

**HARDING TOWNSHIP BOARD OF ADJUSTMENT MINUTES
REGULAR MEETING
FEBRUARY 18, 2021
7:30 PM**

CALL TO ORDER AND STATEMENT OF COMPLIANCE

The Board Chair, Mr. Flanagan called the regular meeting of the Board of Adjustment to order at 7:30 and announced that adequate notice of the meeting had been made in accordance with the New Jersey State Open Public Meetings Act and State Executive Order 103.

ROLL

Ms. Taglairino called the roll. It went as follows:

Mr. Cammarata	Present	Mr. Newlin	Present	Mr. Maselli	Present
Mr. Addonizio	Present	Ms. Sovolos	Present	Mr. Boyan	Present
Mr. Rosenbaum	Present	Mr. Symonds	Present	Mr. Flanagan	Present

REGULAR MEETING

MINUTES

Mr. Flanagan made a motion to approve the January 21, 2021 minutes as written. It was seconded by Ms. Sovolos. On a voice vote all eligible members voted to approve the January 21, 2021 minutes.

ADMINISTRATIVE—Mr. Flanagan

Mr. Newlin discussed a previously created zoning requirement chart and possible revisions to the chart.

Mr. Flanagan noted the he was preparing a spread sheet to provide monthly application fee and technical review information to the Board.

The Board discussed the current Variance Application Checklist and is making the recommendation to the Township Committee to change its criteria by resolution instead of by ordinance.

RESOLUTIONS—Mr. Flanagan

BOA Resolution 04-2021 Do Not Exceed Limit for Gary Hall for 2020

Mr. Flanagan made a motion to approve BOA Resolution 04-2021 Do Not Exceed Limit for Gary Hall for 2020. It was seconded by Ms. Sovolos. On a voice vote all but Mr. Addonizio voted yes to approve the resolution. Mr. Addonizio abstained.

OLD BUSINESS

Application BOA# 17-18

New York SMSA Limited Partnership d/b/a Verizon Wireless
8 Millbrook Road, B17/L1, PL Zone
Applicant requesting variance relief for use, per NJSA 40:55D-70(d) for a cell tower.

Presenting:

Richard Schneider, Attorney

Frances Boshulte, RF Manager

Dr. Eisenstein, RF Specialist

Mr. Mlenak is acting Board Attorney for this application.

Robert Simon is an objecting attorney for this application.

Mr. Barree, a Planner from Heyer Gruel and Associates was in attendance for Ms. Mertz, the Board Planner.

There was a break hearing this application from 9:55 to 10:05.

Ms. Taglairino called the roll for the Board Members after the break and the following were present:

Mr. Boyan, Mr. Newlin, Mr. Flanagan, Mr. Maselli, Mr. Rosenbaum, Mr. Addonizio
Mr. Symonds, Mr. Cammarata, and Ms. Sovolos.

The application is carried to the March 18, 2021 meeting with no further notice.

A transcript of the testimony is appended to the minutes.

NEW BUSINESS

Application BOA# 15-21

Joseph Ginarte

2 Welsh Lane, B49/L42, R-1 Zone

Applicant is requesting variance relief for a side and rear setback and lot coverage and building coverage per N.J.S.A. 40:55D-70(c).

Presenting:

Robert Dunn, Attorney

Joseph Ginarte, Owner

Mr. Hall swore in Mr. Ginarte for testimony.

- Mr. Ginarte stated that he was the property owner since 1990. The existing pool was built at that time and was fully compliant at 14% lot coverage where now 10% is permitted.
- Mr. Ginarte is requesting relief to rebuild the pool in the same location.

The Board requested a Site Inspection of the property for February 27, 2021 at 9:00 am with an inclement weather date of March 13, 2021 at 9:00 am.

Application BOA# 13-20

Gregory & Christine Ihnken

Tempe Wick Road, B34/L3, RR-Zone

Applicant is requesting variance relief for a side setback, building area per N.J.S.A. 40:55D-70(c) and relief for an accessory residence per N.J.S.A. 40:55D-70(d).

Presenting:

David Scalera, Attorney

Richard Schommer, Engineer

Art Palumbo, Architect

Gregory and Christine Ihnken, Owners

Mr. Hall swore in Mr. Palumbo for testimony.

- Mr. Palumbo presented proposed plans for a barn renovation and addition for an existing barn.
- Mr. Palumbo presented plans for a first floor accessory dwelling with a living area, study, bedroom, bathroom and washer and dryer with an addition of a solarium for and entryway adjoining the existing silo. The proposed residence is 1,185 square feet in area.
- Mr. Palumbo presented plans for a second floor game room and storage room with a hall bathroom with a shower and changing area.
- Mr. Flanagan noted that his main concern about this project is the density on a property that does not meet the six acre zone requirement.
- Mr. Fox noted that there is not environmental impact and the property septic had been expanded.
- Mr. Rosenbaum noted that he was in favor of preserving the structure but struggled with the acreage requirement.
- Mr. Kirby, a Harding resident, spoke in favor of the project.
- Mr. Boyan raised concerns that the plan had two full baths and could easily be converted into a two apartment structure.

This application is carried until the March 18, 2021 meeting with no further notice.

OTHER BUSINESS

None

ADJOURNMENT

Mr. Flanagan adjourned the meeting at 11:15

Lori Taglairino

Respectfully submitted by Lori Taglairino, Board of Adjustment Secretary

HARDING TOWNSHIP BOARD OF ADJUSTMENT

RESOLUTION BOA#04-2021

AUTHORIZING INCREASE IN CONTRACT AMOUNT FOR PROFESSIONAL LEGAL SERVICES –BOARD OF ADJUSTMENT

ATTORNEY- GARY HALL OF MCCARTER ENGLISH

FEBRUARY 18, 2021

WHEREAS, the Board of Adjustment previously contracted Gary Hall, Board of Adjustment Attorney, of the firm McCarter English for legal services on January 16, 2020 via resolution BOA#3-2020 for an amount not to exceed \$9,500.00; and

WHEREAS, Resolution BOA# 06-2020, dated September 30, 2020 amended the do not exceed limit to \$15,000.00; and

WHEREAS, due to additional legal services now anticipated for 2020, there exists a need to increase the contract amount by an additional \$2,000.00; and

WHEREAS, the cost of this contract is not anticipated to exceed \$17,500; and

WHEREAS, the Board of Adjustment recommends that the total contract amount be increased to \$17,000.00; and

WHEREAS, the Chief Financial Officer has certified that additional funds are available and shall be encumbered through account #01-2020-1185-0185-2-00035 in an amount not to exceed \$17,000.00.

BE IT RESOLVED, by the Board of Adjustment of the Township of Harding in the County of Morris and State of New Jersey that an amendment to the existing contract with McCarter English to increase the contract amount by \$2,000.00 for a total not to exceed amount of \$17,000.00 be and is hereby approved; and

BE IT FURTHER RESOLVED, that the Board of Adjustment be and are hereby authorized to execute an appropriate Amendment to Contract on behalf of the Board to reflect the increased contract amount authorized by this resolution; and

BE IT FURTHER RESOLVED, that notice of this contract will be published as required by law within ten days of the passage of this Resolution.

DATED: February 18, 2021

For: Flanagan, Newlin, Rosenbaum, Maselli, Sovolos, & Symonds

Abstain: Addonizio

HARDING TOWNSHIP
BOARD OF ADJUSTMENT

IN THE MATTER OF: : TRANSCRIPT
:
CASE: BOA# 17-18 : OF
New York SMSA Limited Partnership:
d/b/a Verizon Wireless : PROCEEDINGS
8 Millbrook Road :
Block 17; Lot 1; PL Zone :
X

Thursday, February 18, 2021
Zoom Remote Videoconference
Commencing at 7:40 p.m.

BOARD MEMBERS PRESENT:

MIKE FLANAGAN, Chairman
ALF NEWLIN
DAN MASELLI
HUGH SYMONDS
ELIZABETH SOVOLOS
THOMAS ADDONIZIO
ARIC ROSENBAUM
GEORGE BOYAN
MICHAEL CAMMARATA

ALSO PRESENT:

LORI TAGLAIRINO, Board Administrator
PAUL D. FOX, P.E., CME
JOHN BARREE, PP, AICP
DR. BRUCE EISENSTEIN, Cellular Communications
Consultant

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1 A P P E A R A N C E S:

2

GREENBAUM, ROWE, SMITH & DAVIS, LLP
3 BY: STEVEN G. MLENAK, ESQUIRE
Attorneys for the Board

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5

VOGEL, CHAIT, COLLINS & SCHNEIDER, ESQUIRES
6 BY: RICHARD SCHNEIDER, ESQUIRE
Attorneys for the Applicant

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HEROLD LAW, PA
8 BY: ROBERT F. SIMON, ESQUIRE
Attorneys for the Objectors: SGSL, LLC; Harsh and
9 Nina Bansal; Michael and Susan Koeneke;
David and Eunice Conine; Brian and
10 Christina McKittrick; Livio Saganic and
Christel Engel; James M. Carifa and
11 Sarah G. Conine; Ted Cotton

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I N D E X

WITNESS:

PAGE

FRANCES BOSCHULTE..... 7

E X H I B I T S

IN EVD.

DESCRIPTION

PAGE

No Exhibits marked

NO PUBLIC MEMBERS ARE SWORN

1 CHAIRMAN FLANAGAN: All right. I think
2 that's it for the housekeeping. And I'll repeat it
3 just in case anyone joined late.

4 The Agenda for tonight we're going to hear
5 Verizon first. We expect that will go for probably
6 around two hours. Maybe a little bit under. We are
7 then going to hear the Ginarti application. And then
8 finally we are going to hear the Inkin application. So
9 if you were here for something other than Verizon you
10 may want to come back a little bit later, probably in
11 about two hours from now.

12 All right. So with that said, Mr.
13 Schneider, welcome back. Mr. Simon, welcome back. I
14 hope you're both well.

15 MR. HALL: And I'll hand the torch off to
16 Mr. Mlenak. And I did, as I think I mentioned already,
17 Mr. Fox agreed to send me a text when you want me back.
18 I'm not going anywhere. So I will be back when you
19 finish Verizon for the night.

20 MR. MLENAK: Thanks, Gary.

21 CHAIRMAN FLANAGAN: Thank you, Gary. Okay.

22 SECRETARY TAGLAIRINO: Mike, you also want
23 to note that the Planner is being represented by
24 another member of Heyer, Gruel for this evening.

25 CHAIRMAN FLANAGAN: Okay. Yes. Where is

1 our other member of Heyer, Gruel today?

