# In The Matter Of: <br> Florida Tower Partners LLC, d/b/a North Atlantic Towers Public Hearing 

July 14, 2015

BCT Reporting LLC<br>PO Box 1774<br>Bristol, CT 06010<br>860.302.1876

## STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL

Docket No. 458
Florida Tower Partners LLC, d/b/a North
Atlantic Towers for a Certificate of
Environmental Compatibility and Public Need
for the construction, maintenance, and
operation of a telecommunications facility at one of two locations at 62-64 Codfish Hill Road, Bethel, Connecticut

Continued Public Hearing held at the Connecticut Siting Council, Ten Franklin Square, New Britain, Connecticut, Tuesday, July 14, 2015, at 11:12 a.m.

Held Before:
ROBERT STEIN, Chairman
SENATOR JAMES J. MURPHY, JR., Vice Chairman

|  |  | 2 |
| :---: | :---: | :---: |
| 1 | A prearances: |  |
| 2 |  |  |
| 3 | Council Members: |  |
| 4 | PHILIP T. ASHTON |  |
| 5 | DANIEL P. LYNCH, JR. |  |
| 6 | LARRY LEVESQUE, ESQ., |  |
| 7 | PURA Designee |  |
| 8 | ROBERT HANNON, |  |
| 9 | DEEP Designee |  |
| 10 | DR. MICHAEL W. KLEMENS |  |
| 11 |  |  |
| 12 |  |  |
| 13 | Council Staff: |  |
| 14 | MELANIE BACHMAN, ESQ. |  |
| 15 | Executive Director and |  |
| 16 | Staff Attorney |  |
| 17 |  |  |
| 18 | ROBERT MERCIER |  |
| 19 | Siting Analyst |  |
| 20 |  |  |
| 21 |  |  |
| 22 |  |  |
| 23 |  |  |
| 24 |  |  |
| 25 |  |  |

Appearances: (Cont'd.)

For Florida Tower Partners LLC,
d/b/a North Atlantic Towers:
COHEN AND WOLF, P.C.
1115 Broad Street
Bridgeport, Connecticut 06604 BY: JULIE D. KOHLER, ESQ. RACHEL A. SCHWARTZMAN, ESQ.

For Codfish Hill Environmental Trust:
EVANS FELDMAN \& AINSWORTH, LLC
261 Bradley Street
P.O. Box 1694

New Haven, Connecticut 06507-1694
BY: KEITH R. AINSWORTH, ESQ.

For Cellco Partnership d/b/a Verizon
Wireless:
ROBINSON \& COLE LLP
280 Trumbull Street
Hartford, Connecticut 06103-3597
BY: KENNETH C. BALDWIN, ESQ.

## SENATOR MURPHY: Ladies and

 gentlemen, I'd like to call this hearing to order this Tuesday, July the 14th, 2015.It's a little bit after 11 o'clock. I apologize for being late, but the traffic is tough coming up Route 9. My name is James J. Murphy Jr., and I'm substituting temporarily for Robin Stein, our Chairman, who will be along.

This hearing is a continuation of the hearing held on June the 2nd, 2015, at the Bethel Town Hall, General Purpose Room, in Bethel, Connecticut. It is held pursuant to the provisions of Title 16 of the Connecticut General Statutes and of the Uniform Administrative Procedure Act upon an application from Florida Tower Partners LLC d/b/a North Atlantic Towers for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance, and operation of a telecommunications facility at one of two locations at 62 to 64 Codfish Hill Road, Bethel, Connecticut. This application was received by the Council on March 19, 2015.

A verbatim transcript will be made of this hearing and deposited with the Town Clerk's Office in the Bethel Town Hall for the convenience of the public.

We will proceed in accordance with the prepared agenda, copies of which are available. If you don't have one, they should be on the table over there.

There's a request from the
Codfish Hill Environmental Trust for the Council to take administrative notice of the Department of Transportation traffic map.

Does any party or intervenor have an objection to the Council taking notice?

MS . KOHLER: No.
MR. ASHTON: Mr. Chairman, a point of inquiry. I received what's so labeled as the traffic map, an eight and a half by eleven, is that correct, Mr. Ainsworth, is that what we're looking at? SENATOR MURPHY: Well, first of all, let's see if we can -- I realize it's very difficult to read it. I had the same problem.

Is there any objection?
(No response.)
SENATOR MURPHY: Hearing none, we'll take administrative notice of it.

Then go ahead, Mr. Ashton, with your questions.

MR. ASHTON: I'm just trying to understand that this is in fact what you submitted, or is this a reduction of what has been submitted?

MR. AINSWORTH: That is actually what is at that location that's noted. You can actually zoom in to the Codfish Hill area on line when you access that map.

MR. ASHTON: But for a hard copy, this is what was submitted, the eight and a half by eleven; is that correct?

MR. AINSWORTH: Yes.
MR. ASHTON: Okay. It's a little tad difficult to read.

SENATOR MURPHY: I found it very difficult to read.

MR. AINSWORTH: I can, as a Late-Filed matter, I could reproduce the area around Codfish Hill which is in much greater detail.

MR. ASHTON: That might be a productive suggestion.

SENATOR MURPHY: Why don't we
leave it if you can, submit it; if you can't, we'll understand. Okay?

MR. AINSWORTH: Understood.
MR. ASHTON: Thank you very much,
Mr. Chairman.
Mr. Ainsworth.
SENATOR MURPHY: You have a panel, Mr. Ainsworth?

MR. AINSWORTH: Yes, I do.
Mr. Chairman, I have six witnesses here today, and I'd like to introduce each one and have their prefile testimony admitted.

I'll start with Gillean Reinders.
Ms. Reinders, at my request, did you prepare --

MS. BACHMAN: Shouldn't we swear them in first?

SENATOR MURPHY: Yes. Why don't you introduce your panel, and we'll swear them in first.

MR. AINSWORTH: Okay. I have here today Gillean Reinders; Mark Reinders;

Susan White; Caryl Kirschbaum; and on behalf of Lada Bedriy, Ken Parsons; and Leon Kurjiaka.

SENATOR MURPHY: If they'd rise,
Attorney Bachman will administer the oath.
K ENNETHPRARSONS,
LEONKKURIAKA,

MARK REINDERS,
S USANWHETE,
CARYLILKIRSCHBAUM, called as witnesses, being first duly sworn by Ms. Bachman, were examined and testified on their oaths as follows: SENATOR MURPHY: NOW Mr.

Ainsworth.
MR. AINSWORTH: Again, starting with Ms. Reinders, Ms. Reinders, at my request, did you prepare a statement that you filed known as prefiled testimony and labeled such that you submitted to the Council and which has been marked as Exhibit 5c?

THE WITNESS (G. Reinders): Yes,
I did.

MR. AINSWORTH: And do you have any deletions, additions or corrections to that?

THE WITNESS (G. Reinders): No, I do not.

MR. AINSWORTH: And do you adopt it as your testimony before the Council here today?

THE WITNESS (G. Reinders): I do.
MR. AINSWORTH: And Mr. Reinders,
Mark Reinders?
THE WITNESS (M. Reinders): Yes.
MR. AINSWORTH: Did you prepare what has been marked as Exhibit 5 b in which you filed as your prefiled testimony?

THE WITNESS (M. Reinders): I did.

MR. AINSWORTH: And do you have any deletions, corrections or additions to that?

THE WITNESS (M. Reinders): No, I do not.

MR. AINSWORTH: And do you adopt
that as your testimony here today?
THE WITNESS (M. Reinders): I do.

MR. AINSWORTH: And Susan White?
THE WITNESS (White): Yes.
MR. AINSWORTH: Did you prepare
what has been labeled as your prefile testimony, which was received on May 26 th and been marked as Exhibit 5d?

THE WITNESS (White): Yes.
MR. AINSWORTH: And do you have any corrections, deletions or additions to that?

THE WITNESS (White): No.
MR. AINSWORTH: And do you adopt that as your testimony here today?

THE WITNESS (White): Yes.
MR. AINSWORTH: And Caryl
Kirschbaum?
THE WITNESS (Kirschbaum): Yes.
MR. AINSWORTH: Did you prepare what has been marked as 5e, your prefile testimony received on May 26 th as your prefile testimony?

THE WITNESS (Kirschbaum): Yes.
MR. AINSWORTH: Do you have any corrections, deletions or additions to that?

THE WITNESS (Kirschbaum): No, I
do not.
MR. AINSWORTH: And do you adopt
that as your testimony here today?
THE WITNESS (Kirschbaum): I do.
MR. AINSWORTH: And Mr. Kurjiaka?
THE WITNESS (Kurjiaka): Yes.
MR. AINSWORTH: Did you prepare what has been marked as your prefile testimony as Exhibit 5 g and received on May 26th?

THE WITNESS (Kurjiaka): Yes.
MR. AINSWORTH: You'll have to speak up, by the way.

And do you have any corrections, deletions or additions to it?

THE WITNESS (Kurjiaka): No.
MR. AINSWORTH: And do you adopt that as your testimony here before the Council?

THE WITNESS (Kurjiaka): Yes, I do.

MR. AINSWORTH: And Mr. Parsons, you're here representing -- in place of your wife who is --

THE WITNESS (Parsons): Out of
the country.
MR. AINSWORTH: Out of the
country?
THE WITNESS (Parsons): Yes.
MR. AINSWORTH: And the prefiled
testimony that was filed for Lada Bedriy marked as Exhibit 5f, do you adopt that as your testimony here today before the

Council?
THE WITNESS (Parsons): I do for her.

MR. AINSWORTH: And are there any deletions, corrections or additions?

THE WITNESS (Parsons): There are not.

SENATOR MURPHY: Thank you.
Any objection to admitting the six exhibits?

MS . KOHLER: No.
SENATOR MURPHY: I see the nods of "no." They're so admitted then.
(Intervenor Codfish Hill
Environmental Trust Exhibits III-B-1 through
III-B-6: Received in evidence - described
in index.)

SENATOR MURPHY: Cross
examination of the panel. Mr. Mercier, we'll start with the staff.
(Whereupon, Chairman Stein
entered the hearing room.)
CROSS-EXAMINATION
MR. MERCIER: Thank you.
Attorney Ainsworth, I was going
to ask everybody on the panel generally the same question in regards to the balloon fly on June 2nd.

So I'll just begin with Mr.
Parsons. As you're probably aware, there was a balloon $f l y$ on June 2nd as part of the field review. As noticed in the transcript, they flew the balloon approximately like 7:45 to I think about 6 p.m. I was wondering if you had a chance to try to look for the balloons from your property on that day on June 2nd?

THE WITNESS (Parsons): I could not see it from my house, but I could see it on the road several places on the way in and out of town. I can be more specific.

MR. MERCIER: Actually I was just
curious about the property itself, your property itself. You could not see it from your property.

THE WITNESS (Parsons): No.
MR. MERCIER: Mr. Kurjiaka, the same question. Did you get a chance to look for the balloons from your property on June 2nd?

THE WITNESS (Kurjiaka): Yes, I did, and I walked on the hike too. The foliage was covering the balloons in June, but the previous balloon during the winter there was visibility.

MR. MERCIER: Do you know when that balloon fly occurred, that particular one in the winter?

THE WITNESS (Kurjiaka): Was it in February, the last --

THE WITNESS (M. Reinders):
Thanksgiving.
MR. AINSWORTH: You have to just do the best from your memory.

THE WITNESS (Kurjiaka): Yes, it was around the end of November.

MR. MERCIER: Of 2014?

THE WITNESS (Kurjiaka): Yes.
MR. MERCIER: Okay. Thank You. Was that balloon fly noticed to you? How did you know about that particular balloon fly?

THE WITNESS (Kurjiaka):
Neighbors told me it was going to happen.
MR. MERCIER: Thank you.
Mr. Parsons, regarding that
winter -- around Thanksgiving, excuse me, Thanksgiving 2014 balloon fly, did you know about that particular one?

THE WITNESS (Parsons): No one called me. I didn't see a notice in the paper. I had no knowledge of it.

MR. MERCIER: Thank you.
Ms. Reinders, Mr. Reinders, on
June 2nd did you have the opportunity to attempt to observe the balloons from your property?

THE WITNESS (G. Reinders): We did, but it was very windy, and it got tangled in the trees. We have clear pictures of it. The first balloon float you could clearly see it from our house.

MR. MERCIER: The first balloon float, was that the one that was held around Thanksgiving?

THE WITNESS (G. Reinders):
Around Thanksgiving of 2014.
MR. MERCIER: So that was through the trees you could see some balloon?

THE WITNESS (G. Reinders): Yes, clearly can see it from our house.

MR. MERCIER: From your house or just your property?

THE WITNESS (G. Reinders): Well, from our house, yes, and our property. We submitted several pictures.

MR. MERCIER: Okay.
Attorney Ainsworth, I haven't seen the pictures. Have those been submitted?

MR. AINSWORTH: They should have been part of the prefile testimony.

THE WITNESS (G. Reinders): I e-mailed them to you.

MR. AINSWORTH: Okay. Apparently they should have been part of the prefile testimony.

MR. MERCIER: Okay, I'll just check my records again. The copy in front of me I don't have the attachment.

MR. AINSWORTH: Perhaps the electronic version but --

MR. MERCIER: Ms. White, same question, on June 2nd did you have the opportunity to observe the balloons from your property?

THE WITNESS (White): Yes. As Ms. Reinders said, it was windy, and from my house and also from my driveway a little ways out toward the road we could see it, but it kept bobbing behind trees. So it would pop out sort of where there was a break in the trees, and then it would disappear, but it was blowing off to the side quite strongly.

MR. MERCIER: Did you attempt to
look at it in the morning or the afternoon?
THE WITNESS (White): Oh, I would say it was around 11 o'clock or 11:30 in the morning.

MR. MERCIER: Ms. White,
regarding your prefile testimony, I saw a
figure that you included in there. This is your May 26th filing. It said that the tower appears to be about 300 to 400 feet from the back wall of your property?

THE WITNESS (White): Roughly 300
to 400 feet from kind of the right-hand end of my house, not directly behind it, but very visible.

MR. MERCIER: How did you
determine that distance?
THE WITNESS (White): I was able to see that from the pictures that were taken, the November balloon float. I was not home that day, and I was shown the pictures later that were taken. There was one taken from right in my driveway, and it looked like it was growing out of my chimney. That was when there were no leaves on the trees obviously.

MR. MERCIER: Okay. So did you do any type of measurement using any kind of mapping, or did you just kind of estimate it?

THE WITNESS (White): I was not able to do that because the balloon was down
obviously, but the time $I$ saw the picture.
MR. MERCIER: Right. I'm just
trying to figure out where you got the 300 to 400 feet. I mean, is that something that you --

THE WITNESS (White): It was an estimation, and I admit that.

MR. MERCIER: Thank you.
And Ms. Kirschbaum?
THE WITNESS (Kirschbaum): Yes.
MR. MERCIER: I was wondering if you had a chance on June 2nd to observe the balloon fly that occurred?

THE WITNESS (Kirschbaum): I did. It was early in the morning before $I$ went to work. And again, it was windy, and it was rainy, and I saw it bob above the trees, and then it went away. The weather conditions were not good. I did see it. As I was leaving the neighborhood and going down the hill, $I$ saw it again. I had extremely clear visibility in the November 2013 float, saw it extremely clearly through -- as a matter of fact, I thought it was -- I didn't know what it was until a neighbor knocked on my
door to tell me what it was. I thought it was a party balloon that got stuck in the trees. And it was so clear I could see the gentleman drive up in his truck to take it down.

MR. MERCIER: In regards to the June 2nd balloon fly, did you see one balloon or both?

THE WITNESS (Kirschbaum): I saw one balloon. I'd like to clarify that in the November 2013 float was at the Site 1 proposed.

MR. MERCIER: Thank you.
Given that the applicant is now proposing a shorter tower, $I$ wasn't sure if CHET has any position regarding a monopine. I'm not sure if there's a collective discussion among your group as to that type of structure.

MR. AINSWORTH: I mean, I think there's a preference -- as it gets closer to the tree line, I think there's a preference that if there has to be a tower that the monopine would be of some benefit because it would blend toward the tree line, and for
those people who had those intermediate distances, $I$ think that would probably be of some relief to them. You know, when it sticks up significantly above the tree line, obviously it makes a larger visual mass, so I think in that circumstance if it were the 170-foot tower, that's probably one where the group probably would not favor that. MR. MERCIER: Okay. Thank you.

I have no other questions at this time. THE CHAIRMAN: We'll now go to questions from the Council, commissioners. Mr. Hannon?

MR. HANNON: I have no questions.
THE CHAIRMAN: Dr. Klemens?
DR. KLEMENS: I have no
questions. But I'd like also the record to show that $I$ have read the -- on June 22nd I came into the offices and read the transcripts of both the hearings on June 2nd.

THE CHAIRMAN: Mr. Levesque?
MR. LEVESQUE: No questions.
Thank you.
THE CHAIRMAN: Attorney Kohler?

MS. KOHLER: The applicant
doesn't have any questions for these lay witnesses.

THE CHAIRMAN: Attorney Baldwin?
MR. BALDWIN: No questions,
Mr. Chairman.
THE CHAIRMAN: Thank you.
Those are all the questions. So at the moment would you please take your seats? We have to do some musical chairs here.

MR. AINSWORTH: Thank you,
Mr. Chairman.
(Witnesses excused.)
THE CHAIRMAN: This is now for
the applicant, Florida Tower Partners.
I ask Attorney Kohler to
reintroduce your panel, but I see it's being reintroduced as we speak. Also, Attorney

Kohler, if there are any witnesses -- I
think Mr. Gustafson has to be sworn in --
MS . KOHLER: Yes.
THE CHAIRMAN: And anybody else.
Verify your exhibits, please.
MS. KOHLER: Thank you.

CARLOTESENTORE,
MICHAELPRILIBERTINE, K E I THESCOP PINS, having been previously sworn, testified further on their oaths as follows:
D EAN
E.
GUSTAFSON, called as a witness, being first duly sworn by Ms. Bachman, was examined and testified on his oath as follows:

MS. KOHLER: We'd like to have Mr. Gustafson accept Exhibits 1 and 6 for identification. Actually Exhibits 1 and 6 have already been accepted, but as he wasn't here for the first hearing, we'd like him to also verify those exhibits.

Mr. Gustafson, did you supervise or participate in the preparation of Exhibits 1 and 6?

THE WITNESS (Gustafson): I did. MS. KOHLER: And did you have any corrections, additions or deletions to make to those exhibits?

THE WITNESS (Gustafson): No. MS. KOHLER: And do you accept
them here today as your testimony?

THE WITNESS (Gustafson): I do. MS. KOHLER: Thank you.

THE WITNESS (Gustafson): You're welcome.

MS. KOHLER: And today the
applicant also --
THE CHAIRMAN: I just ask is
there any objection?
MR. AINSWORTH: No objection.
THE CHAIRMAN: Thank you.
MS. KOHLER: Today the applicant also asks for identification purposes under Roman Numeral II-B-7, 8, 9 and 10, that we be asked to verify those exhibits.

THE CHAIRMAN: Yes.
MS. KOHLER: Mr. Coppins, did you supervise or prepare Exhibit 7?

THE WITNESS (Coppins): Yes.
MS. KOHLER: Do you have any corrections, additions or deletions to make to that exhibit?

THE WITNESS (Coppins): No.
MS. KOHLER: And do you accept it here today as your testimony?

THE WITNESS (Coppins): Yes.

MS. KOHLER: Mr. Centore, did you supervise or participate in the preparation Of Exhibits 7, 8 and 9?

THE WITNESS (Centore): I did.
MS. KOHLER: And do you have any additions, corrections or deletions to make to those exhibits?

THE WITNESS (Centore): I do not.
MS. KOHLER: And do you accept it
here today as your testimony?
THE WITNESS (Centore): I do.
MS . KOHLER: And Mr. Libertine, did you supervise or participate in the preparation of Exhibits 10 and 11?

THE WITNESS (Libertine): Yes.
MS. KOHLER: And do you have any corrections, additions or deletions to make to those exhibits?

THE WITNESS (Libertine): No.
MS. KOHIER: And do you accept it
here today as your testimony?
THE WITNESS (Libertine): Yes.
MS. KOHLER: Thank you. With
that I'd ask that those exhibits be accepted as full exhibits.

THE CHAIRMAN: Is there any objection?

MR. AINSWORTH: There are no objections.

THE CHAIRMAN: The exhibits are accepted.

MS . KOHLER: Thanks.
(Applicant Exhibits II-B-7
through II-B-11: Received in evidence described in index.)

MS. KOHLER: I have just one question for each of three witnesses just for clean up from the last time. I'd like to ask Mr. Libertine to verify the date and the timing of the balloon floats for the record, if you don't mind?

