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ILLINOIS POLLUTION CONTROL BOARD

ANTHONY and KAREN ROTI,)
PAUL ROSENSTROCK and)
LESLIE WEBER,)
Complainants,)
vs.)
LTD COMMODITIES,)
Respondent.)

PCB 99-19 (citizen enforcement, air.)

VOLUME I, Page 1 - 281

Report of proceedings before the
HONORABLE BRADLEY P. HALLORAN, Hearing Officer,
upon the hearing of the above-entitled cause, at
118 West Cook Road, Libertyville, Illinois,
commencing at 9:00 o'clock a.m. on the 15th day
of October 2002.

1 APPEARANCES:

2

3 ILLINOIS POLLUTION CONTROL BOARD

4 James R. Thompson Center

5 100 West Randolph Street

6 Suite 11-500

7 Chicago, IL 60601

8 MR. BRADLEY P. HALLORAN

9

10 STEVEN P. KAISER & ASSOCIATES

11 BY: MR. STEVEN P. KAISER

12 Appeared on behalf of the Complainants;

13

14 LAW OFFICES OF BAIZER & KOLAR, P.C.

15 BY: MR. JOSEPH KOLAR

16 Appeared on behalf of the Respondent.

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1 HEARING OFFICER HALLORAN: We're on
2 the record.

3 Good morning everyone. My name is
4 Bradley Halloran. I'm a hearing officer with
5 the Illinois Pollution Control Board. I'm also
6 assigned to this matter, PCB 99-19, entitled,
7 Anthony and Karen Roti, Paul Rosenstock and
8 Leslie Weber, the Complainants, versus LTD
9 Commodities.

10 It's approximately 9:15 on October 15
11 in the year 2002. I want to note for the record
12 that present there are no members of the public
13 here but if they do show up, they are allowed to
14 testify subject to cross-examination.

15 We'll run this hearing pursuant to
16 Section 103.212, and Section 101 Subpart F under
17 the board's general provision.

18 I note that this hearing is intended
19 to develop a record for review for the Illinois
20 Pollution Control Board. I will not be making
21 the ultimate decision in this case. It will be
22 left to the seven members of the board. They
23 will review this transcript and the remainder of
24 the record and render a decision in the matter.

1 My job is to insure an orderly hearing
2 and a clear record and to rule on any
3 evidentiary matters that may arise.

4 After the hearing, the parties will be
5 allowed to submit posthearing briefs. These,
6 too, will be considered by the board.

7 I note that the board granted
8 Complainant's motion for summary judgment on
9 February 15, 2001, and directed that this
10 hearing be held on the issue of penalties. To
11 that end the parties are only to present
12 testimony and evidence that are relevant to the
13 factors and cause that are set forth in Section
14 33C and 42H of the act.

15 The board also directed in the
16 February 15th order the parties are encouraged
17 to introduce evidence on remedies that have not
18 yet been discussed and introduce new testimony
19 on remedies that have been discussed. The
20 parties may also address civil penalties.

21 Also, I want to note that there are
22 members of the Pollution Control Board here, not
23 members, but there are two technical personnel,
24 Mr. Anad Rao and Ms. Alisa Liu. There is also a

1 staff attorney, Amy Antoniolli is also present.

2 With that said, Complainant's
3 attorney, would you like to introduce yourself,
4 please?

5 MR. KAISER: Yes, I would. Thank you.

6 Good morning. My name is Steven
7 Kaiser, K-A-I-S-E-R. And I represent the
8 Complainant's in this matter, Karen and Anthony
9 Roti, Paul Rosenstock and Leslie Weber.

10 To my right is Dr. Paul Schomer, who
11 we expect to testify, hear testimony from this
12 morning.

13 MR. KOLAR: I'm Joe Kolar. I
14 represent LTD Commodities, the Respondent.

15 HEARING OFFICER HALLORAN: Thank you,
16 sir.

17 And I might add that the technical
18 personnel and even the staff attorney may ask
19 questions of the witness at different times
20 throughout this proceeding.

21 With that said, Mr. Kaiser, would you
22 like to do an opening?

23 MR. KAISER: I would. Thank you.

24 MR. KOLAR: Can I make a

1 clarification? Summary judgment was not granted
2 to Complainant's. They prevailed, I guess, at
3 the initial hearing on the issue of nuisance.

4 HEARING OFFICER HALLORAN: Okay. It's
5 proceeding towards -- for the remedies.

6 MR. KOLAR: Right.

7 HEARING OFFICER HALLORAN: Thank you
8 for the clarification, sir.

9 MR. KAISER: Thank you, Mr. Halloran,
10 and my thanks to the board and its
11 representatives for giving us this opportunity
12 to provide additional information to the board
13 in connection with remedies.

14 Just by way of history, the
15 Complainants filed this action before the board
16 on July 22nd, 1998.

17 In the fall of 2000, actually fall of
18 1999 and into the spring of 2000, we presented
19 testimony over the course of almost seven days
20 and introduced in excess of 150 exhibits between
21 the parties, all of which formed the basis for
22 the board's opinion in order dated February 15,
23 2001.

24 And as Mr. Halloran noted, in that

1 opinion, the board concluded that noise from
2 LTD's dock operation constituted a nuisance and
3 that the noise from the dock operations had
4 substantially, frequently, significantly
5 interfered with Tony and Karen Roti's use and
6 enjoyment of their property, Paul Rosenstock's
7 use and enjoyment of his property and Leslie
8 Weber's use and enjoyment of her property.

9 The board has brought back an exhibit
10 that was used extensively during that first
11 hearing. It's an aerial photograph. I think
12 persons in attendance here today are able to
13 identify or perhaps with my help can identify
14 the LTD warehouse and office complex, which is
15 located just north of Route 22 and just east of
16 the north tollway.

17 This large building shown in the
18 center of the photograph is the LTD facility.
19 You can see the dock area, which you'll hear
20 testimony about today. You can see the tops of
21 semitrailers parked in the dock area. And
22 you'll note that just to the north of the dock
23 area are my clients' homes. Karen and Tony Roti
24 live with their five children immediately north

1 of LTD's dock area. Paul Rosenstock lives with
2 his daughter, Rachel, is just to the northeast
3 of the LTD dock area. And Leslie Weber lives
4 with her husband, Henry Weber, and her two sons
5 just to the northeast of LTD's dock area.

6 The board found that the noise and
7 activity in LTD's dock area posed a nuisance,
8 created a nuisance. And there was a great deal
9 of testimony, well, what type of noise. When
10 you bring trucks in and out of a dock area,
11 there is noise attended to that process.

12 And I also want to point out for the
13 members in attendance today another feature, you
14 see this is marked as LSD, and that is Lake
15 Shore Drive(sic). It's the way in which trucks
16 coming from the tollway exiting on Route 22 gain
17 access to the LTD dock area. The trucks come up
18 Lake Shore Drive and then -- Lake Side Drive,
19 excuse me, and then exit Lake Side Drive.

20 The board heard testimony that when
21 trucks arrive in the LTD dock area, that there
22 is typically, truck naturally brakes and as it
23 brakes, there is a release of air from the air
24 brakes. That is an impulsive sound. There was

1 testimony from Greg Zak(phonetic), who at that
2 time was still employed by the Illinois
3 Environmental Protection Agency as its noise
4 specialist, that those impulsive sounds like the
5 hissing of an air brake when it is released are
6 particularly annoying.

7 There is testimony that the steady
8 noise, the ambient noise from the tollway, while
9 persistent, is not as disruptive as these
10 intermittent impulsive noises, such as the air
11 brake release when they arrive at the LTD, when
12 trucks arrive at the LTD facility.

13 Typically, when a truck arrives at the
14 LTD facility, the tractor that has dragged the
15 trailer across the highway, disengages from the
16 trailer and there is an uncoupling of what they
17 call the fifth wheel, that large plate on the
18 back of the semitractor which engages with a pin
19 on the trailer. When those are disengaged,
20 there is a certain sound associated with that
21 and that also is an impulsive noise.

22 The tractor, which has dragged the
23 trailer to the LTD dock area, then pulls away
24 and that sound of the tractor accelerating is

1 another noise that was noted by the board as one
2 of the noises that creates the nuisance.

3 LTD employs a subcontractor that
4 operates something called a yard tractor or a
5 yard pig. It's essentially a small tractor,
6 truck, that then guides the trailers, once
7 they're in the dock area. Against, there was
8 testimony in the record that this yard tractor
9 engages with the semitrailer and at that point
10 when the tractor engages with the trailer and
11 the trailer drops onto that fifth wheel, that
12 there is a clanging and, again, an impulsive
13 noise that the Rotis testify they hear in their
14 backyard, in their kitchen and in their bedrooms
15 on the second floors. Paul Rosenstock
16 testified he hears that noise in his backyard,
17 in his family room and in his bedroom on the
18 second floor, which faces south. Leslie Weber
19 testified that she hears the noises I have
20 described so far when she is in her backyard,
21 out on either of her patios on the south side of
22 her home, in her living room sitting by her
23 fireplace reading or when she or her husband are
24 upstairs in their bedroom reading in a nook that

1 faces to the south. And there is also testimony
2 that the children in these three households are
3 effected by those noises.

4 That yard tractor then once it's
5 engaged the trailer, drags the trailer into
6 either a position where it is parked along the
7 north end of the dock, as you can see on this
8 aerial photograph, or it backs the trailer into
9 LTD's warehouse area where the trailer is then
10 unloaded and where the yard tractor then
11 disengages, accelerates as it moves away from
12 the trailer that is now in position.

13 And there was testimony that this
14 process of trailers arriving, tractors
15 disengaging, the yard tractor engaging, trailers
16 being put in the docks, trailers being pulled
17 out of the docks, trailers being parked against
18 these back bumpers and the retaining wall
19 located there, goes on from about 6:00 in the
20 morning until as late as 2:30 or 3:00 at night.
21 And that when LTD is operating during -- in
22 anticipation of the Christmas holiday season,
23 which for LTD the testimony was began in some
24 years as early as middle of July, and always by

1 August of that year, that during the months of
2 July, August, September, October, November, and
3 half of December, LTD is operating two full 8
4 hour shifts, and the noise begins at least by
5 6:00 in the morning and in some instances
6 doesn't conclude until 2:00 or 3:00 in the
7 morning.

8 And the board found that that noise
9 over that period of time in the -- and with the
10 intensity that was described posed a nuisance.

11 Now, at the first hearing, which began
12 in November of 1999, and concluded in May of
13 2000, there was testimony about how that noise
14 might be reduced. And that is also included in
15 the record. LTD developed something called a
16 good neighbor policy. LTD did talk with their
17 subcontractor and replaced the extremely loud
18 yard tractor that had been in operation in 1996
19 with a somewhat quieter yard tractor in 1997,
20 but the testimony was that even that new yard
21 tractor and these actions that are inherent in
22 pulling and pushing and tugging trailers in and
23 around the dock area continued to cause noise up
24 through the date of hearing.

1 There was considerable testimony at
2 the first hearing about whether it was
3 appropriate to build a noise wall to stop the
4 noise generated in the LTD dock area from
5 migrating to the Weber, Rosenstock and Roti
6 homes.

7 LTD has retained a gentleman by the
8 name of Tom Thunder who we expect you will hear
9 testimony from this morning, and Mr. Thunder
10 himself recommended early on to LTD that one way
11 in which they might stop the noise from
12 migrating north and disturbing the neighbors to
13 the north was to build a noise wall.

14 And Mr. Thunder proposed certain
15 dimensions of the wall and they're in the
16 record. And at one point it was a 12 foot wall,
17 then it was a 13 foot wall and then it was
18 suggested maybe a 14 foot wall might be more
19 appropriate. And the wall was to run the entire
20 length of the LTD dock area, which is a distance
21 of a little over 500 feet. And it was to be
22 built right along the edge of a retaining wall
23 and I suspect that we'll show you photographs of
24 the dock area and that retaining wall so you can

1 see it a little bit more closely. It should be
2 noted that the dock is a little bit below grade
3 and Dr. Schomer in his testimony will tell you
4 at exactly what grade above sea level the dock
5 area is. The parking lot to the north is
6 approximately 9 feet above the grade of the dock
7 area and then the land as it moves to the north
8 and northeast slopes up, so that the Roti's home
9 and especially the second floor windows of the
10 Roti home are substantially above the base of
11 the dock. And Dr. Schomer will tell you exactly
12 how high above. Paul Rosenstock's home, again,
13 is even higher in elevation than the LTD dock
14 area. And as you get to the -- furthest to the
15 east, to the Webers, you'll find that their's is
16 the most elevated and Dr. Schomer will tell you
17 how that fact that these homes are located above
18 and significantly above the dock area, how that
19 effects the propagation of noise, that is how
20 noise travels through this particular
21 environment and what steps would have to be
22 taken to stop the noise from migrating to the
23 north.

24 Again, Tom Thunder, LTD's noise

1 consultant, had proposed that the wall be built
2 right along the retaining wall in the dock area
3 and that had some basis in acoustical science.
4 General theory states that you'll get the most
5 noise reduction if you can place the wall the
6 closest to the noise source and presumably that
7 was Mr. Thunder's thinking.

8 And the record contains proposals back
9 in 1999, '98, for building a wall right along
10 and right above the existing retaining
11 structure.

12 In June of 2002, over a year after the
13 board had issued its opinion and advised LTD
14 that its operations were in violation of the
15 regulation promulgated by the Illinois Pollution
16 Control Board, LTD disclosed to the
17 Complainant's for the first time that a wall
18 couldn't be built where Tom Thunder had
19 suggested it could be built more than two years
20 earlier, that, in fact, a wall, if it were to be
21 built on LTD's property, would have to be built
22 16 feet north of the existing retaining wall or
23 at some distance north of the existing retaining
24 wall so as not to interfere with the integrity

1 of the wall.

2 September of 2002, a little more than
3 a month ago, we were advised that LTD now has an
4 engineer, Ted Anderson, who we expect you will
5 hear from tomorrow, who in the last few months
6 has done a little more research and has
7 concluded that, yes, in fact, a wall would need
8 to be built 16 feet north of the existing
9 retaining wall in order to preserve the
10 integrity of the existing retaining wall.

11 We were, frankly, surprised to get
12 this information at this late date, three years
13 after the complaint had been filed, more than a
14 year after the board had found that there was a
15 nuisance and only a few months before the
16 hearing today.

17 My clients at considerable expense to
18 themselves and at the conclusion of the first
19 phase of this hearing hired Dr. Schomer to look
20 over the record and make recommendations about
21 how noise could be reduced in the LTD dock area
22 and you will hear Dr. Schomer's testimony in a
23 few minutes.

24 Essentially, Dr. Schomer concluded

1 that while LTD can employ perhaps certain
2 operational chances to reduce some of the noise
3 in the dock area, certain noises that originate
4 in the dock area, like the accelerating of
5 trucks as they come up this ramp to get onto
6 Lake Side Drive, the air brakes as the brakes
7 are engaged as the trucks go down the ramp, and
8 there is a slope to this ramp into the dock,
9 that hissing from the air brakes, the
10 disengaging of the pin from the fifth wheel, the
11 engaging of the fifth wheel with the pin, the
12 banging of the trailers in the dock area and
13 against the dock bumpers, the muffler from the
14 semitractors that bring more than 150 trucks in
15 and out of this facility during the course of
16 the day, that those noises can't be controlled
17 by operational changes, that those are noises
18 that just come with the territory, if you're
19 operating a truck dock warehouse facility,
20 you're going to have those noises, and that the
21 only way to or the best way to reduce that noise
22 and to keep that noise from migrating to the
23 north, is to build an appropriately scaled noise
24 wall. Noise walls have been built within half a

1 mile of LTD, the tollway just to the south has
2 18 to 20 foot noise walls all along it. And Dr.
3 Schomer has created a computer analysis or has
4 created a program to analyze the noise data that
5 has been generated and to determine how high a
6 wall would have to be to cut the noise in half
7 as experienced in the thousand kilohertz octave
8 band at the second story of the Weber home. And
9 you will hear testimony as to why Dr. Schomer
10 felt that that was an appropriate target. As --
11 and the board has technical representatives here
12 today, but the record supports that much of this
13 noise is in the low frequencies. And then there
14 is a certain noise that is in the midrange
15 frequencies, the 1,000 kilohertz, 2,000
16 kilohertz, 4,000 kilohertz octave band area.
17 The human ear is pitched to be particularly
18 sensitive to noise in the thousand and 2,000
19 kilohertz octave bands, that's where much of the
20 conversation goes on, that's where sound can be
21 particularly annoying.

22 And there are sounds, Tom Thunder's
23 noise measurements taken almost three years ago
24 now, establish, four years ago now, establish

1 that noise from the LTD dock area was intense in
2 those 1,000, 2,000, 4,000 kilohertz octave
3 bands.

4 To reduce noise by 10 decibels is to
5 essentially cut in half the way in which the
6 human ear perceives that sound. And Dr. Schomer
7 will tell you that he believed it was reasonable
8 to design a wall so that the Webers as they sat
9 and lived, occupied their second story of their
10 home, would experience the noise from the LTD
11 dock areas and the noise emitted on this ramp
12 leading into and out of, because of where the
13 Webers are located in relation to the dock area
14 and to this ramp, which is the principle way of
15 getting into and out of the dock, they
16 experience sound from this or noise from this
17 northeastern corner of the dock operation and
18 because they're higher, the noise carries and is
19 particularly intense at the second floor level.
20 So, the idea was to build a wall that would
21 provide the Webers with protection at their
22 second story and protection was identified as
23 cutting the noise in half at the 1,000 kilohertz
24 octave band and Dr. Schomer will explain that to

1 you.

2 Now, there will be testimony that to
3 build a wall -- and that the wall would have to
4 be about 25 feet high and run more than 500 feet
5 in length to insure a reduction, a meaningful
6 reduction in noise as experienced at the Weber,
7 Rosenstock and Roti homes. There will be
8 testimony that a wall of that height will cost
9 over \$600,000. And the board has to consider
10 whether that is reasonable and cost effective in
11 light of all of the circumstances.

12 There is testimony in the record about
13 how much LTD paid for this property, how much
14 they paid to expand their warehouse. And just
15 in terms of cost of the land and cost of the
16 improvements, several years ago the value of
17 that property was approaching \$20 million. To
18 date LTD has declined to provide any information
19 to the Complainants about their gross revenues,
20 about their net profits, about the salary to
21 or --

22 MR. KOLAR: Objection. This is
23 argumentative. And we had a stipulation that
24 prior to the hearing we did not have to provide

1 that information.

2 MR. KAISER: Well, I only bring it up
3 because I note that the board in their order of
4 February 15, noted on page 28 that there is no
5 evidence presented at hearing regarding the
6 value of LTD's sales or LTD's profits. So,
7 whatever stipulation Mr. Kolar and I worked out
8 in that regard and we're in the process of doing
9 that, we'll present to the board but I felt it
10 important to address that fact since the board
11 noted it in its opinion and --

12 HEARING OFFICER HALLORAN: I'm going
13 to sustain Mr. Kolar's objection. It is a bit
14 argumentative, Mr. Kaiser. Thank you.

15 MR. KAISER: Okay. But we'll endeavor
16 before this portion of the hearing wraps up to
17 provide the board with information about LTD's
18 ability to pay for an improvement 600, \$700,000
19 improvement.

20 You will hear testimony that Tom
21 Thunder in the little time he and the little
22 thought he gave to it, feels that, well, if
23 you're going to --

24 MR. KOLAR: Objection,

1 argumentative --

2 MR. KAISER: -- if you're going to
3 build --

4 HEARING OFFICER HALLORAN: Mr. Kaiser,
5 could you -- I sustained Mr. Kolar's objection.

6 BY MR. KAISER:

7 Q. We'll hear Tom Thunder, and I note for
8 the record that Leslie Weber, one of the
9 Complainant's has arrived and is present at the
10 hearing.

11 -- that Tom Thunder suggests that,
12 well, if the board were to order LTD to build a
13 noise wall, that the wall would be better
14 located at the property line, at the north
15 property line separating LTD from the Rotis and
16 at least Mr. Rosenstock. I think it's
17 significant for the board to note that Leslie
18 Weber's home does not share a common border with
19 the LTD property, that Leslie Weber's home is
20 located immediately north of something known as
21 C-100, Corporate 100, which is a completely
22 separate entity, not a respondent in these
23 proceedings. You'll hear Mr. Thunder opine that
24 I think it might be a little cheaper if we built

1 a wall up there by the Roti and Rosenstock
2 residence. And you will hear Dr. Schomer say,
3 and I believe Steve Mitchell also say, no, it
4 wouldn't actually be much, if any, cheaper, and,
5 of course, then you'd essentially be building --
6 and that the wall would have to be taller if
7 built on the noise -- on the property line, and,
8 of course, then LTD would essentially be putting
9 a new problem right at the property line,
10 trading the noise problem, which has been a
11 nuisance for the last five years, and creating a
12 new problem, a visual blight right along the
13 property line. And it's our position that that
14 would be inappropriate to put the burden for
15 solving LTD's problem on the Complainant's.

16 And just because there are
17 representatives here of the board that may not
18 be as familiar with the record, I think it is
19 important to note that while portions of the LTD
20 facility were in place before my clients moved
21 into their homes, LTD substantially expanded
22 operations in 1994 after my clients were all
23 living in their homes, expanding from the one
24 shift a day, which ran from about 7:00 until

1 3:30 in the afternoon, to the two shifts a day
2 where the noise then began as early as 6:00 in
3 the morning and continued until as late as 2:00,
4 2:30, 3:00 in the morning.

5 After hearing from Dr. Schomer, I
6 don't think the board will have any doubt that a
7 noise wall can be built in the vicinity of LTD's
8 dock area and that a properly sized noise wall
9 can be counted on to reduce by half the noise
10 that migrates from LTD's dock area to the Weber
11 home and by more than a half, one half, the
12 noise levels that -- as measured, of course,
13 predicted at the Rosenstock and Roti homes.

14 We'll be asking the board at the
15 conclusion of the hearing to order LTD to pay
16 Dr. Schomer to revise calculations so that he
17 can determine with scientific certainty the
18 precise height of a wall that would have to now
19 be located, as we've been told within the last
20 month, 16 feet north of LTD's retaining wall and
21 then order LTD to build that wall with all
22 deliberate speed.

23 We appreciate your presence here today
24 and your attention throughout these proceedings.

1 Thank you.

2 HEARING OFFICER HALLORAN: Thank you,
3 Mr. Kaiser.

4 Mr. Kolar?

5 MR. KOLAR: Thank you.

6 I know we're here for the remedy
7 portion of the hearing. I just want to make
8 clear, which may not be necessary, that LTD
9 respectfully disagrees with the finding that
10 it -- nuisance and that it has to take any
11 significant remedial steps. . . \$623,000 noise
12 wall to remedy the problem.

13 LTD would like to resolve this matter,
14 and, again, participating in the hearing and
15 remedies without waiving its right to challenge
16 the nuisance finding by the pollution control
17 board.

18 Just a quick clarification, the
19 pollution control board decision, which I'm sure
20 you've all read, has the finding that LTD was
21 actually operating a second shift since the late
22 1980s, and that is on page 5 of the pollution
23 control board decision of February 15, 2001.

24 And so that everybody understands the

1 history of use, very quickly, all of these truck
2 docks, all 18 of them, which are on the north
3 wall of the LTD warehouse and opposite this
4 staging area, every one though was in there
5 before any of these property owners moved into
6 their homes. They were all there before this
7 1995 addition, but every truck dock was there
8 before any of them moved into their homes. And
9 not all children are effected by the LTD
10 operation. Ms. Weber's son Christopher she
11 admitted at the hearing he is not affected by
12 the noise and here is her home to the northeast.

13 Now, the pollution control board
14 decision near the end of the remedy section they
15 found that \$300,000 noise wall as was discussed
16 at that time was indeed a significant sum. And
17 that's why we're here, the board wanted to have
18 more information on appropriate remedies because
19 300,000 was a significant sum, and what we get
20 as the starting point from the Complainant's is
21 a wall that they claim will cost \$623,350, and I
22 believe the evidence will show that this is not
23 even an accurate number, for the wall that Dr.
24 Schomer wants to put in you're going to be

1 talking at a minimum another 100,000, maybe up
2 to a million dollars.

3 But we believe the evidence will show
4 that a wall even if it was only \$623,350 is not
5 technically practical and not economically
6 reasonable.

7 As Steve indicated, this retaining
8 wall here, we have photos, to hold retaining
9 walls up you have to have some sort of support
10 structure. And once we got Dr. Schomer's report
11 in -- on April 30th, 2002, where he proposed a
12 25 foot height wall, right on top of the grade
13 change, so the record is clear, 25 foot high
14 wall above, 10 feet above the area where the
15 trucking operations occur, once we were provided
16 this document, which we've marked as Respondent
17 Exhibit 48, we hired an engineer to take a look
18 at, could you really put a 25 foot high wall on
19 top of a retaining wall so it is going to be 35
20 feet above the people and the truck dock area.
21 And that -- very shortly after that, we provided
22 Mr. Kaiser our opinion disclosure in response to
23 this report where we said there is some sort of
24 support structure holding up this 10 foot

1 retaining wall, that's the way they're built.
2 We thought they were -- called deadmen, it's
3 similar to this like microphone, you'd have a
4 long metal column that would be connected to the
5 retaining wall and then buried so that it holds
6 it in and the wall can't move into the truck
7 dock area. Our engineer you'll hear he
8 investigated that. He got a drawing and did
9 further investigation and then he called one
10 person after another, he kept finding that --
11 I'm not so sure that was installed, and
12 eventually tracked down they didn't use the
13 deadman but what was used was a support -- a
14 fabric. And we've got a couple of exhibits
15 which will show you, but for this retaining wall
16 you have all of these multiple blocks that go up
17 10 feet high and at certain intervals starting
18 at the bottom, you put this mesh fabric that
19 goes out a number of feet and then you put soil
20 on top of it for a number of feet, let's say 2
21 feet, put another layer of fabric, more soil,
22 another layer, until you get up to the top.
23 Once he was advised that that was what was
24 there, Jack Voyt(phonetic) advised LTD

1 Commodities, he had a hole dug in the vicinity
2 of the retaining wall and indeed they had found
3 the fabric.

4 So, LTD had no reason really to
5 investigate whether you could build a 25 foot
6 high retaining wall on top of -- excuse me, a 25
7 foot high noise wall on top of that retaining
8 wall because no one had ever proposed that. Not
9 until Dr. Schomer prepared his report, did LTD
10 learn that now we're talking a 25 foot high
11 noise wall.

12 And, in fact, I would point out on
13 page 1 of Complainant's closing brief, this was
14 what we were -- had always been dealing with.
15 They state they had also introduced after
16 hearing substantial evidence that construction
17 of a 12 foot high noise wall running the length
18 of 682 feet just north of the loading docks
19 would enable LTD to continue operations in
20 compliance with the act.

21 So, LTD was shocked when it got a
22 proposal for 25 foot high wall and set about
23 looking into whether it could be built.

24 Again, so the evidence from the

1 engineer will be that because of this support
2 fabric, there is a zone of influence, I think
3 you call it a zone where you have to stay away
4 from. The fabric goes out like 7 to 8 feet
5 north from the block wall in multiple layers and
6 the zone of influence is 16 feet, meaning if you
7 do any work within 16 feet north of the
8 retaining wall, you're going to effect the
9 structural integrity of the fabric holding up
10 the retaining wall. He is not going to tell you
11 it will fall down immediately, the closer you
12 get to the actual block, the more you effect it,
13 but if you dig, try to put support polls into
14 that support fabric, you're going to destroy the
15 retaining wall.

16 So, the evidence from the engineer is
17 that if you were required to put a wall, a noise
18 wall right at that retaining wall, that 10 foot
19 grade change, it really can't be done because
20 you're going to destroy the retaining wall. So,
21 all you do it, have to do is tear down the
22 retaining wall and build a unified structure, a
23 retaining wall with a noise wall on top of it,
24 35 feet high, and that is going to cost \$1.5 to

1 maybe as high as \$3 million, significantly
2 higher than Dr. Schomer \$623,000 proposal.

3 So, that is not at all economically
4 reasonable.

5 To get outside the zone of influence,
6 then you're in LTD's parking lot. And Jack, as
7 vice president of operations, will tell you that
8 LTD already has a shortage of parking spaces
9 here, even with these spots on the south, LTD
10 does not have enough parking spaces for its
11 employees and what it currently does is it has
12 people park at a church, it leases space from
13 the church and buses people back to the LTD
14 facility to work. And if you put a wall 16 feet
15 north, which would be outside of the zone of
16 influence, LTD would lose at least 35 to 40 more
17 parking spaces, so that is not a technically
18 practicable option because LTD cannot afford to
19 lose parking spaces.

20 The wall -- what we further did is the
21 wall proposed by Dr. Schomer, 25 feet high, is
22 not allowed by Bannockburn ordinances, David
23 Lothspeich, former Bannockburn official who was
24 involved in this particular case, actually for

1 many years having correspondence with Dr.
2 Schomer and the Complainant's, he will testify
3 that the ordinance allows a -- either 5 or 6
4 feet. Steve has an ordinance that tells you you
5 can have a 5 feet high wall. The one I got
6 certified says you can have a 6 foot high wall.
7 So, we're way beyond what the Bannockburn
8 ordinance allows. The Bannockburn ordinance
9 will tell you it has a variance provision but
10 you can't use the variance provision because it
11 allows only a maximum increase of a wall of 20
12 percent. So, that only gets you to like 7 and a
13 half feet. So, the only option would be to
14 petition Bannockburn to change the text of its
15 ordinance, which is called a text amendment, to
16 change the wording of the ordinance to allow 25
17 foot high noise walls in Bannockburn and, again,
18 that is -- you don't know what Bannockburn will
19 do in that regard. And David, the Bannockburn,
20 former Bannockburn official, he is not going to
21 tell you they would approve it or disapprove it
22 because they don't prejudge things. He just
23 will tell you that that's what you have to do,
24 that's what LTD would have to do.

1 Regarding Dr. Thunder, Dr. Tom
2 Thunder, and his work for LTD regarding a noise
3 wall, he did that because from the beginning LTD
4 was trying to resolve this problem, and so it
5 hired a noise consultant and asked him to look
6 at walls and that's where some of these
7 proposals were generated for 12 foot high noise
8 wall. And initial proposals were \$150,000, and
9 then it increased to \$300,000, but it didn't go
10 further in terms of looking that you can install
11 a noise wall at the retaining wall because no
12 one ever gave LTD a guaranty that this noise
13 wall would take care of the problem. LTD didn't
14 want to spend a significant sum of money if the
15 Complainant's were still going to complain, if
16 people who were going to build this could not
17 give LTD a guaranty that this noise wall would
18 take care of the problem and I still don't think
19 we're going to have that guaranty, I don't think
20 anybody is going to say I'll guaranty that this
21 noise wall will take care of the problem and the
22 Roti and the Webers and the Rosenstocks will
23 not complain.

24 So, what Jack will tell you, what LTD

1 is willing to do is higher a dock pilot for the
2 nighttime hours. A dock pilot would enable LTD
3 to disconnect the backup beeper on its yard
4 tractor. So, between 10:00 p.m. and 7:00 a.m.
5 the dock pilot would assist with backing up
6 trucks and maybe there would be a strobe light
7 of some sort to provide further warning of a
8 back up, but disconnect the backup beeper in the
9 truck dock area, and the dock pilot could also
10 prohibit trucks from -- or trailers from being
11 staged on this exit ramp.