2 MR. BARREE: I'm here, Chairman.

3 CHAIRMAN FLANAGAN: Mr. Barree?

4 MR. BARREE: Yes.

5 CHAIRMAN FLANAGAN: Thank you for joining
6 us. Yes. McKinley and I spoke earlier. She said she
7 will be with us a little bit later this evening. She
8 had another obligation she could not change, but we're
9 happy to have you here, so thank you.

10 MR. BARREE: Thank you for having me, and
11 nice to see you.

12 CHAIRMAN FLANAGAN: Mr. Schneider, as I
13 recall, we are at the point where we had heard the RF
14 testimony or the extended RF testimony, and at this
15 point Mr. Simon was going to begin his
16 cross-examination. Am I correct in that recollection?

17 MR. SCHNEIDER: That's correct, Mr.
18 Chairman. My recollection is consistent with yours
19 with the understanding that the cross-examination,
20 since Mr. Simon had previously completed his
21 cross-examination the cross-examination should be
22 limited to those items testified to by Ms. Boschulte at
23 the January 21st hearing.

24 CHAIRMAN FLANAGAN: Yes. That sounds right
25 to me. Mr. Simon, does that sound fair to you as well?

1 MR. SIMON: Well, I don't think it was just
2 the January meeting. I believe it was also inclusive
3 of the meeting prior to that. So whatever I have not
4 had an opportunity to cross-examine her on in terms of
5 testimony or submitted material that's what I intend to
6 cover tonight. Nothing repetitive.

7 CHAIRMAN FLANAGAN: All right. Steve, is
8 that -- and I don't recall where we ended off the last
9 time.

10 MR. MLENAK: I'm trying to recall. Rob,
11 there was additional testimony after you completed two
12 meetings ago?

13 MR. SIMON: Yes. Frances started in with
14 some testimony. There were some questions from the
15 Board. And then I didn't question her at that moment.
16 And then she came back -- hi Frances. I see you there.
17 She came back I think with her report in January, and
18 then testified to that report in January. And then
19 that's what I intend -- those items that she covered
20 it's really mostly the January meeting, frankly.
21 That's what I'm going to be devoting my
22 cross-examination to.

23 MR. MLENAK: Yes. You provided with what
24 you just said that your cross-examination is going to
25 be limited to the additional testimony after you

1 previously completed your cross-examination.

2 MR. SCHNEIDER: Absolutely correct.

3 MR. MLENAK: Okay.

4 CHAIRMAN FLANAGAN: Okay. With that said,
5 Mr. Schneider, anything else before Mr. Simon begins?

6 MR. SCHNEIDER: No. I'd like to -- I know
7 you have matters behind us on the Agenda so I'd like to
8 get started and hopefully move it along.

9 CHAIRMAN FLANAGAN: All right. Mr. Simon,
10 the floor is yours.

11 MR. SIMON: Thank you.

12 MR. SCHNEIDER: I'll remind Ms. Boschulte
13 that she is still under oath.

14 F R A N C E S B O S C H U L T E, having been
15 previously sworn, testifies as follows:

16 EXAMINATION BY MR. SIMON:

17 Q. Ms. Boschulte, good evening.

18 A. Good evening.

19 Q. Can you hear me okay?

20 A. I can. Can you hear me okay?

21 Q. I can hear you great. Thank you very much
22 for asking.

23 And I may be slipping and referring to you
24 either as Ms. Boschulte or Frances throughout my
25 questioning; is that okay?

1 A. Yes.

2 Q. Okay. Just want to check. Thank you.

3 So Ms. Boschulte, to start off, you stated
4 a number of times on the record at the last hearing
5 that the drive test you performed took place on March
6 3rd, 2020, but I believe that was actually the date of
7 your report where the drive test data was presented and
8 that actually the drive test was conducted on
9 February 14th, 2020, over a year ago; is that accurate?

10 A. Yes, that's accurate.

11 MR. SIMON: Mr. Chairman, I just wanted to
12 clear the record on that. It was repeated a number of
13 times.

14 CHAIRMAN FLANAGAN: Thank you.

15 BY MR. SIMON:

16 Q. And Frances, there has been no other drive
17 test conducted by you or PierCon since the
18 February 14th, 2020 date, correct?

19 A. That's correct.

20 Q. You are not aware of any drive test
21 conducted by Verizon or any other carrier for the gap
22 area in question prior or subsequent to February 14th,
23 2020, correct?

24 A. Correct. There were not.

25 Q. And the data that you presented on Z-3

1 through Z-8 that you recently testified to, that
2 numerical data was adjusted by you to account for RSSI
3 data that was converted to RSRP calculation, is that
4 accurate?

5 A. Yes.

6 Q. And was it also adjusted to represent the
7 power level on the street?

8 A. Not sure what you mean.

9 Q. In other words, is the calculation that is
10 shown on Z-3 through Z-8 or the numbers that you're
11 showing, is that the actual power level on the street?

12 A. It's the power level that was taken by the
13 receiver on top of the vehicle that we were driving
14 around, so it is. There is, as indicated in the drive
15 test report, that foliage factor, because the test was
16 taken in the Winter.

17 Q. So that's the 7 dB foliage factor or
18 correction that you put in for all the data shown on
19 your exhibit Z-3 through Z-8?

20 A. Yes.

21 Q. So are the -- if we selected a number,
22 whatever the number is, if it shows on Z-3 through Z-8
23 as let's say negative 100, that reading was actually
24 negative 93 and that you added 7dB to that; correct?

25 A. That is correct.

1 Q. And I apologize if this is an ignorant
2 question, but do you take that 7dB foliage factor
3 correction, do you do that before or after you convert
4 your data from RSSI to RSRP?

5 A. That was taken after the conversion.

6 Q. And then you also mentioned at the last
7 meeting, and I may have wrote it down incorrectly, that
8 you make an adjustment to what the cell tower would
9 provide in 4GLTE, is that what you said during your
10 testimony?

11 A. Yes. The conversion includes a power
12 adjustment. The CW test we only have a one watt
13 transmitter. The actual site, of course, the macro
14 site will have more than one watt of power, of transmit
15 power.

16 Q. So --

17 A. So these -- I'm sorry.

18 Q. No. Go ahead.

19 A. So the conversion calculation was provided
20 to Dr. Eisenstein for review and he accepted that
21 conversion.

22 Q. Did you provide that to the Board?

23 A. I'm checking the report. I don't believe
24 so. I have to double-check but I'm not 100 percent
25 sure of everything that was submitted.

1 MR. SIMON: Mr. Chairman, I would just ask
2 as a request that Ms. Boschulte supply the Board and
3 really to me directly through Mr. Schneider whatever
4 that calculation or conversion that she's referring to,
5 please.

6 CHAIRMAN FLANAGAN: Mr. Schneider, could
7 you supply those calculations to the Board and to Mr.
8 Simon?

9 MR. SCHNEIDER: We'll be glad to do that.

10 CHAIRMAN FLANAGAN: All right. Thank you.

11 MR. SIMON: Thank you, Rich.

12 BY MR. SIMON:

13 Q. Frances, could you describe though,
14 understanding that you're going to provide that to Mr.
15 Schneider, who's going to provide it to the Board and
16 myself, could you describe what that conversion just
17 generally consists of?

18 A. Yes. Let me see if I can actually -- so it
19 consists of the difference in transmit power between
20 the CW and an actual base station. It also consists of
21 the difference between the antenna. Obviously, we're
22 not utilizing the same panel antennas that will be
23 provided at an actual macro facility. This was the
24 crane test, so utilizing only an omni antenna there is
25 a difference in gain, as well as the cable loss.

1 Q. Have you provided the actual raw readings
2 from that CW test to the Board?

3 A. The raw readings from the RSSI before --

4 Q. Before you converted to RSSI --

5 A. To RSRP?

6 Q. Before you add the 7dB for the foliage,
7 before you do the power adjustment to what the cell
8 tower would provide in 4GLTE?

9 A. No. Because it has no meaning. You have
10 to reference it to -- you have to convert it. As Dr.
11 Eisenstein was indicating before to see something in
12 meters and then in feet you have to do the conversion.
13 So what I provided was the RSRP for LTE.

14 Q. Okay. As long as you provide that to the
15 Board so that we can take a look at that, thank you.
16 I'm going to move on.

17 In the areas of Z-3 that are colored in
18 green, you don't know how far away from the road that
19 you're showing as being covered there are there any
20 buildings, correct? Have you done that analysis?

21 A. Sorry. Repeat your question.

22 Q. Sure. If you take Z-3 for example and you
23 show certain areas in green that presumably mean that
24 it meets the, your in-building, you know, negative 95
25 dBm RSRP; correct?

1 A. Okay.

2 Q. Right. And have you done an analysis as to
3 whether there are any buildings in the vicinity of
4 where you're showing, in essence, green coverage in
5 Z-3, just as an example?

6 A. The neg 95 that is the design threshold is
7 a street level that takes into account, it's a design
8 criteria that takes into account what the -- takes into
9 account the margin so that you would have communication
10 services if you were inside a building structure.

11 Q. I understand that, Ms. Boschulte. I'm
12 asking you whether you did any analysis as to whether
13 within those areas where you're showing green they're
14 actually buildings?

15 A. No. There isn't a need for me to do a
16 specific analysis. The margin as in many link budgets
17 give a --

18 Q. I didn't ask you whether there was a need.
19 I'm not trying to be argumentative. I'm asking you
20 whether you performed the analysis or not. That's all.
21 Did you?

22 A. The analysis of the fact that there could
23 be anywhere between a 10 and 20 dB of attenuation inside
24 a building structure.

25 Q. I understand. You've testified to that

1 before. I'm not going back to that. I'm asking you
2 whether you -- first question --

3 A. I did not physically go into buildings to
4 see what the --

5 Q. I'm not asking you whether you went into
6 buildings.

7 A. Then I'm not sure what it is that you're
8 asking.

9 Q. My question is very simple. In the areas
10 where you did the CW test and you drove through, and
11 you believe that based on what you provided or what you
12 will provide to the Board that it meets the in-building
13 threshold. In those particular areas, whether it's
14 along Blue or wherever, did you do any analysis to
15 ascertain whether there's any buildings in those areas?

16 A. Yes. I identified areas where there were
17 building structures.

18 Q. And did you -- how did you identify
19 building structures, did you write them down, did you
20 identify them any other way?

21 A. There are several ways that I identified
22 building structures, one was through driving the area.
23 The second was through Google Earth.

24 Q. So in terms of Google Earth, did you
25 provide any type of Google Earth data to the Board that

1 you reviewed as to buildings within those areas that
2 you drive tested?