THE CHAIRMAN: Go ahead.
MS. KOHLER: Mr. Libertine, can you just verify the time the balloon was flown at Site 1 and Site 2 on Tuesday, June 2, 2015?

THE WITNESS (Libertine):
Certainly. On that date the first at Site 1 the balloon was up at about 7:30 in the morning, and at Site 2 by 7:45. They were
flown, and we did have some challenging weather conditions that day with the wind, but we were able to maintain balloons at the site until 6 o'clock, as prescribed by the Council.

MS. KOHLER: Thank you.
And Mr. Centore, Mr. Ashton asked you to confirm the dimensions of the cyclone fence mesh. Can you also confirm those dimensions?

THE WITNESS (Centore): The cyclone fence mesh is one-and-one-quarter inch.

MS. KOHLER: Thank you.
And Mr. Coppins, would the applicant be amenable to constructing a stealth facility should the Council deem it appropriate?

THE WITNESS (Coppins): Yes, we would.

MS. KOHLER: Thank you. That's all that we have.

THE CHAIRMAN: Okay. Thank you.
We'll now continue with the cross examination first by staff. Mr. Mercier.

MR. MERCIER: Thank you.
CROSS-EXAMINATION

MR. MERCIER: Mr. Libertine, I just wanted to follow up on some of the visibility discussion we just had with the other panel. I believe it was stated there was a balloon fly in November of 2014. I don't know if it was the $13 t h$ or the $23 r d$, but can you tell me if that was for site 1 or Site 2 or both?

THE WITNESS (Libertine): At that time it was for Site 1, and I can give you that date. Bear with me one second. That was November $30 t h$, and that was actually in 2013. The site goes back a little ways.

MR. MERCIER: Thank you.
In regards to the June 2 nd
balloon fly for the field review, several of the adjacent residents, Mrs. Kirschbaum and Mrs. White who reside on Twin Maple, said they saw a balloon either above the trees or through the trees. Since two red balloons were used for both towers, can you opine as to which one you believe they viewed? Was it the Site 1 balloon or the Site 2 balloon?

THE WITNESS (Libertine): Could you provide me their addresses? I apologize, $I$ don't have that right in front of me.

MR. MERCIER: I think it's 12 Twin Maple Drive is one of them. I have to look also. It's essentially the tower that is Twin Maple Drive is east of Site 1.

THE WITNESS (Libertine): Okay. I'm sorry, they're both on Twin Maple?

MR. MERCIER: Yes, they are.
THE WITNESS (Libertine): I'm going to opine that it would be Site 1 just because of its proximity. When we floated Site 2 in February of 2014, I could not see that from anywhere along Maple Avenue. But again, they may be able to verify if they saw both balloons or not. It's possible that both balloons may have been visible from some locations in the backyards there, but $I$ don't know that for a fact.

THE CHAIRMAN: And the height
that the balloons were flown was what
height?
THE WITNESS (Libertine): In all
cases for the floats that we did independently and for the floats on June 2nd Site 1 was at 150 feet and Site 2 was at 170 feet.

THE CHAIRMAN: Okay. And what's proposed now is?

THE WITNESS (Libertine): Now we've dropped site 2 by 20 feet down to 150 feet, and the proposed Site 1 is dropped down from 150 to 120 feet.

THE CHAIRMAN: Thank you.
THE WITNESS (Libertine): So 20 and 30 feet respectively.

MR. MERCIER: Given that both are now reduced in height, can you provide an opinion as to how you feel a monopine would either blend in or not at both sites?

THE WITNESS (Libertine): I think Site 1 , because of its height reduction down to about 120 feet or so, I think a monopine there certainly is going to probably, from my perspective, going to be a major benefit to any of the folks who I'll call the near view residents, the select folks that do have some views from either their homes or
their backyards. They are through trees, but using some type of a concealment like a monopine is going to certainly soften that effect, and I would venture to say that you're not going to really be able to see a whole lot of distinction through the trees during the winter of that facility if it were a monopine.

The downside to that, as was
mentioned by Attorney Ainsworth, is some of the further views, I'll use the high school as an example about a mile away, it still is above the tree line by probably 20 or 30 feet, maybe a little bit more from some perspectives, that's likely going to give a little bit thicker of a profile on the horizon, but certainly from the near views $I$ think that has a major benefit.

Site 2, I guess you could make the argument that it would have the same benefit from the near views. I get a little concerned when we start talking about 150 feet in height because, again, anywhere it is seen above the trees, and I know there are a few select areas along Codfish Hill

Road to the west where you look back where it's significantly above the trees. I think Site 2 would certainly be more of a prominent feature from those locations. I think there were less immediate residents in the what I'll call the immediate area of the site that can see through to Site 2 through the trees, so I'm probably more of an advocate for a concealing option at Site 1 as being advantageous.

MR. MERCIER: In Your revised photo simulation for Site 2 you have several photographs -- photo simulation Number 14 for Site 1, excuse me, I'm sorry, Site 1. There appears to be a gray house at Number 9 Wolfpits Road?

THE WITNESS (Libertine): Yes.
MR. MERCIER: So is that one of the views you're talking about where it extends I'll call it significant compared to the other photos in this set that you might be concerned about?

THE WITNESS (Libertine): Yes, that site is somewhat elevated, so you're looking across the valley, and it does rise
significantly above the trees. Albeit, we've dropped it 30 feet, so it gets closer to the tree line, but it's still
significantly above the tree line from that perspective, as well as a few others.

MR. MERCIER: Thank you.
Looking through your revised visibility analysis, you provided some figures of a reduction in acreage of visibility. Do you have any figures related to residences? I believe in the previous hearing you said there might be 25 for Site 1 that had year-round views and 12 for Site 2 that would have year-round views. Has that altered at all?

THE WITNESS (Libertine): Not significantly. I think maybe one or two homes in each case may drop out. Without the use of a balloon float and actually physically looking in the field, it's a little difficult to say for sure, but I think we could safely say that you may drop out one to two, but $I$ don't believe it's a significant reduction. And I'll qualify that because the again predominant views are
seasonal associated with this until you start to get significantly away from the site, over three-quarters of a mile away. So I think what we're going to experience is the drop in height brings it down lower into the tree line, and so those homes or those residential properties that may be able to see through the trees are still going to see a portion of the facility. It's just going to be a shorter facility.

MR. MERCIER: Thank you.
In your visibility mapping
there's a legend in the actual maps themselves, you know, it talks about -- it just has a designation for open space and photo locations. Is there a dataset you examined for scenic roads?

THE WITNESS (Libertine): Yes.
Well, there's two. The state maintains for state roads its own dataset, and that's updated periodically, not that often because to go through a state road designation is actually a fairly long process. So we use that, the DOT maintains that, and that's publicly available. The towns have varying
degrees of information that is available, so we try to use web sites. We often call the town to find out if there's any scenic roads designated in the areas. And then obviously as we're doing our reconnaissance, we'll take note of any signs that may be up.

MR. MERCIER: So you examined the Town of Bethel records for this particular application for scenic roads as well as look for signs?

THE WITNESS (Libertine): That's correct.

MR. MERCIER: On the state level do you know if there's a dataset for like scenic views like observation points or anything of that nature?

THE WITNESS (Libertine): Not that I'm aware of that's just a general. There obviously, if we're talking about the Blue Blazed Trails, that type of thing, then there are scenic outlooks that are called out, but I'm not aware of any statute or any other -- I'm not sure what the right term would be -- that singles out or states scenic areas, per se. I think there are a
lot of what I'll call informal scenic areas that are called out in a lot of plans of conservation and development and again on web sites, that type of thing.

MR. MERCIER: Have you seen that type of designation on the local level in your experience?

THE WITNESS (Libertine): Only in a very general sense. Again, I've never seen anything that has any what I'll call regulatory in it in the sense that it's been called out and is shown on maps and is somehow promulgated as a scenic designated area, but certainly most towns will talk about some of what they'll call their scenic areas in general fashion, yes.

MR. MERCIER: Okay. Thank you.
I have no other questions at this time.
THE CHAIRMAN: Thank you.
Senator Murphy?
SENATOR MURPHY: No questions,
Mr. Chairman.
THE CHAIRMAN: Mr. Ashton?
MR. ASHTON: No questions.
THE CHAIRMAN: Mr. Hannon?

MR. HANNON: I have no questions.
Thank you.
THE CHAIRMAN: Dr. Klemens?
DR. KLEMENS: I have a few questions.

Mr. Libertine, attachment $B$ on the detailed site map, I'm looking at that, and then I'm looking at figure 1 -- it's somewhat confusing here -- which is also in the same attachment, it appears to me that -- and tell me if that's correct -that there's a big central flat plateau in the center of the site which is cleared?

THE WITNESS (Libertine): Yes, there's a cleared field that's centrally located at a plateau in the property.

DR. KLEMENS: And I know you talked earlier that there's visibility in some of -- this is all talking now about alternative 2 , which is the so-called central location -- that you said there could be visibility from certain residences along Codfish Hill Road?

THE WITNESS (Libertine):
Correct.

DR. KLEMENS: If one were to take and follow the edge of the field and move what is the orange arrow up maybe, I scaled it about 300 to 400 feet following the tree line getting it truly in the center of the site, it's not much of an elevational difference. Would that make a difference to getting it even further away from residences and having less of a visual impact? THE WITNESS (Libertine): Well, it's a trade-off. I think from the perspective of some of the locations on Codfish Hill Road and to the south, Ichabod Lane, in that general area, I think that would perhaps be some improvement. I do have some concerns about folks to the north on Settlers Road and to the west on Windaway Road. I think that may create a little bit more of a prominent view from those areas, but again, it's a trade-off. Site 2 is fairly centrally located on the site, but it certainly -- a shift of a few hundred feet could certainly make a difference on the Codfish Hill Road side. As I say, I just have a little bit of reservations about what

```
might start to open up to the west and to
the north from those --
    DR. KLEMENS: Right. I can see
that the }\textrm{x}\mathrm{ on this one is really right at
the peak. So I guess as you move north
along the field, you'll be going off the
peak and you'll increase visibility to the
northern and western roads then?
    THE WITNESS (Libertine): I think
just from their perspectives they're looking
up onto that hillside. And there's no
visibility today from the Settlers Road
location unless you're looking through the
trees in the dead of winter and know what
you're looking for. That was a red balloon
at Site 1, and that was very difficult to
see and spot. Windaway Road we have a
couple of photos, and I think you'll see
there that you start to get some visibility,
so I think that might change from moving it
in that direction.
    But yes, to answer your question,
certainly from Codfish Hill Road I think it
would make some difference. I think as you
get westerly on Codfish Hill Road -- and I
```

just want to pick out the right photo number -- I think you're still going to have one or two very short stretches of the road where a tower is going to be above the tree line regardless of where we locate it, particularly with Site 2.

DR. KLEMENS: So your sense then is that Site 2 is the superior location for visibility for the -THE WITNESS (Libertine): Well, if we're strictly talking about number of residential properties that have a potential to see the tower, then the numbers from a quantifiable standpoint, the numbers bear that out. If you're asking me my own personal opinion as to the better site, I tend to favor Site 1 because we can get a lower height, it's buried in fairly thick woods, and I just think it overall provides a lower profile on the horizon. Again, that's just my own personal opinion. As I say, the numbers tend to bear out from a residential standpoint solely that Site 2 would have less visibility.

DR. KLEMENS: It's very hard to
tell because what's going on just to the east of that, $I$ see these long narrow -- how close is there to another road at Site 1?

THE WITNESS (Libertine): The closest road to Site 1 to the east is Maple Drive and that's --

DR. KLEMENS: It's not on this map, so it makes it somewhat difficult to actually --

THE WITNESS (Libertine): I'm sorry, are you looking at the aerial photograph still?

DR. KLEMENS: This one here, the one that has both on them, attachment $B$, detailed site map.

THE WITNESS (Libertine): I don't know exactly which one that is. There is an aerial photo in part one of the application in the very beginning in the executive summary. It's called aerial photograph that also shows it. It may be the same one that's showing Site 1 and Site 2 on it. And if you look to the east, you can just make out --

DR. KLEMENS: Okay. Thank you.

It's very helpful.
So that's your preferred site in the sense of height?

THE WITNESS (Libertine): Having seen both sites several times, and again now that we've got a reduced height going down 30 feet in that location, 1 think it makes a fairly dramatic difference in some of the near views, so I tend to favor that site.

DR. KLEMENS: The site though would have a longer access road, correct?

THE WITNESS (Libertine): It would, yes.

DR. KLEMENS: Would there be more wetland impacts?

THE WITNESS (Libertine): Not that I'm aware of. I'll let Mr. Gustafson speak to that. But my sense is that once we get by the general location of Site 2 , we're really going through an elevated open field that would not be requiring a lot of tree clearing to get up into the Site 1 area, and it's being used now for travel for getting to that part of the property. So I don't believe it's a major difference in overall
environmental impact, but I'm going to let Dean speak to the wetland aspect.

THE WITNESS (Gustafson): From a wetland impact perspective, talking about these alternatives, I would agree, there isn't a significant difference between the two.

DR. KLEMENS: Do any of these wetlands -- while I have you here, Dean, do any these wetlands appear to you to have vernal pool characteristics?

THE WITNESS (Gustafson): No. The only qualification is that based on the limits of the wetlands shown on this mapping, no habitats or potential harmful habitats were observed within this study area. I think that for wetland 4, which is located just to the northwest of 2 , further down that drainage system and possibly off site, but that would be a considerable distance away from the proposed development. There is the potential just because it's a large enough water shed and it becomes somewhat of a depressional wetland system, but that would be a considerable distance
from any development.
DR. KLEMENS: When you say a "considerable distance," can you quantify that?

THE WITNESS (Gustafson): Greater
than 750 feet from the proposed --
DR. KLEMENS: That's what I wanted to hear. Thank you.

I have no further questions,
Mr. Chairman.
THE CHAIRMAN: Thank you.
MR. ASHTON: I have a couple questions.

MR. LEVESQUE: I just want to answer because I have to excuse myself. I didn't have any additional questions for the panel, and I didn't have any questions for Mr. Gustafison. Excuse me.
(Whereupon, Mr. Levesque left the hearing room.)

THE CHAIRMAN: Mr. Hannon?
MR. HANNON: I have no questions.
THE CHAIRMAN: Mr. Ashton?
MR. ASHTON: Mr. Libertine, in
your work you have assumed a tree height of

65 feet; is that correct?
THE WITNESS (Libertine): Yes,
for the entire study area, yes.
MR. ASHTON: Did you confirm that by any field measurements at all?

THE WITNESS (Libertine): We did. There are certainly a substantial amount of trees that are significantly taller than that height, but we tend to be very conservative.

MR. ASHTON: What do you mean by "significantly taller"?

THE WITNESS (Libertine): Some are in the 90 to 95-foot range.

MR. ASHTON: A tree height of 75 feet versus 65, what would that do to your visibility?

THE WITNESS (Libertine): Well, it honestly would not change the areas that we've been able to field verify. Certainly areas that we were not able to and we've used the model, it could change it somewhat. I don't think it would be overly substantive. We were able to get in most cases direct views from adjacent roads, so
we've tweaked our initial model to account for the field observations. So it could reduce it slightly, but 10 feet normally doesn't make a huge difference.

MR. ASHTON: Would that be true
then of 90-foot trees?
THE WITNESS (Libertine): You
start getting to 90 feet, you know, that's probably a 25-foot difference from what we're modeling, that could start to -- you'd start to see some reductions. That would be a little bit more substantive.

MR. ASHTON: Thank you. Nothing further.
(Whereupon, Mr. Lynch entered the hearing room.)

THE CHAIRMAN: Thank you.
Mr. Lynch, we're concluding the cross examination of the applicant. I don't know if you have --

MR. LYNCH: I'm still trying to catch up, Mr. Chairman, so thank you very much.

THE CHAIRMAN: Okay. Thank you.
Let me just make sure I
understand correctly, Mr. Libertine. All things being equal and all the balancing with the reduced heights, which is the one that you -- the site that you feel would be least impactful?

THE WITNESS (Libertine):
Strictly from a visibility standpoint, I favor Site 1. I'm not sure everyone on this panel might agree with me, even on the visibility standpoint. Again, the numbers don't necessarily bear it out in all cases in terms of what would quantify the amount of area overall where there could be visibility, but I always favor shorter towers where feasible. And in this case because the vast majority of views are through the trees, I think that this site tends to lend itself better to overall minimizing views. THE CHAIRMAN: If I understand, Mr. Gustafson, you feel that neither site would have significant more impact than the other site; is that correct?

THE WITNESS (Gustafson): That's correct. I mean, in the grand scheme of
things as far as potential wetland impacts, there's no direct wetland impacts with either site. As far as proximity to wetland resources, generally speaking, the nearest -- any of the activities that come within wetlands is about 50 feet. Site 1 does a little bit better job at providing greater buffers to nearby wetland resources than Site 2 , but with respect to potential impact to functions and values, I don't think development of either site would adversely affect any of the wetland systems located in proximity to either one of the sites.

THE CHAIRMAN: And I guess,
Mr. Centore, from a road construction standpoint, is there a significant difference, impact or cost, of --

THE WITNESS (Centore): There is not. Site Number 1 has, although it has a longer road, has less grading requirements around the compound area, where Site Number 2 has a shorter road but has considerably more grading involving the compound area in constructing the compound area. Tree
removals are pretty close for both scenarios in counts.

THE CHAIRMAN: Thank you.
Mr. Hannon?
MR. HANNON: I know we've probably talked about it before, but from a structural perspective when you're talking about monopines, what sort of safe upper limit, I mean, because I thought like 150 was getting kind of beyond that scope?

THE WITNESS (Centore): Are we talking about structural capacity or visibility?

MR. HANNON: No, just in terms of when building some of the stealth units going in with a monopine, what seems to really be sort of the limit of a safe construction? It almost seems like the 150 elevation, from what I remember, I thought that might be stretching it a bit?

THE WITNESS (Libertine): I don't want to speak necessarily for the structural, but if it is kind of an overlap. I think we've certainly seen monopines as tall as 160 and over, so structurally they
can be done. It certainly means the base and the foundation all has to be accounted for, so you start to get a bit of a wider profile of the actual monopole itself. I was speaking strictly to once we start talking 150, even 140, that starts to get up there, and in a Connecticut setting with the tree canopy and everything else, there are going to be locations where it's going to stick significantly above the tree line. So from my perspective, I kind of -- I like to see these type of facilities, if they're going to be camouflaged with trees, to stay below that 150 or 140 threshold. I just think they work better in those capacities. But Carlo may be able to speak a little bit more to the loading issues. Yes, 160 is the tallest I've seen.

THE WITNESS (Centore): The tallest that our firm has worked on is 160-foot monopine in Winchester. It was constructible. There were no issues in constructing it. The mat foundation from memory was about -- and actually we did that a few times -- was about 27-foot square,

6-feet thick. So it was quite a substantial mat as opposed to what we typically see as a 20 to 24-foot square mat on it. Again, it's constructible. It's just a matter of how much concrete you need and how much steel you need to make it work, but it's doable.

MR. HANNON: Thank you.
THE CHAIRMAN: Dr. Klemens, did you have anything?

DR. KLEMENS: Is that the tower you're referring to you see from 44?

THE WITNESS (Centore): Yes, I would think so; yes.

DR. KLEMENS: Thank you. It put it into context for me.

THE CHAIRMAN: Mr. Mercier.
MR. MERCIER: Yes. I just want
to follow up on the diagram you were discussing earlier, the aerial photo. I think it's on page 6 of the application, part one. You were talking regarding Twin Maple Drive, Windaway Road, and things of that nature. Looking at the map at Site 1 and going due south, there's a property that's kind of open, a house on it, with

```
some evergreens along the driveway. I think
it's listed as }74\mathrm{ Codfish, according to the
abutters' map. Given the revised heights of
both facilities, what's your sense of
visibility from that particular property
that kind of juts up into the site property?
                                THE WITNESS (Libertine): Well, I
think that's likely the one property that
has some form of direct or certainly
indirect views. When I stood from Site 1
and looked back into that property during
the November 2013 float, I could see
portions of the home, and certainly I could
see the back porch light on, so there are
lines of sight. My guess is, and again not
having been on the property for any of the
floats, my guess is that during the tree
heights -- excuse me, the tower heights
down, particularly at Site 1, is probably
going to get that from that perspective
closer to the tree line, if not in the tree
line, but that's -- I'm somewhat working on
conjecture here just having not stepped on
the property. Certainly the reduction in
height is going to be an improvement for
```

that property just because we're able to get it down 20 and 30 feet respectively.

