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United States of America
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION
1120 20th Street, N.W., Ninth Floor
Washington, DC 20036-3457

SECRETARY OF LABOR,

Complainant,

v.

REVOLUTION ERECTING, LLC.
and its successors,

Respondent.

OSHRC DOCKET NO. 21-0142

APPEARANCES:

Jeremy K. Fisher, Esquire
Daniel Miller, Esquire
Department of Labor, Office of the Solicitor, Atlanta, Georgia
For the Secretary

Angelo M. Filippi, Esquire
Kelley Kronenberg, Fort Lauderdale, Florida
For Respondent

BEFORE:

Dennis L. Phillips
Administrative Law Judge

DECISION AND ORDER

I. Background

This proceeding is before the Occupational Safety and Health Review Commission (the Commission) pursuant to § 10(c) of the Occupational Safety and Health Act of 1970, 29 U.S.C.

§ 659(c) (the Act). On July 13, 2020, OSHA’s Compliance Safety and Health Officer (CO) Michael Marquez¹ and later in September 2020, CO Reginald Benson,² inspected a residential construction worksite in Naples, Florida. (Tr. 34-35; Joint Preh’g Statement, ¶ D, 1, 4). BCB Homes (BCB) was the general contractor at the site. (Tr. 36-37; Ex. C-25). BCB hired Morca Construction Services, Inc. (Morca Construction) and Ott Welding. (Tr. 25-26, 36-37; Ex. C-25). Morca Construction was hired to pour and install concrete columns on the first floor, along with the tie beams³ to which hollow core slabs⁴ were to be attached. Morca Construction hired American Precast LLC (American Precast) (also known as Mellor & Sons, Inc. (Mellor & Sons)) to fabricate the hollow core slabs. (Tr. 26, 36-37; Ex. C-25). American Precast and Mellor & Sons fabricated the hollow core slabs offsite. (Tr. 26, 36-37). The owner of American Precast and Mellor & Sons, Victor Mellor, hired Revolution Erecting, LLC (Revolution or Respondent) to install the hollow core slabs.⁵ (Tr. 19-20, 36-37, 90-91, 332-34, 342; Ex. C-25). Ott Welding was hired to install steel ledger angles,⁶ which supported the

¹ CO Marquez is no longer employed at OSHA. (Tr. 50).

² CO Benson has been an OSHA CO for approximately 16 years. (Tr. 33-34). He has conducted more than 700 OSHA inspections at construction work sites. (Tr. 34).

³ The photograph at Exhibit C-6 shows a tie beam at “D”. (Tr. 70; Ex. C-6, at D). CO Benson testified that Mr. Phil Nanna (sometimes spelled “Nana”), a safety consultant for BCB, told him that the segment of the tie beam he photographed at the storage facility in September 2020 “was taken from the tie beam that the ledger angle was affixed to that had collapsed.” (Tr. 124).

⁴ Dr. Bryan Ewing, the Secretary’s expert, testified that hollow core slabs are typically precast, four-foot-wide planks, with several voids within the depth of the slabs. He testified that each hollow-core slab weighed 6,536 pounds. He said they are horizontal structural members typically used for roofs or floors. (Tr. 194-95, 239). The photograph at Exhibit C-9 shows hollow core slabs laying atop concrete at the west [left] side of the photograph and in the background two hollow core slabs are shown leaning on a tie beam. (Tr. 72; Ex. C-9). CO Benson testified that hollow-core slabs range from about 29 to 30 feet in length. He said they are “usually more than nine feet or more up.” (Tr. 67, 94; Exs. C-1, at E, C-3).

⁵ CO Benson testified that Revolution’s job at the worksite was to, using a crane, install the hollow core slabs by laying them down one by one next to each other and insuring they fit. Revolution was also to put cement between the slabs to enjoin the slabs and make sure there were no openings between them for water proofing purpose. (Tr. 90-91).

⁶ A ledger angle was a L-shaped steel section with holes and a 90-degree angle. Here, the vertical leg of the ledger angle was anchored into concrete using “expansion anchors”, where the drawings called for the use of mechanical screw bolts, that were inserted before the concrete had cured. Dr. Ewing said doing so can lead to micro cracks within the concrete and premature failure of the tie beam. The ledger angle supported the hollow core slab on the vertical leg of the angle. The weight of the hollow core slabs is transferred to the foundation through the slabs

hollow core slabs. (Tr. 37-38, 108, 195). American Structural Engineering (ASE) was the engineer of record. (Ex. C-37).

At about 2:00 p.m. to 3:30 p.m., Saturday, July 11, 2020, following the installation of the hollow core slabs and the placement of sixty cement bags on top of the slabs, a collapse occurred at the worksite exposing Respondent's employees to crushing hazards.⁷ (Tr. 40-41, 340-41, 358; Exs. C-1 through C-23, R-D). The OSHA inspection was initiated because of the collapse and resulting injuries to two Respondent's employees. (Tr. 34-35, 39-41). On July 13, 2020, OSHA CO Marquez visited the worksite and conducted an opening conference as part of OSHA's inspection. (Tr. 34-35, 51-52). CO Marquez took many photographs at the worksite. (Tr. 50-52, 61; Exs. C-1 through C-11, C-17 through C-23).

CO Benson replaced CO Marquez⁸ as the OSHA CO assigned to the inspection and a few days before September 14, 2020, he visited the worksite and a storage facility where pieces of material that came from the worksite were stored. At the storage site, CO Benson took photographs of material that came from the worksite. (Tr. 48-49, 53-54; Exs. C-12 through C-16).

resting on the ledger angle, up through the ledger angle and through anchor bolts, through connections to the tie beam to the supporting columns, and from the columns to the foundation. (Tr. 65-73, 195-96, 204-09, 218; Exs. C-4, at A, C-6, at A, C-10, at A, C-18, at A, C-20, at A; Resp't Br. at 3). Dr. Ewing testified that ledger angles were also anchored into tie beams before the concrete had reached its design strength. (Tr. 205). A ledger angle that fell down with a hollow core slab is shown on the ground at the photograph contained at Exhibit C-10, at A. (Tr. 73; Ex. C-10, at A). The photograph at Exhibit C-16 shows a ledger angle with a hole that had been enlarged to allow a bolt to pass through. Dr. Ewing testified that irregular bolt hole sizes cause loads to be unevenly distributed on individual bolts. (Tr. 76-77, 209-10, 287-88; Ex. C-16, at A). Dr. Ewing testified that the hole for the bolt needed to be one sixteenth of an inch larger than the diameter of the bolt. (Tr. 287-88). One of the ledger angles on a tie beam that collapsed supported by shoring poles is shown on the ground at the worksite. (Tr. 79-80; Ex. C-17, at A and B). The photograph at Exhibit C-18 shows a ledger angle on the ground and cement bags under a collapsed hollow core slab. (Tr. 80; Ex. C-18, at A). The holes in the ledger angle were to align with the bolts that were inserted inside the wood foundation (also referred to as forms) which supported the tie beam prior to concrete being poured. (Tr. 81). Dr. Ewing testified that the photograph at Exhibit C-18 shows the continued practice of making field cut holes in a ledger angle located at the worksite. (Tr. 212; Ex. C-18).

⁷ Mr. Lopez said the accident occurred after he finished installing the core slabs. (Tr. 355, 364, 367). The Court finds that the accident occurred after sixty cement bags had been placed on top of the hollow core slabs.

⁸ CO Benson conferred with CO Marquez concerning CO Marquez's initial findings and photographs. (Tr. 34-35).

After the completion of OSHA's inspection, OSHA issued a citation and notification of penalty (Citation) to Revolution on January 11, 2021, for two serious violations. OSHA asserts that on or about July 11, 2020, Respondent's employees were exposed to crushing hazards due to hollow core slabs not being adequately supported, cement bags being placed on top of the hollow core, and ledger angles not being installed per the engineer's plans. *See* Citation. The violations alleged noncompliance with OSHA's safety regulations at Subpart Q - Concrete and Masonry Construction, 29 C.F.R. § 1926.700 *et seq.* OSHA proposed a penalty of \$8,096 for the two violations.

On February 9, 2021, Revolution timely contested the Citation. A two-day trial was held in Naples, Florida on October 26, 2021, and October 27, 2021. Three witnesses testified at the trial: CO Benson; Dr. Ewing;⁹ and Marcos Lopez (Mr. Lopez), an owner of Revolution.¹⁰ (Tr.

⁹ The parties stipulated that Dr. Ewing was qualified to testify as an expert in structural engineering. (Tr. 163-64, 191). The Court also found Dr. Ewing to be qualified to testify as an expert witness in structural engineering. (Tr. 191). Dr. Ewing is a structural engineer with the OSHA Office of Construction within the Department of Labor. (Tr. 152-53). He has been a structural engineer with OSHA for approximately 6 years. (Tr. 153). Dr. Ewing has a Bachelor of Science in Civil Engineering with structural emphasis, a Master of Science in Civil Engineering with structural emphasis, and a Doctor of Philosophy in Civil Engineering focused on unbonded post-tension and clay brick masonry from North Carolina State University. (Tr. 161-62; Ex. C-41 at 1). Prior to working for OSHA, he worked in antiterrorism and force protection design for Baker Risk Engineering. (Tr. 156). Dr. Ewing assists in accident investigations, forensic engineering, rule-making, and general engineering questions. (Tr. 153). He has assisted in over fifty OSHA investigations with the majority of investigations involving the failure of concrete structures. (Tr. 153). Dr. Ewing is licensed as a professional engineer in the State of California. (Tr. 157; Ex. C-41 at 1). Additionally, Dr. Ewing sits on the American Society of Civil Engineers committee and serves as the OSHA liaison to the committee. (Tr. 158). At the trial, Respondent objected to the admissibility of his expert report, Exhibit C-41, on the basis of hearsay and presented two cases after the trial to support his objection. (Tr. 219-22). Expert reports often contain inadmissible hearsay. While Rule 703 of the Federal Rules of Evidence authorize experts to proffer opinions based on inadmissible facts or data, the inadmissible information contained in the expert reports is not thereafter automatically admissible. *See* Fed. R. Evid. 703. However, a court may decide to admit the materials upon which experts rely "to assist the factfinder in assessing the basis of the expert's testimony." *United States of Am. v. Philip Morris USA Inc.*, No. 99-2496 (PLF), 2021 WL 4318113, at *2 (D.C. Cir. Sept. 23, 2021). Where, as here, the judge sits as the trier of fact, the typical concerns contemplated by rules of inadmissibility are diminished because "it is presumed that the judge will understand the limited reason for the disclosure of the underlying inadmissible information and will not rely on that information for any improper purpose." *Williams v. Ill.*, 567 U.S. 50, 69-70 (2012). Here, the Court was inclined to admit the expert report at trial for purposes of aiding it in assessing the basis of Dr. Ewing's testimony relating to the technical and complex issues in this case. The Court is capable of not relying on inadmissible information within the report for improper purposes. Dr. Ewing's expert report at Exhibit C-41 was admitted. (Tr. 224).

¹⁰ Mr. Lopez testified at the trial with a Spanish language interpreter. He said that neither he nor [redacted], or a third employee, Manolo (no last name given), who were at the worksite on July 11, 2020, ever received any formal

33, 332). Post-hearing briefs were filed by both parties, as was a reply brief from Respondent.