3 A. I didn't supply a Google map, if that's
4 what you're asking. I'm not sure. I think -- I mean,
5 I identified building structures during my testimony.

6 Q. I'm asking you, did you record -- when you
7 undertook your examination of this area, whether it was
8 on February 14th, 2020, or another date, did you record
9 in any manner the location of any buildings in the
10 areas where you drive tested?

11 A. Yes. I recorded locations. They're
12 mentioned in my reports of those building locations.

13 Q. So if the -- you've submitted, I believe,
14 now three reports that your testimony tonight is that
15 the extent of your identifying buildings within the
16 coverage area in question are contained exclusively
17 somewhere within those three reports; correct?

18 A. Yes. They're in the reports. They're
19 mentioned in the reports, right.

20 Q. So other than those three reports, do you
21 have other data that you have supplied or that you
22 intend to supply the Board as to the location of
23 buildings, whether they're residential or
24 nonresidential, within the areas that you drive tested?

25 A. I'm sorry. I really don't understand the

1 questions that you're asking.

2 Q. Ms. Boschulte, you are showing on your
3 exhibits in green what you refer to as proposed
4 reliable in-building coverage of negative 95 dBm RSRP;
5 correct?

6 A. Yes.

7 Q. I'm asking you, what buildings are actually
8 located within the areas that you are showing in green
9 on Z-3?

10 A. There are no buildings on the street where
11 you're able to drive, if that's what you're
12 specifically asking. The drive test can only be done
13 on the street. You can't drive onto people's
14 properties. So initially what were submitted were
15 propagation maps, but then the question of the signal
16 levels and drive test came into question. So the drive
17 test was done. It's already been spoken to that the
18 propagation gives a view that the CW does not because
19 the drive test can only occur on the street; whereas,
20 propagation helps provides a better picture of what
21 occurs between the streets in the residential areas.

22 Q. Have you done any analysis as to how far
23 any buildings are from the roadways that you conducted
24 a CW test on?

25 A. I have looked at the distance in some of

1 the buildings, the distance from the houses from the
2 roads, yes.

3 Q. And have you recorded that data in terms of
4 the distance of those buildings from the road anywhere?

5 A. Only in my notes.

6 Q. Have those notes been -- those notes -- I'm
7 sorry. Apologize.

8 Are those notes any part of the three
9 reports that you've submitted to the Board?

10 A. I would have to go through the reports to
11 see if I called out any distances from residential
12 houses from the streets.

13 Q. Okay. But you know, as I ask you the
14 question you don't recall one way or the other right
15 now?

16 A. I recall evaluating. I have some numbers
17 that I know. Certain driveways the concern, there are
18 very long driveways, and some of these driveways extend
19 more than 500 feet from the main roads. Some of them
20 as long as over a thousand feet that encompasses where
21 the residential houses are from the main road.

22 Q. And have you identified in any of your
23 three reports -- just your recollection, of course --
24 where those driveway -- residential driveways that
25 service homes are between 500 and a thousand linear

1 feet?

2 A. In my report I don't recall if I
3 specifically called that out, but I can, you know, give
4 some examples of roads that I looked at and measured.

5 Q. Okay.

6 A. So some of those specifically along
7 Pleasantville Road. The distance on Marino Drive
8 and Wildlife Run, Wildlife Run was approximately around
9 five to 600 feet. There were other driveways along
10 Village Road that extended over a thousand feet into
11 the resident -- toward the residential houses.

12 Q. Do you remember where those were?

13 A. One I already mentioned which was Wildlife
14 Run that's off of Pleasantville Road and near Millbrook
15 Road. The other one that I looked at when I was
16 evaluating is -- it's called Featherbed Lane.

17 Q. Any others that you can recall right now?

18 A. Not off the top of my head, but I have been
19 through the process looking at the roads specifically
20 where the ones during my drive test route where it
21 indicated the signs actually said private. And I
22 noticed that to get to the end of some of those private
23 roads where there are residential housing it was over
24 500 feet.

25 Q. And to the extent that you made a notation

1 of that you believe that that would be in one of your
2 three reports?

3 A. I don't believe -- I would have to really
4 look. I don't believe other than the fact of me
5 jotting down and making a mental note and notes on
6 paper.

7 Q. Okay. Let me move on. Just for
8 clarification purposes, because I think there was some
9 confusion at the last meeting. Z-3 through Z-8, which
10 includes the CW test 700 megahertz at 120 feet, that
11 assumes that the other sites in the area, including
12 Harding, Harding 2, Morristown 3 Reel, and Chatham 2,
13 that's all assuming that none of those sites are turned
14 on at all; correct?

15 A. It's not assuming. The Exhibits of Z-3
16 through Z-8 specifically are the collection of data
17 from the CW test. It is not the recording of the
18 signal strength from the existing Verizon Wireless
19 network.

20 Q. Right. That's what I'm saying. It doesn't
21 show any -- it's as if none of those sites are in
22 existence; correct?

23 A. Correct.

24 Q. Thank you. And in Z-3 through Z-8, none of
25 those exhibits show the -- that BR site where the

1 Verizon headquarters is that you refer to in your
2 dropped-call analysis; is that correct?

3 A. That's correct. BR --

4 Q. Go ahead.

5 A. Yes, that's correct.

6 Q. And I went back and none of your prior
7 reports or testimony on this application identify a
8 reference to BR, or I think it's the Basking Ridge
9 site; is that correct?

10 A. That is correct. That's correct.

11 Q. For the CW test the difference in coverage
12 between 120 feet -- and we're talking about, I'm sorry,
13 it's 700 megahertz, Ms. Boschulte. For the CW test the
14 difference in coverage between 120 feet and 80 feet
15 mostly only affects the local residential streets;
16 correct?

17 A. That's correct.

18 Q. And when I say the local residential
19 streets I'm not referring to the main streets which I'm
20 going to be referring to as either Glen Alpine, Blue
21 Mill, Lees Hill Road, Village Road or Millbrook Road.
22 Would you agree with that?

23 A. Yes.

24 Q. And Ms. Boschulte, have you done an
25 analysis, even though you haven't provided it to the

1 Board, as to what would happen with the coverage at 700
2 megahertz as the tower, the proposed tower that's at
3 the DPW site goes below 80 feet?

4 So in other words, how much I guess fewer
5 linear feet of roadway do you lose as you dip -- if you
6 decided to reduce the height of the tower at the DPW
7 yard below 80 feet?

8 A. Below 80 feet --

9 MR. SCHNEIDER: I guess the question is,
10 Frances, have you done any analysis below 80 feet?

11 MR. SIMON: Thank you, Rich.

12 MR. SCHNEIDER: If you haven't done the
13 analysis then you haven't done the analysis.

14 THE WITNESS: In my report I mention --
15 sorry, were you referring to --

16 BY MR. SIMON:

17 Q. Let me rephrase it, and I think Mr.
18 Schneider makes a good point, that I did not see in any
19 of your reports, and I do not recall in any of your
20 testimony any analysis as to the coverage at
21 700 megahertz if you placed a tower at the DPW yard
22 with antennas that were lower than 80 feet in height;
23 is that accurate?

24 A. Only at 80 feet.

25 Q. Right. So I know you haven't provided the

1 Board with any reports analysis or testimony at
2 below -- at what would happen if there were antennas
3 below 80 feet. So my follow-up question is, have you
4 independently, even though you haven't provided it to
5 the Board, done that analysis?

6 A. No, I have not evaluated lower than
7 80 feet.

8 Q. And then let me move on then to some
9 questions regarding your -- the drop call or dropped
10 transmission data that you referred to. Have you
11 reviewed any independent I guess peer-reviewed reports
12 or studies that determined what is a reasonable
13 standard of percentage of dropped data transmissions?

14 A. Have I reviewed, I'm sorry, any reports?

15 Q. Yes. Any report or studies that does an
16 analysis and makes an independent determination as to
17 what a reasonable standard of dropped calls or dropped
18 data can be?

19 A. I've only, you know, read through research
20 and through -- based on what Dr. Eisenstein has
21 indicated that two percent has been an industry
22 standard.

23 Q. You mentioned last time that two percent
24 has been an industry standard, but I'm asking you that
25 forget about the industry for the moment, have you read

1 any -- have you read any peer-reviewed report or
2 studies that makes that finding?

3 A. I've come across it a couple of times from
4 reading, you know -- what do I want to say -- articles
5 that have been written about the two percent.

6 Q. And what article --

7 A. As a quality -- they refer to it as a
8 quality of service.

9 Q. And those recalls say what, that it
10 shouldn't be above two percent for dropped calls?

11 A. That they should stay below -- like two
12 percent is a bench mark, so to speak, for the quality
13 of service.

14 Q. And so do you recall what those articles
15 were that you read?

16 A. No, but I'm sure I can find them again.

17 MR. SIMON: Okay. I would ask to the
18 extent, Mr. Chairman, that Ms. Boschulte can find those
19 articles if she can supply them. Thank you.

20 Q. So, and just to be clear, and I think you
21 referenced it before at the last meeting, that when you
22 talk in your report and your testimony about dropped
23 calls it's really dropped data transmissions; correct?

24 MR. SCHNEIDER: And dropped calls.

25 BY MR. SIMON:

1 Q. And dropped calls right. Go ahead?

2 A. Go ahead.

3 Q. No, no. Let me clarify the question. So
4 when you have presented your dropped call data, is that
5 comprised of both dropped transmissions, like on a
6 text, as well as a dropped voice call that are mostly
7 data calls now?

8 A. The dropped call includes all data
9 connections, which includes voice, which is VOLTE.

10 Q. So it includes voice, and do you have any
11 data that breaks down from what you have submitted and
12 provided to the Board how much of that dropped data or
13 call is voice versus non-voice?

14 A. I didn't request it, the separation of the
15 two. I have to look to see if the data that I was
16 supplied actually has that specific bucket included for
17 voice. I would have to separate it, but no, I don't
18 recall.

19 Q. So in terms of the fact that the data
20 encompasses both voice calls and non-voice data
21 transmissions, if I have my three kids in the back seat
22 of my car, which I promise you in real life would never
23 happen anymore, but if it did many years ago, and each
24 kid is streaming a movie on their phone or their iPad
25 and each of their respective data connection would drop

1 that would constitute three dropped connections as
2 referenced on the excel spreadsheet provided to you by
3 Verizon; correct?

4 A. Correct. It's a connection that was made
5 and then lost. Correct.

6 Q. But you just don't remember right now
7 whether they actually broke it down between the voice
8 and the non-voice, or even within the non-voice if it's
9 broken down by, you know, texts, versus streaming a
10 movie, or music. Do you recall any of that?

