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STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE DEPARTMENT OF LABOR AND INDUSTRY

John B. Lennes, Jr., Commissioner,
Department of Labor and Industry,
State of Minnesota,

Complainant,

FINDINGS OF FACT,
CONCLUSIONS OF LAW,
AND ORDER

Vs .

C. S. McCrossan Construction, Inc.,

Respondent.

The above-entitled matter came on for hearing before Administrative Law Judge Steve M. Mihalchick on January 21-23, 1992, at the Office of Administrative Hearings. John K. Lampe, Special Assistant Attorney General, 520 Lafayette Road, Suite 200, St. Paul, Minnesota 55155, appeared on behalf of Complainant, Commissioner of Labor and Industry (Complainant). Thomas J. Rooney, Rooney & Neilson, Ltd., 8 Pine Tree Drive, #120, Arden Hills, Minnesota 55112, appeared on behalf of Respondent, C. S. McCrossan Construction, Inc. (McCrossan). The record closed in this matter upon receipt of the final reply memorandum on March 16, 1992.

Notice is hereby given that pursuant to Minn. Stat. 182.664, subd. 5, this decision and order of the Administrative Law Judge may be appealed to the Minnesota Occupational Safety and Health Review Board by the employer, employee, or their authorized representatives, or any party within 30 days following service by mail of this decision and order. The Review Board has the authority to revise, confirm or reverse the decision and order of the Administrative Law Judge.

STATEMENT OF ISSUE\$

1. Whether McCrossan failed to provide adequate fall protection to its employees in violation of 29 CFR 1926.105(a) and 1926.28(a).

2. Whether McCrossan failed to provide adequate guardrails in violation of 29 CFR 1926.500(d)(1).

3. Whether McCrossan failed to provide adequate safety, training to its employees in violation of 29 CFR 1926.21(b).

4. If McCrossan did violate these standards, whether the penalties proposed by Complainant are appropriate or should be modified.

Based upon the record herein, the Administrative Law Judge makes the following:

FINDINGS OF FACT

1. At the beginning of the hearing, McCrossan withdrew its contest in Docket No. 2727. Three citations and penalties issued in Docket No. 2696 remain in dispute.

2. McCrossan is a construction contractor. During the summer of 1988, McCrossan was engaged in a highway bridge construction project in St. Paul building three bridges over Interstate 94 and a nearby box culvert, all known as Project Number 1250. One of the bridges was the Mounds Boulevard Bridge.

3. On September 13, 1988, Scott Peterson, a McCrossan laborer, while carrying a sheet of plywood on the deck of the bridge, fell through an opening in the deck to a paved portion of the highway median 27 feet below and was severely injured. He died September 15, 1988, from the injuries received in the fall,

4. As a result of the fall, an OSHA inspection of the Mounds Boulevard Bridge was conducted on September 15 and 16, 1988, by OSHA Investigator Mitz DelCaro. As a result of the inspection, three citations and penalties were issued that are at issue in this proceeding. McCrossan was charged with a repeat violation for failure to provide adequate fall protection for its employees in violation of 29 CFR 1926.28(a). Prior to the hearing, Complainant was allowed to amend the citation to also allege that the conditions also constituted a violation of 29 CFR 1926.105(a). Complainant has proposed a penalty of \$10,000 for this violation. McCrossan was also charged with failing to provide adequate guardrails on the Mounds Boulevard Bridge on September 15 and 16, 1988, in violation of 29 CFR 1926.500(d)(1), for which Complainant has proposed a penalty of \$1,500. Finally, McCrossan was charged with failing to adequately instruct or train its employees in the recognition and avoidance of unsafe conditions at the Mounds Boulevard Bridge worksite in violation of 29 CFR 1926.21(b)(2), for which Complainant proposed another penalty of \$1,500.

