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STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

Docket No. 478

Eco-Site, Inc. and T-Mobile Northeast, LLC
application for a Certificate of Environmental
Compatibility and Public Need for the
construction, maintenance, and operation of a
telecommunications facility located at 63 Woodland
Street, Glastonbury, Connecticut

Public Hearing held at the Glastonbury Town
Hall, Council Chambers, 2155 Main Street,
Glastonbury, Connecticut, on Thursday, January 11,
2018, beginning at 3:02 p.m.

H e l d B e f o r e :
ROBERT STEIN, Chairman

1 A p p e a r a n c e s:

2 Council Members:

3 SENATOR JAMES J. MURPHY, JR.,

4 Vice Chairman

5 ROBERT HANNON,

6 Designee for Commissioner Robert Klee

7 Department of Energy and Environmental

8 Protection

9 LARRY LEVESQUE, ESQ.,

10 Designee for Chair Katie Dykes

11 Public Utilities Regulatory Authority

12

13 ROBERT SILVESTRI

14 EDWARD EDELSON

15 DANIEL P. LYNCH, JR.

16 DR. MICHAEL W. KLEMENS

17

18 Council Staff:

19 MELANIE BACHMAN, ESQ.

20 Executive Director and

21 Staff Attorney

22

23 ROBERT MERCIER

24 Siting Analyst

25

1 A p p e a r a n c e s : (Cont'd)

2

3 For Eco-Site, Inc. and T-Mobile Northeast,

4 LLC:

5 CUDDY & FEDER LLP

6 445 Hamilton Avenue

7 White Plains, New York 10601

8 BY: DANIEL M. LAUB, ESQ.

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1 THE CHAIRMAN: Good afternoon, ladies
2 and gentlemen. I'd like to call to order this
3 meeting of the Connecticut Siting Council today,
4 Thursday, January 11, 2018, at approximately 3
5 p.m. My name is Robin Stein. I'm Chairman of the
6 Connecticut Siting Council.

7 Other members of the Council here are
8 Senator James Murphy, our vice chairman;
9 Mr. Hannon, our designee for the Department of
10 Energy and Environmental Protection; Mr. Levesque,
11 designee from the Public Utilities Regulatory
12 Authority; Mr. Silvestri; Mr. Edelson; Mr. Lynch;
13 and Dr. Klemens.

14 Members of the staff present are
15 Melanie Bachman, our executive director and staff
16 attorney; and Robert Mercier, our siting analyst.

17 This hearing is held pursuant to the
18 provisions of Title 16 of the Connecticut General
19 Statutes and of the Uniform Administrative
20 Procedure Act upon an application from Eco-Site,
21 Inc. and T-Mobile Northeast, LLC for a Certificate
22 of Environmental Compatibility and Public Need for
23 the construction, maintenance and operation of a
24 telecommunications facility located at 63 Woodland
25 Street in Glastonbury, Connecticut. This

1 application was received by the Council on
2 September 18, 2017.

3 As a reminder to all, off-the-record
4 communication with a member of the Council or a
5 member of the Council's staff upon the merits of
6 the application is prohibited by law.

7 The parties to the proceeding are as
8 follows: Eco-Site, Inc. and T-Mobile Northeast,
9 LLC, Attorney Laub from Cuddy & Feder; and the
10 party, the Town of Glastonbury, the Town Manager,
11 Mr. Johnson.

12 We will proceed in accordance with the
13 prepared agenda, copies of which are available in
14 the back. Also available are copies of the
15 Council's Citizens Guide to Siting Council
16 Procedures.

17 At the end of the afternoon evidentiary
18 session, we will recess and resume again at 6:30
19 p.m. for the public comment session. The 6:30
20 public comment session will be reserved for the
21 public to make brief oral statements into the
22 record. I wish to note that the parties,
23 including their representatives and witnesses, are
24 not allowed to participate in the public comment
25 session. I also wish to note for those who are

1 here, and for the benefit of your friends and
2 neighbors who are unable to join us for the public
3 comment session, that you or they may send written
4 statements to the Council within 30 days of the
5 date hereof, and such written statements will be
6 given the same weight as if spoken at the hearing.

7 A verbatim transcript will be made of
8 the hearing and deposited with the Town Clerk's
9 Office in Glastonbury for the convenience of the
10 public.

11 Is there any public official here at
12 this time who wishes to speak?

13 (No response.)

14 THE CHAIRMAN: The applicant has
15 submitted a motion for protective order, dated
16 January 8, 2018, relating to the disclosure of the
17 monthly rent and financial terms contained in the
18 lease agreement.

19 Attorney Bachman may wish to comment.

20 MS. BACHMAN: Thank you, Mr. Chairman.

21 Staff recommends that the motion be
22 granted consistent with the conclusions of law in
23 Docket No. 366.

24 SENATOR MURPHY: I'll move approval in
25 accordance with our usual practice.

1 MR. SILVESTRI: Second.

2 THE CHAIRMAN: Okay. I have a motion
3 and second.

4 All those in favor, signify by saying
5 aye.

6 THE COUNCIL: Aye.

7 THE CHAIRMAN: Opposed? Abstentions?
8 (No response.)

9 THE CHAIRMAN: The motion carries.

10 I wish to call your attention to those
11 items shown on the hearing program marked as Roman
12 Numeral I.D., Items 1 through 67.

13 Does the applicant or the party have
14 any objection to the items that the Council has
15 administratively noticed?

16 MR. LAUB: No objection, Mr. Chairman.

17 THE CHAIRMAN: Okay. Thank you.

18 Accordingly, the Council hereby administratively
19 notices these existing documents, statements and
20 comments.

21 Attorney Laub, will you please present
22 your witness panel for the purposes of taking the
23 oath?

24 MR. LAUB: Certainly, Mr. Chairman.

25 For the record, Daniel Laub from Cuddy & Feder

1 here on behalf of the applicants.

2 To my far left, your far right, is Mr.
3 A.J. DeSantis of Infinigy Engineering. To his
4 immediate right is Mr. Matthew Allen of Saratoga
5 Associates who conducted the visual study.
6 Somewhat behind us, but in the same line, is Mr.
7 Scott Heffernan -- if you could just raise your
8 hand, Scott -- from Centerline Communications
9 who's our radio frequency consultant. To my
10 immediate left is Mr. Steve Ruzzo of Eco-Site. To
11 my immediate right is Mr. Chuck Bruttomesso with
12 Airosmith Development, who's the siting
13 acquisition vendor for this project. To his right
14 is Mr. James McManus who's conducted the inland
15 wetland review. And to your far left and to my
16 far right is Mr. Adrian Berezowsky from CBRE, who
17 conducted the NEPA environmental review for this
18 project.

19 I would ask that they stand to be sworn
20 at this time.

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1 M A T T H E W W. A L L E N,
2 A D R I A N B E R E Z O W S K Y,
3 C H U C K B R U T T O M E S S O,
4 A N D R E W J. D e S A N T I S,
5 S C O T T H E F F E R N A N,
6 S T E V E R U Z Z O,
7 J A M E S M. M c M A N U S,

8 called as witnesses, being first duly sworn
9 by Ms. Bachman, were examined and testified
10 on their oaths as follows:

11 MS. BACHMAN: Thank you.

12 THE CHAIRMAN: Continue with the
13 exhibits.

14 MR. LAUB: Certainly, Mr. Chairman.

15 As indicated in the hearing program,
16 under Section II, II-B to be specific, II-B-1, we
17 have the application exhibits for identification,
18 including the application for a Certificate of
19 Environmental Compatibility originally submitted,
20 along with the bulk filing that was provided with
21 that application. II-B-2 would be the responses
22 to the Siting Council's interrogatories, dated
23 December 11th. II-B-3 would be the applicant's
24 sign posting affidavit, dated January 3rd; as well
25 as II-B-4, which includes the applicant's witness

1 resumes for the individuals who were just sworn
2 in.

3 DIRECT EXAMINATION

4 MR. LAUB: I would ask at this time for
5 each of my witnesses to indicate, did you prepare
6 or supervise, and are you otherwise familiar with
7 the materials that I've identified as exhibits for
8 identification?

9 THE WITNESS (DeSantis): I have.

10 MR. LAUB: Matthew Allen?

11 THE WITNESS (Allen): Yes, I have.

12 MR. LAUB: Scott Heffernan?

13 THE WITNESS (Heffernan): Yes.

14 MR. LAUB: Steve Ruzzo?

15 THE WITNESS (Ruzzo): Yes.

16 MR. LAUB: Chuck Bruttomesso?

17 THE WITNESS (Bruttomesso): Yes.

18 MR. LAUB: James McManus?

19 THE WITNESS (McManus): Yes.

20 MR. LAUB: Adrian Berezowsky?

21 THE WITNESS (Berezowsky): Yes.

22 MR. LAUB: And do you have any
23 corrections, clarifications or edits that you'd
24 like to make known to the Council at this time?

25 THE WITNESS (DeSantis): Not at this

1 point.

2 MR. LAUB: Matthew?

3 THE WITNESS (Allen): No.

4 MR. LAUB: Scott?

5 THE WITNESS (Heffernan): No.

6 MR. LAUB: Steve?

7 THE WITNESS (Ruzzo): No.

8 MR. LAUB: Chuck?

9 THE WITNESS (Bruttomesso): No.

10 MR. LAUB: James?

11 THE WITNESS (McManus): No.

12 MR. LAUB: Adrian?

13 THE WITNESS (Berezowsky): Yes. As
14 mentioned in the field today, James McManus did a
15 supplemental inland wetlands review, and we are
16 preparing a report that will be submitted for
17 further review by the Council.

18 MR. LAUB: With that clarification, is
19 this information true and accurate to the best of
20 your belief?

21 A.J.?

22 THE WITNESS (DeSantis): It is.

23 MR. LAUB: Mr. Allen?

24 THE WITNESS (Allen): It is.

25 MR. LAUB: Mr. Ruzzo?

1 THE WITNESS (Ruzzo): Yes.

2 MR. LAUB: Mr. Heffernan?

3 THE WITNESS (Heffernan): Yes.

4 MR. LAUB: Mr. Bruttomesso?

5 THE WITNESS (Bruttomesso): Yes.

6 MR. LAUB: Mr. McManus?

7 THE WITNESS (McManus): Yes.

8 MR. LAUB: Mr. Berezowsky?

9 THE WITNESS (Berezowsky): Yes.

10 MR. LAUB: And do adopt it as your
11 sworn testimony today?

12 THE WITNESS (DeSantis): I do.

13 THE WITNESS (Allen): I do.

14 THE WITNESS (Heffernan): I do.

15 THE WITNESS (Ruzzo): I do.

16 THE WITNESS (Bruttomesso): I do.

17 THE WITNESS (McManus): I do.

18 THE WITNESS (Berezowsky): I do.

19 MR. LAUB: And with that, I'd ask that
20 they be made full exhibits, Mr. Chairman.

21 THE CHAIRMAN: Thank you.

22 Does the party have any objection to
23 the submission of these exhibits?

24 (No response.)

25 THE CHAIRMAN: I'll take that as a no.

1 Then the exhibits are admitted.

2 (Applicant's Exhibits II-B-1 through
3 II-B-4: Received in evidence - described in
4 index.)

5 THE CHAIRMAN: We will now begin with
6 the cross-examination of the applicant by the Town
7 of Glastonbury.

8 MR. JOHNSON: Members of the Siting
9 Council, Director Bachman, good afternoon. My
10 name is Richard Johnson. I'm the town manager in
11 Glastonbury. Thank you for this opportunity to
12 come. And I have two questions that represent
13 questions that are supported by our local town
14 council who has reviewed this matter on multiple
15 occasions and has had a public information
16 hearing.

17 Just for introduction, I'm joined by
18 two council members behind me, George Norman and
19 Deb Carroll.

20 CROSS-EXAMINATION

21 MR. JOHNSON: Our questions are pretty,
22 I think, pretty straightforward. First, if you've
23 been to the site and are looking at the balloon
24 float that was held some months ago, and as you
25 look from the southeast from the historic site in

1 Glastonbury, which is our Slocomb Mill located off
2 of Matson Hill, the installation is very visible
3 from that location. The town has invested
4 probably a million and a half to 2 million dollars
5 in purchasing and restoring that site that, in
6 part, dates back to the civil war days.

7 So our first question to the applicant
8 is, would the applicant include a stealth
9 structure to protect the viewscape from the Matson
10 Hill historic property? And specifically, two
11 options the town would like to have considered
12 include a faux tree or -- and there are people
13 that understand what I'm going to describe in the
14 room far better than I do -- but it's similar to a
15 flag pole without the flag. And we understand
16 there's an installation that is similar to a flag
17 pole where the antennae are located within the
18 structure so that the antennae are not visible.
19 But it is very important to us, so we would ask
20 the applicant for the opportunity to have a faux
21 tower at this location.

22 THE CHAIRMAN: Does anybody want to
23 respond at this point?

24 SENATOR MURPHY: I'm sure Mr. Heffernan
25 wants to talk about the flag pole.

1 THE WITNESS (Heffernan): All in good
2 time.

3 THE WITNESS (Ruzzo): Do you want to
4 start with the flag pole portion of it and just
5 the limitations of it?

6 THE WITNESS (Heffernan): Sure. I
7 didn't know if you wanted me to get into the
8 structural part of it.

9 THE WITNESS (Ruzzo): No, I can speak
10 to those.

11 THE WITNESS (Heffernan): Okay. I know
12 this gets asked a lot. But looking at it from a
13 technology standpoint and the RF coverage
14 standpoint, internally mounted, I'll call them,
15 flag poles, for lack of a better term, pose a lot
16 of problems for the deployment of a system that
17 encompasses many frequency bands, different
18 technologies, and different technologies that
19 might actually be directed at different antenna
20 azimuths.