11 A. The data that I provided does not
12 distinguish between what the data connection was used
13 for. So whether it was -- whether they were connecting
14 for a movie or a zoom call or whatever the case may be,
15 it's a connection that was made and was lost.

16 Q. Ms. Boschulte, does the transmission, the
17 dropped transmission data that was provided to you by
18 Verizon, does that also reflect a situation where
19 someone's accessing a wireless connection from a home
20 or an office with a computer that has a built-in
21 cellular, let's say, a wireless card or a USB device?

22 A. It's any smart device that's accessing the
23 LTE network when the connection is made and if it's
24 lost it's pegged as a drop.

25 Q. And that's regardless of whether you're in

1 a home, you're in a building, you're driving, it
2 doesn't just settle?

3 A. That's correct.

4 Q. And either prior to the last meeting where
5 you testified, or even subsequent to the last meeting,
6 have you reviewed any of the backup data used to create
7 the excel spreadsheet that was provided to you by
8 Verizon?

9 A. No. I don't know what you're referring to
10 as backup data.

11 Q. Well, you testified, I believe, last time
12 that they provided to you an excel spreadsheet?

13 A. That is correct.

14 Q. And then you took the excel spreadsheet and
15 you created your exhibit that you put forth in your
16 latest report?

17 A. That's correct.

18 Q. But you have not seen the backup data that
19 created -- that led to the creation of that excel
20 spreadsheet; correct?

21 A. Correct. I do not have access to the
22 performance tool that they use to pull the actual
23 information from the network.

24 Q. And so you haven't seen any data either
25 where the overwhelming majority of the calls or data

1 transmissions were not dropped; correct? That's the
2 good data, I guess?

3 A. No. The total number of connections made,
4 that I do have. It's part of the data provided to show
5 the difference to get the percentage, yes.

6 Q. So, right. So you had that number, right?
7 You don't have the backup data, but you have the actual
8 number, and that's what you did to calculate the
9 percentages, right?

10 A. Correct. They have -- right. Yes.
11 Well --

12 Q. Go head. I'm sorry. Did you want to say
13 something?

14 A. I should say -- I'm going to look at that,
15 but I believe the excel spreadsheet has the columns for
16 percentage, and has the columns of total number of
17 connections and the number that's dropped.

18 Q. Okay. So you didn't do any then
19 independent calculation yourself then? You just took
20 the calculations that were done by someone in Verizon
21 and then you created an exhibit from that; correct?

22 A. That's not correct. I do recall looking to
23 make sure I understood where the percentage numbers
24 came from, and to which buckets they came out of. So I
25 did verify that the percentages did make sense. That

1 they did include the number of dropped failures,
2 connection failures, and the total number of
3 connections made.

4 Q. So you verified the percent calculation?

5 A. Yes.

6 Q. And again this may be an ignorant question,
7 but at what point does Verizon consider a data
8 connection as being dropped? So is it actually losing
9 the connection where the user has to reinitiate the
10 data connection, or can there be some, let's say,
11 interference with the transmission which causes delay
12 or freezing of the connection, and then it comes back
13 before it actually, you know, fails, completely fails?

14 A. The connection loss is a connection that's
15 lost. What you're indicating is some latency or lag
16 time, but however it's still connected. So it's only
17 when the connection has ended.

18 Q. Okay. During -- I'm assuming that in the
19 past year or so that folks presumably have been using
20 their smart phones more than ever because of COVID and
21 the related state of emergency; is that a fair
22 assumption?

23 A. It's fair.

24 Q. Have you reviewed any data from Verizon
25 indicating whether or not that is the case?

1 A. That there has been an increase?

2 Q. Yes, Ma'am.

3 A. I do have data that extends more than the
4 recent data provided, which I believe was from November
5 to --

6 Q. I guess my question or really curiosity is
7 that, if you provided the November to December 2020
8 data, and how does that compare to the November to
9 December 2019 data. Have you looked at that?

10 A. I have not looked at the 2019. What I did
11 look at was from the start of the COVID, which I
12 believe was March of 2020 to maybe August or something.
13 I have to look back to see the date, but it more
14 evaluated the year of 2020.

15 Q. But you have not done a comparison, nor
16 have you asked for the data from Verizon to do the
17 comparison to pre-pandemic times; correct?

18 A. No. Not in the year 2019. No.

19 Q. And as you -- and as you have more users,
20 and again this is a little bit of an ignorant question
21 admittedly, but as you have more users to the wireless
22 system my understanding is that the available power
23 sort of shrinks or becomes less available; correct?

24 A. Yes.

25 Q. And a dropped data connection can be, you

1 know, the user's fault, right, whether it's a dropped
2 phone or otherwise, the phone's fault or the network's
3 fault, correct, one of the three?

4 A. When you say user's fault, what --

5 Q. So in other words --

6 A. What are you referring to?

7 Q. So in other words, if I drop my phone,
8 right, it's not that I'm making a call and all of a
9 sudden the call goes dead, I actually do something, you
10 know, human error that results in losing the call. The
11 phone's fault is if my battery goes dead in my example,
12 and the network's fault is that I believe what you are
13 trying to show. Is that a fair, at least, summary?

14 A. I don't see how a user can --

15 Q. Let me go back. Okay. Can a phone case on
16 your phone that can block a cell signal from reaching
17 your phone's internal antenna; correct?

18 A. Yes, can weaken the signal, yes.

19 Q. And the user -- because I do this from time
20 to time -- can inadvertently block the internal antenna
21 while actually holding the phone which causes problems;
22 correct?

23 A. Yes. Your body can shield, yes.

24 Q. And then the user, I'll give myself as an
25 example, I can accidentally drop my phone, especially

1 if I'm multi-tasking and trying to do a number of
2 things at once, right? And that can cause a data
3 transmission failure, right? Correct?

4 A. I guess if you drop your phone.

5 Q. Right. And then I can also accidentally
6 disconnect whatever the data connection is, I hit the
7 wrong button or something happens?

8 A. If you hit the wrong button and you
9 terminate the call then it's a termination, it's not a
10 drop.

11 Q. But let's say I do something with my phone
12 that results in the connection dropping. So for
13 example --

14 A. Yes, for example if you --

15 Q. If I don't charge my phone and I probably
16 have a dead battery or a low smart phone or a computer
17 battery that can negatively impact the ability to hang
18 onto a cell signal; correct?

19 A. I don't know for sure. I'd have to verify,
20 but I don't believe if your battery dies it's pegged as
21 a dropped call.

22 Q. All right. But you don't know one way or
23 the other?

24 A. I don't know that for sure.

25 Q. Okay. That's fair.

1 All right, now, what happens -- there's
2 also circumstances where your SIM card, your subscriber
3 identity modular card which is needed to connect to the
4 carrier's network and identifies you and your activity
5 on, for example, Verizon's network that could be
6 damaged also, right, that can be bent, that can be
7 chipped, it can be broken, right? That's possible,
8 right?

9 A. Okay.

10 Q. Right. And then also I understand that you
11 could have multiple applications on your phone that are
12 running at the same time that are taking up space and
13 memory that could result in a dropped data connection,
14 right? Like if one of my kids has, you know, 20 or 30
15 background apps running simultaneously that it could
16 result in a dropped data connection; correct?

17 A. In one of your applications?

18 Q. Yes. If I'm overloaded.

19 A. Yes. If there's not enough bandwidth, yes.

20 Q. Right. And in fact, if you don't also have
21 updates that you install that can also result in a
22 dropped transmission data, correct, in some cases?

23 A. Okay. That I'm not sure about, but go
24 ahead.

25 Q. And also -- all right. I'm going to leave

1 that. I think I've made my point.

2 The dropped call data that you've presented
3 is just for 4G; right.

4 A. Correct.

5 Q. And again, one of my many ignorant
6 questions. Can an LTE drop be recorded when the
7 connection tries to drop down from 4G, let's say, to
8 3G? That could be a circumstance where you have a
9 dropped call?

10 A. Right. If there is weak signal and is
11 unable to complete its handdown or handover to another
12 cell, yes, it's a drop.

13 Q. And in your report I believe when you're
14 talking about dropped calls or now we know they should
15 be called dropped data transmissions, that you say that
16 the dropped call performance data further, I think it
17 was something like further concludes poor service in
18 Harding Township toward the area of the proposed DPW
19 location; do you recall writing that?

20 A. Yes.

21 Q. Okay. And when you say "toward the area of
22 the proposed DPW location," what do you mean by toward
23 the area?

24 A. So what I mean is, in evaluating, and again
25 you pointed out several scenarios that how a person

1 uses their phone in different ways. And again the
2 design threshold is to take into account, as it was
3 stated before, there's a margin. There's a margin for
4 signal fading. So if you have your cell phone out or
5 if you have your cell phone in your pocket, or you put
6 your cell phone in the bottom of your book bag, or
7 you're standing behind a tree, or you're standing
8 behind a refrigerator there are certain factors in your
9 environment that are going to attenuate the signal.

10 So there is a level of margin to take those
11 fluctuations in the environment into account so that
12 you still have communication, an adequate signal
13 remaining to have a communication. So in my report
14 when I'm referring to toward the proposed, you have
15 surrounding wireless facilities. Each of those
16 wireless facilities have a sector, an antenna that's
17 pointing toward the proposed location. The proposed
18 location is in the center.

19 Q. Well, let me back you up there. Why would
20 it be -- are these antenna sectors each pointing
21 directly toward the DPW site?

22 A. If you actually look at the azimuths that
23 are mentioned and you drew a line in the direction of
24 those azimuths, yes, it's pretty close to that
25 geographical area that I mentioned where you have the

1 triangle of Lees Hill Road and Sand Spring Road and
2 Glen Alpin Road and Village Drive, yes. It's all
3 toward in that geographical location.

4 Q. Have you provided any such diagram or
5 exhibit to show specifically what -- where those
6 azimuths are angled toward in relation to the DPW yard?

7 A. There isn't a diagram. Maybe that will be
8 helpful, but I did call out the site reference and the
9 azimuth reference.

10 Q. Well, you did do that, yes. I agree. I
11 concur. But a dropped data connection can actually
12 happen not necessarily as you're driving toward the DPW
13 site, it could be as you're driving away from the DPW
14 site; correct?

15 A. Well, if you're driving --

16 Q. You can have a dropped data transmission if
17 you're driving away, right? Just like you can have an
18 updated transmission if you're driving parallel to the
19 antennas that you're calling out, you could, right?