The key issues in dispute are: a) whether and when a condition at the worksite presented a hazard; b) whether the standards applied to the cited conditions; c) whether Respondent knew, or with the exercise of reasonable diligence, could have known of the hazardous conditions; and d) whether Complainant has met all the elements of its claims in connection with the alleged violations. As set forth below, the Court finds the Secretary has proven his prima facie case and both items of the serious Citation are affirmed and a total penalty of \$8,096 is assessed by the Court for the following reasons.

II. Jurisdiction

Based upon the record, and the joint prehearing statement, the Court finds Respondent, at all relevant times, was engaged in a business affecting commerce and was an employer within the meaning of sections 3(3) and 3(5) of the Act, 29 U.S.C. §§ 652(3) and (5). (Tr. 20-21; J. Pre Hr'g Statement, ¶ E, at 4; Answer at ¶ I, at 1; Resp't Findings of Fact and Conclusion of Law (Resp't Br.), at 1). The Court finds the Commission has jurisdiction over the parties and subject matter jurisdiction in this case pursuant to section 10(c) of the Act.

III. Findings of Fact

A. Stipulated Facts

The parties stipulated to the following fact. The location of the incident was 1 Sabre Lane Road, Naples, Florida 34102 (worksite). (Tr. 19-20; J. Pre Hr'g Statement, ¶ D, 1, at 4).

B. Respondent

Revolution is a family-owned construction company with its principal place of business at 1302 Mimosa Avenue, Immokalee, Florida 34142. (Tr. 332-33). The company provides

training or schooling in structural design. Marcos Lopez is referred to herein as Mr. Lopez and [redacted] is referred to herein as [redacted]. Mr. Lopez did not have any certification in structural design. (Tr. 325-32, 343-44, 354).

construction services, including the installation of hollow core slabs. (Tr. 36-37, 90-91, 332-33). Mr. Lopez is an owner of Revolution. (Tr. 332-33). Revolution has six employees, including Mr. Lopez. (Tr. 88-89, 102).

C. The Worksite and Accident

Mr. Lopez testified that BCB was in charge of building the home and making sure everything was okay. (Tr. 335). BCB's project superintendent was Patrick Nash (Mr. Nash).¹¹ (Tr. 37). On July 10, 2020, Revolution began installing some of the hollow core slabs to construct the second-floor foundation of the structure.¹² (Tr. 35-36, 91-92, 333-35). Mr. Lopez determined that some of the slabs failed to meet the prescribed length and Mellor & Sons was informed that some of the slabs were not the correct size. (Tr. 46-47, 91-92). Additional slabs, of the correct size, were delivered to the worksite on July 11, 2020, and Revolution continued installing them. (Tr. 91-92). After placing the hollow core slabs atop the ledger angles, Revolution was to put a concrete cement mix between the slabs to seal the edges for weatherproofing purposes.¹³ This was called "[g]routing the cavities in between the hollow-core-slabs."¹⁴ (Tr. 36, 90-91, 205). Cement bags¹⁵ were placed on top of the hollow core by Mellor & Sons/American Precast's on-site crane operator at the direction of Mr. Lopez.¹⁶ (Tr.

¹¹ Mr. Nash is not a structural engineer. (Tr. 304). Mr. Lopez never asked Mr. Nash if he had any training in structural design. (Tr. 343).

¹² Mr. Lopez told CO Benson that "once Victor Mellor calls him to tell him to come meet him at the site, that's when he knows that it's time to install the hollow core slabs." (Tr. 93, 99).

¹³ The building design also called for another two inches of topping slab to be poured over the entire floor, but this had not yet occurred before the floor collapsed. (Tr. 92-93, 205, 340-41, 352-53; Exs. C-1, C-23, R-D).

¹⁴ Dr. Ewing estimated the grouting would take Respondent two or three days to do it by hand. Mr. Lopez planned to start grouting on July 11, 2020. (Tr. 205-06, 340).

¹⁵ The photograph at Exhibit C-3, at A, shows a row of cement bags laying on top of a fallen hollow-core slab. (Tr. 66-67; Ex. C-3, at A). The photograph at Exhibit C-10, at B, shows a row of about 10 to 11 cement bags, which were on top of a hollow core slab before it collapsed, laying on top of hollow-core slabs that had fallen to the ground. (Tr. 72-73; Ex. C-10, at B). The photograph at Exhibit C-11 also shows cement bags at "A" on the ground. (Tr. 73-74; Ex. C-11, at A).

¹⁶ Dr. Ewing testified that Respondent needed "to know the strength of the concrete prior to loading or subjecting the concrete to construction loads." (Tr. 299).

40, 93, 339-40; Ex. R-A, at 3, Answer to Interrogatory (Int.) No. 3). Immediately after the cement bags were lowered and placed on the hollow core slabs, the hollow core slabs collapsed endangering three of Revolution's workers and seriously injuring two. (Tr. 92).

Manolo and Mr. Lopez were starting to mix cement to fill the grout when the accident occurred. (Tr. 355). Mr. Lopez was located at "C", [redacted] was located at "D", and Manolo was located at "E" on the photograph at Exhibit C-17 at the time of the accident.¹⁷ (Tr. 356; Ex. C-17, at C, D, E). Both Mr. Lopez and [redacted] fell to the ground from atop the second floor. (Tr. 368).

Both Mr. Lopez and [redacted] required hospitalization and surgery as a result of the hollow core slabs collapsing. Mr. Lopez was hospitalized [redacted]. (Tr. 87-88, 339-41, 352-53, 359). [redacted] was also hospitalized [redacted]. (Tr. 359).

D. CO Benson's OSHA Inspection

In September 2020, CO Benson headed to the worksite to continue the OSHA inspection. (Tr. 35-36). CO Benson testified he was able to determine which employers were involved in the construction of the residential structure. (Tr. 35-38; Ex. C-25). CO Benson met with Mr. Nanna at a storage facility to take photographs of a tie beam used in the construction of the structure. (Tr. 38-39, 125). Photographs were taken specifically of the holes in the tie beam where wedge anchors bolts¹⁸ had been installed. (Tr. 38-39; Exs. C-12 through C-13). CO Benson measured the depth of two holes in one of the collapsed tie beams at three inches and a quarter.¹⁹ (Tr. 75-77; Exs. C-12 through C-13). CO Benson testified that Ott Welding

¹⁷ Manolo was about 10 to 15 feet from Mr. Lopez when the accident occurred. Manolo was not injured. (Tr. 355).

¹⁸ A wedge anchor bolt is also commonly referred to as a "bolt" (Tr. 69).

¹⁹ CO Benson testified that his investigation revealed that the bolts delivered to the worksite were not the correct size. (Tr. 85-86). Dr. Ewing testified that the drawing package from the engineer specified that a six-inch bolt be used and that this did not occur. (Tr. 205-07; Ex. C-39). CO Benson testified that the manufacturer dictated that the bolts were to be inserted around six to six- and one-half inches. (Tr. 75-77, 103). A purchase order provided to CO Benson by Ott Welding showed that it ordered 80 wedge anchor bolts that were 3/4x6-1/4 inches in size from TCS

was responsible for installing the ledger angles with the wedge anchor bolts. (Tr. 86). He said the wedge anchors had not been installed correctly or per the manufacturer's design specifications.²⁰ (Tr. 39). CO Benson also testified that Ott Welding used "different washers that did not come with the wedge anchor bolts, which the manufacturers say that you need to use those specific washers because it's designed to do what it needs to do." (Tr. 68, 71, 96-97, 103; Ex. C-6, at B). He said Ott Welding used a larger washer on the hole on the east side of the ledger angle because the washer that came with the bolt would go through the larger hole and not work. (Tr. 71-72; Exs. C-6, at B, C-7 through C-8). Dr. Ewing said that washers ensure the bearing capacity between the nut and the vertical leg of the ledger angle. He said that if the bearing surface is not adequate, connections may prematurely fail. He said that the tolerances around the bolt holes needed to be tight "to make sure that the load transfer between the ledger angle and the tie beam can be completed successfully and safely."²¹ Dr. Ewing testified that these washers installed on the ledger angle were visible prior to the hollow-core slabs being

on March 27, 2020. Dr. Ewing testified that five and three-quarters inch bolts were found at the worksite. He was told these were possibly used to connect the ledger angles to the tie beams. He said these bolts were not allowed to be used in concrete in the fashion used. (Tr. 85-86, 104, 267-71; Ex. C-38). CO Benson testified that the hole measurements "showed that the hole was not deep enough inside the tie beam to meet the manufacturer's specification of the anchor bolt." Dr. Ewing testified that the bolts needed to be embedded about five and a half inches into the side of the tie beam. He said that photographs taken by CO Benson showed that the depth of the holes for the bolts were measured at three and a quarter to three and a half inches. Dr. Ewing said that the lesser embedment "would weaken a connection for sure because the connection is a function of the embedment." (Tr. 77, 206-07; Exs. C-12 through C-13). CO Benson said the failure to properly embed the wedge anchors bolts "would be one of the contributing factors to make an assessment to recommend" the issuance of a citation for a violation of 28 C.F.R. §1926.704(a) [Citation 1, Item 2]. CO Benson further testified that he would recommend the issuance of a citation for a violation of that standard if it was the only issue. (Tr. 129-130). He said that the failure to properly embed the anchors was a contributing factor in creating a struck-by hazard. (Tr. 127).

²⁰ CO Benson testified that Mr. Nanna told him that the section of the tie beam at the storage facility "was taken from the tie beam that the ledger angle was affixed to that had collapsed." (Tr. 124). CO Benson testified that wedge anchors were installed by Ott Welding in the tie beam section stored in the storage facility prior to concrete being poured and that contributed to the creation of a hazard. (Tr. 132-33). He stated that he believed that had Ott Welding followed the manufacturer's recommendations regarding the installation of the wedge anchors "that would have given the structural stability to the wedge angles which then would have supported the hollow core." (Tr. 132-33).

²¹ Dr. Ewing said that the construction drawings did not call for "slotted holes" which allow tie beams to slide back and forth and could cause inadequate load transfer. He said these cut holes within the ledger angle were visible before hollow-core slabs were installed. (Tr. 212-14; Ex. C-16, at A).

installed. (Tr. 210-12; Ex. C-6, at B). CO Benson determined that the hollow core slabs fell because ledger angles were not correctly installed on the tie beams, non-compliant wedge anchor bolts were used to connect the ledger angles to the tie beams, and excessive weight of cement bags was placed atop the hollow core slabs. (Tr. 39-40).

CO Benson said the cement bags were placed on top of the hollow core slabs by Mellor & Sons' on-site crane at the direction of Mr. Lopez. (Tr. 40-41). CO Benson's testimony was corroborated by Mr. Lopez. Mr. Lopez testified:

Q So when the accident occurred you had finished installing the core slab in that area?

A Yes.

Q Who called for the cement to be brought up?

A The cement comes from the same company and is sent with the hollow core. The same company sends it.

Q I understand. At some point though the cement was brought up and it's placed on top of the hollow core; correct?

A Yes.

Q Okay. And who was it that called for that cement to be brought up and placed on top of the hollow core?

A I did.

(Tr. 339).