21 T-Mobile currently has several
22 different frequency bands that they're licensed to
23 provide coverage on. Right now they're utilizing
24 700 megahertz, 1900 megahertz, and 2100 megahertz.
25 Typically for their site deployments there will be

1 a separate antenna for the low band frequencies,
2 as well as the high band frequencies. This may be
3 broken down further if there are different
4 technologies, GSM, MTS. In several instances, LTE
5 data coverage may have a different objective than
6 the original GSM voice coverage footprint.

7 Having antennas internally mounted
8 really poses a problem for aligning of azimuths.
9 It severely limits the number of antennas.
10 Typically you can have one antenna per sector at
11 each elevation inside the flag pole. So for a
12 carrier to deploy multiple antennas right out of
13 the gate, the tower itself, for any given number
14 of carriers, would be much larger, much taller
15 than a typical traditional tower where you could
16 have a number of antennas at each elevation level.

17 Another big challenge that the internal
18 mount structures pose for T-Mobile, T-Mobile
19 utilizes many active antennas. What this means is
20 instead of the traditional radios externally
21 mounted in a cabinet fed via coax to a passive
22 antenna, the antennas actually have the radios
23 built into the chassis of the antenna itself. It
24 does help with performance in the network. It
25 eliminates a lot of loss, a lot of noise on the

1 receive side. However, the antennas do require
2 heat exchange. So to internally mount these, it
3 would create a very hot situation. Something like
4 that would cause the antennas to go into rollback.
5 It could cause noise problems with the antennas,
6 and it really defeats the purpose of a well-tuned
7 network if you just put it in an environment where
8 it can't regulate its temperature.

9 So for those items that were just
10 listed, I think that this type of a scenario from
11 a stealth -- and I use stealth loosely here --
12 from a stealth standpoint would probably be the
13 last scenario that we would really want to look at
14 from a design standpoint, especially when you're
15 putting out a site into a mature network where
16 right out of the gate we're going to be deploying
17 many frequency bands, providing a lot of different
18 services to the customers. That would severely
19 limit what T-Mobile could do at that site.

20 THE CHAIRMAN: Mr. Lynch has a
21 follow-up.

22 MR. LYNCH: Mr. Heffernan, just
23 speaking of T-Mobile, no other carriers --

24 THE WITNESS (Heffernan): Correct.

25 MR. LYNCH: -- to get the coverage that

1 you have planned now for the tower, in stacking
2 it, how many antennas would you have to stack to
3 get that, and how much taller, approximately,
4 would the tower have to be?

5 THE WITNESS (Heffernan): Typically
6 T-Mobile will deploy three antennas per sector.
7 So looking at the 150 foot height that we're
8 looking at now, you would then need to use that as
9 a minimum height, and then stack these antennas at
10 10 foot increments above the lowest antenna. And
11 that really poses a problem. Just for T-Mobile
12 alone, the tower would have to be 20 feet taller
13 than what is proposed right now just to
14 accommodate the same number of antennas that would
15 normally be horizontally placed.

16 MR. LYNCH: So we're talking 170 feet?

17 THE WITNESS (Heffernan): 170, yes.

18 MR. LYNCH: So we're getting closer to
19 the magic number of 200?

20 THE WITNESS (Heffernan): Exactly.

21 MR. LYNCH: Thank you.

22 THE CHAIRMAN: Any response to the --

23 MR. JOHNSON: Can I ask a follow-up?

24 THE CHAIRMAN: Sure. You're on --

25 MR. JOHNSON: Okay. As I understood

1 the explanation, it was regarding the flag pole
2 like structure. Is there a response to the faux
3 tree or other stealth application?

4 THE WITNESS (Ruzzo): So for a faux
5 tree or a monopine, as they call it in the
6 industry, is we're not adverse to deploying those
7 where, you know, the visual impact would benefit
8 from them. I'm looking at this view, VP18, which
9 I believe is the location that you are discussing,
10 on Figure 9b. And a monopine, you know, although
11 it would give the appearance of trees that would
12 perhaps be in the backdrop, stand alone that
13 monopine would actually have a greater visual
14 impact because of the increased silhouette. But
15 from a standpoint of deploying those, we're not
16 adverse to deploying monopines to lessen the
17 visual impact in sensitive areas where SHPO might
18 consider that a better option for us.

19 MR. LAUB: Mr. Allen, did you want to
20 add to that?

21 THE WITNESS (Allen): I think the key
22 point there from this particular location -- and
23 I'm looking at Figure 9b from the visual
24 assessment report which is the photograph from
25 Matson Hill Road out in front of the Matson Hill

1 Road open space that the gentleman from the
2 town -- the town manager was referring to. And,
3 in fact, the tower does protrude noticeably above
4 the tree line. From this location, whether it be
5 a monopole or a monopine, the tower will show its
6 silhouette against the sky. If it were a
7 monopine, which by its nature of design has a
8 wider profile, that silhouette would simply appear
9 greater.

10 So it really is a matter of preference
11 on behalf of the parties as to whether that
12 constitutes a greater visual impact, or whether in
13 fact it meets its intended goal of minimizing the
14 visual impact by decreasing visual contrast. From
15 this particular location it could be argued that
16 it would increase visual contrast simply because
17 it's a wider profile.

18 THE CHAIRMAN: I believe Mr. Hannon has
19 a follow-up.

20 MR. HANNON: Yes. Thank you,
21 Mr. Chairman.

22 Following up on Figure 9a and 9b, if
23 I'm not mistaken, it looks as though where the
24 proposed cell tower is located on 9b is not where
25 the balloon is.

1 THE WITNESS (Allen): Yes.

2 MR. HANNON: And with that being the
3 case, it slides it a little further to the right,
4 which actually ties in a little bit closer with
5 some of the pine trees that are there.

6 THE WITNESS (Allen): You are correct.
7 The day the balloon was flown, the balloon was
8 actually flown about 300 feet to the west of the
9 tower center line because of the existing tree
10 cover in the area. I did that balloon test
11 myself, and my judgment on that day was, given the
12 forecast wind conditions, that the balloon would
13 become ensnared in the tree branches, and the
14 location and elevation would be less easy to
15 determine. So I put the balloon at the nearest
16 open space where the tether line would not become
17 tangled.

18 When I did this photo simulation, it
19 originates with a 3 dimensional model of the
20 topography of the tower, and the balloon in its
21 flown location was actually modeled. So when I
22 married the model to the photograph, the balloon
23 served as a survey point so that I could
24 accurately position the tower in the photograph.
25 So the photo simulation in 9b is technically

1 accurate, and that is where the tower will
2 actually appear.

3 MR. HANNON: And is this the only photo
4 where that discrepancy occurs?

5 THE WITNESS (Allen): No. All the
6 photo simulations -- and I believe it's documented
7 in the visual assessment report -- the shift of
8 the balloon is described, and all photo
9 simulations are adjusted by that distance. So the
10 simulated tower is directly located based on where
11 the balloon was. The intent of this is the
12 balloon was located as close as possible, but for
13 the purposes of preparing the photo simulations,
14 it was used as a survey reference point rather
15 than an actual spot where the tower would be.

16 MR. HANNON: Thank you.

17 THE CHAIRMAN: Dr. Klemens has a
18 follow-up.

19 DR. KLEMENS: Yes. Thank you,
20 Mr. Chairman.

21 While we're talking about profile size,
22 can you give us a sense of what the difference --
23 we're talking about the silhouette -- what was the
24 difference in the actual width and impact of the
25 standard pole versus the enclosed pole? I

1 understand they're -- aren't they wider by nature
2 and would have a greater impact on the silhouette,
3 a greater visual impact also?

4 THE WITNESS (DeSantis): I will respond
5 to that. A concealed monopole, or a flagless flag
6 pole, is typically a little bit larger in diameter
7 to encase the antennas than a typical monopole.
8 It's typically more cylindrical rather than
9 tapered. As described in the responses to the
10 interrogatories, a monopole would be approximately
11 6 feet in diameter at the base, and tapered to
12 approximately 2 feet at the top. While I don't
13 believe that it would be a 6 foot diameter
14 straight cylindrical shaft all the way up, I would
15 say that it would be bigger in diameter than 2
16 feet at the top.

17 As for any of the other options that
18 were discussed, specifically the monopine, the
19 branches that would conceal or hide the antenna
20 arrays would extend beyond the limits of the
21 antennas, thus making it even wider. So in our
22 application, as we have, as shown in the drawings,
23 the antenna frame is approximately 12 feet wide,
24 so the antenna width of the branches -- or, I'm
25 sorry, not the antenna width -- the branch width

1 would be wider than that, thus giving it an even
2 bigger profile.

3 DR. KLEMENS: Have you -- and I know
4 this is something we go back and forth with a lot.
5 Is there any ability to use different colors or
6 treatments of the tower to make it fade away? And
7 I know there is a problem depending on whether the
8 sky is blue or gray. But how could you lessen the
9 impact, the visual impact of the tower?

10 THE WITNESS (Allen): I'll let my
11 statement be corrected by anybody on the panel,
12 but it's my understanding that the tower can be
13 any color we want it to be. With that said,
14 that's just a technical challenge is what color
15 paint do we use. From a visual perspective,
16 typically a lighter color is more compatible with
17 the background sky. In the case of the Matson
18 Hill Road open space and the preserved ruins of
19 the old mill on that site, the tower is visible
20 solely against background sky, so the ideal color
21 would be a lighter color.

22 Now, in terms of what lighter color is
23 best, we typically have found that trying to paint
24 something say a sky blue or a light blue to blend
25 with the background sky often appears unnatural

1 and tends to draw the eye and just appears more
2 fake than if we did nothing but allow the
3 galvanized steel of the tower to stand alone. The
4 steel color itself is actually a fairly neutral
5 sky color that tends to work very well with
6 background skies on cloudy days and on sunny days.
7 So typically if you were going to do nothing else
8 in terms of concealing it, the color of the steel
9 alone is usually a pretty good choice. Other than
10 that, I would recommend something, a very pale
11 white or very pale gray. Something where the
12 color is not obvious tends to work very well with
13 background skies.

14 I would not recommend in this case an
15 earth tone brown, or something of that sort,
16 because it would simply make the tower appear
17 darker silhouetted against the sky. Where that
18 might work when it's viewed against a background
19 landscape, in this case that probably would
20 increase visual impact. So I would tend to stay
21 with a much lighter color, either the galvanized
22 steel, or something in a very pale white or gray.

23 DR. KLEMENS: Thank you.

24 THE CHAIRMAN: Could I make a
25 suggestion? And I'll be glad to -- since this

1 evidentiary hearing, I understand, will be
2 continued to a subsequent date -- am I correct --
3 that in light of the concerns, and legitimate
4 concerns of the town, that you go back to the
5 drawing board and see -- you talked about it, but
6 maybe you could be able to visually demonstrate
7 some of these options and allow us and the town to
8 better understand the pros and the cons. I'd make
9 that suggestion.

10 THE WITNESS (Ruzzo): We can certainly
11 provide that, yes.

12 THE CHAIRMAN: Mr. Lynch.

13 MR. LYNCH: Mr. Heffernan, I'm coming
14 back to you again. With the proposed stand-alone
15 tower with the internal antennas, I've noticed a
16 trend over the last few years that some of these
17 stand-alone towers that were proposed and built,
18 when new technology comes along, they aren't going
19 on the inside, they're going on the outside. I've
20 noticed that. Is that something that could -- is
21 a new trend I guess is what I'm asking?

22 THE WITNESS (Heffernan): Just to
23 clarify, you're saying that the antennas and the
24 radios are going on the outside of the existing
25 monopole?

1 MR. LYNCH: Yes, that's correct. In
2 other words, it was originally proposed and built
3 to have internal antennas. As whether they're new
4 carriers, or new technology from whoever proposed
5 the tower, they're going on the out -- I've
6 noticed this in Connecticut and Massachusetts --
7 they're going on the outside of the pole, not the
8 inside.

9 THE WITNESS (Heffernan): That could be
10 for a number of reasons. There may just not be
11 space inside of the pole for antennas, radios,
12 cables. Eventually things take up a lot of space
13 in there.

14 One other thing to consider is the flag
15 poles for the internally mounted monopoles that
16 were deployed ten years ago, those were done
17 before a lot of the newer antenna models, the
18 broadband and multiport, the 12, 16, even 24 port
19 antennas that are being used in a lot of higher
20 level MIMO deployments. And that's really done
21 for a technology reason to allow more streams to
22 be broadcast out of one antenna. But those
23 antennas, just by the laws of physics, have to
24 increase in size. So there's a good possibility
25 that it could be because a lot of the antennas

1 that are out and being utilized these days will
2 not fit inside of the original profile --

3 MR. LYNCH: I guess that's what I'm
4 asking you and what the Chairman suggested for you
5 to develop is that, as technology evolves, the
6 internal antennas may not serve the purpose that
7 it was originally intended for?