When I stood at Site 2, I could not see directly into that property, but again, the perspective is different as you're looking from the property towards something in the air. But $I$ guess to answer your question, $I$ think certainly it's going to improve, whatever views there are, it's certainly going to be more buffered.

MR. MERCIER: You don't have a sense of which one might have the lesser view, I guess --

THE WITNESS (Libertine): Site 1 is slightly closer.

MR. MERCIER: I mean, above the trees. That's my sense. That's what I'm asking, if you --

THE WITNESS (Libertine): My guess is because it's at a little bit lower ground elevation, that because we're able to drop 30 feet, Site 1 may actually come down into the tree line where Site 2 may still be slightly above the tree line from those perspectives, but again, $I$ can can't confirm
that.
MR. MERCIER: Thank you. I have no other questions.

THE CHAIRMAN: Mr. Lynch?
MR. LYNCH: Mr. Libertine, coming back to the height of the tower and the tree canopy again -- and I apologize for coming in late. If you've gone over this, just let me know, and we won't do it again.

THE WITNESS (Libertine): Sure.
MR. LYNCH: What is the average tree height in this area, do you know?

THE WITNESS (Libertine): Well, there are specimens that kind of range all over the place, but around the site itself I think those trees are certainly anywhere from 60 to 85 or 90-feet tall, depending upon the type of trees we're talking about.

MR. LYNCH: That leads me to a taller monopine, you know, would pretty much stand out above that?

THE WITNESS (Libertine):
Certainly from some of the more what I'll call the more remote locations, once we start getting out about three-quarters of a
mile or so and wherever you're gaining any kind of elevation you're kind of looking across a bit of a shallow valley. It kind of dips in through the knolls there. So yes, there are some locations where it certainly is above the canopy significantly. MR. LYNCH: Which leads me to my real question in that wouldn't a thinner profile of a monopole at those same distances be less obtrusive? THE WITNESS (Libertine): From those distances, yes, that's my opinion, and I think I'm on the record stating that. I think where the discussion has gone prior to you joining us was that there are some near views through the trees on some of the not necessarily abutters but certainly some of the neighbors that are within close proximity. So the question or at least the discussion was going down the line of if you're looking through the trees, especially in the wintertime, would a monopine help soften those views, and I think from those locations certainly anything that could be done in terms of concealment, whether it's
painting, adding the faux branches, that type of thing, certainly would help.

MR. LYNCH: I thank you. And I apologize for having you rehash everything all over again.

THE WITNESS (Libertine): Oh, no, apologies aren't necessary.

THE CHAIRMAN: Dr. Klemens?
DR. KLEMENS: Yes.
In the category of possible
rehash, I understand from reading the transcript of these applications that Site 2 was developed at the request of the Town of Bethel; is that correct?

THE WITNESS (Coppins): That's correct.

DR. KLEMENS: And what were the justifications, because everything you have said is $I$ don't understand what their interest was or justification was in asking to locate it in the more central area?

THE WITNESS (Coppins): If you'll go back to the same page that you had with the visibility, the cluster of trees that look more into the middle of the property
right next to Site Number 2, right in the middle of the clearing.

MS. KOHLER: On the aerial map. THE WITNESS (Coppins): On the aerial map that you were just on. DR. KLEMENS: I see a cluster of trees no where near Site 2. It's in the middle of a field.

THE WITNESS (Coppins): It's in the middle of the field, correct.

DR. KLEMENS: Yes.
THE WITNESS (Coppins):
Originally when we -- we're going back several years now, but originally the landowner placed us in that spot, and we filed that on the land records. When we went before the town and during the technical report a year or two had passed and since then she didn't want the -- the landowner didn't want it in that section; however, the town thought it was in that spot. And the questioning became more and more at the town meeting of why we moved it. And so we developed Site Number 1 was our original technical report, and then at their
request wanted to know if we could move it back to a more centrally-located spot in the property, which we were able to, but she didn't want it in the middle of her field again. She wanted to put it in behind what I call a rock cut, and that's where Site 2 -- how Site 2 became more of a viable site.

DR. KLEMENS: But what was the reason, did they say a reason for having it more central? Did they offer any kind of a reason?

THE WITNESS (Coppins): The original reason was they wanted to move it away from Site 1 , which was the neighborhood that was on -- what's the name of that road?

THE WITNESS (Libertine): Twin Maple.

THE WITNESS (Coppins): Twin Maple Road.

DR. KLEMENS: So they wanted it further away from Twin Maple Drive?

THE WITNESS (Coppins): Correct.
DR. KLEMENS: Which was the
reason they asked you to move it more

```
centrally?
```

    THE WITNESS (Coppins): That's
    correct.

DR. KLEMENS: At that time what was the height of the tower that you were proposing then?

THE WITNESS (Coppins): Once we determined the location, 170 feet was the height that worked for AT\&T.

DR. KLEMENS: At Site 1?
THE WITNESS (Coppins): At Site 2.

DR. KLEMENS: And at Site 1 what was proposed?

THE WITNESS (Coppins): Was 150 feet.

DR. KLEMENS: Now it's 120 feet,

```
Site 1?
```

THE WITNESS (Coppins): That's correct.

DR. KLEMENS: Okay. Thank you.
THE CHAIRMAN: Let's continue now with Mr. Ainsworth who's representing the Codfish Hill Environmental Trust.

MR. AINSWORTH: Mr. Libertine,
one of the first questions you were asked was about a stealth facility. What were you defining as a stealth facility when you gave that testimony earlier today?

THE WITNESS (Libertine): I was under the impression we were talking about a monopine.

MR. AINSWORTH: And just for the benefit of all the Council members, at both Site 1 and Site 2 , a monopine would be beneficial for the let's say near site views as opposed to the far site views?

THE WITNESS (Libertine): Yes, I agree with that; yes.

MR. AINSWORTH: And when you look at the photograph that shows the view from the high school, which is a little over three-quarters of a mile away, correct?

THE WITNESS (Libertine): Yeah, about a mile away.

MR. AINSWORTH: Or about a mile away. At that distance the antenna structure -- the tower structure appears to be fairly thin on the horizon?

THE WITNESS (Libertine): Yes, it
does.
MR. AINSWORTH: So at that
distance would it also not be true that it would be difficult to discern the difference between a tall tree and a monopine in terms of one being real and one being artificial?

THE WITNESS (Libertine): I think generally, yes. I would only qualify that in that from a lot of the views, certainly in picture 17 from the original visibility analysis for $I$ believe it's Site 2, it would be kind of what I'll call the lone pine. There are pines actually to the south of there to the right in that photo; but yes, from that distance, yes, it would be hard to tell the difference between whether that was a real tree or a monopine.

And I think just to give everybody some perspective, if you do look at photo simulation number 17 from the Bethel High School behind Site Number 2, which is behind Exhibit 2 in the original application, part one, I think if you were to take the platforms that can be seen on the horizon at the top of that facility and
more or less think of those as branches and bring those all the way down with a bit of a taper, that's essentially what you'd be looking for. It would be a much tighter configuration because it would be faux branches, but that might be helpful for everyone in terms of maybe the overall width or bulk of what it might look like on the horizon.

MR. AINSWORTH: So given the relatively minor impacts at distance, wouldn't it tend to favor giving relief to the closer views for the nearby neighbor?

THE WITNESS (Libertine):
Absolutely.
MR. AINSWORTH: Now, originally
when North Atlantic -- and I'm not sure who on the panel might be appropriate for this one. When North Atlantic originally developed this application, did it do its own, you know, coverage gap analysis, or were you in communication with one of the carriers?

THE WITNESS (Coppins): I think
from the first hearing we have an RF
engineer on staff, and we developed a search ring based on the information that he provided to us, and that's how we got this site.

MR. AINSWORTH: But your RF engineer would have to be looking at existing coverage; would he not?

THE WITNESS (Coppins): I'm sure he was.

MR. AINSWORTH: Was he looking at coverage from a particular carrier's perspective?

THE WITNESS (Coppins): I can't answer what he was necessarily looking at because -- I mean, he provided a site, and that's when we went and looked.

THE CHAIRMAN: ExCuse me, Mr. Lynch has a follow-up.

MR. LYNCH: Mr. Ainsworth, can I ask a follow-up question?

MR. AINSWORTH: Absolutely.
MR. LYNCH: Mr. Coppins, when
your RF engineer now is analyzing
territories or sites, being that the
industry has kind of changed a little bit
from coverage area to delivering data services, do you take that into account in your search?

THE WITNESS (Coppins): I would think that he does take that into account with a search. Again, I'm not a hundred percent sure how he determines a ring, but I would assume so based on where the industry has gone.

MR. LYNCH: Thank you.
MR. AINSWORTH: So Mr. Coppins, just to clarify, do you know what parameters the RF engineer uses to determine where the coverage -- where the search rings would be located?

THE WITNESS (Coppins): I do not.
MR. AINSWORTH: Originally this application obviously had AT\&T involved. Was North Atlantic Towers involved with or communicating with AT\&T about their needs in particular?

THE WITNESS (Coppins):
Absolutely, yes.
MR. AINSWORTH: And was North
Atlantic Towers in communication with any
other carriers regarding their coverage needs?

THE WITNESS (Coppins): Once we determined an area and we have a property under contract, we let all the carriers know where we are, what we're doing, and we work with them on a day-to-day basis, yes.

MR. AINSWORTH: But that
communication or the notification to the other carriers would have been after the initial selection was done for the site, correct?

THE WITNESS (Coppins): Yes.
MR. AINSWORTH: Because you had a lease on it at that point?

THE WITNESS (Coppins): A lease, and we know of a need based on our RF engineer, and then we send it out to the carriers, and they say yes or no, not at this time, we need it, but maybe it's a 2020 or a 2015 site or whatever that date was.

MR. AINSWORTH: Clearly AT\&T was
interested. What were the responses from the other carriers?

THE WITNESS (Coppins): Well,

Verizon is here with us, so they obviously are interested in the site as well. I haven't heard anything back from T-Mobile or Sprint.

MR. AINSWORTH: If AT\&T were to
locate on this -- well, you originally determined the tower to be at 150 to 170-feet respectively, correct?

THE WITNESS (Coppins): That's correct.

MR. AINSWORTH: And which carrier was supposed to be on top of that tower?

THE WITNESS (Coppins): That would have been AT\&T.

MR. AINSWORTH: So those heights were determined to be suitable for AT\&T's purposes?

THE WITNESS (Coppins): That's correct.

MR. AINSWORTH: And now that they're out of the sort of the running here, you were able to reduce the heights to meet the other carriers' needs?

THE WITNESS (Coppins): That is correct.

MR. AINSWORTH: So if AT\&T were to locate on the tower in the future, they would have to go at a lower height; would they not?

THE WITNESS (Coppins): I'm not sure what their needs would be. They would have to tell me what their height parameters would be at that point in time.

MR. AINSWORTH: But if there were a tower let's say 120-feet or 150-feet high and Verizon is at the top -- actually is it Verizon that you were proposing to have at the top?

THE WITNESS (Coppins): Verizon would be at the 120 and 150-foot, depending on the site.

MR. AINSWORTH: So if Verizon is at the top of either one of these towers at Site 1 or Site 2, then any other co-locating carrier would have to be at a correspondingly lower height?

THE WITNESS (Coppins):
Typically, yes.
MR. AINSWORTH: And the next spot down is, what, 20 feet below or --

THE WITNESS (Coppins): Ten feet, yes.

SENATOR MURPHY: Can I ask a question?

MR. AINSWORTH: Absolutely.
SENATOR MURPHY: YOu're now
talking about the reduced height. Are you building this tower not to be expandable upward?

THE WITNESS (Coppins): So to answer your question, we would build and do our foundation as an expandable tower.

SENATOR MURPHY: And then under the Federal Regulations you could go up to 10 percent?

THE WITNESS (Coppins): I'm sorry, $I$ didn't hear that.

SENATOR MURPHY: Under the
Federal Regulations you can go up 10 percent. So in answer to Attorney Ainsworth's question, AT\&T could have the tower increased to go higher?

THE WITNESS (Coppins): That's correct, but they would obviously have to come back before the Council.

SENATOR MURPHY: That's right, but --

THE WITNESS (Libertine): Senator Murphy, just for clarification or just I guess for everyone's information, it's standard in this industry to construct and build a foundation so that all towers are expandable by at least 20 feet. That's standard.

SENATOR MURPHY: I realize that, but the way he was answering the question, it was like AT\&T would have to go under, which is not necessarily true because it can go up, right?

THE WITNESS (Libertine):
Certainly.
SENATOR MURPHY: So I just wanted to get on the right track. Or maybe he misunderstood your question, but under Federal Regulations they have a right to -almost the right to go up. So, I'm sorry.

MR. AINSWORTH: No, that's a fair question, and actually that's where $I$ was headed.

SENATOR MURPHY: I'm sorry.

MR. AINSWORTH: But it doesn't matter who asked the question.

Now, obviously North Atlantic must have looked at alternative locations when you were trying to determine what site to put forward before the Council?

THE WITNESS (Coppins): Yes, we did.

MR. AINSWORTH: And I notice in Exhibit $H$ of the original application that there were some sites, and I'll refer to 11, 12 and 13, Sugar Street, Taunton Hill Road and Dodgingtown Road. And let's say for Taunton Hill Road, it says "This site did not meet the needs of AT\&T and was ruled out as being too far outside of the ring."

When you saw that AT\&T dropped out of this proceeding, did you go back and look at any of the previously-considered alternative sites to see if it would work for other carriers?

THE WITNESS (Coppins): We didn't look at -- we didn't go back and look mainly because we know that AT\&T still has a need in the area in the vicinity. So if we were
to build one at Sugar Road, AT\&T is coming back for another tower.

MR. AINSWORTH: If AT\&T had such a burning need to be at this location, don't you think they would continue to be participating in the proceeding?

THE CHAIRMAN: If you know the answer --

MS. KOHLER: I object. That's not a fair question.

THE WITNESS (Libertine): This is a timing issue with AT\&T. It's unfortunate that we're here and they're not here with us, but this is a cyclical business decision that is made by carriers, and for whatever reason, which is more planning and financial than it is need driven, they elected not to pursue this, and they've elected not to pursue several other facilities that were in the planning stages at this time. This is not the first time this has happened.

MR. AINSWORTH: True, but as a result of their withdrawing from the proceedings, their exhibits are no longer part of these proceedings. If they had
simply not shown up to this proceeding but left their materials in the record, they would have been able to -- certainly have their need presented to the Council, albeit without much advocacy. But they withdrew, doesn't that indicate a lack of a public need for their services at this location? MS. KOHLER: I think the letter that AT\&T filed speaks for itself. It indicates they still have a need for a facility in the area, but right now budgetary constraints indicate that they cannot pursue the site at this point. I think Attorney Laub's letter speaks for itself.

MR. AINSWORTH: I don't want to debate what it actually says, but I'm not sure if budgetary was the sole reason.

So just to clarify, North
Atlantic Towers did not go back and relook at any of the alternative sites with regard to the other carriers' needs to see if any of the alternatives would better suit their needs, correct?

THE WITNESS (Coppins): No.

Again, because of the letter that was written by AT\&T, they still have a need for this site in this location.

MR. AINSWORTH: Based on what
evidence in the record?
THE WITNESS (Coppins): I think AT\&T provided a letter that stated so.

MR. AINSWORTH: But there's no other technical data that would back that up in the record?

THE WITNESS (Coppins): We just have a letter stating that they have a need.

MR. AINSWORTH: Now, we were
talking about the relative merits of Site 1 and Site 2 in terms of visual impact to the neighborhood. Isn't it true that the close views for the immediate neighbors would be more prominent at Site 1 than they would be at Site 2 because of the relative location on the property? And the aerial photograph would be of some assistance.

THE WITNESS (Libertine): I think there are probably six or seven homes on the west side of Twin Maple Road that are proximate to Site 1 , and then we
mentioned -- we discussed 74 Codfish Hill Road previously and abutting property there that probably are maybe not equal distance but probably fairly close to either of those facilities. So I guess in that sense from a strict proximity standpoint, yes, there's probably a few more homes that are closer to the Site 1 , yes.

MR. AINSWORTH: I think I may
have asked this previously, but to your knowledge, there's nothing preventing any tree clearing within this particular property, not the site, but the actual property itself where the site is located? THE WITNESS (Libertine): Nothing preventing anyone in that neighborhood from cutting their own trees down, no.

MR. AINSWORTH: And if there were any tree clearing or development of the site, wouldn't that make Site 1 particularly more prominent to the Twin Maple Drive residences than Site 2?

THE WITNESS (Libertine): Well, if you're suggesting that tree clearing was to occur east of Site 1 only, then certainly
it would reduce the amount of buffer of forest; and yes, there would certainly be increased views through the trees.

MR. AINSWORTH: When you calculated the number of homes with views, that's only including houses -- views from houses or yards themselves, correct?

THE WITNESS (Libertine): It's only from within a -- somewhere within a property, a residential property, yes.

MR. AINSWORTH: So it doesn't include the views of let's say residents who are driving around town and how many people would be able to see the tower?

THE WITNESS (Libertine): That's correct.

MR. AINSWORTH: You mentioned that the base of the tower can be seen. Which tower were you referring to?

THE WITNESS (Libertine): I'm not sure when $I$ mentioned that, but certainly -I'm not sure about the base of the tower, but certainly some of the lower portions of either tower can potentially be seen through the trees in the wintertime from some of the
neighboring properties. And the only reason -- I don't mean to be difficult. When you say "base," I think of the compound itself, and I think those first 15, 20 feet are going to be fairly buried in both locations. So I'm very confident that you're not going to have direct views to be seen through a chain-link fence and into the equipment. I'm more concerned with above that level as you start to get into the tree line, that type, so the pole itself. So that's the only distinction I'm making between the base and what I'll call the main portion of the pole.

MR. AINSWORTH: So then you're talking about, let's say, from 15 or 20 feet to 40 feet, in that range?

THE WITNESS (Libertine): Or even higher, yes. Again, depending upon where you are standing and where you're looking and at what site.

MR. AINSWORTH: And you also expressed -- you said you favor Site 1, Mr. Libertine, and that was generally because the views are reduced from the top
of the tower at a distance?
THE WITNESS (Libertine): No, it's kind of a combination. I think the reduced height overall is kind of swaying me towards Site 1. Granted, we may be splitting some hairs here, but having driven up and down Twin Maple Drive on a few occasions now with the balloon, granted, at 150 feet, it was clear to me that there were going to be some locations where you would be able to see through the trees and see portions of the pole. But when I take the overall viewscape, that does include some more distant views, my sense is that at 120 feet $I$ think Site 1 is going to be less visible overall, both to neighbors, both to folks driving around, and at the high school and other areas where we've shown and demonstrated that there will be some visibility, $I$ think the character of those views are going to be less intrusive than 150-foot facility at Site 2. And again, that's just my opinion. I'm not saying Site 2 would be grossly more visible, but if $I$ had to pick one strictly on a visibility
standpoint, that would be my selection would be Site 1.

MR. AINSWORTH: And you base that on, you know, you talk about the balloon height at 150 feet. You said you had some weather challenges, which means there was wind that day?

THE WITNESS (Libertine): On the 2nd of June for the Council hearing, yes, that's correct.

MR. AINSWORTH: So that balloon wouldn't have been appearing at its full intended height; would it not?

THE WITNESS (Libertine): No, but actually -- and I'm not trying to be cute here -- it actually in those conditions, not that we would ever use that for a visibility analysis that we do independently, but it actually is helpful when the balloon is being kicked off in these type of conditions only in the sense that you get an idea -again, we're looking at a red balloon. When you build a tower, you don't have that type of coloration. We use red for that very reason so that we can pick it out, but when
it starts to bounce around at lower elevations, it gives you a good idea as to how much visibility is coming through the woods.

So in that sense it was somewhat helpful going up and down Maple because every once in a while you could see it bouncing through the foliage, so it helped me understand that, yeah, there are going to be some -- it only substantiated, I guess, what I knew from our initial work is that there are going to be some areas, particularly in the winter, where you're going to be able to see through and be able to see a portion of the pole. Other than that, no, the challenge of the wind is not very helpful in other cases.

MR. AINSWORTH: And of course a monopine would assist those particular views through the trees?

THE WITNESS (Libertine): It
would certainly help, yes, it would definitely assist, as would painting it a color. And the reason I say that is because let's not forget when we're talking about
monopines, the branches typically are brought down to a portion of the pole that starts to intercept the canopy of the trees and a little bit, maybe 10 or 15 feet, below that. So not necessarily are those branches going to come all the way down to what let's call the fence line or the height of the shelter 10 feet above grade, and so those poles are typically painted brown or some other color to again assist with that blending in.