5. The Mounds Boulevard Bridge is 246 feet long along its center line and 68 feet 3 inches wide including overhangs that extend beyond the girders. It is skewed at a sharp angle. See Diagram 1. It lies generally north and south, with concrete abutments at each end and a center pier located a few feet south of the center of the bridge span. The bridge is constructed of 7 girders, each of which is actually 3 steel girders spliced together, running from abutment to abutment. The I-beam shaped girders are equally spaced at 10 feet 4 inches on center. The top flange of the girders varies from 16 inches to 20 inches wide, with the widest portion being at the center pier. Therefore, the space between the girders varies from 9 feet 0 inches at the ends down to 8 feet 8 inches near the center pier. A concrete deck is constructed on top of the girders. The deck of the bridge reaches heights of 27 feet or more above the interstate highway and median below. Traffic on the interstate continued while the bridge was under construction.

6. Construction of the concrete deck involves building a plywood deck over the girders to serve as the base of a form for the concrete. Wooden 2 x 12 joists are hung between the girders on "Borg hangers", which hang on

the flange of the girders. The joists are spaced at 2-foot intervals along the girders and are covered with 4 x 8 sheets of 3/4 inch plywood and filler pieces where necessary. After the plywood deck is complete and other portions of the form are added, reinforcement bars are installed and the concrete is poured. After the concrete has cured, the joists and plywood decking are removed from underneath the bridge.

7. It is the general practice of McCrossan to install static lines on each of the girders for its workers to "tie off" to until the plywood decking is complete. A static line is a steel cable strung between static line posts which are clamped to the girder flange every 25 feet or so. Workers tie off by hooking their lanyards to the static line; the 6-foot lanyards are attached to the safety belts they wear. McCrossan generally attaches the static lines to the girders after the girders have been installed. A better practice is to attach them before the girders are raised into place.

8. On September 1, 1988, an OSHA inspection was conducted at the Mounds Boulevard Bridge worksite while a McCrossan subcontractor, Morrow General Construction, Inc., was completing installation of the steel girders. At that point in time, the subcontractor's employees were working on the structural steel without any fall protection. The subcontractor was issued citations for failure to enforce the use of safety belts and lifelines while working on the structural steel and in baskets of aerial lifts. A McCrossan superintendent, Tom Jerde, was present at the opening and closing conferences when the violations were discussed.

9. On September 2, 1988, the Mounds Boulevard Bridge worksite was visited by a Loss Prevention Consultant from Liberty Mutual, McCrossan's insurer. At that point, he noted that four of the seven static line systems had been set up and that the subcontractor employees were still working on the steel beams without static lines, using no fall protection. He also noted fall hazards at the ends of the bridge at the abutments where no fall protection was provided. The consultant recommended that the remaining static lines be installed on the girders and that fall protection at the abutments be provided by filling in the abutments. When the consultant revisited the site

on September 9, 1988, he found that all seven static lines were in place and were being used.

10. Once the static lines are set up, McCrossan employees install and adjust the joists. This work is done by carpenters and laborers and involves two people kneeling on adjacent girders putting the Borg hangers in place, then sliding a joist into the two hangers. They generally work a considerable distance across the bridge setting the joists, then come back and adjust the joists to the specified height by turning screws on the bottom of the Borg hangers. This requires the workers to kneel or lie on the girders. While setting and adjusting the joists, the workers usually tie off to the nearby static line.

11. After a number of joists have been set and adjusted, plywood sheets are placed over them and nailed down. This operation involves a laborer carrying sheets of plywood to the proper location where they are nailed in place by one or two carpenters. In some situations the laborer lays the plywood sheets roughly in place, in others the laborer hands the plywood sheet to the carpenter or carpenters who lay it on top of the joists. In any event, the carpenters put the sheet in its exact place and nail it down. The plywood