20 A. You could drop a call anywhere between the
21 proposed site and the site that's transmitting. I
22 think the point that I was making in my report is that
23 you have these surrounding wireless facilities all with
24 the sector pointing in the direction of the proposed,
25 and if you look at the scanned data, if you look at the

1 signal levels, the area where the sectors are pointing
2 shows an area of signal levels that are weaker than neg
3 95. They're in the areas --

4 Q. I know what the exhibits show.

5 A. Can I finish?

6 Q. Go ahead.

7 A. Thank you. Which in conjunction with the
8 dropped percentages gives an indication that the drops
9 are occurring in this area of weak signal strength, of
10 signal strength that's weaker than the neg 95,
11 indicating that there's a problem in this geographic
12 area that neg 100 or neg 105 is not providing adequate
13 signal to maintain data connections.

14 Q. All right. Where do these dropped data
15 connections actually take place, do you know where
16 precisely each of these data connections was dropped?

17 A. No. I don't know precisely a latitude and
18 longitude location.

19 Q. And you don't know whether a dropped data
20 connection took place at neg 96 or even negative 106 or
21 negative 110, you don't have that data, it wasn't
22 provided to you by Verizon as to where the data
23 connection was dropped in relation to the area of
24 coverage; correct?

25 A. The actual geographical latitude and

1 longitude location was not provided, but as I mentioned
2 what -- it does indicate that the drops are occurring
3 in that direction of the proposed. Those sectors that
4 have the high dropped call percentages are providing
5 coverage in the vicinity of the proposed. So those
6 signal strengths that are weaker than neg 95, those
7 areas it's showing that there's a problem. They're
8 showing that the weak signal strength --

9 Q. But you're not -- you can have perfect
10 coverage in an area of neg 95 and you can still have a
11 dropped call, correct? Right?

12 A. You can have a dropped call, yes, at neg
13 95.

14 Q. Right. Where you currently show reliable
15 in-building LTE coverage it's even better than negative
16 95, correct?

17 A. Yes, but it would be less.

18 Q. Okay. But have you -- but you can't tell
19 me that the dropped calls are -- because we have
20 identified the locations of the dropped calls. And
21 many of them are right here and as opposed to right
22 over here. You're just basically taking the antenna
23 and having the recording done as to where there was a
24 dropped data transmission that that antenna had at one
25 time; correct?

1 A. Those antennas are the best servers in this
2 geographic location, and they have a high dropped call
3 percentage, not at the high band but at the low band.
4 The fact that they don't have a high dropped call at
5 the high band gives an indication that the high band
6 which we know covers close to the site where there's
7 going to be a stronger signal level, and then as you
8 move out you're going to switch down to the
9 700 megahertz. And it's the 700 megahertz that have
10 the high dropped call rate, because you're further away
11 from the cell sites and you have a weaker signal
12 strength.

13 Q. But you're the same distance from the cell
14 site. If you're a mile away from the BR site you're a
15 mile of way whether you're low frequency or a high
16 frequency; correct?

17 A. A mile away did not show an indication of
18 having adequate signal strength at the high band.

19 Q. So there were dropped calls at the high
20 band? There weren't.

21 A. They're very low, showing that you're fine
22 as you're closer to the site. The problem occurs when
23 you're moving further away from the site towards the
24 proposed.

25 Q. Now, you testified a number of times now

1 over many months that what you're proposing to cover
2 with the DPW site is not going to be achieving the
3 closing of all the gaps in the Harding area; correct?

4 A. That's correct.

5 Q. I'm sorry. I want to let you finish.

6 A. Yes. That's correct.

7 Q. And so what percentage of the dropped data
8 connections took place within the area that you're
9 going to be covering by the DPW cite versus outside
10 that coverage area?

11 A. That I don't know, but --

12 Q. Go ahead.

13 A. Okay. I don't know specifically, but if
14 you look at the propagation of the proposed, and you
15 look at the, or the CW test of the proposed, the
16 coverage footprint covers at 120 feet covers a
17 significant amount of the area that has poor coverage.

18 Q. When you say poor coverage, do you mean
19 weaker than negative 95 dBm RSRP; correct?

20 A. Correct.

21 Q. And do you have, I guess -- you show, and
22 I'll get to the outdoor DAS exhibits that you provided
23 in a little bit, but where you have the installation of
24 those outdoor DAS nodes, did you have -- do you have
25 dropped calls currently in those areas?

1 A. We already established that there isn't any
2 latitude or longitude locations for the dropped call.
3 That the dropped call percentages on the sectors, the
4 sectors cover the geographical area pointing toward the
5 proposed site.

6 Q. And it's like -- and it's not just a line,
7 though, it's like a pie; right?

8 A. Correct.

9 Q. So within -- so somewhere within that pie,
10 right, that triangle as which you say is aimed toward
11 the DPW site, somewhere within that pie is where you
12 have the dropped call or dropped data transmission?

13 A. Correct.

14 Q. All right. But we don't know whether it's
15 right at the apex or as you're moving away and it's out
16 on the corners, we just don't know. Okay. I got it,
17 because you don't have the latitude and longitude. I
18 understand.

19 And besides the latitude and the longitude
20 and not knowing whether it's a voice versus non-voice,
21 do we have any idea whether it's broken down by, you
22 know, whether somebody is in a car versus outside,
23 versus in a building?

24 A. There's no distinction. The fact that you
25 can't maintain a connection, whether it's voice or data

1 or wherever you are, is still a failure to maintain
2 that connection.

3 Q. And just for clarification, the RRC drop
4 number that's in your report, how does that relate to
5 the number of data connections per day?

6 Dose that show up on the corresponding
7 percentage sheet, and then I just need to do the math
8 to back into it?

9 A. Let me make sure that I understand you.

10 Q. I didn't see the total number of data
11 connections per day. I just saw --

12 A. Yes. If you did the math --

13 Q. Okay. I'm not going to waste anyone's time
14 with that then.

15 Are both the higher and lower frequencies
16 using the same antenna or the same azimuth?

17 A. The azimuths are the same.

18 Q. For both high and lower, right?

19 A. Correct, yes.

20 Q. And you know, you talked about the fact
21 that we had very, very few dropped calls or dropped
22 data transmissions at the higher frequencies. I'm
23 assuming, and I think you stated it earlier, that it's
24 because most of the calls in this area operate at the
25 lower frequencies, right, that propagate further,

1 correct?

2 A. Correct.

3 Q. All right. And in this area certainly of
4 the state it's not a question of having inadequate
5 capacity in the gap area in question, right?

6 A. Correct. This is not -- right. If you --

7 Q. Did you want to finish? I'm sorry.

8 A. No. It's okay.

9 Q. So from Morristown three, for example, how
10 many of those dropped calls at the, let's say at the
11 higher frequencies, the 2100 megahertz band, occurred
12 in areas that you're going to be covering now with the
13 Harding DPW site at the 2100 megahertz band? Any?

14 A. Repeat that again.

15 Q. Sure. And it may be an improper question,
16 you'll tell me it is.

17 For Morristown three you show a dropped
18 call that's 2100 megahertz band, right?

19 A. Right.

20 Q. So how many of those dropped calls at the
21 2100 megahertz band occurred in areas, if you know,
22 that you're now going to be covering with the Harding
23 DPW site at 2100 megahertz?

24 Because it seems to me that because you
25 have such limited area of coverage at the higher

1 frequencies you're not going to pick anything up at the
2 higher frequencies in terms of dropped data
3 transmissions for Harding DPW?

4 A. Correct. The --

5 Q. I got it.

6 A. The handoff is going to primarily occur for
7 the existing wireless facilities at the low band.

8 Q. Right. Okay. And then, did you I guess do
9 any type of analysis to determine whether you can,
10 let's say, adjust the electrical tilt of the antenna,
11 or swapping out the antennas at the existing sites for
12 a more effective antenna so to reduce the dropped
13 call -- dropped transmission data?

14 A. The antennas that are on the existing
15 sites, if you swap out an antenna -- I think what
16 you're indicating is if there was a faulty antenna
17 where it wasn't performing --

18 Q. No. I'm not talking about a faulty antenna,
19 I'm talking about whether you can adjust the antennas,
20 you can get a more powerful antenna, or change the -- I
21 guess degree of the antenna, or the azimuth of the
22 antenna, to reduce the number of dropped data
23 transmissions. Have you looked into that?

24 A. I've looked into whether or not the tilts
25 on the surrounding sites have -- can play any role.

1 I've looked into the azimuths. I haven't looked to see
2 if there's a better antenna on the market that would
3 give it an extra dB or two, but what I have -- what I
4 have evaluated so far is that changing the azimuth is
5 not going to give you an increase in signal strength
6 levels that are already weaker than neg 95 in this
7 area. They're already pointing, I believe, at an
8 optimal azimuth trying to cover the center which is the
9 triangle that I always refer to where the DPW is
10 located.

11 So it's not a scenario where the -- it's
12 pointing, let's say, for the Morristown 3 Relo it's
13 pointing north, and then -- which would be away from
14 the DPW. They actually have a sector that's pointing
15 toward the area. So I think the azimuths are optimal.

16 The tilts -- the tilts are not going to
17 have any significance again in adding more gain or
18 increase in dB levels towards the proposed. You're
19 talking about distances that are over a mile away.

20 Q. Okay. And again, just so the record's
21 clear, let's say I'm on, let's say, Harding 2 and I'm
22 driving through azimuth 125, and I, I guess, catch
23 azimuth 40, or I catch azimuth 240, azimuth 125 is not
24 going to record a dropped data communication under that
25 scenario; correct?

1 A. If you have handed over to the other -- an
2 adjacent sector of that cell site or a sector of
3 another site, correct, it's not going to be -- the
4 dropped call will not be pegged on the sector that you
5 were initially on.

6 Q. And a dropped data communication, though,
7 can in some instances, I know, be caused by
8 interference between two sites where there's
9 overlapping coverage; correct?

10 A. There can be interference. There can be a
11 degrade in signal quality if you have too many signals
12 serving with weak signal levels, yes.

13 Q. So do you know -- well, two questions, I
14 guess. First of all, I'm assuming that you don't know
15 from the data that was provided to you in the excel
16 spreadsheet as to the dropped data transmissions as to
17 what percentage of them were caused by overlapping
18 coverage, you don't know that; correct?

19 A. No.

20 Q. And if this site -- if this site is
21 approved have you done an analysis to determine what
22 percentage of overlapping coverage will there be in
23 relation to the other sites in the area?

24 A. No. I haven't looked at the -- to
25 calculate the percentage based on a best server plot.

1 Q. You stated the -- in order to identify
2 which sector should be investigated, I guess, for the
3 dropped transmission data, that you said a mapping of
4 the sector or ID in the scanned drive data was used
5 identifying the sites or the sectors mostly serving in
6 and around the coverage gap area in the proposed
7 location, something like that, right?