So you're going to get kind of a different or a double effect here where you've got faux branches being brought down into the canopy so that as you look through the trees, yes, it's going to look very obscured, but you're going to say, oh, yeah, that's greenery, but you're also going to have the main trunk of the tree which is not going to likely have a significant amount of branches below a certain height. So that height could be from zero to 40,45 feet.

MR. AINSWORTH: There's no
technical reason why you can't bring the branches lower than that, is there?

THE WITNESS (Libertine): Not that I'm aware except for just the structural consideration.

MR. AINSWORTH: But like --
THE WITNESS (Centore): Clearance to equipment would be the only concern. You've got shelter that's, you know, the top of it's probably about 12 feet above grade, so you'd want to clear that and any exhaust from the generator and that sort of thing. So I would say 16 to 20 feet can be achieved above grade.

THE WITNESS (Libertine): And I would add that in those cases if you were going to bring it down that low, which has been done in some cases, $I$ would not advocate doing it to the full extent that you would where you're trying to hide the antennas and the arrays that are at the top, because again, if you go and look and walk through the woods, when you see pine trees, a lot of times they start to lose their lower branches and you get kind of a real hodgepodge, for lack of a better -arrangement of those branches. So if we
were to consider that, $I$ would say you'd want to have that kind of a sporadic arrangement so that it didn't look like a Christmas tree essentially. I think that would draw more attention to it, quite honestly, by having it too full in the actual -- within the canopy, down within the canopy.

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

MR. LYNCH: Either Mr. Libertine or Mr. Centore, I know in some of the monopines they actually use, for lack of a better term, an artificial bark that goes up and down the tree. How beneficial is that in describing what Mr . Ainsworth is looking for?

THE WITNESS (Libertine): My own feeling on the bark is that if you're within maybe 100 feet or less of it, then it's somewhat beneficial because it might look from that distance as though you have kind of a bark around it. Once you start moving away a couple a hundred feet, I honestly don't think you're going to be able to tell
the difference as to whether that looks like bark or whether it's just going to be brown with different shades. That's all it's going to be. You're not going to notice the texture. We've actually gone through that exercise on several facilities that have been built either with bark and without, and we find, as I say, once you get beyond a hundred and -- depending on how good your eyes are -- anywhere from maybe 70 feet to maybe 150, I'll give you. Once you get beyond there, you're not going to notice that difference because it's a texture. So the brown monopoles work almost as effectively, again, once you get beyond that distance.

MR. LYNCH: Thank you.
THE WITNESS (Libertine): I'm not a big advocate of the bark. It's a lot of maintenance as well. I'd rather see the money spent rather than on the bark and doing additional branches on the tree, quite honestly.

THE CHAIRMAN: Apparently it's a subject of great interest to the Council.

Mr. Hannon and then Dr. Klemens would also have follow-up.

MR. HANNON: I just want to make sure that I understand something. In terms of the visibility analysis that was done both for Site 1 and Site 2, for Site 1, going back to the original application, I'm assuming that the antennas that are shown on the tower are at the 10-foot increments?

THE WITNESS (Libertine): That's correct.

MR. HANNON: So to try and get a better feel for Site 1, you'd be coming down to about -- coming down to three level antenna, and at Site 2 it would be two. So we could theoretically look at the pictures to get an idea of where the new top of the tower would be, correct?

THE WITNESS (Libertine): That's correct. We've actually done that in the revised. The balloon is still shown at the original flown heights of 150 and 170 , but we've modeled the tower, and we're able to drop it to 120 and 150 respectively.

MR. HANNON: Thank you.

THE CHAIRMAN: Thank you.
Dr. Klemens?
DR. KLEMENS: I just would like Mr. Libertine to maybe revisit the question I asked earlier. You've been talking about visibility analyses, and you've brought sort of three sort of classes in a sense, you talk about the proximal neighbors, you've talked about people driving around on the roads, and you've talked about the far views. So if we could discard the far views and discard the people driving around the roads, can you tell me in your professional opinion the impact to the proximal neighbors, compare 1 and 2, please, numbers and impacts between that?

THE WITNESS (Libertine): When you say "numbers," are you talking about the number --

DR. KLEMENS: Number of residences and also the severity of the impact because I think to me there's -that's the people that are here, that's the people who have intervened, and I think I'd like to understand from that perspective
what is the better design -- the better location, excuse me.

THE WITNESS (Libertine): Well, it really doesn't change my original opinion. Yeah, are there more folks along Twin Maple Drive that are closer to Site 1 than are to Site 2 , yes, but I don't believe that every one of those folks on the west side, certainly the folks on the east side, are not going to have direct views of the site. And when we drop it by 30 feet, I think a lot of the views really do get buried. I'm not against Site 2 being constructed. I just always -- I'm always in favor of a shorter tower. I think these are very close in terms of the views to neighbors, so I think I stand by Site 1. I think it's close. I'm not saying it's overwhelming, but if it were me, I always favor a shorter tower.

DR. KLEMENS: Okay. Thank you.
Thank you, Mr. Chairman.
THE CHAIRMAN: Mr. Ainsworth, continue.

MR. AINSWORTH: Thank you, sir.

And just to follow up on that last line, but Site 2 is actually 800 feet further away than Site 1 from the Twin Maple Drive residences. Isn't that a significant distance given that there is some tree cover between those two sites?

THE WITNESS (Libertine): Yes, it's certainly substantial; yes.

MR. AINSWORTH: And of course when you render your opinion as to which one you believe is better from a visual perspective, have you consulted with the neighbors in that determination?

THE WITNESS (Libertine): The only consultation I've had with the neighbors was when we flew Site 1 in November of 2013. One of the neighbors was out walking the property, and we had a chat for quite a while. And it was very productive, I thought, but that's the only consultation I've had with the neighbors.

MR. AINSWORTH: And also just to clarify, the reason why Site 1 is able to go down to 120 and Site 2 is at 150 is because the location at Site 2 is actually lower in
geographical height physically, correct?
THE WITNESS (Libertine): I
believe so. I don't have the numbers in front of me, but $I$ believe so.

THE WITNESS (Centore): Correct, it's the change in ground elevations between the two locations.

MR. AINSWORTH: So from distant views, the two should be relatively similar because they are effectively the same height above mean sea level; isn't that true?

THE WITNESS (Libertine): Yes, I think that's safe to say.

MR. AINSWORTH: So in terms of the differences of visual impact, it would be the closer views that would be differing in quality as opposed to the distant views?

THE WITNESS (Libertine):
Depending on where you're standing. Quite honestly, I don't believe this is a very visible site, whether you're talking about Site 1 or Site 2. I know that's not a popular answer in this room, but that's based on what we've been able to determine. I don't think either one of these sites are
going to be very visible from neighbors.
Now, are there going to be a few folks in the area who are going to be able to look through and see portions of it? Yes, we can't make these things invisible. But I've been doing this for over 20 years. This is as good as a site as they come, either Site 1 or Site 2. It's not easy to locate these type of facilities when you stick a pole up in the air 130 or 150-feet tall. This is minimal visibility overall.

And that's really where I come down to on this site. Look, I have no problem if they want to select Site 2 over Site 1, if everyone thinks that's a better site from proximity to close neighbors. I don't think it makes a big difference. A hundred and thirty versus 150 to those neighbors $I$ think does make a bit of a difference. That's really where I'm splitting the hairs over.

MR. AINSWORTH: And there are air-conditioning units that are installed typically at these sites?

THE WITNESS (Libertine): Yes.

MR. AINSWORTH: And they generate some noise outside of the compound; is that not true?

THE WITNESS (Centore): Yes, they do.

MR. AINSWORTH: And being, let's say, 800 feet further away should make a difference in the quality of any sound that --

THE WITNESS (Centore): I'm going to say it would be below the $d B$ requirements to the property lines that are state required noise levels at the property line, just based on our experience with these types of units. What could be done too is they could be oriented to be away from the neighborhoods as part of the design, which is easy enough to do.

MR. AINSWORTH: But relative,
Site 1 to Site 2, the one that's more centrally located would be further away from the residences, so regardless of the state requirements, it would be quieter from any receptor being further away; would it not?

THE WITNESS (Centore): Yes.

THE WITNESS (Libertine): Not any receptor. We're making the assumption that we're talking just about Twin Maple Drive now because Site 2 does have proximity to other neighbors, just so we're all on the same page here.

THE WITNESS (Centore): Yes, with shorter distances.

MR. AINSWORTH: Nothing further at this time. Thank you.

THE CHAIRMAN: Okay.
Attorney Baldwin, do you have anything?

MR. BALDWIN: Just one question, Mr. Chairman.

I'd just like to follow up quickly on the question Mr . Ainsworth asked regarding the alternative sites that were considered as part of the application. I would ask if you could summarize for the Council or remind the Council the information in the site summary, which I think is Exhibit H? Site 1 in that list is the site at Codfish Hill Road that's proposed; is that correct?

THE WITNESS (Coppins): That's correct.

MR. BALDWIN: And Sites 2 through 8 and Site 13, the reasons why those sites were rejected is because the property owner was not interesting in leasing space on those parcels; is that correct?

THE WITNESS (Coppins): That's correct.

MR. BALDWIN: And only parcels 9, 10, 11 and 12 were rejected by, I assume, AT\&T for RF reasons; is that correct?

THE WITNESS (Coppins): That's correct.

MR. BALDWIN: And then Site 14 on that list was rejected for limited ground space; is that correct?

THE WITNESS (Coppins): Yes, that's correct.

MR. BALDWIN: Do you have any reason to believe that going back to any of those property owners who were not interested in the past would be interested today?

THE WITNESS (Coppins): I
actually have gone back to them prior to filing, and $I$ have one very nasty e-mail that said absolutely not and spoke -- yes, we did go back to them, and they were not interested.

MR. BALDWIN: Thank you. Nothing
further.
THE CHAIRMAN: We're going to
break for lunch now until quarter of 2 , and then we'll continue with Verizon.
(Whereupon, the witnesses were excused and a recess for lunch was taken at

```
12:49 p.m.)
```


## AFTERNOON SESSION

1:48 P.M.
THE CHAIRMAN: Good afternoon.
We'll resume our hearing. It's
approximately 1:50. And we'll now go to the appearance by the intervenor, Cellco

Partnership, Attorney Baldwin.
MR. BALDWIN: Thank you,
Mr. Chairman. Again, Kenneth Baldwin with Robinson \& Cole on behalf of the intervenor, Cellco Partnership doing business as Verizon Wireless.

We have two witnesses to present this afternoon. Carlo Centore with Centek Engineering has already been sworn, but we also have Ryan Ulanday who's a radio frequency design engineer with Cellco Partnership, and I would offer him to be sworn at this time.

called as a witness, being first duly sworn by Ms. Bachman, was examined and testified on his oath as follows:
 having been previously duly sworn,
testified further on his oath as follows:

MR. BALDWIN: Mr. Chairman, I have four exhibits that Cellco would like to offer today. They are listed in the hearing program under Roman IV, subsection B, items 1 through 4. And I offer them now for identification purposes, subject to verification. If I could ask my witnesses to verify those exhibits? Did you prepare or assist in the preparation of the exhibits listed in the hearing program under Roman IV, Section B, 1 through 4? Mr. Ulanday?

THE WITNESS (Ulanday): Yes, I did.

MR. BALDWIN: Mr. Centore? THE WITNESS (Centore): Yes, I did.

MR. BALDWIN: And do you have any corrections or modifications to offer to any of the information contained in those exhibits at this time? Mr. Ulanday?

THE WITNESS (Ulanday): I have one correction. In our response to question
number 11 on the first set of interrogatories, our response to question number 11 should have been "No. As mentioned above in response to question number 10," instead of question "11."

MR. BALDWIN: Mr. Centore?
THE WITNESS (Centore): I do, I have one correction. Under Set I of the interrogatory responses to question number 12, there's a call out for the ground equipment to be a "12 by 30 " shelter. The correction needs to be made to reflect a "12 by 26" shelter.

MR. BALDWIN: And with those corrections and modifications, is the information contained in those exhibits true and accurate to the best of your knowledge? Mr. Ulanday?

THE WITNESS (Ulanday): Yes.
MR. BALDWIN: Mr. Centore?
THE WITNESS (Centore): Yes.
MR. BALDWIN: And do you adopt the information in those exhibits as your testimony today? Mr. Ulanday?

THE WITNESS (Ulanday): Yes.

MR. BALDWIN: Mr. Centore?
THE WITNESS (Centore): Yes.
MR. BALDWIN: I offer them as
full exhibits, Mr. Chairman.
THE CHAIRMAN: Is there any objection?

MR. AINSWORTH: No objection.
MS. KOHLER: No objection.
THE CHAIRMAN: Okay, the exhibits are admitted.
(Intervenor Cellco Partnership
d/b/a Verizon Wireless Exhibits IV-B-1
through IV-B-4: Received in evidence described in index.)

THE CHAIRMAN: We'll now go to the cross-examination starting with

Mr. Mercier.
CROSS-EXAMINATION
MR. MERCIER: Thank you.
Let's begin by looking at Cellco
Exhibit 4. This is the supplemental
responses to Siting Council interrogatories submitted on July 7th. Attached to the document are supplemental maps 5 through 12. So I'll just look at numbers 5 to 8 really.

```
Now, I understand Verizon intends to install equipment servicing four different frequencies. I'm just trying to determine the relationship between your data service frequencies, that's the 700 megahertz and the 2100 megahertz, is that correct, those are specific to data services?
THE WITNESS (Ulanday): That's correct.
MR. MERCIER: How do the two different wireless services interrelate?
THE WITNESS (Ulanday): The 700 and the 2100?
MR. MERCIER: Yes.
THE WITNESS (Ulanday): Actually
the lower the frequency, the farther away it gets. So with 700 megahertz we can get more coverage compared to the 2100 megahertz frequency.
MR. MERCIER: What would be the advantage of having the 2100 megahertz?
THE WITNESS (Ulanday): Actually the advantage of getting the 2100 would be the additional capacity.
```

MR. MERCIER: So nearer a tower you can pick up additional users?

THE WITNESS (Ulanday): Yes, within a certain distance within the tower.

MR. MERCIER: So it's capacity only?

THE WITNESS (Ulanday): Capacity only, yes.

MR. MERCIER: Is it possible just to instead of having 2100 megahertz antennas to install another set of 700 antennas, is that something that ever could be done such as, you know, do you have double the amount of 700 services, is that possible?

THE WITNESS (Ulanday): Right now we only have one block of 700 megahertz because in the future we may get another one, but as of today we have only one block of 700 .

MR. MERCIER: So your antennas at we'll say the Codfish Hill sites, the proposed ones, have a certain block, and due to data services they could reach capacity; and if they did, then the 2100 megahertz picks up the additional capacity?

THE WITNESS (Ulanday): That's correct.

MR. MERCIER: Thank You.
Now, is the same true for your voice data services, 850 and 1900 megahertz systems?

THE WITNESS (Ulanday): That's correct. For 850 that's our main frequency that we use for our 3G.

MR. MERCIER: Give me a moment.
(Pause.)
MR. MERCIER: NOW for this
proposed tower, which of the four
frequencies determines the height you would need or requesting for that matter?

THE WITNESS (Ulanday): It would be the 700 megahertz frequency.

MR. MERCIER: In regards to the responses to the Council interrogatories, Set II, response 3 , that was also July 7, it states that the proposed Codfish Hill site would provide capacity related to the Alpha sector of Cellco's Bethel site, which has already been exhausted. What service frequency has already been exhausted at the

Bethel site?
THE WITNESS (Ulanday): Right now it's the 700 megahertz frequency.

MR. MERCIER: And does this 700 megahertz service extend to the Codfish Hill area currently?

THE WITNESS (Ulanday): Right now it extends to the Codfish Hill, but it is very unreliable.

MR. MERCIER: Now, going back to those coverage maps you submitted as part of the supplemental responses, I'll just pick map 5, which is 700,120 feet at Site 1, just to discuss how the coverage works for that matter. The area that's shown as magenta is listed as proposed 700 megahertz coverage, and it's over the top of purple coverage, it says existing. So in that area where the magenta is covering existing service, does that represent capacity relief in some way?

THE WITNESS (Ulanday): It could represent a capacity, but the purple right now I have actually -- that's the coverage for the existing sites, right?

MR. MERCIER: Yes.
THE WITNESS (Ulanday): But when we get to Bethel East, we would definitely optimize those existing sites, so we will have to create a hole to minimize interference and noise issues, signal to interference and noise issues.

MR. MERCIER: Just so I
understand, so assuming that this tower was constructed, the proposed tower, you would go to the Bethel site and kind of optimize it, as you said, to reduce the amount of overlap with the new Codfish Hill tower; is that right?

THE WITNESS (Ulanday): That's correct.

MR. MERCIER: In areas where there will be overlap, how does a wireless device assign to a particular tower?

THE WITNESS (Ulanday): The
network actually selects. It depends on -there's actually a couple of parameters that the cell phone looks at. First of all, the power that it receives from all the sectors, and then there's what we call the quality,
quality of the signal. So those two are the major.

MR. MERCIER: So a device, if you're on the overlapping area and it's going to try to go on, so we'll just say the existing Bethel site, but that's at all the available, I'll call them, slots are used, so it would just automatically transform over to the Bethel, new Bethel East site?

THE WITNESS (Ulanday): That's correct. That's another parameter that the network looks at. If one sector is already congested, the network may allocate it to another sector with less traffic.

MR. MERCIER: Going back to the map here, I see that some of the proposed 700 megahertz service extends up to the site called Bethel North. Would that also provide capacity relief to that particular location?

THE WITNESS (Ulanday): It may just be actually that we didn't optimize the Bethel East proposed site. That's why it's going up towards Bethel North, but definitely we'll be able to -- when we get
the site, we will definitely optimize it not to overlap Bethel --

MR. MERCIER: So it would be optimized to relieve Bethel Alpha but also be optimized to limit interference with adjacent sites that might be shown on this particular --

THE WITNESS (Ulanday): That's correct.

MR. MERCIER: Okay. I have no other questions at this time. Thank you. THE CHAIRMAN: Thank you. Senator Murphy? SENATOR MURPHY: Mr. Ulanday, from an RF engineer's standpoint, which of these proposed towers is the best for Verizon?

THE WITNESS (Ulanday): RFIs, they cover what we wanted to cover, so as for my personal opinion, they're the same.

SENATOR MURPHY: So as far as you're concerned, it makes no difference from an RF standpoint?

THE WITNESS (Ulanday): RFIs, there's no difference or very little
difference for that matter.
SENATOR MURPHY: Okay. I have no further questions, Mr. Chairman.

THE CHAIRMAN: Mr. Ashton?
MR. ASHTON: Just a couple of questions. When we talk about a frequency block, we're really talking about discrete frequencies assigned to Cellco in this case within a broad frequency band; is that fair to say?

THE WITNESS (Ulanday): That's correct, licensed.

MR. ASHTON: Right, you're licensed to use only certain frequencies?

THE WITNESS (Ulanday): That's correct.

MR. ASHTON: It may be a few megahertz bandwidth, but you can only operate in that area at 700 or whatever number it is. And as I recall, 700 is the old TV frequency block, isn't it?

THE WITNESS (Ulanday): It is the old, yes, the old frequencies from the UHF televisions.

MR. ASHTON: So TV was
reassigned, and you're able to purchase this, a block of frequency in that area; is that right?

THE WITNESS (Ulanday): That's correct.

MR. ASHTON: And it's to everyone's advantage, I assume, to be able to operate in the 700 range because, as you testified, it carries further; is that fair to say?

THE WITNESS (Ulanday): That's correct, yes.

MR. ASHTON: So insofar as you can use 700 , it means the tower spacing can be further apart for a given load?

THE WITNESS (Ulanday): That's correct, but it depends on a lot of factors like the terrain.

MR. ASHTON: Oh, yeah. Okay.
Well, all things being equal?
THE WITNESS (Ulanday): Yes, definitely.

MR. ASHTON: I have nothing
further. Thank you.
THE CHAIRMAN: Thank you.

Dr. Klemens?
DR. KLEMENS: I have no
questions. Thank you.
THE CHAIRMAN: Mr. Hannon?
MR. HANNON: I have no questions.
Thank you.
THE CHAIRMAN: Mr. Lynch?
MR. LYNCH: The only questions I had were on data service delivery, and Mr. Mercier covered them very well.

THE CHAIRMAN: Mr. Mercier?
MR. MERCIER: Just one other follow-up question regarding the existing Bethel site. Is there 2100 megahertz equipment on that site?

THE WITNESS (Ulanday): Yes, there is.

MR. MERCIER: So how does that relate to the capacity problem at the 700 level that you're experiencing on the Alpha sector?