CO Benson said as many as 20 to 60 bags²² of cement were placed on top of the hollow core slabs. (Tr. 39-40). Mr. Lopez testified that each bag of cement weighed 50 pounds.²³ (Tr. 339-40). Dr. Ewing opined that the second-floor collapse involved the weight of: 1) the hollow-core slabs, 2) human beings, and 3) cement bags. (Tr. 299-300).

CO Benson said that through the course of his investigation, he determined the hollow

²² CO Benson said the crane operator told him that he had lifted 60 cement bags atop the hollow core slabs. The Court finds that 60 cement bags were atop the hollow core slabs when the accident occurred. (Tr. 40).

²³ CO Benson testified that he had been told that the bags weighed between 84 to 98 pounds each. (Tr. 40). He said he believed that the cement bags placed "4,500 or 4,800 pounds" of additional weight on top of the hollow core slabs. (Tr. 94-95). Dr. Ewing described the bags as "80-pound bags of cement." (Tr. 204; Ex. C-20). The Court finds that the cement bags weighed an average of 87 pounds calculated by the average of 80, 84, and 98 lbs. $\div 3 = 87$ lbs. Accordingly, the Court finds that the cement bags placed 5,220 pounds of added weight atop the hollow core slabs at the time of the accident.

core slabs fell due to incorrect installation of the ledger angles with the wedge anchors. (Tr. 39-40). CO Benson said that prior to the installation of the hollow core slabs, there was a design change²⁴ that resulted in Mr. Nash making a decision to install wedge anchors on the forms prior to the concrete pour. (Tr. 39-40, 95-97, 114, 131). Installing the wedge anchors prior to the pour did not allow for the proper expansion as the concrete cured around the anchors.²⁵ (Tr. 95-97, 113-14). CO Benson testified that Dr. Ewing determined that as the concrete cured the wedge anchors shifted causing the openings of the ledger angles to not fully align with all of the wedge anchor bolts.²⁶ (Tr. 94-95). CO Benson further testified that Ott Welding had installed the ledger angles after the concrete pour, and after there was an effort to align them properly. (Tr. 95-97). This approach necessitated the usage of bolts that were non-compliant with the design plans. These bolts were not installed per the manufacturer's requirements. (Tr. 38-40, 84-86, 94-95; Exs. C-37-38).

Dr. Ewing asked for the compressive strength test for the concrete that was used in the tie beam shown at photograph C-1, at B, where the failure occurred. (Tr. 317-18; Ex. C-1, at B). Dr. Ewing testified, based upon interviews with BCB's Mr. Nanna and concrete compressive strength reports²⁷ forwarded to him, that the concrete in the tie beams involved in

²⁴ CO Benson testified at trial that someone decided to use wedge anchor bolts instead of another type of anchor. (Tr. 123).

²⁵ CO Benson testified that he was not able to determine who installed the wedge anchor bolts prior to the pour. But he did say Revolution did not do it. (Tr. 110-11, 131). He also said that at his pre-trial deposition he agreed with counsel that "[t]here would be no way for me [counsel] to when I'm [counsel] installing the hollow core to determine whether or not the bolts were sufficiently embedded into the tie beam." (Tr. 126-27).

²⁶ Wedge anchor bolts are used "to attach the ledger angle onto the tie beam." (Tr. 68, 82-83, 218; Exs. C-5, C-6, at B, C-21). The photograph at Exhibit C-21 shows holes at the bottom of a tie beam that were there from anchor bolts that fell down from the tie beams that had earlier been installed inside the tie beam to affix the ledger angle. (Tr. 82-83; Ex. C-21).

²⁷ Dr. Ewing's expert report states that he reviewed the compressive strength report dated July 13, 2020. (Ex. 41, at 2, ¶5). At trial, and without any compressive strength report before him, Dr. Ewing testified that "if he remembered correctly" he received only the compressive strength report dated July 7, 2020 (Ex. C-39 at 1). The Court finds that Dr. Ewing also had and reviewed the compressive strength report dated July 13, 2020 (Ex. C-39 at 2), when he prepared his expert report dated August 16, 2021. Dr. Ewing testified that his expert report is "based upon the

the collapse had not reached the appropriate level of cure to support loads.²⁸ (Tr. 173-75, 202-05; Exs. C-39, C-41). The concrete compressive strength reports indicated that the pounds per square inch of strength had not been reached prior to the installation of the hollow core slabs. (Tr. 215-17; Ex. C-39). Dr. Ewing testified that when pouring concrete, sampling molds are taken for later testing. (Tr. 200-01, 215-17). Periodically throughout the concrete curing process, these samples are tested for their strength. (Tr. 215-17). Dr. Ewing stated the reason for these tests is to determine when the formwork²⁹ supporting the concrete can be stripped away as the concrete reached the desired structural strength. (Tr. 215). Here, the engineer's concrete drawing package required a structural strength of 75% of the minimum concrete strength of 4,000 psi before the formwork could be removed. (Tr. 203-05, 215-16; Ex. C-37). Dr. Ewing determined the concrete strength had not reached the desired strength in order for the formwork to be removed or for the hollow core slabs to be installed. (Tr. 215-17). Dr. Ewing testified that the rate of curing for concrete is "dependent on a lot of things" and "specific to the situation." He said factors that affect the rate at which concrete in a tie beam cures include: 1) size of the tie beam, 2) relative humidity, 3) temperature of concrete when delivered to the worksite, 4) water/cement ratio of the concrete, 5) any kind of mixtures added to the concrete, 6) how the concrete was cured; e.g. was it wet cured or was it sprayed constantly, and 7) the environment. (Tr. 200).

CO Benson testified that he worked with Dr. Ewing during his investigation and that he

compressive strength reports." (Tr. 172-74; Exs. 39, 41, at 215). The Court finds that Dr. Ewing received both compressive strength reports found at Exhibit 39. (Tr. 275-76; Ex. C-39).

²⁸ CO Benson also testified that after considering the compressive strength report he too "came to the conclusion that the concrete was not at its full strength at the time of the removal of the forms, and they are not at the full strength at the time of the accident." (Tr. 86-87; Ex. 40). He testified that he learned from Dr. Ewing's report that the weight placed on top of the ledger angles was too much for the ledger angles to carry. (Tr. 137).

²⁹ 29 C.F.R. § 1926.700(b)(2) defines "Formwork" as "the total system of support for freshly placed or partially cured concrete, including the mold or sheeting (form) that is in contact with the concrete as well as all supporting members including shores, reshores, hardware, braces, and related hardware."

and Dr. Ewing determined:

That the ledger angles were not installed properly, that there was no inspection conducted prior to the hollow-core slabs being placed. On the ledger angles, that the strength of the concrete was not at its percentage where it needed to be, and the bolts were installed incorrectly where they were installed before the pour, which the manufacturer states that they needed to be installed after the pour to properly align the ledger angles.³⁰

We also determined that because of the shifting of the wedge anchors after the pour, that the openings of the ledger angles did not align with all the bolts, so they had to make modifications in the field. And due to the weight of the cement bags, which I believe weighed from 4,500- or 4,800-pounds additional weight on top of the hollow core, was the contributing factor of that hollow-core fail, to fall down due to the incorrect installation of the ledger angles.
(Tr. 94-95, 98, 182, 184).

Dr. Ewing testified at trial:

Q. Dr. Ewing, did you form an opinion as to the cause of the – the cause of the accident in this case?

A. Yes, I did. The contributing factors for this incident was the improper selection of the anchor used to connect the ledger – the ledger angle to the tie beam, improper embedment depth of that anchor, improper field cutting of the bolt holes of the ledger angle, the concrete had not reached its design strength yet, and also improper shoring of the ledger angle while concrete was still curing.
(Tr. 193, 218-19).

Dr. Ewing testified that the photograph at Exhibit C-1 shows at the bottom of a tie beam (at “B”) several locations of concrete pullouts (at “G”) where anchor bolts inserted through a ledger anchor shown on the ground (at “J”) had once been. He also said that several shoring poles (sometimes referred to as “posts”), maroon in color, are shown at “H”, as well as a fallen hollow core slab at “E”. (Tr. 197-98; Ex. C-1). Dr. Ewing opined that there was inadequate shoring and said that:

on the top of the shoring post [at C-1 and C-2] there’s a horizontal piece of lumber. The horizontal piece of lumber is holding up the tie beam as it cures.

³⁰ Dr. Ewing testified at trial that he had testified at his deposition that the manner the wedge anchor bolts were installed resulted in a reduction in the strength of the connection between the ledger angle and the tie beam. (Tr. 182).

And in this case, we have ledger angles that were attached to the side of the tie beam and none of this lumber members extend under those ledger angles. So there's no way – the only thing that's connecting the ledger angle to the tie beam are the mechanical anchors every two feet. And while the concrete is curing, those mechanical anchors aren't capable of supporting the applied load. So if there is proper shoring, this lumber – this lumber member at the top of the shore³¹ post would either extend under the ledger angle or there'd be a separate shoring system to support the hollow-core slab while the tie beam cures. (Tr. 201-03; Exs. C-1, C-2).

Dr. Ewing testified that the presence of shoring at the worksite indicated that the concrete was not strong enough to support its own weight causing the need to be careful about the load applied and how it is supported because the concrete has not obtained its design strength. (Tr. 203-04, 225). Dr. Ewing testified “[i]f I were to come onto a site and I see shoring posts, that's going to be the number one question I'm asking is what is the strength of this concrete, when was it poured, and can I get these concrete tests to verify its strengths.”³² (Tr. 230, 320). He said he would have liked “to get some kind of confirmation from the cylinder test if that concrete actually has been cured enough to proceed with construction.” (Tr. 219). He said that the presence of shoring or forming was visible during the installation of hollow-core slabs as shown in the photograph at Exhibit C-1. (Tr. 193, 204; Ex. C-1, at H). Dr. Ewing further stated if the general contractor said to him that the concrete had adequately cured, he could not rely on that representation and he would, instead, ask for the concrete strength test reports, especially when you see shoring posts. (Tr. 230-31, 244).

At trial, Mr. Lopez acknowledged that formwork for “the bottom parts of the tie beams”; *i.e.*, shoring poles, was present at the worksite when he started installing hollow core slabs. (Tr. 337). He said that was “pretty normal” for shoring to be there. (Tr. 337, 345). He

³¹ 29 C.F.R. § 1926.700(b)(7) defines “Shore” as “a supporting member that resists a compressive force imposed by a load.”

³² Mr. Lopez did not know when any of the tie beams had been poured. (Tr. 347).

also said he saw ledger angles that looked to be normal. (Tr. 338).

The Citation issued to Revolution was based on two instances identified as Citation 1, Item 1 and Citation 1, Item 2. (Tr. 97-100; Citation). CO Benson testified that Citation 1, Item 1 was recommended due to Respondent's decision to put cement bags on top of the hollow core slabs before an inspection was done of the ledger angles and anchor bolts, or a copy of the concrete strength report was requested.³³ (Tr. 98). He testified that Citation 1, Item 2 was recommended based on the incorrect installation of the ledger angles with the anchor bolts. (Tr. 99-100).

IV. Secretary's Burden of Proof

To establish a violation of an OSHA standard, the Secretary must prove: (1) the cited standard applies; (2) the terms of the standard were violated; (3) one or more employees had access to the cited condition; and (4) the employer knew, or with the exercise of reasonable diligence could have known, of the violative condition. *Astra Pharm. Prods.*, No. 78-6247, 1981 WL 18810, at *4 (OSHRC, July 30, 1981), *aff'd in relevant part*, 681 F.2d 69 (1st Cir. 1982). The Secretary has the burden of proving his case by a preponderance of the evidence.