8 THE WITNESS (Heffernan): Correct. And
9 the fact that most carriers are trying to deploy
10 remote radio units, remote radio heads, where the
11 radios are located very close to the antennas
12 themselves, there just isn't enough space inside
13 of many of the older flag poles to accommodate the
14 radios, the antennas, the cabling, you know, at
15 some point it's a finite amount of space in there.

16 MR. LYNCH: Go ahead. I'm all done,
17 Mr. Chairman.

18 THE CHAIRMAN: I'm reminded that this
19 is really the town's opportunity to cross-examine,
20 and the Council will have an opportunity to
21 cross-examine subsequently. So I think perhaps we
22 should turn back to the town since I believe you
23 have at least one other --

24 MR. JOHNSON: I do.

25 And just not to belabor the current

1 point, I heard the applicant indicate that at
2 least with the faux tree, and perhaps there's
3 another stealth that you would be willing, and it
4 would seem to me it should be the town can
5 evaluate whether or not the profile is wider, or
6 the appearance is something that should or
7 shouldn't fit within the viewscape of a historic
8 structure. So I would agree with what the
9 Chairman indicated. We would like the ability to
10 work and be part of the decision as to whether or
11 not a faux tree profile is or isn't something that
12 we would like to see as compared to the original
13 proposal. That would seem reasonable to me,
14 particularly since I think I heard the applicant
15 say yes a faux tree could work, although you have
16 to be aware there's a larger, a wider profile.
17 The elected officials in Glastonbury have
18 suggested to look at that faux application. We'd
19 like the opportunity to work with the applicant in
20 that regard, as the Chair suggested.

21 THE CHAIRMAN: All right. The answer
22 is yes, particularly since there will be a
23 subsequent evidentiary hearing. And hopefully the
24 applicant can provide all the material to the
25 town, the Council, and you will get a chance. I

1 just remind you, ultimately the Council makes the
2 decision, but we certainly --

3 MR. JOHNSON: Understood.

4 THE CHAIRMAN: -- value the input of
5 the town.

6 MR. JOHNSON: One other quick question
7 of the applicant, again, something that's
8 supported by our local officials, in that this
9 tower is proposed for that location because of the
10 geography of that spot on Woodland Street. And we
11 are going through a process of evaluating our
12 public safety communications. And as part of that
13 evaluation, we would like to understand if the
14 town would be able to install public safety
15 equipment on this tower, if it is approved by the
16 Siting Council, at no cost to the community as a
17 support for our police and fire EMS.

18 THE WITNESS (Ruzzo): We do work with
19 the towns and their public safety. We are
20 obviously a for-profit company, and we have -- not
21 having seen what your requirements are and what
22 kind of space you would need, we would definitely
23 work with you to make that space accessible.

24 MR. JOHNSON: Just with the process,
25 would that be something that would be integrated

1 or included with the Siting Council's action, is
2 that --

3 MR. LAUB: Well, on behalf of the
4 applicant, if we don't know what the -- it
5 certainly can be part of the record that there's
6 certainly an interest on behalf of the town, but
7 without details it wouldn't necessarily be part of
8 the approval. So if there were specifications,
9 specs on the antennas and the location, there
10 might be a microwave dish, and so if that wasn't
11 included in the final approval, that would have to
12 come later as a modification of any tower that was
13 approved.

14 MR. JOHNSON: If you do have that
15 information on specifications, it could be
16 included in the approval?

17 MR. LAUB: In theory, yes, it could.

18 THE CHAIRMAN: Yes. I mean, we
19 certainly encourage, I mean, in all cases
20 certainly priority be given, obviously, for public
21 safety, but again without knowing the specs --

22 MR. JOHNSON: Understood. I'm good.

23 THE CHAIRMAN: Okay. Well, thank you
24 very much.

25 MR. JOHNSON: Thank you. Thank you for

1 your time.

2 THE CHAIRMAN: We'll now continue the
3 cross-examination with Mr. Mercier.

4 MR. MERCIER: I'm just going to
5 continue with the -- we talked about the tree
6 tower. I'm going to continue with that line of
7 questions. I'm looking at that Figure 9b that was
8 a visual simulation from the Slocomb Mill site.

9 Did you drive into the parking lot on
10 the right-hand side and you could see if the tower
11 would be visible from either the mill and the
12 parking area?

13 THE WITNESS (Allen): Yes, I did. What
14 I found was that the closer you are to the tree
15 line that you see in the foreground of Figure 9b,
16 the less visible the tower is. Just based on
17 perspective, the tower appears low on the horizon.
18 As I recall, when you're actually in the parking
19 lot, the tower would fall very close to the tree
20 line, if not below the tree line. I did walk to
21 the far end of the grassy area, or the
22 snow-covered area that you see in 9b on that open
23 space site directly in front of the low vegetation
24 that you see on the other side of the bridge, and
25 the tower appeared slightly lower on the horizon

1 than it does in this photograph.

2 I chose the location for the photograph
3 simply to identify a worst-case position because I
4 knew that this location would be of interest to
5 the community, as well as the amount of traffic
6 that goes along Matson Hill Road, and those
7 drivers would definitely be in the line of sight.
8 So that's why this location was chosen, but I did
9 walk on that property and did take note of
10 visibility.

11 MR. MERCIER: And you talked about the
12 tower, if there was a tree tower it would be
13 silhouetted against the sky from this location.
14 But I'm just talking about a traveler driving down
15 the road in this vantage point, you know, they're
16 going to look. Would you agree they would look
17 and see the height of the tower as disguised as a
18 tree, but then it kind of matches the trees to the
19 right, and it kind of matches the tree line to the
20 far left. So it's not really sticking up too far
21 compared to the canopy on either side. Would you
22 agree?

23 THE WITNESS (Allen): That is a correct
24 statement. The further you drive up the road, the
25 lower the tower will appear against that tree line

1 and likely the more compatible a monopine design
2 would appear with the tree line.

3 MR. MERCIER: One other question I had.
4 You spoke about maybe the galvanized gray finish
5 might be the best. When you initially install a
6 tower that has galvanized steel, does it come out
7 shiny or have some reflective quality; and if so,
8 how long would it take to dull so it's not
9 reflective?

10 THE WITNESS (Ruzzo): Like any
11 galvanized surface, it does take a little bit of
12 time to dull up. Obviously, its reflective
13 qualities help blend it into the background, but
14 the dull also has been found to just -- it falls
15 in line a little bit more to a gray day. I would
16 say typically the reflective nature of the tower,
17 I would say about a year or two before weather
18 just takes its natural course.

19 MR. MERCIER: Thank you.

20 Has Eco-Site constructed a tree tower
21 in Connecticut before?

22 THE WITNESS (Ruzzo): No, we haven't.

23 MR. MERCIER: Have you constructed a
24 tree tower elsewhere in the New England region?

25 THE WITNESS (Ruzzo): Not yet. We have

1 a few approved.

2 MR. MERCIER: I just wasn't sure if you
3 had a vendor, and who it would be, or do you shop
4 it out in a bid process?

5 THE WITNESS (Ruzzo): We do. We do.
6 And there are different qualities of each of the
7 trees. Typically with a tree as well you have a
8 conical top which increases the height of the
9 tower as well by a few feet, depending on the size
10 of the tower, to make it blend more. So that has
11 to be taken into consideration when we are
12 approving the height of this tower there's going
13 to be an increase to the total height of the
14 structure.

15 MR. MERCIER: Would you estimate about
16 7 feet?

17 THE WITNESS (Ruzzo): Yes.

18 MR. MERCIER: So 157 foot tree tower.
19 And you talked about the quality. So I guess my
20 question is, I just want to make sure that there's
21 enough branches to cover the antennas and not have
22 a situation where it's put up and then the
23 antennas are sticking way out which --

24 THE WITNESS (Ruzzo): Correct.

25 MR. MERCIER: -- I've seen.

1 Okay. So Eco-Site would find a vendor
2 that would have some thick branches and would
3 cover the antennas at the installation height of
4 T-Mobile's antennas?

5 THE WITNESS (Ruzzo): Yes.

6 MR. MERCIER: The town just requested
7 maybe potentially using this tower for public
8 safety purposes. And I'm just going to assume
9 that there's some whip antennas that might be
10 mounted on top of the tower. And if so, how would
11 that affect the tree tower?

12 THE WITNESS (Ruzzo): Well, that's why
13 I didn't want to get too far into it, not knowing
14 what their requirements are. I've seen certain
15 public safety requirements where they don't have
16 current technology and they're requesting a 20
17 foot whip at the top of a structure, which is also
18 increasing the overall height of our structure.

19 And when you get into the monopine
20 situation where you have that treetop situation,
21 it becomes a little bit more of a challenge to get
22 that effective whip in that area versus if they
23 had multiple whips below the limbed portion, which
24 we've also seen. You know, the omni-directional
25 whips that they usually use for their public

1 safety, the single at the top obviously provides
2 them the highest height, which to us is pretty
3 premium as well, but it gives them a full circle
4 with a single antenna versus that same task can be
5 accomplished with multiple antennas at a lower
6 portion, depending on the network need. So not
7 having all that information, I can't assess it
8 completely, but we've worked with both scenarios.

9 MR. MERCIER: Mr. Allen, based on your
10 experience, you know, would a whip mounted on in
11 this view 9b from the Slocomb Mill property, would
12 it be discernable at the top from this distance?

13 THE WITNESS (Allen): In my experience,
14 assuming that the whip antenna is a white or a
15 very even light color, it would be difficult to
16 discern. Whip antennas are typically very narrow;
17 they're not visible from a great distance.

18 MR. MERCIER: Thank you.

19 Now, understanding your analysis, you
20 had to move the balloon fly -- this picture shows
21 it clearly -- 300 feet to an open area. Was that
22 in the gravel pit on the property or along the
23 roadway?

24 THE WITNESS (Allen): That was
25 immediately east, I believe, of the gravel pit at

1 the top of the hill. If you're familiar with the
2 site, there's a path that goes into the woods.
3 And as that path emerges from the woods, the top
4 of the gravel pit, that's where I put the balloon.

5 MR. MERCIER: Okay. Just looking at
6 this balloon and the tower further to the left, I
7 understand during the development of the
8 application the landowner had the tower location
9 moved. Was the original location in the gravel
10 pit?

11 THE WITNESS (DeSantis): So the
12 original tower location is -- the tower has been
13 in the same location the entire time. There was
14 an adjustment to the access drive, which is
15 depicted on the rev 2 drawings, which are included
16 in the application.

17 MR. MERCIER: Okay. Is the landowner
18 amenable to moving the tower elsewhere, like say
19 for this particular viewpoint is it possible to
20 move it -- I guess you moved the balloon east --
21 so to the east 300 feet, or is this the location
22 he wants?

23 THE WITNESS (Ruzzo): Chuck, go ahead.

24 THE WITNESS (Bruttomesso): I believe
25 the location is set in his mind, and it would move

1 it closer to actually boundaries. That's another
2 issue that we're looking at. So the location
3 worked out well for the tower, for the property
4 line, and for setbacks, in our mind, for
5 additional buffers for the property owners
6 adjacent.

7 MR. MERCIER: Thank you.

8 Staying with the visibility analysis,
9 I'm just going to go flip through all the
10 pictures. I have a couple of questions on some of
11 them. This is Tab 5 again. So I'm going to start
12 with Figure 3a -- excuse me, 3b. So there's a
13 house with a turret, and then a valley view with
14 smokestacks and things way in the distance.

15 Where is the tower, or is it just so
16 remote that it's not discernable?

17 THE WITNESS (Allen): Well, discernable
18 is how good your eyes are in this photograph. The
19 tower is slightly right of center. If you look at
20 the photograph, there's two ridges that are
21 visible. On the first ridge there's a little bit
22 of an open space where you can see a spot of snow.
23 The tower is, in the scale of the photograph, 11
24 by 17. The tower is about a half an inch to the
25 right of that patch of snow just above the tree

1 line of that first ridge but below the tree line
2 of the second ridge.

3 MR. MERCIER: Okay. What I'll probably
4 have you do is, if you do some simulations, put an
5 arrow there, you know, for the next round. But I
6 guess my point is, someone looking down, it's not
7 silhouetted against the sky, it's just going to
8 blend in with the scenery. Is that a good
9 assessment?

10 THE WITNESS (Allen): That is
11 absolutely correct.

12 MR. MERCIER: Okay. Now for 4b, which
13 shows a yellow simulation, is that representing
14 that this is behind the trees?

15 THE WITNESS (Allen): Yes, that's
16 correct.

17 MR. MERCIER: So it would be a seasonal
18 view, at best, from this location?

19 THE WITNESS (Allen): Yeah. I think it
20 probably would not be visible at all. The reason
21 this is in here is because this is an open space
22 where someone might expect to see it. In fact, I
23 expected to see it, so I assessed it and
24 determined that it would be behind the trees.

25 MR. MERCIER: Thank you. I guess 5b is

1 similar to 3b in that, wherever it is, it's not
2 readily discernable, it would not extend above the
3 tree line?

4 THE WITNESS (Allen): Yes, that is
5 correct. It's above the foreground tree line but
6 below the ridge line on the ridge in the middle of
7 the photograph.

8 MR. LAUB: Just for clarification,
9 we'll put in the revised simulation point with the
10 arrow.

11 MR. MERCIER: Yes.

12 MR. LAUB: But just for purposes now,
13 there is an appendix with a photo log included
14 with these that actually does have the arrows of
15 the balloon but not the location of the tower.