THE WITNESS (Ulanday): Like I mentioned earlier, the 2100 megahertz actually don't go that far. That's why the 700 megahertz that we are experiencing
congestion right now or exhaustion.
MR. MERCIER: Okay. Thank you.
THE CHAIRMAN: Thank you.
The applicant, Attorney Kohler?
MS. KOHLER: I have no questions
for Verizon.
THE CHAIRMAN: Okay. Attorney
Ainsworth, Codfish Hill Environmental Trust?
MR. AINSWORTH: Thank you, sir.
You mentioned there's 700
megahertz congestion, or you said I think you used both "congestion" and "exhaustion." What's the difference between those two terms in your parlance?

MR. ASHTON: Mr. Ainsworth, would you keep your voice up? We're going to have this room redecorated, I understand, and maybe that will solve the problem. It's a dead room sound wise, and even your clients can't hear.

MR. AINSWORTH: Let me repeat the question.

You used both the terminology of "congestion" and "exhaustion" for 700 megahertz. Could you explain the difference
between those two?
THE WITNESS (Ulanday): Actually they are basically the same. It just means that the resources available right now on that site has been exhausted, but I guess the congestion term has been from my experience way back in GSM days we called it congestion, so basically they are the same.

MR. AINSWORTH: Did Cellco have a search ring in this area prior to this application?

THE WITNESS (Ulanday): Yes.
MR. AINSWORTH: And was Cellco in communication with the applicant prior to them submitting their application?

THE WITNESS (Ulanday): No.
MR. AINSWORTH: What sites did Cellco have that it investigated in this area prior to the application?

THE WITNESS (Ulanday): We actually answered that in Question Number 11 where we mentioned that we've always had a search area within the area, but due to budgetary constraints we didn't really commence to doing the formal search for
candidates.
MR. AINSWORTH: So is it fair to say that Cellco didn't do an RF analysis on alternative locations prior to the application?

THE WITNESS (Ulanday): Yes, they did not.

MR. AINSWORTH: And there were some alternative locations that were looked at by AT\&T. Did Cellco do any RF analysis on those locations?

THE WITNESS (Ulanday): No, we did not.

MR. AINSWORTH: Did Cellco review any alternative technology that might be able to be used to provide the capacity that it's looking for with this facility?

MR. BALDWIN: Could you just be more specific? "Alternative technology" is kind of a broad term.

MR. AINSWORTH: Sure. Did Cellco investigate another method other than the standard cell sites such as a microcell or a repeater or DAS?

THE WITNESS (Ulanday): No, we
did not.
MR. ASHTON: Was there any reason that you did not?

THE WITNESS (Ulanday): When we got this petition from AT\&T, that's the only option that we looked at. And when we -based on our analysis, the site will -we'll get what we want from the site, so we jumped right into what they are proposing.

MR. ASHTON: Is it fair to say that if you chose a small tower, you would not get the coverage you do out of a site like this; is that fair to say?

THE WITNESS (Ulanday): That's correct.

MR. ASHTON: So that alternatives are not necessarily equal in their capability to what you're getting as proposed?

THE WITNESS (Ulanday): They are definitely very different.

MR. ASHTON: Thank you.
THE CHAIRMAN: Mr. Lynch?
MR. LYNCH: Under the DAS system
would you be able to incorporate all your
different frequencies?
THE WITNESS (Ulanday): That's the limitation actually for that system, you can only choose a frequency. You are limited to expansion, so you have to deploy that one frequency, and if you need to expand, there's no way to -- there's very limited way to expansion.

MR. LYNCH: Which frequency would be eliminated?

THE WITNESS (Ulanday): Can you -- I said "limited," not "eliminated."

MR. LYNCH: Okay. Sorry. Thank you.

MR. AINSWORTH: So as you sit here today as an RF engineer, you're not aware of any other alternative site -whether any alternative site would provide what Cellco needs or whether it would do it better?

THE WITNESS (Ulanday): That's probably true.

MR. ASHTON: Mr. Ainsworth, don't we have to qualify that by saying a site that is available? There could be a
gazillion alternate sites that might work, but if none of them are available, they're all for naught.

MR. AINSWORTH: Sure. And for example, Cellco would have no knowledge of whether 131 Taunton Hill Road in Newtown would provide adequate coverage?

MR. BALDWIN: Mr. Ainsworth, I think we've answered that question. I think what Mr. Ulanday has said is that Verizon Wireless did not investigate the other sites that are included in the site search summary presented in the application. So since that is one of those, I think we've answered that question.

THE CHAIRMAN: I think you're correct.

MR. AINSWORTH: Then I have no further questions for this applicant.

THE CHAIRMAN: Before closing
this hearing, the Connecticut Siting Council --

Attorney Kohler, you're looking at me as if you want to $I$ don't know what.

MS. KOHLER: No, I just wanted to
just make a brief closing statement.
THE CHAIRMAN: We don't normally, unless there's -- because then we need everybody --

MS. KOHLER: Okay. That's okay.
THE CHAIRMAN: And it would just go on and on. And there will be, as I will state in a matter of seconds, an opportunity obviously to submit --

MS. KOHLER: We don't have any rebuttal then.

THE CHAIRMAN: Okay. Thank you. Before closing this hearing, the Connecticut Siting Council announces that briefs and proposed findings of fact may be filed with the Council by any party or intervenor no later than August 13th, so that hopefully answers that question. The submission of briefs or proposed findings of fact are not required by the Council, rather we leave it to the choice of the parties and intervenors.

Anyone who has not become a party or intervenor but who desires to make his or her views known to the Council may file

```
written statements with the Council within
30 days of the date hereof.
    The Council will issue draft
findings of fact, and thereafter parties and
intervenors may identify errors or
inconsistencies between the Council's draft
findings of fact and the record. However,
no new information, no new argument or
evidence or reply briefs without our
permission will be considered by the
Council.
Copies of the transcript will be made of the hearing and will be filed with the Bethel Town Clerk's Office. And I hereby declare the hearing adjourned. And thank you all for your participation.
(Whereupon, the witnesses were excused, and the above proceedings were adjourned at 2:14 p.m.)
```

CERTIFICATE
I hereby certify that the foregoing 115 pages are a complete and accurate computer-aided transcription of my original stenotype notes taken of the Council Meeting in Re: DOCKET NO. 458, FLORIDA TOWER PARTNERS LICe $d / b / a$ NORTH ATLANTIC TOWERS FOR

A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE, AND OPERATION OF A TELECOMMUNICATIONS FACILITY AT ONE OF TWO LOCATIONS AT 62-64 CODFISH HILI ROAD, BETHEL, CONNECTICUT, which was held before ROBERT STEIN, Chairman, and JAMES J. MURPHY, JR., Vice Chairman, at the Connecticut Siting Council, Ten Franklin Square, New Britain, Connecticut, on July 14, 2015.


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

|  |  |  |  | 117 |
| :---: | :---: | :---: | :---: | :---: |
| 1 |  | I N D E X |  |  |
| 2 | WITNESSES | KENNETH PARSONS | Page 8 |  |
| 3 |  | LEON KURJIAKA |  |  |
| 4 |  | GILLEAN REINDERS |  |  |
| 5 |  | MARK REINDERS |  |  |
| 6 |  | SUSAN WHITE |  |  |
| 7 |  | CARYL L. KIRSCHBAUM |  |  |
| 8 | EXAMI | NERS : |  |  |
| 9 |  | Mr. Ainsworth |  |  |
| 10 |  | Mr. Mercier |  |  |
| 11 | WITNESSES | DEAN E. GUStAFSON | Page 23 |  |
| 12 |  | CARLO F. CENTORE |  |  |
| 13 |  | MICHAEL P. LIBERTINE |  |  |
| 14 |  | KEITH E. COPPINS |  |  |
| 15 | EXAMI | NERS : |  |  |
| 16 |  | Ms. Kohler |  |  |
| 17 |  | Mr. Mercier |  |  |
| 18 |  | Dr. Klemens |  |  |
| 19 |  | Mr. Ashton |  |  |
| 20 |  | The Chairman |  |  |
| 21 |  | Mr. Hannon |  |  |
| 22 |  | Mr. Lynch |  |  |
| 23 |  | Mr. Ainsworth |  |  |
| 24 |  | Senator Murphy |  |  |
| 25 |  | Mr. Baldwin |  |  |




```
In d e x: (Cont'd.)
```

EXHIBIT
DESCRIPTION
PAGE
III-B-5 Pre-filed testimony, received12

May 26, 2015:
a. Gordana Bogdan
b. Mark Reinders
c. Gillean Reinders
d. Susan White
e. Caryl L. Kirschbaum
f. Lada Bedriy
g. Leon Kurjiaka

III-B-6 Pre-filed testimony of Susan 12
White, dated July 2, 2015

CELLCO PARTNERSHIP $\mathrm{d} / \mathrm{b} / \mathrm{a}$ VERIZON WIRELESS
EXHIBITS (Received in evidence)

EXHIBIT DESCRIPTION
IV-B-1 Cellco Partnership d/b/a
PAGE

Verizon Wireless request to
intervene, dated May 14, 2015
IV-B-2 Cellco Partnership d/b/a 97
Verizon Wireless responses to
Council interrogatories, Set I,
dated May 26, 2015


| A | $\begin{aligned} & \text { 53:22;61:13;67:11; } \\ & \text { 69:23;72:17;78:15, } \\ & \text { 16,19;82:13;83:5; } \end{aligned}$ | $\begin{aligned} & \text { 56:5;58:5;64:6;73:1; } \\ & \text { 76:19;77:22;78:22; } \\ & \text { 80:10;81:20;83:15; } \end{aligned}$ | $\begin{array}{\|l} \text { 72:21;91:18;110:4,9, } \\ \text { 15,19;112:17,18 } \\ \text { alternatives (3) } \end{array}$ | 56:12 appropriate (2) 27:18;62:18 |
| :---: | :---: | :---: | :---: | :---: |
| able | 84:20;87:2,25;93:1; | 94:9 | 43:5;72:23;111:16 | approximately (2) |
| $\begin{aligned} & \text { 18:11,25;27:3; } \\ & 29: 17: 31: 5: 34: \end{aligned}$ | $\begin{aligned} & \text { 98:16,23;101:24; } \\ & \text { 102:21,22;103:22; } \end{aligned}$ | $\begin{array}{\|c} \hline \text { against (1) } \\ 86: 13 \end{array}$ | $\begin{array}{\|c} \text { although (1) } \\ 48: 20 \end{array}$ | $\begin{aligned} & 13: 16 ; 94: 5 \\ & \text { area (29) } \end{aligned}$ |
| $\begin{aligned} & 29: 17 ; 31: 5 ; 34: 7 ; \\ & 45: 20,21,24 ; 50: 16 ; \end{aligned}$ | 107:24;109:2,21; | agenda (1) | always (5) | $6: 13,24 ; 32: 6 ; 36: 14$ |
| 53:1,21;58:3;66:22; | 112:3 | $5: 6$ | $47: 14 ; 86: 14,14,19$ | $38: 14 ; 42: 22 ; 43: 17$ |
| $72: 3 ; 75: 14 ; 77: 11$ $79: 14.14: 82: 25$ | $\begin{array}{\|r\|} \hline \text { add (1) } \\ 81: 14 \end{array}$ | $\begin{array}{\|l\|} \text { agree (3) } \\ 43: 5 ; 47: 9 ; 60: 14 \end{array}$ | $\begin{gathered} \text { 109:22 } \\ \text { amenable (1) } \end{gathered}$ | $\begin{aligned} & 45: 3 ; 47: 13 ; 48: 22,24, \\ & 25 ; 54: 12 ; 56: 21 ; 64: 1 \end{aligned}$ |
| 84:23;87:23;88:24; | adding (1) | ahead (2) | 27:16 | 65:4;70:25;72:11; |
| 89:3;103:25;106:1,7; | 56:1 | 6:4;26:17 | among (1) | 89:3;101:6,15,18; |
| $110: 16 ; 111: 25$ | additional (6) $44 \cdot 16 \cdot 83 \cdot 22 \cdot 98 \cdot 25$ | AINSWORTH (125) | $20: 18$ | $103: 4 ; 105: 19 ; 106: 2$ |
| above (21) 19:17.21:4.28. | $\begin{aligned} & 44: 16 ; 83: 22 ; 98: 25 \\ & 99: 2,25 ; 118: 18 \end{aligned}$ | $\begin{aligned} & 3: 12,16 ; 5: 20 ; 6: 10, \\ & 17,22 ; 7: 6,9,11,12,24 \end{aligned}$ | $\begin{array}{\|l\|} \hline \operatorname{amount}(6) \\ 45: 7 ; 47: 12 ; 75: 1 ; \end{array}$ | $\begin{aligned} & 109: 10,19,23,23 \\ & \operatorname{areas~(11)} \end{aligned}$ |
| 19:17;21:4;28 | additions (10) | $8: 16,17 ; 9: 1,6,10,13$ | 80:20;99:13;102: | 31:25;35:4,25;36:1, |
| 40:4;50:10;53:16,24; | 9:2,19;10:9,24 | 18,23;10:1,3,8,12,15, | analyses (1) | 16;38:19;45:19,21; |
| 54:21;55:6;76:9;80:8; | 11:15;12:13;23:21 | 18,23;11:2,5,7,12,17, | 85:6 | 77:18;79:12;102:17 |
| 81:8,12;88:11;96:4; | 24:20;25:6,17 | 22;12:2,5,12;13:8 | analysis (8) | argument (2) |
| 115:18 | addresses (1) | 14:21;16:16,19,23 | 33:8;61:11;62:21 | 31:20;115:8 |
| Absolutely (5) | 29:2 | 17:4;20:20;22:12 | 78:18;84:5;110:3,10; | around (14) |
| 62:15;63:21;64:23; | ad | 24:9;26:3;31 | 111:7 | 6:24;14:24;1 |
| 68:5;93:3 |  |  | analyzing | 16:2,5;17:22;48:22; |
| abutters (1) | adjacent (3) <br> 28:19;45:25;104:6 | 61:2;62:10,16;63:5, 10,19,21;64:11,17,24; | 63:23 | $\begin{aligned} & 54: 15 ; 75: 13 ; 77: 17 ; \\ & 79: 1 ; 82: 23 ; 85: 9,12 \end{aligned}$ |
| $55: 17$ <br> abutters' | adjourned (2) | $\begin{aligned} & 10,19,21 ; 64: 11,17,24 ; \\ & 65: 8,14,22 ; 66: 5,11 \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { announces (1) } \\ 114: 14 \end{array}$ | $79: 1 ; 82: 23 ; 85: 9,12$ arrangement (2) |
| $52: 3$ | 115:15,19 | 15,20;67:1,9,17,24; | answered (3) | 81:25;82:3 |
| abutting (1) | administer (1) | 68:5;69:22;70:1,9 | 109:21;113:9,14 | arrays (1) |
| 74:2 | 8:5 | 71:3,22;72:16;73:4,8, | antenna (2) | 81:19 |
| accept (5) | Administrative (3) | 13;74:9,18;75:4,11, | 60:22;84:15 | arrow (1) |
| 23:11,24;24:23; | 4:16;5:11;6:3 | 17;76:15,22;78:3,11; | antennas (5) | 38:3 |
| 25:9,20 | admit | 82:10 | 19;84:8;99:10 | artificial (2) |
| accepted (3) | 19:7 | 82:16;86:23,25;87:9, | $11,20$ | 61:6;82:14 |
| 23:13;25:24;26:6 | admitted (3) $7: 15 ; 12: 21 ; 97: 10$ | $\begin{aligned} & \text { 22;88:8,14;89:22; } \\ & 90: 1,6,19 ; 91: 9,17 \end{aligned}$ | $\begin{array}{\|r} \text { apart (1) } \\ 106: 15 \end{array}$ | ASHTON (34) <br> 5:16;6:4,6,14,18 |
| $\begin{gathered} \operatorname{access}(2) \\ 6: 13 ; 42: 1 \end{gathered}$ | admitting (1) | $97: 7 ; 108: 8,9,15,21$ | $\begin{gathered} \text { 106:15 } \\ \text { apologies (1) } \end{gathered}$ | $\begin{aligned} & 5: 16 ; 6: 4,6,14,18 ; \\ & 7: 1,7 ; 27: 7 ; 36: 23,24 \end{aligned}$ |
| accordance (1) | 12:17 | 109:9,13,17;110:2,8, | 56:7 | 44:12,23,24;45:4,11, |
| $5: 5$ | adopt (7) | 14,21;112:15,23; | apologize (4) | 15;46:5,13;105:4,5 |
| according (1) | 9:6,23;10:12;11:2 | 113:4,8,18;118:10 | 4:5;29:3;54:7;56 | 13,17,25;106:6,13,19, |
| 52:2 | 17;12:7;96:2 | Ainsworth's (1) | Apparently (2) | 23;108:15;111:2,10, |
| account (3) | $\begin{aligned} & \text { advantage (3) } \\ & 98: 22,24 ; 106: 7 \end{aligned}$ | $\begin{gathered} 68: 21 \\ \text { air (2) } \end{gathered}$ | $16: 23 ; 83: 24$ | $16,22 ; 112: 23 ; 118: 9$ |
| 46:1;64:2,5 | 98:22,24;106:7 <br> advantageous (1) | air (2) 53:7;89:10 | $\begin{array}{\|c} \text { appear (1) } \\ 43: 10 \end{array}$ | $\begin{array}{\|c} \text { aspect (1) } \\ 43: 2 \end{array}$ |
| $\begin{aligned} & \text { accounted (1) } \\ & 50: 2 \end{aligned}$ | advantageous (1) 32:10 | air-conditioning (1) | $43: 10$ appearance (1) | $43: 2$ assign (1) |
| accurate (1) | adversely (1) | 89:23 | 94:6 | 102:19 |
| 96:17 | 48:12 | Alb | appearing ( | assigned (1) |
| achieved (1) | advocacy (1) | 33:1;72 | 78:1 | 105:8 |
| 81:11 | 72:5 | allocate (1) | appears (4) | assist (4) |
| acreage (1) | advocate (3) $32: 9 ; 81: 17 ; 83: 19$ | 103:13 | $\begin{aligned} & 18: 3 ; 32: 15 ; 37: 1 \\ & 60: 23 \end{aligned}$ | $\begin{aligned} & 79: 19,23 ; 80: 1 \\ & 95: 12 \end{aligned}$ |
| $\begin{gathered} 33: 9 \\ \operatorname{across}(2) \end{gathered}$ | $\begin{array}{r} 32: 9 ; 81 \\ \text { aerial (7) } \end{array}$ | $\begin{array}{\|l\|} \hline \operatorname{almost}(3) \\ 49: 18 ; 69: 21 ; 83: 1 \end{array}$ | applicant (11) | 95:12 assistance (1) |
| 32:25;55:3 | 41:11,18,20;51:19; | along (7) | 20:14;22:1,16;24:6, | 73:21 |
| Act (1) | 57:3,5;73:20 | $\begin{aligned} & 4: 9 ; 29: 16 ; 31: 25 ; \\ & 37: 23: 39: 6: 52: 1: 86: 5 \end{aligned}$ | $\begin{aligned} & \text { 11;26:8;27:16;46:19; } \\ & 108: 4: 109: 14: 113: 19 \end{aligned}$ | $\begin{array}{\|l} \hline \text { associated (1) } \\ 34: 1 \end{array}$ |
| 4:16 activities (1) | $\begin{gathered} \text { affect (1) } \\ 48: 12 \end{gathered}$ | Alpha (3) | APPLICANT'S (4) | $\begin{array}{\|c\|} \hline 34: 1 \\ \text { assume (3) } \end{array}$ |
| $\begin{gathered} \text { activities (1) } \\ 48: 5 \end{gathered}$ | 48:12 <br> afternoon (4) | $\begin{aligned} & \text { Alpha (3) } \\ & \text { 100:22;104:4 } \end{aligned}$ | $118: 13,16,20,23$ | $\begin{aligned} & \text { assume (3) } \\ & 64: 8 ; 92: 11 ; 106: 7 \end{aligned}$ |
| actual (4) | 17:20;94:1,3,14 | 107:20 | application (16) | assumed (1) |
| 34:13;50:4;74:13 | Again (30) | altered (1) | 4:17,24;35:9;41:18; | $44: 25$ |
| 82:7 | 8:17;17:2; | 33:15 | 51:20;61:23;62:20; | assuming (2) |
| actually (33) | 29:17;31: | alternate | 64:18;70:10;84:7; | 84:8;102:9 |
| 6:10,12;13:25; | $\begin{aligned} & 36: 3,9 ; 38: 20 ; 4 \\ & 42: 5 ; 47: 10 ; 51: \end{aligned}$ | alternative | $\begin{aligned} & 91: 19 ; 109: 11,15,19 \\ & 110: 5 ; 113: 13 \end{aligned}$ | $\underset{91: 2}{\text { assumption (1) }}$ |
| $\begin{aligned} & \text { 23:12;28:14;33:19; } \\ & 34: 23 ; 41: 9 ; 50: 24 ; \end{aligned}$ | $52: 15 ; 53: 5,25 ; 54: 7,9$ | $37: 20 ; 70: 4,20$ | applications (1) | AT\&T (21) |