8 A. Yes.

9 Q. Did you provide the Board with that mapping
10 of the sector ID?

11 A. No.

12 Q. And there are other sectors and there's
13 other sites serving the coverage gap area of the
14 proposed location with different sector IDs than those
15 that you used for your dropped data transmission data;
16 correct?

17 A. This area because there's no dominant
18 server and the signal levels are very weak, worse than
19 neg 100, you can have other cell IDs showing up in this
20 area at very weak levels, yes, creating essentially
21 noise.

22 Q. Right. So the -- for example, let me take
23 Harding 2, the alpha sector azimuth at 125 degrees.
24 You say that that antenna is facing the DPW site;
25 correct?

1 A. Yes. If you look at, yes, the azimuths 360
2 degrees and the orientation, yes.

3 Q. And the distance and the width of that
4 coverage would presumably be shown on your propagation
5 maps of existing coverage; correct?

6 A. The propagation maps do not show you who's
7 serving where, it's all green. If you wanted to see
8 which sector is the dominating server for that
9 particular geographic area, because if you look you do
10 have Harding 2, and Morristown 3 Relo, and they both
11 have sectors pointing in the southern direction, but
12 one will be dominant over the other at certain
13 geographical locations. So if you wanted to see that
14 that is what we would consider a best server map which
15 would give you an indication of who is specifically
16 serving where.

17 Q. But we can't figure that out from the
18 propagation?

19 A. That's correct.

20 Q. Let me see what else I want to -- oh, in
21 terms of this dropped call data that you presented, you
22 don't have any information as to, I guess, percentage
23 or number of Verizon customers actually complaining as
24 to the dropped calls; correct?

25 A. No. I did not request customer complaint

1 information.

2 Q. So you know nothing about recording of
3 complaints or how many or anything like that; correct?

4 A. Correct.

5 Q. Now, let me move onto the ODAS plan that
6 you provided in Z-13 and Z-14. So Verizon designed
7 this ODAS, I guess, plan shown on Z-13, Z-14, and not
8 you or PierCon; correct?

9 A. I did not. This plan was provided by
10 Verizon.

11 Q. And you didn't do any tweaking of the plan;
12 correct?

13 A. No tweaking.

14 Q. And how does this design that was supplied
15 by Verizon shown in Z-13 and Z-14 compared to what was
16 previously formally submitted by Verizon to this Board
17 actually and then withdrawn?

18 MR. SCHNEIDER: We're unaware of what was
19 submitted to the Board or withdrawn. Unless Ms.
20 Boschulte knows what was submitted to the Board and
21 withdrawn.

22 A. What I have -- what I have is what is as
23 current of today.

24 Q. My question -- okay. Let me back up.

25 Are you aware of any ODAS plan that was

1 formally filed with the Harding Township Board of
2 Adjustment?

3 A. Now you said it --

4 Q. I'm sorry. Is that a no?

5 A. You just stated that there was something
6 formally submitted and then withdrawn.

7 Q. Are you aware of whether that took place?

8 A. So I'm not aware that anything formally was
9 done.

10 Q. So is it safe to say since you are not
11 aware, you have not seen anything that may have been
12 submitted to this Board in the past for an ODAS
13 network; correct?

14 A. No. What I've seen is what's now.

15 Q. Did you inquire of Verizon, particularly in
16 response to or in reaction to a prior question I may
17 have asked you regarding an ODAS plan, whether they
18 had, in fact, submitted an ODAS plan to Harding
19 Township Board of Adjustment?

20 A. I did not -- sorry. I did not inquire to
21 anything that was done. Previously I asked for the
22 ODAS conceptual design that they had been working on.

23 Q. Okay. So when you say they had been
24 working on it, for how long had they been working on
25 it?

1 A. That I don't know.

2 Q. Have you seen any prior iteration of the --
3 of what you submitted at Z-13 and Z-14?

4 A. So I -- no. What I have submitted is what
5 I have seen based on the propagation analysis that I've
6 done. That's it.

7 Q. Well, regardless if it's based on the
8 propagation analyses that you've done or not, you've
9 not seen any other ODAS plan?

10 A. Why do you keep asking the same question?

11 Q. Ms. Boschulte, I'm trying to get a clear
12 answer. Have you seen any other plan, ODAS plan for
13 this area in Harding other than what you've submitted
14 as Z-13 and Z-14?

15 A. Other than this one, no.

16 Q. And with regard to, let's say Z-13, based
17 on the scale that you provide in the top left-hand
18 corner for Z-13 it appears to me that the coverage from
19 the ODAS nodes extend on either side of the roadway
20 width-wise for between one-eighth of a mile or 650
21 linear feet and a quarter of a mile or 1,320 linear
22 feet in some locations, is that a fair conclusion based
23 on the scale that you provided?

24 A. All the nodes combined together?

25 Q. I'm sorry, Ms. Boschulte?

1 A. I'm sorry. Can you hear me?

2 Q. I apologize. I missed that last --

3 A. I'm sorry. Are you asking -- I'm not sure.
4 Are you referencing one node that covers, or all the
5 nodes combined?

6 Q. Well, I'm saying any particular node will
7 extend it appears for between one-eighth of a mile and
8 a quarter of a mile based on the scale that you attach
9 to Z-13 and Z-14, is that a fair reading of the
10 exhibit?

11 A. I see very few that cover a quarter of a
12 mile. I'm not sure which ones you're referencing that
13 covers a quarter of a mile.

14 Q. Okay. So your testimony is that you don't
15 believe that the coverage -- I'm looking at Z-13 -- and
16 you don't believe that based on your scale that these
17 -- that any of these cover a quarter of a mile; is that
18 what you said?

19 A. They look to be covering less than based on
20 the scale.

21 Q. Can you estimate for me based on the scale
22 how long are they covering both along the roadway and
23 also perpendicular?

24 A. Sorry. I have to bring it up on my
25 computer screen so I can see it.

1 Q. That's all right.

2 BOARD MEMBER NEWLIN: Rob, just for
3 clarification, do you mean a quarter mile each way or
4 one-eighth of a mile each way? Maybe that's the
5 confusion.

6 MR. SIMON: So if I'm looking, Mr. Newlin,
7 at Z-13 and I'm kind of comparing it to the scale. It
8 appears that each one of these DAS nodes will extend in
9 each direction, for clarification, at least between an
10 eighth of a mile and a quarter of a mile, and then also
11 perpendicular the same distance.

12 A. Okay. I see what you're saying. Yes, so
13 I'm looking at it now in the light.

14 Q. It's okay.

15 A. Yes. So based on the scale above from zero
16 to one, which is a mile, and then the halfway point is
17 a half a mile, and then a quarter, and then one-eighth.

18 Yes, I would agree that it is in that
19 range, correct.

20 Q. Okay. And there's typically -- and oh, I'm
21 sorry. I know you have in response to questions I've
22 asked you in the past and just for confirmation, that
23 depending on line-of-site issues the poles will
24 typically be between 500 and 1500 feet apart; is that a
25 fair statement?

1 A. They can be in that range.

2 Q. And there's no dense forest between the
3 street and most of the homes on the streets that you're
4 trying to cover here; correct?

5 A. There are dense trees between the homes.

6 Q. Well, when you say -- what's the -- how far
7 a setback, let's say, front the yard setback from the
8 road to the front doors of these homes?

9 MR. SCHNEIDER: If you know, Frances.

10 BY MR. SIMON:

11 Q. If you know?

12 A. Well, I think -- to the front door -- I
13 mean, they vary. So in some cases there are some homes
14 that are closer to the road, like such as Pleasantville
15 Road. And then as I mentioned before other homes are
16 situated along on the hillside where there are several
17 trees between the road and the next residential house.
18 And that does -- it is greater than 500 feet in some
19 cases.

20 Q. But most cases not. Most cases the setback
21 from the road to the front door is less than 500 feet;
22 correct?

23 A. I don't know where you're looking, but I
24 don't agree that in most cases. In most cases there
25 are several homes that are set back from the main

1 roads.

2 Q. I know they're set back from the main road,
3 are you saying that the majority of the homes are set
4 back more than 300 feet, or a football field away from
5 the road?

6 A. There are several homes that I am looking
7 at. Sorry?

8 Q. Ms. Boschulte, I'm asking, is it your
9 testimony that the majority of the homes in this area
10 are set back greater than 300 feet from the roadway; if
11 you know?

12 A. I will have to evaluate every home to say
13 if it was the majority.

14 Q. And then with regard to Z-13 and Z-14 do
15 you know how many of these nodes that you're showing
16 will be utilizing existing telephone poles or other
17 structures, versus how many are going to need new
18 structures?

19 A. Based on my -- I don't know for sure,
20 but --

21 Q. Finish your answer. It's okay.

22 A. I can only tell you from my experience in
23 designing ODAS networks on utility poles and from what
24 I've seen driving up and down these roads that many of
25 them have primary and secondary power and have risers

1 on them. So to a certain degree they're not going to
2 be usable.

3 Q. So you'd have to put in --

4 A. Put in a new -- correct.

5 Q. But you haven't done that analysis;
6 correct?

7 A. I haven't done a thorough analysis, that's
8 correct.

9 Q. And have you looked to see whether there's
10 in addition to telephone calls whether there's
11 opportunities for small cell installations on, let's
12 say, traffic lights or buildings or rooftops, anywhere
13 along let's say Glen Alpin or Blue Mill Road, Lees Hill
14 Road, Village Drive or Millbrook Road?

15 A. There's very little rooftops in this area.
16 So I have looked at to see existing rooftop structures,
17 and there isn't -- other than the ODAS solution that
18 Verizon is proposing other areas to put a small cell
19 opportunities are very minimal.

20 Q. What about at the Harding DPW? There are
21 buildings and structures there, right?

22 A. They have the sheds and the actual facility
23 that's there. It's like a one story. Putting a small
24 cell structure on a one-story rooftop is really not
25 going to provide much service, especially if it's

1 surrounding the amount of foliage that's in this area
2 other than covering the DPW.

3 Q. Would it provide coverage similar to that
4 if you placed an ODAS node in the same location?

5 MR. SCHNEIDER: Same location as what?

6 A. The DPW?

7 Q. As the DPW?

8 A. I haven't done the analysis, but if you're
9 asking whether or not a small cell or an ODAS node
10 would have comparative coverage; is that what you're
11 asking?

12 Q. Yes.

13 A. If the heights are about the same, but you
14 have -- I think you have -- with a small cell the
15 installation is slightly different, the antenna
16 configurations can be slightly different than what
17 you're able to do on an ODAS node type of installation.