16 MR. MERCIER: The tower would be
17 different than the balloon?

18 MR. LAUB: Correct.

19 MR. MERCIER: That was also one of my
20 questions.

21 9b, that was Slocomb Mill, we just
22 talked about that.

23 And I guess I'll just flip to 11 and
24 12b -- 11b and 12b. Now, the tower is currently
25 visible across some field areas. Is that just

1 representative of all the field areas where
2 there's visibility? You have like a similar view.
3 It looks like a majority of the tower is visible,
4 is that correct, from both of these locations?

5 THE WITNESS (Allen): That is correct.
6 This is from Matson Hill Road. 11b and 12b are
7 simply different locations on Matson Hill Road.
8 Where a view exists between vegetation and
9 buildings in the direction of the tower, these two
10 figures would represent the degree of visibility
11 from Matson Hill Road. It's certainly not a
12 continuous view along Matson Hill Road between
13 these two viewpoints because of the existing
14 vegetation and houses. So we selected the
15 worst-case visibility and selected two points in
16 that area to show that.

17 MR. MERCIER: I did see your analysis.
18 You said 317 acres would have year-round
19 visibility, and I think most of it is -- would you
20 agree most of it is across open field areas?

21 THE WITNESS (Allen): Yes, that would
22 be correct.

23 MR. MERCIER: Did you have any
24 characterization of the amount of field areas
25 where it's visible? The area, according to your

1 mapping, southwest of the site is a large open
2 field area. So I was wondering if you had a
3 quantification how many acres those fields were?

4 THE WITNESS (Allen): The total fields?

5 MR. MERCIER: Yes.

6 THE WITNESS (Allen): Irrespective of
7 whether it's visible or not?

8 MR. MERCIER: With visibility, yes. Of
9 the 317 acres, how many acres is across those
10 fields?

11 THE WITNESS (Allen): I could calculate
12 that, but I did not.

13 MR. MERCIER: Okay. In general, the
14 area southwest of the site which contains most of
15 the fields, is it lightly developed residentially,
16 or is it a moderate amount residential? Do you
17 have any characterization of how much development
18 is there?

19 THE WITNESS (Allen): I would call it
20 sparsely developed.

21 MR. MERCIER: Just flipping back to
22 Figure 2, which is your visibility mapping before
23 the photos, due west of the site this is the --
24 yeah, Figure 2 again. Due west of the site
25 there's two residential streets. I believe one is

1 called Hopewell Heights, which abuts the open
2 space parcel; and another one is Blueberry Lane,
3 which is pretty much due west. Did you do any
4 assessment from those two streets?

5 THE WITNESS (Allen): The street names
6 are not clearly labeled. If there's not a photo
7 location icon on the map, then I did not do a
8 specific evaluation from those locations.

9 THE CHAIRMAN: Mr. Silvestri has a
10 follow-up.

11 MR. SILVESTRI: I had another
12 clarification on the visibility ones. And if I
13 could turn your attention to VP11, Figure 7b, 7
14 bravo, the appendix actually states that it's not
15 visible, but mine has this yellow cell tower
16 that's there. Is that another situation where
17 it's actually behind the trees, but you just kind
18 of painted it to say it's there but it's really
19 not visible?

20 THE WITNESS (Allen): That is correct.

21 MR. SILVESTRI: Okay. Thank you.

22 MR. MERCIER: Just going back to my
23 question, so did you just drive the main streets,
24 or did you go down certain residential streets
25 when you did your analysis?

1 THE WITNESS (Allen): I drove most of
2 the residential streets. If I omitted any
3 residential streets, it was because viewshed
4 analysis indicated that views were unlikely, so in
5 the interest of time. But my intention was to
6 drive all residential streets where visibility was
7 deemed theoretically possible.

8 MR. MERCIER: So when you generated
9 this map, you did some modeling, and you used 50
10 feet as a tree height it states on here, and then
11 you obtained the pinkish color, is that right,
12 through the modeling?

13 THE WITNESS (Allen): The pinkish color
14 is generated through the GIS analysis, yes. It's
15 not a windshield survey at all.

16 MR. MERCIER: Okay. So it's strictly
17 modeling. Then you went out and drove the area
18 based on this modeling?

19 THE WITNESS (Allen): That is correct.

20 MR. MERCIER: Okay. So the two
21 residential streets that immediately abut this
22 site, as I just spoke about, you probably most
23 likely did not drive basically to the right of
24 number 20 because there is no coloring there?

25 THE WITNESS (Allen): I may have driven

1 it just because it's close to the project site.
2 If I didn't note visibility, I did not take a
3 picture.

4 THE CHAIRMAN: I think Dr. Klemens has
5 a follow-up.

6 DR. KLEMENS: I just want to go back to
7 the Slocomb. Which number is that?

8 MR. MERCIER: Number 9.

9 DR. KLEMENS: Anyway, I really was
10 intrigued by what Mr. Mercier said that actually
11 you show a simulation looking straight on. But as
12 you're coming back and providing additional
13 information for the Council, would it be possible
14 to take that faux tree and show it at a couple of
15 different intervals along the road as if you were
16 driving? Because I'm intrigued with the concept
17 that the canopy is high on one side, high on the
18 other side. You're looking at it straight on, and
19 it's visible, but a couple hundred feet to the
20 left or the right. It may be very helpful to the
21 Council and to the town to understand the benefits
22 of this faux tree as it melds with the canopy.
23 Could you do that when you -- supplemental
24 material?

25 THE WITNESS (Allen): Yes, that's

1 certainly possible. That would just require
2 taking photographs at specific intervals. We may
3 or may not have those photographs in our library,
4 but we can acquire them.

5 DR. KLEMENS: You understand. Because
6 I thought that was a very interesting point he
7 made that if you look at it head on, it's visually
8 there; but if you're driving, it actually might
9 very quickly blend into the canopy either left or
10 right. And I'd like to see if you could find a
11 way to show us and show the town what that might
12 look like.

13 THE WITNESS (Allen): I think you
14 correctly characterized that condition, and
15 certainly we can demonstrate that.

16 DR. KLEMENS: Thank you.

17 THE WITNESS (Ruzzo): Is it because the
18 trees are higher, or is it just because those
19 trees in the forefront on the right-hand side are
20 closer to the road, and therefore they give the
21 appearance of being higher, so as you go towards
22 those trees they get lost in the tree? Do you see
23 what I'm saying? When we're looking at the
24 worst-case scenario that was presented in 9b, we
25 did it in a vantage point where those trees that

1 seem lower are actually just further in the
2 distance; and those trees that seem higher,
3 taller, are actually just closer to the point of
4 view of the cameraman. And as you go to that
5 road, they don't hide in the canopy, they just
6 hide because you are further -- closer to the
7 trees -- along down the road. That's, I guess,
8 all I'm -- just a point of clarification versus
9 higher trees and lower trees. It's just travel
10 down the road.

11 And to your point, Dr. Klemens, as you
12 drive down that road, yeah, they disappear because
13 those trees are over your -- it's gone in the
14 vantage point, not blending with those trees.

15 DR. KLEMENS: Thank you.

16 THE CHAIRMAN: Senator Murphy.

17 SENATOR MURPHY: You mentioned the need
18 to take new photographs. The town has
19 specifically talked about what area, which we've
20 had discussion of. You already have the photo.
21 Maybe you can, as I understand it, just do the
22 markup of what the tree would look like or the
23 flag pole, or whatever you want to call it,
24 straight up, based upon the photos you took last
25 January. And perhaps, you know, you could get

1 those done and show them to the town in terms of
2 sharing them with them, have a discussion, prior
3 to the next hearing that we're going to have so
4 that they can get an appreciation of what they
5 would look like if in fact this tower was approved
6 and we went along with a flag pole or a tree.

7 Some people, when the tree is approved,
8 are not happy with what they asked for, and I
9 certainly wouldn't want that to happen here. And
10 I think when they get a look at it, they may not
11 feel quite as strongly as they do now, and maybe
12 they will, but at least they'll get a shot at what
13 it would possibly look like. If that could be
14 done, I think we would all appreciate that.

15 THE WITNESS (Allen): Yes, I think that
16 absolutely can be done.

17 MR. MERCIER: Thank you.

18 Just going back to the mapping, Figure
19 2 again, I just want to understand. So you took a
20 drive based on the suspected visibility based on
21 your modeling. So for say Number 27, you took a
22 picture and did not see the balloon. But would
23 you expect to see the balloon if it was 300 feet
24 left or right because you didn't fly the balloon
25 in the location of the tower?

1 THE WITNESS (Allen): That's partially
2 correct. Because I knew when I did the drive what
3 the circumstance of the balloon location was, I
4 was cognizant of whether I could see the balloon
5 or not, as well as whether I may be able to see
6 the tower given the offset. So I was very
7 conservative in choosing these locations with that
8 understanding.

9 So when I visited location 27, and I
10 believe you'll find a photograph of that in the
11 appendix to the visual report which was the photo
12 log, I chose not to simulate it because when I
13 went out in the field there were trees along the
14 roadside that were substantially screening both
15 the balloon and the line of sight to where the
16 tower would actually be offset from the balloon.
17 So it was my judgement that even though the
18 viewshed map indicated that visibility was
19 possible, actual field locations would have
20 blocked that visibility.

21 MR. MERCIER: So that would apply for
22 some other ones, even though 22 and 8, you know,
23 it shows modeling, you probably could see the
24 tower, but based on your field judgement you're
25 not?

1 THE WITNESS (Allen): Based on highly
2 conservative viewshed modeling, which is assuming
3 that the trees are 50 feet tall where in fact they
4 may be taller, or not including less dense
5 deciduous trees such as hedge rows that are very
6 typical in farm areas. If it was not clear
7 forested area visible in aerial photographs, I
8 discounted it for the purposes of developing the
9 viewshed map. Therefore, the viewshed map is much
10 more conservative and disclosive of theoretical
11 visibility than one would actually find in the
12 field. So the viewshed map is a process step to
13 help guide me to knowing where I'd want to look
14 for visibility. And once I go out and look for
15 it, if I don't see it, then I record that it was
16 not found.

17 MR. MERCIER: And just flipping to 10b,
18 that was a picture from Bittersweet Lane, I could
19 not tell if the tower was visible in this location
20 or not.

21 THE WITNESS (Allen): Yes. And that's
22 a --

23 MR. MERCIER: And that's a pretty close
24 view.

25 THE WITNESS (Allen): Yes. That's a

1 bit of an outlier because of the offset of the
2 balloon. The balloon was visible. Had the
3 balloon been flown at the exact tower location, it
4 would have fallen behind the trees that are on the
5 horizon in this photograph. And when I married
6 the 3D model with the photograph in 10b, if you
7 look very, very carefully through the tree
8 branches, you'll see where the tower is, but it is
9 solidly behind those foreground trees and
10 effectively screened.

11 MR. MERCIER: Thank you.

12 If the site was approved and the tower
13 was constructed, would it be constructed, the
14 foundation and the tower itself, to support any
15 type of extension, or are you just going to build
16 it to the 150 foot specification?

17 THE WITNESS (Ruzzo): So the monopine
18 does create some limitations to the height
19 extension.

20 MR. MERCIER: I'm not even talking
21 about the monopine; I'm just talking about in
22 general. Would Eco-Site build a tower so it
23 supports an extension, or are you just going to
24 build it to 150?

25 THE WITNESS (Ruzzo): We certainly can

1 build it, the foundation, to support a taller
2 tower. We have done that in the past based on
3 what we've seen as a need from other carriers in
4 the area. And, you know, if we were to estimate
5 that T-Mobile's minimum need was 150, that the
6 other carriers would be looking for a potentially
7 similar height, although they would typically
8 settle for a lower height, you know, if the
9 structure is there, as you know, if we had any
10 kind of information that the need was greater, we
11 could certainly design it that way.

12 MR. MERCIER: Has any other carriers
13 expressed interest in the tower besides T-Mobile
14 like in an informal manner?

15 THE WITNESS (Ruzzo): I believe, yes,
16 based on the responses in our broadcast letters
17 here. I can verify that, but yes.

18 MR. MERCIER: On a related matter for
19 the tower itself, did you review the Connecticut
20 Airport Authority's letter regarding tower heights
21 and they recommended consulting with the FAA?

22 THE WITNESS (Ruzzo): We have conducted
23 an ASR for this site, so we do have --

24 MR. MERCIER: And that's in the
25 application, I think it's TOWAIR, or is there some

1 other type of document you have?

2 THE WITNESS (Ruzzo): We initially did
3 the TOWAIR. Then we also did the full FAA
4 evaluation, and we have, I believe, completed the
5 ASR for this tower as well, correct.

6 MR. MERCIER: All right.

7 THE WITNESS (Ruzzo): I don't know if
8 they're part of the initial application. They
9 weren't in the initial application.

10 MR. MERCIER: Okay. So you did go
11 before them and received an actual official letter
12 which we can get for the next proceeding?

13 THE WITNESS (Ruzzo): Yes.

14 MR. MERCIER: Okay. Thank you.

15 T-Mobile's equipment will have a radio
16 cabinet or two. Would those have any type of
17 cooling, or do they just have fans?