V. Multi-Employer Citation Worksite Policy

A. Respondent does not Contest the Applicability of the Multi-Employer Citation Worksite Policy

In its Reply Brief, Respondent states that it "does not contest the applicability of this [OSHA's Multi-Employer Citation] policy." (Resp't Reply Br. at 7). Instead, Respondent argues that under the aforementioned policy, BCB, Ott Welding, and Morca Construction should

³³ CO Benson testified that he did not determine whether or not anybody had the concrete strength report at the time of the accident because he was not the compliance officer then. But he said, "Somebody had it." (Tr. 144; Ex. 39). Mr. Lopez never requested to see any compressive strength report. (Tr. 344).

be cited.³⁴ (Resp't Reply Br. at 3, 7-8). Respondent asserts Ott Welding and/or BCB should be cited for the improper selection of the wedge anchors. It asserts that Ott Welding or Morca Construction were responsible for the improper embedment of the anchors. It further asserts that Ott Welding³⁵ was responsible for the ledger angles, and BCB was responsible for monitoring the concrete strength and directing the removal of formwork and shoring.³⁶ (Resp't Reply Br. at 3). The Court need not adjudicate here whether or not BCB, Ott Welding, or Morca Construction may have violated the Act. Even if any of them did, it would not excuse Respondent's obligations to comply with the Act. The Court finds that OSHA's Multi-Employer Citation Worksite Policy is applicable to Respondent and its arguments to the contrary are rejected.

B. Respondent was both a Creating and Exposing Employer for Citation 1, Item 1, and an Exposing Employer for Citation 1, Item 2.

Under OSHA's multi-employer enforcement policy, an exposing employer who created the violation may be cited for the violation as a creating employer. *See* OSHA Instruction Directive Number CPL 2-0.124, *Multi-Employer Citation Policy*, ¶ XB-C (Dec. 10, 1999) (CPL 2-0.124).³⁷ CPL 2-0.124, ¶ XC2 also provides that an exposing employer is citable, even if the violation was created by another employer, if it: "(1) knew of the hazardous condition or failed to exercise reasonable diligence to discover the condition, and (2) failed to take steps consistent

³⁴ OSHA issued Mellor & Sons a Citation and Notification of Penalty under the multi-employer citation policy. (Ex. R-A. at 3, Answer to Int. 3).

³⁵ CO Benson testified that OSHA issued a hazard alert letter to Ott Welding relating to 29 C.F.R. § 1926.704(a). (Tr. 131-32).

³⁶ Dr. Ewing stated "shoring" is what they reference to the post, calling them shoring posts. "Formwork" is what is used to support the concrete as it is being cast. (Tr. 216-17, 225-27).

³⁷ Here, Respondent was both a Creating and Exposing Employer as to Citation 1, Item 1 that prematurely installed the hollow core slabs and directed the placement of 60 bags of cement atop the hollow core slabs without first determining, based on information received from a qualified person in structural design, that the structure was capable of supporting the load, thereby exposing its employees to crushing hazards. Respondent had the authority to allow the concrete more time to cure before it began installing the hollow core slabs and placing the cement bags on top of them.

with its authority to protect its employees.”³⁸ *Id.*; *S. Pan Serv. Co.*, 25 BNA OSHC 1081, 1085 (No. 08-0866, 2014) (“an employer whose own employees are exposed to a hazard or violative condition – an ‘exposing employer’ – has a statutory duty to comply with a particular standard even where it did not create or control the hazard.”) *aff’d*, 685 F. App’x 692 (11th Cir. 2017) (unpublished); *Capform, Inc.*, 16 BNA OSHC 2040, 2042 (No. 91-1613, 1994) (addressing “multi-employer worksite defense” and finding exposing employer responsible for violation it did not create or control because it failed to take “reasonable alternative steps to protect its employees”). Respondent was cited as an exposing employer under OSHA’s Multi-Employer Citation Worksite Policy.³⁹

The Commission’s application of the Multi-Employer Citation Worksite Policy is well established. *See S. Pan Serv. v. DOL*, 685 F. App’x 692, 695 (11th Cir. 2017) (unpublished) (multi-employer worksite doctrine found applicable in the Eleventh Circuit under the exposing-employer doctrine); *Anning-Johnson Co.*, 4 BNA OSHC 1193, 1198-99 (No. 3694, 1976) (consolidated). An employer whose own employees are exposed to a hazard, is an exposing employer, has a statutory duty to comply with a standard even if it did not create or control the hazard. *See Anning-Johnson Co.*, 4 BNA OSHC at 1198-99.

As in *Southern Pan Services*, Respondent’s own employees were exposed to a hazard here. Three Revolution employees had just finished installing hollow core slabs and placing sixty cement bags on top of the slabs when the worksite structure collapsed on July 11, 2020. (Tr. 40-41, 339-41, 352-53; Exs. C-1, C-23, R-D). Mr. Lopez testified the concrete slabs had

³⁸ Here, Respondent was also an Exposing Employer as to Citation 1, Item 2 because it failed to exercise reasonable diligence to discover that the hollow core slabs were not adequately supported where ledger angles were not installed per the engineer’s plans; thereby compromising the structural integrity of the tie beams upon which the hollow core slabs were seated. Respondent had the authority to allow the concrete more time to cure before it began installing the hollow core slabs on the ledger angles. Respondent also failed to take adequate steps consistent with its authority to protect its employees.

³⁹ *See* Exhibit R-A, at 3, Answer to Int. 3.

fallen on himself and [redacted] severely injuring them both. (Tr. 339-41, 352-53). Three employees, including [redacted], were exposed to the violative conditions described in the Citation. As an exposing employer, Revolution was required to “do what [was] ‘realistic’ under the circumstances to protect its employees from the hazard to which a particular standard is addressed, ...” *Anning-Johnson Co.*, 4 BNA OSHC at 1199; *see also Capform, Inc.*, 16 BNA OSHC at 2042.

Respondent argues its efforts were “realistic under the circumstances.” (Resp’t Reply Br. at 4-5). Photograph C-1 shows maroon colored shoring poles supporting a tie beam following the floor collapse and on the tie beam behind where the failure occurred. Shoring poles were used to support the weight of the tie beam during its curing process. (Tr. 197-99, 320; Exs. C-1, at H, C-2). Shoring poles are used to hold up the concrete in tie beams while the concrete is curing and developing strength so that a tie beam does not collapse under its own weight. CO Benson testified that shoring supports the cement structure that is being poured and being cured to keep it and maintain it from collapsing until it is at its full capacity where they then can remove the shoring poles. (Tr. 64-65, 199). Dr. Ewing testified that the American Concrete Institute (ACI) has several manuals that are used for designing concrete structures. (Tr. 158-59). Dr. Ewing testified that here the structural engineer specified that forms on the concrete can be removed at 75 percent of the 28-day minimum strength of 4,000 psi, i.e., at 3,000 psi.⁴⁰ Dr.

⁴⁰ Specifically, the Structural Notes for the project stated:

FORMWORK AND SHORING:

Form work supporting structural concrete (beams, slabs, etc.) may not be removed until the concrete has attained 75% of the 28-day design minimum strengths. Determination of the in place concrete strength shall be determined by laboratory testing of concrete cylinders. ...

CONCRETE:

Ewing stated that these were the required strengths of the concrete. (Tr. 199-201, 214-216, 295; Exs. C-37, C-39). He said that the

“strength of the bolted connection is a function directly proportional to the concrete strength. As you lower the concrete strength, the connection loses its capacity, and it gets weaker. So it’s important for the concrete to reach its designed strength so the connection connect as intended by the structural engineer.” (Tr. 214).

Dr. Ewing opined that on July 11, 2020 the concrete strength was approximately 2,600 psi at the time of the incident, so it had not reached the desired strength yet for the forms to be removed per the construction documents. (Tr. 215-16, 295-296; Ex. C-39). He said, “until the concrete has been shown to reach 75 percent strength, you are not allowed to remove the formwork or the shoring supporting, that green concrete or that concrete that’s still curing.” (Tr. 296; Ex. C-37). Consequently, he concluded:

the structure’s stability is compromised because the concrete is not strong enough to transmit the load from the ledger angle into the concrete beam. So you’re going to have the failure condition right there in that load path. So the load from the hollow-core slab would not be able to complete its intended load path by the structural engineer from where it’s resting down to the foundation, and you would get a failure there at the connection of the concrete.

(Tr. 216).

All concrete shall be placed in accordance with the American Concrete Institute “Building Code Requirements for Structural Concrete” (ACI-318).

The following minimum design stresses shall be met:

CAST IN PLACE CONCRETE:

...
Beams, Elevated Slabsf’c - 4000 psi
The concrete stresses listed above are based on a 28 day compressive strength as determined by laboratory testing of concrete cylinders.

...
Concrete shall be placed and cured to ACI standards and specifications.

(Tr. 200-02; Ex. C-37).

Dr. Ewing testified that after one bolt failed the weight previously on that bolt was thereafter carried by additional bolts resulting in an “unzipping effect” across the ledger angle causing all the bolts that were two feet apart along the tie beam to fail and the ledger angle to fall to the ground. (Tr. 286). Dr. Ewing saw the failure pattern in photographs of the tie beam. He said he could not tell which bolt failed first, but he can say “the series of bolts did fail.” (Tr. 286-87, 291-94, 298; Exs. C-1, at G, I, J, C-4, at A). Dr. Ewing opined that the failure occurred at the ledger angle that was bolted into the tie beam that was located on the photograph at Exhibit C-1, at “G”.⁴¹ (Tr. 291; Ex. C-1, at G).

The photograph at Exhibit C-2 also shows two shoring poles with lumber above them supporting a concrete structure. (Tr. 66, 199; Ex. C-2). Similarly, the photograph at Exhibit C-3 shows shoring poles leaning in on a tie beam. (Tr. 66; Ex. C-3). The photograph at Exhibit C-9 shows shoring poles supporting at least a portion of lumber under a tie beam at A and B. (Tr. 72, 231-33; Ex. C-9, at A, B, D). The photographs at Exhibits C-11, C-21 through C-23 also show shoring polls. (Tr. 72-74, 83-84; Exs. C-11, C-21 through C-23).

Mr. Lopez testified that American Precast scheduled Respondent, along with American Precast’s crane operator and driver, to work at the site on Friday, July 10, 2020. (Tr. 336, 348; Ex. R-A, at 3, Answer to Int. 3). After he arrived at the worksite at about 2:00 p.m., Mr. Lopez walked around for about ten minutes because as he said he was “in charge.” (Tr. 349-50, 357). He noticed nothing unusual regarding the shoring of the tie beams or the ledger angles. He looked to see that all of the bolts were on the ledger angles, but did not determine whether the correct bolts had been used because “that’s not my job.” (Tr. 349-52). Mr. Lopez testified that

⁴¹ Dr. Ewing testified that the concrete for the failed tie beam was poured on July 7, 2020. (Tr. 297-98, 311-12; Ex. C-39 at 2). The Court relies on Dr. Ewing’s testimony that he was told during interviews that the concrete for the tie beams located where the failure occurred was poured on July 7, 2020 notwithstanding Respondent’s argument that it may have been poured on June 29, 2020. (Tr. 297-98, 311-12; Ex. C-39 at 2; Resp’t Br. at 15).

at about 2:00 p.m. he asked Mr. Nash at the worksite “if everything was ready in order for us [Respondent] to begin to work” Mr. Lopez said Mr. Nash said, “Yes.” (Tr. 336, 344-45, 363-64). [redacted], Manolo, and Daniel Leal, a hollow core slab installer, were with Mr. Lopez at the worksite. (Tr. 357-58). Mr. Lopez then installed five or six hollow-core slabs⁴² and departed the worksite at about 5:00 p.m. to 6:00 p.m.⁴³ (Tr. 336, 345, 357).