12 In addition, what LTD offered and
13 stills offers, I don't think this would be an
14 appropriate civil penalty, because I don't think
15 a civil penalty could be paid to the
16 Complainant's, but LTD offered the Complainant's
17 \$20,000 to the Rotis --

18 MR. KAISER: Objection.

19 MR. KOLAR: It goes to LTD's
20 willing -- for noise abatement. We offered them
21 money for noise abatement.

22 HEARING OFFICER HALLORAN: I agree.
23 Sustain. You can address that in closing.

24 MR. KOLAR: LTD does not believe a

1 noise wall -- evidence present, cannot build one
2 where Dr. Schomer proposes. LTD will present
3 evidence that if a noise wall is ordered, it has
4 to be on the north property line because of the
5 zone of influence, but it also would be more
6 effective on the north property line because
7 initially the Complainants also complained about
8 parking lot noise and if you put it on the north
9 property line, you're also protecting them from
10 car noises and the employee parking lot. They
11 initially complained about lights. The north
12 property -- the wall on the north property line
13 to protect them from the light issues they
14 complained about, but it would also be cheaper
15 because you do not need pedestrian's openings in
16 the noise wall if you put it on the north
17 property line. Dr. Schomer will tell you and
18 even Mr. Mitchell from the wall company that
19 when you put an opening in a wall, it costs more
20 money and it actually decreases the
21 effectiveness of the noise wall.

22 The one Dr. Schomer proposes on the
23 retaining wall have these overlapping openings
24 which increase the cost and decrease the

1 effectiveness. There will be no need to open
2 these on the north property line, it can be
3 made -- Mr. Thunder will tell you, it could be
4 made of wood, which is a cheaper material. LTD
5 is not saying this is an economically reasonable
6 thing to do even on the north property line, I
7 think you're talking a minimum of a half a
8 million dollars to build a noise wall, but
9 probably the most significant reason why any
10 noise wall if ordered has to be on the north
11 property line is because under Section 24 and
12 also under the regulation relating to a
13 nuisance, 900.12, they relate to a property
14 owner does not have a right to emit noise beyond
15 its property. So, basically LTD can be as noisy
16 as it wants on its property and when noise
17 leaves its property, that is when it becomes a
18 nuisance.

19 So, LTD legally has a right to, if
20 required to put up a noise wall, to put it on
21 the north property line, as opposed to putting
22 one where it would go right through the middle
23 of their parking lot, destroy their parking,
24 take away valuable parking.

1 So, it is LTD's position that in the
2 end an economically reasonable remedy,
3 technically practical one would be that LTD hire
4 a dock pilot, disconnect the backup beeper and
5 not have trailers parking on the ramp at night
6 and that under that scenario it would no longer
7 be a nuisance.

8 HEARING OFFICER HALLORAN: Thank you,
9 Mr. Kolar.

10 I, too, for the record want to note
11 that Leslie Weber did enter the room about 20
12 minutes ago. She is one of the Complainants.

13 With that said, Mr. Kaiser, you may
14 call your first witness.

15 MR. KAISER: Thank you very much.

16 I'd call to testify Dr. Paul Schomer.

17 (Sworn in.)

18 DR. PAUL SCHOMER,
19 having been first duly sworn, was examined and
20 testified as follows:

21 HEARING OFFICER HALLORAN: You may
22 proceed.

23 DIRECT EXAMINATION

24 BY MR. KAISER:

1 Q. Dr. Schomer, could you please state
2 your full name and spell your last name for the
3 court reporter's benefit?

4 A. Paul Schomer, S-C-H-O-M-E-R.

5 Q. And, Dr. Schomer, what is your date of
6 birth?

7 A. April 20th, 1943.

8 Q. Where do you live?

9 A. I live in Champaign, Illinois.

10 Q. Could you describe for the board your
11 educational background?

12 A. I have a bachelor's in electrical
13 engineering from the University of Illinois. I
14 have a master's in electrical engineering
15 specializing in acoustics from the University of
16 California, Berkeley. And then I have a Ph.D.
17 in electrical engineering, specializing in
18 acoustics from the University of Illinois.

19 Q. What year did you receive your Ph.D.?

20 A. 1971.

21 Q. What year did you receive your
22 master's?

23 A. 1966.

24 Q. And when did you get your bachelor's?

1 A. 1965.

2 Q. Can you describe for us your work
3 experience once you got done with school?

4 A. Well, I've always worn several hats.
5 I've done acoustical consulting since
6 I was a graduate student. The initial work was
7 actually for the Illinois Institute of
8 Environmental Quality at the time in helping
9 develop the initial property line regulations
10 for the state of Illinois.

11 In 1971 I went to work in the Army
12 Corps of Engineers research laboratory and for
13 many years headed up the environmental noise
14 research for the United States Army, Corps of
15 Engineers, and I did that for 30 years.

16 I've also been an adjunct professor of
17 electrical and computer engineering at the
18 University of Illinois and had graduate students
19 do work in our laboratory and did. . .Committee
20 work and that sort of thing.

21 Currently, in addition to consulting,
22 I'm the executive director of the Institute of
23 Noise Control Engineering, which is a
24 professional society dedicated to the noise

1 control engineering and people who do that.

2 I'm also the standards director for
3 the Acoustical Society of America.

4 Q. And in addition to that, do you head
5 up a consulting group known as Schomer &
6 Associates?

7 A. That's my private consulting, yes.
8 That's what's been going on since I was a
9 graduate student.

10 Q. Okay. And you actually got involved
11 in this case initially at the request of the
12 village of Bannockburn?

13 A. Yes, initially, and I can't remember
14 all the years very well anymore, I was doing
15 work with the village of Bannockburn because
16 they were very concerned about the tollway noise
17 and for several years worked with them in trying
18 to get the Illinois Toll Highway Authority to
19 solve some of the noise problems that they were
20 creating in Bannockburn, with respect to the
21 tollway noise and was working with them when
22 this came about and I wrote two or three
23 letters, I guess I had some conversations and
24 this sort of thing, with people relative to the

1 early stages of this process.

2 Q. And when you were working for the
3 village of Bannockburn in connection with
4 highway noise issues, you were dealing with this
5 David Lothspeich?

6 A. I was dealing -- David Lothspeich was
7 the village manager and he was the one I was
8 dealing with primarily. There would have been
9 the village president at the time and perhaps
10 the village attorney I met with, and others, I
11 can't really recall, but the main person was
12 David Lothspeich.

13 Q. Just for the court reporter's benefit
14 I believe that is spelled, L-O-T-H-S-P-E-I-C-H?

15 A. I think so.

16 Q. And it was Mr. Lothspeich who made you
17 aware that there were some issues with Ms.
18 Weber, Ms. Roti, Mr. Rosenstock in connection
19 with the LTD facility?

20 A. I knew that there was an issue and I
21 remember the name Roti. I don't know that I
22 knew all of the names at the time.

23 Q. And you're aware, are you not, that
24 the LTD facility is located within the limits of

1 the village of Bannockburn?

2 A. I am, yes.

3 Q. And you're also aware that the Roti,
4 Rosenstock and Weber's homes are located within
5 the corporate limits of the village of Lake
6 Forest?

7 A. Yes.

8 Q. And I believe the record from the
9 earlier proceedings contains some letters that
10 you had written to Mr. Lothspeich in connection
11 with this matter?

12 A. Correct.

13 Q. Can you describe for the board what
14 your assignment was once the board issued its
15 opinion in February of 2001 concluding that LTD
16 was a noise nuisance?

17 A. What I did was look at the board's
18 ruling and then set about designing what I felt
19 would be a set of procedures and construction
20 options that would in my opinion mitigate the
21 noise nuisance to a sufficient degree.

22 Q. And you were retained through my
23 office by Ms. Weber, Mr. Rosenstock and the
24 Rotis?

1 A. Correct.

2 Q. And how much, just so the board knows
3 how much have you charged my clients on an
4 hourly basis for your work?

5 A. I have been charging \$140 an hour.

6 Q. And to date to approximately how much
7 have you billed my clients, the Complainant's in
8 connection with in matter?

9 A. Including expenses, I think around 13
10 or 14,000, but I'd have to check that to be
11 precise.

12 Q. All right. Now, one of the things
13 you did once you were retained by my clients,
14 the Complainants, was to review the board's
15 order of February 15, 2001?

16 A. Correct.

17 Q. And before February 15, 2001, had you
18 been out to the LTD facility?

19 A. I've been out there once or twice
20 before the February -- at least twice, maybe
21 three times beforehand. I'd been out there when
22 it first came up when I was working with the
23 village of Bannockburn, I went out there. They
24 had -- didn't used to have the garden fence and

1 stuff that they have now and was out there one
2 Sunday and looked around, of course, there was
3 nobody there, but just to be familiar with the
4 site a little bit. I can't remember if I was
5 out there a second time while I was still
6 working with the village of Bannockburn. I
7 believe I was out there at least once prior to
8 the evidence deposition that I gave in the first
9 matter. And then I've been out there maybe
10 three, four times since then.

11 Q. And in total how many hours have you
12 spent in and around the LTD facility including
13 time spent up in the vicinity of Leslie Weber's
14 home, Paul Rosenstock's home and Karen Roti's
15 home?

16 A. I'd say three to four hours.

17 Q. And while you've been out there, what
18 sort of things have you been looking at or
19 looking for?

20 A. Well, the first few times it was just
21 trying to understand a little bit about the
22 area. Once we got to this stage of designing
23 the noise mitigation, it's then that I had to
24 understand the details of where everything sits

1 and it was not until we were out there in a
2 winter setting, I remember because it was cold,
3 that I was able to see the houses that are in
4 question from the property and this is
5 significant because it was then that I realized
6 that things were up hill. Because up until that
7 time all I had ever seen was a wall of trees and
8 foliage, it is not particularly deep, but it
9 doesn't take too much if it has got leaves on it
10 and you just can't see through it.

11 Q. All right. So, in preparing to give
12 the board an opinion, one of the things you did
13 was review the board's order of February 15,
14 2001?

15 A. Correct.

16 Q. The other thing you did was view the
17 area?

18 A. Correct.

19 Q. Did you review any of the testimony of
20 that Greg Zak had offered during the initial
21 hearing?

22 A. I reviewed all of the testimony of Tom
23 Thunder, of Greg Zak and of Steve Mitchell.

24 Q. Did you review any aerial photographs?

1 A. Yes. One of the things I asked for
2 specifically was that I would need aerial
3 photographs and I needed the drawings of LTD to
4 understand the elevations in height above sea
5 level as it were that the loading dock was, that
6 the parking lot was, so that I could lay out an
7 accurate picture, if you'd like, in three
8 dimensions of the situation, because this 3
9 dimensional picture is critical to being able to
10 design something validly. And I recall it took
11 us many months to get these drawings from LTD.

12 Q. And eventually --

13 MR. KOLAR: Objection to that comment
14 and move to strike it as nonresponsive.

15 HEARING OFFICER HALLORAN: So
16 stricken.

17 BY MR. KAISER:

18 Q. Eventually did you get the drawings or
19 did -- the types of drawings necessary for you
20 to begin a valid analysis of the noise, THE LTD
21 document?

22 A. We eventually got the drawings.

23 Q. And this 3-D picture, in your review
24 of the record for the first phase of the

1 hearing, did you notice whether Mr. Thunder had
2 ever generated a 3 dimensional representation of
3 the LTD dock area in relation to the
4 Complainant's homes?

5 A. What I could tell from the kind of
6 analysis that I saw that I think was one of the
7 exhibits was that Mr. Thunder had not considered
8 the elevation of the houses in his analysis. He
9 had done an analysis based upon everything being
10 the same height as the -- I would say the
11 loading dock floor, which was, which is 676 feet
12 is the elevation of the loading dock where the
13 trucks are above sea level and it looked to me
14 like his analysis was based upon everything
15 being at 676 feet, like the Roti house being at
16 676, and the Weber house being at 676, and the
17 Rosenstock house being at 676, and they're not.
18 They're higher than that.

19 Q. And what effect does -- why is that
20 important, why was that a factor you considered?

21 A. Well, probably should have some kind
22 of a visual aid but we don't so we'll try to
23 explain this.

24 The purpose of a noise barrier is to

1 block the sound. So, number 1, you can't be
2 able to see the noise source from where the
3 receiver is if it's going to work. You've got
4 to obscure the person's vision so-to-speak, the
5 line of sight from the source that the receiver.
6 And so if we picture a source on the ground and
7 a receiver on the ground, then any kind of a
8 little wall blocks the line of sight. I think
9 that is clear. So, if there was a source on the
10 ground and a receiver on the ground, then a
11 little wall blocks the line of sight.

12 If for some reason the receiver
13 happens to be up in the air some considerable
14 distance, 10, 15, 20 feet, compared to the
15 source, then the wall is going to have to be,
16 depending upon where it is, considerably taller
17 than it would be otherwise to block the line of
18 sight. And this is fundamentally what is going
19 on, that we need to be able to block the line of
20 sight, plus, there has to be more than looking
21 at the line of sight, but this is why the
22 elevations are important in designing the wall.

23 Q. And you concluded that the elevation
24 of the loading dock was 676 feet above sea

1 level?

2 A. That was off the diagrams from --
3 supplied by LTD.

4 Q. Those were construction diagrams?

5 A. They seemed to be.

6 Q. How did you determine the height of
7 the Roti home?

8 A. This was from USGS maps.

9 Q. And USGS, United States Geological
10 Survey Service?

11 A. One of those.

12 Anyway they were U.S. Government maps
13 and topography of the area.

14 Q. Are those the types of document that a
15 person in your field typically relies upon to
16 establish elevations?

17 A. I rely upon those, either those or
18 things based on them, like the modern computer
19 mapping programs, some of these things are even
20 available on the Internet now.

21 Q. And you determined that the Roti home
22 was -- well, if you turn to your report, do you
23 have a copy of your April 26, 2002, report?

24 A. Yes, I do, and let me -- I'm pretty

1 sure that it was 681 but I'd sure like to --

2 MR. KOLAR: Can I bend his microphone
3 over it's right in the middle of his face?

4 HEARING OFFICER HALLORAN: Oh, sure.

5 MR. KOLAR: Thank you.

6 MR. RAO: Blocking your line of sight?

7 MR. KOLAR: Right.

8 THE WITNESS: Here we go. The Roti
9 home was at 687.

10 BY MR. KAISER:

11 Q. Did you determine the elevation, the
12 base elevation for Paul Rosenstock's home?

13 A. That I had at 692 feet.

14 Q. And with respect to Ms. Weber's home?

15 A. 697 feet.

16 Q. And all of those are then above the
17 base elevation of the dock which is 676?

18 A. Correct. Yes.

19 Q. And did you determine what the base
20 elevation of LTD's north parking lot is?

21 A. It's not a constant and neither is the
22 loading dock itself, but in my analysis I
23 consider it nominally about 9 feet above.

24 Q. When you say it is not a constant,

1 there is some slope to the land so that at the
2 west end of the dock it is slightly lower than
3 at the east end, is that what you're --

4 A. West would be a little lower than east
5 and south would be lower than north.

6 Q. All right. Now, I want to go back and
7 have you tell the board what other things you
8 did in preparation for your opinion report dated
9 April 26, 2002, did you confer with the
10 Complainants?

11 A. I've met with the Complainants only
12 recently in terms of the details of their
13 houses.

14 What I relied on originally was the
15 order of the board, and as I said, the technical
16 documents and what the Complainants had
17 complained about and what the nature of the
18 board's decision was.

19 Q. And during some of that time that you
20 spent out in the vicinity of the LTD dock area,
21 did you ever devote time simply to watching the
22 traffic patterns and the action of the yard
23 tractor and trailers and tractors coming in and
24 out of the LTD facility?

1 A. Yes, I think we spent the better part
2 of an hour at least doing that.

3 Q. And what sounds and what noises do you
4 recall observing in the vicinity of the LTD dock
5 area?

6 A. I think I recall all of the noises
7 that were listed except for maybe the sounding
8 of air horns. I don't think I have ever heard
9 truck horns in any of the times I've been there,
10 but certainly always hear the air brakes, the
11 connecting or when -- like I said, I was there
12 once on a Sunday, of course, when nobody was
13 there, so I heard no noises on the Sunday when
14 nothing was happening and nobody was there, but
15 when I'd been there and the facilities been
16 operating, I've heard the air brakes and some of
17 the connecting and disconnecting and some of the
18 movement of either the yard tractor or of over
19 the road tractors. I can't say that I've heard
20 a lot of every kind of noise but I've heard I
21 think most of the noises.

22 Q. When you say most of the noises, those
23 are most of the noises identified by with the
24 board in its findings of fact and opinion dated

1 February 15, 2001?

2 A. That's correct.

3 Q. Did you talk with Steve Mitchell at
4 all?

5 A. I've talked with Steve Mitchell
6 several times, met with him at least once that I
7 recall.

8 Q. Who is Steve Mitchell?

9 A. Steve Mitchell is the president of the
10 Huff Company and the person who did the cost
11 estimate for the noise wall.

12 Q. And could you summarize briefly the
13 opinion that you set forth in your April 26,
14 2002, report, which I'll mark for purposes of
15 identification as Complainant's Exhibit -- I was
16 going to say 1 but we're --

17 HEARING OFFICER HALLORAN: We can
18 start from scratch. Exhibit 1?

19 MR. KAISER: All right.

20 THE WITNESS: If I could drop back for
21 a minute, I think that it is important to take a
22 look at what the board said. And the board
23 found that there was a nuisance and this
24 nuisance exists at night, and night and day are

1 very important in the pollution control board
2 rules and regulations, because, well, here the
3 board has found a nuisance. In terms of the
4 numerical limits there is different numerical
5 limits for day and for night. Night is 10:00
6 p.m. to 7:00 a.m. according to the definition of
7 the board. And daytime is 7:00 in the morning
8 until 10:00 p.m. at night. And I took the
9 board's finding that this was a nuisance at
10 night, especially at night, to be very
11 significant in this particular situation because
12 all three of these homes are two story homes,
13 and the bedrooms, the rooms that the people
14 reside in at night are on the second floor, and
15 this is significant because this means that to
16 reduce the nuisance one has to reduce the noise
17 on the second floor of these homes, otherwise it
18 doesn't -- it didn't make a lot of sense to me
19 to design a wall that reduces noise at let's
20 say a height of microphone 4 feet out on the
21 lawn, when the problem is 20 or 24 feet in the
22 air on a high second floor. So, this is a very
23 significant point in my analysis, and one that I
24 want to fully explain that as I read what the

1 board said, the nuisance is at night.

2 BY MR. KAISER:

3 Q. Did you make an effort to determine
4 then the height of the second story at Leslie
5 Weber's home?

6 A. I had -- we had each of the homeowners
7 tell us the height to the top of the second
8 story windows because it's the windows that we
9 have to protect from sound. And so we got the
10 heights of the second story windows and the --
11 I'm pretty sure of these numbers, the -- here it
12 is. The Roti house is 18 feet, which is fairly
13 typical. The Rosenstock and Weber houses are
14 taller. The Rosenstock is 21 feet to the top
15 of the second story windows, and the Weber's are
16 24 feet to the top of the second story windows.

17 So, this is becoming where the
18 receivers are very high in the air compared to
19 the source. And so because the receivers are
20 very high in the air, one needs to have taller
21 walls than one would imagine just at first blush
22 without getting all of these elevations and
23 going through the analysis process.

24 Q. So, when you say the top of the Roti's

1 second story window is 18 feet high, that is 18
2 feet above the Roti base elevation?

3 A. Yes.

4 Q. Which is already elevated in relation
5 to LTD's dock?

6 A. Yes.

7 Q. And the top of the second story window
8 at Paul Rosenstock is 21 feet above his base
9 elevation, correct?

10 A. Correct.

11 Q. Which, again, is already substantially
12 above the base elevation of LTD's dock?

13 A. Correct.

14 Q. And, similarly, the top of the second
15 story at window at Leslie Weber's home is 24
16 feet above the base elevation at Leslie Weber's
17 home?

18 A. Yes.

19 And it's worth adding the two numbers
20 up and by way of example at the Weber house, we
21 have 24 feet for the top of the window above the
22 ground, and the ground is already 21 feet above
23 the loading dock, so we're looking at 45 feet.
24 That's like being up a good size hill already.

1 Q. And does that effect the way in which
2 noise from LTD's dock operation migrates to the
3 Weber household?

4 A. Yes, it certainly does. One of the
5 things, if I can digress for a moment to the
6 Bannockburn situation where Bannockburn had
7 employed my services to try to get a tollway
8 wall, the problem we had at Bannockburn was that
9 the homes in question were sitting up in the
10 air, if I recall right, some 20, 30 feet above
11 the tollway, and then they were again these two
12 story homes and the tollway, the whole highway
13 authority prediction just ignored the fact that
14 these homes were up hill and over an open area,
15 over -- and in that case a pond that was a hard
16 surface that reflects sound rather than absorbs
17 it. And we have much the same situation
18 especially with the Weber home where it's really
19 sitting up in the air over a hard surface and
20 there is just -- when we normally think about
21 how sound propagates, we think about it close to
22 a grass surface where there is a lot of
23 absorption and there just isn't any of this
24 absorption. We talk about this in terms of

1 ground to ground propagation versus like ground
2 to air propagation. And this is this ground to
3 air situation where the sound is just going to
4 be a lot louder than what you'd measure if you
5 just measured propagating over a grass covered
6 surface.

7 Q. Did you -- so, what are the absorptive
8 capacities of the paved parking lot north of
9 LTD's dock facility?

10 A. Well, they're going to be slightly
11 better than water but a whole lot worse than
12 grass.

13 Q. And is the same true for the paved
14 parking lot north of the Corporate 100 office?

15 A. Yes, it is.

16 Q. What about this line of trees, does
17 that provide any significant noise reduction?

18 A. There is not any significant noise
19 reduction, it's more of a visual barrier. The
20 rule of thumb I've always used is one DB per 100
21 feet of dense foliage, thickness of 100 feet.
22 The standard that I actually used actually has
23 some figures in it broken out in more detail
24 but --

1 Q. So, 100 feet of thick dense foliage
2 result in a reduction of 1 decibel?

3 A. Yep, but we can go by the standard,
4 that is just the rule of thumb that I've always
5 used but it is not dissimilar.

6 Q. So, then you understood to eliminate
7 or mitigate the nuisance, LTD would have to take
8 action to stop noise from its dock from
9 migrating to the second story of the Roti,
10 Rosenstock and Weber homes, is that true?

11 A. If the problem is at night, which is
12 what the board finding was and it's a nuisance,
13 then people are in their bedroom, the place to
14 mitigate the noise is in their bedroom.

15 Q. All right. Did you propose certain
16 steps LTD could take to reduce noise at its dock
17 area?

18 A. Well, certainly in my report I list
19 two things, one is turning off the backup alarm
20 and perhaps using a strobe light at night and
21 the other would be to build a wall. What I
22 didn't put in the report but which is certainly
23 a clear alternative would be to not operate at
24 night.

1 Q. Now, the backup warning beeper is one
2 of those high pitched beepers that is engaged
3 when a tractor is operating in reverse, correct?

4 A. Correct.

5 Q. And that is an impulsive noise?

6 A. I would call that an impulsive noise,
7 yes.

8 Q. And, in fact, that noise is designed
9 specifically to get people's attention and so it
10 operates right in those frequencies that the
11 human ear is attuned to, correct?

12 A. I'd almost call it piercing.

13 Q. And one of the recommendations you
14 make in your April 26, 2002, report is that LTD
15 during the nighttime hours of operation turn off
16 the warning beeper?

17 A. That would only be on the yard
18 tractor. They certainly have no control over
19 any backup alarms that might be on the
20 individual tractors that come in and out.

21 Q. Did you also make some recommendations
22 with respect to the use of the ramp and the Lake
23 Side Drive?

24 A. When we were out there, one of the

1 things that we didn't know about until we were
2 out there was that they regularly park trucks,
3 my memory serves me, I don't remember whether
4 they were the empty or the full trucks that are
5 ready to be moved off, but they're kind of
6 trying to fit, you know, 10 pounds of material
7 in a 5 pound bag there, because their business
8 seems to be so good that it is overflowing, and
9 they're parking these trucks on this ramp
10 leading to Lake Side Drive, and that means that
11 the yard tractor, I think it was, pulls them out
12 to that point and disconnects, and then at some
13 point the over-the-road tractor comes in, picks
14 them up and collects them. There was also
15 trucks waiting to get end loaded that parked on
16 the other side of the ramp sort of going
17 downhill, would sit there idling, waiting for
18 space to get into the place.

19 Q. Now, Dr. Schomer, so that there is no
20 confusion or at least so we can do our best to
21 eliminate confusion, I'd like you to step down
22 from where you're testifying and come over to
23 what has previously been marked as Respondent's
24 Exhibit 89, and show us, if you can on this

1 aerial photograph, where you observed these
2 trucks parked and idling?

3 A. We have the submerged -- the area of
4 the loading dock where the area is 9 feet below
5 the parking lot grade on average. And then we
6 go up hill along this kind of entrance to the
7 loading dock area, this is a road or a -- not a
8 road but it's a paved part of the area that runs
9 generally from the southeast to the northwest
10 and connects to the exit onto Lake Side Drive.
11 And rather than having enough space within the
12 submerged area, they have trucks parked almost
13 clear along here --

14 Q. Indicating the ramp area?

15 A. -- the ramp area being connected and
16 disconnected and trucks waiting up here also
17 idling go down to the ramp area.

18 Q. And when you say idling, you're
19 pointing to that -- the little finger of land
20 and grass?

21 A. A little island like.

22 Q. Just --

23 A. -- peninsula land.

24 Q. -- at the northeast corner of LTD's

1 dock area?

2 A. Correct.

3 And then I've also observed on one or
4 two occasions, although they're not supposed
5 to -- trucks clear out on to Lake Side Drive
6 parked and idling because there just does not
7 appear to be enough space.

8 Q. Space within LTD's own dock?

9 A. Correct.

10 Q. And that would be indicated, about how
11 far down did you see trucks on Lake Side Drive?

12 A. They'd be as close as possible, I'd
13 say, to the ramp area. So as far north as they
14 could be without blocking the ramp.

15 Q. And would that be even with the top of
16 this pond?

17 A. It would be generally in that area.

18 Q. Okay. Indicating for the record the
19 area just to the north of the pond but south of
20 the peninsula of the land marking the entrance
21 to the LTD's dock area.

22 Thank you, Dr. Schomer, if you can
23 have a seat.

24 Now, do the trucks that you just

1 described parked and idling in the ramp area and
2 even on Lake Side Drive, does that pose any
3 particular challenge in terms of designing a
4 noise mitigation measure?

5 A. Well, that was an expansion to what I
6 understood the problem to be.

7 I understood that the activities were
8 within the dock area and not sort of spilling
9 out along the ramp and onto the street also.
10 And what I had in my report is an optional
11 additional 150 feet and a relocation of the ramp
12 being the only solution if they're going to need
13 to park along the ramp is to actually build a
14 wall along there which would take a little bit
15 of a relocation of the ramp in order to fit
16 everything in and still be able to get into the
17 parking lot.

18 Q. Did you conclude whether the
19 Complainants were effected equally by the
20 activities on the ramp and on Lake Side Drive or
21 whether one of the Complainants might bear
22 more -- a greater impact from those activities?

23 A. Well, the -- actually the only one
24 that would get any shielding from the ramp would

1 be the Roti house. The Rosenstock and Webers
2 would both be effected pretty much the same by
3 the ramp.

4 Q. Did you consider alternative control
5 options to construction of a wall, such as
6 placement of acoustically absorptive materials
7 on the north side of LTD's north wall?

8 A. I did and that would reduce some of
9 the noise but actually in the calculations I
10 did, I gave to be conservative a bit in the
11 prediction, I assumed that the wall on average
12 were 50 percent absorbing to begin with just in
13 their basic configuration. Of course, the hard
14 walls that are up high are not at all that
15 absorbing, they may be 5 or 10 percent
16 absorbing, but I assumed the 50 percent by --
17 because I assumed the doorway would be open a
18 lot of the time because I had observed the doors
19 being open a lot of the time and with the open
20 doors then you wouldn't be getting reflections
21 in that area. So, in the calculations I assumed
22 that. Once I made that assumption, then totally
23 adding absorption to go from 50 percent to 100
24 percent, gave about a decibel or 2 of

1 improvement. If I had originally assumed
2 totally reflecting, then there would have been a
3 greater improvement, but you still have the
4 direct sound to deal with. The sound that comes
5 directly from the source, the engine exhaust,
6 the banging off the doors, the air brake,
7 whatever the source is, you have the direct
8 sound, you would just eliminate the reflected
9 sound and it would be -- it wasn't enough.

10 Q. All right. And do you have an opinion
11 within a reasonable degree of scientific
12 certainty as to whether placement of
13 acoustically absorptive materials on the top
14 third of the north wall of the LTD facility by
15 itself would substantially mitigate the
16 nuisance?

17 A. Yes, if we just did that, I don't
18 think there would be any noticeable difference
19 whatsoever.

20 Q. Did you consider whether enhancement
21 of the rubber bumper on the posts at the north
22 end of the parking area within LTD's dock would
23 have a significant impact on noise migration?

24 A. It would seem to me that there would

1 be a minor improvement to that sound but not too
2 much of a difference to the overall.

3 Q. Would that effect or would that have
4 any impact on the migration of the noise
5 generated by release of air from air brakes?

6 A. It wouldn't effect the air brake
7 noise.

8 Q. Would it effect noise from the muffle
9 on the yard tractor?

10 A. It wouldn't effect any of the engine
11 noise.

12 Q. Would it effect the noise generated
13 when the fifth wheel engages with the pin from
14 the trailer?

15 A. It wouldn't effect any of that noise.

16 Q. Did you consider the dynamic created
17 within the environment in the LTD dock area by
18 the fact that there are empty trailers in that
19 area?

20 A. Well, because there is trailers in
21 that area and so many, I thought that there
22 would be no benefit to lining the retaining wall
23 with absorptive material. And so one of the
24 things I didn't recommend is to line any of the

1 retaining walls with absorptive material because
2 I felt that that would be blocked so much of the
3 time by trailers as to not be a worthwhile noise
4 mitigation endeavor.

5 Q. Does an empty semitrailer bear any
6 acoustical resemblance to a violin or a piano?

7 A. One of the things to understand about
8 this and when you deal with these trucks it can
9 be a little misleading where the noise source
10 is.

11 And I've had experience with this in
12 other kinds of cases and other settings, but if
13 people are familiar with a wooden box, it's a
14 resonator. That's how you get the sound of a
15 piano or a sound out of a violin or a sound out
16 of a guitar, cello, is you have this resonating
17 box, and, of course, with a musical instrument,
18 it's designed to resonant -- have resonance in a
19 harmonious fashion. Nobody tunes the box which
20 is the trailer to be resonant and in a
21 harmonious fashion but it is still going to have
22 resonances. And what happens is you may think
23 that your noise source is down low, like the
24 connecting of the fifth wheel or hitting the

1 loading dock but you really have this whole box
2 that is 12 or 16 feet in the air going into
3 vibration, and it ends up being that your noise
4 source can be a lot higher in the air than you
5 think it is and much more distributed over a
6 wider space than you think it is. And that is
7 part of what needs to be understood about these
8 trucks. It is not as simple as it seems. It's
9 not one given height or one simple point but
10 much more distributed and can be -- it's hard to
11 quantify but qualitatively this is what is going
12 on.