18 THE WITNESS (Heffernan): Typically
19 just fans for heat exchange.

20 MR. MERCIER: So a low noise emitter?

21 THE WITNESS (Heffernan): Correct.

22 MR. MERCIER: Looking through the soil
23 classification map that you provided in
24 interrogatories -- that was attachment 7 -- it
25 basically, the site would be on a soil class 75C,

1 according to the document, which is a rock outcrop
2 complex.

3 Now, since there's a lot of rock
4 outcrops potentially there, do you anticipate
5 blasting, or are you going to do mechanical
6 chipping, if necessary?

7 THE WITNESS (DeSantis): It would be
8 mechanical chipping.

9 MR. MERCIER: Now, I understand during
10 the technical report review by the town they
11 requested a balloon fly, and I think that was done
12 in, was it, July or August of last year?

13 THE WITNESS (Allen): I believe the
14 date was July 13th, if I'm not mistaken, about
15 then.

16 MR. MERCIER: Was there any additional
17 visual analysis done based on that balloon fly
18 that's incorporated in this report?

19 THE WITNESS (Allen): Other than a
20 letter documenting that that balloon float
21 occurred, I do not believe any additional visual
22 analysis was conducted.

23 MR. MERCIER: Thank you.

24 Did you do the balloon fly?

25 THE WITNESS (Allen): Yes, I did.

1 MR. MERCIER: Where did you fly the
2 balloon for that one?

3 THE WITNESS (Allen): We flew it in
4 exactly the same location as we did the January
5 balloon float, so about 300 feet west of the tower
6 center point.

7 MR. MERCIER: So is it possible that
8 people who didn't see the balloon from their
9 properties will see the tower because it's not in
10 the exact location that it's supposed to be?

11 THE WITNESS (Allen): That is possible
12 if they have a discrete view where that 300 feet
13 makes a difference.

14 MR. MERCIER: I have no other questions
15 at this time. Thank you.

16 THE CHAIRMAN: Thank you.

17 We'll now continue with
18 cross-examination by the Council, Senator Murphy.

19 SENATOR MURPHY: Thank you,
20 Mr. Chairman.

21 Mr. Heffernan, I assume you did
22 propagations on heights other than 150 feet. It's
23 146.

24 THE WITNESS (Heffernan): For this
25 location we did run heights starting at 150. The

1 reason that we looked at 150, or T-Mobile did
2 analyze 150, was because that was the height that
3 was given to us as the height of the tower, a
4 little bit of a different scenario where instead
5 of T-Mobile dictating what the height of the tower
6 is, we have an outside company coming to us saying
7 we're going to put up a tower, does 150 feet work
8 for you. So we do run with that. Like I said, we
9 did look at greater heights to see if there was --
10 could we go back and ask for 10 extra feet or 20
11 extra feet to really push the footprint. There
12 wasn't that much of a difference in coverage.

13 SENATOR MURPHY: That's not that much
14 difference between 150 and 160?

15 THE WITNESS (Heffernan): Correct.

16 SENATOR MURPHY: Back in the early days
17 this is an oasis, no capacity problem here at all.
18 You're just in the middle of no where like the
19 early days of the towers. Go ahead.

20 THE WITNESS (Heffernan): So with that,
21 analyzing the height that was available to us and
22 presented to us, we did deem that it did work for
23 our coverage needs.

24 SENATOR MURPHY: So there's really no
25 benefit in going back to them and requesting 160

1 feet then because you were satisfied that 150 was
2 probably the best you're going to get?

3 THE WITNESS (Heffernan): Correct. And
4 typically that height comes from more sources than
5 just the RF side. There are zoning consideration
6 setbacks, even just financial considerations as to
7 when an outside company does comes in --

8 SENATOR MURPHY: Did you run 140 to see
9 if there's much difference, if there's much
10 coverage lost by going down 10 feet?

11 THE WITNESS (Heffernan): We did not do
12 an incremental height decrease from that point.

13 SENATOR MURPHY: What's your best
14 guess?

15 THE WITNESS (Heffernan): This is a
16 very tough area just because of the rolling
17 terrain and the canopy and a lot of uncovered
18 area.

19 SENATOR MURPHY: Right.

20 THE WITNESS (Heffernan): And to your
21 point, getting back to the early days where you
22 really were trying to just get the first piece of
23 the puzzle in there, there's a very large area of
24 poorly covered terrain in this part of the state.
25 So with this, we're really trying to fit and start

1 that puzzle of how we're going to fill in this
2 median area between the two highways. It would be
3 a little bit easier to say what the exact minimum
4 height would be if we knew what those bookends
5 were, where is the next site going to be to the
6 north, where is the next site to the south.

7 SENATOR MURPHY: That was going to be
8 the next question. Is there any plans for where
9 you're developing to tie into this? It appears
10 there's an awful lot of area in Glastonbury with
11 apparently no T-Mobile coverage.

12 THE WITNESS (Heffernan): Correct.
13 Right now this is the only ring that's funded to
14 move forward with, but that doesn't mean that
15 on -- looking at a 3 or a 5-year plan in the RF
16 design world, there are always numerous rings.
17 And obviously if you were to ask us, and money
18 wasn't an object, and if you could have your
19 perfect Christmas list, we would obviously want
20 sites everywhere with a very finely-tuned
21 optimized network.

22 But, as I had said before -- and I know
23 you touched on it as well -- there's a very large
24 area that's for the most part is uncovered or has
25 very unreliable service. This right here is the

1 first piece of that puzzle. And when 150 feet was
2 presented to us, we obviously took that, as we had
3 the opportunity to get the top spot, but also
4 knowing that this really sets the stage for where
5 is the next site going to go. If we were to go in
6 at a lower height, that may increase the need for
7 more towers beyond what is required now at 150
8 feet.

9 SENATOR MURPHY: The town raised the
10 question about the flag pole type with interior
11 mounted poles which are, I think, fast becoming a
12 thing of the past.

13 THE WITNESS (Heffernan): Yes.

14 SENATOR MURPHY: You're at the top at
15 146. How many locations on the pole would you
16 have to use?

17 THE WITNESS (Heffernan): We would look
18 for three locations.

19 SENATOR MURPHY: And separation, is it,
20 you're talking about 10 feet or 6 feet?

21 THE WITNESS (Heffernan): Well,
22 typically it's 10 feet, more so because of the
23 manufacturer specifications. With the size of the
24 T-Mobile antennas, the 700 megahertz antennas are
25 typically a little bit longer just to get apples

1 to apples electrical characteristics between the
2 different frequency bands. But could they be
3 squeezed down a little bit? Yes. But we do have
4 to consider also room for technicians to get in
5 there to put the jumper cables in between there
6 and the radios. So 10 foot is a pretty good rule
7 of thumb for a lot of reasons, again, because of
8 the manufacturing specifications of those towers.

9 SENATOR MURPHY: So basically the top
10 30 feet would be yours?

11 THE WITNESS (Heffernan): Correct.

12 SENATOR MURPHY: If we approve that
13 type of a pole --

14 THE WITNESS (Heffernan): Correct. And
15 it also does limit --

16 SENATOR MURPHY: -- which would make
17 another carrier less desirous of coming on the
18 pole?

19 THE WITNESS (Heffernan): Correct. And
20 it does really handcuff you on the ability to,
21 like we were talking about, maybe squeezing it
22 down to 9 feet or 8 feet when you have preset bay
23 heights on those internal mounts.

24 SENATOR MURPHY: I think that's the
25 extent of my questions, Mr. Chairman. Thank you.

1 THE CHAIRMAN: Mr. Edelson?

2 MR. EDELSON: I guess my question is
3 for Mr. Ruzzo along the same lines. I guess I'm
4 looking at the exhibit about the coverage with the
5 existing and the proposed. And the areas that
6 just kind of show up as being more of a dense area
7 that would need more coverage, why go at this
8 location as a starting point? Filling in the
9 puzzle, it doesn't seem like a logical way to go
10 about building a jigsaw puzzle.

11 THE WITNESS (Ruzzo): Well, actually we
12 don't necessarily prospect the tower location. We
13 work with T-Mobile's national group, and they
14 provide us the ring information for the coverage
15 that they are looking for, and we provide certain
16 candidates within that ring to satisfy their need.

17 MR. EDELSON: How big is the ring?

18 THE WITNESS (Ruzzo): This ring, Scott,
19 I believe maybe three quarters to a mile in
20 radius.

21 THE WITNESS (Heffernan): That is
22 correct.

23 MR. EDELSON: I guess, I don't know how
24 to show this, but where we are right now, it seems
25 like physically we're in the center of town?

1 THE WITNESS (Ruzzo): Yes.

2 MR. EDELSON: And you don't have
3 coverage here -- or T-Mobile doesn't have coverage
4 here. I realize T-Mobile is not on the panel.

5 THE WITNESS (Ruzzo): Correct.

6 MR. EDELSON: Were you given rings in
7 that area to look at, or only a ring in the area
8 of those three quarters to a mile around the tower
9 we're talking about today?

10 THE WITNESS (Ruzzo): Yes, we were
11 given a ring. For this specific ring is all we
12 received for the Town of Glastonbury to provide a
13 candidate.

14 MR. EDELSON: So that's the only
15 requirement you were given was --

16 THE WITNESS (Ruzzo): That is their
17 need, and we were looking to satisfy it for them.
18 We weren't going out and prospecting and doing our
19 own independent studies of all the carriers in the
20 area and say this would be the best. That would
21 be what other certain other companies may or may
22 not do. But we have an agreement with T-Mobile to
23 search for candidates for them.

24 MR. EDELSON: And just to verify,
25 because we don't like proliferation of more towers

1 than we need.

2 THE WITNESS (Ruzzo): Correct.

3 MR. EDELSON: You have looked within
4 this ring for other towers and other existing tall
5 sites that you could leverage off of?

6 THE WITNESS (Ruzzo): So typically when
7 T-Mobile comes to us, the tower company, looking
8 for us to build a raw land candidate for them,
9 they've exhausted any colocation on existing
10 structures in the area.

11 MR. EDELSON: So that's not your
12 business?

13 THE WITNESS (Ruzzo): Yeah, that's not
14 ours. We do work with them before accepting the
15 ring that there has been, at a minimum, on our
16 side, to verify a desktop type of search of any
17 structures in the area. And we work with them
18 pretty closely. Even at this point in the game,
19 as we get closer to this time, to verify that
20 there are no other colocatable structures within
21 the area that would satisfy the need for the
22 coverage that they're requesting from us to
23 provide a tower for.

24 THE CHAIRMAN: I believe Mr. Silvestri
25 has a follow-up.

1 MR. SILVESTRI: Thank you,
2 Mr. Chairman.

3 If I could turn your attention to
4 Section 2, Figure 1, which has your site search
5 ring. If I'm looking at this correctly, the
6 proposed location is actually outside of the ring
7 that was provided to you. Is that a correct
8 statement?

9 THE WITNESS (Ruzzo): Go ahead.

10 THE WITNESS (Bruttomesso): Yes, it's
11 outside the search ring.

12 MR. SILVESTRI: Okay. So based on that
13 answer that it's outside the search ring, what
14 does the proposed location do for the coverage
15 that you originally anticipated you're going to
16 get if something was within the search ring?

17 THE WITNESS (Heffernan): The search
18 ring itself is -- we consider it a starting point.
19 When we look at an area, and we know that we want
20 to provide coverage to a pretty vast area, we give
21 the search ring -- and it's not a definite bull's
22 eye that something has to be in here; it's a
23 starting point for the site acquisition team to go
24 out there and say, all right, if we could find
25 something pretty dead center in the middle of the

1 coverage objective, this is where we would start.

2 As candidates get depleted within that
3 because there may be other considerations, we
4 don't need setbacks, the landlords aren't
5 interested, we are forced to look at candidates
6 that do fall just outside the ring but may have
7 characteristics like maybe they're not blocked by
8 the tree canopy, maybe they're on a higher
9 elevation and they have good vantage points, good
10 line of sight to the coverage objectives.

11 So just because it doesn't fall into
12 the initial circle, which is the initial starting
13 point, it doesn't mean that a candidate gets
14 rejected. In many instances in design scenarios
15 in Connecticut alone we've had sites that might be
16 just outside of where that circle was, but it
17 turned out that the candidate in the site location
18 had all the qualities that we needed to provide
19 coverage to the objective.

20 MR. SILVESTRI: So do you have any
21 revised search ring then in the area that you
22 actually looked at for coverage?

23 THE WITNESS (Heffernan): We actually
24 don't because once the process is moving -- and
25 the search ring also helps us lay out where rings

1 fit on that puzzle when we're trying to forecast
2 for a three-year or five-year buildout plan or
3 where we're going to try to get funding for the
4 rings in the future. Once that process starts and
5 we start to receive candidates from the site
6 acquisition team, we don't go back and refine it.
7 We just provide feedback. And if nothing is
8 available within that circle, we might say, okay,
9 maybe look at this ridge line over here, or can
10 you bring in candidates or find parcels that you
11 think do meet the requirements of where a tower
12 would be allowed or could be constructed, and then
13 we can run analysis on it. Again, the search
14 ring, I think it gets a lot of credit as being the
15 be all, end all when really it's a starting point.

16 MR. SILVESTRI: Thank you.

17 THE CHAIRMAN: I guess, Mr. Mercier.

18 MR. MERCIER: I want to follow up on
19 the search ring myself. When it was first
20 established, was the intent -- you know, looking
21 at it, you know, it's in the center of a
22 densely-populated developed area --

23 THE WITNESS (Heffernan): Correct.

24 MR. MERCIER: -- on a residential
25 development, according to the map there. It's

1 also close to Route 17, which is Main Street on
2 the search ring map. Was that the intent, to try
3 to cover the South Glastonbury more residential
4 area, rather than it looks like you're pushing
5 into more rural?