| 59:9;64:18,20; | 47:2 | benefit (5) | 17:16;93:9 | 30:15;32:7;39:3; |
| :---: | :---: | :---: | :---: | :---: |
| 6:5,14;67:1; | BALDWIN (25) | 20:24;30 | Bridgeport (1) | 40:17;41:23;44:3; |
| :21;69:12;70:15, | 3:23;22:4,5;91:12 | 1;60:9 | 3.7 | 50:1;53:25;61:24; |
| 17,24;71:1,3,12;72:9; | 14;92:3,10,15,20; | best (3) | brief (1) | 63:19;68:3,19;69:13; |
| 73:2,7;92:12;110:10; | 93:6;94:7,8,9;95:3,17, | 14:22;96:17;104:16 | 114: | 75:18,24;78:25; |
| 1:5 | 20;96:6,14,20,22; | Bethel (21) | briefs (3) | 81:11;85:13;98:18; |
| AT\&T's | 97:1,3;110:18;113:8; | 4:12,13,24;5:3 | 114:15,19;115 | 99:2;105:18;106:14 |
|  | 118:6 | :8;56:14;61:21 | ing (3) | 14;112:4,11 |
| Atlantic | balloon (34) | 100:23;101:1;102:3, | 62:2;80:24;81:15 | candidates (1) |
| 3:4;4:18;6 | 13:10,14,16 | 11;103:6,9,9,18,23, | ings (1) | 110:1 |
| 64:19,25;70:3;72:20 | 15;15:3,4,11,24;16:1, | 24;104:2,4;107:14; | 34:5 | canopy (7) |
| Attached (1) | 7;18:13,25;19:13; | 115:14 | Broad | 50:8;54:7;55:6 |
| A | 20:2,7,8,10;26:15,19, | better (13) | 3:6;105:9;110:20 | 80:3,15;82:7 |
| attachment | 24;28:7,18,21,25,25; | 40:16;47:18;48:7 | brought (3) | capability (1) |
| 17:3;37:6,10;4 | 33:19;39:15;77:8; | 50:15;72:23;81:2 | 80:2,14;85 | 111:18 |
| attempt (2) | 78:4,11,19,22;84:21 | 82:14;84:13;86:1, | brown (3) | capacities (1) |
| 15:19;17: | balloons (10) | 87:11;89:15;112:20 | 80:9;83:2,14 | 50:15 |
| attention (1) | 13 | beyond (4) | budgetary (3) | capacity (12) |
| 82:5 | 15:19;17:8;27:3; | 49:10;83:8,12,1 | 72:12,18;109:2 | 49:12;98:25;99:5,7 |
| Attorn | 28:22;29:18,19,23 | big (3) | buffer (1) | 23,25;100:22;101:20, |
| 8:5;13:8;16 | band (1) | 37:12;8 | 75:1 | $23 ; 103: 19 ; 107: 19$ |
| 21:25;22:4,17,19; | 105:9 | bit (16) | buffered | 110:16 |
| 31:10;68:20;72:14 | bandwidth | 4:4;31:14,16;38:18 | 3:10 | Carlo (3) |
| $1: 12 ; 94: 7 ; 108: 4,7$ | 105:18 | 25;46:12;48:7;49:20; | buffers | 50:16;94:14;118:3 |
| 113:23 | bark (7) | 50:3,16;53:20;55:3 | 48:8 | carrier (2) |
| August (1) | 82:14,19,23;83:2 | 62:2;63:25;80:4; | build ( | 66:11;67:2 |
| 4:17 | 19,21 | 89:19 | 68:11;69:7 | carriers (8) |
| automatic | base (6) | Blazed (1) | 78:23 | 62:23;65:1,5,10,19, |
| 103:8 | 50:1;75:18,22;76:3, | 35:20 | buildin | 24;70:21;71:15 |
| able | 13;78:3 | blend | :15;68 | carriers' (2) |
| ;34: | based (8) | 20:25;3 | built (1) | 66:23;72:22 |
| 103:7;109:4;112:25; | 43:13;63 | blending ( | 83:7 | carrier's (1) |
| 113:2 | 65:17;73:4;88:24; | 80:11 | bulk (1) | 63:11 |
| Avenue | 90:14;111:7 | block (6) | 62:8 | carries (1) |
| :16 | basically (2) | 99:16,18,22 | buried | 106:9 |
| average | 109:3, | 21;106:2 | 40:18;76 | Caryl (2) |
| 54:11 | basis (1) | blowing ( | burning (1) | 8:1;10:15 |
| aware (6) | 65:7 | :17 |  | case (3) |
| 13:13;35:18,22 | Bear (4) | Blue (1) | busines | 33:18;47:15;105:8 |
| 42:17;81:2;112: | 28:13;40:14,22 | 35:20 | 71:14;94:11 | cases (6) |
| vay (18) | 47:11 | bob (1) | C | $\begin{aligned} & 30: 1 ; 45: 25 ; 47: 11 ; \\ & 79: 17: 81: 14.16 \end{aligned}$ |
| $38: 8 ; 43: 21 ; 58: 15,22$ | $57: 22 ; 58$ | bobbing |  | catch (1) |
| 60:18,20,22;82:24; | become (1) | 17:14 | calcu | 46:22 |
| $87: 3 ; 90: 7,16,21,24$ | 114:23 | both (20) | 75:5 | category (1) |
| $98: 17$ | becomes | 20:8;21:20;28:10 | call (16) | $56: 10$ |
|  | 43:23 | 23;29:10,18,19;30:1 | 4:2;30:23;32:6,2 | cell (2) |
| B | Bedriy | 17;41:14;42:5;49:1; | 35:2;36:1,10,15 | 102:23;110:2 |
|  | 8:2;12:6 | 52:4;60:9;76:5;77:16, | 54:24;58:6;61:12; | Cellco (17) |
| BAC | begin | 16;84:6;108:12,23 | 76:13;80:7;96:10; | 3:18;94:6,1 |
| 7:19;8:5,13;23:8 | 13:12; | bounc | 102:25;103: | 5:4;97:11,20;105:8; |
| 94:22 | beginning | 79:1 | called (10) | 109:9,13,18;110:3,10, |
| back (23) | 41:19 | bouncin | 8:12;15:14;23:7 | 14,21;112:19;113:5 |
| 18:4;28:15;32:1; | behalf (2) | 79:8 | 35:21;36:2,12;41:20; | Cellco's (1) |
| $52: 11,14 ; 54: 6 ; 56: 23$ | 8:1;94:10 | Box (1) | 94:21;103:18;109:7 | $100: 23$ |
| $57: 13 ; 58: 2 ; 66: 3$ | behind (5) | 3:14 | came (1) | Centek (1) |
| 68:25;70:18,23;71:2; | 17:14;18 | Bradle | 21:19 | 94:14 |
| 72:20;73:9;84:7; | 61:21,22 | 3:13 | camoufla | center (2) |
| 92:21;93:1,4;101:10; | below (5) | branches (11) | 50:13 | 37:13;38:5 |
| 103:15;109:7 | 50:14;67:25;80:4, | 56:1;62:1,6;80:1,5, | can (36) | Centore (28) |
| backyards (2) | 21;90:11 | 14,21,25;81:23,25; | $5: 22 ; 6: 12,22 ; 7: 4$ | $25: 1,4,8,11 ; 27: 7$ |
| 29:20;31:1 | beneficial (3) | 83:22 | 13:24;16:9;26:18; | 11;48:16,19;49:11; |
| balancing (1) | 60:11;82:15,21 | break (2) | 27:9;28:9,12,23; | 50:19;51:12;81:5; |


| 82:12;88:5;90:4,10, | character (1) | 3:11;4:23;5:10; | 62:5 | Coppins (52) |
| :---: | :---: | :---: | :---: | :---: |
| 25;91:7;94:14;95:17, | 77:20 | 6:12,24;12:22;31:25; | confirm (4) | 24:16,18,22,25; |
| 18;96:6,7,20,21;97:1, | characteristics (1) | 37:23;38:13,24; | 27:8,9;45:4;53:25 | 27:15,19;56:15,22; |
| 2;118:3 | 43:11 | 39:23,25;52:2;59:24; | confusing (1) | 57:4,9,12;58:13,19, |
| central (4) | chat (1) | 74:1;91:24;99:21; | 37:9 | 23;59:2,7,11,15,19; |
| 37:12,21;56:21; | 87:18 | 100:21;101:5,8; | congested (1) | 62:24;63:8,13,22; |
| 58:11 | check (1) | 102:13;108:8 | 103:13 | 64:4,11,16,22;65:3, |
| centrally (4) | 17:2 | COHEN (1) | congestion (6) | 13,16,25;66:9,13,18, |
| 37:15;38:21;59:1; | CHET (1) | 3:5 | 108:1,11,12,24; | 24;67:5,14,22;68:1, |
| 90:21 | 20:16 | COLE (2) | 109:6,8 | 10,16,23;70:7,22; |
| centrally-located (1) | chimney (1) | 3:20;94:10 | conjecture (1) | 72:25;73:6,11;92:1,8, |
| 58:2 | 18:18 | collective (1) | 52:23 | 13,18,25 |
| certain (5) | choice (1) | 20:17 | Connecticut (9) | copy (2) |
| 37:22;80:21;99:4, | 114:21 | co-locating (1) | 3:7,15,22;4:13,15, | 6:14;17:2 |
| 22;105:14 | choose (1) | 67:19 | 24;50:7;113:21; | correction (3) |
| Certainly (34) | 112:4 | color (2) | 114:14 | 95:25;96:8,12 |
| 26:23;30:21;31:3, | chose (1) | 79:24;80:10 | conservation (1) | corrections (12) |
| 17;32:3;36:14;38:22, | 111:11 | coloration (1) | 36:3 | 9:2,19;10:9,24; |
| 23;39:23;45:7,20; | Christmas (1) | 78:24 | conservative (1) | 11:14;12:13;23:21; |
| 49:24;50:1;52:9,13, | 82:4 | combination (1) | 45:10 | 24:20;25:6,17;95:21; |
| 24;53:8,10;54:16,23; | circumstance (1) | 77:3 | consider (1) | 96:15 |
| 55:6,17,24;56:2;61:9; | 21:6 | coming (7) | 82:1 | correctly (1) |
| 69:16;72:3;74:25; | clarification (1) | 4:6;54:5,7;71:1 | considerable (3) | 47:1 |
| 75:2,21,23;79:22; | 69:4 | 79:3;84:13,14 | 43:20,25;44:3 | correspondingly (1) |
| 86:9;87:8 | clarify (4) | commence (1) | considerably (1) | 67:21 |
| Certificate (1) | 20:10;64:12;72:19; | 109:25 | 48:23 | cost (1) |
| 4:19 | 87:23 | commissioners (1) | consideration (1) | 48:18 |
| chain-link (1) | classes (1) | 21:12 | 81:3 | Council (28) |
| 76:8 | 85:7 | communicating (1) | considered (2) | 4:25;5:11,14;8:22; |
| Chairman (77) | clean (1) | 64:20 | 91:19;115:10 | 9:7;11:19;12:9;21:12; |
| 4:8;5:16;7:8,13; | 26:13 | communication (4) | constraints (2) | 27:5,17;60:9;68:25; |
| 13:4;21:11,15,22,25; | clear (5) | 62:22;64:25;65:9; | 72:12;109:24 | 70:6;72:4;78:9;83:25; |
| 22:4,6,7,13,15,23; | 15:23;19:21;20:3; | 109:14 | construct (1) | 91:21,21;97:22; |
| 24:7,10,15;26:1,5,17; | 77:9;81:9 | compare (1) | 69:6 | 100:19;113:22; |
| 27:23;29:22;30:5,11; | Clearance (1) | 85:15 | constructed (2) | 114:14,16,20,25; |
| 36:19,22,23,25;37:3; | 81:5 | compared (2) | 86:14;102:10 | 115:1,3,11 |
| 44:10, 11,21,23;46:17, | cleared (2) | 32:20;98:19 | constructible (2) | Council's (2) |
| 22,24;47:20;48:15; | 37:13,15 | Compatibility (1) | 50:22;51:4 | 115:6;118:17 |
| 49:3;51:8,16;54:4; | clearing (5) | 4:19 | constructing (3) | country (2) |
| 56:8;59:22;63:17; | 42:22;57:2;74:12, | compound (7) | 27:16;48:25;50:23 | 12:1,3 |
| 71:7;82:9;83:24;85:1; | 19,24 | 48:22,24,25;76:3; | construction (3) | counts (1) |
| 86:22,23;91:11,15; | clearly (4) | 90:2;118:21,24 | 4:20;48:16;49:18 | 49:2 |
| 93:8;94:3,9;95:3; | 15:25;16:9;19:23; | concealing (1) | consultation (2) | couple (5) |
| 97:4,5,9,15;104:12; | 65:22 | 32:9 | 87:15,21 | 39:18;44:12;82:24; |
| 105:3,4;106:25; | Clerk's (2) | concealment (2) | consulted (1) | 102:22;105:5 |
| 107:4,7,11;108:3,7; | 5:3;115:14 | 31:2;55:25 | 87:12 | course (2) |
| 111:23;113:16,20; | clients (1) | concern (1) | contained (2) | 79:18;87:9 |
| 114:2,6,12 | 108:19 | 81:6 | 95:22;96:16 | cover (3) |
| chairs (1) | close (8) | concerned (4) | Cont'd (2) | 87:5;104:19,19 |
| 22:10 | 41:3;49:1;55:18; | 31:22;32:22;76:9; | 3:1;118:1 | coverage (14) |
| challenge (1) | 73:16;74:4;86:16,18; | 104:22 | context (1) | 62:21;63:7,11;64:1, |
| 79:16 | 89:16 | concerns (1) | 51:15 | 14;65:1;98:19; |
| challenges (1) | closer (8) | 38:16 | continuation (1) | 101:11,14,17,18,24; |
| 78:6 | 20:21;33:2;52:21; | concluding (1) | 4:10 | 111:12;113:7 |
| challenging (1) | 53:15;62:13;74:7; | 46:18 | continue (5) | covered (1) |
| 27:1 | 86:6;88:16 | concrete (1) | 27:24;59:22;71:5; | 107:10 |
| chance (3) | closest (1) | 51:5 | 86:24;93:10 | covering (2) |
| 13:18;14:6;19:12 | 41:5 | conditions (4) | contract (1) | 14:11;101:19 |
| change (5) | closing (3) | 19:18;27:2;78:16, | 65:5 | create (2) |
| 39:20;45:19,22; | 113:20;114:1,13 | 20 | convenience (1) | 38:18;102:5 |
| 86:4;88:6 | cluster (2) | confident (1) | 5:4 | Cross (3) |
| changed (1) | 56:24;57:6 | 76:6 | copies (2) | 13:1;27:24;46:19 |
| 63:25 | Codfish (22) | configuration (1) | 5:6;115:12 | CROSS-EXAMINATION (4) |


| $13: 6 ; 28: 2 ; 97: 16,18$ | 11:15;12:13;23:21; | 104:22,25;105:1; | 20 | east (9) |
| :---: | :---: | :---: | :---: | :---: |
| curious (1) | 24:20;25:6,17 | 108:13,25 | DOT (1) | 29:8;41:2,5,23; |
| 14:1 | delivering (1) | differences | 34:2 | 74:25;86:9;102:3; |
| currently (1) | 64:1 | 88:15 | double (2) | 103:9,23 |
| 101:6 | delivery (1) | different (7) | 80:13;99:13 | easy (2) |
| cut (1) | 107:9 | 53:5;80:13;83:3; | down (28) | 89:8;90:18 |
| 58:6 | demonstrated | 98:3,12;111:21;112:1 | 18:25;19:20;20:5; | edge (1) |
| cute (1) | 77:19 | differing (1) | 30:8,10,19;34:5;42:6; | 38:2 |
| 78:15 | Department (1) | 88:16 | 43:19;52:19;53:2,22; | effect (2) |
| cutting (1) | 5:12 | difficult (8) | 55:20;62:2;67:25; | 31:4;80:13 |
| 74:17 | depending (5) | 5:23;6:19,21;33:21 | 74:17;77:7;79:6;80:2, | effectively (2) |
| cyclical (1) | 54:17;67:15;76:19; | $39: 16 ; 41: 8 ; 61: 4 ; 76: 2$ | $6,14 ; 81: 15 ; 82: 7,15$ | $83: 15 ; 88: 10$ |
| $71: 14$ | 83:9;88:19 | dimensions (2) | $84: 13,14 ; 87: 24 ; 89: 13$ | eight (2) |
| cyclone (2) | depends (2) | 27:8,10 | downside (1) | 5:18;6:15 |
| 27:8,12 | 102:21;106:17 | dips (1) | 31:9 | either (13) |
|  | d | 55:4 | Dr (40) | 28:21;30:17,2 |
| D | 112:5 | direct (5) 45.25.48.2.52.9 | 21:15,16;37:3,4,17; | 48:3,11,13;67:18; |
|  | deposited (1) $5: 2$ | $\begin{aligned} & 45: 25 ; 48: 2 ; 52: \\ & 76: 7 ; 86: 10 \end{aligned}$ | $\begin{aligned} & 38: 1 ; 39: 3 ; 40: 7,25 ; \\ & 41: 7,13,25 ; 42: 10,14 \end{aligned}$ | $\begin{aligned} & 74: 4 ; 75: 24 ; 82: 11 ; \\ & 83 \cdot 7 \cdot 88 \cdot 25 \cdot 89 \cdot 8 \end{aligned}$ |
| 3:4,18;4:18;97:12 | depressional (1) | direction (1) | 43:8;44:2,7;51:8,10, | elected (2) |
| DAS (2) | 43:24 | 39:21 | 14;56:8,9,17;57:6,11; | 71:17,18 |
| 110:24;111:24 | described | directly (2) | 58:9,21,24;59:4,10, | electronic (1) |
| data (7) | 12:24;26:10;97:14 | $18: 7 ; 53: 4$ | $13,17,21 ; 84: 1 ; 85: 2,3,$ | 17:5 |
| 64:1;73:9;98:4,7; | describing (1) | disappear (1) | $20 ; 86: 21 ; 107: 1,2$ | elevated (2) |
| 99:23;100:5;107:9 | 82:16 | 17:17 | draft (2) | 32:24;42:20 |
| dataset (3) | DESCRIPTION (1) | discard (2) | 115:3,6 | elevation (5) |
| 34:16,20;35:14 | 118:15 | 85:11,12 | drainage (1) | 49:19;53:21;55:2; |
| date (5) | design (3) | discern (1) | 43:19 | 118:21,24 |
| 26:14,23;28:13; | 86:1;90:17;94:1 | 61:4 | dramatic (1) | elevational (1) |
| 65:21;115:2 | designated (2) | discrete (1) | 42:8 draw (1) | $38: 6$ |
| $\begin{aligned} & \text { dated (3) } \\ & 118: 18,22,25 \end{aligned}$ | 35:4;36:13 designation (3) | 105:7 discuss | $\begin{array}{\|c} \hline \text { draw (1) } \\ 82: 5 \end{array}$ | $\begin{array}{\|c} \text { elevations (2) } \\ 79: 2 ; 88: 6 \end{array}$ |
| day (4) | 34:15,22;36:6 | 101:14 | drive (11) | eleven (2) |
| 13:20;18:14;27:2; | desires (1) | discussed (1) | 20:4;29:6,8;41:6 | 5:19;6:16 |
| 78:7 | 114:2 | 74:1 | 51:22;58:22;74:21; | eliminated (2) |
| days (2) | detail (1) | discussing (1) | 77:7;86:6;87:4;91:3 | 112:10,12 |
| $109: 7 ; 115: 2$ | $6: 25$ | 51:19 | driven (2) | else (2) |
| day-to-day (1) | detailed (2) | discussion (4) | $71: 17 ; 77: 6$ | $22: 23 ; 50: 8$ |
| 65:7 | 37:7;41:15 | 20:18;28:5;55:14 | driveway (3) | e-mail (1) |
| dB (1) | determination (1) | 20 | 17:12;18:16;52 | 93:2 |
| 90:11 | 87:13 | distance (14) | driving (4) | e-mailed (1) |
| dead (2) | determine (5) | $18: 10 ; 43: 21,25$ | $75: 13 ; 77: 17 ; 85: 9$ | $16: 22$ |
| 39:14;108:19 | 18:10;64:13;70:5 | $44: 3 ; 60: 22 ; 61: 3,15$ | $12$ | end (2) |
| Dean (2) | 88:24;98:4 | 62:11;74:3;77:1; | drop (6) | 14:24;18:6 |
| 43:2,9 | determined (4) | 82:22;83:16;87:5 | $33: 18,22 ; 34: 5 ;$ | engineer (7) |
| debate (1) | 59:8;65:4;66:7,16 | 99:4 | $53: 22 ; 84: 24 ; 86: 11$ | $63: 1,6,23 ; 64: 13$ |
| 72:17 | determines (2) | distances (4) | dropped (4) | $65: 18 ; 94: 17 ; 112: 16$ |
| decision (1) | 64:7;100:14 | 21:2;55:10,12;91: | $30: 8,9 ; 33: 2 ; 70: 17$ | Engineering (1) |
| 71:14 | developed (4) | distant (3) | due (3) | 94:15 |
| declare (1) | 56:13;57:24;62:20 | 77:14;88:8,1 | 51:24;99:22;109:23 | engineer's (1) |
| 115:15 | 63:1 | distinction (2) | duly (4) | 104:15 |
| deem (1) | development (5) | 31:6;76:12 | 8:12;23:7;94:21,25 | enough (2) |
| 27:17 | 36:3;43:21;44:1 | doable (1) | during (5) | 43:23;90:18 |
| defining | 48:11;74:19 | 51:6 | 14:12;31:7;52:11, | entered (2) |
| 60:3 | device (2) | document |  | 13:5;46:15 |
| definitely (6) | 102:19;103:3 | 97:24 |  | entire (1) |
| 79:23;102:3; | diagram (1) | Dodgingtown (1) | E | 45:3 |
| 103:25;104:1;106:22; | 51:18 | 70:13 |  | Environmental (7) |
| 111:21 | difference (22) | done (8) | earlier (5) | 3:11;4:19;5:10; |
| degrees (1) | $38: 7,7,23 ; 39: 24$ | $50: 1 ; 55: 25 ; 65: 11$ | $37: 18 ; 51: 19 ; 60: 4$ | $12: 23 ; 43: 1 ; 59: 24$ |
| 35:1 | $42: 8,25 ; 43: 6 ; 46: 4,9$ | 81:16;84:5,20;90:15; | 85:5;107:23 | $108: 8$ |
| deletions (10) | $48: 18 ; 61: 4,16 ; 83: 1$ | $99: 12$ | early (1) | equal (4) |
| $9: 2,19 ; 10: 9,24$ | 13;89:17,20;90:8; | door (1) | $19: 15$ | 47:2;74:3;106:20; |