sheets are nailed in all four corners. Some carpenters also nail them at each edge over the three middle joists, while others only nail the edges over the joist that passes through the middle of the plywood sheet. As the sheets are nailed to the joists, they form a floor that can be walked on, and upon which equipment and materials can be placed. In the case of the Mounds Boulevard Bridge, with the space between the girders being nine feet or slightly less, two full sheets of plywood could be placed on the joists, leaving a narrow unfinished strip of one foot or less to be completed at a later point. It is McCrossan's practice to deck from one end of the bridge to the other, generally from the center to the outer edge. It is also its practice to drop the static lines as the decking on both sides of a girder is completed up to each static line post. This allows the workers to move around more easily on the completed decking, especially the laborers carrying the sheets of plywood. McCrossan generally does not take down the static lines located on the outside or fascia girders as the decking is completed. On the fascia girders it is necessary to use brackets to construct an overhang that extends, in this case, about three feet beyond the girders. A 2 x 4 framework is built upon the brackets, which is then surfaced with plywood. When that is complete, a guardrail with a top board and midrail is constructed at the outside edges of the bridge and left in place until the bridge is completed.

12. McCrossan began decking the Mounds Boulevard Bridge on September 7, 1988. By the afternoon of September 13, 1988, about three-quarters of the bridge had been decked -- all of the east side and the south half of the west side. See Diagram 1. Peterson had been working with William Weber, a carpenter, that day installing and grading joists in the third bay from the west. Weber was tied off to a static line while doing so, and Peterson probably was too. Later, they began decking the third bay, working from the south end toward the center pier. Peterson was obtaining sheets of plywood from a stockpile on the south end of the bridge and bringing them to Weber one sheet at a time. Weber put the sheets in place on the joists and tacked them down. Weber worked in a pattern of placing a 4 x 8 sheet along the east-most girder, nailing it down at the corners and on the center joist and then placing a 4 x 8 sheet to the west of that sheet and nailing it down. He would then move up the girder and repeat the pattern as shown as letters A, B, C, and D in Diagram 2. During this operation, Peterson was walking across completed deck carrying plywood sheets and was not tied off to any static line. Weber was probably not tied off because he would have had to unhook from the static line on the eastern girder and rehook to the static line on the western girder in order to reach the west-most sheets of plywood.

13. Some time after 3:00 p.m. that day, the bridge foreman, John Sutton, sent Weber to work on the overhang brackets with another carpenter. Two other

carpenters, Paul Stavne and Mike Mullen, were instructed to go help Peterson finish the decking of the small remaining area where the joists had been installed. Peterson told Stavne and Mullen that he would lay the plywood down and they could nail it.

14. Peterson was one or two sheets ahead of Stavne and Mullen and had placed sheets no. 1, 2 and perhaps 3 in Diagram 2 for them to nail down. At that point in time, Peterson was getting the plywood sheets from a plywood stack located in the second bay just to the west of the area they were working. The decking in the second bay had been completed to somewhere north of the center pier. Stavne nailed the north end of sheet no. 1 while Mullen

nailed the south end. They then moved up and nailed sheet 2 and then sheet 3. Stavne was tied off to the static line behind him on the girder to the east. Mullen was not tied off. Peterson was not tied off while carrying the plywood sheets.

15. Peterson placed the plywood sheet at the location marked no. 4 on Diagram 2, about the time that Stavne and Mullen were nailing down sheet no. 2, and by carrying the plywood sheet from the stockpile around the west static line, across the sheets that had been nailed down to the south (D and C), and onto sheet no. 1. About the time Stavne and Mullen moved up to sheet no. 3 to nail it down, Peterson placed a sheet at the location marked no. 5, again by walking around the south end and probably across sheets 1 and 2.

