This case comes to the commission on the department of labor's petition for discretionary review \(^1\) (PDR). After granting review, the commission asked for briefs.

KRS 336.015 (1) charges the commissioner of labor with the enforcement of the Kentucky occupational safety and health act. KRS chapter 338. When a compliance officer conducts an inspection of an employer and discovers violations, the executive director of the office of occupational safety and health compliance issues citations. KRS 338.141 (1). If the cited employer notifies the executive director of his intent to challenge a citation, the Kentucky occupational safety and health review commission "shall afford an opportunity for a hearing." KRS 338.141 (3).

The Kentucky General Assembly created the review commission and authorized it to "hear and rule on appeals from citations." KRS 338.071 (4). The first step in this

\(^1\) 803 KAR 50:010, sections 47 (3) and 48 (1).
process is a hearing on the merits. A party aggrieved by a hearing officer’s recommended order may file a petition for discretionary review; the review commission may grant the PDR, deny the PDR or elect to call the case for review on its own motion. Section 47 (3), 803 KAR 50:010. When the commission takes a case on review, it may make its own findings of fact and conclusions of law. In *Brennan, Secretary of Labor v OSHRC and Interstate Glass*, 2 487 F2d 438, 441 (CA8 1973), CCH OSHD 16,799, page 21,538, BNA 1 OSHC 1372, the eighth circuit said when the commission hears a case it does so "de novo." See also *Accu-Namics, Inc v OSHRC*, 515 F2d 828, 833 (CA5 1975), CCH OSHD 19,802, page 23,611, BNA 3 OSHC 1299.

Compliance Officer (CO) Seth Bendorf on May 25, 2005 inspected a construction site where general contractor Quality Paving and sub-contractor Corrie Construction were installing a drop box inlet (TE I 71 and 132) in the median of the Western Kentucky Parkway near Elizabethtown. TE I 18 and 123. As he began his inspection, the CO found two Corrie employees working in the excavation which had been dug for the drop box inlet; these employees were under the control of Qualified Paving. TE I 132. After Compliance Officer Bendorf completed his inspection, the Kentucky Labor Cabinet issued identical, serious citations to Quality Paving and Corrie. The two cases were consolidated for a hearing on the merits. 803 KAR 50:010, section 10.

Item 1 charged the two employers with not performing daily inspections of excavations as required by 29 CFR 1926.651 (k) (1). Item 2 said two employees worked

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2 In *Kentucky Labor Cabinet v Graham*, Ky, 43 SW3d 247, 253 (2001), the supreme court said because Kentucky's occupational safety and health law is patterned after the federal, it should be interpreted consistently with the federal act.
3 Transcript of the evidence, volume I, page 71 (TE I 71).
4 Exhibit 1 is a copy of the citations issued to Qualified Paving. Exhibit 2 is Corrie's citations.
5 The federal excavation standards are adopted in Kentucky by 803 KAR 2:415.
in the excavation "with no cave-in protection," a violation of 29 CFR 1926.652 (a) (1).
Then item 3 said "No stairway or ladder was provided for two employees working in an
excavation up to 7 feet deep..." 29 CFR 1926.1051 (a).\(^6\) After a trial on the merits, the
hearing officer dismissed all citations issued against Qualified Paving and Corrie.
Recommended order, page 11 (RO 11). Labor then filed its PDR with this review
commission.

Complainant department of labor has the burden of proof in these cases. 803
KAR 50:010, section 43 (1). To prove a violation, labor must show the standard applies,
the terms of the standard were not met, one or more of the employer's employees were
exposed to the cited condition and the employer knew, or with the exercise of reasonable
diligence, could have known of the violative condition. Ormet Corporation,\(^7\) a federal
review commission decision, CCH OSHD 29,254, p 39,199, BNA 14 OSHC 2134, 2135.
Because the two employees working in the excavation could easily be seen by their
supervisors, the department of labor proved the two employers, Qualified Paving and
Corrie, could have known of the violative conditions described by the citations. For us,
then, the issue on discretionary review is whether the cited standards applied and whether
their terms were met.

Item 1

Citation 1, item 1 says a competent person did not make daily inspections "for
evidence of a situation that could result in possible cave ins..." Then the citation says
"An inspection shall be conducted by the competent person prior to the start of work and

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\(^6\) Incorporated by reference in Kentucky by 803 KAR 2:423, Section 1 (1).
\(^7\) Go to oshrc.gov. Click on decisions and select 1991 for final commission decisions.
as needed throughout the shift." For item 1, the department of labor proposed a penalty of $2,500\textsuperscript{8} for Qualified Paving and $1,500\textsuperscript{9} for Corrie.

Here is the cited standard:

\begin{quote}
1926.651 (k) Inspections. (1) Daily inspections of excavations...and protective systems shall be made by a competent person for evidence of...failure of protective systems...or other hazardous conditions. Any inspection shall be conducted by the competent person prior to the start of work and as needed throughout the shift...These inspections are only required when employee exposure can be reasonably anticipated. (emphasis added)
\end{quote}

As the regulation states, an employer must make daily inspections to look for "evidence of...failure of protective systems [shoring or benching]...or other hazardous conditions."

The standard applies.