| 111:17 | 61:22;70:10;91:23; | farther (1) | 35:3;83:8 | 95:4;98:2;100:13 |
| :---: | :---: | :---: | :---: | :---: |
| equipment (5) | 97:21;118:15 | 98:17 | findings (4) | frequencies (7) |
| 76:9;81:6;96:11; | exhibits (28 | fashion | 114:15,19;115:4,7 | 98:3,5;100:1 |
| 98:2;107:15 | 12:18,23;22:24 | 36:16 | firm (1) | 105:8,14,23;112:1 |
| errors (1) | 23:11,12,15,18,22 | faux (3) | 50:20 | frequency (14) |
| 115:5 | 24:14;25:3,7,14,18, | 56:1;62:5;80:14 | first (17) | 94:17;98:17,20; |
| especially (1) | 24,25;26:5,8;71:24; | favor (9) | 5:21;7:20,23;8:12; | 100:8,17,25;101:3; |
| 55:21 | 95:4,11,12,23;96:16, | 21:8;40:17;42:9; | 15:24;16:1;23:7,14 | 105:6,9,21;106:2 |
| ESQ (4) | 23;97:4,9,12;118:13 | 47:8,14;62:12;76:23; | 26:23;27:25;60:1; | 112:4,6,9 |
| 3:8,9,16,23 | existing (7) | 86:15,20 | 62:25;71:21;76:4; | front (3) |
| essentially (3) | 63:7;101:18,19,25; | feasible (1) | 94:21;96:1;102:23 | 17:2;29:3;88:4 |
| 29:7;62:3;82: | 102:4;103:6;107:13 | 47:15 | flat (1) | full (5) |
| estimate (1) | expand (1) | feature (1) | 37:1 | 25:25;78:12;81:17; |
| 18:22 | 112:7 | 32:4 | flew (2) | 82:6;97:4 |
| estimation | expandable (3) | February (2) | 13:16;87:16 | functions (1) |
| 19:7 | 68:8,12;69:8 | 14:18;29:15 | float (7) | 48:10 |
| EVANS (1) | expansion (2) | Federal (3) | 15:24;16:2;18:13; | further (19) |
| 3:12 | $112: 5,8$ | 68:14,19;69:20 | 19:22;20:11;33:19 | $23: 5 ; 31: 11 ; 38: 8$ |
| even (5) | experience (4) | feel (4) | 52:12 | 43:18;44:9;46:14; |
| 38:8;47:9;50:6 | $34: 4 ; 36: 7 ; 90: 14$ | 30:16;47:4,21 | floated (1) | 58:22;87:3;90:7,21, |
| 76:18;108:19 | 109:7 | 84:13 | 29:14 | 24;91:9;93:7;95:1; |
| evergreens (1) | experiencing (2) | feeling (1) | floats (4) | 105:3;106:9,15,24; |
| 52:1 | 107:20,25 | 82:19 | 26:15;30:1,2;52:17 | 113:19 |
| everybody (3) | explain (1) | feet (48) | Florida (3) | future (2) |
| 13:9;61:19;114: | 108:25 | 18:3,6;1 | 3:3;4:17;22:16 | 67:2;99:17 |
| everyone (3) 47:8:62:7: | $\underset{76 \cdot 03}{\text { expressed (1) }}$ | $\begin{aligned} & 8,9,10,13,20 ; 31: 14 \\ & 23 ; 33: 2 ; 38: 4,22 ; 42: 7 \end{aligned}$ | $\begin{aligned} & \text { flown (4) } \\ & 26: 20 ; 27: \end{aligned}$ | G |
| everyone's (2) | extend (1) | $4: 6 ; 45: 1,16 ; 46: 3,8 ;$ | $84: 22$ |  |
| 69:5;106:7 | 101:5 | 48:6;53:2,22;59:8,16, | fly (10) | gaining (1) |
| evidence (6) | extends (3) | 17;67:25;68:1;69:8; | 13:10,14;14:15 | 55:1 |
| 12:24;26:9;73:5; | 32:20;101:8;1 | 76:4,16,17;77:9,15; | 15:3,5,11;19:13;20:7; | gap (1) |
| 97:13;115:9;118:14 | extent (1) | 78:5;80:4,8,22;81:8, | 28:7,18 | 62:21 |
| exactly (1) | 81:1 | 11;82:20,24;83:10; | foliage (2) | gave (1) |
| 41:17 | extremely (2) | 86:11;87:2;90:7; | 14:11;79:8 | 60:3 |
| examination (3) | 19:21,23 | 101:13 | folks (8) | gazillion (1) |
| 13:2;27:25;46:19 | eyes (1) | FELDMAN (1) | 30:23,24;38:16 | 113:1 |
| examined (5) | 83:10 | 3:12 | 77:17;86:5,8,9;89:3 | General (7) |
| $\begin{aligned} & 8: 13 ; 23: 8 ; 34: 17 \\ & 35: 7 ; 94: 22 \end{aligned}$ | F | fence (4) | follow (5) $28 \cdot 4 \cdot 38 \cdot 2 \cdot 51 \cdot 18$ | $4: 12,15 ; 35: 18 ; 36: 9$ |
| EXAMINERS (1) |  | few (9) | $87: 1 ; 91: 16$ | generally (4) |
| 118:5 | facilities (6) | 31:25;33:5;37: | following (1) | 13:9;48:4;61:8 |
| example | 50:12;52:4;71:19 | 38:22;50:25;74:7; | 38:4 | 76:24 |
| 31:12;113:5 | 74:5;83:6;89:9 | 77:7;89:2;105:17 | follows (5) | generate (1) |
| except (1) | facility (11) | field (13) | 8:14;23:5,9;94:23; | 90:1 |
| $81: 2$ | $4: 22 ; 27: 17 ; 31: 7$ | 13:15;28:18;33:2 | 95:2 | generator (1) |
| excuse (7) | 34:9,10;60:2,3;61:25; | 37:15;38:2;39:6; | follow-up (5) | 81:10 |
| 15:10;32:14;44:15, | 72:11;77:22;110:17 | 42:20;45:5,20;46:2; | 63:18,20;82:10 | gentleman (1) |
| 18;52:18;63:17;86:2 | fact (7) | 57:8,10;58:4 | 84:2;107:13 | 20:4 |
| excused (3) | 6:7;19:24;29:21; | figure (3) | forest (1) | gentlemen (1) |
| 22:14;93:12;115:18 | 114:15,20;115:4,7 | $18: 1 ; 19: 3 ; 37: 8$ | $75: 2$ | $4: 2$ |
| executive (1) | factors (1) | figures (2) | forget (1) | geographical (1) |
| 41:19 | 106:17 | 33:9,10 | 79:25 | 88:1 |
| exercise (1) | fair (7) | file (1) | form (1) | gets (3) |
| 83:6 | 69:22;71:10;105:9; | 114:25 | 52:9 | 20:21;33:2;98:18 |
| exhaust (1) | 106:9;110:2;111:10, | filed (7) | formal (1) | Gillean (2) |
| 81:9 | 13 | 8:20;9:15;12:6 | 109:25 | 7:16,25 |
| exhausted (3) | fairly (7) | 57:16;72:9;114:16; | forward (1) | Given (6) |
| 100:24,25;109:5 | 34:23;38:21;40:18; | 115:13 | 70:6 | 20:14;30:14;52:3; |
| exhaustion (3) | 42:8;60:24;74:4;76:5 | filing (2) | found (1) | 62:10;87:5;106:15 |
| 108:1,12,24 | far (8) | 18:2;93:2 | 6:20 | gives (1) |
| Exhibit (12) | 48:1,3;60:12;70:16; | financial (1) | foundation (4) | 79:2 |
| 8:22;9:14;10:6; | 85:10,11;104:21; | 71:16 | 50:2,23;68:12;69:7 | giving (1) |
| 11:9;12:7;24:17,21; | 107:24 | find (2) | four (3) | 62:12 |


| goes (2) | harmful (1) | 39:11 | 42:15;48:1,2;62:11; | 56:20;83:25 |
| :---: | :---: | :---: | :---: | :---: |
| 28:15;82:14 | 43:15 | hodgepodge (1) | 85:16 | interested (5) |
| $\operatorname{good}(5)$ | Hartford (1) | 81:24 | impression (1) | 65:23;66:2;92:23, |
| 19:19;79:2;83:9; | 3:22 | hole (1) | 60:6 | 23;93:5 |
| 89:7;94:3 | Haven (1) | 102:5 | improve (1) | interesting (1) |
| grade (3) | 3:15 | home (2) | 53:9 | 92:6 |
| 80:8;81:8,12 | headed (1) | 18:14;52:13 | improvement (2) | interference (3) |
| grading (2) | 69:24 | homes (6) | 38:15;52:25 | 102:6,7;104:5 |
| 48:21,24 | hear (3) | 30:25;33:18;34:6; | inch (1) | intermediate (1) |
| grand (1) | 44:8;68:17;108:20 | 73:23;74:7;75:5 | 27:13 | 21:1 |
| 47:25 | heard (1) | honestly (5) | include (2) | interrelate (1) |
| Granted (2) | 66:3 | 45:19;82:6,24; | 75:12;77:13 | 98:12 |
| 77:5,8 | hearing (19) | 83:23;88:20 | included (2) | interrogatories (3) |
| gray (1) | 4:2,10,11;5:2;6:2; | hopefully (1) | 18:1;113:12 | 96:2;97:22;100:19 |
| 32:15 | 13:5;23:14;33:12; | 114:18 | including (1) | interrogatory (1) |
| great (1) | 44:20;46:16;62:25; | horizon (5) | 75:6 | 96:9 |
| 83:25 | 78:9;94:4;95:5,13; | 31:17;40:20;60:24; | inconsistencies (1) | intervened (1) |
| greater (3) | 113:21;114:13; | 61:25;62:9 | 115:6 | 85:24 |
| 6:25;44:5;48:8 | 115:13,15 | house (9) | incorporate (1) | intervenor (7) |
| greenery (1) | hearings (1) | 13:22;15:25;16:9, | 111:25 | 5:13;12:22;94:6,10; |
| 80:18 | 21:20 | 10,13;17:12;18:7; | increase (1) | 97:11;114:17,24 |
| grossly (1) | height (30) | 32:15;51:25 | 39:7 | intervenors (2) |
| 77:24 | 29:22,24;30:15,19; | houses (2) | increased (2) | 114:22;115:5 |
| ground (4) | 31:23;34:5;40:18; | 75:6,7 | 68:22;75:3 | into (15) |
| 53:21;88:6;92:16; | 42:3,6;44:25;45:9,15; | huge (1) | increments (1) | 21:19;34:5;42:22; |
| 96:10 | 52:25;54:6,12;59:5,9; | 46:4 | 84:9 | 51:15;52:6,11;53:4, |
| group (2) | 67:3,7,21;68:7;77:4; | hundred (5) | independently (2) | 23;56:25;64:2,5;76:8, |
| 20:18;21:8 | 78:5,13;80:7,21,22; | 38:22;64:6;82:24; | 30:2;78:18 | 10;80:15;111:9 |
| growing (1) | 88:1,10;100:14 | 83:9;89:18 | index (3) | introduce (2) |
| 18:17 | heights (7) |  | 12:25;26:10;97:14 | 7:14,22 |
| GSM (1) | 47:3;52:3,18,18; | I | indicate (2) | intrusive (1) |
| 109:7 | 66:15,22;84:22 |  | 72:6,12 | 77:21 |
| guess (12) | held (3) | Ichabod (1) | indicates (1) | investigate (2) |
| 31:19;39:5;48:15; | 4:11,13;16:2 | 38:13 | 72:10 | 110:22;113:11 |
| 52:15,17;53:7,13,20; | help (3) | idea (3) | indirect (1) | investigated (1) |
| 69:5;74:5;79:10; | 55:22;56:2;79:22 | 78:21;79:2;84:17 | 52:10 | 109:18 |
| 109:5 | helped (1) | identification (3) | industry (3) | invisible (1) |
| Gustafson (14) | 79:8 | 23:12;24:12;95:8 | 63:25;64:8;69:6 | 89:5 |
| 22:21;23:11,16,19, | helpful (5) | identify (1) | informal (1) | involved (2) |
| 23;24:1,3;42:17;43:3, | 42:1;62:6;78:19; | 115:5 | 36:1 | 64:18,19 |
| 12;44:5,18;47:21,24 | 79:6,17 | II (1) | information (9) | involving (1) |
|  | hereby (1) | 100:20 | 35:1;63:2;69:5; | 48:24 |
| H | 115:15 | II-B-11 (1) | 91:22;95:22;96:16, | issue (2) |
|  | hereof (1) | 26:9 | 23;115:8;118:18 | 71:12;115:3 |
| habitats (2) | 115:2 | II-B-7 (3) | initial (3) | issues (4) |
| 43:15,16 | hide (1) | 24:13;26:8;118:16 | 46:1;65:11;79:11 | 50:17,22;102:6,7 |
| hairs (2) | 81:18 | II-B-8 (1) | inquiry (1) | items (1) |
| 77:6;89:21 | high (5) | 118:20 | 5:17 | 95:6 |
| half (2) | 31:11;60:17;61:21; | II-B-9 (1) | insofar (1) | IV (2) |
| 5:19;6:16 | 67:10;77:17 | 118:23 | 106:13 | 95:6,14 |
| Hall (2) | higher (2) | III-B-1 (1) | install (2) | IV-B-1 (1) |
| 4:12;5:3 | 68:22;76:19 | 12:23 | 98:2;99:11 | 97:12 |
| Hannon (16) | hike (1) | III-B-6 (1) | installed (1) | IV-B-4 (1) |
| 21:13,14;36:25; | 14:10 | 12:24 | 89:23 | 97:13 |
| 37:1;44:21,22;49:4,5, | Hill (25) | immediate (3) | instead (2) |  |
| 14;51:7;84:1,3,12,25; | 3:11;4:23;5:10; | 32:5,6;73:17 | . 96:5;99:10 | J |
| 107:4,5 | 6:12,24;12:22;19:21; | impact (10) | intended (1) |  |
| happen (1) | 31:25;37:23;38:13, | 38:9;43:1,4;47:22; | 78:13 | James (1) |
| 15:7 | 24;39:23,25;59:24; | 48:10,18;73:15; | intends (1) | 4:6 |
| happened (1) | 70:12,14;74:1;91:24; | 85:14,22;88:15 | 98:1 | job (1) |
| 71:21 | 99:21;100:21;101:5, | impactful (1) | intercept (1) | 48:7 |
| hard (3) | 8;102:13;108:8;113:6 | 47:5 | 80:3 | joining (1) |
| 6:14;40:25;61:15 | hillside (1) | impacts (5) | interest (2) | 55:15 |