6 THE WITNESS (Heffernan): Correct. The
7 sole purpose of this ring was exactly that, to
8 really capture a lot of the in-residence coverage,
9 as well as to offload a lot of the fringe coverage
10 that we're getting from the sites along the
11 highway corridors. That fringe coverage does
12 actually reduce capacity as we start to cover
13 customers at the very edge of cell coverage. So
14 there's a two-tiered approach to that, but the
15 in-residence coverage was the most important.

16 MR. MERCIER: And just looking at your
17 coverage plots, these were modeled at 2100
18 megahertz. Is that correct?

19 THE WITNESS (Heffernan): Correct.

20 MR. MERCIER: Now, I understand you
21 also offer 1900 service?

22 THE WITNESS (Heffernan): Correct.

23 MR. MERCIER: Is there a big difference
24 between the two coverage models?

25 THE WITNESS (Heffernan): There is not.

1 With high band frequencies between 1900 and 2100,
2 it's a very insignificant change.

3 MR. MERCIER: And just quickly glancing
4 at it, it doesn't seem like this site extends much
5 to the south or southeast. Is that because of
6 local topography, or are you orienting the
7 antennas more to the residential areas?

8 THE WITNESS (Heffernan): No. It's due
9 to topography and canopy obstructions.

10 MR. MERCIER: I was just curious if
11 there was a point where T-Mobile would say, you
12 know, the site is too far remote from the original
13 target service area, don't pursue it; but for
14 something like this where there's no coverage, you
15 would just proceed ahead to get some type of
16 coverage, and then build based on an anchor site,
17 or whatever terminology you used?

18 THE WITNESS (Heffernan): Correct.
19 It's always difficult when you're trying to cover
20 a vast area to figure out where that initial
21 anchor point is going to be, that first site in
22 the puzzle. When the ring was established and it
23 was given over to Eco-Site, we did have the
24 objective of trying to get that in-residence
25 coverage.

1 Would we prefer the perfect sphere of
2 coverage off of this? Of course we would. But we
3 also understand that we live in New England, and
4 the design challenges are pretty great. So we do
5 weigh, even though it's not -- it might not give
6 us a hundred percent of what we would get in a
7 vacuum, we do analyze how many residents would it
8 cover, does it cover a large majority of the
9 objective, and does it allow us to really provide
10 a decent footprint that we can now build the other
11 sites around it on, and it did hit all of those
12 check boxes.

13 MR. MERCIER: Thank you.

14 THE CHAIRMAN: Mr. Lynch.

15 MR. LYNCH: Mr. Heffernan, you gave a
16 nice answer to Mr. Silvestri over here on going
17 outside the search ring, and I agree with it. But
18 having done a few of these over the years, I can't
19 let it go by that we've had RF engineers and
20 carriers saying, oh, it's impossible to go outside
21 the search ring, we won't get the coverage. Not
22 that it was you in the past, but it seems to be
23 whatever is important for the site, to get the
24 site approved, is whether you can or cannot go
25 outside the search ring. That's more of a comment

1 than a question. Sorry about that.

2 THE CHAIRMAN: Mr. Edelson.

3 MR. EDELSON: I guess I'll address this
4 more to the Chairman than to the panel. But I
5 find that the folks who are in front of us today
6 are talking about a specific site that they want
7 to develop as a tower developer, not as a carrier
8 or provider. And I guess the analogy that's in my
9 mind is, when I do a jigsaw puzzle, I kind of like
10 to see what the picture is that I'm going to make
11 of the puzzle, and I don't have a picture here of
12 what they're trying to do as T-Mobile.

13 Sitting here, it looks like there's
14 some pretty obvious areas that they should be
15 going -- from a Pareto optimization point of view,
16 it seems to be a logical way to work out from the
17 more populated areas where businesses are. That's
18 where you think your revenue is going to come
19 from, and that's where the public need is that
20 we're saying we're responsible for. So although I
21 see no problem, per se, with this site, I find it
22 without -- it's not clear to me it's an optimal
23 site without knowing what the whole map is.

24 So I guess I'm feeling a little
25 frustration that we might be approving something

1 that's suboptimal without having the whole thing.
2 And maybe that's -- and I'm the newest person on
3 the Council, so I probably don't -- well, I know I
4 don't know as much as the rest of you -- but it
5 doesn't seem like the right way to go about
6 getting coverage with the least impact of
7 population and filling those needs.

8 So just a comment. And maybe somebody
9 can educate me outside of this meeting at another
10 time.

11 THE CHAIRMAN: I don't usually get
12 asked a question by another Council member, or
13 such an esteemed audience, and the answer simply
14 is optimal --

15 MR. EDELSON: It's not part of our
16 mandate?

17 THE CHAIRMAN: Well, our mandate is to
18 review and opine on an application. Our mandate
19 is not to go and look for optimal sites. So --

20 MR. EDELSON: I know we don't look for
21 the sites, but we want to make sure that -- I
22 mean, what I would hate to see is that, in order
23 to get coverage down the road, we're putting more
24 towers in this particular town than are necessary.

25 THE CHAIRMAN: Okay.

1 MR. EDELSON: That's all I'm saying.

2 THE CHAIRMAN: And I don't have an
3 answer to that.

4 SENATOR MURPHY: It will be a long
5 time.

6 THE CHAIRMAN: It's a long time since
7 we're -- I mean, we've spent an awful lot of time
8 on, you know, visual impacts, and those things,
9 and impacts. But I'll tell you, if you've been on
10 this Council a little bit longer, you'll find
11 visual impacts where we're talking about a
12 property that's, you know, 100 feet away or 50
13 feet, you know, a whole subdivision. So, I mean,
14 I'm going to have to leave it.

15 MR. EDELSON: That's fine. I just
16 wanted to record my sense of a little frustration.

17 THE CHAIRMAN: Okay.

18 MR. EDELSON: It's not with you. Don't
19 take it personally.

20 THE CHAIRMAN: Okay. Dr. Klemens.

21 DR. KLEMENS: Thank you, Mr. Chairman.
22 A lot of my questions have been answered,
23 particularly on the visual simulations, but I
24 would like to clarify a few things for the record.

25 On the first page of the application,

1 it says the facility is proposed on a 38.5 acre
2 site. Surely that is not correct?

3 MR. LAUB: There were a few numbers
4 like that, Dr. Klemens, that were corrected in
5 responses to the interrogatories.

6 DR. KLEMENS: Oh, it was.

7 MR. LAUB: There was an uploading error
8 to the printer, so there was a draft that was sent
9 instead of a final. So a few of those errors were
10 picked up by Mr. Mercier, and we clarified them.
11 I can look in the response to interrogatories, but
12 I believe there were a number of those, 9(a) to
13 interrogatory --

14 DR. KLEMENS: I didn't see it in the
15 interrogatories.

16 MR. LAUB: But I think it was for
17 efficiency purposes they were listed there.

18 DR. KLEMENS: Well, let's move on to
19 maybe something more substantive. On page 13
20 there's a statement that the location of the
21 proposed facility is just outside the 100 year
22 flood zone. How about the 500 year flood, is it
23 also outside the 500 year flood?

24 THE WITNESS (Berezowsky): Adrian
25 Berezowsky, CBRE. Yes, it is outside of the 500

1 year floodplain as well.

2 DR. KLEMENS: Thank you.

3 On page 14 you refer to the NDDB,
4 National Diversity Data Base mapping. Did you do
5 any actual inquiry to the NDDB with a letter, or
6 was this all taken off a desktop analysis of their
7 maps that are online?

8 THE WITNESS (Berezowsky): We did not
9 consult directly with DEEP. We went off their
10 online. I think it was a September 2015 map that
11 was online.

12 DR. KLEMENS: And you're aware that
13 there is actually a lag between what they get and
14 what gets on the maps?

15 THE WITNESS (Berezowsky): Yes, we do.
16 But for purposes of consultation, we had been
17 directed that we are not to consult with them
18 directly unless we fall within one of their shaded
19 areas on the maps.

20 DR. KLEMENS: Who instructed you to do
21 that?

22 THE WITNESS (Berezowsky): I'd have to
23 check, but that is the consultation process that
24 we have been following for many, many years.

25 DR. KLEMENS: The consultation process

1 as determined internally by you or determined by
2 the NDDB?

3 THE WITNESS (Berezowsky): My
4 understanding is by the NDDB, but I will verify
5 that.

6 DR. KLEMENS: Okay.

7 THE WITNESS (Berezowsky): We did,
8 however, consult with the U.S. Fish and Wildlife
9 Service directly.

10 DR. KLEMENS: Thank you. And I was
11 going to get to that.

12 THE WITNESS (Berezowsky): I apologize.

13 DR. KLEMENS: Do we have any
14 documentation of that consultation in the record?

15 THE WITNESS (Berezowsky): It should be
16 in the record. I can't tell you exactly which
17 page, but it is within the NEPA report.

18 DR. KLEMENS: It's in the NEPA report.
19 Okay.

20 THE WITNESS (Berezowsky): We first
21 consult with the U.S. Fish and Wildlife online
22 IPaC system to determine which potential species
23 are within the area. Then our biologist compares
24 the habitats of those species as compared to the
25 habitats that are going to potentially be

1 disturbed. And then we make a determination of
2 effect. And if there is any potential adverse
3 effect, as there was here with the northern
4 long-eared bat, then we consult directly with the
5 U.S. Fish and Wildlife Service. And we determined
6 that we met the 4(d) rule for the U.S. Fish and
7 Wildlife Service, and we sent an email to the U.S.
8 Fish and Wildlife Service on June 10, 2016 that
9 said we may affect, but not adversely affect, the
10 northern long-eared bat. And we received no
11 response within 30 days, and as per their rules,
12 the consultation process is complete.

13 DR. KLEMENS: So that email is in the
14 record?

15 THE WITNESS (Berezowsky): Yes, it is
16 also part of the NEPA report.

17 DR. KLEMENS: Okay. Let's move to
18 attachment number 3. You talk about the chain
19 link fence. Would you be amenable to an
20 anti-climb mesh?

21 THE WITNESS (DeSantis): Certainly.

22 DR. KLEMENS: Thank you.

23 I have no further questions,
24 Mr. Chairman. Thank you.

25 THE CHAIRMAN: Thank you.

1 Mr. Hannon?

2 MR. HANNON: Thank you, Mr. Chairman.

3 I know it was just asked, and I just
4 want to make sure I'm understanding what you're
5 saying. I picked up some of the different numbers
6 for lot sizes, lot numbers, but the one in
7 particular -- I know you say in the response to
8 Interrogatory 9(f), you're saying the drive is
9 approximately 650 feet. So the first page on Tab
10 3 where you say the driveway is approximately 400
11 feet to the compound, that is an error. Correct?

12 THE WITNESS (Ruzzo): Correct.

13 MR. HANNON: Okay. Because I was
14 concerned about the slope, 10.3 up to about --

15 THE WITNESS (DeSantis): If I may
16 respond here? The answers given in the
17 interrogatories are correct. Once those questions
18 were asked, we went back and looked at everything,
19 and the length of the new access drive to where it
20 makes that left-hand -- or it goes up the hill is
21 approximately 650 feet.

22 MR. HANNON: On map EC2.

23 THE WITNESS (DeSantis): Yes.

24 MR. HANNON: It appears as though there
25 is a bit of an existing roadway which continues in

1 sort of a southerly direction, one leg running
2 almost parallel to the access drive that you're
3 proposing. Because in looking at the topography
4 there and also on EC3, it almost seems as though
5 you may be able to -- granted, the driveway would
6 be longer, but you could come in with a much
7 easier driveway to put in by shifting it out a
8 little bit to the west and taking advantage of the
9 topography.

10 Has anybody looked at that, or was this
11 sort of the only option that you had?

12 THE WITNESS (DeSantis): So we did look
13 at that option. There was some concerns with in
14 the middle section there, as you had stated on
15 EC3, there's some significant side slopes.
16 Obviously, some grading would have to be done
17 there. But ultimately when we finally were all
18 out there to look at the alignment of it, all
19 parties, the property owner included, the
20 alignment that's shown on these drawings is what
21 was deemed as best for this proposal.

22 MR. HANNON: What are you doing about
23 drainage?

24 THE WITNESS (DeSantis): Certainly. So
25 obviously, as the contours don't show, there's --

1 it is a downhill slope. There will be -- the
2 contours don't show this, but through the next
3 iteration in the D&M there will be swales with
4 riprap to slow that water down, as discussed on
5 the site walk. Further away from us, not shown on
6 EC2, the wetland is a good distance away. I don't
7 know that exact number right off the top of my
8 head though. Obviously, we want to slow that
9 water down coming down from the site compound
10 location, as well as the access drive, and get
11 that water as slow as possible getting to the
12 existing drive.

13 MR. HANNON: Because it would have made
14 it a lot easier for me reading through this in the
15 erosion sedimentation control portion of the plans
16 at least if you had some detailed drawings in
17 terms of what was at least being proposed because,
18 looking at this, it just looks like it's going
19 down --

20 THE WITNESS (DeSantis): It's going to
21 go down.

22 MR. HANNON: -- that bituminous drive.
23 It's not in the best of shape. So what we walked
24 today will be a whole lot worse with all the ice
25 that will be coming from melting snow.