Respondent argues that Mr. Lopez relied on Mr. Nash’s brief, affirmative response that the site was ready for him to install the hollow core.⁴⁴ (Resp’t Reply Br. at 4-5). However, Mr. Lopez never inquired as to whether the concrete had properly cured, had the proper compressive strength, or could handle the weight of the large number of cement bags that were to be put on the hollow core slabs. (Tr. 345-47, 350-51, 366). Mr. Lopez also did not ask anyone if the design plans for the building had been changed. (Tr. 345-46). Mr. Lopez testified that he spoke with BCB and American Precast contractors at the worksite on July 10, 2020, but was unaware of, and never inquired, if any of them had experience in structural design. (Tr. 342-43). Mr. Lopez never asked to speak with a structural engineer. He said that it was “not part of [his] job.” (Tr. 345). He also never spoke with Ott Welding or Morca Construction. (Tr. 345). He testified that in his 15 years of experience installing hollow-core and working with cement,⁴⁵ he had never spoken to a structural engineer regarding a project. (Tr. 333, 351). Mr. Lopez said that he had installed concrete hollow core slabs many times before. (Tr. 336-37).

⁴² Mr. Lopez later stated that he put two hollow core slabs on Friday. (Tr. 360).

⁴³ Respondent returned on Saturday, at about 9:00 to 10:00 a.m. because some of the hollow core slabs were too short and had to be re-ordered. (Tr. 347-48, 358). Mr. Nash was not at the worksite on Saturday, July 11, 2020. (Tr. 350).

⁴⁴ CO Benson testified that during his pre-trial deposition, he agreed with Respondent’s counsel that Mr. Nash had told him that concrete had been poured for three days, had apparently already cured, and was not a concern. (Tr. 122). At trial, CO Benson testified that Mr. Nash never told him that he [Nash] had told Mr. Lopez that the concrete had cured and was ready to go. (Tr. 148).

⁴⁵ Before that, Mr. Lopez poured concrete slabs and installed tile flooring and carpentry. (Tr. 333).

Respondent failed to take reasonable alternative steps to protect its employees. The Secretary has the burden of identifying the measures the employer can reasonably take to protect its employees. *S. Pan Serv. Co.*, 25 BNA OSHC at 1086; *S. Pan Serv. Co.*, 26 BNA OSHC 1005, 1009 (No. 08-0866, 2016) (ALJ's decision on remand). The Secretary has done so here. Respondent never inquired whether the concrete had properly cured, had the proper compressive strength, or could handle the weight of the cement bags being placed on top of the hollow core slabs. (Tr. 345-47, 350-51). Mr. Lopez did not consult with any individual with qualifications in structural design before installing the hollow core slabs and directing the cement bags to be placed atop the hollow core slabs. (Sec'y Br. at 5-6). Mr. Lopez testified that he never reviewed any compressive strength reports or design plans or spoke with a structural engineer.⁴⁶ (Tr. 344-46, 350). Mr. Lopez had access to these reports and plans, but never reviewed them because he said it was not part of his job. (Tr. 86-87, 92-93, 344-46, 350).

Every employer has a primary responsibility for the safety of its own employees. *See Grossman Steel & Aluminum Corp.*, 4 BNA OSHC 1185, 1189 (No. 12775, 1975). (Simply because a subcontractor cannot himself abate a hazardous condition does not mean it is powerless to protect its employees.). Here, Respondent failed to protect its employees and failed to take any alternative actions to protect them. Under applicable Commission precedent, Revolution was an exposing employer. It was an exposing employer in both instances of the

⁴⁶ Mr. Lopez testified:

Q. Did you ever review any compressive strength reports?

A. No, because that's not part of what that pertains to what I do. That's something that they do.

Q. And who do you mean by "they"?

A. The people in charge of the building.

Q. Did you request any compressive strength reports?

A. No, because that's not part of my thing. I go in and I ask if it is ready.

(Tr. 344).

Citation due to two of its employees having been exposed to, and injured by, the violative conditions at the worksite. (Tr. 40-41, 339-41, 352-53).

VI. Citation 1, Item 1

The Secretary alleges that Respondent violated 29 C.F.R. § 1926.701(a), which reads:

Construction loads. No construction loads shall be placed on a concrete structure or portion of a concrete structure unless the employer determines, based on information received from a person who is qualified in structural design, that the structure or portion of the structure is capable of supporting the loads.

The Citation alleges:

On or about 07/11/2020, at 1 Sabre Lane, in the city of Naples, FL, employees were exposed to crushing hazards when the employer did not ensure that the hollow core slabs were capable to support workers installing the slabs and a pallet of cement bags that was stored on top of the hollow core.

A. The Standard Applies

Commission precedent dictates “the focus of the Secretary’s burden of proving that the cited standard applies pertains to the cited conditions, not the particular cited employer.” *Arcon, Inc.*, 20 BNA OSHC 1760, 1763 (No. 99-1707, 2004) (“In order to establish a violation, the Secretary must show that the standards applied to the cited conditions.”) *aff’d*, 142 F. App’x 662 (4th Cir. 2005) (unpublished). The Secretary has met his burden here. *See S. Pan Serv. v. DOL*, 685 F. App’x at 695 (11th Circuit affirming the Commission’s decision to apply 29 C.F.R. § 1926.701(a) to “exposing employer.”); *KS Energy Servs., Inc.*, 22 BNA OSHC 1261, 1267 (No. 06-1416, 2008) (finding “the cited ... provision was applicable to the conditions in KS Energy’s traffic control zone”).

Revolution is a construction company that was providing construction and masonry services, including the installation of hollow core slabs, when the violation occurred. (Tr. 36-37, 90-91, 332-33). It is undisputed that Respondent was hired to perform construction and masonry

services in installing hollow core slabs on the worksite. (Tr. 36-37, 90-91, 332-33). The construction services Revolution performed fall under the purview of Part 1926, Subpart Q, Section 700 – Concrete and Masonry Construction. The scope of the aforementioned Subpart sets forth requirements to “protect all construction employees from the hazards associated with concrete and masonry construction operations performed in workplaces...” 29 C.F.R. §1926.700(a).

The cited standard at 29 C.F.R. § 1926.701(a) applies to Respondent. It is undisputed that Respondent had been hired to install hollow core concrete slabs at the worksite. (Tr. 19-20, 36-37, 39, 90-91, 333-34; JPS, ¶ D, 1, at 4; Ex. C-25). The worksite was a residential structure consisting of mostly concrete construction, about 8,000 square feet in size. (Tr. 35, 194, 333-34). The structure was supported by “a combination of concrete masonry, regular cast-in plates concrete, and then also several types of precast planks were used as well.” (Tr. 194). After installing all of the hollow core slabs on ledger angles in the area marked with “F” on the photograph at Exhibit C-17, Respondent admits to directing cement bags be placed on top of the slabs. (Tr. 36, 40-41, 91-92, 339-41, 348-49, 367-68; Ex. C-17, at F). The resulting collapse of the concrete structure seriously injured two of Respondent’s employees. (Tr. 40, 339-41, 352-53). The Court finds that the evidence establishes that the cited standard applies to Respondent and shows that Respondent was both a creating and exposing employer as to Citation 1, Item 1.

B. Respondent Failed to Comply with the Standard

On July 11, 2020, Respondent installed hollow core slabs and was about to put a cement mix between the slabs at the worksite. (Tr. 36, 90-92). At the direction of Mr. Lopez, the Court has found that 60 cement bags weighing about 87 pounds were then placed on top of the hollow

core slabs. (Tr. 40, 339-40, 366).⁴⁷ The hollow core slabs collapsed shortly thereafter injuring two of Respondent's employees. (Tr. 340-41, Exs. C-1, C-23, R-D).

Respondent failed to take reasonable steps to discover the hazardous condition and protect its employees. At no time before placing cement bags on top of the hollow core slabs and subsequent collapse did Respondent determine, from a person who is qualified in structural design, that the structure was capable of supporting loads. He never spoke with a structural engineer. Mr. Lopez testified that he did not ask anyone if the design plans of the building had been changed or if any of the contractors had experience in structural design. Mr. Lopez admitted he never asked to speak with a structural engineer before instructing the cement bags be placed on the hollow core slabs. He never inquired whether the concrete had properly cured, had the proper compressive strength, or could handle the weight of the cement bags. Mr. Lopez never asked anybody if it was okay to put the weight of the cement bags on top of the hollow core slabs. He never asked if the ledger angles had been properly connected to the tie beams. Respondent failed to review any of the available construction plans, engineering reports, or concrete compressive strength reports before directing cement bags be placed on the hollow core slabs.⁴⁸ (Tr. 40, 339-40, 342-47, 350-51, 366; *see also* fn 6, herein).

Respondent argues that it was relying on the other higher tier contactors to ensure that the concrete had been poured, set correctly, and was ready for hollow core slabs to be placed.⁴⁹ (Tr.

⁴⁷ Mr. Lopez testified that Respondent placed five or six 50-pound cement bags on top of the hollow core slabs. (Tr. 339-40). The Court rejects this testimony as to weight and quantity as unsupported by other more persuasive evidence.

⁴⁸ Respondent argues that Respondent "reviewed the drawings for the installation of the hollow core." (Resp't Reply Br. at 3). The testimony Respondent cites to does not support its position. Mr. Lopez testified as follows:
Q When you were hired by American Precast, did you ask to see any structural drawings of the building?
A No, not a design. The only thing that they sent to me are the blueprints for the hollow core.
(Tr. 344).

Mr. Lopez never says he reviewed any structural drawings for the building being constructed. (Tr. 344).

⁴⁹ CO Benson testified that Mr. Lopez told him:

92; Resp't Br. at 13-16). Respondent's reliance on other contractors is misplaced. With respect to this standard, Respondent is both a creating and exposing employer. It has the primary responsibility for the safety of its own employees. *See Grossman Steel & Aluminum Corp.*, 4 BNA OSHC at 1189; *Capform, Inc.*, 16 BNA OSHC at 2042.

29 C.F.R. § 1926.701(a) calls for no construction loads to be placed on a concrete structure until information is received from a "person who is qualified in structural design" that the structure is capable of holding such loads. 29 C.F.R. § 1926.701(a). Here, failing to inquire whether the concrete structure, including ledger angles, was capable of supporting the hollow core slabs and cement bags, based on information from an individual qualified in structural design, is a violation of 29 C.F.R. § 1926.701(a).

The Court finds that Respondent violated the standard.