16. As Stavne and Mullen were nailing sheet no. 3, Peterson was carrying a sheet from the stack to be placed at location no. 6. As he came around the south end of the west static line, he apparently stepped on sheet no. 4, which had not yet been nailed down. No one saw exactly what happened, but it appears most likely that the south end of sheet no. 4 went down under Peterson's weight and the north end came up. The second joist under the sheet slipped to the north on the Borg hangers a few inches and Peterson and the plywood sheet he stepped on fell through the opening 27 feet to the ground below. Peterson normally carried the plywood sheets on his back, holding them at the sides with his arms stretched down and out. The board he was carrying landed at an angle over the opening and his hardhat landed on the plywood sheet to the south, covered by the sheet he had been carrying. See Diagram 3. At the time of the accident, the static lines had been dropped to the approximate positions shown in Diagrams 2 and 3, which was somewhat beyond the area where the decking had been completed.

17. McCrossan did not require Peterson or any other laborer, carpenter or other worker to tie off to a static line while working adjacent to the remaining openings in the bridge decking or along the edges, nor did it provide any other form of fall protection for its employees. In Stavne's words, "when you are working near the edge of the plywood, you have to watch your own moves and take care of your own self out there." It would have been possible for the plywood stack to be placed and for the workflow to be designed so that Peterson could have remained tied off while delivering the plywood sheets to the carpenters or putting them in place to be nailed down.

18. McCrossan had been cited on June 17, 1988, for violating 29 CFR 1926.28(a) by failing to require safety belts and lanyards to be used by workers on the University Avenue bridge, another bridge in Project 1250. On

that occasion, McCrossan employees were engaged in decking that bridge. Joists had been placed across most of the bridge except for one bay at the edge. Plywood sheets had been laid approximately three-fourths the length of the bridge. The girders on that bridge were approximately six feet apart and the 4 x 8 plywood sheets were placed down the middle of the bays, leaving approximately one-foot spaces on either side of the plywood sheets. No static lines were in place, nor were there any guardrails or any other form of fall protection provided. The static lines had been in place on the girders earlier but had been taken down far too soon. Superintendent Jerde was present during that OSHA inspection. The OSHA inspector required that static lines be set up and used before he left the worksite.

19. During the OSHA inspection of September 15 and 16, 1988, decking of the Mounds Boulevard Bridge was mostly complete. Only the ends of the bridge at the abutments and portions of the overhangs needed to be completed. Most of the static lines had been taken down. The only ones remaining were those on the outside fascia girders and at the far north end where some static lines remained along the undecked, irregular-shaped bays next to the north abutment. A wooden guardrail existed along the north abutment that consisted only of a top rail. While static lines existed along the east and west fascia girders, no employees were tied off to them. Several employees were observed working near the north end and east and west sides of the bridge who were exposed to a fall hazardous of distances from 16 to 27 feet without being tied off to the static lines.

20. It was McCrossan's practice to leave the static lines on the fascia girders in place until the overhang brackets were installed and decked. As the decking proceeded northward in the case of the Mounds Boulevard Bridge, a wooden guardrail would be constructed at the outside edge and the static line dropped. On the morning of September 15, 1988, when the OSHA inspector arrived, only the beginnings of a guardrail had been installed. This consisted only of several vertical wooden posts and a single top rail extending a short distance up the bridge. However, the static line on the fascia girder had been taken down to the point where the top rail was complete. Since the employees were not tying off to the static line while working near the edges of the bridge, they were, in effect, using it as a guardrail or warning device to alert them to the nearby edge. However, a static line is inadequate for that purpose, as is the partial guardrail with only a top rail installed.

21. McCrossan provided virtually no safety training to its employees. No training was provided regarding protection from fall hazards, the use of safety belts, lanyards and static lines, the purposes of and differences between the static line systems and guardrails, or in methods of performing the decking operation to minimize fall exposure.

22. During the building of the bridges in Project 1250, McCrossan had used the services of Richard Pappin, a safety consultant from the Associated General Contractors of Minnesota. Pappin inspected the bridges about weekly. He had observed a number of instances involving the failure to use protective equipment or to provide adequate guardrails or other fall protection and normally drew those matters to the attention of the foreman or superintendent to be corrected immediately. On one occasion, June 14, 1988, he held a safety meeting with the bridge decking crew that had been working on the Seventh Street bridge at which he covered general safety attitude, lanyard and body belt safety, slips and falls, and personal protection. Other than this meeting, McCrossan provided no training sessions for its employees.