13 Q. Do you have an opinion within a
14 reasonable degree of scientific certainty as to
15 whether human yard -- a person, a human spotter
16 put out in the LTD dock area between the hours
17 of -- well, during the evening shift, that a
18 human spotter could take actions to eliminate
19 muffler sounds from the yard tractor?

20 A. I don't see how that would occur.

21 Q. Could that human spotter working the
22 night shift eliminate the noise caused by
23 tractors accelerating up the ramp?

24 A. I don't see how that would be

1 effective.

2 Q. Could the human spotter eliminate
3 noise caused by tractors releasing their air
4 brakes as they come to a stop at the bottom of
5 the ramp?

6 A. I don't see how that would be
7 effective.

8 Q. Could a human spotter eliminate the
9 noise caused by the joining of the fifth wheel
10 with the pin on the trailer?

11 A. I don't see how that would be
12 effective.

13 Q. What would in your opinion be
14 effective in reducing noise received at the
15 Roti, Rosenstock and Weber homes?

16 A. What I did, and the report shows this
17 of course, is to lay out a noise wall and the
18 noise wall design was based upon the hearings
19 and testimony that went before it, wasn't done
20 in a void. The wall I laid out was more or less
21 in the identical position to where Tom Thunder
22 had laid out the wall originally, and that was
23 some 5 or 6 feet north of the retaining wall, a
24 few feet north of the retaining wall. The only

1 thing I did different was that instead of making
2 it about 600 and something feet, which was
3 either the Thunder or the proposal that had been
4 drawn at the request of LTD by Mitchell, at the
5 west side I took away some significant part of
6 the wall because the way that the wall had
7 originally been designed it wrapped around the
8 west side of the trailer enclosure and really in
9 my opinion didn't serve any useful purpose to
10 protecting the homes in question, so I shortened
11 the wall.

12 Q. So, originally in Tom Thunder's design
13 there was the wall wrapped this west end of the
14 dock area?

15 A. At least in the papers I reviewed,
16 whether that was part of Tom Thunder's personal
17 design or part of the design that they had the
18 Huff Company do, I can't recall, but in the
19 documents the wall wrapped around the very west
20 end of the loading dock where they parked
21 trailers. Again, I can't recall whether these
22 were the empty or the full trailers, but they
23 parked trailers for some purpose waiting there
24 up to maybe, I'm going to say half a dozen

1 trailers and, it just didn't make sense to put a
2 wall over there, so I took away, I don't know,
3 maybe 100 feet of wall.

4 Q. And just for the record, on
5 Respondent's Exhibit 89 that would be the west
6 end of the dock located about 2 inches above the
7 one in the 1986?

8 A. Correct.

9 Q. All right. And you took that away
10 because you didn't think it was necessary and
11 would have no -- serve no purpose, it wouldn't
12 reduce noise migrating to the Roti, Rosenstock
13 or Weber home?

14 A. That's correct.

15 Q. All right. What else did you do?

16 A. After that, one of the elements that
17 was included in the cost was these entries that
18 counsel spoke about. These entries were not
19 something that I brought up out of the blue but
20 these were also included in the original
21 proposals presented by LTD, and as he points out
22 for noise purposes those entries aren't
23 necessary and LTD could easily build these walls
24 without those entries and have their employees

1 walk a little further around, so I'm not
2 convinced the entries are needed, and if cost
3 were an issue, the entries that have been spoken
4 about that were part of the original design that
5 LTD presented could be taken out and that money
6 saved.

7 Q. And there are documents in the records
8 that refer to labyrinths, are there not?

9 A. Yes.

10 Q. And those labyrinths -- can you
11 describe for the members of the board what those
12 labyrinths, what their function is?

13 A. The labyrinths are kind of like an
14 overlap, an overlap of sound absorbing materials
15 so that there is, again, no line of sight, even
16 though there is an entry, it's kind of like I go
17 forward, I make a left turn, I go several feet,
18 I make a right turn to get in, and there is this
19 little hallway, if you like, that has got
20 absorbing sound, sound absorbing material on it,
21 so that a person can walk through but they have
22 to make a couple of turns in order, they have to
23 make a left turn and then a right turn to get in
24 and out, but those need not be a part of the

1 design. Those are solely for the convenience of
2 LTD and its employees and need not be included.

3 Q. All right. Can you tell us what else
4 you did?

5 A. All right. At that point, I decided
6 on, first of all, the method of calculation I
7 would use to predict how the sound went from the
8 loading dock to the three homes in question and
9 to do --

10 MR. KAISER: If I could just stop you
11 for one second.

12 HEARING OFFICER HALLORAN: Off the
13 record.

14 (Off the record.)

15 HEARING OFFICER HALLORAN: Back on
16 record.

17 We're back on the record. We took
18 about a ten minute break. It's 11:05.

19 Mr. Kolar.

20 MR. KOLAR: I was just going to state
21 that I -- it's my position, thinking about it
22 more, is that Dr. Thunder would sit outside
23 until Dr. Schomer is complete, and then I would
24 probably be moving to exclude witnesses, he'll

1 sit out and Dr. Schomer will sit out when Dr.
2 Thunder is testifying.

3 MR. KAISER: Mr. Halloran, during that
4 same 10 minute I was able to give it more
5 thought and thought it might be helpful if Mr.
6 Thunder were allowed to remain to the extent he
7 could assist Mr. Kolar in understanding Dr.
8 Schomer's testimony and then reciprocally Dr.
9 Schomer could sit with me at counsel's table
10 when Mr. Thunder is testifying, so that Dr.
11 Schomer could assist me in understanding Mr.
12 Thunder's testimony.

13 HEARING OFFICER HALLORAN: Is Mr.
14 Thunder Mr. Kolar's witness?

15 MR. KOLAR: Yes, he is.

16 HEARING OFFICER HALLORAN: No, that's
17 fine but Mr. Kolar you want Mr. Thunder --

18 MR. KOLAR: I don't want Dr. Schomer
19 sitting in when Dr. Thunder is testifying, so
20 I'm saying that Dr. Thunder would go out now,
21 which Steve initially objected to him being
22 here.

23 HEARING OFFICER HALLORAN: Anything
24 else to add?

1 MR. KAISER: I just think in this
2 situation, I think the usual rule for excluding
3 witnesses is that you don't want their memories
4 to be contaminated by hearing a different
5 version of factual events, was the light red or
6 green, they were 10 feet back, no, they were 15
7 feet back, and you don't want fact witnesses to
8 be influenced by -- their memory to be
9 influenced by what they hear from the stand. In
10 this situation we're talking about paying expert
11 witnesses who are talking about the
12 effectiveness of certain noise measures.
13 They've exchanged reports, the nature of the
14 testimony is somewhat technical and I know that
15 I would be assisted by having Dr. Schomer
16 present to hear Dr. Thunder's testimony and to
17 assist me in developing appropriate
18 cross-examination. So, I think the policy that
19 favors generally exclusion of fact witnesses
20 doesn't apply in this situation because it would
21 be helpful to me and by extension to my clients
22 to have Dr. Schomer here, I'm asking that the
23 board deny the motion to exclude technical
24 witnesses like Dr. Schomer.

1 HEARING OFFICER HALLORAN: Mr. Kolar,
2 anything further?

3 MR. KOLAR: No.

4 HEARING OFFICER HALLORAN: I'm going
5 to deny your motion, although it is a little, I
6 guess, premature at this point since Dr. Schomer
7 is still on the stand, but when the time comes,
8 Dr. Schomer may remain in the hearing room, when
9 the time comes.

10 In any event, Dr. Schomer, you're
11 still under oath and reminded. Mr. Kaiser, you
12 may proceed.

13 MR. KAISER: Thank you.

14 I note that I had initially referred
15 to Dr. Schomer's April 26, 2002, report, we're
16 talking about identifying it as Complainant's 1,
17 I understand that it might be better --

18 HEARING OFFICER HALLORAN: Can be a
19 lot less confusing, you're right, we'll label
20 the exhibits -- Mr. Kolar, have you labeled your
21 exhibits already?

22 MR. KOLAR: Yes, I labeled his report
23 Respondent Exhibit 48.

24 HEARING OFFICER HALLORAN: We can do

1 it that way, too.

2 MR. KAISER: I'll call it Respondent's
3 48.

4 HEARING OFFICER HALLORAN: We'll just
5 continue on from the first hearing, I just want
6 the record to reflect. So, it would be
7 Respondent's Exhibit 48, Mr. Kaiser?

8 MR. KAISER: That's fine. That's
9 fine. And I have talked to Mr. Kolar, and he
10 has no objection. I've got two copies of this.
11 It might be helpful to the board's
12 representatives to have copies in front of them
13 as I work through this next section of Dr.
14 Schomer's testimony.

15 HEARING OFFICER HALLORAN: Okay.
16 Thank you.

17 BY MR. KAISER:

18 Q. Before we turn our attention more
19 fully to your report and the manner in which you
20 design a noise wall, did you give any
21 consideration as to whether a berm would be an
22 appropriate method for reducing the migration of
23 noise from LTD's dock area to the Complainant's
24 homes?

1 A. In terms of building a berm, let's say
2 in place of the wall, which would mean that the
3 berm would start at the present retaining wall
4 and go nominally north, I thought that a berm
5 would take up too much space compared to LTD's
6 needs. Typically a berm let's, say if we had a
7 berm that was 25 feet tall, then it would have
8 to be -- you could probably get by with it being
9 50 feet wide, but it takes some -- a lot of work
10 with the vegetation to stabilize that slope and
11 then you kind of need mountain goats or somebody
12 to keep it mowed. So, more typically a berm is
13 made with 2 to 2 slope, which would make it
14 closer to 100 feet wide. That does two things.
15 The berm is the cheapest thing you can build.
16 Moving dirt is cheaper than building a wall and
17 by having the slope that you have you don't have
18 to worry about absorbing material because the
19 grass itself is somewhat absorbing. So, there
20 is a lot of good things about berms when you can
21 use them. One of the bad things about berms is
22 it takes up space and a second bad thing about
23 the berm is it moves your top of the wall, if
24 you like, the top of the wall is the peak of the

1 berm, that further from the noise source. So,
2 that if you have a berm that is 50 feet wide,
3 then what in effect you've done is you've moved
4 your wall 25 feet further from the noise source.
5 If you had a berm that was 100 feet wide, you'd
6 have moved your wall 50 feet further from the
7 noise source because the top of the wall is --
8 the top of the berm, excuse me, in the middle of
9 the berm.

10 Q. Is there any benefit to having the top
11 of the wall closer to the noise source?

12 A. The closer you are to the noise
13 source, the more effective theoretically the
14 barrier is and also more effective in a
15 practical sense the barrier is. And so by using
16 a berm you end up having to be somewhat taller
17 than you would have had to be if you used a wall
18 and you end up with a wide footprint in terms of
19 land area.

20 Q. Now, have you had a chance to observe
21 noise berms constructed within the village of
22 Bannockburn in close proximity to the LTD
23 facility?

24 A. Yes. Right to the east of the LTD

1 facility are office buildings, as I understand
2 them, and I think that it's actually visibly on
3 the picture that is up there, but on the very --
4 next to LTD is, first of all, a big pond and
5 just to the north of that pond is a building
6 C-100. And then to the east of that, to the
7 east of the pond is a -- kind of like a --
8 almost an L-shaped building but with the two
9 legs of the L almost equal in length. And just
10 to the east and north of that L-shaped building
11 is a berm and that berm is about 25 feet tall.

12 Q. I'd like to show you what I'm marking
13 for purposes of identification as --

14 HEARING OFFICER HALLORAN: We're going
15 to go off the record.

16 (Off the record.)

17 HEARING OFFICER HALLORAN: We're back
18 on the record.

19 Based on the last hearing, I've
20 decided to start from scratch regarding
21 exhibits. And, first of all, Dr. Schomer's
22 report dated April 26, 2002, will be marked as
23 Complainant Exhibit A, for identification. You
24 haven't offered that yet, Mr. Kaiser. And then

1 Respondent's exhibits will start with
2 Respondent's Exhibit A.

3 Thank you.

4 You may proceed.

5 MR. KAISER: Thank you, Mr. Halloran.

6 I'm now marking for purposes of
7 identification, a group exhibit, which is
8 Complainant's B and I note that within that
9 group exhibit I have labeled photographs 1
10 through 11. I've previously shown copies of
11 these photos to Mr. Kolar. And I'm now showing
12 them to Dr. Schomer.

13 BY MR. KAISER:

14 Q. Dr. Schomer, can you take a look at
15 these photographs and tell me what is shown in
16 those photographs?

17 MR. KOLAR: Show my objection. He
18 showed these to me before but I don't think
19 they're relevant. Dr. Schomer said a berm would
20 take up too much space. Now, he is going to
21 show him the photographs of the berms to the
22 east. I don't see the relevance.

23 MR. KAISER: Well, I do this for two
24 reasons. One to show what a berm looks like and

1 to illustrate that point of the top of the berm
2 being further removed from the noise source.
3 And, two, within this series of photographs
4 there is also a barrier enclosing a cooling
5 system just to the east of this Corporate 300,
6 which is shown on Respondent 89. And I'm taking
7 this a little out of order, but we anticipate
8 LTD calling David Lothspeich, the village of
9 Bannockburn representative, who is going to say
10 Bannockburn prohibits walls in excess of 6 feet
11 in height, unless there were a text amendment.
12 So, I want to show -- this is getting ahead, but
13 because Dr. Schomer is here from Champaign,
14 Illinois, and may not be here tomorrow if
15 Lothspeich were called tomorrow, I want to put
16 in these photographs now because I would also
17 anticipate using in cross-examination in
18 connection with Mr. Lothspeich's testimony.

19 HEARING OFFICER HALLORAN: Mr. Kolar,
20 anything further?

21 MR. KOLAR: I think it is
22 unnecessarily extending his testimony. He
23 should show the photo to Mr. Lothspeich when he
24 testifies this afternoon.

1 HEARING OFFICER HALLORAN: You know, I
2 think, for the purposes, I think, it would be
3 helpful for the board and I will rule your
4 objection and photos 1 through --

5 MR. KAISER: Complainant's Group
6 Exhibit B, 1 - 11.

7 HEARING OFFICER HALLORAN: You may
8 proceed.

9 BY MR. KAISER:

10 Q. Dr. Schomer, have you had a chance to
11 look through those photographs?

12 A. I've looked through them.

13 Q. What do you recognize those
14 photographs to be?

15 A. This is the general area that I was
16 just speaking of that -- north and a little bit
17 east of the -- what I call the L-shaped building
18 on the picture, the aerial photograph, is the
19 eastern most building that is visible on the
20 photo, and this berm is shown here, and I'd say
21 this berm is somewhere between a 1 to 1 and 2 to
22 1 slope, so, a little steeper than some but not
23 quite as steep as it could be, and it goes up
24 about 25 feet in the air and it would have the

1 effect of protecting the residents of
2 Bannockburn that were east of this area from
3 noise.

4 Q. And do those photographs truly and
5 accurately depict that area that you've just
6 described, just to the northeast of this
7 L-shaped building, Corporate 300?

8 A. I believe so.

9 Q. And you've been out there as recently
10 as yesterday, correct?

11 A. I've been out there a couple of times
12 as recently as yesterday.

13 Q. And the photographs truly and
14 accurately depict the conditions at that
15 location as recently as yesterday evening, do
16 they not?

17 A. Yes.

18 MR. KAISER: I'd move for admission at
19 this time into evidence of Complainant's Group
20 Exhibit B, photographs 1 through 11.

21 MR. KOLAR: No objection.

22 HEARING OFFICER HALLORAN:
23 Complainant's Group Exhibit B, photos 1 through
24 11 are admitted.

1 BY MR. KAISER:

2 Q. Now, with respect to what is shown in
3 these group photos 1 through 11, is there a wall
4 of some sort?

5 A. I think this is actually also, the
6 foundation of this is visible on that aerial
7 photo so --

8 Q. That lighter rectangle?

9 A. I believe. I am not certain of that
10 but that would be my supposition but as a part
11 of this and what you've labeled CB3 is a good
12 example, CB4, CB5 and CB6, are all -- CB7,
13 excuse me, I don't know where -- 7, there is a
14 whole series of them here. What this is is
15 the -- this is the air conditioning equipment
16 that might sometimes be located on a roof top
17 but I guess it is located remote from the
18 building and sitting on a pad. And this air
19 conditioning equipment, if you're familiar with
20 it, normally has fans associated with it. And,
21 again, there is a three sided -- well, there is
22 a four sided enclosure but three sides are hard
23 as to be impermeable to sound. And the fourth
24 side is open to let air in. So, it is a louver

1 side. And the louvers face west and the hard
2 walls face north, east and south, and, of
3 course, residences of Bannockburn are to the
4 east.

5 There is -- among these pictures there
6 is a picture of an automobile, I guess I'd call
7 it a minivan, I'm not going to be able to tell
8 you what kind of automobile it is, but there is
9 a gray automobile, and when you look at the
10 height of these walls that surround these air
11 conditioning equipment, they're on the order of
12 15 feet.

13 Q. Were you able to determine the length
14 and width of that noise reduction enclosure?

15 MR. KOLAR: You know, objection to
16 the question. There is no evidence that that is
17 a noise reduction enclosure.

18 HEARING OFFICER HALLORAN: Mr. Kolar.

19 MR. KOLAR: Foundation.

20 MR. KAISER: I'd strike the adjective
21 noise reduction and rephrase the question.

22 BY MR. KAISER:

23 Q. Can you tell us the dimensions of the
24 enclosure?

1 A. Just looking at the length of the car,
2 I'm going to say that it looks like the length
3 of the enclosure is about 50 feet and the width
4 or depth of the enclosure, again, in looking at
5 the photos is about two-thirds the length. So,
6 maybe 37 and 50 feet is just my estimate based
7 upon the car in the picture.

8 Q. And while you don't have direct
9 knowledge of the reason why that enclosure was
10 built, do you have an opinion within a degree of
11 scientific certainty as to whether or not the
12 enclosure would operate to reduce noise
13 transmission to the north, east and south?

14 MR. KOLAR: Objection, this was not
15 disclosed in his report, and it has -- that
16 particular wall has nothing to do with the LTD
17 property in terms of noise.

18 HEARING OFFICER HALLORAN: Mr. Kaiser.

19 MR. KAISER: I, again, we're getting a
20 little ahead of ourselves and part of that is
21 just an effort to use Dr. Schomer as best we
22 can, but I expect the argument is going to be
23 even if the board would order LTD to build a
24 wall, Bannockburn would not allow it, and this

1 is an effort to introduce evidence of what
2 Bannockburn has allowed within the village
3 limit.

4 MR. KOLAR: That wasn't the question.
5 He is asking if you have an opinion of this four
6 sided wall which hides air conditioning fans has
7 properties to block noise. He -- all he has
8 done is taken photos of it. So, I guess, I have
9 a foundation objection as well.

10 HEARING OFFICER HALLORAN: Rosemarie,
11 could you read back that question?

12 (Record read.)

13 HEARING OFFICER HALLORAN: Mr. Kaiser,
14 your argument is that?

15 MR. KAISER: That here, the village of
16 Bannockburn aware that, and the board I think
17 can take judicial notice of the number of air
18 conditioning cases they've heard brought by
19 citizens in this same type of forum, that the
20 village of Bannockburn permitted Corporate 300
21 to construct noise mitigation structures that
22 are larger than those apparently permitted by
23 the ordinances.

24 MR. KOLAR: Totally speculative, there

1 is no evidence at all that this is a noise
2 abatement fence as opposed to one just to block
3 the view of people in the parking lot from ugly
4 air conditioning compressors.

5 HEARING OFFICER HALLORAN: You know,
6 Mr. Kolar, I'm -- or I'm going to sustain your
7 objection.

8 Mr. Kaiser, if you can move on. I
9 don't find it relevant or material especially at
10 this point.

11 MR. KAISER: All right. I mean, the
12 photos are in evidence. We have some testimony
13 from Dr. Schomer about the nature of the
14 material and the orientation.

15 HEARING OFFICER HALLORAN: Okay.

16 MR. KAISER: We'll move on.

17 HEARING OFFICER HALLORAN: Thank you.

18 MR. KAISER: And if I may I'll publish
19 them to the board's representatives.

20 HEARING OFFICER HALLORAN: Thank you.

21 BY MR. KAISER:

22 Q. Dr. Schomer, as long as we're talking
23 about dimensions and heights and so forth, did
24 you make an effort to determine the height of

1 the LTD warehouse?

2 A. We've tried to estimate the LTD
3 warehouse based upon the looking at different
4 objects of known height and estimated it like
5 30, 32 feet at the loading dock end.

6 Q. So, that this north wall of the LTD
7 facility is estimated to be between 30 and 32
8 feet from --

9 A. Yes, I'd say probably 32 feet from
10 grade.

11 Q. All right. Now, I want to turn back
12 to your written report of April 26, 2002, do you
13 have a copy of that in front of you?

14 A. Yes, I do.

15 Q. Can you describe for the board what is
16 shown in figure 2 on page 4?

17 A. Figure 2 on page 4 shows pictorially
18 what we're trying to achieve and it shows some
19 sound reflecting off the upper part of the LTD
20 wall and just grazing the top of a barrier wall
21 that might sit close to but not on top of the
22 existing retaining wall, I've not shown an
23 absorbing wall here. I've shown a brick wall
24 only because that is what Microsoft allows me

1 easily to do, but we have to imagine that that
2 is absorbing on the LTD side. And I have shown
3 how the line of sight goes to a -- up to a
4 second story window for a house that is kind of
5 up a hill. And this is the real situation we're
6 dealing with. We're dealing with trucks with
7 noise sources up high in the air, reflecting off
8 the wall, going over the barrier wall and trying
9 to be blocked from -- to the second story of
10 houses that are also up hill, and this is not to
11 scale or anything like this, but this is just to
12 give people an idea of what the situation really
13 is.

14 Q. And this is what you believe the
15 situation really is at the LTD facility in
16 relation to this I believe is a representation
17 of the Weber home, 21 feet above grade with
18 windows second story height 724 feet?

19 A. It's realistic except that the barrier
20 wall depending upon where trucks are may be a
21 little too close to the dock, because it is
22 really -- things are on an angle also. They're
23 not just like vertical going straight north but
24 you got to look along all different kinds of

1 lines. So, you have to look on lines that are
2 from the east side of the dock or the west side
3 of the dock on a diagonal to the different
4 houses. So, again the three dimensional
5 geometry, you have to really go through all the
6 three dimensional and what is going on.

7 Q. But this represents --

8 A. It's a pictorial but it represents
9 elevations and generally what the issues are.

10 Q. And I note that you describe the LTD
11 wall as a hard LTD wall and in other places in
12 your report you describe that as essentially a
13 noise mirror?

14 A. Yes.

15 Q. Why do you do that?

16 A. Because just like if I have a mirror
17 and I have a light bulb and I hold the mirror up
18 it reflects the light and you in effect kind of
19 doubled the light. You got the light directly
20 from the light bulb and you got the light that
21 reflects through the mirror. Acoustically you
22 can have the same thing. You can have an
23 acoustical mirror. And what that does is the
24 same thing. I've got a sound source. I hold it

1 up and I got the direct sound from that light
2 bulb of sound and then I've got the reflection
3 in this mirror, only it's an acoustical mirror
4 and an acoustical source. And what I actually
5 did in my calculations is I assumed, as I said
6 earlier, that the LTD wall was overall 50
7 percent absorbing to be on the conservative side
8 because of the open areas of the doors.

9 Q. And in developing your methodology for
10 analyzing sound propagation in and around the
11 LTD dock area, did you rely on a document known
12 as International Organization for
13 Standardization (ISO), document number
14 9613-2-1996, entitled, Acoustics - Attenuation
15 of Sound During Propagation Outdoors - Part 2:
16 General Method of Calculation?

17 A. Yes, I did.

18 Q. What is that document?

19 A. Okay. First of all, this is an
20 international standard so it is developed under
21 the auspices of the International Organization
22 for Standardization, which is headquartered in
23 Geneva. And it's developed by the different
24 members -- countries that are members of this

1 particular committee, which would be the
2 technical committee, 43 subcommittees, one which
3 is noise. And this is a standard developed by
4 that organization.

5 Frequently, these international
6 standards then become the national standards of
7 countries and in the United States we have been
8 adopting various international standards and
9 this is one that is currently being looked at to
10 be adopted as a national standard but that has
11 not occurred yet.

12 Q. Why did you rely on this International
13 Organization for Standardization document?

14 A. Well, as I just said, we don't have a
15 national standard that deals with this topic.
16 Other countries like Germany and some of the
17 other European countries have standards. Some
18 of them are based on this. Some of them are --
19 proceed this but this is the international
20 document. There is no national document. And I
21 felt to be a reasonable document and in the
22 absence of really any other applicable standard
23 this was the best one.

24 Q. And this provided you, for instance,

1 default values for like absorption of pavement
2 or absorption of grass, is that the sort of
3 information contained in that document?

4 A. It provides for the difference between
5 the grass and the hard surface and means to
6 handle that. It provides methods to calculate
7 the attenuation of the barrier wall. It
8 provides methods to calculate the attenuation of
9 foliage and these elements. And it provides for
10 a standard methodology for doing this which is,
11 I think, what we need in this kind of a
12 situation.

13 Q. Now, I'd like to direct your attention
14 to Figure 3 on page 5, what have you represented
15 in Figure 3 on page 5?

16 A. Okay. What I've shown there is a
17 couple of things. Basically, I should say that
18 this is -- it starts out as a drawing supplied
19 by LTD. Everything that is in black and white
20 is as supplied by LTD and then I guess I scanned
21 it and, you know, made it so that I can add to
22 it. Well, not everything that is black and
23 white, my label, some of them are black, but I
24 think people can recognize the parts that were

1 supplied by LTD and I'll say what I've added to
2 it.

3 Q. Can you tell us what you've added to
4 it?

5 A. Okay. Well, first of all, when one
6 looks at the dock area and when I've been out at
7 the dock observing, one of the things I have
8 observed is the sound comes from almost anywhere
9 on the dock, depending upon where -- which truck
10 is being moved and what is happening. So, there
11 was just a distribution of sound throughout the
12 dock area.

13 And so in my calculations I couldn't
14 just say, well, I have one point that the noise
15 comes from because noise comes from throughout
16 the dock area. So, I assumed what I'm going to
17 call nine docks area points to begin with, and
18 these are labeled points P1 through P9 and
19 they're blue in color with kind of a black ring
20 on the edge, but they're filled in blue circles,
21 and they're labeled P1 through P9, and by this I
22 was saying that there are nine different points
23 that I'm going to do calculations for noise from
24 the dock area.

1 Because the sound is more or less
2 equally from all of these areas, I assumed all
3 of them were equal. And then I said, well, the
4 noise source could be down low or could be up
5 higher, like the exhaust stack is up at maybe 12
6 feet or so. The trailer box to the extent that
7 it acts as a resonator, kind of like that violin
8 that we spoke of earlier, is up high in the air.
9 So, let's say on average 12 feet. When I banged
10 the doors on a trailer, that is up high, again,
11 so I've used the 12 foot height. But then there
12 is sources that are going to be down lower and
13 maybe more of the noise is down low, so I
14 assumed at each point a 4 foot high source and a
15 12 foot high source to cover spatially and
16 height wise this distribution, this like --
17 almost like a cloud of sources. So, I had these
18 nine source points.

19 Now, corresponding to each of the nine
20 source points that are spoken of so far, there
21 is a reflected point because of the walls of LTD
22 being a reflector. So, in green are shown the
23 reflective points, R1 through R9, and these are
24 the mirror image points of the source points.

1 So, I had nine source points times two heights,
2 so that was 18, and then I have 18 reflected
3 locations, so I had 36 calculation points.

4 And then --

5 Q. If you can just explain now, I see
6 those reflected points appear to be located
7 within the roof area of LTD. What are you
8 trying to represent by placing --

9 A. Well, if you, again, the best thing to
10 think about is a mirror, and when you look at
11 yourself in the mirror, if you're 2 feet from
12 the mirror, you see your reflection appearing to
13 be 2 feet inside the mirror. And if you happen
14 to be back 4 or 5 feet from the mirror, you see
15 your reflection 4 or 5 feet inside the mirror.
16 And this is the same thing, if you look, for
17 example, at point P6, you'll see a point R6 that
18 is inside LTD and equal distance that the point
19 P6 is from the LTD wall, or if you look at point
20 P5, you'll see R5, and this sort of thing.

21 Q. So that is the reflected noise from
22 the corresponding noise source?

23 A. Yes.

24 Now, you will see that -- and P9 has

1 an R9 that looks like it's in the parking lot or
2 in the grass, and this is because it is a
3 reflector, if you think about sound that goes to
4 the Roti house where it would be going kind of
5 on an angle, and then bouncing off the LTD wall
6 and going to the Roti house, you could pick up
7 that point R9 for the Roti house but it wouldn't
8 exist for the Weber or Rosenstock houses. So,
9 in that case I would have used it only for the
10 house that it existed at.

11 And so you kind of have to extend
12 things. You have to really visualize all of
13 these things in three dimension and go through
14 each one and get the right ones to the right
15 house.

16 Q. And why did you have only one point P1
17 down at the far western end of LTD's loading
18 dock area?

19 A. Well, first of all, at the far end I
20 felt that there was a little less activity than
21 in the more central area. And, secondly, the
22 loading dock is less wide, of course, you've got
23 the trucks -- well, these trucks backed in on an
24 angle on the rest of it, but that was more of

1 the primary activities, so I just doubled things
2 up where I felt that the activity was heavier
3 and where the loading dock was wider.

4 Q. And I note that there is also a P10
5 point in the far southeastern corner?

6 A. Correct.

7 Q. What does that represent?

8 A. P1 represents where -- this is that
9 ramp that goes from Lake Side Drive to the
10 loading dock, and this shows nominally where
11 sources could be relocated if that's what it
12 took. If LTD needs to continue to operate on
13 Lake Side Drive, then it would have to be
14 relocated and the grass barrier built to protect
15 the Weber and to some extent the Rosenstock
16 residences from that noise.

17 Q. All right. So you assumed P10 was
18 relocated and you ran your calculations with P10
19 in that revised location?

20 A. I did calculate with and without P10.
21 I did calculations without P10, using just the
22 solid barrier walls that are shown in solid red
23 and then I did calculations with P10 included
24 and including the dashed red line, the dashed

1 barrier wall that would go along a relocated
2 ramp from Lake Side Drive to the dock area.

3 Q. I want to then direct your attention
4 to table 1 on page 6. What is shown in Table 1
5 on page 60?

6 A. Table 1 on page 6 shows the predicted
7 attenuation, in the case of the Rosenstock and
8 Weber that is the attenuation with just the
9 solid red wall.