18 Q. Is it fair to say that the two
19 installations in terms of coverage that would be
20 achieved are comparable?

21 A. Yes. They would be very small.

22 Q. But they're comparable, right?

23 A. Yes, but I think we can already see that
24 the coverage footprint of an ODAS is very small.

25 Q. I didn't ask you that. I asked you compare

1 ODAS to small cell. And it would be similar, correct,
2 in terms of coverage?

3 A. Correct.

4 Q. And you're not aware of locations within
5 the gap area where additional ODAS nodes physically
6 cannot be placed; correct?

7 MR. SCHNEIDER: Do you understand the
8 question, Frances?

9 THE WITNESS: No. I don't understand the
10 question.

11 BY MR. SIMON:

12 Q. Is there anything about whether it's
13 wetlands, environmental issues, flood plain, is there
14 any area within the gap in question where you could not
15 physically install an ODAS node?

16 MR. SCHNEIDER: If you've done that
17 analysis.

18 BY MR. SIMON:

19 Q. If you know?

20 A. I haven't done that analysis.

21 Q. And you're aware, or I should say it this
22 way.

23 Are you aware or familiar with Harding's
24 right-of-way ordinance regarding the placement of
25 wireless telecommunications equipment?

1 A. I am aware and I have read it, although it
2 was a while ago.

3 Q. And based on your recollection, even though
4 it was a while ago, isn't it true that installing ODAS
5 nodes to your recollection is permitted within the
6 right-of-way provided you comply with the ordinance?

7 A. I do know that the ODAS nodes are permitted
8 in the municipal right-of-way. I think it says
9 municipal right-of-way.

10 MR. SCHNEIDER: Subject to all compliance
11 with all of the provisions of the ordinance.

12 MR. SIMON: That's what I asked. I said
13 subject to complying with the ordinance.

14 MR. SCHNEIDER: Okay.

15 BY MR. SIMON:

16 Q. Are there any -- so do you believe that for
17 purposes of this application that the right-of-way
18 ordinance does not pertain to an installation of an
19 ODAS node within the county right-of-way?

20 MR. SCHNEIDER: That calls for a legal
21 conclusion. I'll object to that.

22 A. I don't know what you're asking.

23 Q. I'll move on.

24 Your Exhibit Z-13 shows 25 ODAS nodes, and
25 they're all proposed outside the area intended to be

1 covered by the DPW macro site; is that accurate?

2 A. Yes. That's accurate. It's in areas
3 where, almost all where the DP -- the proposed coverage
4 from the DPW is not covering.

5 Q. And the ODAS nodes along the roadways are
6 propagated based on what Verizon perceives as reliable
7 in-building LTE coverage; correct?

8 A. The propagation is at the neg 95 dBm RSRP.

9 Q. In building, right.

10 A. Correct.

11 Q. So I will try to ask this somewhat artfully
12 enough.

13 If the desired signal strength was not
14 in-building but let's say hypothetically in car, and
15 that the desired signal strength accordingly would not
16 be negative 95, but more like negative 105, that in
17 that scenario or hypothetical the ODAS propagation that
18 we're seeing in Z-13 would extend further; correct?

19 A. I can tell you that in this particular case
20 it is not correct. And although this exhibit was not
21 provided I did -- when I did my evaluation I did look
22 at the weaker signal levels at say, for example, the
23 in-vehicle threshold for neg 105, and the concern as I
24 mentioned previously in my testimony is that in this
25 particular area, especially along Pleasantville Road

1 and Long Hill Road and some of the other areas, the
2 fact that the ODAS antenna is low and within the tree
3 line, and there is dense trees in these areas, in
4 addition to severe changes in ground elevation, the
5 roll off between neg 95 and neg 105 is -- happens very
6 quickly. So you do not see a significant or even an
7 adequate amount of large footprint between the neg 95
8 and the neg 105.

9 I did do that evaluation. The fact that
10 it's not -- I mean, we have just submitted so many
11 exhibits already that I did not submit that exhibit
12 showing the weaker signal levels, but that can be
13 provided. But I did evaluate that in my analysis.

14 Q. So for example, I'm just looking at this,
15 let's say there is no Harding DPW site, and
16 hypothetically you wanted to cover this entire area,
17 exclusively with an ODAS network, and you put some
18 nodes, for example, on Blue Mill Road near the Harding
19 DPW site where it meets with Glen Alpin, are you
20 telling me that the coverage would be the same if your
21 desired signal strength was 105 -- negative 105 as
22 opposed to negative 95?

23 A. What I'm telling you is that first I did
24 not do an evaluation of placing additional nodes
25 anywhere other than what is in this conceptual design.

1 So I can't answer your question regarding --

2 Q. I understand. I'm going to ask it
3 differently and I think it will be a better question,
4 which is, for the areas that you looked at, or the ODAS
5 areas that you looked at were exclusively the ones that
6 are identified on Z-13 and Z-14; correct?

7 A. Correct.

8 Q. And for those areas where there's ODAS
9 nodes shown on Z-13 and Z-14, if the desired signal
10 strength was not negative 95 but negative 105 it really
11 wouldn't make it much of any difference in terms of the
12 propagation from those particular ODAS nodes that are
13 shown on Z-13 and Z-14; correct?

14 A. That's correct.

15 Q. Okay. Thank you.

16 So the -- do the ODAS nodes on Z-13 and
17 Z-14, do they cover any areas where there are
18 buildings?

19 A. No.

20 Q. If you know.

21 A. No.

22 Q. Okay. And why -- do you know why ODAS
23 nodes are shown along Spring Valley Road and Van Beuren
24 Road when they don't represent areas that you even
25 drive tested as part of this application?

1 A. Do I know why Verizon has conceptual design
2 there? Is that what you're asking?

3 Q. Yes.

4 A. It's an area that clearly has poor signal
5 strength, and a gap in coverage.

6 Q. Right. But it's a different gap than what
7 you've been focusing on for purposes of this
8 application?

9 A. Correct. I -- yes, correct.

10 Q. And when we started this application a
11 while back, in your initial report I believe you stated
12 that Verizon Wireless focused on the major road -- I
13 think you said the major roads and central areas within
14 Harding Township such as the municipal court, the
15 police department, and the fire department; correct?

16 A. Yes.

17 Q. And when we talk about the major roads I
18 assume we're talking about Lees Hill Road, Blue Mill
19 Road and Glen Alpin?

20 A. Yes, and Village Road, yes.

21 Q. And Village Road?

22 A. Yes.

23 Q. So right now you have ODAS nodes proposed
24 along Glen Alpin Road and Blue Mill Road, right, on
25 Z-13, for example?

1 A. And Pleasantville Road and Long Hill Road.

2 Q. Plus included are ODAS nodes along Glen
3 Alpin and Blue Mill, right?

4 A. Yes.

5 Q. You currently are showing six along Glen
6 Alpin and four along Blue Mill, right?

7 A. Yes.

8 Q. You also suggest that, I believe at the
9 last meeting, that you could place an ODAS node at the
10 intersection of Blue Mill Road and James Street, right?

11 Didn't you say that at the last meeting?

12 A. Yes. The question was why wasn't there one
13 placed? And I said, based on the data presented one
14 could be utilized there for not meeting -- for having
15 poor signal strength.

16 Q. At that particular location?

17 A. Correct.

18 Q. And you would need, it seems to me in
19 looking at Z-13, only about eight or nine more nodes
20 along Blue Mill Road to cover the entire stretch of
21 Glen Alpin and Blue Mill that extends beyond where the
22 DPW macro site is intended to cover; correct?

23 A. I haven't done that evaluation. So as --
24 if you look at the current ODAS design --

25 Q. Which one, Z-13?

1 A. On Z-13.

2 Q. Okay.

3 A. You know, in some cases the nodes are
4 closer together. In other cases they're slightly
5 further apart. So that would have to be evaluated
6 based upon the terrain.

7 Q. So can you -- as you're looking at this
8 right now and being familiar, Ms. Boschulte, with the
9 terrain, can you estimate for me how many additional
10 nodes would we be able to install along Blue Mill Road
11 to cover the entire stretch of Glen Alpin and Blue
12 Mill, approximately, like a range?

13 A. Between where the current design ends on
14 Blue Mill Road, all the way down to Glen Alpin?

15 Q. Yes. Right. So how many additional ones?

16 I figured -- I'm looking at the terrain
17 data, and other data. I'm not an expert, but I came up
18 with between eight and nine.

19 A. It's possible. Probably around nine or
20 ten. I think you'll need some additional ones around
21 the bend where Blue Mill Road bends off and then
22 there's a change in elevation again. So --

23 Q. And then it also, in terms of where Lees
24 Hill Road is, how many do you think we would need along
25 Lees Hill Road to cover the area where the macro site

1 is intended to cover? I counted approximately four or
2 five.

3 A. I think that's more difficult, because as
4 you can see the area of coverage is not just along Lees
5 Hill Road. You are covering the residential area
6 within that triangle of Lees Hill and Glen Alpin. If
7 you look at it from a triangle perspective up to
8 Fawnhill --

9 Q. Right. And I misspoke and I apologize.
10 I'm just talking about covering the roadway. Okay.

11 So how many more nodes -- I counted, you
12 know, four or five, in fairness, given the topography
13 along Lees Hill to cover the area that -- the area of
14 Lees Hill Road that the DPW macro site's intending to
15 cover.

16 A. That's a good approximation to cover the
17 road.

18 Q. And the -- and along Village Drive -- along
19 Village -- I think you say it's Village Road here.
20 Along what you call Village Road --

21 A. Village Drive.

22 Q. I think -- right. In terms of covering
23 that roadway that's being covered by the Harding DPW
24 site, we're probably five or six nodes and then you've
25 got to also take into consideration the fact that it

1 looks like it's already being covered by another site,
2 right, because of the green?

3 A. Yeah. This is where -- based on the actual
4 drive test this was like an over prediction, because it
5 doesn't really get in there due to the terrain, but
6 based on approximation, yes, I would say probably four
7 or five.

8 Q. And so -- and then along Millbrook Road it
9 seems that where the DPW site's intending to cover, you
10 know, we're talking also probably even closer to four.
11 Does that sound right?

12 A. I think that area is going to be a little
13 bit more challenging, but --

14 Q. Maybe five? I understand what you're --

15 A. Yeah. It could be more like maybe five or
16 six.

17 Q. So that would be five or six along
18 Millbrook Road?

19 A. But again we're just talking about roads.

20 Q. I totally agree. Right. So it seems that
21 -- so and right now on the Z-13, Z-14 ODAS plan you're
22 showing 25 nodes that are all in areas that are not
23 intended to be covered by the Harding DPW; correct?
24 Right?