1 Other than that, I really don't have
2 anything else. Thank you.

3 THE CHAIRMAN: Thank you.

4 Mr. Silvestri.

5 MR. SILVESTRI: Thank you,
6 Mr. Chairman.

7 Just one other clarification, again,
8 and I think the correct answer is in interrogatory
9 Number 9 regarding the trees. Is the number of
10 138 the most accurate number for expected tree
11 removal?

12 THE WITNESS (DeSantis): Yes, 9(d), 138
13 is accurate. It's based on the square footage
14 disturbance divided by the survey that we did
15 localized and then extrapolated.

16 MR. SILVESTRI: Okay. Because, again,
17 on page 1 of attachment 4, it had approximately 50
18 trees, and there were a couple of other numbers.
19 But 138 is the most accurate?

20 THE WITNESS (DeSantis): Correct.

21 MR. SILVESTRI: Thank you.

22 I want to go back to what Senator
23 Murphy had talked about earlier. If I have the
24 topography correct, we have an approximate
25 elevation of 316, 319 feet where we're looking at

1 putting the proposed tower. You're going to add
2 to that a 150 foot tall tower, not counting the
3 lightning rod, so total height above elevation I'm
4 looking at, if we round it all off, is about 470.
5 Okay?

6 THE WITNESS (DeSantis): (Nodding head
7 in the affirmative.)

8 MR. SILVESTRI: I heard before that
9 it's a terrain issue as to why you have to be 470
10 feet in elevation because of the rolling area. I
11 believe Mr. Heffernan said that. But is it more
12 from the south part of it that you're getting --
13 you're expecting to get blockage out of the deal
14 and not the north? In other words, why 470 feet?
15 Why 150? Could it be cut down more to 140 and
16 still give you the coverage to the north where
17 you're not getting coverage to the south?

18 THE WITNESS (Heffernan): The short
19 answer is that I'm not sure. At 140 feet there is
20 certainly an obstruction condition to the south
21 heading away from the site. The majority of the
22 concentrated coverage is in close proximity to the
23 facility itself, and more of the less robust
24 coverage, getting down towards the in-vehicle
25 coverage level, does extend further south. It

1 does start to break up a little bit as you get to
2 the edge of the footprint. Whether or not a
3 reduction to 140, 130, 120 would -- and obviously
4 it would reduce the footprint in some manner, but
5 I can't give you the exact ratio of what type of
6 coverage reduction would happen in any direction.

7 MR. SILVESTRI: So the other part that
8 I'm stuck on goes back to the coverage map that we
9 had regarding also the site search ring and the
10 proposed elevation on the tower, and that the
11 search ring is more to the west of where the
12 proposed tower location is, but yet the majority
13 of what I see on the anticipated coverage is to
14 the north. So I'm kind of juggling that in my
15 head, too, all right, if the search ring is more
16 west, your coverage that you're expecting is more
17 north, does it make sense to have that tower in
18 that location?

19 THE WITNESS (Heffernan): Well, based
20 upon the candidates that were brought in, the
21 viable candidates, locations where a tower could
22 be built and that did reach the point where, if it
23 was viable and there was a willing landlord, at
24 that point that's where the candidates move to the
25 RF side and we look at this is what we're working

1 with, do any of these candidates provide, if not
2 all of the coverage, the majority of the coverage,
3 or a good chunk of coverage to the target that
4 you're trying to hit. And, like I said before,
5 there's always a perfect scenario. We always want
6 to try to get the perfect 360 degree coverage
7 around the site.

8 But in this area, based upon where the
9 majority of the residences were that we were
10 trying to hit, and the more major roadways, the
11 coverage to the north, and specifically to the
12 northeast, really did hit a lot of the check boxes
13 that we needed from the site. Again, it's not the
14 ideal site, the perfect site giving us 100 percent
15 coverage of what we were trying to hit, but at the
16 end of the day we do have to analyze what is
17 available for candidates. And as we move towards
18 polarizing the site to one end of that uncovered
19 area or the other, we also have to look at what
20 does the redundant coverage do. At some point a
21 site located further west, or even a lot further
22 west, will have a lot of redundant coverage with
23 sites over by 17.

24 So we do have to compare what does that
25 do to the coverage, what does that do to the

1 performance of the network, and where is the best
2 place, what is the best candidate that's presented
3 to us that's viable that we have to work with from
4 an RF standpoint, and which one do we want to run
5 with. And out of that pool, this was the best
6 candidate.

7 MR. SILVESTRI: Let me move on to a
8 couple of other questions I have. Do you know the
9 distances of the proposed site location to Roaring
10 Brook and Slab Gut Brook?

11 MR. LAUB: Just the distances of what
12 to the brook and to the -- or from the tower?

13 MR. SILVESTRI: From the tower.

14 MR. LAUB: From the tower. Okay.

15 THE WITNESS (McManus): Let's see.
16 These are going to be rough. So from the proposed
17 pole where I could figure out to the Slab Gut
18 Brook, it's approximately about 630 feet to the
19 south. And I don't have one from the tower. The
20 closest point from the road is about 200 feet to
21 Roaring Brook. I don't have it from the tower to
22 Roaring Brook.

23 MR. SILVESTRI: When you say road --

24 THE WITNESS (McManus): The access
25 drive we walked. The closest point from that

1 access drive is about 200 feet. So you're looking
2 at 800 to 1,000 feet.

3 MR. SILVESTRI: Because that's going in
4 the opposite direction?

5 THE WITNESS (McManus): Right.

6 MR. SILVESTRI: Okay. Thank you.
7 That's fine.

8 Another question. Has the utility
9 hookup been determined to be overhead or
10 underground at this point?

11 THE WITNESS (Ruzzo): We met with the
12 utility company, and the current proposal is
13 underground, the full run. There was an option
14 put out there to have a pole line overhead run,
15 and I think we were checking on that --

16 THE WITNESS (Bruttomesso): Yes.

17 THE WITNESS (Ruzzo): But there is an
18 option there to run a portion of it overhead to
19 minimize the disturbance, but at the same time any
20 overhead run would, as you could see when we
21 started to walk the site, there would be some
22 significant tree trimming that would be required
23 to run overhead along the length of that existing
24 access, but the current proposal is for
25 underground.

1 MR. SILVESTRI: And that would tap
2 probably the pole that had the transformer, I
3 would think, on the street?

4 THE WITNESS (Ruzzo): Right. Correct.

5 MR. SILVESTRI: Okay. As a follow-up
6 to that, how would that impact the existing
7 driveway if it's going underground?

8 THE WITNESS (Ruzzo): It's adjacent to
9 the driveway. I mean, it's obviously, you know,
10 we've seen the condition of that concrete out
11 there, reprocessed. It varies. So we would be
12 alongside that. It's a 20 foot wide access
13 utility easement, and so we would be working the
14 best down the side of that road the full length.

15 MR. SILVESTRI: No idea if it's going
16 to be one side or the other at this point?

17 THE WITNESS (Ruzzo): I believe we have
18 it proposed as the same side as the utility
19 structure itself right now.

20 MR. SILVESTRI: Okay.

21 THE CHAIRMAN: Mr. Hannon has a
22 follow-up question.

23 MR. HANNON: Given what you were just
24 saying about the location and going underground,
25 especially given the intermittent brooks that we

1 were looking at today, where are you going to put
2 it? Because the brooks are basically right off of
3 the road, so you really don't have much of an area
4 there to work with. So I'm kind of curious how
5 you're planning on dealing with some of the
6 physical constraints on the site.

7 THE WITNESS (Ruzzo): Yes. And as we
8 walked that site, especially the second brook, I
9 suppose, we're well above that brook area, and
10 there's some significant -- it's almost like a
11 land bridge that we would be crossing. And there
12 is enough space within that elevation to bury our
13 utilities safely. Just like we would if we ran
14 into ledge or anything like that if we're going
15 up, you know, the sloped area, if we don't meet
16 the minimum coverage, we'd have concrete encase
17 that.

18 Yes, go ahead.

19 THE WITNESS (DeSantis): I think what
20 Steve was trying to say was, where possible, we're
21 going to stay as far away from the existing drive
22 as we can. And in the instances where we cross
23 the intermittent stream or with the culvert, there
24 is sufficient cover above that culvert where we
25 can get the conduits through, but we may have to

1 make a jog or realign the conduits so maybe the
2 section of the drive, at least in that portion,
3 we'll have to bring in more towards the center of
4 the drive, and then get back over to the edge as
5 we're going that way.

6 MR. HANNON: A portion of those, the
7 intermittent stream looked as though it was almost
8 right off the edge of the drive. So that's why
9 I'm curious as to how you can say that there's
10 enough room to do that.

11 THE WITNESS (DeSantis): While it's not
12 ideal, we have certainly designed the conduits to
13 go under the drive. It's not ideal for any
14 situation, but it is certainly a viable solution.
15 We want to minimize it as much as possible in the
16 event of a problem, maintenance, but --

17 MR. HANNON: But there may be some
18 areas that you're really forced to go into the
19 existing roadway?

20 THE WITNESS (DeSantis): Correct.
21 Sometimes you have to just be in the existing
22 drive and then do the job and come back out.

23 THE WITNESS (Ruzzo): And I guess in
24 those instances it was similar to when we had
25 certain ledge areas where we can't get to the

1 depth with the mechanical chipper, we would encase
2 those to make them road worthy, you know, and
3 traffic worthy, as is required by the utility.

4 MR. HANNON: Thank you.

5 THE CHAIRMAN: Mr. Lynch.

6 MR. LYNCH: Just another follow-up. I
7 understand the underground portion but, Mr. Ruzzo,
8 you threw me a curve ball when you said there's a
9 hybrid being discussed overhead/underground. Is
10 that being discussed, or what's the nature of
11 that, I guess?

12 THE WITNESS (Ruzzo): So, you know,
13 there's always variables that you discuss. When
14 we look at that road, you know, it makes sense
15 just to put it underground. But if there were any
16 reason that the board or anywhere else it was
17 determined that maybe perhaps some overhead lines
18 along the existing access was better than
19 disturbing -- the initial concern came from the
20 identification of the proximity to the wetlands
21 and how we could potentially avoid it if we
22 couldn't, you know, utilize the methods that we
23 have in place. So we just threw it out to the
24 utility company and said is there an overhead
25 option to continue down the road with a pole line.

1 So it's just an option right now. It's not
2 what -- our main plan is still an underground.
3 And then we would, if there was an overhead
4 option, it would be to a certain point, and then
5 continue underground.

6 MR. LYNCH: So it is something that is
7 still being discussed as an option as a secondary?

8 THE WITNESS (Ruzzo): Yeah. It's also
9 not the preference of our landlord to have an
10 overhead line running down there. So that was his
11 initial. I just wanted to pose it as an option to
12 the utility company in case we were forced into
13 that situation that we were investigating both
14 options.

15 MR. LYNCH: Thank you.

16 MR. SILVESTRI: A couple other
17 questions I have for you. If I understand
18 correctly from the readings, there was a public
19 information session on August 1st. Approximately
20 how many people attended that?

21 MR. LAUB: My recollection is somewhere
22 probably in the order of 50, maybe 60. I mean,
23 most of the room was -- it was here. It was in
24 this room. I would say a significant portion of
25 the chairs were filled. I believe recollection

1 was 50 or 60.

2 MR. SILVESTRI: And if you received
3 public comment, did the comments change anything
4 that you were proposing to do?

5 MR. LAUB: No, not in this instance.

6 MR. EDELSON: Can I get clarification
7 on that? Are you saying you received no comment?

8 MR. LAUB: There were comments made at
9 the meeting.

10 MR. EDELSON: But none of them were
11 actionable from your point of view?

12 MR. LAUB: Right.

13 MR. SILVESTRI: In discussions with the
14 town, did the town suggest any site location other
15 than what you're proposing here?

16 MR. LAUB: No. Oh, there was -- a
17 clarification. There was.

18 THE WITNESS (Bruttomesso): So when the
19 attorney and I met with the town manager,
20 Mr. Johnson, he mentioned the Elks Club. And we
21 did approach the Elks Club. We talked to the RF
22 engineer. And it's literally across the street
23 from our current site owner. And we found that
24 the tower would, A, be significantly higher than
25 with the 150 we propose, would not get the same

1 coverage, and also with the wetlands over in the
2 Elks Club it would not work. It's not a suitable
3 candidate.

4 MR. SILVESTRI: But nothing besides the
5 Elks Club?

6 THE WITNESS (Bruttomesso): No, that's
7 the only one.

8 MR. SILVESTRI: Out of curiosity, did
9 anybody, the town or public, comment about the old
10 Nike missile site that's in the area?

11 THE WITNESS (Bruttomesso): No.

12 MR. SILVESTRI: I'm just curious about
13 that one.

14 THE WITNESS (Ruzzo): That we would
15 have remembered.

16 MR. SILVESTRI: The last question I
17 have for you, VP18, Figure 9b, is that what's
18 referred to in the application as the Matson Hill
19 industrial property? We talked about that being
20 an old mill. I just want to make sure the old
21 mill and the industrial property are the same.