On the issue of what training suffices to make an employee a competent person

Compliance Officer Bendorf said:

\begin{quote}
Truthfully, the inspection was the main area that I focused on. Employees stated to me that they have been trained in excavations. I typically will take somebody at their word for it.
\end{quote}

\textit{TE I 132.}

Labor accepted the word of employees they were properly trained, here as persons competent to perform daily inspections. Our hearing officer found Robert Campbell, Qualified Paving's foreman, was a competent person and we agree. RO 3-4 and 10. With

\textsuperscript{8} Qualified's penalty calculation: High severity rating (high, medium and low, the choices) and greater probability (greater or lesser) for a gravity based penalty of $5,000. Forty percent for size of the business (number of employees, 30 employees); ten percent history credit (no priors for three years, the maximum allowed); and no good faith credit (25%, 15% or 0) because of the high serious/greater probability of an injury characterization. Otherwise Qualified would have gotten 15% for good faith. TE I 140-141. $5,000 with 50\% credit = a proposed penalty of $2,500. See KRS 338.991 (2) and 803 KAR 2:115, section 1 (2).

\textsuperscript{9} Corrie: High serious/greater probability of an injury for a gravity based penalty of $5,000. Sixty percent credit for size, they had ten employees. Ten percent for history (no priors) and no good faith (otherwise 15\% credit for good faith would have been allowed except for the high serious/greater probability characterization). $5,000 with 70\% credit = a proposed penalty of $1,500. TE I 151-152.
a competent person present at the job site, the issue is what sort of daily inspections must be made as that is the thrust of the citation.

As permitted by our rules, 803 KAR 50:010, section 36 (9), the hearing officer asked the following question:

HEARING OFFICER: why is it you felt you found no inspection or improper inspection rather than the lack of a competent person performing that duty?
MR. BENDORF [the CO]: I asked the 2 people who were identified as competent persons if they had done the inspections or if they had classified the soil. They stated they had not. That they had looked at the excavation. The inspections detail that visual is not sufficient. You need to do a visual and a manual test.

TE I 139. (emphasis added)

A competent person knows how to do the visual and manual tests\(^\text{10}\) for the condition of the soil according to R. S. Deering, Inc, a federal ALJ decision, CCH OSHD 29,509. But the standard by its very terms does not require these tests to be performed every day. In fact the standard does not refer to either test.

While the CO said the two competent persons had to do a visual and a manual test, he did not say whether those tests must be performed each day. But the citation charged the employers with not doing "Daily inspections." When the hearing officer asked the CO why he cited the two employers, he said they needed to do the tests, and

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\(^{10}\) Visual test: large grains like sand and gravel are not cohesive, fine grain soil like clay is small grained and is more cohesive. Large clumps of excavated soil is an indication of cohesiveness; soil that breaks down when excavated is not cohesive. Look for water which means the soil is not cohesive. Look for soil breaking off a vertical wall - spalling they call it; that means the soil is not cohesive.

Manual test: roll a damp ball of soil to form a long thread 1/8 inch in diameter; cohesive material can be so rolled. If the soil is dry and crumbles on its own, it is granular and not cohesive; if the soil when dug does not break down into smaller clumps, the soil is un fissured.

Type A soil can only be penetrated with a thumb with difficulty. Type C soil can be easily penetrated several inches with a thumb.

See Appendix A immediately following 29 CFR 1926.652 (g) (2): Subpart P - Soil Classification.
presumably they had not on the day of the inspection. Case law, however, does not require that the visual and manual tests be performed daily:

The Secretary's argument that every daily inspection must include a visual test and a manual test is rejected. *Garney Construction, Inc.*,11 a federal ALJ order, CCH OSHD 32,670, page 51,438.

In *Garney*, the judge went on to say visual and manual tests are required initially when an excavation was dug and when there was a change, such as water in the excavation or a partial cave in or spalling.12 Page 51,438.

Daily inspections are required whether changes occur or do not occur. They are done to determine whether there is evidence of a situation that could result in a hazardous condition. As they relate to soil classification, such inspections are done to determine whether there have been any changes in the properties, factors or conditions...If upon initial [daily] inspection, a determination is made that such changes have occurred, the competent person must then perform the...visual and manual tests to reclassify the soil as needed. *Garney* at page 51,438.

Our hearing officer's recommended order dismissing citation 1, item 1 for both parties was correct. Compliance Officer Bendorf in support of the citation charging the employers with not performing daily inspections said he cited the employers because their competent persons performed a visual but not a manual test. There is no requirement for the employers to perform visual and manual tests daily. We affirm the hearing officer's recommended order dismissing item 1. KRS 338.081 (3).

The Exhibits

During its review of this case, the commission found the following exhibits particularly important to its decision: exhibit 3, a video of the work site taken by the compliance officer as he first arrived at the scene (TE I 129); photographic exhibits 4a

11 Go to oshrc.gov. Click on decisions and select 2003 for final ALJ decisions.
through 4i, taken by the CO; exhibit 5, the compliance officer's drawing of the excavation; and exhibit 12, a drawing of the work site prepared by civil engineer Doug Smith who appeared as an expert witness for respondent employers.

The photographs, the two drawings and the video introduced by the department of labor in this case can be used as demonstrative evidence, that is as a graphic portrayal of the witness's testimony, or as real evidence. Gosser v Commonwealth, Ky, 31 SW3d 897, 901-902 (2000).

Exhibits 5 and 12, the two drawings, are drawn from the same perspective: both have arrows, rendered in blue ink, pointing to the right edge of the document. These arrows point to the North. A person looking at the two drawings has the West bound lane of the parkway to his right and the East bound lane to his left.