C. Respondent's Employees Were Exposed to the Hazard

The Commission's test for hazard exposure requires the Secretary to "show that it is reasonably predictable either by operational necessity or otherwise (including inadvertence), that employees have been, are, or will be in the zone of danger." *Delek Refin., Ltd.*, 25 BNA OSHC 1365, 1376 (No. 08-1386, 2015) *aff'd in relevant part*, 845 F.3d 170 (5th Cir. 2016); *Gilles & Cotting*, 3 BNA OSHC 2002 (No. 504, 1976).⁵⁰

The zone of danger is the "area surrounding the violative condition that presents the

Q. And do you recall him [Lopez] telling you [Benson] anything about any preparations or inspections he [Lopez] had made before beginning the work?

A. He said that that's not what he does, that he doesn't do that inspection, that when they call the company up to deliver the slabs, he's relying on them to make sure that everything is okay. (Tr. 92, 147-48).

⁵⁰ In *Gilles & Cotting, Inc.*, the Commission rejected the "actual exposure" test, which required evidence that someone observed the violative conduct, in favor of the concept of "access", which focuses on the possibility of exposure under the conditions. *See Gilles & Cotting, Inc.*, 3 BNA OSHC at 2002 (holding "that a rule of access based on reasonable predictability is more likely to further the purposes of the Act than is a rule requiring proof of actual exposure").

danger to employees.” *Boh Bros. Constr. Co., LLC*, 24 BNA OSHC 1067, 1085 (No. 09-1072, 2013) (citing *RGM Constr. Co.*, 17 BNA OSHC 1229, 1234 (No. 91-2107, 1995)). The zone of danger is determined by the hazard presented by the violative condition and is normally the area surrounding the violative condition that presents the danger to employees which the standard is intended to prevent. *Id.*, at 1234; *Gilles & Cotting, Inc.*, 3 BNA OSHC at 2003.

Respondent’s employees were directly exposed to a hazardous condition when hollow core slabs were set upon ledger angles that were improperly bolted into tie beams made up of cement that was not sufficiently cured, and cement bags were placed on the concrete hollow core slabs without first determining if the structure was capable of supporting the bags. (Tr. 40-41, 339-41; Exs. C-1, C-23, R-D). The Commission has long held that exposure is met by an employee’s mere access to a hazardous situation. *Id.* Here, it is undisputed Respondent’s employees had access to and installed hollow core slabs that had cement bags placed on top. (Tr. 40-41, 339-41; Exs. C-1, C-3, at A, C-23, R-D).

Further, it is undisputed that two of Respondent’s employees were severely injured when the worksite structure collapsed. (Tr. 40, 352-53). The victims’ actual exposure to the hazardous condition and resulting injuries also establishes exposure. *See S & G Packaging Co., LLC*, 19 BNA OSHC 1503, 1506 (No. 98-1107, 2001) (injuries establish actual exposure to the violative condition). There is no real dispute that employees were exposed to the hazardous conditions. (Sec’y Br. at 8).

The Court finds that Respondent’s employees were exposed to a hazardous condition.

D. Respondent Had Knowledge of the Hazard

To prove a violation the Secretary must show that the cited “employer either knew or, with the exercise of reasonable diligence, could have known of the presence of the violative

condition." *Pride Oil Well Serv.*, 15 BNA OSHC 1809, 1814 (No. 87-692, 1992). An employer is required to make a reasonable effort to anticipate the particular hazards to which its employees may be exposed during the course of their scheduled work. *Automatic Sprinkler Corp. of Am.*, 8 BNA OSHC 1384, 1387 (No. 76-5089, 1980). When determining whether an employer has been reasonably diligent, the Commission considers "several factors, including the employer's obligation to have adequate work rules and training programs, to adequately supervise employees, to anticipate hazards to which employees may be exposed, and to take measures to prevent the occurrence of violations." *Precision Concrete Constr.*, 19 BNA OSHC 1404, 1407 (No. 99-0707, 2001).

An employer's awareness of the violation may be shown through actual or constructive knowledge of said violation. It is not necessary to show the employer knew or understood the condition was hazardous. *Phoenix Roofing, Inc.*, 17 BNA OSHC 1076, 1079-1080 (No. 90-2148, 1995). "[An] employer's duty is to take *reasonably* diligent measures to inspect its worksite and discover hazardous conditions; so long as the employer does so, it is not in violation simply because it has not detected or become aware of every instance of a hazard." *Ragnar Benson, Inc.*, 18 BNA OSHC 1937, 1940 (No. 97-1676 1999). An employer is not automatically aware of a hazard in plain view, especially if not observed by a supervisory employee. *Cent. soya de P. R., Inc. v. Sec'y of Labor*, 653 F.2d 38, 39 (1st Cir. 1981); *Cranesville Block Co., Inc./Clark Div.*, No. 08-0316, 2012 WL 2365498, at *10 (OSHRC June 12, 2012) (consolidated). The actual or constructive knowledge of a foreman or supervisor can generally be imputed to the employer. *Tampa Shipyards*, 15 BNA OSHC 1533, 1537 (No. 86-368, 1992) (consolidated.) (citing *A.P. O'Horo Co.*, 14 BNA OSHC 2004, 2007 (No. 85-369, 1991); *N&N Contractors, Inc.*, 18 BNA OSHC 2121, 2123 (No. 96-0606, 2000) *aff'd*, 255 F.3d

122 (4th Cir. 2001);

The Secretary contends that the “evidence in this case establishes that Respondent had both actual and constructive knowledge of the hazards due to the company’s decision to not comply with the standard.” (Sec’y Br. at 9). The Court agrees that Respondent had actual knowledge of the crushing hazard associated with Citation 1, Item 1.⁵¹ One of Respondent’s owners, Mr. Lopez, knew, and therefore Respondent knew, it was placing construction loads; i.e. hollow core slabs and cement bags, on a concrete structure without first determining, based on information received from a qualified person in structural design, that the structure was capable of supporting the loads. Mr. Lopez proceeded with the installation of hollow core slabs starting on July 10, 2020, and he continued until he was done doing so on July 11, 2020 knowing he had not spoken with a qualified person in structural design that the concrete structure was capable of supporting the hollow core slabs and the cement bags. *See Payne & Howard Glass Co.*, No. 81-1466, 1983 WL 23745, at *7 (OSHR CALJ, May 19, 1983) (imputing knowledge to Respondent when Respondent’s foreman was at the worksite and all of the facts giving rise to the violative condition were readily discoverable by sight if due diligence had been exercised); *K M Eng’g Co.*, No. 15699, 1976 WL 22000, at *6 (OSHR CALJ, July 13, 1976) (finding that a defective and excessively worn boom block shackle on a sideboom tractor could have been discovered by Respondent in the exercise of due diligence).

When the Secretary shows that a supervisor had actual knowledge of the violation, such knowledge is generally imputed to the employer. *See Ga. Elec. Co. v. Marshall*, 595

⁵¹ Alternatively, to any extent required, the Court also finds that Respondent had constructive knowledge of the violative condition and hazard. The Court finds Respondent failed to exercise reasonable diligence to discover the violative condition and failed to take steps consistent with its authority to protect its employees.

F.2d 309, 321 (5th Cir.1979); *N.Y. State Elec. & Gas Corp.*, 88 F.3d 98, 105 (2d Cir. 1996); *Access Equip. Sys., Inc.*, 18 BNA OSHC 1718, 1726 (No.95-1449, 1999). *But see ComTran Grp., Inc. v. U.S. Dep't of Labor*, 722 F.3d 1304, 1316 (11th Cir. 2013) (“employer knowledge must be established, not vicariously through the violator’s knowledge, but by either the employer’s actual knowledge, or by constructive knowledge based on the fact that the employer could, under the circumstances of the case, foresee the unsafe conduct of the supervisor.”). As an owner and the person “in-charge” of Revolution working on the actual worksite, Mr. Lopez’s knowledge is imputed to Respondent. (Tr. 349-50, 357). *See Tampa Shipyards*, 15 BNA OSHC at 1537. Mr. Lopez knew his lack of qualifications in structural design, and he knew he had never spoken to a structural engineer regarding a project in his fifteen years of experience installing hollow-core slabs and working with cement. (Tr. 333, 351). It was readily foreseeable that he would not do so here at the worksite.

The Court finds that the evidence shows Respondent had actual knowledge of the violative conditions associated with Citation 1, Item 1. The Secretary has proven all elements of his *prima facie* case.

VII. Citation 1, Item 2

The Secretary alleges that Respondent violated 29 C.F.R. § 1926.704(a), which reads:

*Requirements for precast concrete.*⁵² Precast concrete wall units, structural framing, and tilt-up wall panels shall be adequately supported to prevent overturning and to prevent collapse until permanent connections are completed.

The Citation alleges:

On or about 07/11/2020, at 1 Sabre Lane, in the city of Naples, FL, employees were exposed to crushing hazards due to the hollow core slabs not being adequately supported where the ledger angles were not installed per engineer's plans compromising the structural integrity of the beams.

⁵² 29 C.F.R. § 1926.700(b)(5) defines “Precast concrete” as “concrete members (such as walls, panels, slabs, columns, and beams) which have been formed, cast, and cured prior to final placement in a structure.”

A. The Standard Applies

As previously addressed, the hazards associated with concrete and masonry construction operations and the construction services Respondent performed fall under the purview of Part 1926, Subpart Q, Section 700. The standard cited at Citation 1, Item 2 is 29 C.F.R. § 1926.704(a), Requirements for precast concrete. The standard requires precast concrete units and structural framing, including hollow core slabs, to be adequately supported to prevent the possibility of collapse until permanent connections have been made. It is undisputed that Respondent had been hired to install hollow core concrete slabs at the worksite. (Tr. 19-20, 36-37, 39, 90-91, 333-34; JPS, ¶ D, 1, at 4; Exs. C-25, R-D, at 6, ¶ A). Precast concrete hollow core slabs had just been installed at the worksite to construct the second-floor foundation of the structure at the time of the incident. (Tr. 35-36, 333-34). After Respondent installed the concrete hollow core slabs, Respondent's Mr. Lopez admits to directing cement bags be placed on top of the hollow core slabs. (Tr. 36, 40-41, 91-92, 339-40).

The Court finds that the precast concrete hollow core slabs were not adequately supported to prevent collapse when the accident occurred where ledger angles were not properly installed in tie beams whose structural integrity was compromised. The Court finds that the evidence establishes that the cited standard applies to Respondent. *See Dillingham Constr. Pac. Basin LTD*, 19 BNA OSHC 1069, 1070-71 (No. 99-0787, 2000) (ALJ) (29 C.F.R. § 1926.704(a) standard applies to prime contractor who was responsible for the installation of precast concrete members, i.e. beams, that fell because they were not adequately supported by welding the components together to prevent collapse.).

B. Respondent Failed to Comply with the Standard

On July 11, 2020, Respondent finished installing hollow core slabs on the concrete

structure at the worksite. (Tr. 36, 90-92). At the direction of Mr. Lopez, sixty 87-pound cement bags were then placed on top of the hollow core slabs. (Tr. 40, 339-40). The flooring then collapsed injuring two of Respondent's employees due to the hollow core slabs not being adequately supported. (Tr. 340-41; Exs. C-1, C-23, R-D).