23. McCrossan has a written safety policy that it was strongly urged to adopt by one of its insurers. McCrossan also has a Safety Officer. The safety policy was distributed to the superintendents who, according to the policy, were to assist the Safety Officer in promoting and enforcing the safety program. A copy of McCrossan's general safety rules, which were attached to the policy, were to be distributed to all employees. McCrossan personnel were not particularly aware of the contents of the safety policy

and, in a few instances, did not agree with its provisions. The policy placed the bulk of the safety responsibility upon the superintendents and, among

other things, required superintendents to schedule and conduct weekly ten-minute safety programs with all foremen and construction site employees. The general safety rules attached to the policy were for operating engineers, those people that operate heavy equipment. However, none of the rules were addressed to bridge construction or, in particular, the fall hazards associated with bridge construction. In actuality, McCrossan's written safety policy was not followed. No regular safety training was provided to the employees except in the form of on-the-spot corrections given by the safety consultants from the AGC and insurance company. Otherwise, the employees were left to look out for themselves.

24. Diagrams 1, 2 and 3 attached hereto constitute additional findings.

Based upon the foregoing Findings of Fact, the Administrative Law Judge makes the following:

CONCLUSIONS

1. The Administrative Law Judge has jurisdiction in this matter pursuant to Minn. Stat. 182.661, subd. 3, and 14.50.

2. McCrossan is an employer within the meaning of Minn. Stat. 182.651, subd. 7.

3. McCrossan violated 29 CFR 1926.105(a) and 1926.28(a) on September 13, 1988, when it failed to provide adequate fall protection for its employees decking the Mounds Boulevard Bridge. McCrossan failed to require Scott Peterson and Mike Mullen to tie off to the static lines while working near fall hazards of more than 25 feet above the ground. Such a situation constitutes a violation of 1926.105(a) because none of the alternative safety devices listed in that standard were being used. *Cleveland Consolidated, Inc. v. OSHRC*, 649 F.2d 1160 (5th Cir. 1981). It also constitutes a violation of 1926.28(a) which makes employers responsible for requiring employees to wear personal protective equipment in all operations where there is an exposure to hazardous conditions or some other standard that requires the use of protective equipment. A 27-foot fall hazard is a recognized hazardous condition.

4. McCrossan's failure to provide adequate fall protection to its employees or to require the use of personal protective equipment by tying off to a static line on September 13, 1988, contributed to the death of Scott Peterson and was a serious violation under Minn. Stat. 182.651, subd. 12

(1988). It is also a repeat violation. If Peterson had been tied off to the static line or had McCrossan provided other fall protection for him, it is unlikely that he would have fallen all the way to the pavement 27 feet below and received the injuries that caused his death. The violation is a repeat violation because McCrossan had been cited once before on the same project at the University Avenue bridge for violating 1926.28(a). That citation involved essentially the same violation -- failure to require employees to tie off to static lines while decking a bridge.

5. Complainant's proposed penalty of \$10,000 for the foregoing violation is appropriate under the facts of this case and should be affirmed. Under Minn. Stat. 182.666, subd. 1 (1988), a fine of up to \$20,000 could be assessed for repeat violations. Under Minn. Stat. 182.666, subd. 2 (1988),

a fine of \$2,000 could be assessed for each serious violation, except that a violation that caused or contributed to the death of an employee could result in a fine of up to \$10,000. In assessing the proposed fine, Complainant gave due consideration to the size of the business of the employer, the gravity of the violation, the good faith of the employer, and the history of previous violations. Because McCrossan is a large employer, because the violation was grave in terms of the number of employees exposed to the hazard throughout the workday, because it was a repeat violation and one that had been pointed out several times by McCrossan's own consultants and because McCrossan did not require any employees to tie off to static lines when working near fall hazards, the maximum penalty for a serious violation contributing to a death is appropriate.