Exhibit 5 shows a storm drain, a square box drawn in black, in the middle of the excavation. This storm drain shows a "pipe," rendered in blue ink, leading away from the North side of the storm drain. We infer the box marked "storm drain" is the drop box inlet. An examination of the square box in exhibit 5 reveals only one pipe leading away from the box and toward the North. Photographic exhibits 4b, 4c and 4h show a pipe leading away from the box and pointing to the North. On photographs 4b, 4c and 4h an arrow rendered in blue ink indicates the direction to North. We find the pipe shown in each of the three photographs is the same one depicted in exhibit 5, the compliance officer's drawing of the work site.

Compliance officer Bendorf said he took the video as he walked toward the work site. TE I 129. As the CO approaches the work site, there is vehicular traffic to his right going away from him and traffic to his left coming toward him. Then as the compliance
officer arrives at the excavation where the drop box inlet was to be installed, he encounters two Corrie employees standing in the excavation and right next to a plywood form for the drop box inlet. A black pipe leads away to the right from the perspective of the videographer and toward the North. Since this one black pipe, the same one depicted on exhibit 5 and photographs 4b, 4c and 4h, leads off to the right side of the video screen, we find the compliance officer as he walked toward the excavation had the West bound traffic on his right and the East bound traffic to his left. In other words, the video (exhibit 3) has the same perspective as the two drawings, exhibits 5 and 12: West bound traffic to the right and East bound traffic to the left.

Exhibit 12, the engineer's drawing, shows the concrete footer which is the floor of the drop box inlet. TE II 151. Exhibit 12 shows the surface elevation at the drop box inlet gate to be lower than the elevation at either side of the drawing which he marked as "WB Lanes" and "EB Lanes." This confirms what is seen in the video: the West and East bound roadways are higher in elevation than the center of the excavation where the drop box inlet form is found. According to the video and exhibit 5, the excavation has four sides with the North wall lying parallel to the West bound lane and the South wall lying parallel to the East bound lane.

As the compliance officer approaches the work site while shooting the video, the West bound lane is to the right and the East bound to the left. The drop box inlet form is located in the center of the excavation and is significantly lower in elevation than the two lanes of traffic on either side. This is confirmed by the drawing prepared by Mr. Smith, the civil engineer, which depicts the work site as a shallow V shape with the center lower than the two sides. Exhibit 12.
As the video shooting compliance officer approaches the excavation, first one worker's head becomes visible and then the other. When the two men stand erect to face the videographer, the tops of their heads are significantly below the top of the North wall and the West wall where it touches the North wall to form a corner. Exhibit 3. With their backs to the compliance officer as he approaches them, one of the employees hands the other a tool; the two men standing erect are of approximately equal height. Mr. Kenny Walters testified he was one of the two men, shown in the video, working in the excavation. Mr. Walters when asked said he was five feet, ten inches tall. TE I 43.

When the first employee exits the trench toward the videographer, he steps out using his hands and arms to propel himself upward; the same is true for the second employee.

Respondent witnesses, their heights ranging from five feet nine inches to five feet ten inches, said they could stand in the excavation and looking over the North wall see the surface of the Westbound roadway. Based on the video showing the two employees, one of whom is five feet ten inches tall, standing erect in the excavation with the North wall towering above their heads, we do not find the testimony of respondent's witnesses credible.

Item 2

In this case the hearing officer dismissed item 2; he did so for two reasons. He said the department of labor failed to prove the walls of the excavation\(^\text{13}\) were at least five feet deep. RO 10. He also said the "re-graded median above the 4-foot north wall...should not be considered part of the...excavation."

In his recommended order Mr. Head said:

\(^{13}\) The standards define a trench as a "narrow excavation (in relation to its length)...In general the depth [of a trench] is greater than the width..." 29 CFR 1926.650 (b). This explains why this case and the citations refer to the work site as an excavation.
...the re-graded median above the 4-foot north wall of the drop box...had been re-graded. But the re-graded median above the 4-foot north wall of the...box...should not be considered part of the drop box inlet excavation. The OSHA regulations imply this interpretation by including in their classification of excavation wall soils the term "previously disturbed soils." See 29 CFR Part 1926 Appendix A to Subpart P. By classifying soils outside an excavation as "previously disturbed," the regulations imply that one should not consider those soils to be a part of an excavation.

RO 6, footnote 1 (emphasis added).

This is how appendix A (b) reads in part:

Soil classification system means...a method of categorizing soil...in a hierarchy of Stable Rock, Type A, Type B, and Type C, in decreasing order of stability...

Appendix A to Subpart P

The excavation regulations divide soil into three categories, four really: Stable rock and soil types A, B and C. Of the soils, type A is the most stable while type C soil is the least stable of all soil types for the purpose of the regulation. This standard\textsuperscript{14} regulates excavation safety by directing employers to take increasingly aggressive protective measures, depending on the stability of the soil at the work site: if, for example, the employer chooses to slope the excavation walls to protect his employees, he must lay back type C soil at an angle\textsuperscript{15} (34 degrees) shallower than, say, type B soil (45 degrees).

Table B-1, Appendix B to Subpart P - Sloping and Benching. This is because type C soil is less cohesive, and thereby more unstable, than type B and more likely to collapse. See the definitions section for types A, B and C soils in Appendix A to Subpart P - Soil Classification which says type A soil has a compressive strength of 1.5 ton per square

\textsuperscript{14} We use the terms regulation and standard interchangeably.
\textsuperscript{15} A vertical excavation wall is 90 degrees.
foot (tsf) or greater, type B has a compressive strength greater than .5 tsp but less than 1.5 tsp and type C has .5 or less tsp.