10 Q. And the solid red wall then we'd go
11 back to Figure 3?

12 A. Figure 3.

13 Q. And you drew a solid red wall and then
14 there is a dashed line --

15 A. Correct.

16 Q. -- in red as well?

17 A. Correct.

18 Q. What does the solid red line in Figure
19 3 represent?

20 A. The solid line represents the basic
21 520 feet of wall that I was recommending.

22 Q. And what does the dashed wall
23 indicate?

24 A. The dashed wall indicates the wall

1 that would protect from a relocated ramp, if
2 it's necessary to also use the ramp as a staging
3 area.

4 Q. And then with that as background, what
5 information is contained in Table 1?

6 A. All right. As I was starting to say,
7 the -- Table 1 gives the attenuation projected
8 for the solid red line for the Rosenstock and
9 Weber houses.

10 When I put this together, I mistakenly
11 took the wrong set of numbers, the Roti numbers
12 there are for the wall that includes the dashed
13 line in P10 and are slightly different than what
14 are given there. I think they're slightly
15 smaller, if my memory serves me, than what are
16 there, but still within the criteria set
17 forward.

18 So, the Roti numbers instead of being
19 the set for the solid red wall and sources P1
20 through P9, was actually for the elongated wall
21 and included source P10.

22 Q. So, for instance the 15.6 DB reduction
23 you projected the Roti household in the 1
24 kilohertz octave band, that's assuming both the

1 solid red wall and the dashed red wall were
2 built?

3 A. Correct.

4 Q. Whereas the reduction in the 1,000
5 kilohertz octave band of 14 decibels at the
6 Rosenstock residence, that is just assuming
7 construction of the wall indicated with the
8 solid red line?

9 A. And no activity on the ramp.

10 Q. And similarly --

11 A. An absence of trucks using that ramp
12 other than to drive in and drive out.

13 Q. And with respect to the Weber home,
14 again, at the 1,000 kilohertz octave band, 11.5
15 DB reduction, if the wall indicated with the
16 solid red line were built?

17 A. Correct.

18 Q. And, again, you located that solid red
19 line where you did on the drawing, why did you
20 do that?

21 A. Basically, it really mirrors what had
22 been done earlier, but it also says that I agree
23 with what was presented by Thunder and by
24 Mitchell and their basic layout that it come

1 earlier, that it go in a little bit from the
2 existing retaining wall, build the wall as close
3 as you can to the noise sources and make it long
4 enough that it really blocks the line of sight
5 to all the properties in question.

6 Q. Now, I note that the level of
7 reduction is not even, the Rotis get more
8 reduction than the Webers do, why is that?

9 A. Again, this has to do with the
10 geometry and what I did was design this, each
11 house is going to get a different attenuation
12 for the same wall because the geometry is
13 different. It's just that if you're just barely
14 breaking the line of sight for one house, the
15 geometry is such that another house you may be
16 substantially into the shadow and another house
17 you're even more into the shadow. And this is
18 even -- has to do with which points are
19 important for which house. So, it's a very
20 complicated three dimensional picture and
21 because I have a variety of sources, a variety
22 of house heights, a variety of distances and
23 directions, there is just no reason that they
24 would be the same and indeed they're different

1 than -- if they're different, one is going to
2 get the highest benefit and one is going to get
3 the lowest benefit. There is nothing that can
4 be done about that. It's just the way it is.

5 And so the Weber house because of its
6 situation being up hill the most and having the
7 tallest windows, is going to get the least
8 benefit. And the -- conversely the Roti house
9 being at the lowest elevation and also having
10 the lowest second story windows gets the most
11 benefit.

12 Q. Now, how long did it take you to set
13 up this program so that you can run these
14 calculations?

15 A. This took awhile. I don't know. I
16 think it was probably two or three days time.

17 Q. Two or three days time?

18 A. Yes.

19 Q. And how many hours during those two or
20 three days did you work on this?

21 A. When I say days, I mean 24 hours, 16
22 to 24 hours of work.

23 Q. Okay. And does that include then the
24 run time of the calculations or is that on top

1 of?

2 A. That is trivial.

3 Q. What is trivial.

4 Once you get it set up, it runs fairly
5 quickly?

6 A. Yes.

7 Q. But it's your testimony it took 2 to
8 3, 24 hour days to set up?

9 A. That's what I can recall. It took
10 awhile. I can probably check in the records but
11 it took awhile to set this up and do it
12 correctly.

13 Q. How did you size the noise barrier
14 wall?

15 A. Well, what I did is going back to
16 these points that I talked about, first of all,
17 what I created was to start with three files, if
18 you'd like, and using Excel. One for the Roti,
19 one for the Weber and one for the Rosenstock
20 houses. Now, in each of these files there was
21 40 pages of calculations. There was a
22 calculation for each of my source points and
23 reflected points for the two heights going to
24 that house. So, 40 pages of calculations for

1 each house. And then there is a couple of
2 summary pages that sit on top of that that add
3 everything together out of those 40 pages of
4 calculations.

5 And each page implements the ISO
6 standard for that point and that house. And
7 then I actually doubled this because I had files
8 with and without trucks on the ramp.

9 So, I had six files, basic files, each
10 with some 44 huge pages, not the kind that you
11 can print out and read, of calculations.

12 Q. What was your target level of noise
13 reduction?

14 A. Okay. Well, what I was able to do is
15 I made certain things be variables, that I could
16 change. And one of the things I could change
17 easily the way I set things up was the height of
18 the wall. And so I made the height of the wall
19 a variable and I just looked at different
20 increments and 1 foot increments and I kept
21 making the wall higher until I got a number that
22 was in excess of 10 DB at the 1,000 hertz octave
23 band.

24 And that --

1 Q. Why were you looking for a 10 DB
2 reduction at the 1,000 hertz octave band?

3 A. Well, again, first of all, the measure
4 data by Tom Thunder showed that, at least in
5 terms of numerical values, the problems tended
6 to be at the middle and higher frequencies. And
7 so I wanted to concentrate in that area. It
8 makes sense, just like I suggested that if the
9 problem is on the second floor, then we have to
10 protect the second floor. It also makes sense
11 that if the problem is in the middle
12 frequencies, we want to design at the middle
13 frequencies.

14 I wouldn't, for example, design at 31
15 hertz because there is really no evidence that
16 31 hertz is a problem, and likewise, I wouldn't
17 design for 8,000 hertz because we've not really
18 looked at that. We've looked at the middle
19 area. That is one reason and probably the main
20 reason.

21 I note that in Tom Thunder's -- one of
22 the exhibits that was from the earlier hearing,
23 Tom had also picked that same criteria. I
24 didn't know it at the time I picked it to be

1 honest. But I did note afterwards that what I
2 had picked was identical criteria to what Tom
3 had picked, which I believe was also 10 DB at
4 1,000 hertz.

5 And what this is is nominally -- it's
6 half as loud. The human hearing -- nominally
7 every 10 decibels is a having of apparent
8 loudness, at least at the middle frequencies.
9 And this like most human functions is more
10 rhythmic in nature, that is why 10 DB is as
11 having.

12 And there is no precise answer here.
13 And that is why I think that both Tom and I
14 picked 10 decibels as a reasonable thing.

15 This is a clearly noticeable thing and
16 there is no way to say, well, 9 decibels is the
17 right number or 11 decibels or 12 decibels is
18 the right number.

19 And so to be honest, the having of
20 sound 10 decibels is just the reasonable minimum
21 value that one can use in this situation to say,
22 I'm going to do something significant about that
23 nuisance.

24 Q. Do you have an opinion within a

1 reasonable degree of scientific certainty as to
2 whether the human ear would even detect a
3 reduction of a single decibel?

4 A. Typically, it's quoted that when
5 comparing sounds, like the continuous sound one
6 compared to another, if you just have the
7 subject really listen to one sound and then the
8 other, 2 to 3 DB is what people can readily
9 detect as a difference, but that is like saying,
10 well, that's -- that light is a little brighter
11 than the other one or that sound is a little
12 louder than the other one, but it's not a
13 significant difference and it's not a difference
14 that would be considered as really making a dent
15 in the nuisance.

16 Q. And your opinion is that it would
17 require a reduction of 9, 10 or 11 decibels to
18 make a dent in the nuisance?

19 A. That's what I'm saying, yes.

20 Q. I'd like you to turn to page 7 and
21 explain to the board what is indicated in Table
22 2?

23 A. All right. In Table 2, and this was,
24 apparently, for the Weber house, what I did was

1 as I said, I set this up so that I could run the
2 calculations with height being a variable, and
3 what is shown in Table 2 is how the barrier
4 works and each of the 9 octave bands from 31
5 hertz to 8 kilohertz, which are the octave bands
6 that the board use in its rules, and are shown
7 how the attenuation would be for walls ranging
8 in height from 19th to 30 feet. And I did this
9 to get a sensitivity of how the different
10 heights effect things, and these are just the
11 results, I think the results, this is the
12 results of those calculations.

13 Q. It shows you have a 19 foot wall at
14 the thousand hertz octave bands wouldn't have a
15 reduction of 3.3 --

16 A. Correct.

17 Q. -- decibels.

18 Whereas a 24 foot high wall at 1,000
19 hertz as predicted in the second story of the
20 Weber home would be a reduction of 9.6 decibels?

21 A. Correct.

22 Q. At what level of confidence do you
23 have in these predicted reductions?

24 A. When barrier walls are built, they

1 work very well when the distance from the source
2 to the receiver is not long.

3 When the distance from the source to
4 receiver is far, and when the barrier is in the
5 middle, kind of out in the open, the barriers
6 don't work as well.

7 This particular situation I feel
8 pretty comfortable with the barrier closed --
9 located close to the building. I would call
10 this distance medium and is neither short nor
11 long.

12 Well, Roti approach is short and Weber
13 approach is medium on the distance, whereas
14 let's say a thousand feet or 2,000 feet would be
15 long distances.

16 So, in terms of it working, it's in
17 the region where the barrier year should work
18 pretty much as advertised.

19 One of the things that causes a
20 barrier not to work well, one of the primary
21 things is when they're out in the wind and
22 subject to wind gradient. A gradient is a
23 change in wind speed with height above ground.

24 And when you deal with barriers that

1 are -- when you deal with long distances and
2 barriers in the middle, not close to the source
3 or close to the receiver and out in the open,
4 the sounds instead of following straight lines,
5 follows curved paths, and the sound can go up in
6 the air, curve and come back down to the
7 receiver and kind of curves over the top of the
8 barrier. So, instead of having the straight
9 line, we've got this arc going up over the
10 barrier and coming back down and the barrier we
11 think that is going to attenuate sound doesn't.

12 Now, one of the reasons I like this
13 location is this is a situation that occurs when
14 you've got the wind blowing from the source to
15 the receiver.

16 Q. Meaning this situation is aggravated
17 when you have winds from the southwest blowing
18 the noise from the dock area towards the
19 Complainant's home?

20 A. Well, it would be normally, but the
21 building, LTD acts as a big wind shield. So, as
22 long as we keep the barrier close as possible to
23 LTD, we're going to have less of a wind effect
24 on the barrier. But if that barrier were, let's

1 say if the source happened to be instead of
2 being LTD, but let's say it was consolidated,
3 Edison had a transformer yard, and it was
4 sitting out in the open, and 1,000 feet away
5 were homes that were a problem, and let's say
6 that these homes -- that the transformer was
7 south of the homes and the homes were 500 feet
8 or 1,000 feet to the north, and the barrier was
9 built in the middle, 250 feet from 1 and 250
10 feet from the other, there would be a high
11 probability that that barrier wouldn't work well
12 because it was out in the open, it was a pretty
13 long distance and the wind could carry the sound
14 up over and to the other side of the barrier.

15 In this situation, or what we have is
16 a sound source doesn't have any wind behind it
17 because I've got this 32 foot wall of LTD
18 protecting me but the more that barrier is out
19 in the open, the less it's going to get
20 protected from LTD.

21 Q. Now, since you wrote your report and
22 published your report on April 26, 2002, we
23 received information from LTD which suggested
24 that the barrier wall could not be built where

1 you show in Figure 3, and, in fact, the barrier
2 wall would have to be located 16 feet north of
3 the existing retaining wall?

4 A. Correct.

5 Q. -- the implications of relocating the
6 wall 16 feet to the north?

7 A. Basically to relocate the wall 16 feet
8 to the north, and I don't think we yet have a
9 map from LTD showing where material does or
10 doesn't exist, so I can't really tell you with
11 any degree of certainty exactly where the wall
12 would even go because we don't know where the
13 material does or doesn't exist. All we've been
14 told is that somewhere there is 16 feet of
15 material running north, but, of course, this
16 wall doesn't only run east, west, but there is
17 some diagonal parts to it that taper off and we
18 have been given no information about that, even
19 as we speak about it now.

20 So, with those caveats I'd say that by
21 locating it further to the north, it would
22 require the wall to be higher for the same
23 amount of attenuation because it is now further
24 from the sources. How much higher, I can't say

1 without going through detailed calculations.
2 What do I think it is, I think it is like a foot
3 or 2 higher. I don't think it is a big
4 difference and I say that because the extreme
5 situations are not where the sound is -- sound
6 source is here and I think of a path going
7 straight north, but the extreme situations are
8 more the diagonals where I have a sound source
9 on the west side of the loading dock and it's
10 going to the Weber house. And that is the
11 furthest line and that makes the -- already the
12 effective barrier fairly far from the source
13 protected from the wind, but fairly far from the
14 source, and so this extra 15 feet is not going
15 to make the dimensions change very much. In
16 fact, it's possible we'd find that it doesn't
17 need to be any taller because it is only a few
18 tenths of a decibel difference but I don't know
19 until I go through detailed calculations.

20 Q. And how long would it take you to go
21 through those detailed calculations?

22 A. I would estimate that it is going to
23 take a day to run the calculations and then a
24 day to write things up and make another little

1 report. It's a minimum of 16 hours.

2 Q. But you could do that just as you've
3 done it, those calculations for the wall as
4 originally proposed by Tom Thunder?

5 A. Correct.

6 Q. And once you've done that and were
7 able to summarize it in something similar to
8 Table 2 on page 7, what degree of confidence
9 would you have in the numbers that you would
10 generate through that process?

11 A. Again, I'd have a reasonable
12 confidence that this is going to make -- this is
13 going to make the difference.

14 Now, like anything in acoustical
15 measurements you can't go out and one day --
16 each day you measure it is going to be a little
17 bit different, so there is no certainty to
18 anything, but I believe that this would give --
19 make it on the order of half as loud and that
20 would be the target and I think we'd get to that
21 kind of a target.

22 One thing on this 16 feet we really
23 didn't find out fabric was the issue until I
24 think it was the day before the depositions or

1 two days before the depositions that were held a
2 couple of weeks ago, while we were told that
3 there was -- we were told originally there were
4 deadmen on the retaining wall, and deadmen as I
5 think it was counsel here showed was something
6 like this microphone rod or some rods coming off
7 of the wall, and one can space the barrier wall
8 supports to avoid those deadmen knowing where
9 they are and with deadmen the wall could have
10 been built right where it has been talked about.
11 The fact that the wall needs to be moved by some
12 number of feet is something that was just
13 communicated to us about two days before the
14 deposition.

15 Q. And when you say the deposition,
16 you're talking about your deposition in
17 anticipation of the hearing today?

18 A. Correct, and that was I believe less
19 than two weeks ago.

20 MR. KAISER: Again, I would note for
21 the record, Mr. Halloran, that Anthony Roti has
22 joined us, and Mr. Roti is one of the
23 Complainants.

24 HEARING OFFICER HALLORAN: Thank you

1 very much, Mr. Kaiser. The record will so
2 reflect.

3 BY MR. KAISER:

4 Q. Now, Dr. Schomer, I'd ask you to turn
5 to page 8 and tell us what is shown on in Figure
6 4?

7 A. In figure 4, I've shown, and this time
8 I've used 2 kilohertz. So, I have taken the 2
9 kilohertz line, if you'd like, horizontal line
10 from Table 2 and plotted it.

11 So, for example, if you look under 19
12 feet it says 2 kilohertz in Table 2, 3.6 DB.
13 And then you find plotted for 19 feet, you can
14 see that it is 3.6 DB. So, I've plotted the
15 variation of attenuation at 2 kilohertz with
16 wall height. And this is characteristic. And
17 what it shows is that the attenuation goes along
18 at a fairly low level until about 23 feet and
19 then it starts to climb rapidly as I start to
20 get into a nice shadow. So, I kind of have --
21 just as I'm getting the sources just barely
22 covered, then I start to get into a shadow and I
23 start to get the attenuation to grow quickly
24 with height and then after awhile that tapers

1 off again, after a short while, you see that
2 building the wall taller and taller just doesn't
3 buy you great gains in attenuation anymore. So,
4 there is a region where you've got reasonable
5 attenuation and that 25 feet is kind of in the
6 middle of this region of greatest gain, and it's
7 also where you get over 10 DB at a thousand
8 hertz.

9 So, that was the -- again, this is
10 another way of seeing that the height chosen is
11 a height that is reasonable.

12 For example, if you went up out
13 towards 30 feet, the difference between 26 and
14 30 feet you're not getting a lot.

15 Q. Though you'd be adding to the cost of
16 the wall?

17 A. Yes, you'd be adding to the cost a lot
18 more quickly than you're adding to the benefit
19 in that region.

20 Q. Now, in your calculations did you make
21 certain assumptions concerning the materials out
22 of which the noise wall would be built?

23 A. Yes. It's not an assumption. It's
24 essential that the wall be sound absorbing on

1 the side that faces the LTD dock.

2 What would happen otherwise, and I'm
3 sure people are familiar with sound echoing in a
4 room especially without much sound absorption,
5 is you would have a -- between the LTD wall and
6 the sound wall you just get the sound bouncing
7 up and back. My hand is bouncing up and back.
8 And it just bounces up and back. There is
9 nothing to get rid of it. Eventually it just
10 spills over the top, almost like waves in a pool
11 bouncing up and back until they spill over the
12 top and the barrier then would not be effective.
13 It has to be absorbing on the side.

14 Q. Do you know whether concrete walls can
15 be built with absorption panels?

16 A. Well, the standard concrete that we
17 see along the tollway is not absorbing, it's
18 reflecting, a very high reflection coefficient.

19 There are -- there is a product I
20 think called Sound-sorp that is either a plaster
21 or concrete type of material but it is made with
22 holes in it, if you'd like, fishers to be sound
23 absorbing. So, there are two or three
24 categories of sound absorbing barriers, all of

1 which are about the same cost but it is not a
2 standard concrete like you see on the -- along
3 the highways in Illinois.

4 Q. What are the sound absorbing
5 properties of a wooden fence?

6 A. There aren't any for a wooden fence.

7 Q. Did you talk with Steve Huff of the --
8 or Steve Mitchell of the Huff Company to obtain
9 a cost estimate for building a wall of the
10 height and length that you had calculated would
11 be necessary to obtain a 10 decibel reduction in
12 the second story of the Weber residence in the
13 1,000 kilohertz octave band?

14 A. Yes, I did. And this is included as
15 a -- well, based upon my talking with him, he
16 wrote a letter, which is annex B to my report,
17 and in this letter, he estimates a cost as a
18 square foot cost including these five
19 labyrinths, which I've indicated are not really
20 necessary, from the Roti, Weber or Rosenstock
21 standpoint and certainly could be eliminated
22 from the design and a cost savings.

23 Q. And what was his cost estimate for
24 building a wall the height and the length at the

1 location you had described?

2 A. Well, without searching for this
3 there, I quote in here \$48, something like that.
4 I'd have to find the exact number but it was on
5 the order of -- \$47.95 cents per square foot.
6 \$48 a square foot.

7 Q. And do you know within your
8 professional community the reputation of the
9 Huff Company?

10 A. Well, the Huff Company is using --
11 but, first of all, they have got a good
12 representation themselves and they, of course,
13 don't manufacture the materials. The materials
14 they've suggested here are from Industrial
15 Acoustics.

16 MR. KOLAR: Objection, volunteered
17 testimony. He just asked him about the
18 reputation of the Huff Company and he answered
19 that.

20 MR. KAISER: I'd like to ask him
21 another question.

22 HEARING OFFICER HALLORAN: Objection
23 sustained.

24 BY MR. KAISER:

1 Q. Do you know what types of materials
2 the Huff Company proposed to be used to
3 construct the noise wall?

4 A. They were proposing material from the
5 Industrial Acoustics Company, Industrial
6 Acoustics is probably the largest and one of the
7 oldest manufacturers of acoustical products of
8 this kind and other noise mitigation products.
9 And they're certainly well known in Europe and
10 the United States. I don't really know how well
11 they're known in Japan, so I can't say that.

12 Q. But their reputation, the reputation
13 of Industrial Acoustics Company in the United
14 States --

15 A. Is a good reputation, uh-huh.

16 Q. I'd like to direct your attention to
17 page 9, Table 3. Can you describe for the board
18 what information is contained within Table 3?

19 A. Okay. What is being shown here is the
20 first column, and this is all for the Weber
21 residence, and the first column of -- well, the
22 first, very first column is just the octave
23 band.

24 The first column of data, if you'd

1 like, is labeled nine source positions barrier
2 indicated by solid red line. And what this
3 shows is just -- this comes from the earlier
4 table in this report, it says, here is the
5 attenuation, if there is no activity on the
6 ramp, no significant activity other than driving
7 up and down it, but not parking and hitching
8 and unhitching trailers there and sitting and
9 idling and this sort, so I build the barrier 520
10 feet long. I have sources 1 through 9 and, for
11 example, at 1 kilohertz I get an attenuation of
12 11.5 DB.

13 Q. And in your professional opinion would
14 that be a significant reduction of noise --

15 A. Yes.

16 Q. -- at the second story of the Weber
17 residence?

18 A. Correct, this is all for the second
19 story.

20 Now, what I've done is I've said, all
21 right, I have a 520 foot barrier, but now let's
22 say there is a significant noise at my position
23 10 but no barrier.

24 Q. And just to refresh our recollection,

1 that position 10 is located somewhere out to the
2 east of the LTD warehouse facility into the
3 vicinity of the ramp connecting the dock with
4 Lake Side Drive?

5 A. Correct. And it is marked on the
6 figure in my report. So, now I've said, let's
7 say we have significant noise over there, what
8 does that do to the attenuation, and we see the
9 attenuation, for example, at 1 kilohertz drops
10 from 11.5 to 7.3 DB. So, now this one noise
11 source that we failed to control, this position
12 10, if it is used a lot, this becomes a
13 significant source at the Weber residence, less
14 at the Rosenstock but still significant, I
15 don't have any numbers to tell you, and very
16 much less at the Roti residence.

17 So, then what I've done is in the
18 third column of a data, which is labeled 10
19 source position barrier indicated by both solid
20 and dashed line, I've included all 10 sources
21 but now I've included the extra barrier shown as
22 the dashed red line in my report. And then you
23 see that the attenuations aren't identical at
24 every octave band but they only vary a little

1 bit and it brings the attenuation back up, for
2 example, at 1 kilohertz to 11.5 DB.

3 Q. And it is your professional opinion
4 that 11.5 DB reduction at the 1 kilohertz octave
5 band is significant?

6 A. Well, again, I set like 10 DB is the
7 criteria, and this was in equal increments of
8 feet, the first foot, if you'd like, to get mine
9 above 10.

10 Q. And, again, now, working through your
11 report, is there anything else that the board
12 would need to know about Table 3?

13 A. I don't believe so.

14 Q. Turn to page 12 of your report, can
15 you just describe briefly for the board what
16 information is contained on pages 12 and 13?

17 A. Okay. Pages 12 and 13 are just kind
18 of like -- page 12 is like I'm going to say a
19 quarter but it is probably not even a quarter of
20 the Excel spreadsheet summary page. And what it
21 contains though is the most important
22 information and at the end of the column labeled
23 all, first of all, there is just to the left of
24 that it shows the different octave bands and

1 then this shows the attenuation and by all I
2 mean I wanted to be able to divide things up. I
3 had my low sources, the ones that were at 4
4 feet. I had my high sources at 12 feet. I had
5 my low reflected sources, which were the
6 reflections of the 4 foot sources, and the high
7 reflected sources, which were the reflections of
8 the 12 foot sources. And I did calculations on
9 all of these sources separately and then what
10 the overall reduction would be and that's what
11 the all is. So, that's the answers, if you'd
12 like, the attenuation and the different octave
13 band for the barrier height, setup for the house
14 that is -- whichever one is indicated, this sort
15 of thing.

16 Q. And up at the top here, now this was a
17 calculation for the Rosenstock residence, this
18 calculation?

19 A. This says it was for the Rosenstock
20 residence, and over there you see reflections,
21 barrier height above lowest point is 34 feet,
22 lowest point is the 676 elevation of the dock.
23 Reflection equals 3, that says that -- that I'm
24 assuming 3 DB reduction of reflection from the

1 LTD wall, the 50 percent absorption. Eliminate
2 barrier east most says whether that dotted
3 barrier is in or not in the calculation. And
4 then the barrier top is at 710, that is just 676
5 plus 34. The typical barrier base was 685,
6 which is 9 feet above 676. And so the typical
7 barrier height is 25 feet. And then off to the
8 very right you start to see the numbers coming
9 in and I can't tell you exactly which ones those
10 are from this but that would be like .1, some of
11 the calculations from .1 come in first, and
12 there would be 40 of those columns of numbers on
13 this page, plus then another 40 sets of
14 calculations on those numbers. So, it is a huge
15 Excel spreadsheet.

16 Q. And page 13, that is another portion
17 of these Excel spreadsheets?

18 A. Yes. Page 23 is a portion of an
19 individual page where I'm applying the ISO
20 standard to a specific point. In this case it's
21 1L, point 1L means that it is .1 the low source.

22 And the source equal zero says that it
23 is a hard source, this is hard asphalt by the
24 source. It says by the receiver. It's grass.

1 So, that is an absorbing by the house. And the
2 middle I have labeled as .5 because there is
3 some grass part of the way and some hard surface
4 part of the way.

5 And then the calculation is done in --
6 separately for all of the 9 octave bands and so
7 those are what are shown there and just
8 different numerical results for part of the
9 calculation to get at and then this page is
10 repeated 40 times and then summed up.

11 Q. And that is how you arrive at the
12 appropriate wall height and calculate the level
13 of attenuation given the wall of that height?

14 A. Yes.

15 Q. And I see that note at the top,
16 barrier net ignores, quote, negative, closed
17 quote, excess ground and attenuations greater
18 than 20 DB, what is that?

19 A. This is fairly standard for using ISO
20 1996. What happens normally when you build a
21 barrier, and I spoke earlier of the difference
22 between ground to ground propagation and air to
23 ground propagation, and I said that when you
24 have ground to ground propagation, you got

1 attenuation by the grass surface, by the porous
2 ground.

3 But what happens, let's -- again,
4 let's go back to my transformer. And let's say
5 I have got a transformer sitting on grass, maybe
6 a little pad under it but it is essentially a
7 grassy area. And I've got a home let's say 300
8 feet away and it's lawn or field between the
9 home and the transformer. And I go in and I put
10 in a 20 or 24 foot high barrier like I think has
11 been done recently near here, and what I have
12 done is I now have an effective height going
13 from the source to the receiver of 25 feet
14 because my source height has moved 25 feet in
15 the air, because putting the barrier in, I've
16 now made my source height 25 feet in the air.
17 What that has is that eliminates a lot of the
18 ground absorption. In fact, over grass you can
19 put in a barrier in and actually get a negative
20 attenuation with soft ground.

21 So, what the standard tells you to do
22 is remove the excess attenuation of the soft
23 ground. It says remove the excess attenuation.

24 When I have a hard surface like I do

1 at LTD because of the parking lot, I don't have
2 this excess attenuation, in fact, because of the
3 hard surface the way the standard does it, it's
4 a minus 1.5. Well, the hard surface doesn't
5 make the barrier work better. So, you have
6 to -- when there is a hard surface, not add in a
7 negative excess attenuation.

8 Q. And that's what that --

9 A. That's what that says.

10 Q. -- means on page 13?

11 A. Yes.

12 The other thing you have to do is
13 barriers, as people have said, are you sure it's
14 going to work, yes, I am sure it's going to
15 work, but I'm also reasonably sure that when you
16 predict barrier attenuations in excess of 20 DB
17 for a simple barrier, very high attenuations
18 don't work so well. So, anytime there is a
19 calculation where it comes up with a number
20 greater than 20 DB, I substitute 20 DB. So, I
21 don't allow the attenuation calculated to go
22 greater than 20 DB.

23 Q. All right. And so that explains that
24 number at the top of page 13?

1 A. Yes.

2 Q. And then the appendix annex B, pages
3 14, 15, 16, that is the cost estimate received
4 from the Huff Company?

5 A. Correct.

6 Q. All right. Now, at some point in this
7 process you became aware that LTD through its
8 representative, Tom Thunder was suggesting that
9 if the board were to order LTD to build a
10 barrier wall that the board order that wall
11 built along the property line separating the
12 Roti and Rosenstock homes from LTD.

13 Do you recall when you became aware
14 that that was one of LTD's proposals?

15 A. I believe that was in their
16 disclosure, which is not too long ago, a couple
17 of months.

18 Q. And as I understood it or did you
19 understand that LTD thought one of the benefits
20 of relocating the wall to the north property
21 line was that the wall wouldn't have to be
22 continuous, you've proposed if located in the
23 dock area a continuous wall running between 5
24 and 600 feet long. There is a suggestion that

1 if the wall were built on the property line, it
2 wouldn't have to be continuous and, therefore,
3 it wouldn't cost as much.

4 Did you understand that to be one of
5 the arguments in favor of relocating the wall?

6 A. Yes. I understood that to be one of
7 the arguments.

8 Q. Did you in any way analyze that
9 argument to determine whether, in fact, the wall
10 would or would not have to be continuous?

11 A. Yes, I did. I did not go through
12 detailed analysis but I went through a -- at
13 least a reasonably quick analysis, just looking
14 at the geometry. And I concluded two things,
15 actually. One is if you just consider the sort
16 of property line and extended property line
17 behind Corporate 100, then you get 1 or 2 very
18 small openings when you look at the fence
19 because, again, you don't have a single point
20 that the sound emanates from on the loading
21 dock, but really the sound on that loading dock
22 is spread out over a distance of certainly 300,
23 400 feet. I don't remember the exact number,
24 but let's say 300 feet. So, it's not a -- it's

1 not a point that is creating the sound but a
2 smear, a distribution, a cloud of points and
3 this cloud is fairly long in length. And so in
4 laying out the protection of one of these
5 houses, the barrier has to be such that it
6 protects against the most extreme of your cloud
7 to the most extreme end of the house in
8 question. And when you go through all of that,
9 you end up with a barrier, a length of wall
10 which I calculated to be very close to 520 feet
11 again.

12 Q. And just so we can illustrate that
13 point, for instance, the Roti home would receive
14 sound from P1 --

15 A. Uh-huh.

16 Q. -- in your diagram as well as from
17 P9, P1 being at the west end of the dock, P9
18 being at the east of the dock?

19 A. And what one has to look at is how P1
20 effects the west side of the Roti house, and how
21 P9 effects the east side of the Roti house. And
22 so between the extent of the house and the
23 extent of the source, you get fairly long
24 lengths. And indeed the lengths become the same

1 kind of number as the other barrier. There is
2 not a savings, it could be a little longer, it
3 could be a little shorter, but there is not
4 going to be any significant difference in length
5 of the barrier.

