know.
18 After the, after the stresses, the crack remain the same as it --

19 Q. So the cracking --

20 A. More clear, more clear. The cracks that I observed, I
21 observed before they finished the destressing.

22 Q. And they didn't -- and then when they were finished the
23 detensioning --

24 A. It remained the same.

25 Q. It remained the same.

1 A. Yes. That (indiscernible) --

2 Q. And those cracks were more significant --

3 A. Yes.

4 Q. Then they were very significant.

5 A. Yes.

6 Q. And they were observed before the detensioning operation ever
7 started. Because you saw those --

8 A. Yes, I saw it before.

9 Q. Okay. There has been a lot of discussion on the cracking at
10 the deck level, on the diagonal interface area. Was there
11 cracking at any other location -- back face of the diaphragm,
12 underside of the diaphragm -- that you observed?

13 A. No. No, I don't -- you talking about the first --

14 Q. (Indiscernible) -- yes.

15 A. For my first, my first cracking inspection you're talking
16 about, right?

17 Q. Yes.

18 A. No. I don't see any other --

19 Q. So it was primarily located at the diagonal deck region.

20 A. In a, in a --sorry. In a truss element 3 and 10. Basically
21 I observed that. That's the first -- now you're talking about the
22 first inspection.

23 Q. No, no, I'm talking about all after placement now.

24 A. Yes. Basically no, I don't see any other. Not in the deck,
25 not in the canopy. I don't see any other.

1 Q. How about the back face of the -- so diagonal 11 and vertical
2 12 hit at the pier location?

3 A. Right there.

4 Q. And there was what they call -- there was a diaphragm that
5 was by 2 feet wide, 4 feet (indiscernible) --

6 A. Yeah, some damage. In the picture it showed some damage in
7 the edge that is, like, broke. There's no crack. It's like
8 broke. The damage, the edge of that --

9 Q. Right. The edge cracked off. And that was there before they
10 detensioned, you're saying, or --

11 A. Yes. Yes.

12 Q. So you saw that before --

13 A. Yes.

14 Q. -- they started detensioning?

15 A. Yes.

16 Q. Well, did you get a chance to look at the bottom --

17 A. No.

18 Q. -- or the back at all?

19 A. No, not the back. Just on top of the deck.

20 Q. So on top of the deck.

21 A. And so the picture I'm taking from the top. No, I don't see
22 any in the bottom.

23 MR. HOLT: (Indiscernible) one second. I think that's it for
24 me. Thank you.

25 MR. MOLINA: You're welcome.

1 MR. WALSH: Okay. I just have a few --

2 MR. BRAGG: (Indiscernible).

3 MR. WALSH: -- just a few follow-up questions.

4 MR. MOLINA: Yes.

5 MR. BRAGG: Dan.

6 MR. WALSH: Dan Walsh, NTSB.

7 BY MR. WALSH:

8 Q. You mentioned the -- when the removal of the shoring and the
9 falsework took place and the second time you observed the cracks
10 on the, on the main span. Do you have any idea what that date
11 was? I mean, any idea?

12 A. I think February 28. But I'm not completely sure. I
13 remember that just because I saw the email sent by the PA about
14 that report, but I'm not, I'm not completely sure if that's
15 February 28.

16 Q. But the photos will identify the correct date. The photos,
17 the photos --

18 A. Yeah, sure. Sure. Yes. Yes. Yes.

19 Q. -- will confirm that date.

20 A. Yeah, I don't want to say exact date because --

21 Q. Right.

22 A. Because it was around February 28 -- 26, 27, something
23 like --

24 Q. And then just to follow up with -- on Reggie's question about
25 the gauge and the calibrator. So you check -- when you check to

1 make sure that the gauge is in good condition and it matches the
2 calibrator --

3 A. Yes.

4 Q. -- what would happen if the gauge and the calibrator did not
5 match?

6 A. They can't work.

7 Q. They can't work.

8 A. Work. Because the process was like this. When I -- when
9 they going to start, I have to check that first. Even they have
10 the correct paper, if the CEI don't have it, they can't start.
11 That was the -- I'm sorry. The project engineer said, if you
12 don't have -- if our office don't have the right calibration, even
13 they have, you can't inspect that operation. So always they send
14 to the prime contractor and to our office the equipment telling
15 the calibration for that specific operation.

16 Q. So you don't allow them to work if the gauge and the
17 calibrator are not correct.

18 A. No.

19 Q. Don't match.

20 A. No.

21 Q. You don't allow them to work.

22 A. No. No.

23 Q. Okay. And you don't know, on the day of the collapse,
24 whether the gauge and the calibrator were correct because no one
25 was there to observe that.

1 A. Well, not me. I wasn't there, I know.

2 Q. Right.

3 A. But I don't know if somebody was present there checking that.
4 I don't know.

5 Q. To check. Right.

6 A. I don't know.

7 Q. Okay. And what would happen, in your experience, if someone
8 proceeded with the gauge and the calibrator not matching
9 correctly? What could happen?

10 A. Well, if the, if the tendon receives more force than they
11 design it, you know, in a high level, that can explode. That can
12 break the tendon. That happened before in other projects, you
13 know. Not while I'm present, but in a class, they show that. So
14 that's very important, you know. That's what I'm saying.

15 Q. So it could, it could explode the tendon. What other, what
16 other --

17 A. I don't know. Okay.

18 Q. More force could be applied.

19 A. You know, I'm not a designer, you know, but --

20 Q. Yeah, right.

21 A. -- I'm not the structural engineer. But for some reason they
22 submit a minimum and a high pressure. So if you put more
23 pressure, maybe damage the tendon. That's the only I can say.

24 Q. Okay. Thank you.

25 MR. WALSH: That's all I have.

1 MR. BRAGG: Okay. So the time is 11:23. We are going to
2 conclude this portion of the interview. Thank you.

3 (Whereupon, the interview was concluded.)
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CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD


IN THE MATTER OF: PEDESTRIAN BRIDGE COLLAPSE
MIAMI, FLORIDA
MARCH 15, 2018
Interview of Alexis Molina

ACCIDENT NO.: HWY18MH009

PLACE: Sweetwater, Florida

DATE: April 9, 2018

was held according to the record, and that this is the original,
complete, true and accurate transcript which has been transcribed
to the best of my skill and ability.


Eileen Gonzalez
Transcriber