22 THE WITNESS (Allen): I don't believe
23 that's the term I used in the visual assessment
24 report. I don't know if it might have been --

25 MR. LAUB: That's an old mill.

1 THE WITNESS (Allen): It is an old
2 mill. It's a remnant of an old mill that the town
3 has preserved. I don't recall using that title in
4 the visual report. I can't speak to whether it
5 was used.

6 MR. LAUB: It may have been used in
7 the application.

8 MR. SILVESTRI: Page 16 of the
9 application actually calls it the Matson Hill
10 industrial property, and I didn't know if that was
11 something different.

12 MR. LAUB: No, that's the same,
13 reflective of its industrial history.

14 MR. SILVESTRI: Okay. That's all I
15 have, Mr. Chairman. Thank you.

16 THE CHAIRMAN: Mr. Levesque?

17 MR. LEVESQUE: I can wait until the
18 continued hearing.

19 THE CHAIRMAN: Okay. Mr. Lynch?

20 MR. LYNCH: Just a couple of
21 clarifications on earlier testimony. I agree with
22 Senator Murphy in that -- Mr. Johnson isn't
23 here -- and a stealth -- who my good friend,
24 Mr. Dibella, is sitting back here -- a stealth
25 tower disguised as a tree, you know, they better

1 look at it very carefully, if you take the old
2 H.L. Mencken quote, you know, "Be careful what you
3 wish for: You just might get it." And that was a
4 hundred years ago.

5 And as far as stealth is concerned --
6 and whoever wants to chime in can -- I've only
7 seen it in one place in Connecticut, but I know as
8 you get into a higher forested area there are cell
9 towers disguised as fire towers. Now, it's
10 another option you can look at. I know they're
11 expensive, but I know they have been done.

12 And as far as the height of the tower
13 being increased, under federal regulations a new
14 carrier can come in, and you can go up 15 or 20
15 feet here.

16 THE WITNESS (Ruzzo): I will say we do
17 make that consideration.

18 MR. LYNCH: Well, as a monopole that's
19 easy enough to do.

20 THE WITNESS (Ruzzo): Correct.

21 MR. LYNCH: But when you get to a
22 stealth configuration, how difficult is that?

23 THE WITNESS (Ruzzo): Well, you know,
24 you start looking at branches. Let's use that
25 application, because honestly I believe if we were

1 going to use a stealth application, that would be
2 the one best suited for the location. So in that
3 case, we have a taper as it is, just like a normal
4 monopole or a more normal pine tree would be. So
5 20 feet on a 150, you're talking about, you know,
6 maybe the colocatable area already with branches
7 out, you know, if we have an array that's 12 or 15
8 feet, our branches are 15 to 18, you know. And as
9 you get to the top, you know, you want to always,
10 when you get to a monopine, avoid the bottle brush
11 look, right -- that's a term that's kind of thrown
12 around -- which is why we throw that 7 to 10 foot
13 conical section at the top to give it at least
14 some appearance of a taper like a normal stealth
15 would have.

16 Fortunately, at the colocatable areas
17 you do kind of have to have branches. You know,
18 what's impacted mostly is the base, the lower
19 areas, have a wider girth to give the appearance
20 of some taper at the top where your minimum is.
21 So you may have a portion, if it's extended to 20
22 feet or 10 percent, where it is almost I won't say
23 square but, you know, your taper may be a little
24 less apparent. That's all. That's where that
25 comes into play. So there is some rework

1 required.

2 MR. LYNCH: So redesign the --

3 THE WITNESS (Ruzzo): So the structure
4 itself could be designed to address the 20 feet on
5 design. It's just that the rework for that
6 carrier who would go up there would work with us
7 to make those changes in the areas that were
8 impacted.

9 MR. LYNCH: And the town had mentioned
10 that they may have an interest in going on. And
11 we just assume it's a whip, but it could be, I've
12 seen some of the towns are going to microwave
13 dishes. How would that create a problem?

14 THE WITNESS (Ruzzo): The microwave
15 dish, I mean, yeah, in a branch section a
16 microwave dish is no different than a panel
17 antenna. It's a directional antenna specific.

18 MR. LYNCH: But you need direct line.

19 THE WITNESS (Ruzzo): Line of sight.
20 So stealthing, you always can't have everything.
21 And if you want to provide public safety, that
22 opportunity, microwaves become a little bit
23 challenging, although, you know, you work the
24 stealthing around that as well. There's always a
25 way.

1 MR. LYNCH: I have a few more questions
2 that are rather simple.

3 Mr. Heffernan, again, in the
4 application it states on page 8 here -- you don't
5 have to look. I'll tell you what it says -- that
6 50 percent of households now in the country are
7 wireless, and Connecticut lags behind. This, I
8 think, was written a while ago. Is Connecticut
9 still lagging behind in wireless versus wireline
10 phones?

11 THE WITNESS (Heffernan): That's a real
12 good question. I'm not sure of that answer.

13 MR. LYNCH: I just figured I'd ask.
14 And on Section 2 -- and I don't really have the
15 page number here, but I think it's page 2 -- you
16 talked about a site on Main Street that would work
17 for your application, but you got no response from
18 the owner. Is there any other information we have
19 on this?

20 THE WITNESS (Bruttomesso): We sent
21 letters, my team sent letters, and we never got
22 any response, unfortunately.

23 MR. LYNCH: And the small little
24 microwave dish that I see that you refer to on the
25 facility and equipment specs and on the, whatever

1 it is, I think it's Z9, Z something or other, in
2 the designs it shows a little thing hidden on the
3 top. I've never seen that before. Is that GPS?

4 THE WITNESS (Ruzzo): That's probably
5 the representation of the GPS antenna at the --
6 no? You think that's the microwave?

7 THE WITNESS (DeSantis): The detail is
8 on Z9. If you can point out specifically what
9 you're --

10 MR. LYNCH: I'm trying to find it.
11 It's on Z4. And it shows the antennas on the top,
12 but then it shows the dish mounted on top, the 2
13 foot dish. I've never seen it up there within the
14 --

15 THE WITNESS (Ruzzo): So that is meant
16 to represent an option for a temporary microwave
17 backhaul.

18 MR. LYNCH: Okay.

19 THE WITNESS (Ruzzo): So if there's a
20 need to get service to the site prior to the
21 underground fiber backhaul making it to the
22 carrier, that's the option for line of sight fiber
23 backhaul.

24 MR. LYNCH: I've just never seen it
25 before.

1 THE CHAIRMAN: Dr. Klemens, I believe,
2 has a follow-up.

3 DR. KLEMENS: I have a question about
4 trees.

5 THE CHAIRMAN: I guess that's a
6 follow-up.

7 DR. KLEMENS: I guess. It's about real
8 trees, not fake ones.

9 As I understand correctly that you
10 didn't go out and count trees, you basically went
11 out and characterized the landscape, estimated the
12 amount of tree coverage that's going to be lost?

13 THE WITNESS (DeSantis): That is
14 correct.

15 DR. KLEMENS: Why couldn't you just
16 physically go out and count the trees that are
17 going to go and -- I guess the other thing is,
18 what is the DBH of these trees? Is there any --
19 when we talk about losing 138 trees, is there any
20 standard?

21 THE WITNESS (DeSantis): So on sheet
22 EC2 in the upper right-hand corner we had provided
23 the methodology that we used. We based it on the
24 square footage of the disturbed area. And based
25 on -- we assumed for every 400 square feet of

1 disturbance that one tree measuring 6 inches in
2 diameter would be removed. And based on the field
3 investigation that I looked at, myself personally,
4 I stand behind those numbers, and then
5 extrapolating that out. So, no, we did not go out
6 and count specifically limits of disturbance to
7 trees but --

8 DR. KLEMENS: So it's an estimate. So
9 with all estimates, what are the confidence levels
10 here? I mean, what's the worst it could be? It
11 could be more than 138?

12 THE WITNESS (DeSantis): I would say
13 that would be a conservative estimate based on
14 what we saw.

15 DR. KLEMENS: Conservative estimate of
16 clearing, or conservative estimate of the number
17 of trees being lost, or conservative in the sense
18 it's a worst-case scenario?

19 THE WITNESS (DeSantis): I would say
20 conservative in almost all regards. The area of
21 disturbance that we've calculated is a
22 conservative estimate. The number of trees is a
23 conservative estimate based on that square footage
24 of the 400 square feet figure.

25 DR. KLEMENS: So what you're telling me

1 as a scientist, actually, is it's a conservative
2 area of disturbance, a conservative estimate, so
3 in fact the actual tree loss could be a lot more?

4 THE WITNESS (DeSantis): I would say it
5 would be a lot less.

6 DR. KLEMENS: Well, we're talking a
7 different language. If you are conservative in
8 your estimate of disturbance and conservative in
9 the number of trees, that leads me to think that
10 in fact it could be a lot more.

11 THE WITNESS (DeSantis): It was my
12 intention to say that our estimate of area of
13 disturbance was an overestimate.

14 DR. KLEMENS: That's different then.
15 It was a generous estimate, not a conservative
16 estimate?

17 THE WITNESS (DeSantis): Correct.

18 DR. KLEMENS: Okay. And when you're
19 going to be taking this trench off the road bed,
20 is this going to be going through the forest --
21 for the utilities? Excuse me.

22 THE WITNESS (DeSantis): For the
23 utilities up the access drive. So at the time the
24 site plans were prepared, the final design
25 actually to this day still is not completed, so

1 that area of disturbance is not included in that
2 number.

3 DR. KLEMENS: So you could be cutting
4 through tree roots to put this underground utility
5 in? I mean, I assumed it was going to go in the
6 driveway. If it's going in the adjacent forest,
7 we could have a lot more tree impact.

8 THE WITNESS (DeSantis): Well, it would
9 be adjacent to the drive.

10 DR. KLEMENS: About how far off the
11 drive because the trees come right up to the
12 drive?

13 THE WITNESS (Ruzzo): So we talked
14 about a 20 foot access in utility easement. In
15 areas that drive narrows, right?

16 DR. KLEMENS: Yes.

17 THE WITNESS (Ruzzo): But the intent is
18 not to put it so far as we're impacting additional
19 trees, but on the edge of the drive there are
20 areas that tree roots will encroach into that, as
21 they do now. And obviously in the newly created,
22 our area of disturbance is well beyond that, so it
23 would be within the area of disturbance that's
24 already created in the access, the new 600 feet.

25 THE CHAIRMAN: We have to break.

1 DR. KLEMENS: Okay. Thank you. It's
2 very confusing to me. Thank you.

3 THE CHAIRMAN: We have to break. Do
4 you have like --

5 MR. LYNCH: I have a few more
6 questions, but we're up against the break, so I
7 can wait until next time.

8 THE CHAIRMAN: Okay. We'll recess
9 until 6:30, at which time we'll resume the public
10 hearing.

11 (Whereupon, the witnesses were excused,
12 and the above proceedings were adjourned at 5:04
13 p.m.)

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CERTIFICATE

I hereby certify that the foregoing 104 pages are a complete and accurate computer-aided transcription of my original stenotype notes taken of the Council Meeting in Re: DOCKET NO. 478, Eco-Site, Inc. and T-Mobile Northeast, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility located at 63 Woodland Street, Glastonbury, Connecticut, which was held before ROBERT STEIN, Chairman, at the Glastonbury Town Hall, Council Chambers, 2155 Main Street, Glastonbury, Connecticut, on January 11, 2018.

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Lisa L. Warner, L.S.R., 061
Court Reporter

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I N D E X

WITNESSES MATTHEW W. ALLEN PAGE 9

ADRIAN BEREZOWSKY

CHUCK BRUTTOMESSO

ANDREW J. DESANTIS

SCOTT HEFFERNAN

STEVE RUZZO

JAMES M. MCMANUS

EXAMINERS:

Mr. Laub (Direct) 10

Mr. Johnson (Start of cross) 13

The Chairman

Mr. Mercier

Senator Murphy

Mr. Edelson

Dr. Klemens

Mr. Hannon

Mr. Silvestri

Mr. Lynch

APPLICANT'S EXHIBITS

(Received in evidence)

EXHIBIT DESCRIPTION PAGE

II-B-1 Application received September 13

18, 2017, and attachments and bulk file

exhibits including:

| | | |
|----|---|----|
| 1 | I n d e x: (Cont'd) | |
| 2 | | |
| 3 | a. Town of Glastonbury zoning map | |
| 4 | b. Town of Glastonbury zoning code | |
| 5 | c. Town of Glastonbury plan of | |
| 6 | conservation and development | |
| 7 | d. Technical report submitted to the | |
| 8 | Town of Glastonbury | |
| 9 | e. Power Point presentation provided | |
| 10 | to the Town of Glastonbury | |
| 11 | II-B-2 Eco-Site, Inc. and T-Mobile | 13 |
| 12 | Northeast, LLC's responses to Council | |
| 13 | interrogatories, dated December 11, 2017 | |
| 14 | II-B-3 Applicant's sign posting affidavit, | 13 |
| 15 | dated January 3, 2018 | |
| 16 | II-B-4 Applicant's witness resumes | 13 |
| 17 | received January 10, 2018: | |
| 18 | a. Matthew W. Allen | |
| 19 | b. Adrian Berezowsky | |
| 20 | c. Chuck Bruttomesso | |
| 21 | d. Andrew J. DeSantis | |
| 22 | e. Scott Heffernan | |
| 23 | f. Steve Ruzzo | |
| 24 | g. James M. McManus | |
| 25 | | |