6 There is another issue, however, and
7 that is it's not clear that LTD could build a
8 wall on the C-100 property because that is not
9 their property line.

10 So, if we were to -- the full
11 analysis, which I've not been able to do, would
12 require an L-shaped barrier, one that would go
13 along the north property line if one were going
14 to do that, and then it would have to turn when
15 it got to the C-100 and become a north, south
16 barrier between the LTD property and the C-100
17 property to keep things on the property line.

18 Q. Did you understand that one of the
19 arguments for relocating a noise wall to the
20 property line was that perhaps the noise wall
21 wouldn't have to be 25 feet high?

22 A. Yes, I did.

23 Q. Did you analyze that proposition?

24 A. Yes, I did. I went back and

1 fortunately that is a little simpler situation
2 to set up as I said, a single line is a lot
3 easier to set up than the barrier we have, which
4 I think has five or six different segments. In
5 the solid red line there is five or six
6 different segments and that just takes a lot of
7 work to set up but the straight line was a
8 little easier and I could do all three in half a
9 day or so.

10 Q. And did you do that?

11 A. And I did it. And what I came out
12 with and I got to look at my -- make sure I get
13 to the right set of things.

14 I did calculations, and the first
15 thing I did I have to say is go back to my USGS
16 map to see what the elevations were along the
17 property line because if one is going to build a
18 barrier along with the property line, how tall
19 it is depends upon what the ground elevation is
20 where the barrier is going in.

21 And so I needed to get the USGS out
22 and I did look it up on the Internet this time
23 and got it that way. I think I used a different
24 source the first time but, again, it was the

1 same USGS data.

2 Q. And what did you determine the
3 elevation was at the property line in the
4 vicinity of the Roti home?

5 A. I'm not sure I'm going to -- barrier
6 base, I have a 686, yes, 686.

7 Q. And what did you determine was the
8 base elevation at the property line in the
9 vicinity of the Rosenstock home?

10 A. Well, it's, again, it would be on the
11 diagonal going from the source -- for the
12 Rosenstock that is more or less the same,
13 meaning 687.

14 Q. And the Weber home?

15 A. 689.

16 Q. And then what did you do next?

17 A. Again, what I did I said, I set these
18 things up only with the barrier in the area
19 indicated and ran calculations for the nine
20 basic points again, and got the heights of the
21 barriers and the results are for the Roti home
22 23 feet would suffice, which is a couple of feet
23 indeed shorter than the 25, however, for the
24 Rosenstock home, the height would need to be 28

1 feet, which is 3 feet higher, and for the Weber
2 house, the height would need to be 33 feet,
3 which is 8 feet higher than the wall is designed
4 being closer to LTD.

5 Q. Did you understand that one of the
6 arguments in favor of moving the noise wall to
7 the north property line was that a noise wall
8 located at the north property line would not
9 need to be constructed with sound absorptive
10 panels?

11 A. Yes, I did.

12 Q. Did you consider that proposition?

13 A. I think that there may be a little
14 benefit to that but the numbers I recall and
15 I've not looked at them recently, show that
16 absorptive panels are not that different than
17 reflective panels. At one point in time, some
18 number of years ago there used to be a greater
19 discrepancy between the two then exists now.

20 Okay. I was -- the absorptive
21 barriers, Illinois Toll Highway Authority
22 excluded, some States have gone to requiring all
23 highway barriers to be absorptive. I can't
24 remember which -- I think Pennsylvania is one

1 but I'm not certain of that. And they're
2 getting to be much more common because you have
3 the same problems as the LTD wall facing the
4 barrier wall. You have two highway barrier
5 walls facing one another and the sound builds up
6 between them. It builds up between the sides of
7 trucks and the barrier wall. And they just
8 don't work as predicted. Whereas when they're
9 made absorptive, then they're going to work much
10 or as predicted.

11 Q. When you're saying there is not that
12 much difference, were you talking about a
13 difference in cost between absorptive and
14 nonabsorptive --

15 A. That's correct.

16 Q. Now, the wall that the Huff Company is
17 proposing, that is essentially built of
18 foundation elements, often caseons, steel posts,
19 and then these noise panels laid in between the
20 post, is that correct?

21 A. Correct.

22 Q. Would you view that wall construction
23 as conventional or unconventional?

24 A. That is conventional. I think if you

1 look here on the toll highway, well, not here,
2 but a little ways down from here, you'll see
3 that it's built with posts and these preformed
4 concrete slabs that are put in place with a
5 crane and they span the distance between these
6 I-beams essentially or things that look like
7 I-beams to me.

8 Q. And did you understand that LTD
9 suggests that a wall built at the property line
10 might cost between 30 and \$35 a square foot?

11 A. Oh, that was a number kind of put out.

12 Q. And do you have an opinion as to what
13 type of wall can be built for 30 to \$35 a square
14 foot?

15 A. Well, I think if I remember what Mr.
16 Thunder suggested, he was suggesting that he got
17 the data from the Wall magazines, I think that
18 is the source. And the Wall magazine is a
19 magazine, believe it or not, devoted to highway
20 noise and highway noise mitigation and has had
21 summaries of barrier costs and barriers built of
22 different materials by different states, keeps
23 track of things like this. So, there is a
24 magazine for everything.

1 Q. And that is where that number --

2 A. And I can't say for sure. I think I
3 remember him saying that. And that -- those
4 are -- normally, those projects are half mile or
5 a mile at a throw or even more, and, you know,
6 parts of the costs is just the material costs,
7 part of the costs is to labor of putting things
8 in place. So, you have a cost of getting the
9 equipment on site and getting the crew moving
10 and going and some of that start-up cost is the
11 same whether you're building 500 feet of wall or
12 5,000 feet of wall, and the basic labor to put
13 the wall in which is probably half the wall to
14 begin with, is the same whether it is absorbing
15 or reflecting, but, you know, I really defer, I
16 guess, to Steve Mitchell on any details because
17 he bids these kinds of things all the time, but
18 I would think that the numbers quoted were
19 really for the highway situation and the cost
20 goes up from the highway situation when you're
21 only putting in 500 feet instead of 5,000 feet
22 of wall, it just has to because you're
23 marshalling the same group for a lesser size
24 job.

1 Q. Did you prepare summary sheets of your
2 calculations that you ran in order to determine
3 an appropriate wall height if the wall were
4 located along the north property line?

5 A. What I really only did is print out
6 that -- like from Appendix A the small portion
7 of the total page that has the results.

8 Q. May I see those?

9 A. And I think this is one set.

10 Q. Add I'd like to mark these as
11 Complainant's C1, 2 and 3.

12 Mr. Schomer, Dr. Schomer,
13 Complainant's C1, what is this document?

14 A. C1 is the calculations at the Weber --
15 HEARING OFFICER HALLORAN: I'm sorry.

16 Mr. Kaiser, C1, 2 and 3?

17 MR. KAISER: Yes.

18 HEARING OFFICER HALLORAN: We're
19 starting with the alphabet I believe at this
20 time, CA, CB.

21 MR. KAISER: Right. This would be
22 Complainant's C1

23 BY MR. KAISER:

24 Q. What are you looking at?

1 A. I'm looking at what you have called
2 CC1, you did label it CC1. It's labeled Weber,
3 which means it's the Weber house, and then it
4 says dash dash Thunder, so it means the Thunder
5 proposal for having a barrier along the property
6 line and then what it shows is in order to get
7 at 1 kilohertz I get all my attenuation of 10.2
8 DB, which is over 10, which is the criteria for
9 typical barrier height of 33 feet.

10 Q. With respect to CC2, what is shown?
11 Excuse me.

12 A. It shows that the top of the barrier
13 is at an elevation of 722 feet. The typical
14 base of the barrier is 689 feet.

15 Q. That is for the Weber home?

16 A. Yes.

17 Q. CC2, what is shown there?

18 A. CC2 is the same kind of calculation
19 for the Rosenstock and the net result here is
20 the barrier height of 28 feet.

21 Q. CC3?

22 A. CC3 is the same thing for the Roti
23 house and it shows the typical barrier height of
24 23 feet.

1 MR. KAISER: I'd move for admission
2 into evidence of Complainant's Exhibits CC1, 2
3 and 3.

4 MR. KOLAR: No objection.

5 HEARING OFFICER HALLORAN:
6 Complainant's exhibits are admitted.

7 MR. KAISER: Thank you, Dr. Schomer.
8 I have no further questions.

9 Mr. Kolar.

10 (Record read.)

11 HEARING OFFICER HALLORAN: We're back
12 on the record.

13 I think we're going to take a 45
14 minute lunch or thereabouts, we'll be back here
15 at 1:30.

16 Thank you very much.

17 (Off the record.)

18 HEARING OFFICER HALLORAN: We're back
19 on the record. It is approximately 1:32. The
20 witness is going to go out of turn, one of Mr.
21 Kolar's witnesses is going to go out of turn
22 because of certain time restraints. Mr. Kaiser
23 has agreed with that so we're going to go
24 forward.

1 Mr. Kolar.

2 MR. KOLAR: We call David Lothspeich
3 to the stand.

4 (Sworn in.)

5 DAVID LOTH SPEICH,
6 having been first duly sworn, was examined and
7 testified as follows:

8 DIRECT EXAMINATION

9 BY MR. KOLAR:

10 Q. State your name for the record?

11 A. David Lothspeich.

12 Q. And you live here in Libertyville?

13 A. Yes.

14 Q. You're currently the manager for Long
15 Grove?

16 A. Yes.

17 Q. You're the former village manager of
18 Bannockburn?

19 A. Yes.

20 Q. You started working with Bannockburn
21 and its administration, what year?

22 A. '93.

23 Q. And you recall generally that you had
24 some communications and correspondence with the

1 property owners to the north of LTD regarding
2 noise from the LTD property, right?

3 A. Yes.

4 Q. That was when you were working for
5 Bannockburn?

6 A. Yes.

7 Q. And based on your experience working
8 at Bannockburn, you have familiarity with the
9 Bannockburn zoning code?

10 A. If you put it in front of me, I can
11 find things.

12 Q. What I marked as Respondent's I, and I
13 have some photos that are premarked beginning at
14 A. Let me show you that, Exhibit I. And you
15 can see page 1 is an e-mail from Blanca, do you
16 know her?

17 A. Yes.

18 Q. She is at the village of Bannockburn?

19 A. Yes.

20 Q. Now, the current Bannockburn code has
21 a height limitation on closed type fences,
22 correct?

23 A. Yes.

24 Q. I think at your deposition you pointed

1 this out to us but it is in Section 9-101.50,
2 permitted obstructions and required yards,
3 correct?

4 A. Yes.

5 Q. And in this exhibit, it is on page
6 116, correct?

7 A. Yes.

8 Q. And so in Bannockburn closed type
9 fences cannot exceed 6 feet in height above
10 grade, correct?

11 A. Yes.

12 Q. So, if the Complainants were proposing
13 a fence 25 feet above grade in the village of
14 Bannockburn that would not be permitted by
15 current ordinances, correct?

16 A. Correct.

17 Q. Okay. Now, the Bannockburn zoning
18 code also has a provision relating to
19 variations, correct?

20 A. Yes.

21 Q. And in this Exhibit I, beginning at
22 page 183 there is a section entitled, authorized
23 variations, correct?

24 A. Yes.

1 Q. And if we continue on and turn to page
2 184, Mr. Lothspeich, subparagraph D, do you see
3 that?

4 A. Yes.

5 Q. So this -- the current Bannockburn
6 zoning code provides that the maximum variation
7 that can be granted for a fence is 20 percent of
8 the allowable height, correct?

9 A. Yes.

10 Q. Okay. So, that means if LTD had
11 applied for a variance for a noise wall under
12 the current variance provisions, it would only
13 be able to get a wall by variance of 20 percent
14 higher than 6 feet?

15 A. Yes.

16 Q. Now, the Bannockburn zoning code also
17 provides generally for something called text
18 amendments, right?

19 A. Yes.

20 Q. And there is a procedure in how you
21 can apply to Bannockburn to get a text
22 amendment?

23 A. Yes.

24 Q. And that basically means that you're

1 asking Bannockburn to change its legislation,
2 which is the Bannockburn zoning code, correct?

3 A. Correct.

4 Q. Okay. And that is something that the
5 Bannockburn village board makes the ultimate
6 decision on, correct?

7 A. Yes.

8 Q. Okay. So, if LTD wanted to -- if LTD
9 was ordered to build a fence of 25 feet, an
10 option would be that it would have to apply to
11 the village of Bannockburn for a text amendment
12 to in some manner change the Bannockburn zoning
13 code to allow a noise wall that high?

14 A. Yes.

15 Q. And you as you sit here today, you
16 have no knowledge as to how Bannockburn would
17 rule on such an application, whether it would
18 approve a text amendment or disapprove one,
19 true?

20 A. I don't have a clue.

21 Q. They take it, they review them on a
22 case by case basis?

23 A. Yes.

24 Q. And when Bannockburn considers

1 proposals from property owners to change the
2 text of the zoning code or receive any
3 applications from property owners, the
4 Bannockburn professional fees, including lawyer
5 fees are passed on to the applicant, right?

6 A. They're reimbursable.

7 Q. So, LTD, if it was applying to
8 Bannockburn, would be responsible for its own
9 legal and professional fees and Bannockburn's as
10 well?

11 A. Yes.

12 Q. Okay. Let me just, and I'm almost
13 done.

14 HEARING OFFICER HALLORAN: Take your
15 time, Mr. Kolar.

16 BY MR. KOLAR:

17 Q. Complainant's B4 shows an enclosed
18 structure to the east of LTD at the -- I think
19 it is called Corporate 3,000 property?

20 A. That's what I would refer to as the
21 Pizzuti building.

22 Q. Okay. And that building was built
23 within the last four years?

24 A. I believe so.

1 Q. All right. And as part of that
2 building -- strike that.

3 As part of the building of the
4 building to the east, Bannockburn required a
5 berm?

6 A. Yes.

7 Q. And also required that these
8 compressors or whatever they are be enclosed?

9 A. It appears that way. I don't remember
10 the specific particulars on it, but I was part
11 of that review process.

12 Q. All right. In any event, these
13 clearly appear to be -- let me show you another
14 one. Here is Complainant's Exhibit B6. That is
15 the same enclosure at the property, right?

16 A. Yes.

17 Q. All right. And you would agree based
18 on the van that is situated there that that
19 would be over 8 feet tall?

20 A. Yes.

21 Q. Okay. Bannockburn in some fashion
22 approved a fence over 8 feet tall?

23 A. That property was developed as a
24 planned unit development. And as part of that

1 process, you're allowed to vary from sections of
2 the code as appropriate.

3 Q. And that is a PUD?

4 A. Yes.

5 Q. And this fence that surrounds the
6 structures, these HVAC type structures, that was
7 required for aesthetic purposes?

8 A. I assume so. I don't -- I don't
9 remember even reviewing that part of the
10 development.

11 Q. As you sit here today, do you know if
12 that was required for aesthetic purposes or
13 noise abatement purposes or both?

14 MR. KAISER: Objection, asked and
15 answered.

16 HEARING OFFICER HALLORAN: Sustained.

17 MR. KOLAR: I don't have any other
18 questions.

19 HEARING OFFICER HALLORAN: Thank you.

20 Mr. Kaiser.

21 MR. KAISER: If I may, please.

22 CROSS-EXAMINATION

23 BY MR. KAISER:

24 Q. In that Corporate 3,000 that is within

1 the boundaries of the village of Bannockburn?

2 A. Yes.

3 Q. And you were part of the team that
4 reviewed that planned unit development
5 application?

6 A. Yes.

7 Q. And the planned unit development, that
8 is a way in which larger parcels of property can
9 be developed and the development can take into
10 consideration the particularities of that
11 parcel, correct?

12 A. That allows some flexibility in the
13 development proposal for the property.

14 Q. Now, the village of Bannockburn is
15 principally a residential community, wouldn't
16 you agree?

17 A. Well, the interior part is
18 residential. Anywhere along 22 or 43, along the
19 tollway, is commercial. I think if you looked
20 at the assessed valuation for the property, the
21 mix is closer to 50/50.

22 Q. If you look at it from an assessed
23 valuation point of view?

24 A. Right.

1 Q. What about if you look at it from just
2 a total --

3 A. Land area?

4 Q. -- point of view?

5 A. I would say that there is more
6 residential. I don't know if it's -- you know,
7 percentages though.

8 Q. What is the minimum lot size in
9 Bannockburn?

10 A. It's 2 and 4 acre zoning.

11 Q. How many people live in Bannockburn?

12 A. Including Trinity University I think
13 the number is around 1400.

14 Q. And you'd agree, wouldn't you, that
15 most of the zoning ordinance is designed --
16 strike that.

17 The zoning ordinance is broken up and
18 there are certain provisions that apply to the
19 residential districts, correct?

20 A. Yes.

21 Q. Certain provisions that apply to the
22 retail district, right?

23 A. Yes.

24 Q. And certain provisions that apply

1 particularly to the office districts, correct?

2 A. Yes.

3 Q. And I think you agreed in your
4 deposition about 10 days ago that the best you
5 can recall is that LTD developed its facility
6 pursuant to a planned development in what was at
7 that time an office district, correct?

8 A. I don't remember what the original
9 zoning was but it is office now.

10 Q. And you recall that to develop this
11 property, LTD and the beneficiaries of a land
12 trust Sheldon and Pearl Leibowitz applied to the
13 village for ordinance amendments, did they not?

14 A. Yes.

15 Q. And the village of Bannockburn granted
16 certain ordinance amendments to LTD so that LTD
17 could expand its warehouse facility, did it not?

18 A. Yes.

19 Q. I'd like to show the witness what I've
20 marked for purposes of identification as
21 Complainant's Exhibit D and E. I'm going to
22 show you what I have marked as Complainant's
23 Exhibit E. Mr. Lothspeich, do you recognize
24 that document?

1 A. Yes.

2 Q. What is it titled?

3 A. Village of Bannockburn ordinance
4 number 93-36, an ordinance amending the zoning
5 ordinance to provide for business headquarters,
6 planned developments, has a special use in the E
7 commercial park district.

8 Q. And that was submitted by LTD and the
9 holders of the beneficial interest in the
10 property to the village of Bannockburn back in
11 1993, was it not?

12 A. This is the ordinance approving the
13 request by LTD.

14 Q. And that was a request so that LTD
15 could expand its warehouse with the extension
16 shown on this Respondent's 89 as the 1995
17 addition, do you see that?

18 A. Yes.

19 Q. And that is what that amendment
20 allowed, right?

21 A. Yes.

22 Q. And I'm showing you what I've marked
23 for purposes of identification as Complainant's
24 Exhibit D. Do you see that, Mr. Lothspeich?

1 A. Uh-huh.

2 Q. What do you recognize that to be?

3 A. Yes. This is the special use permit
4 and height variation ordinance for LTD
5 Commodities.

6 Q. That was submitted to the village of
7 Bannockburn in connection with the expansion of
8 the warehouse and office complex back in '93?

9 A. Yes. This is the ordinance that
10 approves their expansion request.

11 Q. And did I hear you correctly that
12 there was -- LTD had requested a height
13 variation so that they can build their addition?

14 A. Yes.

15 Q. And do you recall to what height
16 Bannockburn modified its ordinance so that LTD
17 could build into a certain particular height?

18 A. I don't remember the specifics.

19 Q. But that's an example of a petitioner
20 using the Bannockburn's zoning ordinance to gain
21 approvals for certain development features
22 within the planned unit process, is it not?

23 A. Well, let's see here. For business
24 headquarters planned development -- I don't

1 recall if it's under the -- if it came under the
2 PUD process or whether it was simply as a text
3 amendment, as a special use.

4 Q. And that is that text amendment that
5 Mr. Kolar was talking about is one vehicle for
6 obtaining approval for a noise wall?

7 A. Right.

8 Q. And these appear to be true and
9 accurate copies of the village of Bannockburn
10 ordinances 93-36 and 93-37?

11 A. They appear to be.

12 Q. Do you have any reason to think that
13 they're not?

14 A. No.

15 MR. KAISER: I'd move for the
16 admission into evidence of Complainant's
17 Exhibits D and E, D being ordinance number 93-37
18 and E being ordinance number 93-36.

19 MR. KOLAR: No objection.

20 HEARING OFFICER HALLORAN:
21 Complainant's Exhibits D and E are admitted.

22 BY MR. KAISER:

23 Q. And did I understand that you were
24 involved in the approval of -- did you say it

1 was the Pizzuti building?

2 A. Pizzuti building.

3 Q. But is it your testimony you don't
4 have a specific recollection of consideration of
5 the proposal to enclose the air conditioning
6 units?

7 A. I'm sure there was a requirement that
8 it be enclosed, the particulars of it though I
9 don't recall.

10 Q. Do you know, do you know why the
11 village insisted on the construction of a noise
12 berm along the eastern property line of the
13 Corporate 3,000 development?

14 A. Provide a buffer to the residential
15 properties to the east.

16 Q. And those residential properties to
17 the east, what village are they located in?

18 A. The village of Bannockburn.

19 Q. And the residential property to the
20 north of LTD, what village are they located in?

21 A. Lake Forest.

22 MR. KAISER: Thank you. I have no
23 further questions.

24 HEARING OFFICER HALLORAN: Thank you

1 Mr. Kaiser.

2 Mr. Kolar.

3 MR. KOLAR: Just a couple of follow-up
4 questions to clarify.

5 REDIRECT EXAMINATION

6 BY MR. KOLAR:

7 Q. Complainant's Exhibit D, ordinance
8 93-37, in the title it refers to a height
9 variation, correct?

10 A. Yes.

11 Q. Just so the record is clear, if a
12 person in Bannockburn receives permission or
13 receives a variation that is not a text
14 amendment, true?

15 A. I believe it would have outlined in
16 the title if there was a text amendment required
17 for that.

18 Q. But if a person applies for a
19 variance, the person is taking advantage of the
20 existing text of the zoning code using the
21 variance procedure to get some relief as already
22 outlined in the text of the code?

23 A. Yes, it would be a permitted
24 variation.

1 Q. And as the code currently exists, the
2 variance procedure is not available to LTD for
3 purposes of getting a 25 foot high noise wall,
4 true?

5 A. Based on that 20 percent rule, it
6 would require a text amendment.

7 Q. Text amendment changing the variance
8 procedures?

9 A. Correct.

10 Q. If LTD Commodities, if this was a
11 completely vacant lot now and someone applied to
12 Bannockburn to build a facility as we see here
13 on Respondent Exhibit 89, in that scenario
14 Bannockburn might require a berm on the north
15 property line, true?

16 A. They might.

17 MR. KAISER: Objection, calls for
18 speculation.

19 HEARING OFFICER HALLORAN: I am sorry.
20 Mr. Kaiser, your objection?

21 MR. KAISER: Calls for speculation.

22 HEARING OFFICER HALLORAN: If he can
23 answer, he can answer. And it appears that he
24 answered, so overruled.

1 BY MR. KOLAR:

2 Q. And the answer was just so I'm clear?

3 A. I'm sorry.

4 (Record read.).

5 BY MR. KOLAR:

6 Q. For the Pizzuti building we had a
7 vacant piece of property where a property owner
8 was coming to Bannockburn requesting to build an
9 office building, correct?

10 A. Correct.

11 Q. And as part of that process of totally
12 new construction Bannockburn required the berm?

13 A. Yes.

14 MR. KOLAR: I don't have any other
15 questions.

16 HEARING OFFICER HALLORAN: Thank you,
17 Mr. Kolar.

18 Mr. Kaiser, any redirect?

19 MR. KAISER: If I may, briefly.

20 RECROSS-EXAMINATION

21 BY MR. KAISER:

22 Q. With respect to Complainant's Exhibit
23 E, an ordinance amending the zoning ordinance
24 that is actual amendments to the text of the

1 ordnance, is it not?

2 A. I believe it was an amendment to the
3 ordinances to allow for business headquarters as
4 a specific use.

5 Q. And up until the time LTD proposed
6 adding almost 200,000 square feet to its
7 warehouse, there had never been a category for
8 an office headquarters within the Bannockburn
9 zoning ordinance, correct?

10 A. I don't believe so.

11 Q. And that was put in place to
12 accommodate or to facilitate LTD's development
13 of their property at the intersection of Route
14 22 and the tollway, correct?

15 A. Yes.

16 MR. KAISER: No questions.

17 MR. KOLAR: No questions.

18 HEARING OFFICER HALLORAN: Okay.

19 Anad?

20 MR. RAO: Yes.

21 EXAMINATION

22 BY MR. RAO:

23 Q. I had just a clarification question
24 regarding the ordinance that you have been

1 talking about that limits the fence height to 6
2 feet for the --

3 A. Uh-huh.

4 Q. -- does that ordinance apply only to
5 fences at the property line or does it apply to
6 a noise wall built within the property line?

7 A. I don't think it differentiates
8 between whether it's at the property line or
9 not, just says fences which would to me mean
10 anywhere on a property residential, commercial,
11 wherever.

12 Q. So, noise wall constructed to, you
13 know, mitigate any noise problems in the
14 vicinity of LTD, would that be considered as a
15 fence or would it be considered anything other
16 than a fence, you know? Do you have a
17 definition for fence in your ordinance?

18 A. I don't know if we do or not or if
19 Bannockburn does or not. I'd have to look at
20 it.

21 MR. KOLAR: Want me to look?

22 MR. RAO: No, I was just curious
23 because I know in residential areas they have
24 ordinances that apply to fences mostly between

1 property, residential property that you don't
2 want a big wall to be built. So, I was just
3 wondering whether a noise wall built within the
4 property line would also be considered a fence
5 or that is some -- you know. Considered as
6 something different.

7 THE WITNESS: The only analogy that I
8 could give is if you look at the zoning code
9 that they had passed out here with permitted
10 obstructions on fences, sometime in the past
11 year the plan commission went through reviewing
12 the maximum height for fences, for closed type
13 fences, and they allowed for closed type fences
14 along Half Day Road but not along other
15 roadways. For visual reasons, their
16 comprehensive plan is more reliant on
17 landscaping as a visual buffer than fences.

18 MR. RAO: Okay.

19 HEARING OFFICER HALLORAN: Mr. Kolar,
20 you want to explore that on re-redirect, I
21 guess, Mr. Rao's question, if you can find it?

22 MR. KOLAR: Well, yes, let me just
23 show him the full Bannockburn zoning code. I
24 just wanted to clarify one point.

1 REDIRECT EXAMINATION

2 BY MR. KOLAR:

3 Q. The Section 9-109 relating to
4 permitted obstructions and required yards, part
5 of the article titled district regulations of
6 general applicability, correct?

7 A. Yes.

8 Q. That means that article applies to all
9 zoning classifications?

10 A. Yes.

11 Q. And it's your understanding that the 6
12 foot height limitation for closed type fences
13 would apply to a noise wall regardless of
14 whether it was on the property line or somewhat
15 inside the property?

16 A. The way that the code identifies or
17 deals with fences, it doesn't matter whether or
18 not it's on a property line. For instance, if
19 somebody wanted to put in a pool, which was --
20 there is a required fencing for pools, those
21 maximum heights would apply and they're
22 typically not on the property line. We have a
23 dumpster enclosure.

24 Q. And does the code define closed type

1 fences?

2 A. I believe that there is a definition
3 of open and closed type fences.

4 Q. Would you be able to -- would you be
5 able to find that for us?

6 A. 242.

7 Q. So, page 242 of the zoning code that I
8 have here has a definition fence, closed type,
9 right?

10 A. Yes.

11 Q. And it states a wall, fence, gate or
12 similar barrier that is not an open type fence,
13 correct?

14 A. Yes.

15 Q. And the next definition is, fence,
16 open type, right?

17 A. Uh-huh. Yes.

18 Q. All right. I'll read the definition
19 of open type fences, a wall, fence, gate or
20 similar barrier or any 10 linear foot segment of
21 such a barrier where the visibility at right
22 angles to any surface of such barrier or segment
23 thereof is not reduced by more than 50 percent.

24 What does that mean?

1 A. I've always interpreted that at least
2 50 percent is open, where you can see through
3 the fence.

4 Q. In this Complainant's Exhibit B6, that
5 particular wall where we see the van, do you
6 know if that is an open type fence or a closed
7 type fence?

8 A. I couldn't tell you without seeing the
9 drawing for it.

10 Q. Okay. In the same section, 9-109, it
11 limits open type fences to 8 feet in height?

12 A. Yes.

13 Q. And a variance for an open type fence
14 would be limited to 20 percent of -- 20 percent
15 addition to that 8 feet?

16 A. Maximum, yes.

17 MR. KOLAR: Okay. I don't have any
18 other questions.

19 HEARING OFFICER HALLORAN: Mr. Kaiser,
20 any re-recross.

21 MR. KAISER: Briefly.

22 RE-CROSS-EXAMINATION

23 BY MR. KAISER:

24 Q. Does the ordinance have a definition

1 of a noise wall?

2 A. I don't know. Would you like me to --

3 Q. If you would, please.

4 A. Sure. I don't believe so.

5 Q. And to the best of your knowledge and
6 understanding, what we have in front of us here
7 today is the most current and up-to-date
8 ordinance promulgated by the village of
9 Bannockburn?

10 A. That's how it has been represented to
11 me.

12 Q. And you have no reason to disagree
13 with that representation?

14 A. No.

15 MR. KAISER: Thank you. I have no
16 further questions.

17 Mr. O'Halloran, I would ask --

18 MR. KOLAR: I have no questions.

19 HEARING OFFICER HALLORAN: Thank you.

20 MR. KAISER: -- leave of the board I
21 suspect and I'm certain that Mr. Kolar has moved
22 for admission into evidence of Respondent's
23 Exhibit I but I expect he would.

24 MR. KOLAR: I move for Respondent I

1 into evidence.

2 MR. KAISER: And that is a portion of
3 the zoning ordinance, I would simply ask leave
4 to supplement the record with portions of the
5 current ordinance pertaining to text amendments,
6 planned unit developments, special use permits,
7 portions of the ordinance that we would expect
8 to use and rely on in our closing argument.

9 HEARING OFFICER HALLORAN: When do you
10 propose to supplement the --

11 MR. KOLAR: I have no objection. You
12 can take this, Steve, and look through it and
13 supplement whatever you want.

14 HEARING OFFICER HALLORAN: We can
15 address that tomorrow, if you so choose?

16 MR. KAISER: Yes. With the idea that
17 Mr. Lothspeich is leaving now, that is a concern
18 of mine, I think we have the current one. I
19 don't think there would be any objection.

20 HEARING OFFICER HALLORAN:
21 Respondent's Exhibit I is admitted on condition
22 on Mr. Kaiser's motion supplement.

23 MR. KAISER: Thank you.

24 MR. KOLAR: You can step down.

1 HEARING OFFICER HALLORAN: Thank you
2 very much.

3 MR. KOLAR: May I begin?

4 HEARING OFFICER HALLORAN: Yes.

5 CROSS-EXAMINATION (FURTHER)

6 BY MR. KOLAR:

7 Q. Dr. Schomer, how are you doing this
8 afternoon?

9 A. I'm fine.

10 Q. Now, you yourself did no research to
11 determine whether Bannockburn would permit the
12 25 foot height noise wall that you recommended
13 to Mr. Kaiser's clients, true?