6. McCrossan violated 29 CFR 1926.500(d)(1) by failing to erect adequate guardrails on the Mounds Boulevard Bridge on September 15 and 16, 1988. Under that standard, McCrossan was to guard any open-sided floor six feet or more above an adjacent floor or the ground with a standard guardrail or its equivalent. After the bridge was decked, it was essentially an open sided floor subject to the requirements of 1926.500(d)(1). At the time the OSHA inspector arrived on the morning of September 15, 1988, the only protection provided by McCrossan was the static lines installed on the fascia girders and the bare beginnings of a guardrail system at one end of the east side. The static lines were being used as a guardrail because no employees were tying off to them. Static lines do not constitute a standard guardrail, nor does a guardrail that consists only of some up-right posts with a partial top rail installed. The fall hazard was over six feet and several employees were exposed to the hazard.

7. The failure of McCrossan to provide adequate guardrailing on the Mounds Boulevard Bridge on September 15 and 16, 1988, constitutes a serious violation under Minn. Stat. 182.651, subd. 12, in that its violation creates a substantial probability that death or serious physical harm could result from the condition.

8. The penalty of \$1,500 proposed by the Complainant for McCrossan's failure to provide adequate guardrailing is appropriate under the facts and circumstances of this case and should be affirmed. Complainant gave due consideration in proposing the fine to the size of the business of the employer, the gravity of the violation, the good faith of the employer, and the history of previous violations. Two thousand dollars was the maximum penalty allowed for a serious violation that does not contribute to the death of an employee under Minn. Stat. 182.666, subd. 2 (1988). From this unadjusted penalty, Complainant allowed a 25 percent credit for good faith and history. McCrossan had not been cited for this particular violation previously and was in the process of constructing a guardrail as it normally does on its bridges. Thus, it did act in some good faith. However, McCrossan's practice of not requiring its employees to tie off to the static lines until the guardrail is complete and, in several cases, of taking down the static lines prematurely, still renders this an unsafe practice and serious violation. A penalty of \$1,500 is appropriate.

9. McCrossan failed to establish and supervise programs for the training of employees in the recognition, avoidance, and prevention of unsafe conditions in violation of 29 CFR 1926.21(b)(2). McCrossan gave no

organized safety training to its employees. It never gave its carpenters and laborers safety training on decking techniques and fall protection. Each employee was left to recognize the hazards and provide for his or her own safety. McCrossan's superintendent and foremen, for the most part, only took action when unsafe conditions were pointed out to them by safety consultants and OSHA investigators.

10. McCrossan's failure to adequately train its employees regarding safety matters was a serious violation under Minn. Stat. 182.651, subd. 12 (1988), in that it caused several employees to be exposed to fall hazards that could cause serious injury or death.

11. Complainant's proposed penalty of \$1,500 for McCrossan's failure to provide safety training is appropriate under the facts and circumstances of this case and should be affirmed. Again, the maximum penalty is \$2,000 and a 25 percent credit was given for good faith and history.

Based upon the foregoing Conclusions of Law, the Administrative Law Judge makes the following:

ORDER

1. The citations and notifications of penalties issued by Complainant on October 12, 1988, to McCrossan, as amended, are affirmed.

2. McCrossan shall pay the total penalties of \$13,000 to Complainant forthwith. Pursuant to Minn. Stat. 182.661, subd. 3 (1991), this Order constitutes the final order of the Commissioner of Labor and Industry. Under Minn. Stat. 182.666, subd. 7, unpaid fines shall be increased by 25 percent if not paid within 60 days after the fine becomes a final order and shall then accrue an additional penalty of 10 percent per month, compounded monthly, until the fine is paid in full.

Dated this day of April, 1992.

STEVE M. MIHALCHICK
Administrative Law Judge

Recorded: Taped, not transcribed, 16 tapes.