When the hearing officer says predisturbed soils are not to be counted when measuring the depth of an excavation wall, he is incorrect. If an employer chooses to slope the walls to afford protection, he need not slope stable rock but must slope all types of soil, A, B and C, the angle of repose being dependent on the stability classification of the soil as determined by examination. If the drafters of the regulation did not intend that predisturbed soil be counted as a part of an excavation wall, they would not have defined it within the soil classifications which require specific degrees of repose for employee safety. Excavations need no cave-in protection until they are at least five feet deep. 16 If predisturbed soil is not to be counted when determining excavation depth, in order to reach the critical five foot mark when the regulation takes effect, then predisturbed soil would play no part within the system of soil classification and hazard abatement. But it does.

Here then is how the appendix defines soil stability in regard to previously disturbed soil:

_Type A...no soil is Type A if...The soil has been previously disturbed...

_Type B...means...Previously disturbed soils except those which would otherwise be classed as Type C soil...

Appendix A to Subpart P

According to the appendix to the excavation standard, previously disturbed soil is never type A but is type B unless it is not stable enough to so qualify, then it is C. Placing the phrase "previously disturbed soil" in the definitions of A and B demonstrates

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16 29 CFR 1926.652 (a) (1) (ii).
the drafter's intent to define previously disturbed soil as a part of the excavation wall which is subject to sloping requirements found within the appendix.

In Scafar Contracting, Inc, 17 a federal ALJ recommended order, CCH OSHD 31,652, the employer dug an excavation next to a blacktop road. Scafar measured the excavation wall from its base but stopped measuring when it came to the bottom of the blacktop road at the top of the wall. The federal compliance officer, on the other hand, measured the wall of the excavation to the top of the road bed. In Scafar, the ALJ said the standard could not be read in such a way as to exclude the roadbed from the measurement of the excavation. Scafar at page 45,755.

Then Scafar argued the previously disturbed soil it encountered while replacing a 100 year old sewer pipe had reformed itself to its original condition and so should not be counted as previously disturbed. To that, the secretary argued "'previously disturbed' means precisely that, without any modification." At page 45,755. Rejecting Scafar's argument the federal ALJ said he would defer to the secretary's reading of the standard if it was reasonable. He said "The issue is one of regulatory interpretation not choosing between two, opposing scientific theories." At page 45,755. Because there is nothing in the regulation which puts a time limit on previously disturbed soil, the ALJ accepted labor's argument and then wrote:

...for the purposes of this case, the soil in question is 'previously disturbed' by virtue of the...fact that a sewer line was placed in that location in...1886... Scafar at page 45,755

In Scafar, the ALJ said the soil which included predisturbed soil was type B and thus should have been sloped to 45 degrees. Since the existing slope was greater than 45

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17 Go to oshrc.gov. Click on decisions and select 1998 for final ALJ decisions.
degrees, that is more toward the vertical, the ALJ affirmed the citation which alleged a violation of 29 CFR 1926.652 (a) (1). Previously disturbed soil is ever thus.

In Scafar, then, the ALJ ruled in favor of the federal department of labor whose compliance officer had opined both the previously disturbed soil and the blacktop road lying on the surface were subject to the regulation. Based on our analysis of the relevant portions of Appendix A and the Scafar decision, we reverse our hearing officer who excluded both the predisturbed soil and the roadway above it from the compliance officer's measurement of the depth of the North wall. Rather, we conclude as a matter of law when the wall of an excavation includes previously disturbed soil or a roadway, regardless of its composition, both the previously disturbed soil and the roadway are to be measured when determining if the wall is subject to the excavation regulation.

In its brief to the commission, respondents take issue with the compliance officer's measurements of the excavation because "he didn't measure the depth in the middle of the excavation." Respondent brief, p 2. Respondents' brief made reference to its expert Douglas Smith who testified he drew red lines on his drawing, exhibit 12, to indicate what he called "the actual work area." He said his training led him to the conclusion the excavation regulations looked to the 'actual work area' to decide whether "there was a need for side support." Brief, page 6. Mr. Smith, quoted in respondents' brief, takes this conclusion even further. Here he is questioned about whether a worker is protected from cave-ins depending how far away he may be from a cut. He says when questioned:

Q. Even though they go straight up and down, it's according to how far the worker is away from that cut?
A. Right.
Q. Just because you have a cut that would be in excess of 5-foot,
if the worker is over here to far away that if they [the cut] fell down it wouldn't make any difference, he is not in violation the way you understand the law?
A. I would think there would be no way he would be in violation. Respondent brief, p 7-8.

Between the two roadways, the excavation at bar is approximately 20 feet wide. TE I 134. Respondents' brief to us and their witnesses make two claims: first, they say the compliance officer must measure an excavation at its center and, two, if the employees in the excavation stay away from the sides of the excavation, that is stay in the "actual work area" as Mr. Smith defines it, then there is no violation even if the cut fell down. For this novel proposition, respondent cites no supporting case law.