14 A. I relayed solely on the information
15 from the hearing a year ago when the board made
16 its first findings and what was presented there.

17 Q. All right. The question was, maybe I
18 didn't state it clear. You yourself did no
19 research to determine whether Bannockburn would
20 permit a wall of the type and height you were
21 recommending, true?

22 A. I did no research into the Bannockburn
23 codes.

24 Q. And you did no research with an

1 engineer to determine if the wall you were
2 proposing could be built on top of that
3 retaining wall, true?

4 A. I never suggested that the wall be on
5 top of the retaining wall.

6 Q. You did not consult -- strike that.
7 You had no consultation with an
8 engineer regarding whether a 25 foot high noise
9 wall could be built in the location that you
10 proposed, true?

11 A. I relied on, again, what came at the
12 hearing. I did nothing new.

13 Q. Okay. All right. Maybe my question
14 wasn't clear.

15 You did not consult with an engineer
16 regarding --

17 A. I did nothing new, yes. No
18 engineering.

19 Q. Did you consult with an engineer?

20 A. No engineer.

21 Q. You did no further noise studies in
22 terms of measuring noise, true?

23 A. I did no further noise measurements.

24 Q. All right. For the report you

1 prepared, you relied on the data that Mr.
2 Thunder's firm compiled when it was at the site
3 in 1997, it measured noise on that particular
4 date, true?

5 A. No. I said that I relied on Mr.
6 Thunder's measurements only to the extent that
7 they indicated that the middle or higher
8 frequencies were more of a problem than the
9 lower frequencies, but I did not rely on any
10 specific numerical values for any design
11 purposes whatsoever.

12 Q. So, your goal was to build a noise
13 wall that would take care of this nuisance
14 problem that the pollution control board found?

15 A. Correct.

16 Q. You agree generally that people are
17 effected differently by noise, true?

18 A. Everybody is an individual. They're
19 effected differently.

20 Q. And especially when you're talking
21 about noise as a nuisance, one level of noise
22 might be a nuisance to one person and not a
23 nuisance to another person, true?

24 A. That's true.

1 Q. And with respect to the noise wall
2 that you proposed, you cannot guarantee the
3 pollution control board that if LTD built that
4 noise wall, that the homeowners would no longer
5 complain about noise, true?

6 A. What I've said, and maybe I didn't say
7 it clearly enough, is the pollution control
8 board has found that the current noise is a
9 nuisance. And what I've said is that in my
10 professional opinion a reduction of 10 DB is
11 sufficient to remove their finding of a
12 nuisance, that in my opinion if they, if LTD
13 reduces by 10 DB, then I feel there should no
14 longer be a finding of a nuisance, that isn't to
15 say that they may or may not still be bothered
16 but it is to say that I would then say that the
17 pollution control board, they may be bothered
18 but I don't think you should find this to be a
19 nuisance any longer.

20 Q. So, even if LTD built the wall that
21 you propose, the Complainants still might be
22 bothered by noise from LTD, true?

23 MR. KAISER: Objection, calls for
24 speculation.

1 HEARING OFFICER HALLORAN: He may
2 answer if he is able.

3 THE WITNESS: What the pollution
4 control board does, as I understand it in the
5 most basic way --

6 MR. KOLAR: Objection, nonresponsive.

7 HEARING OFFICER HALLORAN: Sustained.

8 THE WITNESS: I'm trying to answer the
9 question.

10 BY MR. KOLAR:

11 Q. Dr. Schomer, my question is if LTD
12 built a noise wall of the type you propose, you
13 cannot tell us that the Complainants will no
14 longer be bothered by noise from LTD, true?

15 A. I can no longer -- I cannot tell you
16 whether they will be bothered or not.

17 Q. And you told us that the noise wall
18 that you propose was designed to have 10 DB of
19 reduction in noise at one of those octave bands?

20 A. 1 kilohertz.

21 Q. 1 kilohertz.

22 Okay. So, a 10 DB reduction in noise,
23 recognizing that people are effected differently
24 by noise, may not be enough of a reduction for

1 some people and maybe more than needed for other
2 people, correct?

3 A. More than needed for what?

4 Q. You don't understand the question?

5 A. No, I think -- yes, I don't think you
6 said anything fully.

7 Q. You did not read the hearing testimony
8 of the Complainants, is that true?

9 A. I've read only small parts.

10 Q. And on direct examination you said
11 that you read the testimony of Mr. Zak and Mr.
12 Thunder from the first hearing, is that
13 accurate?

14 A. And Mr. Mitchell.

15 Q. Okay. So, you did not read any of the
16 hearing testimony of the Complainants, true?

17 A. If I did, it was very little.

18 Q. Well, did you or did you not?

19 A. I don't recall.

20 Q. And you have never been to the
21 Complainant's property during the nighttime
22 hours as nighttime is defined in the
23 regulations, true?

24 A. I never recall being there at night.

1 Q. And you have not even spoken with them
2 until recently, you said, correct?

3 A. Correct.

4 Q. You met them only recently I think you
5 said?

6 A. I've spoken -- no, I've spoken years
7 ago with Mrs. Roti for sure. When I said this
8 morning I forgot about that, but you've jarred
9 my memory.

10 Q. In any event, let me get back to this
11 10 DB thing, the noise wall that you designed to
12 offer 10 DB of noise reduction at 1 kilohertz,
13 that may be more than is necessary for certain
14 people to recognize a reduction, correct?

15 A. I don't think so.

16 Q. Well, some people who, for example,
17 are sound sleepers, may not be bothered by noise
18 until there is like a 12 DB increase in noise,
19 true?

20 A. No, I think that is a great
21 oversimplification of the situation.

22 Q. But you do agree that people are
23 effected differently by noise?

24 A. That I agree to.

1 Q. Okay. In fact, you recall in the
2 pollution control board's decision the finding
3 that Ms. Weber's son, Christopher was not
4 effected by the noise from LTD?

5 A. I think he was 2 years old at the
6 time.

7 Q. But you recall that finding, correct?

8 A. I recall that.

9 Q. That would be there an example in one
10 house you have people effected differently by
11 the noise from LTD, true?

12 A. No, because there is an age factor.
13 People that may not be annoyed at age 20 may be
14 annoyed at age 30 or visa-versa. People that
15 aren't annoyed at the age 6 may be annoyed at
16 the age 14, so I don't think you can categorize
17 the people that way without also speaking about
18 the age and point in time.

19 Q. In any event, you've had no
20 discussions with the Weber family to determine
21 if Christopher is now effected by the noise,
22 true?

23 A. I don't know.

24 Q. You have had no discussions, right?

1 A. I've had no discussions.

2 Q. Now, on your noise report, which I'll
3 just refer to this based on Mr. Kaiser's number,
4 I guess, Complainant's Exhibit A.

5 Before I do that, let me ask you a
6 question, did you bring your entire file with
7 you relating to this project?

8 A. Yes.

9 Q. Everything?

10 A. Everything I could find. I didn't
11 bring things like the transcript.

12 Q. Okay. On page 4 of your report, is
13 that an exact replication of what the Weber
14 house looks like?

15 A. No.

16 Q. And on this page 4 you state that
17 sound sources on trucks are 4 feet and 12 feet
18 above the truck ground level, correct?

19 A. That is to say that the assumptions as
20 was given earlier in the reports, was -- I was
21 assuming those two heights.

22 Q. All right. Do you have your report?

23 A. Yes.

24 Q. This is a question, that's what you

1 have stated on page 4, correct, .3, did I read
2 that correctly?

3 A. That's correct. That is what is
4 written there.

5 Q. And for the 12 foot you have a
6 parenthetical that says exhaust, correct?

7 A. Correct.

8 Q. And then in the footnote, maybe it is
9 not a footnote but for Figure 2 you note that
10 the critical path is sound from the 12 foot high
11 source that reflects off the hard LTD wall over
12 the noise barrier to the second floor of the
13 indicated residence, correct?

14 A. Correct.

15 Q. So, you designed a noise wall or you
16 analyzed this situation from the perspective
17 that you have a highest source being a 12 foot
18 high noise source?

19 A. Correct.

20 Q. And the 12 foot high noise source
21 according to this page 4 is exhaust from the
22 trucks?

23 A. That was as an example, yes.

24 Q. And that is a low frequency noise,

1 exhausts from a truck, correct?

2 A. That would be low frequency.

3 Q. And that in the lower frequencies
4 where the Complainants are not bothered by the
5 noise, correct?

6 A. I heard that exhaust noise was one of
7 the things that bothered the Complainants from
8 what I understood.

9 Q. What would be the middle or higher
10 frequencies on the octave band level, what is
11 the first one that you would put into the
12 definition middle or higher frequencies?

13 A. Well, that certainly includes 500
14 within the middle. It's kind of a grey area,
15 the very low frequencies, I always consider the
16 -- is 63 hertz octave bands and that is what is
17 considered to be the low frequencies. And
18 middle I'd say would be certainly 500. So, 125
19 and 250 are kind of a grey area in my mind.

20 Q. All right. And a truck exhaust would
21 be at what octave band, 125 or less?

22 A. I was going to pick 125.

23 Q. Okay. And so the middle in your
24 opinion in terms of the octave bands begins in

1 the neighborhood of 500?

2 A. I'll say 500.

3 Q. So, on direct examination you said in
4 terms of the Complainant's problems, you said
5 problems at the middle or higher frequencies, do
6 you remember that testimony?

7 A. That was based upon the measurements
8 from Thunder and most of the sources, R&D,
9 higher frequencies, the slamming of the doors on
10 the trucks are going to be higher frequencies,
11 the air brake will be higher frequencies.

12 Q. The question was, is that is your
13 understanding of the problem that the middle or
14 higher frequencies --

15 A. No, I never said that. I said that I
16 understood that the exhaust and the bumpers of
17 the trucks backing in were also problems.

18 Q. Okay. But the 12 foot noise source of
19 exhaust that is not a middle or higher
20 frequency -- Dr. Schomer, let me finish the
21 question.

22 Okay. The 12 foot high noise source,
23 that does not fall into what you would call the
24 middle or higher frequencies of the octave

1 bands, true?

2 A. When I described the 12 foot high
3 noise sources --

4 MR. KOLAR: Objection, nonresponsive.

5 HEARING OFFICER HALLORAN: Dr.
6 Schomer, if you could just answer the question
7 if you're able yes or no.

8 THE WITNESS: Say that again.

9 BY MR. KOLAR:

10 Q. Yes.

11 The 12 foot high noise source for
12 exhaust that is listed in your report, that does
13 not fall in the phrase, middle or higher
14 frequencies of the octave bands, true?

15 A. The exhaust does not fall in the
16 middle or high frequencies.

17 Q. Now, the noises of which the
18 Complainants most concerned are the noises at
19 the 4 foot high source, true?

20 A. Wrong.

21 Q. All right. Well, let's break that
22 down a little.

23 The fifth wheel would be at roughly 4
24 feet off the ground, right?

1 A. What I explained earlier today --
2 MR. KOLAR: Objection, nonresponsive.
3 HEARING OFFICER HALLORAN: Dr.
4 Schomer.
5 THE WITNESS: The fifth wheel noise
6 radiates from throughout the truck.
7 BY MR. KOLAR:
8 Q. Dr. Schomer, simple question, the
9 fifth wheel is roughly 4 feet off the ground,
10 true?
11 A. The fifth wheel or the source of
12 noise?
13 Q. The fifth wheel connection is roughly
14 4 feet off the ground?
15 A. The fifth wheel connection is 4 feet
16 off the ground.
17 Q. And the air being released from air
18 brakes, that would be at 4 feet or below, that
19 actual air release, true?
20 A. The air release is 4 feet or lower.
21 Q. All right. Now, Dr. Schomer, the
22 doors for trucks to get into the LTD warehouse,
23 you've seen those doors, correct?
24 A. The overhead doors?

1 Q. Right.

2 A. Yes.

3 Q. And you would agree that the doors
4 comprise more than maybe 50 percent of the
5 square footage of that north wall?

6 A. No.

7 Q. Well, in any event, one of the
8 problems -- strike that.

9 You're not recommending that LTD
10 install absorptive material on the north wall of
11 its warehouse because you don't believe that
12 would have any significant impact, true?

13 A. That is what I said.

14 Q. Okay. And part of the reason for that
15 opinion by you is because you have these doors
16 that the trucks use to enter the warehouse which
17 you can't put absorbed material on those doors,
18 right?

19 A. No, that is not right.

20 Q. Okay. In any event those doors are
21 opened frequently, right?

22 A. They're opened frequently.

23 Q. And when they're opened, the noise
24 would go into the warehouse as opposed to

1 reflecting off the doors?

2 A. That's correct.

3 Q. And you are not recommending that LTD
4 install some sort of absorptive material on the
5 face of the retaining wall?

6 A. That is correct.

7 Q. Right.

8 And in your report, Dr. Schomer, where
9 you have the P and R points plotted on page 5,
10 just so the record is clear, so I understand,
11 for example, R10 -- strike that one.

12 R5 corresponds to P5, right?

13 A. Yes.

14 Q. Okay. So, is this showing that R5 is
15 inside the warehouse or is that just a point on
16 the north face where the -- you believe the
17 noise would reflect and bounce the other
18 direction?

19 A. Let me try -- can I give you a long
20 answer?

21 Q. Well, short one is better, but --

22 A. Well, it's like a mirror, like what I
23 tried to explain earlier that if you're looking
24 in a mirror and you're 2 feet from the mirror,

1 your image is 2 feet inside the mirror, that is
2 what you see, you see a source of yourself 2
3 feet inside the mirror. If you're 10 feet back
4 you see the source 10 feet inside the mirror and
5 that is what this is showing, there is another
6 source, let's say P5, I don't remember a number
7 but I think it is 15 feet from the wall, so
8 then -- I'm sorry, P5 is more like 45 feet from
9 the wall. I don't remember the distance but
10 let's say it is 45 feet from the wall, then
11 there is another source inside LTD that needs to
12 be modeled 45 feet inside, that's the mirror
13 image.

14 Q. And these points that you have
15 plotted, P1 through I think P9, those are points
16 where under your analysis noise would originate
17 in this analysis?

18 A. What it is is I'm saying what I said
19 was I don't know where the noise originates
20 from. It's pretty uniform throughout the area.
21 I sensed that it was a little more right in
22 front of all of the doors than off to the sides,
23 so I've attempted to model that with a
24 reasonable set of discrete points.

1 Q. And these P points, P1 through P9, is
2 there an elevation of 4 feet or 12 feet that
3 goes with these points?

4 A. Yes.

5 Q. So, you used 12 feet for these points
6 P1 through P10?

7 A. 12 feet and 4 feet.

8 Q. And do you in any way describe in your
9 report which ones are 12 foot high noise sources
10 and which ones are 4 foot high?

11 A. They're all both.

12 Q. They're all both.

13 And in terms of your analysis of the R
14 spots, there would be no reflection if the door
15 was opened at that particular spot?

16 A. There would be very small reflection
17 certainly.

18 Q. And those doors are higher than -- do
19 you know how high the doors are on the --

20 A. Excuse me. I need to give you a
21 little better answer.

22 If the door is open and you happen to
23 be speaking about a source that is normal to the
24 door, that is true, but if the receiving

1 property happens to be off on an angle it might
2 be the space in between the doors that acts as a
3 reflector. You really have to look at the
4 geometry all the time to see what is going on at
5 any point in time in space.

6 Q. All right. Then I forgot the question
7 I asked after that.

8 Do you remember the second question?

9 A. No.

10 MR. KOLAR: Could I have that read
11 back?

12 HEARING OFFICER HALLORAN: Sure.

13 (Record read.)

14 BY MR. KOLAR:

15 Q. Do you know how high the doors are on
16 the north wall of the warehouse?

17 A. I don't know the precise height.

18 Q. Could you make an assumption as to the
19 height of those doors?

20 A. I assume they are at least as tall as
21 the trucks.

22 Q. The trucks have to get in there?

23 A. Yes.

24 Q. How high are the trucks?

1 A. I'm assuming about 15 to 16 feet. 14
2 to 16 feet, the trailers that is.

3 Q. All right. And for these points where
4 you represented the noise to be P1 through P9,
5 again, those are representative spots in the
6 area where you think noise most often comes
7 from?

8 A. Those are just more or less equal
9 spacing. I just felt that this was a reasonable
10 cloud of points to represent the area.

11 Q. Those points are representative of
12 noise generated in the LTD truck dock area?

13 A. It's not to imply that there is only
14 noise from those points. I feel that is a close
15 enough spacing to model the continuum.

16 Q. All right. You have no points in the
17 truck staging area, true?

18 A. The truck staging area, I guess you
19 mean the -- what is the truck staging area?

20 Q. It's the angled area right up against
21 the retaining wall where trailers are placed.

22 A. I think P9 is there.

23 Q. Respondent's Exhibit D, do you see
24 those trailers backed in there?

1 A. Yes.

2 Q. Those are backed in with their doors
3 back towards the retaining wall?

4 A. Correct.

5 Q. You have none of those P points
6 on your chart in that truck staging area, true?

7 A. True.

8 Q. And when you're talking about this
9 violin example, you're talking about noise that
10 gets into these empty trailers in the truck
11 staging area?

12 A. Anywhere.

13 Q. Is that one of your points that you
14 were making with the violin that noise somehow
15 gets into the empty trailer and resonates like a
16 violin?

17 A. That you will get resonances inside
18 those trailers, yes.

19 Q. And you have nothing in your report
20 about this phenomenon, right?

21 A. I didn't put it in there.

22 Q. And that can only happen if the doors
23 are open when the trailers in the staging area?

24 A. No.

1 Q. So, noise can get inside the trailer
2 when the doors are closed?

3 A. It's not noise. It's -- if you cause
4 something to shake, then you set up mechanical
5 resonances throughout the system. You get
6 resonances that will be internal to that box and
7 that whole box, the walls of that box will
8 vibrate and that whole box can radiate in very
9 complicated fashion from all of the different
10 sides. And, in fact, I'd expect it to be
11 stronger closed than open.

12 Q. And it would be stronger if it was an
13 empty trailer than if it was filled with
14 merchandise, true?

15 A. If it was completely full of
16 merchandise, I would expect that merchandise to
17 dampen any of the acoustical modes inside.

18 Q. So, just to clarify because I was
19 confused you are not telling us that noise
20 bounces off the retaining wall and then heads
21 back south into an empty trailer and that that
22 is --

23 A. No, not at all.

24 Q. -- resonating?

1 A. No, it was totally -- that's what I
2 was trying to explain, the mechanical thing of
3 the fifth wheel or of banging into the stop can
4 set off resonances throughout all of the
5 structures.

6 Q. Now, if there was a -- there was a
7 noise wall built on the north property line you
8 admit that that benefit of that noise wall would
9 be that it would block noise from the
10 automobiles and the automobiles parking lot,
11 correct?

12 A. It would block noise from the parking
13 lot, yes.

14 Q. And you mentioned that LTD is the
15 party that says it would need an opening in a
16 wall if it was built near the retaining wall,
17 that's your understanding, correct?

18 A. My understanding is that they were put
19 in for the convenience of LTD.

20 Q. I understand, but you -- if LTD says
21 they would need openings if the wall was put
22 there, you would have no information or reason
23 to dispute LTD's wanting openings, true?

24 A. Well, I've taken off a good 100 feet

1 of the wall on the west side so there might be
2 less of a need for openings.

3 Q. I understand, but LTD says we need
4 openings if there is one on the retaining wall,
5 you have no dispute with LTD's business need in
6 that fashion?

7 A. I have no dispute with it.

8 Q. You do agree though that openings
9 increase the cost of a retaining wall, of a
10 noise wall?

11 A. It certainly is going to cost more
12 than not having it there.

13 Q. Right.

14 And having openings reduces the
15 effectiveness of a noise wall?

16 A. No, I think that properly designed
17 it's not going to reduce the effectiveness of
18 the wall.

19 Q. Properly designed you have to have
20 pretty substantial overlaps, true?

21 A. I wouldn't think it is going to be
22 that substantial, but I'd have to see what Steve
23 Mitchell has done in the past. I would think
24 several feet would be enough.

1 Q. Now, you told the people here today
2 that you have a noise wall on the north property
3 line and it is built of wood, the wood would
4 have no absorptive properties, is that your
5 opinion?

6 A. That's correct, little.

7 Q. Little.

8 So, it would have some absorptive
9 properties?

10 A. By 5 percent.

11 Q. All right. But the wood wall would
12 block noise that hit it and send it the other
13 direction, true?

14 A. Send it back towards LTD?

15 Q. Right.

16 A. Well, again, you're thinking of things
17 on right angles and everything is going every
18 which way here. So, it is going to be mainly
19 some kind of angular thing and not the 90
20 degree.

21 Q. I understand. I just want to clarify.
22 You're not telling us that if you put a wood
23 wall on the north property line that noise will
24 just pass through the wood?

1 A. No.

2 Q. It will hit the wood and reflect back
3 at some angle?

4 A. The wood will -- properly designed
5 would be a barrier.

6 Q. It would absorb some of the noise and
7 reflect the remaining noise back at some angle?

8 A. Correct.

9 Q. And much of the reflective noise would
10 go over the LTD warehouse or in some fashion by
11 the LTD warehouse out towards Route 22, true?

12 A. It's going to go towards Route 22 but
13 over a wide lateral length.

14 Q. All right. But the point is the wood
15 wall would block noise and reflect it away from
16 the Complainant's property, true?

17 A. True.

18 Q. And you understand that the board
19 found LTD to be a nuisance because it was
20 emitting noise beyond the boundaries of its
21 properties and effecting the Complainants to the
22 north, true?

23 A. I don't know what they found in terms
24 of the property line. I know that the numerical

1 limits are written in terms of the property line
2 but I can't say that I've read the regulations
3 or the order with that in mind.

4 Q. Well, you read page -- the whole
5 decision including page 23 where it quotes,
6 Section 24 of the act and 900.102 of the
7 regulations, right?

8 A. I've read it, not recently.

9 Q. All right. Don't you have a general
10 understanding that even the nuisance regulations
11 state you can't react a nuisance beyond the
12 boundary of your property?

13 A. Yes, I think I have that general.

14 Q. Okay. So, to the extent that LTD
15 could contain the nuisance within the boundaries
16 of its property, that would comply with the act
17 and the regulations, true?

18 MR. KAISER: Objection, calls for a
19 legal conclusion.

20 HEARING OFFICER HALLORAN: Mr. Kolar.

21 MR. KOLAR: I don't --

22 HEARING OFFICER HALLORAN: Sustained.

23 BY MR. KOLAR:

24 Q. Now, Dr. Schomer, you agree that you

1 construct a noise wall, you need to keep it
2 close to the source or the receiver of the
3 noise, true?

4 A. True, all else being equal.

5 Q. And the noise wall on the north
6 property line would fall into the second
7 category as being close to the receiver, true?

8 A. I would really think for -- at least
9 the Weber's house and maybe Rosenstock, more in
10 between, they're set pretty far back from the
11 property line. I would say that that is
12 probably true for the Roti house.

13 Q. And it's your testimony that a problem
14 with the arrangement here of the LTD business
15 and the Complainant's properties is that you
16 have these asphalt parking lots that allow noise
17 to reflect off it towards the Complainant's?

18 A. It's just that the hard surface
19 doesn't absorb sound.

20 Q. Does grass, a grassy hill absorb
21 sound?

22 A. Yes.

23 Q. On your page 5 of your report, point
24 10, you have that noise going directly west and

1 reflecting off of the east wall of the LTD
2 warehouse?

3 A. It doesn't go directly west, it's on
4 the directional source. What that is showing
5 again is where the mirror source would be
6 located but both sources radiate in all
7 directions, again, with the proviso that if
8 there is a certain direction that wasn't
9 possible with that reflection I wouldn't use it.

10 Q. I called your attention to the wrong
11 one.

12 P9, the blue dot, you have the noise
13 going basically due south and reflecting at R9,
14 which is in the area of the grassy hill, right?

15 A. That's the location of the source,
16 yes, the reflected source.

17 Q. So, for point 9, P9, that noise is
18 actually going to continue south toward Route
19 22, right?

20 A. P9 would continue south towards Route
21 22.

22 Q. Now, you were generally discussing
23 noise walls with Tom Thunder back before we had
24 this hearing in November '99 and May 2000,

1 correct?

2 A. I remember at least one conversation,
3 this was when I was still doing stuff with
4 Bannockburn with Tom Thunder about noise wall in
5 general.

6 Q. Right.

7 In any event, when you had your
8 general conversations, neither you nor Mr.
9 Thunder had topographical information, right?

10 A. I don't know what he had. I didn't
11 have any at the time.

12 Q. Right.

13 I mean, you got involved in this
14 particular project I think in January 1997, when
15 you started working with Bannockburn, true?

16 A. I got involved in a very small way in
17 the review process.

18 Q. I mean, you were working with
19 Bannockburn on the tollway issue and they asked
20 you can you take a look at this Roti, LTD issue,
21 right?

22 A. Correct.

23 Q. And that was about January 1997?

24 A. I'd have to look at my records, but

1 I'll take -- I -- that sounds reasonable.

2 Q. Right.

3 And in any event you did not obtain
4 any topographical information regarding
5 elevations until you were requested to prepare
6 this report, right?

7 A. That is correct.

8 Q. And on occasion you were standing on
9 the sidewalk on top of the retaining wall and
10 you saw some trailers backed into those bumpers,
11 true?

12 A. I was standing on top of the retaining
13 wall and I saw trailers in place. Are you
14 saying I saw them while they actually backed in?

15 Q. Yes. Did you see that?

16 A. I don't recall. I think we might have
17 seen one but I don't -- I couldn't tell you for
18 sure.

19 Q. And have you ever felt the property,
20 the LTD property shake from its trucking
21 operations?

22 A. Have I ever felt the LTD property
23 shake?

24 Q. Right.

1 A. I've not been inside the LTD property.

2 Q. I am talking on top of the retaining
3 wall or in the parking lot area, have you ever
4 felt the ground shake from the trucking
5 activities or the noise?

6 A. I can't recall feeling any.

7 Q. Respondent Exhibit 88 from the first
8 hearing, this is before the '95 expansion, the
9 Weber house does not even exist at this point,
10 right?

11 A. I'll take your word for all of that.

12 Q. And the Rosenstrock house is under
13 construction.

14 So, if you were consulting with them
15 at that time, you might have told them to build
16 a ranch house given the commercial influence to
17 the south, right?

18 MR. KAISER: Objection, calls for
19 speculation.

20 HEARING OFFICER HALLORAN: Sustained.

21 BY MR. KOLAR:

22 Q. If the Webers had built a ranch house,
23 they would be less impacted by noise from LTD,
24 true?

1 A. If there were a one story house
2 instead of two story, then the required
3 mitigation would be less tall.

4 Q. The noise wall would not need to be as
5 high in your opinion if the Rosenstock house
6 and the Weber house were one story houses, true?

7 A. Correct.

8 Q. Just so we understand the full costs
9 here.

10 If the additional 150 foot extension
11 of your 520 foot wall is built, to determine
12 that cost you take your \$48 a square feet times
13 25 feet high times the 150 feet, right?

14 A. Correct.

15 Q. That adds about \$180,000 to your cost?

16 A. I'll assume that you have done the
17 arithmetic correctly and agree. That's in the
18 right ballpark anyway.

19 Q. When you received this proposal from
20 Huff Company, which is attached to your report,
21 the 25 foot high wall, you read that proposal,
22 correct?

23 A. I've read it.

24 Q. And he gave you a proposal for a wall

1 with absorptive materials on the south face
2 because that is what you requested from him,
3 correct?

4 A. Correct.

5 Q. And when you read the proposal, you
6 saw his note that it is based upon normal soil
7 conditions, correct?

8 A. Correct.

9 Q. So, you understood that if there were
10 not normal soil conditions that could increase
11 the cost of the wall?

12 A. Correct.

13 Q. Now, that four sided structure around
14 the HVAC equipment to the east, you merely took
15 photos of that, correct?

16 A. I didn't take the photos.

17 Q. All right. You didn't -- you have not
18 conducted any sort of investigation to determine
19 if that has sound absorptive materials on the
20 inside, true?

21 A. I don't know whether it is sound
22 absorptive or sound reflective on the inside.
23 From what I saw three sides were solid like
24 concrete and one side was louvered, as I

1 described this morning.

2 Q. And Mr. Kaiser had marked as an
3 exhibit your analysis of how high a wall would
4 have to be if it's on the property line for the
5 Roti, Rosenstock and Weber homes, do you recall
6 that?

7 A. Yes.

8 Q. And that you did that analysis in half
9 a day?

10 A. Approximately, yes.

11 Q. Okay. So, how many hours is that?

12 A. Four hours.

13 Q. Four hours.

14 Okay. But you're telling us it would
15 take you three solid days, 24 hours to analyze
16 the noise abatement properties of a wall 16 feet
17 away from the retaining wall?

18 A. No.

19 What I said is it would take at least
20 a day to do the calculations and if anybody
21 wanted a report, a write-up, would be at least
22 another day.

23 Q. All right. So, it would take you 24
24 hours to do the calculations for the wall?

1 A. No, 8 hours.

2 Q. 8 hours.

3 Took you twice as long to do the
4 calculations for one 16 feet away from the
5 retaining wall as opposed to on the property
6 line?

7 A. Yes, because there is many segments to
8 that. The one on the property line is very
9 simple because it's a constant distance from
10 each house and it is constant distance from the
11 noise sources.

12 When you have this 5 or 6 segment you
13 got to up your numbers changed for each segment
14 and each source.

15 Q. Well, the fact that it takes 8 hours,
16 does that number of hours have anything to do
17 with the fact that Mr. Kaiser is requesting LTD
18 to pay for that?

19 A. Absolutely not.

20 Q. And maybe I had this wrong, you had 72
21 hours in terms of running the numbers for the
22 wall you propose as shown in your report?

23 A. When I say days, I mean an 8 hour day.
24 Please, I did not work 24 hours a day, but 8

1 hours.

2 Q. When you said something took you 3
3 days, that mean 24 hours total, 8 hours each
4 day?

5 A. Correct.

6 Q. Okay.

7 A. May be lawyers bill that way.

8 Q. In your profession, there have been
9 studies that basically conclude that when you
10 add noise to an area people notice the increase
11 noise but if you take away that same noise they
12 don't notice the decrease, true?

13 A. I don't think that is true.

14 Q. Is that generally true?

15 A. I don't think that is generally true.

16 Q. Are there any studies that you're
17 aware of that basically conclude that, that
18 people are not as aware of a noise reduction as
19 they are of a noise increase?

20 A. I know of studies that say the length
21 of time that it takes to gain awareness is
22 different so that people quickly notice a new
23 noise source but more slowly notice the absence
24 of a noise source, but I don't know of anything

1 that says that they don't ultimately change.

2 That would be contrary to everything I know.

3 Q. And there are wood walls along the
4 tollway, correct?

5 A. There are wood walls built. I don't
6 think I've ever seen one along in Illinois but
7 maybe you can point one out.

8 Q. You're saying from here all the way
9 down to Hinsdale there are no walls, noise walls
10 built of wood?

11 A. I recall mainly the concrete walls.

12 Q. And you cannot point the board to any
13 25 foot high noise walls in Illinois, true?

14 A. I think Steve Mitchell will be hear
15 shortly. He told me they had just built one 25
16 feet in Illinois, if I recall right, but we can
17 ask him.