25 A. Correct.

1 Q. So 25, and I just did the math in my head.
2 We're talking about maybe 25 more nodes to cover all
3 the main roads in the area at the signal strength
4 Verizon desires, correct? Including areas outside the
5 coverage area, right, just for the roads; correct?

6 A. Just for the roads.

7 Q. Right. But you're also getting -- sounds
8 like a Ginsu knife -- you're also getting Pleasantville
9 Road, you're getting Long Hill, you're getting Red Gate
10 Road, you're getting Spring Valley Road, you're getting
11 Van Beuren Road in addition to that; correct?

12 A. But you're missing all the residential
13 houses in between.

14 Q. Okay. I understand what you're saying.
15 And I'm assuming, or do you know the amount of traffic
16 that's on, let's say, Glen Alpin, Blue Mill, Lees Hill,
17 Village Drive and Millbrook Road as compared to those
18 more minor roads such as Pleasantville Road and Red
19 Gate and Spring Valley?

20 A. The vehicular traffic you mean?

21 Q. Yes.

22 A. That was a long time ago. I'd have to look
23 for those numbers again.

24 Q. And so, if you -- if you added, let's say,
25 the 25 ODAS nodes, and again this is just for the major

1 roads, to the ten currently proposed on Blue Mill and
2 Glen Alpin, that's a total of 35 ODAS nodes that are
3 needed for what you believe to be the major roadways in
4 the area. Again, we're just talking about roadways,
5 right, does that sound right?

6 A. Sorry. Did you say a total of 35?

7 Q. Thirty-five, for the main roads as you've
8 identified.

9 A. Are you just adding in Blue Mill and Lees
10 Hill?

11 Q. Yes.

12 A. And not Village?

13 Q. I'm adding in Village, Glen Alpin, Blue
14 Mill, Lees Hill?

15 A. I thought that was an extra 20, plus 25.
16 Isn't that like 45?

17 Q. No. I think that we just need another 25.
18 There's ten right now.

19 A. Sorry.

20 Q. I mean, my math -- okay.

21 A. I'm trying to figure out, are you looking
22 at the --

23 Q. The bottom line is that if you wanted to
24 just cover those roadways you would need approximately
25 35 to 40 ODAS nodes; correct?

1 A. Okay. Not including the current
2 conceptual --

3 Q. Yeah, not including the --

4 A. Oh, okay. That's why I was confused.

5 Q. Well, I'm including -- obviously, I want to
6 use the nodes that are on Glen Alpin and Blue Mill that
7 you show, but not the ones that are on like Van Beuren
8 and Spring Valley and those?

9 A. Okay.

10 Q. Right. Are you following?

11 A. Understood.

12 Q. And you recall because PierCon worked on
13 it, that for the Burnsville Mountain site or area that
14 Verizon installed with PierCon's assistance 32 ODAS
15 nodes in that area; correct?

16 MR. SCHNEIDER: Do you know that number to
17 be true, Frances?

18 THE WITNESS: I don't know. I wasn't
19 involved in the installation. I was involved in the
20 design, but I don't know any of the approvals or
21 outcomes of what transpired.

22 BY MR. SIMON:

23 Q. But based on your involvement in the design
24 do you remember how many nodes were involved?

25 A. I don't recall. I'd have to look back.

1 Q. If I said it was 32, does that refresh your
2 recollection one way or another?

3 MR. SCHNEIDER: If you don't know, you
4 don't know.

5 BY MR. SIMON:

6 Q. If you don't know, you don't know.

7 A. No. It was too long ago.

8 CHAIRMAN FLANAGAN: Mr. Simon --

9 MR. SIMON: Yes. I'm almost done.

10 CHAIRMAN FLANAGAN: We're approaching a
11 little over the two hours, I think.

12 MR. SIMON: I have like four questions
13 left.

14 CHAIRMAN FLANAGAN: All right. Thank you.

15 Q. Let me see here. Okay. You mentioned at
16 the last hearing about the school, the elementary
17 school. And you've not done any analysis as to whether
18 that can be covered by any in-building DAS or small
19 cell rooftop installation; correct?

20 A. I haven't done any, no, that's correct,
21 whether or not that's a viable candidate.

22 MR. SIMON: Actually, Mr. Chairman, I want
23 to stick to my word. I'm done.

24 Thank you, Ms. Boschulte. Always a
25 pleasure to speak with you.

1 CHAIRMAN FLANAGAN: All right. Mr. Simon,
2 thank you.

3 Ms. Boschulte, can I ask one quick
4 question? Just because I forgot to ask it last Monday.
5 How tall are these ODAS towers or structures in your
6 plan?

7 THE WITNESS: In the propagation analysis
8 they all have an antenna centerline of approximately 33
9 -- 33.5 feet.

10 CHAIRMAN FLANAGAN: Thirty-three and a
11 half. And how does that compare, and I know this is a
12 tough thing to find, but a normal telephone pole?

13 So as you've driven around town you've seen
14 the telephone poles. How tall are those?

15 THE WITNESS: I think they kind of average
16 -- through my experience they average between 25 and 35
17 feet.

18 CHAIRMAN FLANAGAN: Okay. Fair enough.
19 Fair enough. Thank you.

20 Mr. Simon, thank you.

21 Are there any members of the public who are
22 not represented by Mr. Simon that have any questions
23 for Ms. Boschulte? (No reply.)

24 I'll give people a moment to turn their
25 mics on if they do have any questions.

1 Okay. I'm going to take that as a no.

2 Mr. Schneider, thank you very much. Ms.
3 Boschulte, thank you for coming back.

4 Mr. Schneider, I'd like to pick this up
5 again next month. Do you have -- what's your plan for
6 testimony next month?

7 MR. SCHNEIDER: Mr. Chairman, we had talked
8 about at the conclusion of last month, based on your
9 agenda, the possibility of a Special only because my
10 intention next month is while I'll reserve the right to
11 call back Ms. Boschulte, my clear intention and hope is
12 to proceed with planning at next month's hearing,
13 whether that be by Special or not. And I think I
14 respectfully was trying to highlight the need to want
15 to do that in one fell swoop so as not to have that, I
16 think, really important testimony broken up.

17 So my respectful request would be whether
18 it's at the Board's regular meeting where we can be
19 given the night, or some mutually acceptable Special
20 Meeting to be able to proceed with my planner so that
21 testimony and cross-examination can all be effectuated
22 in one setting.

23 CHAIRMAN FLANAGAN: Okay. How long do you
24 think the testimony will be?

25 MR. SCHNEIDER: Famous last words, but I

1 would -- off the top of my head I'm thinking about an
2 hour and a half in terms of direct. Could it be to two
3 hours? It could be. Let me err on the side of
4 caution.

5 CHAIRMAN FLANAGAN: Okay. So the bulk of
6 the Cross I would imagine is going to come from you,
7 Mr. Simon. Having not heard the testimony, but you
8 have experience in these matters, how long do you
9 expect your cross would be?

10 MR. SIMON: It typically would be over two
11 hours. I think that's a fair estimate. You know, two
12 and a half. And Rich is correct. It's very, very
13 important testimony and that's why, you know, we need
14 to take the time with it.

15 CHAIRMAN FLANAGAN: Yeah. And Mr.
16 Schneider, so right there even if it's only two hours
17 by Mr. Simon, not including any of the Board's
18 questions, not including any of the other public's
19 questions we're over the three and a half hours we have
20 slotted for a meeting.

21 I would say regarding a Special Meeting if
22 the need arises we will have a Special Meeting and I
23 will move the non-Verizon applications to the Special
24 Meeting. All right. As we sit here I just don't know
25 what the Agenda is going to look like for next month.

1 We may have some, we may have none, but I would like to
2 play it by ear. But in any case, this application will
3 be heard at the regularly scheduled meeting. If
4 something gets moved to a Special Meeting it will not
5 be this application. So if everybody keeps this on our
6 calendar I think it's easier so we don't have to change
7 our schedules around.

8 I would like to if we can talk, and you
9 Steve, and you and Steve can talk, and I'll talk with
10 Steve, we'll figure out exactly what's on the Agenda,
11 and how to organize the -- or how to get your planning
12 testimony in. It doesn't sound like it's feasible to
13 do both the Direct testimony and the Cross in one
14 meeting anyway. So anyway, let's plan on getting
15 together again at the regularly scheduled meeting next
16 month.

17 MR. SCHNEIDER: And just for the purposes
18 of the record, we would carry the matter without
19 further notice contingent upon mutual extensions of the
20 Shot Clock to the Board's March 18th 7:30 p.m. meeting.

21 CHAIRMAN FLANAGAN: Is that the correct
22 date, Lori? I'm not sure of the date. Let's look.

23 BOARD MEMBER NEWLIN: Looks correct.

24 CHAIRMAN FLANAGAN: March 18th, yes. And
25 yes, carried without further notice. And yeah, the

1 Board consents to an extension of the Shot Clock.

2 MR. SCHNEIDER: And I reserve the right,
3 Mr. Chairman, although it's not my intention at this
4 point to bring back Frances, but just for purposes of
5 the record I certainly reserve that right. But my
6 intention to move the matter along is to have our
7 planner on March 18th.

8 CHAIRMAN FLANAGAN: Okay. Sounds great.

9 MR. SCHNEIDER: And we'll submit, if
10 anything, in terms of any visual analysis to assist the
11 Board that in advance of the hearing for the Board's
12 benefit.

13 CHAIRMAN FLANAGAN: Great. Thank you.

14 MR. SCHNEIDER: Okay.

15 CHAIRMAN FLANAGAN: All right. So we will
16 see you next month. Thank you very much.

17 MR. SCHNEIDER: Thank you. Thanks for all
18 your time tonight.

19 MR. SIMON: Thank you very much.

20 CHAIRMAN FLANAGAN: Thank you. All right.
21 So for anyone on the meeting that is the conclusion for
22 the evening of the Verizon matter. We'll pick it up
23 again next month as you heard.

24 (Whereupon, the hearing on this application
25 concludes at 9:49 p.m.)

C E R T I F I C A T E

I, IRIS LA ROSA, a Notary Public and Certified
Shorthand Reporter of the State of New Jersey, do
hereby certify that the foregoing is a true and
accurate transcript of the testimony as taken
stenographically by and before me at the time, place,
and on the date hereinbefore set forth.

I DO FURTHER CERTIFY that I am neither a
relative nor employee nor attorney nor counsel of any
of the parties to this action, and that I am neither a
relative nor employee of such attorney or counsel, and
that I am not financially interested in the action.

IRIS LA ROSA, CSR, RPR
Certificate No. 30XI 00162800

Dated:

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