We need look no further than "Appendix A to Supart P - Soil Classification (b) Definitions" where we find any number of references to the sides of the excavation:
"Stable rock means...mineral matter that can be excavated with vertical sides..." The definition of (d) Acceptable visual and manual tests.- (1) Visual tests says to examine "the sides of the open excavation..." Three lines later in the appendix it says to "Observe samples of soil...in the sides of the excavation...Observe the side of the opened excavation...[and]Observe the opened side of the excavation..." (emphasis added)

From the definitions section of 29 CFR 1926.650 (b), we learn the following:
"Cave in means the separation of...soil...from the side of an excavation..."
"Shoring...supports the sides of an excavation..." "Benching...means...excavating the sides of an excavation..." (emphasis added)

The excavation regulations focus on the sides, the walls, and not the middle. After all, if the sides of the excavation collapse, that is where employees are injured or killed.
In *Globe Contractors, Inc v Herman*, 132 F3d 367, 372 (CA7 1997), CCH OSHD 31,488, page 44,631, the seventh circuit says 29 CFR 1926.652 (a) (1), the instant standard, applies to employees who are within an excavation but standing either on a pipe or ladder. Specifically, the court\(^\text{18}\) ruled employees are exposed to the hazard of a cave-in regardless of their position in the excavation. In *Globe* the court pointed to where the regulation says "Each employee in an excavation..." (emphasis added) "The regulation...makes no mention of where an employee must be in the trench for the standard to apply." *Globe* at F3d 372 and CCH page 44,631. Then the court looked to the citation for the secretary's interpretation of the regulation. "The citation listing violations after an inspection is an appropriate means for the Secretary to announce an interpretation of the Regulations." At CCH page 44,631. As in the case at bar, the citation in the *Globe* case accused the employer of permitting employees to be in an "excavation" and not in some particular spot.

Finally, on the issue of employee exposure to the hazard of a cave-in, the federal review commission has said the department of labor did not have to prove actual exposure to the hazards presented by an unprotected excavation but only access to the hazards, meaning the walls. In *Staley and Lawrenz, Inc*, CCH OSHD 21,153, page 25,449, BNA 4 OSHC 1748, the full commission reversed an ALJ who had dismissed an excavation citation because "respondent's employees performed their work functions in the central portions of the excavation." In its reversal of the ALJ's recommended order, the commission made several points. It said the employees' movements within the excavation were not restricted. "All parts of the excavation were open to" the employees. Then the commission said the ALJ had applied the wrong legal standard; he had used an

\(^{18}\) Judge Posner joined in the unanimous three judge panel decision.
actual exposure standard rather than access to the hazard, citing to Gilles and Cotting, Inc, 19 CCH OSHD 20,448, page 24,425, BNA 3 OSHC 2002, 2003, where in 1976 the federal review commission "rejected an actual exposure test in favor of the more reasonable 'access' test."

Item 2 says:

a. Two employees were working in an excavation located in the median of the Western Kentucky Parkway up to 7 feet deep with no cave-in protection.

The cited standard says:

Each employee in an excavation shall be protected from cave-ins by an adequate protective system designed in accordance with paragraph (b) or (c) of this section except when:

- Excavations are made entirely in stable rock; or
- Excavations are less than 5 feet... in depth...

29 CFR 1926.652 (a) (1)

For this citation the commissioner proposed $2,500 20 as a penalty for Qualified and $1,500 21 for Corrie. Because the compliance officer found two employees working in an excavation which had no cave-in protection, the standard applies.

The law makes it clear that when measuring the depth of an excavation wall any predisturbed soil or pavement lying on top must be counted. Scafar Contracting, supra.

Photographic exhibit 4i shows the corner of the North wall lying parallel to the West bound lane. At the urging of the hearing officer, Compliance Officer Bendorf drew a black horizontal line on photograph 4i which, he said, was the top of the West wall. The CO said the top section of the North wall was three feet deep. TE I 235. Then the hearing officer asked the CO to mark on 4h the location of the bench on the North wall.

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19 Go to oshrc.gov. Select decisions and click on final commission decisions for 1976.
20 Qualified: same as for item 1. See footnote 8.
21 Corrie: same as for item 1. See footnote 9.
TE I 237. Here the CO corrected himself. He "mistakenly said that [the area he had just marked on 4h] that was the edge." TE I 237. Then the hearing officer said:

Q. So what you marked previously in I [4i] as the top of the excavation is, in fact, the top of the bench?
A. Correct.
Q. And so there would be another 3 feet above that point?
A. Correct.

TE I 237-238.

The CO told the hearing officer he measured the depth of the North wall "probably close to the road." TE I 238. In his own handwriting the CO marked this 4i line, again at the urging of the hearing officer, as the "Amended Testimony Regarding top of excavation." TE I 238. This horizontal line on 4i shows the compliance officer considered the top of the North wall to be just a few inches below and next to the top of the blacktop on the roadway. In other words, the CO determined the top of the North wall included all of the predisturbed soil and most of the built up road, lying at the top of the wall. The words "Amended Testimony..." on photograph 4i are found to the left of the words "North Side Top of Excavation Measured by CSHO." This earlier effort misidentified the top of the North wall, a harmless error the CO corrected. However, the compliance officer was never confused about the depth of the North wall. In his drawing, exhibit 5, he said it was four feet plus three feet. On direct examination, the CO said the North wall was three feet plus four feet with a partial bench in between. TE I 137. Then at TE I 220 the CO said North wall was 7 feet and partially benched.

Our hearing officer found the North wall was four feet deep because he incorrectly did not count the portion above the partial bench, which he had excluded as predisturbed soil, as part of the measurement. RO 6, footnote 1 and RO 5, numbered
paragraph 9. While our hearing officer did take issue with the accuracy of the compliance officer's measurement of the South wall, he did not apply that same reasoning to the North wall. Thus, we find the North wall above the partial bench to be three feet deep from the bench to the road and another four feet deep from the bottom of the excavation measuring upwards to the partial bench - as reflected in the CO's drawing, exhibit 5. On this point we reverse our hearing officer who found the North wall measured four feet deep. RO 6.