18 MR. KOLAR: Objection, nonresponsive.

19 HEARING OFFICER HALLORAN: Sustained.

20 MR. KAISER: I think the question was
21 does he know of any and he indicated he did.
22 Now, his knowledge is based on hearsay, might
23 not be something the board wants to rely on but
24 it's knowledge of a sort. I don't know that the

1 answer needs to be struck. The weight maybe
2 something the board would want to consider but
3 striking. . .

4 HEARING OFFICER HALLORAN: I stand on
5 my ruling. Thank you, Mr. Kaiser.

6 Sustained.

7 BY MR. KOLAR:

8 Q. You cannot point to a 25 foot high
9 noise wall anywhere in Illinois, true?

10 A. I can't point to a 25 foot high noise
11 wall.

12 Q. One point. You said something in your
13 testimony on direct that Mr. Thunder assumed the
14 loading dock area was at the same elevation as
15 the receiving property, recall that testimony?

16 A. Yes.

17 Q. Anybody who goes out to LTD can stand
18 on the retaining wall and recognize that the
19 loading dock area is about 10 feet below the
20 grade of the parking lot, true?

21 A. Yes.

22 Q. All right. May not have specific
23 elevations but that is something a layman can
24 recognize, correct?

1 A. That is correct.

2 Q. So, you would agree that Tom
3 recognized that the loading dock area was at a
4 grade below the parking lot and the lawns of the
5 Complainant's property?

6 MR. KAISER: Objection, calls for
7 speculation as to what Tom Thunder knew.

8 HEARING OFFICER HALLORAN: Excuse me,
9 Dr. Schomer.

10 MR. KOLAR: Let me restate the
11 question.

12 BY MR. KOLAR:

13 Q. Based on your communications with Mr.
14 Thunder regarding this case, you remember that
15 he was aware that the loading dock was at a
16 grade below the parking lot, right?

17 A. He was aware that the loading dock was
18 at a grade below the parking lot.

19 Q. Have any of the Complainants, whoever
20 you spoke to, indicated that they want to sell
21 their homes after this case is concluded?

22 MR. KAISER: Objection, hearsay.

23 HEARING OFFICER HALLORAN: Sustained.

24 MR. KOLAR: I think they're parties,

1 not hearsay of the parties.

2 MR. KAISER: Admission of a party
3 opponent, how does that go to any of the
4 elements at issue here, effectiveness of a
5 remedy?

6 MR. KOLAR: My response to that if
7 these people just plan on moving after
8 requesting LTD to build a 25 foot high wall
9 we're going to have new people who may not even
10 be bothered by the wall.

11 MR. KAISER: Great closing argument
12 but nothing that Dr. Schomer needs to testify
13 to.

14 HEARING OFFICER HALLORAN: I would
15 agree with Mr. Kaiser in my ruling, sustain.

16 MR. KOLAR: Let me take one minute. I
17 think I'm done.

18 BY MR. KOLAR:

19 Q. One final thing. You had testified if
20 there were merely deadmen there holding up the
21 retaining wall as opposed to this fabric, you
22 could build the wall where you propose, you
23 recall that testimony?

24 A. Yes.

1 Q. That would depend on how many deadmen
2 would be installed and how far apart they were,
3 true?

4 A. I don't know the answer to that.

5 MR. KOLAR: I don't have any other
6 questions.

7 HEARING OFFICER HALLORAN: Thank you,
8 Mr. Kolar.

9 Mr. Kaiser, redirect, please.

10 MR. KAISER: Thank you.

11 REDIRECT EXAMINATION

12 BY MR. KAISER:

13 Q. What would Complainant's next exhibit
14 be?

15 HEARING OFFICER HALLORAN: F.

16 BY MR. KAISER:

17 Q. Dr. Schomer, I'm showing you what has
18 been marked for purposes of identification as
19 Complainant's Exhibit F. Do you recognize that
20 document?

21 A. Yes, I do.

22 Q. What do you recognize that to be?

23 A. These were barrier calculations that
24 apparently Tom Thunder did and sent to Kaiser

1 and Kolar by fax.

2 Q. And what was the date indicated on the
3 fax transmittal?

4 A. 10/27/99.

5 Q. Have you reviewed these barrier
6 calculations?

7 A. Yes, I have.

8 Q. Do you note anywhere on there where it
9 appears Mr. Thunder took into consideration the
10 height of the receiving properties?

11 A. I can't see anywhere where it's noted.

12 Q. Do you remember at any time during
13 your discussions with Mr. Thunder Mr. Thunder
14 pointing out that, gee, the Weber house is
15 almost 40 feet above the grade of the dock area,
16 what are we going to do about that?

17 A. No, I don't recall that.

18 Q. Now, this aerial photo, Respondent's
19 88, you recognize that this was taken before LTD
20 expanded its warehouse facility to the south,
21 correct?

22 A. Correct.

23 Q. And you also observed that it was
24 taken before LTD constructed the retention wall

1 north of the dock area, correct?

2 A. Yes.

3 Q. And this photo that we're looking at
4 in 88, when the Weber house was under
5 construction or the Rosenstock house was under
6 construction and the Weber house was yet to be
7 built, at that point there is no recessed
8 loading dock area?

9 A. Correct.

10 Q. That was added after the Webers began
11 construction on their property, was it not?

12 A. I can't answer that.

13 Q. All right. But you're looking at
14 these photos. Do you see the -- I'm sorry. The
15 Rosenstock's, after the Rosenstock's began
16 construction?

17 A. Correct.

18 Q. Thank you.

19 And, again, when you began the
20 analysis and the design of an appropriately
21 sized noise wall, you felt it important to
22 obtain the topographical information, did you
23 not?

24 A. Yes, I did.

1 Q. Now, Mr. Kolar made an argument that
2 if LTD built a noise wall along the property
3 line, the noise wall would reflect noise, sound
4 waves, back to the south, was Mr. Kolar's, in
5 essence, his observation, do you recall that?

6 A. Yes.

7 Q. And you said no, that assumes that all
8 the sound is coming and striking the wall
9 perpendicular to the wall and then actually the
10 geometry of noise propagation in the dock area
11 is more complex, is that right?

12 A. Correct.

13 Q. So, for instance, noise coming from
14 the west end of the dock would hit a property
15 line noise wall and reflect at roughly the angle
16 of approach, would it not?

17 A. Correct.

18 Q. So, for instance, noise coming from
19 the west end of the dock, would then bounce back
20 to noise coming from the southwest striking the
21 wall at the property line would be reflected in
22 a southeasterly direction, would it not?

23 A. Correct.

24 Q. And do you have a professional opinion

1 within a reasonable degree of scientific
2 certainty whether construction of a noise wall
3 at the property line at a height of 22 feet at
4 the Roti residence and as high as 32 feet at the
5 Weber residence, might, in fact, reflect noise
6 onto the Corporate 100 office tower?

7 A. There would be noise reflected on the
8 Corporate 100 tower.

9 Q. And that would be noise that is not
10 currently, as you understand the noise
11 propagation in the area, not currently directed
12 to the Corporate 100 office complex?

13 A. That's correct.

14 Q. Just so I'm clear, when you likened
15 the vibration of a trailer to a violin or piano,
16 essentially when there is the impact of the
17 fifth wheel and the tractor and the trailer
18 slamming together, while that occurs at a height
19 of about 4 feet, the energy generated by that
20 collusion radiates out along the walls, floor
21 and ceiling of the trailer, does it not?

22 A. It radiates, first of all, directly at
23 the pen, but there is also going to be
24 mechanical vibrations. These will carry the

1 vibrations to the box, that wooden box will then
2 resonate and there will be further emanations of
3 sound from the box, in addition to what comes
4 from the pen.

5 And let me just explain a little
6 further that the mechanical vibration if people
7 think about a violin, you know there is the
8 bridge that holds up the strings on the Violin,
9 and the Violin strings are vibrating, that
10 string makes very little sound. It's the
11 transmission of the vibration across that bridge
12 to the box, that mechanical connection that
13 causes the violin to get its resonance. That is
14 the transmission.

15 Q. And is there a similar transmission
16 when a tractor hitches with a trailer?

17 A. There is going to be transmission of
18 the vibration to the box. Now, the box is not
19 tuned like a violin to be a resonant harmonious
20 instrument, but it still is a closed box and
21 it's still going to vibrate.

22 Q. Is that why it's incorrect to think of
23 the noise as occurring only at that 4 foot
24 elevation even if though that is where the

1 impact takes place?

2 A. That is just one of the sources, but,
3 yes, there is going to be noise but the doors
4 closing are spread out along the full height of
5 the trailers. The air will be just down low.
6 The air noise will be just down low but any of
7 the impact sounds are going to be radiated from
8 throughout the truck as well as at the point of
9 impact. The door closings are going to be
10 radiated throughout the full height from let's
11 say 4 feet to 16 feet, for whatever the trailers
12 end up being.

13 Q. And you attempted to capture and
14 analyze that diffuse -- the diffuse origin of
15 the noise energy by establishing point at the 4
16 foot and 12 foot elevation?

17 A. That's correct.

18 Q. Why did you not include a P point in
19 this what Mr. Kolar referred to as the staging
20 area?

21 A. I didn't feel there was very much of a
22 noise generated there. Really the only noise
23 that you get from within there would be the
24 impact of the truck with the bumper is the only

1 source that would be inside there. I felt most
2 of the noise sources that I observed were a
3 little further back in the area I showed them.

4 Q. And why is it important to consider
5 the geometry of noise propagation in developing
6 a remedy?

7 A. Because that is part of the detailed
8 calculation. You can't do a precise calculation
9 unless you take into account the height of the
10 source, the height of the receiver, the geometry
11 of the barrier with respect to this, it just has
12 to be done.

13 Q. And with respect to the noise sources
14 I direct your attention to page 1 of your April
15 26, 2002, report, and I direct your attention to
16 the numbered paragraph 1, sources of
17 noise/description of noise. You reviewed the
18 board's February 15th, 2001, opinion and in
19 particular pages 6 and 7 where they made
20 findings as to the type of noise?

21 A. Correct.

22 Q. You also talked with Leslie Weber
23 about noise and whether it bothers her, did you
24 not?

1 A. Yes, I did.

2 Q. She didn't tell you don't bother going
3 to the hearing tomorrow, that's not a problem
4 anymore?

5 A. No, she didn't say that at all.

6 Q. You were up in her upstairs bedroom
7 and sitting room area, were you not?

8 A. Yes, I was.

9 Q. Can you describe for the board what
10 the sitting area looks like up on the second
11 floor of the Weber residence?

12 A. Well, like all of the homes there it's
13 a fairly nice large home. The bedroom is a
14 nice, large bedroom. And off to the Southwest
15 corner of the bedroom is kind of a -- part of an
16 octagonal alcove that kind of sticks out
17 hexagonally maybe, either octagonal or
18 hexagonal, I don't remember the detail, that
19 kind of overhangs and sticks out with windows
20 facing south and southwest as well as southeast.
21 Very open airy kind of things in a place where
22 apparently she likes to sit and read.

23 Q. And do you have a professional opinion
24 as to whether an area located on the south of

1 the Weber home with windows on the southwest,
2 south and southeast would be particularly
3 receptive to noise from the LTD dock area?

4 A. It would be just about the worst place
5 you could have it. In other words, the noise is
6 going to be loudest there compared to any other
7 arrangement of the windows.

8 Q. Now, again, directing your attention
9 to the first page of your April 26th, 2002,
10 report, I'd like you to describe or classify for
11 the board whether hissing from air brakes,
12 whether that noise registers in the low, medium
13 or high octave band?

14 A. I'd call it the medium to even some
15 highs.

16 Q. Banging and slamming as yard tractors
17 and semitractors engage with the trailers, how
18 would you characterize that?

19 A. That is going to be medium I would
20 say.

21 Q. Engine noise from the yard tractor and
22 semitractors both while idling and accelerating?

23 A. That would be mainly low, not real low
24 the way it is defined in some standards, but for

1 what we're doing here that is more into the 125
2 as I said.

3 Q. Booming and clanging noise when
4 trailer doors swing only and close?

5 A. That's going to be between medium and
6 make some highs to that.

7 Q. Noise generated when trailers slammed
8 into dock bumpers?

9 A. That's going to be probably I would
10 say low and medium, both.

11 Q. Air horns?

12 A. That is going to be mainly medium.

13 Q. Backup warning devices on trucks --

14 A. Air horn, I was thinking of air horn
15 also mainly medium.

16 Q. Backup warning devices on trucks and
17 yard tractors?

18 A. That is going to be mainly medium.

19 Q. Now, in light of that review of the
20 noises and you characterization of those sources
21 would you do anything different in the manner
22 in which you design -- well, in which you
23 establish the targeted goal of a 10 DB reduction
24 in the 1,000 kilohertz octave band?

1 A. No.

2 Q. Still think that is a fair goal to
3 shoot for in terms of reduction?

4 A. I think that is the most reasonable
5 thing to do.

6 MR. KAISER: Thank you, Dr. Schomer.

7 HEARING OFFICER HALLORAN: Thank you,
8 Mr. Kaiser.

9 Mr. Kolar, any re-recross?

10 MR. KOLAR: Just a couple.

11 RE-CROSS-EXAMINATION

12 BY MR. KOLAR:

13 Q. When were you in the Weber residence
14 on the second floor in this southwest corner?

15 A. That would have been yesterday.

16 Q. And that was the first time you were
17 ever in the Weber residence?

18 A. That was the first time I was inside.
19 I've been outside of it before.

20 Q. And the Webers constructed their two
21 story home with a window area on the southwest
22 corner, that's either octagon or hexagon?

23 A. On the southwest corner of the
24 bedroom. It's not the southwest corner of the

1 floor.

2 Q. Well, what part of the footprint of
3 the house --

4 A. The master bedroom would be in the
5 southeast corner of the second floor.

6 Q. And then the octagon thing would be in
7 the southwest corner --

8 A. It's kind of like a turret that comes
9 out.

10 Q. In the middle of the back of the
11 house?

12 A. Yes.

13 Q. A dock pilot could prevent noises from
14 trailer doors slamming on the trailers, correct?

15 A. I don't know.

16 Q. You agree that that, stopping trailer
17 doors from slamming is something that can be
18 done administratively by LTD by saying we need
19 to latch those doors down, right?

20 A. If LTD could reduce that, I don't know
21 why they haven't, but I don't know.

22 Q. You don't know if they haven't either,
23 right?

24 A. Well, the people say that there is

1 still the same noises, so I don't think they
2 have.

3 Q. You have no knowledge to that though,
4 correct?

5 A. I have no personal knowledge to
6 whether or not LTD has tied down doors or not.

7 Q. And on any of the occasions when you
8 were out there, did you see any trailer doors
9 swing open and slam against the sides of the
10 trailer?

11 A. I can't recall the details.

12 Q. And then on any occasion when you --
13 strike that.

14 I think you already told us you cannot
15 recall if you ever saw a trailer backed up into
16 the staging area and slam against the bumper,
17 true?

18 A. I can't recall.

19 MR. KOLAR: I don't have any other
20 questions.

21 HEARING OFFICER HALLORAN: Thank you.

22 Mr. Kaiser.

23 MR. KAISER: No.

24 HEARING OFFICER HALLORAN: Thank you.

1 The board personnel, any questions?

2 Dr. Schomer, you may step down. Thank
3 you very much.

4 (Off the record.)

5 HEARING OFFICER HALLORAN: Took a
6 short five minute break.

7 Mr. Kaiser has his witness, just raise
8 your right.

9 (Sworn in.)

10 STEVEN MITCHELL,
11 having been first duly sworn, was examined and
12 testified as follows:

13 DIRECT EXAMINATION

14 BY MR. KAISER:

15 Q. Could you please state your full name
16 and spell your last name for the reporter's
17 benefit?

18 A. Yes. Stephen, with a V, L. Mitchell,
19 last name, M-I-T-C-H-E-L-L.

20 Q. What do you do for a living?

21 A. President of the Huff Company.

22 Q. What is the Huff Company?

23 A. The Huff Company is a manufacturers
24 representative that specializes in noise

1 control.

2 Q. How long have you worked in the field
3 of noise control?

4 A. Just celebrated my 25th anniversary
5 last week.

6 Q. Congratulations.

7 A. Thank you.

8 Q. You recognize this aerial photograph,
9 Respondent's 89, that shows the LTD facility?

10 A. Yes, I do.

11 Q. And you can orient yourself that here
12 is Route 22, here is the tollway?

13 A. Yes.

14 Q. So you're aware that the Complainants
15 in this matter are Tony and Karen Roti, whose
16 home is here, Paul Rosenstock is located in
17 this home, and Leslie Weber, who lives in this
18 home with her husband and children?

19 A. Yes.

20 Q. And you were contacted by Tom Thunder
21 and LTD to talk about the possibility of
22 building a noise wall, correct?

23 A. Yes.

24 Q. You testified in the first phase of

1 this hearing, did you not?

2 A. Yes.

3 Q. And since then, you talked to Dr.
4 Schomer, have you not?

5 A. Yes.

6 Q. And discussed this situation out at
7 LTD?

8 A. Yes.

9 Q. And steps that might be taken to
10 reduce the migration of noise from LTD's dock
11 area to the Roti, Weber and Rosenstrock homes?

12 A. Yes, I have.

13 Q. And you're aware that Dr. Schomer
14 after analysis concluded that a 24, 25 foot tall
15 noise wall running approximately 520 feet long
16 along the dock area would result in reductions,
17 to be specific of approximately 10 decibels as
18 measured in the thousands kilohertz octave band
19 measured in the second story of the Weber home?

20 A. Yes, I understand that that is what
21 Dr. Schomer's calculations were based on.

22 Q. I'm going to show you what has
23 previously been marked as Complainant's Exhibit
24 A, which is Dr. Schomer's report, dated April

1 26, 2002, and in particular I want to direct
2 your attention to pages 15 and 16, Huff Company
3 proposal to Paul Schomer dated April 25, 2002.

4 Did you happen to bring a copy of this
5 document with you today?

6 A. No.

7 Q. Okay. If I may, Mr. Halloran, this is
8 my only copy, I'd like to stand here as I --

9 HEARING OFFICER HALLORAN: Sure.

10 MR. KAISER: -- examine the witness.

11 THE WITNESS: Can I just look?

12 MR. KAISER: Yes, take a quick look,
13 if you will.

14 THE WITNESS: Okay.

15 BY MR. KAISER:

16 Q. And do you recognize that two page
17 document?

18 A. Yes.

19 Q. What do you recognize that to be?

20 A. That's a standard proposal that we
21 would send out for budgeting a barrier wall, not
22 a firm bid.

23 Q. Not a firm bid, that is a cost
24 estimate?

1 A. Right.

2 Q. And one of the things that would be --
3 that that cost would be contingent upon is
4 whether or not there are normal soil conditions
5 in the vicinity of the LTD dock area?

6 A. Yes, the uncertainty that we had in
7 putting together a price at this time and still
8 don't have information on what the soil
9 conditions are, which would effect the caseon
10 which is below ground that the supporting beams
11 or columns are attached to.

12 Q. Okay. So, in order to properly size
13 the support structures, the caseons below
14 ground, you need to know the soil conditions out
15 there at the LTD property?

16 A. That's correct.

17 Q. That is something you routinely do
18 before putting up any noise wall that you get
19 soil sample --

20 A. Somebody provides that.

21 Q. You want to find out if it is fill or
22 if it's sand or clay soil?

23 A. Yes.

24 Q. And as we sit here today, you haven't

1 done that analysis yet?

2 A. No.

3 Q. And you understand that recently LTD
4 advised the Complainants that there are not
5 deadmen holding up this retaining wall but there
6 are layers of synthetic fabrics that hold up
7 that retaining wall?

8 A. The last communication I had, and I
9 don't recall who it was from, said it was
10 deadmen and fabric. I don't know what is there.
11 Something obviously.

12 Q. And is it my understanding that if it
13 is just deadmen you can design around deadmen
14 and build a wall relatively close to the
15 existing retention wall?

16 A. According to structural engineers that
17 we work with he said he could look at that as a
18 possibility.

19 Q. But if it's this fabric that is
20 holding up the wall that changes?

21 A. You would not want to do it with
22 fabric.

23 Q. And that you'd have to move the wall
24 some distance to the right?

1 A. Correct.

2 Q. All right. With that in mind what
3 type of wall was it you proposed to Paul Schomer
4 and by extension to LTD in your letter of April
5 25, 2002, can you explain to the board what the
6 elements of that wall are?

7 A. Yes. It consists of a concrete caseon
8 that can be anywhere from 30 inch diameter to
9 wider in diameter, anywhere from 8 to 12 feet
10 deep, filled with concrete with reinforced cage
11 in it, embedded in that are anchors, usually
12 stainless steel anchors, 4 anchors per caseon.
13 They come up through the ground, to that we bolt
14 a leveling plate and a base plate that has a
15 vertical column on it. The column size is
16 predicated on the wind loads that the wall has
17 to take, which we'd look at the local codes.
18 And it is a function of the height of the wall
19 and the span between columns. And then inserted
20 into the columns from the top down we slide in
21 panels, one on top of another. The acoustic
22 panels are constructed of perforated steal
23 towards the sounds, solid steal towards the
24 exterior of the sound wall, and is filled with a

1 fiberglass or mineral wall sound installation
2 material. And then it's finished painted
3 whatever color somebody wants.

4 Q. Who manufactures the types of sound
5 panels you just described?

6 A. The panels are manufactured by
7 Industrial Acoustic Company of the Bronx, New
8 York.

9 Q. How long have you done business with
10 them?

11 A. Since 1960.

12 Q. Within the community of noise
13 reduction specialists that you operate in, can
14 you -- do you know the reputation of IAC?

15 A. Some good, some bad. Basically, it's
16 a well received company, I mean.

17 Q. I'm sorry?

18 A. It's a well received company. A very
19 well received respected, they're a leader in
20 engineering and product design, product
21 development. They're well recognized.

22 Q. Now, does the fact that the wall Dr.
23 Schomer suggesting would be 25 feet high does
24 that pose -- is that impossible to build at this

1 LTD location?

2 A. No. No. We have done walls that are
3 higher.

4 Q. Where have you done walls higher than
5 25 feet?

6 A. Libertyville.

7 Q. How far from where we're seated right
8 here this afternoon?

9 A. Probably 3 miles, 4 miles, just north
10 of 137 off of Milwaukee Avenue at Casey at a
11 Commonwealth Edison substation.

12 Q. When did you construct that wall?

13 A. Oh, it was May a year ago, so about a
14 year and a half ago.

15 Q. How high is that wall?

16 A. 26 feet.

17 Q. And can a 26 foot wall be built with
18 appropriately sized caseons and columns so that
19 it can withstand a wind load of 80, 90 or 100
20 miles per hour?

21 A. Yes.

22 Q. Would it need to be supported with
23 support structures or guidelines?

24 A. It may have to have some kind of knee

1 brace to it but our first attempt would be to
2 let it be supported by the caseons on the
3 ground.

4 Q. Now, first attempt you're not
5 suggesting that you'd build the wall and have it
6 fall over in the wind and then put it back up,
7 would you?

8 A. No. We would make sure the design
9 could withstand the wind load before we gave a
10 firm proposal on it.

11 Q. What is the process by which you
12 insure that the design that you propose to build
13 could withstand the wind load?

14 A. Well, I talked to LTD sometime a year
15 ago or prior to this, this last proposal at
16 least and told them that we couldn't confirm the
17 caseon size until we had core analysis. And by
18 the way, the last hearing the reporter called
19 that coarse, it is core, C-O-R-E. And that is
20 a -- we sent a soil testing service out, they do
21 a core sample. They analyze that. The
22 structural engineer then uses that to make
23 recommendations on how to form or construct the
24 caseon.

1 So, that is the first thing that needs
2 to be done.

3 And typically when we're given a
4 budget price out, we're not going to go to that
5 cost until we know the project is going to move
6 ahead.

7 Q. You gave a budget price here of \$47.95
8 per square foot?

9 A. Correct.

10 Q. How did you arrive at that estimated
11 cost per square foot?

12 A. Scientific analysis of pricing, from
13 doing it previously. We took a look at the
14 price on the wall that we did for Commonwealth
15 Edison, the size of the caseon, so we estimated
16 that and I'd prefer to estimate or budget
17 prices, give prices that are higher than we know
18 they're going to come in when we actually bid
19 the project because we don't want to give a low
20 price and then find out it is going to cost a
21 lot more, that just creates more problems for
22 everybody. So, we knew what the panel cost. We
23 knew what our labor cost is to put the panels
24 up. The steel we were reasonably certain about

1 the size but I think we're overdesigned there
2 for this budget purpose and the same thing with
3 the concrete.

4 Q. So, you made the most conservative
5 assumptions in all elements of the wall to
6 arrive at this \$47.95 per square foot?

7 A. Yes.

8 Q. And if, for instance, you found that
9 the distance was 16 feet back from the retaining
10 wall, there were clay soil there, that would
11 support a smaller -- well, so that you'd need a
12 small caseon, that might reduce the cost?

13 A. Conceivably, yes.

14 Q. What other elements might reduce the
15 cost from approximately \$48 a square foot?

16 A. The steel, the size of the steel,
17 vertical columns. Right now, you know, we used
18 up at Commonwealth Edison was really heavy
19 design. And I use that for my budget prices
20 here. The panel cost is pretty well fixed and
21 we have a pretty good handle on what our labor
22 is. So, the two uncertain elements are the
23 caseon and the steel column.

24 Q. But fairly confident that you wouldn't

1 go over that budget price of almost \$45 a square
2 foot and if anything it would go down?

3 A. Yes.

4 Q. And how low could you reasonably
5 foresee the cost of constructing a wall in the
6 vicinity of the LTD dock area, what is the
7 lowest price you can reasonably foresee?

8 A. 35 to \$36 a square foot, possibly.

9 Q. Now, does it add tremendously to the
10 cost to have a noise absorptive panel put in
11 place rather than just -- well, panels without
12 noise absorptive properties?

13 A. No, not for us. I mean, there are
14 panels designed to be absorptive and we feel
15 that there is benefits to the -- adding the
16 absorption. So, in terms of the panel, there is
17 no difference in cost.

18 Q. No difference in cost?

19 A. Right.

20 Q. Let me have a minute.

21 So, within a reasonable degree of
22 certainty based on your education and experience
23 in the field, you believe you could build a wall
24 in the vicinity of the LTD dock area that would

1 withstand wind loads in that area?

2 A. Yes. I'd have to have a structural
3 engineer confirm all of that but yes, I believe
4 we can.

5 Q. And has it been your experience that
6 the noise walls once they're built if they're
7 appropriately sized successfully reduce the
8 migration of noise from a source to a receiver?

9 A. Yes.

10 MR. KAISER: Thank you, Mr. Mitchell.
11 I have nothing further.

12 CROSS-EXAMINATION

13 BY MR. KOLAR:

14 Q. The wall in the Libertyville, 4 walls
15 around the Commonwealth --

16 A. It's two walls, it's an L-shaped area.

17 Q. Okay. 2 walls, one 26 foot wall helps
18 support the other 26 foot wall in addition to
19 the caseons, right?

20 A. I don't know that that is the case at
21 all. I really don't.

22 Q. You would defer to an engineer?

23 A. Yes.

24 Q. And what, if you know, what hertz were

1 you trying to block from getting beyond that
2 Commonwealth Edison station?

3 A. Well, according to some of the reports
4 I saw by Mr. Thunder I think the speech
5 inference frequencies, which is 250 per
6 thousand --

7 Q. -- I'm talking the Commonwealth.

8 A. Was lower frequency. I am sorry.

9 Q. What hertz?

10 A. They're interested at 60 hertz and 125
11 hertz. And the wall typically does not perform
12 as well at low frequencies as it does at
13 midrange and high frequency. So it was a more
14 difficult situation for us.

15 Q. So, because of needing to detect low
16 frequency, that is why the wall had to be
17 higher?

18 A. No. It's a function of the height of
19 the equipment and the distance to the receiver.
20 In that case the equipment was quite tall so the
21 wall had to be higher to make sure that we got a
22 good diffraction and go over the top.

23 Q. Does your company build noise walls
24 when the wall is made out of wood?

1 A. Industrial Acoustics Company, who we
2 represent, has a capability and partnership with
3 somebody to do wood walls. I have no experience
4 with wood walls.

5 Q. Okay. Are wood walls less per square
6 foot than a galvanized steel wall with the
7 absorptive material you described?

8 A. Well, when you go to a wood wall,
9 depending on the type it is, you're going to
10 have more frequent columns. The columns might
11 not be as deep because they're closer together,
12 but they can't get the span that you can with
13 our 16 foot steel panel, we're able to maximize
14 the span for the wind load to be transferred
15 from the center of the panel to the columns.

16 Q. Okay. So.

17 A. So, the wood, I don't know. I don't
18 know that it is cheaper or more expensive, I've
19 never priced one, but I can tell you this you'd
20 have many more columns.

21 Q. When you said there is no difference
22 in cost when you add absorptive material to the
23 panel, you were talking about a galvanized steel
24 panel?

1 A. For our panel, yes.

2 Q. And so you have apparently had some
3 communications or contact with the structural
4 engineer regarding the issue of there being
5 support fabric holding up the retaining wall?

6 A. Not with an engineer. I had some
7 communication either from you or from Mr.
8 Kaiser, I don't remember who it was but somebody
9 told us there was some fabric in there. I then
10 asked our structural engineer is that an issue,
11 can we go through the fabric and he would
12 recommend against that, at least until he saw
13 some drawings of what was in there.

14 Q. As you sit here today, it's your
15 understanding that a wall Mr. Schomer, Dr.
16 Schomer proposes would have to be outside the
17 area where there is fabric based on your
18 engineer?

19 A. That's how I understand it, that's
20 correct.

21 Q. And if your company constructed a wall
22 like proposed by Dr. Schomer, can you guaranty
23 LTD that the neighbors will not complain about
24 noise from LTD?

1 A. No, because we could get below the
2 Illinois criteria and people could still
3 complain. I can't guaranty that there going to
4 do -- I can guaranty that we're going to bring
5 the neighbors into compliance. Once we see the
6 data, we can do that, but I don't know that they
7 would complain.

8 Q. In your experience in building noise
9 walls, some people who complain are more
10 sensitive to noise than others, right?

11 MR. KAISER: Objection, relevance.

12 THE WITNESS: Yes, I don't --

13 HEARING OFFICER HALLORAN: You may
14 answer if he is able.

15 THE WITNESS: Can you restate it?

16 BY MR. KOLAR:

17 Q. In your experience in building noise
18 walls, some people are more sensitive to noise
19 than others, as a general proposition?

20 A. I think that is a fair comment.

21 Q. Oh, just one -- what I marked as
22 Exhibit K, been a lot of proposals, May 18,
23 2001, proposal, from you to Jack Voyt, correct?

24 A. Yes.

1 Q. And this is Respondent K.

2 So, here you, as of May 18, 2001, gave
3 him a proposal with the same limitations for a
4 wall 14 feet high, 448 feet long, correct?