CO Benson testified that the hollow core slabs fell due in part to the incorrect installation of the ledger angles. (Tr. 39-40). CO Benson and Dr. Ewing described a litany of irregularities that occurred when the ledger angles were installed at the worksite by contractors other than Respondent that reduced the strength of the connections between ledger angles and tie beams. (Tr. 182; *see* fn 6). CO Benson testified that prior to installation of the hollow core slabs, there was a design change⁵³ which resulted in the wedge anchors, which were to hold up the ledger angles, being installed prior to the concrete pour.⁵⁴ (Tr. 94-98, 102, 113-14, 184; *see* fn. 6, herein). Thereafter, while attempting to align the holes of the ledger angles with the wedge anchor bolts that were installed in the tie beams, it was discovered that the holes were not properly aligned. CO Benson further said, "so they [not Respondent] made some adjustments with the holes and used different washers that did not come with the bolts." The washers that they [not including Respondent] used were wrong for the bolts. (Tr. 68, 71, 94-98, 103, 182, 184; Ex. C-6, at B). A contractor, other than Respondent, also made unallowed enlarged slotted holes in the ledger angles. (*see* fn 21, herein). A contractor, other than Respondent, used incorrectly sized and irregular bolts to connect the ledger angles to the tie

⁵³ Respondent argues that BCB's Mr. Nash's determination to install the wedge anchors before the pour absolves Respondent of any liability. Respondent contends that OSHA should have cited BCB and/or Ott Welding because BCB was responsible for the design changes that allegedly created the hazard and Ott Welding because it was responsible for the installation of the wedge anchors. (Resp't Br. at 6-7). These arguments are without merit.

⁵⁴ CO Benson stated that installing the wedge anchor bolts in the tie beams prior to the pour did not allow the bolts to expand as the concrete cured around them, which can also lead to cracking in the surrounding concrete. (Tr. 96-97, 113-14).

beams. (Tr. 85-86; *see* fns 6, 19, herein). Ott Welding used expansion anchors and not mechanical screws as required. (*see* fn 6, herein). A contractor, other than Respondent, inadequately shored the ledger angles. (Tr. 193, 201-02, 218-19; Exs. C-1, C-2). All of these irregularities were visible to, and discoverable by, Respondent when Mr. Lopez walked around the worksite before beginning to install the hollow core slabs. (Tr. 193, 204, 210-14, 283, 302; Exs. C-1, at H, C-6, at B, C-16, at A).

CO Benson and Dr. Ewing also testified that the hollow core slabs fell due in part to the concrete in the tie beams and elsewhere not having fully cured. The concrete had only been poured on July 7, 2020, just a few days before the accident. (Tr. 215-17). All of these irregularities should have given Respondent pause to not proceed to install the hollow core slabs and place cement bags on top of them on July 11, 2020.

The Court finds that the precast concrete hollow core slabs were not adequately supported to prevent collapse where ledger angles were not properly installed in tie beams whose structural integrity was compromised.

The Commission has consistently held an employer whose own employees are exposed to a hazard, can be cited even if it did not create or control the hazard. *See Anning-Johnson Co.*, 4 BNA OSHC at 1198-99; *S. Pan Serv. v. DOL*, 685 F. App'x at 695; OSHA Instruction CPL 2-00.124, at ¶ XC2. As previously discussed, Respondent failed to exercise reasonable diligence to discover the condition of the ledger angles at the worksite and failed to take steps within its power to protect its employees.

The Court finds that 29 C.F.R. § 1926.704(a) applies and Respondent violated it.

C. Respondent Exposed its Own Employees to the Hazard at Citation 1, Item 2

The discussion and rationale previously addressed at Section VIC, herein, likewise

apply to employee exposure to a hazardous condition here with regard to Citation 1, Item 2 and is incorporated herein. Respondent's employees were directly exposed to hazardous conditions where precast concrete hollow core slabs were not adequately supported to prevent collapse where ledger angles were not properly installed in, and connected to, tie beams. (Tr. 40-41, 339-41; Exs. C-1 to C-23; R-D; *see* fns. 6, 19-21, 54, herein). The record shows that both Mr. Lopez and [redacted] were severely injured from the worksite collapse. (Tr. 40, 339-41, 352-53). Manolo was also working at the worksite when the accident occurred. These three Respondent employees were exposed to the hazardous conditions.

The Court finds that Respondent exposed three of its employees to the hazard and it was an Exposing Employer when it did so at the worksite on July 10-11, 2020.

D. Respondent Had Constructive Knowledge of the Hazard at Citation 1, Item 2

The Secretary contends that Respondent failed to exercise reasonable diligence to discover and to prevent violative conditions and that Respondent therefore had constructive knowledge of those conditions. An employer will be deemed to have constructive knowledge of a violation that is in plain view. *Kokosing Constr. Co.*, 17 BNA OSHC 1869, 1871 (No. 92-2596, 1996). The Tenth Circuit has held that constructive employer knowledge exists when “[a] diligent foreman checking the safety of his workers should have discovered” the hazard. *Austin Bldg. Co. v. Occupational Safety and Health Review Comm’n*, 647 F.2d 1063, 1068 (10th Cir. 1981). This consideration of “reasonable diligence” includes an examination of the employer’s “obligation to inspect the work area, to anticipate hazards to which employees may be exposed, and to take measures to prevent the occurrence.” *Frank Swidzinski Co.*, 9 BNA OSHC 1230, 1233 (No. 76-4627, 1981). Under Commission precedent, “reasonable steps to monitor compliance with safety requirements are part of an

effective safety program.” *Sw. Bell Tel. Co.*, 19 BNA OSHC 1097, 1099 (No. 98-1748, 2000), *aff’d without published opinion*, 277 F.3d 1374 (5th Cir. 2001). This “reasonable diligence” cannot simply rely on the assumption that an employee will alert the employer to hazards if he observes them. “Reasonable diligence implies effort, attention, and action; not mere reliance upon another to make violations known.” *N & N Contractors, Inc.*, 18 BNA OSHC at 2124.

Here, the floor structure collapsed after the weight of hollow core slabs and 60 cement bags were set upon ledger angles at the direction of Mr. Lopez that were not properly connected to tie beams.⁵⁵ The tie beams were made of cement that had not sufficiently cured to achieve required strength. Respondent takes issue with Dr. Ewing’s opinion that the comprehensive strength reports for the tie beams involved in the collapse indicated that the hollow core slabs should not have been placed on the ledger angles.⁵⁶ (Resp’t Reply Br. at 2). The concrete was poured for the tie beams in the area of the collapse on July 7, 2020; only 4 days before the failure occurred. The structural notes required the concrete to cure over a period of 28 days before loads are placed upon the structures made out of concrete. The strength requirement was prescribed as the 28-day minimum strength of 4,000 psi. Using both compressive strength reports, Dr. Ewing opined that the concrete had only reached 2,600 psi as of July 11, 2020. The Court finds that the

⁵⁵ In its Reply Brief, Respondent asserts that Mr. Lopez did not direct the cement bags be placed atop the hollow core slabs. Respondent argues such an accusation is “pure speculation, unsupported by any facts adduced at trial.” (Resp’t Reply Br. at 1). Respondent is wrong. Mr. Lopez testified:

Q. Okay. And who was it that called for that called for that cement to be brought up and placed on top of the hollow core?

A. I did.
(Tr. 339).

⁵⁶ According to the Secretary, Respondent had access to compressive strength reports, but did not access them. (Tr. 86-87, 92-93). Mr. Lopez testified that he never reviewed any compressive strength reports because it was not part of his job. (Tr. 92, 344-45). The Secretary claims, and the Court agrees, a review of the compressive strength reports would have shown the concrete was not at full strength at the time of the accident. (Tr. 86-87; Sec’y Br. at 4).

concrete in the area where the ledger angle connected to the tie beam attained a strength of only 2,600 psi as of the date and time of the accident and was not sufficiently cured to support the weight of hollow core slabs and 60 cement bags. (Exs. C-37, C-39). The structural notes state form work supporting structural concrete (beams and slabs) may not be removed until the concrete has attained 75% of the 28-day design minimum strength. Determination of the in place concrete strength shall be determined by laboratory testing of concrete cylinders. Here, the concrete cylinders showed that form work supporting the tie beams and hollow core slabs should not have been removed on or before July 11, 2020. The structural notes go on to say that “concrete shall be placed and cured to ACI standards and specifications.” Dr. Ewing opined that the concrete had not been sufficiently cured at the time of the accident and the evidence shows that Dr. Ewing’s opinion is well supported. The Court also finds that Dr. Ewing’s opinion that the ledger angles were improperly affixed to the tie beam that collapsed is also well supported and Respondent’s argument to the contrary is rejected.⁵⁷ (See Resp’t Reply Br. at 2).

Respondent exposed its employees to numerous violative conditions described above in Section VIIB that it did not create or control that relate to ledger angles that were not installed per engineer’s plans. Respondent failed to exercise reasonable diligence to discover these violative conditions and take steps within its power to protect its employees from these violative conditions. Ignorance is sometimes bliss, but not in this case, and not in the context of the Act. An employer attempting to re-direct its own legal obligations under the Act to protect its own workers onto other higher tier contractors does so at its own risk.⁵⁸

⁵⁷ The Court does agree with Respondent that Mr. Lopez would not have been able to personally determine precisely how far the wedge anchors were embedded in the tie beams on July 10, 2020 during his walk-around the worksite. (Resp’t Reply Br. at 8).

⁵⁸ Respondent’s arguments that BCB, Morca Construction, and Ott Welding created factors that contributed to the floor collapse does not absolve Respondent from its own responsibility and liability under the Act. (Resp’t Reply Br. at 3). The Court is finding Respondent violated the two standards based upon its own action or inaction. Respondent may have looked at a drawing for the installation of hollow core; but chose to ignore, not seek, or

Mr. Lopez testified that he counted the bolts in the ledger angles to ensure that they were all there before proceeding with the installation of the hollow core slabs. When doing so, with the exercise of due diligence, he should have seen that there were varying sizes and shapes of bolts and washers on the ledger angles. He should have seen that there were field cut slotted holes in the ledger angles that could cause inadequate load transfer. (Tr. 213). He should have seen that the ledger angles were not affixed flush and properly aligned with the tie beams. He should have seen that anchor bolts had been sawed off because they were sticking too far out.⁵⁹ (Tr. 283). Dr. Ewing testified that “[y]ou would be able to see that the bolts were not as described or required in the construction documents.” He said one would have seen threaded rods and a nut; and not a bolt as required by the construction drawings.⁶⁰ (Tr. 302-03). During OSHA’s investigation, Mr. Lopez told CO Benson that he does not check to see if the bolts or angle clips are installed correctly because he relies on the contractor who contracted with his company. (Ex. R-D, at 7, ¶F).

With shore posts still in place and the concrete not sufficiently cured, Mr. Lopez should have realized that all of these identifiable conditions weakened the effectiveness of the ledger angles to hold the hollow core slabs and cement bags. The Secretary argues the partially

consider practically everything else that was pertinent to the job. Respondent did not do what was “realistic” under the circumstances. *See S. Pan Serv. v. DOL*, 685 Fed. Appx. at 695. There were plenty of available indicia that should have given Respondent pause in starting to install hollow core when Mr. Lopez arrived at the worksite. The cement was relatively newly poured just 3 days before, shore poles were in place at many places, compressive strength reports should have been considered to ascertain what strength had been achieved by July 10, 2020, anchor bolts had been sawed off, washers varied, and holes cut into the ledger angles were visible. (Tr. 193, 204, 210-14, 283, 302; Exs. C-1, at H, C-6, at B, C-16, at A). Respondent ignored all of these.