Our hearing officer's rejection of the compliance officer's measurements of the North wall ignores the testimony of Qualified Paving's expert witness, Doug Smith, a civil engineer who took his own measurements of the work site for the respondents some months after the work was completed and the excavation filled in. Civil engineer Douglas Smith confirmed the compliance officer's measurement of the lower, four foot portion of the North wall.

Mr. Smith prepared a drawing, entered as exhibit 12, which represented a side view of the excavation. TE II 149. This "cross sectional view" faces in the direction of traffic moving Westbound on the highway, the same vantage point from which the compliance officer took his video of the work site. Exhibit 3. See the arrow on exhibit 12 indicating North is to the right side of the drawing. Mr. Smith calls the right side of the drawing "WB [West bound] Lanes."

Civil Engineer Smith testified he determined the North wall of the excavation, lying next to the West bound lanes of traffic, to be 4.56 feet deep measured from the top of the concrete footer (TE II 157) to a blue line he drew and then marked with his initials "DES" on photographic exhibit 4i. TE II 156 and 157. He said the top of the footer was
"zero elevation." TE II 151. Mr. Smith admitted his depth measurement did not "include the depth of the footer." TE II 173. We note, however, the video shows the two employees stood on the bottom the excavation which was actually a few inches below the top of the footer which Mr. Smith assumed for his calculations to be the bottom of the excavation. TE II 151. See the video, exhibit 3, which shows the two employees standing on the excavation bottom and photographs 4b and 4f which show the concrete footer rising above the bottom of the excavation.

The measurement taken by Mr. Smith of the North wall was actually eight inches deeper than the depth to which he testified and we so find. TE II 151-152. Mr. Smith said footers are eight inches high. TE II 173 and 176. As Mr. Smith admitted, he had to use the top of the footer for his measurements because at the time he visited the work site, the excavation had been filled in. TE II 167. Since footers are eight inches high and the two men in the excavation were standing below the footer on the dirt bottom of the excavation (see the video exhibit and photographic exhibit 4b), Mr. Smith's measurements were short by eight inches. Eight inches is two thirds of a foot, translated to a decimal as .66 feet.22 Using Mr. Smith's calculations and the height of the footer since he by necessity used the top of the footer as his starting point, the North wall was 4.56 feet plus .66 feet or 5.22 feet. Recall that cave in protection must be implemented when the wall of an excavation reaches 5 feet. 29 CFR 1926.652 (a) (1) (ii). We have ruled that an excavation height includes both predisturbed soil and any pavement portion of the highway when the pavement, as here, sits at the top of the excavation wall. Scafar Contracting, Inc. supra.

22 8 inches/12 inches = .66.
Compliance Officer Bendorf testified the distance from the top of the vertical, blue line drawn by Civil Engineer Smith on photograph 4i to the pavement for the Westbound portion of the highway was three feet. TE I 135 and I 235. As we stated, we find Mr. Bendorf's measurement credible. Mr. Smith did not venture an opinion about the distance from his blue line on photograph 4i to the top of the roadway. Neither did the hearing officer question the three foot measurement; rather the hearing officer did not consider the three feet to be part of the wall.

Our hearing officer had erroneously ruled the previously disturbed soil and the road pavement were not part of the excavation wall and we reversed him on that point. Scafar Contracting. This three feet of previously disturbed soil and roadway is clearly visible on photograph 4i as well as the video Mr. Bendorf took at the beginning of his inspection. Exhibit 3. See also exhibit 5, the CO's drawing. To determine then the actual depth of the lower portion of the North wall (that is the depth below the partial bench), we will out of an abundance of caution take the figure given by the compliance officer which was four feet rather than Mr. Smith's which is 5.22 feet. At the suggestion of the hearing officer, Mr. Smith had placed a blue line on photograph 4i which he initialed. TE II 156. Mr. Smith's blue line on 4i was he said the top of the North wall; of course Mr. Smith's wall did not take into consideration the predisturbed soil, the three feet, at the top of the wall. We find Mr. Smith's figures, adjusted for the eight inch footer, confirm the compliance officer's measurements of the lower portion of the North wall.

We find the North wall to be seven feet deep.
29 CFR 1926.652 (a) (1) says when excavation is at least five feet deep, the employer must protect his employees from the possibility of a cave-in by benching or sloping or by using support systems. The CO said the excavation had no sloping which would qualify under the standard as cave-in protection. TE I 199. Our hearing officer found Qualified Paving and Corrie had not installed cave in protection for the excavation at bar; we agree and so find. After all, an examination of the video and the photographs reveal a complete absence of any cave in protection. Qualified Paving's own witness, Mr. Smith, determined at least the North wall was, as corrected, deeper than five feet which by itself would trigger the operation of the standard. In Williams Construction Company, CCH OSHD 22,325, page 26,895, BNA 6 OSHC 1093, 1094, the federal review commission upheld a citation where three sides of the excavation "were sloped back to some degree" but the North wall was vertical and unprotected from the possibility of a cave in.

An excavation is defined as "any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal." 29 CFR 1926.650 (b). (emphasis added) When the standard drafters used the phrase "any man-made cut," they indicated their intent that a single cut in the earth formed by removing earth would qualify as an excavation. In Williams the federal review commission found an excavation with one unprotected side at least five feet deep violated the standard.