5 A. Yes.

6 Q. And this was rounded off, \$290,000?

7 A. Right.

8 Q. And this one would have roughly again
9 the same contingencies as the one that Dr.
10 Schomer requested, right?

11 A. Probably, we're going to be a little
12 more accurate with this because it is a lower
13 wall so the wind load condition going down to
14 the ground is not quite so severe.

15 MR. KOLAR: I don't have any other
16 questions.

17 HEARING OFFICER HALLORAN: Thank you,
18 Mr. Kolar.

19 Mr. Kaiser, any redirect?

20 MR. KAISER: Yes, briefly.

21 REDIRECT EXANIMATION

22 BY MR. KAISER:

23 Q. This proposal, the May 18th, 2001,
24 proposal, the 14 foot height, that was a height

1 recommended by LTD's consultant, Tom Thunder,
2 was it not?

3 A. Yes.

4 Q. And you don't know what kind of
5 analysis Mr. Thunder did to come up with that 14
6 foot height, right?

7 A. No.

8 Q. And that is not the Huff Company's job
9 to design the height of the wall, it's to build
10 a wall to the specifications of the engineer?

11 A. Again, in this particular case,
12 somebody told us what size to price it to and
13 that's what we did. There are cases where we
14 would make a recommendation with regard to the
15 height of the wall. That's what we did to
16 Commonwealth Edison.

17 Q. But in this situation --

18 A. This situation we're just told -- I
19 mean, this has been a moving target for me
20 because we've had a lot of different sizes and
21 heights that have been thrown at us, so.

22 Q. And I take it if the wall is not
23 running on a straight line but has certain
24 angles in it then those angles serve and can be

1 used as reinforcement points for the wall, can
2 they not?

3 A. Perhaps, I mean, it's up to the
4 engineer to decide.

5 Q. Okay. And once you're going to a
6 height of say 24 feet high, does it cost, does
7 the cost of going from 24 feet to 26 feet, is
8 that less per square foot than the initial cost?

9 A. Yes, the larger the wall typically for
10 some of our fixed costs, the square foot cost
11 goes down because, you know, you mobilize once,
12 you have a crane once. Your equipment, freight,
13 some of these things start to go down a little
14 bit. The steel, you get a certain point and the
15 steel has to be taller or thicker, deeper web
16 depth, and the concrete may have to be
17 developed, but generally to go up 2 feet it is
18 not going to add substantially to the wall,
19 which would then, therefore, drive the square
20 foot cost down.

21 MR. KAISER: Thank you. No further
22 questions.

23 HEARING OFFICER HALLORAN: Mr. Kolar.

24 MR. KOLAR: No.

1 HEARING OFFICER HALLORAN: Any
2 questions from the board?

3 EXAMINATION
4 BY MS. ANTONIOLLI.

5 Q. Do you have an idea when a noise wall
6 like this, like the one proposed, 25 feet tall
7 is built, are there also stabilization
8 structures that go laterally underground?

9 A. We have done them a number of
10 different ways. That is one way to do it.
11 We've actually done some walls where we have
12 driven I-beams into the ground and then welded a
13 curb on top of them and bolted the flange.
14 There is a lot of different ways to handle the
15 support structure. It just depends on the soil
16 conditions and it depends on what is in the
17 environment there. By the environment, I mean
18 is there a parking lot, is there a building in
19 the way. In this case where we did this we're
20 doing it for the Burlington Northern Railway and
21 they had a lot of utilities running through the
22 ground so we had to miss all of those. So, it
23 just varies with every project.

24 Q. So, there would not be a limitation as

1 to how close to the property line you may be
2 able to go with a structure like this?

3 A. No. We can put it right on the
4 property line or, I mean, within a foot or so of
5 the property line.

6 MS. ANTONIOLLI: That's all.

7 HEARING OFFICER HALLORAN: Any
8 follow-up or cross based on the question?

9 MR. KOLAR: No.

10 HEARING OFFICER HALLORAN: Thank you.
11 You may step down. Thank you.

12 Mr. Kaiser, are you finished with your
13 case in chief?

14 MR. KAISER: Well, let me be heard on
15 that.

16 (Off the record.)

17 HEARING OFFICER HALLORAN: Back on the
18 record. It's approximately 10 to 4. Mr.
19 Kaiser, the Complainants are not done or may or
20 may not be done with their case in chief, we're
21 going to move ahead with Respondent's witness,
22 so if you just raise your right reporter will
23 swear you in.

24 (Sworn in.)

1 THOMAS D. THUNDER,
2 having been first duly sworn, was examined and
3 testified as follows:

4 DIRECT EXAMINATION

5 BY MR. KOLAR:

6 Q. State your name for the record,
7 please.

8 A. Thomas D. Thunder.

9 Q. And what do you do for a living?

10 A. I'm an audiologist and an acoustical
11 engineer.

12 Q. And you own your own company?

13 A. Yes, I do.

14 Q. That is called what?

15 A. Acoustic Associates.

16 Q. And just to tell these people, what is
17 your education after high school?

18 A. I have a bachelor's of science
19 communication disorders, a Master's degree in
20 audiology and a doctorate degree in audiology
21 with postgraduate work in acoustical
22 engineering.

23 Q. What -- give us a summary of your
24 experience in audiology and acoustics?

1 A. Summary of my experience?

2 Q. Yes, your professional experience.

3 A. You mean the kinds of activities that
4 I do?

5 Q. Right.

6 A. We conduct hearing examinations and
7 hearing aid fittings. We conduct acoustical
8 analyses. We concentrate a great deal in
9 environmental and occupational noise but we also
10 do architectural noise, and I myself do a great
11 deal of teaching at two universities, live in
12 classes and two on-line classes.

13 Q. In terms of this case, LTD, it
14 involves acoustics?

15 A. Yes, to a great degree, yes.

16 Q. And you've been involved in other
17 cases involving noise and how to maybe stop the
18 propagation of noise, correct?

19 A. That would fall under the area of
20 acoustics, correct.

21 Q. You have been involved in other cases
22 involving -- or noise walls being proposed?

23 A. Yes.

24 Q. And Dr. Schomer's report, April 26,

1 2002, I provided you that?

2 A. Correct.

3 Q. You read it?

4 A. Yes, I did.

5 Q. We asked you to give a response to the
6 report by Dr. Schomer, correct?

7 A. I did.

8 Q. And you provided me a response, I
9 think by e-mail, correct?

10 A. Correct.

11 Q. And what I did I prepared, and let me
12 show you Respondent Exhibit J, I prepared a
13 disclosure which includes, I think beginning on
14 page 2, your opinions, correct?

15 A. That's correct.

16 Q. And that's an accurate statement of
17 your opinions relative to Dr. Schomer's
18 proposals, correct?

19 A. Essentially, yes.

20 Q. You had read this and it is accurate?

21 A. Yes.

22 Q. Now, do you have any experience at all
23 with noise walls that are 25 feet above grade?

24 A. None.

1 Q. And why is that?

2 A. Well, typically when you start to talk
3 about barrier walls exceeding something in the
4 order of 15 feet, you talk about aesthetic and
5 structural difficulties that make it cost
6 ineffective.

7 MR. KAISER: Objection to cost
8 ineffective. That's a conclusion for the board.

9 HEARING OFFICER HALLORAN: Mr. Kolar.

10 MR. KOLAR: Well, that's one of the
11 factors under Section 33C, the technical
12 practicability and economic reasonableness. I
13 think we're allowed to have evidence on that.

14 HEARING OFFICER HALLORAN: I agree.
15 Objection overruled.

16 BY MR. KOLAR:

17 Q. Dr. Schomer, there -- Dr. Thunder,
18 sorry, there has been a lot of discussion today
19 about your work with LTD on getting proposals
20 initially for noise walls. You've heard some of
21 that testimony?

22 A. Yes, I have.

23 Q. Can you explain what you did in terms
24 of getting proposals and how far that went in

1 terms of these proposals for a noise wall on the
2 LTD property?

3 A. Well, early on we just did some
4 preliminary calculations showing that a 13 foot
5 high wall would probably bring the noise levels
6 down to the class B limits, specifically at 5 DB
7 at 1,000 hertz we were looking at and 10 DBs of
8 2,000 hertz.

9 The 13 foot high wall came with the
10 recognition that there was some topography fee
11 differences there, although I was not aware of
12 specifics, and compounding factors of
13 reflectivity. So, for the purposes of budgeting
14 on a preliminary sense, we turn that information
15 over to Steve Mitchell at the Huff Company to
16 come up with a budget figure and that figure
17 early on was about \$120,000.

18 Q. Who asked you to get that information
19 together to provide to Steve Mitchell?

20 A. I'm sorry?

21 Q. LTD asked you to do this?

22 A. Yes. And then later on to account for
23 other factors and so forth, we asked Steve
24 Mitchell to prepare a proposal that would be a

1 longer wall, that would be higher and that's
2 where I think a 14 foot high wall came into
3 bearing and that is where the \$280,000 figure
4 came up.

5 Q. All right. When you were asking Steve
6 Mitchell for proposals, you were requesting
7 proposals relative to a noise wall along the
8 route roughly that Dr. Schomer chose in his
9 report, right?

10 A. Sure.

11 Q. All right. Did you do any
12 investigation to determine if there was any sort
13 of support structure or fabric holding up that
14 retaining wall?

15 A. No. That's certainly and clearly
16 outside of my realm of responsibility. At that
17 point usually what we do is we turn the project
18 over for more detail pricing to a company like
19 Industrial Acoustics Company and because those
20 folks have an onboard acoustical engineer, we
21 leave it up to them since they back their
22 products up so eloquently to run some figures
23 and either agree or reject with our contention
24 that we can achieve certain decibel levels. So,

1 it is more of a team effort that is involved,
2 but at that point it was just a conceptual
3 stage, it was subject to further engineering
4 analysis, including structural engineering.

5 Q. And so you would defer to engineers,
6 structural, civil engineers as to whether you
7 could build a wall in a location where Dr.
8 Schomer proposes?

9 A. Absolutely.

10 MR. KAISER: Objection to that
11 characterization. Dr. Schomer proposed it at a
12 certain location, he indicated during his
13 testimony it could be moved back but that he
14 would have to recalculate an appropriate height
15 if it were moved 16 feet north. I don't want
16 the board to get the impression that Dr. Schomer
17 or the Complainants are wedded to a wall where
18 the solid red line is shown in Dr. Schomer's
19 reports.

20 MR. KOLAR: I'll restate the question.

21 HEARING OFFICER HALLORAN: Thank you.

22 Thanks.

23 BY MR. KOLAR:

24 Q. You would defer to engineers,

1 structural and civil as to whether a wall could
2 be built in the location as indicated by the red
3 line on page 5 of Dr. Schomer's report?

4 A. That's the normal procedure, yes.

5 Q. In fact, I guess you would defer to
6 engineers regarding any location where a wall
7 was proposed in terms of whether it could be
8 built there from an engineering perspective?

9 A. Absolutely.

10 Q. Now, let me ask you some questions
11 about the Weber home. You understand that that
12 is northeast of the LTD property?

13 A. That's correct.

14 Q. Farthest home away from the truck dock
15 operations?

16 A. Correct.

17 Q. Does that distance itself have any
18 impact on in your opinion the noise as received
19 by the Weber property?

20 A. I'm sorry. Could you rephrase that?

21 Q. Yes.

22 Does the sheer fact that the Weber
23 home is the farthest one away from the LTD truck
24 docks, does that physical distance have any

1 impact on the noise that the Webers perceive?

2 A. Absolutely, the further you are away
3 from the source, of course, because of weight
4 divergence, sound level drops off, drops off up
5 to 6 decibels for doubling of distance, so if
6 that home is double the Roti's distance, I would
7 expect it to be somewhat about 5 decibels less.

8 Q. And during your review of this matter
9 after you received Dr. Schomer's report, LTD
10 asked you to analyze property line noise wall,
11 whether that was feasible?

12 A. No. They didn't ask me to analyze it.
13 That was just a result of reviewing Paul
14 Schomer's report, with the cost estimate as
15 being so high, the question was poised can we
16 put this wall at any other location and achieve
17 similar effect at lower cost and at that point I
18 said that certainly a wall along the receiver is
19 commonly done and a wall that is as close to the
20 receiver as it is close to the source, and Paul
21 Schomer's proposal would be about as effective,
22 but because it was further away from the
23 reflective building, it didn't have to be
24 constructed out of the specialty absorptive

1 panels that Steve Mitchell had indicated, more
2 common conventional materials could be used.

3 Q. Common conventional materials would be
4 what?

5 A. Wood, brick, masonry, block.

6 Q. All right. And do you have any
7 information as to the cost of a wood wall versus
8 the cost of the type proposed by Dr. Schomer?

9 A. Well, costs are always changing, but
10 according to the federal department of
11 transportation using 1998 dollars, they
12 indicated that walls made out of all of those
13 common materials run from about 60 to 80 percent
14 of the costs of an absorptive barrier.

15 So, if you run the math then you can
16 figure that you're talking 30, \$35 for a wood
17 wall, maybe somewhat higher for a block or
18 concrete wall.

19 Q. And if there was a noise wall built on
20 the property line, would that noise wall reflect
21 noise away from the Complainant's property?

22 A. Well, to a small degree but generally
23 the rule of thumb is when the distance is 9, 10
24 times the height of the wall that it's not a

1 factor that needs to be considered.

2 Q. I'm talking put a noise wall instead
3 of where Dr. Schomer has it with the red line or
4 instead of in the parking lot, if it was the
5 north property line, would a wood noise wall
6 block noise from getting to the Complainants
7 properties?

8 A. Oh, absolutely. I thought you were
9 talking about the reflection of the sound from
10 the dock off the wood wall back to the LTD wall.

11 MR. KAISER: I object. Move to
12 strike. There is no foundation for that
13 opinion.

14 HEARING OFFICER HALLORAN: Mr. Kolar.

15 MR. KOLAR: He is experienced with
16 noise walls and review of this project, I think
17 that is sufficient foundation.

18 MR. KAISER: He gave us no insight
19 into -- he simply stated a bald conclusion with
20 no facts to back it up.

21 HEARING OFFICER HALLORAN: Is there
22 any way you can rephrase that or back up, Mr.
23 Kolar, try to get a little bit more foundation.

24 MR. KOLAR: Sure.

1 HEARING OFFICER HALLORAN: Please.

2 BY MR. KOLAR:

3 Q. Do you have an opinion to a reasonable
4 degree of certainty if a noise wall constructed
5 of wood on the north property line would stop
6 migration of noise to the Complainant's
7 properties?

8 A. Well it wouldn't stop it in total, but
9 it would mitigate it.

10 Q. All right. And what is your opinion
11 based on that wall made of wood at that location
12 would mitigate noise from LTD traveling to the
13 Complainant's property?

14 A. Any wall that is solid, that is dense
15 enough will perform in the same way, will block
16 the sound from going over the top of it.

17 Q. Okay. And noise is energy?

18 A. Noise is energy.

19 Q. So, if noise hit the wood wall and is
20 reflected in the other direction, does that
21 reduce the intensity of the energy if that is
22 the proper scientific term?

23 A. No. The actual concept is what we
24 call diffraction, which is the bending of sound

1 waves, and because you're disturbing the
2 propagation of waves, it loses energy and casts
3 what is called an acoustic shadow zone onto the
4 receivers.

5 Q. Okay. As the energy from the noise
6 hits a wood wall, it would be -- it would come
7 back in the other direction to the south,
8 correct?

9 A. That's correct.

10 MR. KAISER: Objection, misstates his
11 testimony, said there would be an acoustic
12 shadow, which would, as I understood it, rebound
13 in part towards the receptors. It's not a
14 simple all the energy hits the wall and bounces
15 the other direction.

16 HEARING OFFICER HALLORAN: Mr. Kolar.

17 MR. KOLAR: Let me restate it.

18 BY MR. KOLAR:

19 Q. Any noise that hits a wooden wall,
20 what happens to that noise that actually hits
21 the wall?

22 A. Well, it reflects in the opposite
23 direction, but that's not totally how a barrier
24 works. As I mentioned before, it works through

1 diffraction and a bending of sounds waves.

2 Q. Explain that so we're clear.

3 A. Well --

4 Q. In this scenario where you've got a
5 wooden wall on the north property line?

6 A. Could be with -- could be a wooden
7 wall, could be any solid wall, when sound waves
8 strikes the wall through a process known as
9 diffraction, it casts a shadow, acoustic shadow
10 onto the receiving property.

11 So, what we're saying is that it's
12 just a reduction in decibel levels, a reduction
13 in sound level at the receiver.

14 Q. Can you tell us what percentage of the
15 noise would be reflected versus what percentage
16 would go into the shadow?

17 A. I couldn't tell you that right
18 offhand. The reflection part wouldn't bother
19 me.

20 Q. It's your understanding from your
21 communications with LTD that if there was a
22 noise wall near the retaining wall, they would
23 need pedestrian openings in the wall, right.

24 MR. KAISER: Objection, hearsay.

1 HEARING OFFICER HALLORAN: Mr. Kolar.

2 MR. KOLAR: I'll restate it.

3 HEARING OFFICER HALLORAN: Thank you.

4 BY MR. KOLAR:

5 Q. Did you see in Dr. Schomer's report
6 that he has pedestrian openings in his noise
7 wall as proposed along this red line?

8 A. That's correct.

9 Q. All right. Do pedestrian openings
10 increase the cost of a noise wall?

11 A. Yes, they would because you're talking
12 about a variance in the design and adding
13 material, compared to just a straight wall.

14 Q. Do pedestrian openings in a noise wall
15 decrease effectiveness?

16 A. If it's just an opening, it decreases
17 it quite a bit. If it's done properly, it can
18 minimize that effect.

19 Q. Okay. Do you have an opinion whether
20 any sort of pedestrian openings would be needed
21 if a noise wall was constructed on the north
22 property line?

23 A. Under the current configuration with
24 it being as long as it is, LTD just indicated a

1 need to be able to have pedestrian passage.

2 Q. I'm talking on the north property
3 line, on the north property line, do you have
4 any information that LTD would need pedestrian
5 openings if a wall was built up there?

6 A. No.

7 Q. But has LTD given you any information
8 that it would need pedestrian openings if a wall
9 was built on the north property line?

10 A. No.

11 Q. Okay. Would a wall built on north
12 property line have the benefit of blocking noise
13 from automobiles in the parking lot from getting
14 to the Complainants properties?

15 A. Well, that would be an added benefit
16 of a wall in that particular location is that it
17 would reduce all noise from the LTD property,
18 not just the dock noise. So, these employees
19 would be coming out at 2:00 in the morning and
20 make any kind of ruckus or anything like that,
21 it would block and reduce the level of their
22 noise as well.

23 Q. And how many years have you been
24 involved in acoustics?

1 A. Oh, about 30 years.

2 Q. Have you seen the walls along the
3 tollway?

4 A. Yes.

5 Q. And when you drive the tollway where
6 there are noise walls, are you able to see the
7 top windows of some of the homes along the
8 tollway?

9 A. Very commonly, yes.

10 MR. KAISER: Objection, relevance.

11 HEARING OFFICER HALLORAN: Overruled.

12 BY MR. KOLAR:

13 Q. Do you have any experience in your 30
14 years in acoustics of noise wall being designed
15 to provide protection to the second floor of
16 homes?

17 A. Well, it's a lofty goal, but for
18 reasons I mentioned early in my testimony the
19 costs can get substantial because whenever
20 you're talking about specifically reducing a
21 noise at a second story level, you automatically
22 increase the height of that barrier roughly 10
23 feet to account for blocking that line of sight,
24 and that will often double the cost of a wall or

1 at least substantially increase it.

2 Q. Calling your attention to the north
3 property line, you have an opinion to a
4 reasonable degree of certainty if a wall
5 constructed of wood on the north property line
6 would stop the -- significantly stop noise from
7 going to Roti and Rosenstock properties?

8 A. Yes.

9 Q. And what is that opinion?

10 A. That if done properly, it would
11 substantially reduce the propagation of noise
12 into the receiving property.

13 Q. And, now the Weber home is a little
14 more difficult because of its location, correct?

15 A. Correct.

16 Q. It would have to be either a wall
17 turning to the south or get permission from
18 Corporate 100 to build a wall on its property,
19 right?

20 A. Yes, if the board chose to protect the
21 Webers, then that would be a necessity, to have
22 to bring a wing down along that eastern side of
23 the property.

24 Q. And based on your experience in

1 acoustics and your research, you have an opinion
2 whether a noise wall constructed of wood on the
3 north property line would cost less than a
4 similar wall of the same height, same length
5 constructed on that red line where Dr. Schomer
6 shows?

7 A. Well, as I mentioned before, wood is
8 something on the order of 60 percent of the cost
9 of an absorptive barrier, it would be
10 substantially less.

11 Q. Okay. Now, you heard Dr. Schomer
12 testify that he is not recommending putting
13 absorptive materials on the north wall of the
14 warehouse?

15 A. Correct.

16 Q. You agree with that?

17 A. Generally because that is -- when
18 you're talking about the north wall there is
19 really two sections. There is a section of the
20 doors themselves, which are made out of metal
21 and they reflect sound of course. And then
22 there is the upper section, which is made out of
23 panels. That is much higher than the sources,
24 the greater reflection is off the doors, but

1 many of those doors are open and they're not
2 really reflecting the sound.

3 Q. In your opinion, as Dr. Schomer
4 putting reflective material on the face of the
5 warehouse would not provide any significance
6 noise reduction?

7 A. Not without doing something to the
8 doors.

9 Q. I think the board's decision talks
10 about any sort of absorptive materials that can
11 be placed on the retaining wall itself -- let me
12 ask you a couple of questions about that.

13 A couple photos here, Respondent's
14 Exhibits F and G. You recognize those to show
15 the block retaining wall?

16 A. Yes, I do.

17 Q. And is there any way to install
18 absorptive material on that retaining wall
19 without taking the block down?

20 A. Well, the best way would be to totally
21 remove the block and replace it with acoustical
22 block. Another option would be to face it with
23 absorptive materials, similar to what Steve
24 Mitchell had indicated he was using or would

1 propose to use for the walls themselves. These
2 would be steel panels with perforation and on
3 the inside would be installation. It would have
4 to be bagged protected from the weather
5 elements. My concern with that kind of
6 construction is it's -- there is a lot of truck
7 activity in that area and I would foresee
8 circumstances where tools and trucks that might
9 come in contact with it would degrade that
10 facing rather readily.

11 Q. So, you are not recommending any sort
12 of absorptive material on the retaining wall,
13 true?

14 A. Not at this time.

15 Q. I mean, would that have any
16 significant effect on the noise that the
17 Complainants claim comes to their property?

18 A. Well, I'd like to see some absorption
19 on there if that was possible, but, again,
20 you're talking about maintenance difficulties
21 and cost factors of having to remove that entire
22 wall and replace it with acoustical masonry.

23 Q. I think it is clear, but to get
24 absorptive material on here, you need to replace

1 this block with an absorptive block?

2 A. That would be the best solution.

3 Q. And then these other photos, you were
4 out at the LTD property when these were taken
5 the other day, correct?

6 A. Correct.

7 Q. In fact, photo B shows you in the
8 photo?

9 A. That would be me.

10 Q. Okay. So, Exhibits A, B, C, D, E, F,
11 G and H are all photos that truly and accurately
12 depict what is shown in the photos, correct?

13 A. Yes.

14 Q. Okay. Just a few questions about this
15 one, Respondent's Exhibit B, that shows you up
16 against the light pole?

17 A. Correct.

18 Q. And do you have any knowledge as to
19 how high the light pole is?

20 A. LTD personnel that measure it tells me
21 that the top of that light pole is 28 feet.

22 MR. KAISER: Objection. Objection,
23 hearsay.

24 HEARING OFFICER HALLORAN: Sorry, Mr.

1 Kaiser.

2 MR. KAISER: Objection, hearsay. He
3 is telling us, he asked how high is that light
4 pole, he said I was told by LTD it is this high.

5 HEARING OFFICER HALLORAN: Mr. Kolar.

6 MR. KOLAR: I'll withdraw that
7 question.

8 BY MR. KOLAR:

9 Q. Based on you being at the property and
10 observing the light pole, do you have an opinion
11 as to approximately how high the light pole is
12 shown in Exhibit B?

13 A. I estimated when I first saw it
14 between 25 and 30 feet.

15 Q. And that light pole
16 is approximately -- this one shown in Exhibit B
17 is approximately on the red line as indicated in
18 Dr. Schomer's report for the noise wall?

19 A. That would be correct.

20 Q. And do these other photos, some of
21 them show light poles that you estimate to be 25
22 to 30 feet high?

23 A. The one in Exhibit A. The one in
24 picture Exhibit C. The one in picture Exhibit

1 D. Can't see the full height in E, so I cannot
2 comment on that. The light pole in picture
3 Exhibit H, closer to the north property line,
4 that tall, and picture Exhibit 4 shows a light
5 pole that tall. No light poles shown in Exhibit
6 G.

7 Q. You said 4, I think you meant F?

8 A. Sorry, F.

9 Q. You had it turned?

10 A. I had it turned.

11 MR. KOLAR: I don't have any further
12 questions but I would move to admit Respondent's
13 Exhibit A through K.

14 MR. KAISER: Are those the
15 photographs?

16 MR. KOLAR: Well, the J is the opinion
17 disclosure, which includes his response to Dr.
18 Schomer's report, K is the Huff Company
19 proposal, May 18 2001, the others are the
20 photographs, A amount through H are the photos.

21 MR. KAISER: No problem with A through
22 H.

23 I object to the introduction of the
24 summary of his opinion set forth in Mr.

1 Kolar's --

2 HEARING OFFICER HALLORAN: What is --

3 MR. KAISER: -- disclosure of
4 opinions.

5 HEARING OFFICER HALLORAN: I'm at a
6 big disadvantage. I suggest tomorrow you get a
7 few more copies. I have nothing in front of me
8 and I haven't had anything in front of me the
9 whole day.

10 MR. KOLAR: Well, here, I'd been
11 planning on giving you the originals.

12 HEARING OFFICER HALLORAN: Thanks.

13 MR. KOLAR: Exhibit J is the -- really
14 the same thing as Dr. Schomer's report, this is
15 Dr. Thunder -- starting on page, 2 we had a
16 disclosure deadline for opinion witnesses.

17 And I guess I'm really asking for
18 pages 2, 3, and page 4 that pertains to Dr.
19 Thunder to be admitted as basically his report,
20 his analysis of Dr. Schomer's report.

21 MR. KAISER: Well, I would note we
22 went through page by page, figure by figure,
23 table by table Dr. Schomer's report, which is a
24 report prepared on Dr. Schomer's letterhead

1 signed by Dr. Schomer.

2 What Mr. Kolar is suggesting the board
3 consider is an opinion disclosure prepared and
4 produced by the attorney for LTD in this case.
5 It wasn't all gone over in Mr. Thunder's
6 testimony. For instance, in my opinion -- I
7 mean, there are statements in there, in the
8 disclosure of opinions that Mr. Thunder didn't
9 touch upon during the course of his testimony
10 this afternoon and it's essentially a way to try
11 to get in testimony that hasn't been subject and
12 won't be subject to cross-examination.

13 HEARING OFFICER HALLORAN: Mr. Kolar,
14 would you be willing to go point by point over
15 this page and I think Mr. Kolar was trying to
16 save a little time since Mr. Kaiser
17 underestimated his witness by an hour and 45
18 minutes. It's now probably 4:20, we have to
19 leave this hearing room at 4:30.

20 MR. KAISER: All right. Well, let me
21 propose this because this has already consumed
22 seven days of board testimony, now the eight
23 day, this matter has been pending before the
24 board for almost more than four years. And

1 while Dr. Schomer's testimony this morning went
2 longer than I anticipated, it was important
3 testimony. I don't know that I can effectively
4 cross-examine Tom Thunder, LTD's principle noise
5 specialist in the remaining ten minutes. Now, I
6 understand Mr. Thunder may not be available
7 tomorrow, but I'm hesitant to prejudice my
8 clients who have been enduring noise from LTD
9 for 6 years and who have been --

10 HEARING OFFICER HALLORAN: Mr. Kaiser,
11 what do you want me to do? What do you propose
12 that I do? We have to leave here at 4:30 and
13 you're objecting to the admission but you're not
14 allowing Mr. Kolar to --

15 MR. KAISER: -- go over it point by
16 point and bring Mr. Thunder back on another day.
17 That's what I propose.

18 MR. KOLAR: He is not available
19 tomorrow, and I don't think I need to waste time
20 going over it point by point. It's a document
21 similar to what Dr. Schomer prepared and I'm
22 asking that the pages that pertain to him be
23 received.

24 HEARING OFFICER HALLORAN: I'm going

1 to allow it. You may appeal my decision, Mr.
2 Kaiser within 14 days after the transcript.

3 MR. KAISER: Thank you.

4 HEARING OFFICER HALLORAN:
5 Respondent's Exhibit J is admitted.

6 Mr. Kaiser, did you have any objection
7 to Respondent's Exhibit K? This was J and I --
8 I don't have --

9 MR. KOLAR: Here is K.

10 MR. KAISER: I have no objection to K.
11 I have no objection to the photographs.

12 HEARING OFFICER HALLORAN: You may
13 proceed.

14 MR. KAISER: And I'm renewing my
15 request that the board continue the hearing in
16 this matter to a date when Mr. Thunder can
17 return.

18 HEARING OFFICER HALLORAN: I'll take
19 that up at a later date.

20 MR. KAISER: Okay.

21 HEARING OFFICER HALLORAN: Excuse me.
22 Off the record.

23 (Off the record.)

24 HEARING OFFICER HALLORAN: We've

1 been talking about Respondent's stipulation.
2 Complainant doesn't want to go along with it.
3 We're going to take it up again tomorrow, but it
4 looks like -- it's 4:25. We have to be out of
5 the hearing room at about 4:30. Mr. Thunder is
6 still on the stand. Mr. Kaiser was just about
7 to cross-examine him. I have been informed that
8 Mr. Kaiser definitely needs more than 10 minutes
9 to cross-examine, so what I propose is to --
10 well, Mr. Thunder is not available tomorrow,
11 we're going to have to start tomorrow at 11:00
12 a.m., continue this hearing for two or three or
13 four weeks down the road, try to get our
14 calendar together, see if I can get this hearing
15 room, we'll conclude it. Again, I'm doing this
16 so the board will have all the information in
17 front of them to make a determination.

18 With that said, this will matter will
19 be continued on the record, see you back here at
20 11:00 a.m. October 16. Thank you.

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22
23
24

1 STATE OF ILLINOIS)
)SS:
2 COUNTY OF DU PAGE)

3 I, ROSEMARIE LA MANTIA, being first
4 duly sworn, on oath says that she is a court
5 reporter doing business in the City of Chicago;
6 that she reported in shorthand the proceedings
7 given at the taking of said hearing, and that
8 the foregoing is a true and correct transcript
9 of her shorthand notes so taken as aforesaid,
10 and contains all the proceedings given at said
11 hearing.

12
13 -----
14 ROSEMARIE LA MANTIA, CSR
15 License No. 84 - 2661

16 Subscribed and sworn to before me
17 this day of , 2002.

18 -----
19 Notary Public
20
21
22
23
24