⁵⁹ Although Mr. Lopez did not know how far the anchor bolts had been embedded into the tie beams, he should have seen enough indicators to prompt him to ask BCB and/or Ott Welding whether the anchor bolts had been adequately embedded. Instead of doing so, he ignored all the warning signs and did nothing. (Tr. 150, 284, 303-05).

⁶⁰ Dr. Ewing testified that contractors [including BCB and Ott Welding] are not able to deviate from the structural drawings just because they believe there’s a safety factor and change the design of the concrete. (Tr. 302).

stripped formwork indicated that the concrete had not reached the proper strength. (Sec'y Br. at 10-11). Dr. Ewing testified that partially stripped formwork would indicate the concrete had not reached its design strength. He said the removal of formwork only indicated that the concrete member itself can support its own weight. He also said that the Structural Notes do not say a contractor is ready to place loads on the concrete when the formwork is removed. (Tr. 218-19, 296; Exs. C-9, C-37). Mr. Lopez testified that he did not ask anyone why the formwork was still there and perceived it as normal to still be there. (Tr. 345-47).

Mr. Lopez admits he never reviewed any design plans or compressive strength reports, and only looked at blueprints of the hollow core slabs. (Tr. 344, 350). He further testified that he never asked to speak with a structural engineer because it was not his job. (Tr. 345-46). Mr. Lopez told CO Benson that it was not his responsibility to review any engineering plans. (Tr. 92). Mr. Lopez never asked to see any structural or design drawings of the concrete structure. (Tr. 344-46). Mr. Lopez did not take reasonable steps to determine if the design plans of the building had been changed. (Tr. 344-46). He testified that he did not ask anyone if the design plans had been changed because it was not his responsibility to. (Tr. 345-46).

The record reveals Respondent could have known of the presence of the violative conditions with the exercise of reasonable diligence. Mr. Lopez spent only about ten minutes walking around the site before commencing work. (Tr. 350-51). He never asked anyone, including BCB, whether the concrete had properly cured, had the proper compressive strength, or could handle the weight of the cement bags. (Tr. 345-47, 350-51; Ex. C-3, at A). He did not ask if anyone on the worksite had structural design knowledge. (Tr. 342-43, 345-46). Following through with any of the aforementioned actions would have been reasonable under the circumstances.

When the Secretary shows that a supervisor had constructive knowledge of the violation, such knowledge is generally imputed to the employer. *See Ga. Elec. Co. v. Marshall*, 595 F.2d at 321; *N.Y. State Elec. & Gas Corp.*, 88 F.3d at 105; *Access Equip. Sys., Inc.*, 18 BNA OSHC 1726. As an owner of Revolution working on the actual worksite, Mr. Lopez's constructive knowledge is imputed to Respondent. *See Tampa Shipyards*, 15 BNA OSHC at 1537.

The evidence shows that the structural integrity of the tie beams was compromised because the ledger angles were not installed per the engineer's plans. Respondent had constructive knowledge of the violative conditions that led to the failure of the ledger angles and the ensuing collapse of the hollow core slabs. Constructive knowledge of the violative condition is established. The Secretary has proven all elements of his *prima facie* case.

VIII. Citation 1, Items 1 and 2, were Properly Classified as Serious and the Penalty Assessed is Appropriate

Section 17(j) of the Act, 29 U.S.C. 666(j), requires the Commission to consider four factors in assessing penalties: the gravity of the violation and the employer's good faith, history, and size. The Act does not prescribe how or what weight to apply to the factors. *Atlas Roofing Co. v. OSHRC*, 518 F.2d 990, 1001 (5th Cir. 1975), *aff'd*, 430 U.S. 442 (1977) (OSHA penalties are meant to "inflect pocketbook deterrence"). Penalty assessment requires application of administrative discretion. *D.S. Grading Co., Inc. v. Sec'y of Labor*, 899 F.3d 1145, 1148 (11th Cir. 1990). The gravity of the violation is generally afforded greater weight in assessing an appropriate penalty. *Trinity Indus. Inc.*, 15 BNA OSHC 1481, 1489 (No. 88-2691, 1992). A violation's gravity is determined by weighing the number of employees exposed, the duration of their hazard exposure, preventative measures taken against injury, and the possibility that an injury would occur. *J. A. Jones Constr. Co.*, 15 BNA OSHC 2201, 2214

(No. 87-2059, 1993); *Kus-Tum Builders, Inc.*, 10 BNA OSHC 1128, 1132 (No. 76-2644, 1981).

Under section 17(k) of the Act, 29 U.S.C. § 666(k), a serious violation exists where there is substantial probability that death or serious harm could result from a condition that exists in a place of employment. The Secretary need not show there was a substantial probability an accident would occur, only that if an accident did occur, death or serious physical harm could result. *Wal-Mart Stores, Inc., v. Sec’y of Labor*, 406 F.3d 731, 735 (D.C. Cir. 2005); *Brock v. L.R. Willson & Sons, Inc.*, 773 F.2d 1377, 1388 (D.C. Cir. 1985); *Mosser Constr., Inc.*, 23 BNA OSHC 1044, 1046 (No. 08-0631, 2010).

In determining whether a hazard is “causing or likely to cause death or serious physical harm,” the Commission does not look to the likelihood of an accident or injury occurring, but, instead, looks to whether, if an accident occurs, the results are likely to cause death or serious harm. *See Babcock & Wilcox Co. v. OSHRC*, 622 F.2d 1160, 1164 (3d Cir. 1980) (Secretary must show that the hazard causes or is likely to cause death or serious injury to an employee); *Beverly Enters. Inc.*, 19 BNA OSHC 1161, 1188 (No. 91-3144, 2000) (consolidated) (Secretary must show that recognized hazard “causing” or is “likely to cause” “death or serious physical harm.”); *Waldon Healthcare Ctr.*, 16 BNA OSHC 1052, 1060 (No. 89-2804)((criteria “is not the likelihood of an accident or injury, but whether, if an accident occurs, the results are likely to cause death or serious harm.”)).

Here, the record shows that potentially hazardous conditions existed at the worksite and resulted in serious harm to two of Respondent’s employees. Respondent’s failure to comply with 29 C.F.R. § 1926.701(a) on July 11, 2020, at the worksite in Naples, Florida exposed employees to crushing hazards and serious physical injury. The evidence in this case establishes that there was a high probability of death or serious bodily harm if an accident

occurred. (Tr. 34-35, 39-41, 340-41, 352-53; Exs. C-1, C-23, R-D). Mr. Lopez testified both he and [redacted] required hospitalization and surgery for broken bones after the hollow core slabs fell on them. (Tr. 352-53). When asked why a serious citation was recommended, CO Benson said it was due to employees actually being injured and sustaining very serious injuries. (Tr. 40, 101). When asked what the most serious injury would be from a collapse of hollow core slabs, CO Benson said “[d]eath.” (Tr. 101).

The gravity-based penalty proposed for Citation 1, Item 1 was \$13,494. The violation was assigned a high severity, greater probability, and high gravity. (Tr. 101-02; Ex. R-D at 1). The item was assigned high severity because workers were exposed to crushing hazards that could cause irreversible injury and/or death. (Tr. 101-02; Ex. R-D at 1). It was assigned a greater probability. (Ex. R-D, at 1). The Secretary reduced the proposed gravity-based penalty by 70% due to the company’s size. (Tr. 101-02; Ex. R-D at 1). The Secretary did not give any reductions for good faith or history. (Tr. 100-02; Ex. R-D at 1). CO Benson testified that no good faith reduction was provided because Respondent lacked any safety and health program. (Tr. 101). The calculated penalty, taking into consideration the reduction for Respondent’s size, for Citation 1, Item 1 is \$4,048. (Tr. 100; Ex. R-D at 2). Respondent makes no argument for a penalty reduction.

The gravity-based penalty proposed for Citation 1, Item 2 was \$13,494. The violation was assigned a high severity, greater probability, and high gravity. The item was assigned high severity because workers were exposed to crushing hazards that could cause death or multiple fractures resulting in permanent disability. (Tr. 102; Ex. R-D at 5). The Secretary reduced the proposed gravity-based penalty by 70% due to Respondent only employing six people. (Tr. 88, 102; Ex. R-D at 5). The Secretary did not give any reductions for good faith or history due to

Respondent's lack of any safety and health program. (Tr. 100-02; Ex. R-D at 5). The calculated penalty for Citation 1, Item 2, after the reduction, is \$4,048. (Tr. 102; Ex. R-D at 6).

Respondent again made no argument for a penalty reduction.

The Court finds that the proposed penalties for both items are appropriate and assesses them as proposed.

IX. Respondent's Defenses Fail

Respondent pleaded numerous defenses in its Answer.⁶¹ Many of these defenses were not raised further at trial or in its Post-Trial and Reply Briefs. Affirmative defenses not raised at the trial are deemed waived and abandoned by Respondent. *Corbesco, Inc. v. Dole*, 926 F.2d 422, 429 (5th Cir. 1991) (Affirmative defenses not argued waived); *Ga.-Pac. Corp.*, 15 BNA OSHC 1127, 1130 (No. 89-2713, 1991) ("Commission declines to reach issues on which the aggrieved party indicates no interest."). The Court finds all of these defenses are rejected because they either lack merit or have been abandoned, or both.

X. Conclusion

Revolution was a creating and exposing employer as to Citation 1, Item 1. It was an exposing employer as to Citation 1, Item 2 as it failed to exercise reasonable diligence to discover the violative conditions and failed to take steps consistent with its authority to protect its employees. As discussed above, the elements of applicability, employee exposure, violation and knowledge of the cited conditions are proved as to both items.

⁶¹ Respondent asserted ten defenses, i.e., (1) standards do not apply, (2) Secretary cannot show Respondent failed to comply with standards, (3) isolated instance of employee misconduct of which Respondent had no knowledge or could not have reasonably foreseen, (4) lack of employer knowledge, (5) Respondent had work rules that were adequately communicated and Employer took steps to discover violations, (6) "Respondent did not participate in, have knowledge of or caused the alleged hazards," (7) Unpreventable or unforeseeable employee misconduct, (8) greater hazard defense, (9) compliance functionally impossible, and (10) means of compliance unfeasible. (Answer at 2-4).

XI. Findings of Fact and Conclusions of Law

All findings of fact and conclusions of law relevant and necessary to a determination of the contested issues have been made above. *See* Fed. R. Civ. P. 52(a). All proposed findings of fact and conclusions of law inconsistent with this decision are denied.

XII. Order

Based upon the foregoing findings of fact and conclusions of law, IT IS ORDERED that: Citation 1, Item 1, alleging a Serious violation of 29 C.F.R. § 1926.701(a), is AFFIRMED and the Court assesses a penalty in the amount of \$4,048; and IT IS FURTHER ORDERED that: Citation 1, Item 2, alleging a Serious violation of 29 C.F.R. § 1926.704(a), is AFFIRMED and the Court assesses a penalty in the amount of \$4,048. SO ORDERED.

/s/
The Honorable Dennis L. Phillips
U.S. OSHRC Judge

Dated: September 26, 2022
Washington, D.C.