Plainly, then, the North wall in the case at bar is an excavation requiring some type of cave in protection: it was created, cut, for the purpose of installing the drop box; it was more than five feet deep (actually it was seven feet deep); positioned as it was against the West bound lane of the highway, the North wall was not sloped to the 45
degrees required for predisturbed soil\textsuperscript{23} (see the video admitted as exhibit 3 and photograph 4c which shows the bottom of the North wall fairly straight up and down); the North wall had only a "partial bench" (TE I 135). No shoring or sloping had been installed. TE I 143 and 144. We reverse our hearing officer's recommended order dismissing item 2 for both employers. We conclude the two employers violated 29 CFR 1926.652 (a) (1) and sustain item 2 for both Qualified Paving and Corrie Construction along with the proposed penalties, $2,500 for Qualified and $1,500 for Corrie, since neither party complained to the commission about how the serious penalties were derived.

Respondents and their witnesses have taken the position the excavation was not hazardous whether the walls were five feet deep or not. We find photographs 4b and 4g, however, show where the South wall had already caved-in to some extent leaving the asphalt road at the top of the wall with no support. This was confirmed by the compliance officer who said "That was the area where it was kind of concave underneath the roadway." See TE I 135 and exhibit 5 where the CO had written "vertical sluffing" next to the South wall. Mr. Bendorf said "Cave-ins frequently encompass road surface. Asphalt breaks off and falls into excavations." TE I 224. We find, based on the compliance officer's testimony and corroborated by the two photographs, the sides of the excavation were already starting to give way.

At the trial several of respondent's witnesses said the soil was cohesive red clay. Whether it was red clay or not, and we take no position, neither Qualified nor Corrie did the tests necessary to confirm the soil type. When an employer does not perform the tests

\textsuperscript{23} Appendix A to Subpart P - Soil Classification, (b) Definitions, Type A, says in part "...no soil is Type A if...The soil has been previously disturbed..." Then Table B-1 in Appendix B to Subpart P - Sloping and Benching says Type B soil must be sloped to at least 45 degrees.
prescribed in Appendices A and B, then they must treat the soil as if it were type C soil. 29 CFR 1926.652 (b) (1).

In his drawing of the work site, the compliance officer said the East side of the excavation was less than 5 feet deep. Exhibit 5. We agree; in the video the upper torsos of the two employees are visible to the camera as they turn and stand erect to speak with the compliance officer standing at the edge of the excavation.

Hearing Officer Head found the compliance officer's five foot, eleven inch measurement of the South wall to be inaccurate. He said the compliance officer could not be sure how he measured its depth. Witnesses for the respondents said the compliance officer used 2 by 4 placed on the roadway so he could obtain a vertical measurement of the depth; these same witnesses said a respondent employee entered the excavation to assist with the measurement. Ronald Brooks worked for Qualified Paving at the time of the inspection. He was a witness to the inspection in this case; he answered the following questions:

Q. Now, so the 2 by 4, then, was supposed to be more or less level I take it?
A. Yes, sir. It should have been. But if you didn't have a level on it, you don't know whether it was level or not.
Q. Did he level it?
A. No, sir. Not that I know of.

TE II 126.

On the other hand, the compliance officer on direct said he took depth measurements by himself. TE I 140.

Then the CO was asked the following questions:

Q. In fact, isn't what you Mr. Brooks was in the excavation and you put a 2 by 4 on the W.K Parkway and stood on it. And then you had him hold the measurement pole up. And where it met, that's, in fact, what you wrote
down.
Is that not what you did?
A. I don't recall that.
Q. Are you telling me that didn't happen?
A. I am not telling you that didn't happen. I don't recall. TE I 176-177.

Q. The question was asked if you had not gotten a 2 by 4 and run it across from the east lane to the west lane. And then if you had gone out there with a rod and taken it down and measured in the center.
You said you did not recall if you had done that?
A. That's correct. TE I 223.

In these cases the department of labor has the burden of proof. 803 KAR 50:010, section 43. If the compliance officer cannot recall how he obtained the measurements for the South wall, then the department fails in the attempt. Complainant department of labor failed to prove the South wall was at least five feet deep.

As our hearing officer said, the compliance officer determined the West side of the excavation to be five feet, five inches deep. See RO 8 and 9 as well as exhibit 5 and TE I 135-136. Mr. Head then said the photographs, 4b, 4c, 4d and 4i, contradict the five feet, five inch measurement. Here we take issue with Mr. Head. While 4i shows the West wall in the middle to be no deeper than the lower portion of the North wall, the other photographs show no such thing. The video taken by the compliance officer as he approaches the excavation, however, does show the West wall to be the same height as the North wall where the two intersect to form the Northwest corner. Thus, the video and the photograph 4i, on the question of the depth of the West wall, contradict one another. The compliance officer's testimony to the effect the West side was five feet, five inches deep is contradicted by respondent's witnesses who say it was less than five feet deep. The video shows the center of the median on the west side of the excavation had less
elevation than the two roadways. In fact the compliance officer testified the median sloped down to its center at a 12 degree angle. Exhibit 5 and TE I 136. We find the department of labor failed to prove the depth of the West wall.

Item 3

Finally, item 3 said:

A stairway or ladder was not provided at all personnel points of access where there is a break in elevation of 19 inches...or more, and no ramp, runway, sloped embankment, or personnel hoist is provided:

a. No stairway or ladder was provided for two employees working in an excavation up to 7 feet deep located in the median on the Western Kentucky Parkway.

29 CFR 1926.1051 (a)

For item 3 Qualified received a proposed penalty of $2,500 and Corrie $1,500.

29 CFR 1926.1051 (a) says:

A stairway or ladder shall be provided at all personnel points of access where there is a break in elevation of 19 inches...or more, and no ramp, runway, sloped embankment, or personnel hoist is provided.

The cited standard, found as it is within the construction standard, applies to the fact in this case. 29 CFR 1926.1050 (a), Scope and application, says the section "...sets forth, in specified circumstances, when ladders and stairways are required to be provided."

Compliance Officer Bendorf said he cited the respondents because while the employees worked in an excavation seven feet deep, they had no ladder. TE I 145-146. On cross examination the compliance officer said he found no sloped embankment which could be used as a means of exit. TE I 199. Then he said there was at least a 19 inch
break in elevation. TE I 200. Neither the video nor the photographs revealed any sort of personnel hoist. We find labor proved all the elements of the violation.

Mr. Bendorf said the employees had "slight difficulty" exiting the excavation without a ladder. TE I 200. Exhibit 3, the video, shows the two employees exiting the excavation at the behest of the compliance officer. Both employees used their hands and arms to propel themselves up and out of the excavation. We find the employees exited the excavation with difficulty; neither employee could simply step out of the excavation.

Robert Campbell, a foreman for Qualified testifying on redirect, said the company "...laid the material back, sloped it back where a man could walk right out." He called it a ramp. TE II 80. He said the ramp was directly across the excavation from where the compliance officer took the video. TE II 81. Then Ronald Brooks, superintendent for Qualified at the time of the inspection and also testifying on redirect, said he did not think a ladder was necessary because "we had one end sloped" on the West side. He said the slope "went to the bottom all the way up." TE II 117.

A ramp must rise steadily and require no climbing to be acceptable. Revoli Construction Co, Inc.\textsuperscript{24}, a federal ALJ decision, CCH OSHD 32,189, page 48,666. We have been given no proof about whether the ramp rose steadily.

Our hearing officer rejected the compliance officers testimony because, he said, the excavation was not seven feet deep. We, however, have found otherwise. Then he said it was not necessary for the employees to climb the East wall, which we saw in the video, because "Qualified sloped the west side of the excavation to allow the employees to exit easier." RO 8.

\textsuperscript{24} Go to oshrc.gov. Click on decisions and select 2000 for final ALJ decisions.
In Staley and Lawrenz, Inc, BNA 1 OSHC 3362, 3363, the federal commission said "There was a ramp or grade at the end of the trench but this did not constitute an adequate means of exit, since the ramp could be obliterated by moving ground or a cave-in." Although this case was decided according to the prior excavation regulation, it illustrates the concerns we have about employee safety in this case. Staley, in other words, say a poorly designed ramp could present its own hazard to employees or simply cease to exist.

While we have testimony from respondent witnesses about a ramp or slope on the West wall of the excavation, we have no details about its construction. Despite what the hearing officer says, no photograph admitted into evidence shows a slope or ramp on the West wall. What appears to be a ramp on the West wall, photograph 4b, is an optical illusion because it does not appear on 4a, 4c, 4d, 4f, 4g or 4i all of which show parts of the West wall. Mr. Brooks says he dug the ramp all the way to the bottom of the excavation; but no photograph shows a ramp dug to the bottom of the excavation. The video does not reveal a ramp or slope on the West wall.

Even if there were a ramp, we know almost nothing about it. Assuming for the sake of argument the existence a ramp on the West wall we do not, for example, know the height of the sides of the ramp, dug as it would be through the West wall. Were these walls to give way as regularly occurs in an excavation, Staley, we do not know the height of the walls on either side of the slope. We do not know if the walls of the ramp themselves were vertical or sloped in some manner. Neither do we know how steep this ramp was.

25 In Reynolds v Mion and Murray Co, Ga, 90 SE2d 593, 596, the court said "An optical illusion...is a 'perception' which fails to give the true character of an object."
What we do know is the two employees exited the excavation toward the compliance officer. To climb out of the excavation, both employees used their hands and arms to lift themselves up and out of the excavation. We also know from the video that one employee positioned himself so he could place a foot on the West wall to assist his climb. We know neither the video nor the photographs show a ramp or slope on the West wall dug to the bottom of the excavation. There is in short no visual proof about a ramp or slope leading upward from the bottom of the excavation. We have no details about how a ramp or slope was constructed or whether it posed a hazard to the workers.

In his recommended order Mr. Head dismissed item 3 because, he said, the compliance officer failed to notice a "sloped embankment on the west side of the excavation." RO 10.

We reverse our hearing officer who found a slope on the West wall. We find respondents did not prove the existence of a slope. Because the visual exhibits and the compliance officer's testimony contradict the testimony of Qualified's witnesses, we find the compliance officer's testimony about the absence of a slope is credible.

We conclude the respondents violated 29 CFR 1926.1051 (a). We reverse our hearing officer and reinstate item 3 as a serious violation with proposed penalties of $2,500 for Qualified and $1,500 for Corrie.

We affirm the hearing officer's recommended order to dismiss item 1 which the department of labor had issued to both parties.

26 J.D. Blum Construction Co, a federal review commission decision, CCH OSHD 20,735, page 24,859, BNA 4 OSHC 1255, 1256, says photographic evidence may be used to establish a fact or a violation. Go to oshrc.gov. Click on 1976 for final commission decisions.
27 See footnote 8.
28 See footnote 9.
We sustain items 2 and 3 for Qualified Paving and Corrie Construction and the proposed penalties for each.

It is so ordered.

February 5, 2008.

Kevin G. Sell
Chairman

Sandy Jones
Commissioner

William T. Adams, Jr.
Commissioner
Certificate of Service

I certify a copy of this decision was served this February 5, 2008 in the manner indicated:

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