| Jr (1) | 15:15;74:11;96:17; | leaving (1) | line (20) | looked (6) |
| :---: | :---: | :---: | :---: | :---: |
| 4:7 | 113:5 | 19:20 | 6:13;20:22,25;21:4; | 18:17;52:11;63:16; |
| JULIE (1) | known (2) | left (2) | 31:13;33:3,4;34:6; | 70:4;110:9;111:6 |
| 3:8 | 8:20;114:25 | 44:19;72:2 | 38:5;40:5;50:10; | looking (24) |
| July (6) | KOHLER (41) | legend (1) | 52:21,22;53:23,24; | 5:20;32:25;33:7,20; |
| 4:3;97:23;100:20; | 3:8;5:15;12:19; | 34:13 | 55:20;76:11;80:7; | 37:7,8;39:10,13,15; |
| 118:19,22,25 | 21:25;22:1,17,20,22, | lend (1) | 87:2;90:13 | 41:11;51:23;53:6; |
| jumped (1) | 25;23:10,20,24;24:2, | 47:18 | lines (2) | 55:2,21;62:4;63:6,10, |
| 111:9 | 5,11,16,19,23;25:1,5, | Leon (1) | 52:15;90:12 | 14;76:20;78:22; |
| June (16) | 9,12,16,20,23;26:7, | 8:2 | list (2) | 82:16;97:20;110:17; |
| 4:11;13:11,14,20; | 11,18;27:6,14,21; | less (10) | 91:23;92:16 | 113:23 |
| 14:7,11;15:18;17:7; | 57:3;71:9;72:8;97:8; | 32:5;38:9;40:24; | listed (4) | looks (3) |
| 19:12;20:7;21:18,20; | 108:4,5;113:23,25; | 48:21;55:10;62:1; | 52:2;95:5,13; | 83:1;102:23;103:12 |
| 26:20;28:17;30:2; | 114:5,10 | 77:15,21;82:20; | 101:16 | lose (1) |
| 78:9 | Kurjiaka (12) | 103:14 | little (18) | 81:22 |
| justification (1) | 8:3;11:5,6,11,16, | lesser (1) | 4:4;6:18;17:12; | $\boldsymbol{\operatorname { l o t }}$ (9) |
| 56:20 | 20;14:5,9,17,23;15:1, | 53:12 | 28:15;31:14,16,21; | 31:6;36:1,2;42:21; |
| justifications (1) | 6 | letter (5) | 33:21;38:18,25; | 61:9;81:22;83:19; |
| 56:18 |  | 72:8,14;73:1,7,12 | 46:12;48:7;50:16; | 86:12;106:17 |
| juts (1) | L | level (6) | 53:20;60:17;63:25; | low (1) |
| 52:6 |  | 35:13;36:6;76:10; | 80:4;104:25 | 81:15 |
|  | labeled (3) | 84:14;88:11;107:20 | LLC (3) | lower (12) |
| K | 5:18;8:21;10:4 | levels (1) | 3:3,12;4:17 | 34:5;40:18,20; |
|  | lack (3) | 90:13 | LLP (1) | 53:20;67:3,21;75:23; |
| keep (1) | 72:6;81:24;82:13 | Levesque (4) | 3:20 | 79:1;80:25;81:23; |
| 108:16 | Lada (2) | 21:22,23;44:14,19 | load (1) | 87:25;98:17 |
| KEITH (1) | 8:2;12:6 | Libertine (93) | 106:15 | lunch (2) |
| 3:16 | Ladies (1) | 25:12,15,19,22; | loading (1) | 93:9,12 |
| Ken (1) | 4:1 | 26:14,18,22;28:3,11; | 50:17 | Lynch (23) |
| 8:2 | land (1) | 29:1,9,12,25;30:7,12, | local (1) | 46:15,18,21;54:4,5, |
| KENNETH (2) | 57:16 | 18;32:17,23;33:16; | 36:6 | 11,19;55:7;56:3; |
| 3:23;94:9 | landowner (2) | 34:18;35:11,17;36:8; | locate (5) | 63:18,19,22;64:10; |
| kept (1) | 57:15,20 | 37:6,14,24;38:10; | 40:5;56:21;66:6; | 82:9,11;83:17;107:7, |
| 17:14 | Lane (1) | 39:9;40:10;41:4,10, | 67:2;89:9 | 8;111:23,24;112:9, |
| kicked (1) | 38:14 | 16;42:4,12,16;44:24; | located (7) | 13;118:11 |
| 78:20 | large (1) | 45:2,6,13,18;46:7; | 37:16;38:21;43:18; |  |
| kind (23) | 43:23 | 47:1,6;49:21;52:7; | 48:13;64:15;74:14; | M |
| 18:6,21,22;49:10, | larger (1) | 53:14,19;54:5,10,13, | 90:21 |  |
| 23;50:11;51:25;52:6; | 21:5 | 22;55:11;56:6;58:17; | location (14) | magenta (2) |
| 54:14;55:2,2,3;58:11; | last (3) | 59:25;60:5,13,19,25; | 6:11;37:21;39:13; | 101:16,19 |
| 61:12;63:25;77:3,4; | 14:18;26:13;87:2 | 61:7;62:14;69:3,15; | 40:8;42:7,19;59:8; | main (3) |
| 80:12;81:23;82:2,22; | late (2) | 71:11;73:22;74:15, | 71:4;72:7;73:3,19; | 76:13;80:19;100:8 |
| 102:11;110:20 | 4:5;54:8 | 23;75:8,15,20;76:18, | 86:2;87:25;103:20 | mainly (1) |
| Kirschbaum (11) | Late-Filed (1) | 24;77:2;78:8,14; | locations (16) | 70:23 |
| 8:1;10:16,17,22,25; | 6:23 | 79:21;81:1,13;82:11, | 4:23;29:20;32:4; | maintain (1) |
| 11:4;19:9,10,14;20:9; | later (2) | 18;83:18;84:10,19; | 34:16;38:12;50:9; | 27:3 |
| 28:19 | 18:15;114:17 | 85:4,17;86:3;87:7,14; | 54:24;55:5,24;70:4; | maintains (2) |
| Klemens (40) | Laub's (1) | 88:2,12,18;89:25; | 76:6;77:10;88:7; | 34:19,24 |
| 21:15,16;37:3,4,17; | 72:14 | 91:1 | 110:4,9,11 | maintenance (2) |
| 38:1;39:3;40:7,25; | lay (1) | licensed (2) | lone (1) | 4:21;83:20 |
| 41:7,13,25;42:10,14; | 22:2 | 105:12,14 | 61:12 | major (4) |
| 43:8;44:2,7;51:8,10, | leads (2) | light (1) | long (2) | 30:22;31:18;42:25; |
| 14;56:8,9,17;57:6,11; | 54:19;55:7 | 52:14 | 34:23;41:2 | 103:2 |
| 58:9,21,24;59:4,10, | lease (2) | likely (3) | longer (3) | majority (1) |
| 13,17,21;84:1;85:2,3, | 65:15,16 | 31:15;52:8;80:20 | 42:11;48:21;71:24 | 47:16 |
| 20;86:21;107:1,2 | leasing (1) | limit (3) | look (23) | makes (5) |
| knew (1) | 92:6 | 49:9,17;104:5 | 13:18;14:6;17:20; | 21:5;41:8;42:7; |
| 79:11 | least (3) | limitation (1) | 29:7;32:1;35:9;41:23; | 89:17;104:22 |
| knocked (1) | 47:5;55:19;69:8 | 112:3 | 56:25;60:15;61:19; | making (2) |
| 19:25 | leave (2) | limited (4) | 62:8;70:19,23,23; | 76:12;91:2 |
| knolls (1) | 7:4;114:21 | 92:16;112:5,8,12 | 80:15,16;81:20;82:3, | many (1) |
| 55:4 | leaves (1) | limits (1) | 21;84:16;89:4,13; | 75:13 |
| knowledge (4) | 18:18 | 43:14 | 97:25 | $\boldsymbol{m a p}(12)$ |



| observed (1) | open (4) | 104:2 | Partners (3) | 19:1;61:10 |
| :---: | :---: | :---: | :---: | :---: |
| 43:16 | 34:15;39:1;42:20; | overlapping (1) | 3:3;4:17;22:16 | pictures (6) |
| obtrusive (1) | 51:25 | 103:4 | Partnership (5) | 15:24;16:14,17; |
| 55:10 | operate (2) | overly (1) | 3:18;94:7,11,18; | 18:12,15;84:16 |
| obviously (10) | 105:19;106:8 | 45:23 | 97:11 | pine (2) |
| 18:19;19:1;21:5; | operation (1) | overwhelming (1) | party (4) | 61:12;81:21 |
| 35:4,19;64:18;66:1 | 4:21 | 86:19 | 5:13;20:2;114:16, | pines (1) |
| 68:24;70:3;114:9 | opine (2) | own (6) | 23 | 61:13 |
| occasions (1) | 28:23;29:13 | 34:20;40:15,21; | passed (1) | place (2) |
| 77:8 | opinion (9) | 62:21;74:17;82:18 | 57:18 | 11:23;54:15 |
| occur (1) | 30:16;40:16,21; | owner (1) | past (1) | placed (1) |
| 74:25 | 55:12;77:23;85:14; | 92:5 | 92:23 | 57:15 |
| occurred (2) | 86:5;87:10;104:20 | owners (1) | Pause (1) | places (1) |
| 14:15;19:13 | opportunity (3) | 92:22 | 100:11 | 13:23 |
| o'clock (3) | 15:18;17:8;114:8 |  | PC (1) | plan (2) |
| 4:4;17:22;27:4 | opposed (3) | $\mathbf{P}$ | 3:5 | 118:21,24 |
| off (4) | 51:2;60:12;88:17 |  | peak (2) | planning (2) |
| 17:17;39:6;43:19; | optimize (4) | page (5) | 39:5,7 | 71:16,20 |
| 78:20 | 102:4,11;103:22; | 51:20;56:23;91:6 | people (6) | plans (1) |
| offer (6) | 104:1 | 118:3,15 | 21:1;75:13;85:9,12, | 36:2 |
| 58:11;94:18;95:5,7, | optimized (2) | painted (1) | 23,24 | plateau (2) |
| 21;97:3 | 104:4,5 | 80:9 | per (1) | 37:12,16 |
| Office (2) | option (2) | painting (2) | 35:25 | platforms (1) |
| 5:3;115:14 | 32:9;111:6 | 56:1;79:23 | percent (3) | 61:24 |
| offices (1) | orange (1) | panel (9) | 64:7;68:15,2 | please (3) |
| 21:19 | 38:3 | 7:11,22;13:2,9; | Perhaps (2) | 22:9,24;85:15 |
| often (2) | order (1) | 22:18;28:6;44:17; | 17:4;38:15 | pm (4) |
| 34:21;35:2 | 4:3 | 47:9;62:18 | periodically (1) | 13:17;93:13;94:2; |
| old (3) | oriented (1) | paper (1) | 34:21 | 115:19 |
| 105:21,23,23 | 90:16 | 15:15 | permission (1) | PO (1) |
| once (10) | original (8) | parameter (1) | 115:10 | 3:14 |
| $42: 18 ; 50: 5 ; 54: 24$ | 57:25;58:14;61:10, | $103: 11$ | personal (3) | point (4) |
| 59:7;65:3;79:7;82:23; | 22;70:10;84:7,22; | parameters (3) | 40:16,21;104:20 | 5:17;65:15;67:8 |
| 83:8,11,15 | 86:4 | 64:12;67:7;102:22 | perspective (12) | 72:13 |
| one (56) | Originally (6) | parcels (2) | 30:22;33:5;38:12; | points (1) |
| 4:22;5:7;7:14; | 57:13,14;62:16,19; | 92:7,10 | 43:4;49:7;50:11; | 35:15 |
| 14:16;15:12,13;16:2; | 64:17;66:6 | parlance (1) | 52:20;53:5;61:19; | pole (6) |
| 18:16;20:7,10;21:7; | others (1) | 108:14 | 63:12;85:25;87:12 | 76:11,14;77:12 |
| 26:11;28:13,24;29:6; | 33:5 | Parsons (11) | perspectives (3) | 79:15;80:2;89:10 |
| 32:18;33:17,23;38:1; | Out (29) | 8:2;11:22,25;12:4, | 31:15;39:10;53:25 | poles (1) |
| 39:4;40:3;41:13,14, | 11:25;12:2;13:24; | 10,14;13:13,21;14:4; | petition (1) | 80:9 |
| 17,18,21;47:3;48:13; | 17:13,15;18:17;19:3; | 15:9,13 | 111:5 | pool (1) |
| 51:21;52:8;53:12; | 33:18,23;35:3,22,24; | part (11) | phone (1) | 43:11 |
| 60:1;61:6,6,23;62:19, | 36:2,12;40:1,15,22; | 13:14;16:20,24; | 102:23 | pop (1) |
| 22;67:18;71:1;77:25; | 41:24;47:11;54:21, | 41:18;42:24;51:21; | photo (8) | 17:15 |
| 86:8;87:10,17;88:25; | 25;65:18;66:21; | 61:23;71:25;90:17; | 32:12,13;34:16; | popular (1) |
| 90:20;91:14;93:2; | 70:15,18;78:25; | 91:19;101:11 | 40:1;41:18;51:19; | 88:23 |
| 95:25;96:8;99:16,18, | 87:18;96:10;111:12 | participate (3) | 61:14,20 | porch (1) |
| 18;103:12;107:12; | outlooks (1) | 23:17;25:2,13 | photograph (4) | 52:14 |
| 112:6;113:14 | 35:21 | participating (1) | 41:12,20;60:16 | portion (4) |
| one-and-one-quarter (1) | outside (2) | 71:6 | 73:20 | 34:9;76:14;79:15; |
| 27:12 | 70:16;90:2 | participation (1) | photographs (1) | 80:2 |
| ones (1) | over (12) | 115:16 | 32:13 | portions (4) |
| 99:22 | 5:8;34:3;49:25; | particular (12) | photos (2) | 52:13;75:23;77:12; |
| Only (23) | 54:8,15;56:5;60:17; | 14:15;15:4,12;35:8; | 32:21;39:18 | 89:4 |
| 36:8;43:13;61:8; | 89:6,14,21;101:17; | 52:5;63:11;64:21; | physically (2) | position (1) |
| 74:25;75:6,9;76:1,12; | 103:9 | 74:12;79:19;102:19; | 33:20;88:1 | 20:16 |
| 78:21;79:10;81:6; | overall (9) | 103:19;104:7 | pick (5) | possible (4) |
| 87:15,20;92:10;99:6, | $40: 19 ; 42: 25 ; 47: 13$ | particularly (4) | $\begin{aligned} & \text { 40:1;77:25;78:25; } \\ & \text { 00. } \cdot 101 \cdot 12 \end{aligned}$ | $\begin{aligned} & \text { 29:18;56:10;99:9, } \\ & 14 \end{aligned}$ |
| $\begin{aligned} & 8,16,18 ; 105: 14,18 \\ & 107: 8 ; 111: 5 ; 112: 4 \end{aligned}$ | $\begin{aligned} & 18 ; 62: 7 ; 77: 4,13,16 \\ & 89: 11 \end{aligned}$ | $\begin{aligned} & 40: 6 ; 52: 19 ; 74: 20 \\ & 79: 13 \end{aligned}$ | $\begin{aligned} & \text { 99:2;101:12 } \\ & \text { picks (1) } \end{aligned}$ | 14 <br> possibly (1) |
| onto (1) | overlap (4) | parties (2) | picks (1) 99:25 | $43: 19$ |
| 39:11 | 49:23;102:13,18; | 114:21;115:4 | picture (2) | potential (5) |


| 40:12;43:15,22; | 34:23 | purple (2) | 20;97:25;105:7; | 13:10;20:6;28:17; |
| :---: | :---: | :---: | :---: | :---: |
| 48:1,9 | productive (2) | 101:17,23 | 109:24 | 100:18 |
| potentially (1) | 7:2;87:20 | Purpose (1) | reason (14) | Regulations (3) |
| 75:24 | professional (1) | 4:12 | 58:10,10,12,14,25; | 68:14,19;69:20 |
| power (1) | 85:13 | purposes (3) | 71:16;72:18;76:2; | regulatory (1) |
| 102:24 | profile (4) | 24:12;66:17;95:8 | 78:25;79:24;80:24; | 36:11 |
| predominant (1) | 31:16;40:20;50:4; | pursuant (1) | 87:23;92:21;111:2 | rehash (2) |
| 33:25 | 55:9 | 4:13 | reasons (2) | 56:4,11 |
| preference (2) | program (2) | pursue (3) | 92:4,12 | Reinders (24) |
| 20:21,22 | 95:6,13 | $71: 18,19 ; 72: 13$ | reassigned (1) | 7:16,17,25,25;8:18, |
| preferred (1) | prominent (4) | put (3) | 106:1 | 18,24;9:4,9,10,11,12, |
| 42:2 | 32:4;38:19;73:18; | 51:14;58:5;70:6 | rebuttal (1) | 16,21,25;14:19;15:17, |
| prefile (8) | 74:21 |  | 114:11 | 17,21;16:4,8,12,21; |
| 7:15;10:4,19,21; | promulgated (1) | Q | recall (1) | $17: 11$ |
| $\begin{aligned} & 11: 8 ; 16: 20,24 ; 17: 25 \\ & \text { refiled (3) } \end{aligned}$ | 36:13 properti |  | 105:20 received | $\begin{array}{\|c} \text { reintroduce (1) } \\ 22: 18 \end{array}$ |
| 8:20;9:15;12:5 | 34:7;40:12;76:1 | 43:13 | 4:25;5:17;10:5,20; | reintroduced (1) |
| preparation (4) | property (36) | qualify (3) | 11:9;12:24;26:9; | 22:19 |
| 23:17;25:2,14; | 13:19;14:1,2,3,7; | 33:24;61:8;112:24 | 97:13;118:14 | rejected (3) |
| $95: 12$ | $15: 20 ; 16: 11,13 ; 17: 9$ | quality (4) | receives (1) | $92: 5,11,16$ |
| prepare (8) | 18:4;37:16;42:24; | 88:17;90:8;102:25; | 102:24 | relate (1) |
| 7:18;8:19;9:13; | 51:24;52:5,6,8,11,16, | 103:1 | receptor (2) | 107:19 |
| 10:3,18;11:7;24:17; | 24;53:1,4,6;56:25; | quantifiable (1) | 90:24;91:2 | related (2) |
| 95:11 | 58:3;65:4;73:20;74:2, | 40:14 | recess (1) | 33:10;100:22 |
| prepared (1) | 13,14;75:10,10; | quantify (2) | 93:12 | relationship (1) |
| 5:6 | 87:18;90:12,13;92:5, | 44:3;47:12 | reconnaissance (1) | 98:4 |
| prescribed (1) | 22 | quarter (1) | 35:5 | relative (3) |
| 27:4 | proposed (18) | 93:9 | record (7) | 73:14,19;90:19 |
| present (1) | 20:12;30:6,9;43:21; | quickly (1) | 21:17;26:16;55:13; | relatively (2) |
| $94: 13$ | 44:6;59:14;91:25; | $91: 17$ | $72: 2 ; 73: 5,10 ; 115: 7$ | $62: 11 ; 88: 9$ |
| presented (2) | 99:22;100:13,21; | quieter (1) | records (3) | relief (4) |
| 72:4;113:13 | 101:16;102:10 | $90: 23$ | 17:2;35:8;57:16 | 21:3;62:12;101:20; |
| pretty (2) | 103:16,23;104:16; | quite (6) | red (4) | 103:19 |
| 49:1;54:20 | 111:19;114:15,19 | 17:18;51:1;82:5; | 28:22;39:15;78:22, | relieve (1) |
| preventing (2) | proposing (4) | 83:22;87:19;88:19 | 24 | 104:4 |
| $74: 11,16$ revious (2) | 20:15;59:6;67:12; |  | redecorated (1) | relook (1) |
| $\begin{aligned} & \text { previous (2) } \\ & 14: 12 ; 33: 11 \end{aligned}$ | $111: 9$ provide | R | 108:17 <br> reduce (4) | 72:20 <br> rememb |
| previously (4) | 29:2;30:15;100:22; | RACHEL (1) | $46: 3 ; 66: 22 ; 75: 1$ | $49: 19$ |
| $23: 4 ; 74: 2,10 ; 94: 25$ | 103:19;110:16; | 3:9 | 102:12 | remind (1) |
| previously-considered (1) | 112:18;113:7 | radio (1) | reduced (6) | 91:21 |
| 70:19 | provided (4) | 94:16 | 30:15;42:6;47:3; | remote (1) |
| prior (6) | 33:8;63:3,15;73:7 | rainy (1) | 68:7;76:25;77:4 | 54:24 |
| 55:14;93:1;109:10, | provides (1) | 19:17 | reduction (5) | removals (1) |
| $14,19 ; 110: 4$ | 40:19 | range (4) | 6:8;30:19;33:9,24; | 49:1 |
| probably (16) | providing (1) | 45:14;54:14;76:17; | 52:24 | render (1) |
| $13: 13 ; 21: 2,7,8$ | 48:7 | 106:8 | reductions (1) | 87:10 |
| 30:21;31:13;32:8; | provisions (1) | rather (3) | $46: 11$ | repeat (1) |
| 46:9;49:6;52:19 | 4:14 | 83:20,21;114:20 | refer (1) | 108:21 |
| 73:23;74:3,4,7;81:8; | proximal (2) | reach (1) | 70:11 | repeater (1) |
| 112:22 | 85:8,14 | 99:23 | referring (2) | 110:24 |
| problem (4) | proximate (1) | read (5) | 51:11;75:19 | reply (1) |
| 5:24;89:14;107:19; | 73:25 | 5:23;6:19,21;21:18, | reflect (1) | 115:9 |
| 108:18 | proximity (7) | 19 | 96:12 | report (2) |
| Procedure (1) | 29:14;48:3,13; | reading (1) | regard (1) | 57:18,25 |
| 4:16 | 55:19;74:6;89:16; | 56:11 | 72:21 | represent (2) |
| proceed (1) | 91:4 | real (4) | regarding (7) | 101:20,23 |
| 5:5 | Public (3) | 55:8;61:6,17;81:23 | 15:9;17:25;20:16; | representing (2) |
| proceeding (3) | 4:20;5:4;72:6 | realize (2) | 51:21;65:1;91:18; | 11:23;59:23 |
| 70:18;71:6;72:1 | publicly (1) | 5:22;69:10 | 107:13 | reproduce (1) |
| proceedings (3) | 34:25 | really (11) | regardless (2) | 6:23 |
| 71:24,25;115:18 | purchase (1) | 31:5;39:4;42:20; | 40:5;90:22 | request (6) |
| process (1) | 106:1 | 49:17;86:4,12;89:12, | regards (4) | 5:9;7:17;8:19; |


| 56:13;58:1;118:17 | right-hand (1) | scaled (1) | services (7) | 35:6,10 |
| :---: | :---: | :---: | :---: | :---: |
| requesting (1) | 18:6 | 38:3 | 64:2;72:7;98:8,12 | similar (1) |
| 100:15 | ring (4) | scenarios (1) | :14,23;100:5 | 88:9 |
| required (2) | 63:2;64:7;70:16 | 49:1 | servicing (1) | simply (1) |
| 90:13;114:20 | 109:10 | scenic (9) | 98:2 | 72:1 |
| requirements (3) | rings (1) | 34:17;35:3,9,15,21, | SESSION (1) | simulation (3) |
| 48:21;90:11,23 | 64:14 | 5;36:1,13,15 | 94:1 | 32:12,13;61:20 |
| requiring (1) | rise (2) | scheme (1) | set (5) | singles (1) |
| 42:21 | 8:4;32:25 | 47:25 | 32:21;96:1,8;99:11; | 35:24 |
| reservations (1) | Road (33) | school (4) | 100:20 | sit (1) |
| 38:25 | 4:23;13:23;17:13 | 31:11;60:17;61:2 | setting (1) | 112:15 |
| reside (1) | 32:1,16;34:22;37:23; | 77:17 | 50:7 | Site (179) |
| 28:20 | 38:13,17,18,24;39:12, | SCHWARTZMAN (1) | Settlers (2) | 20:11;26:20,20,23, |
| residences (7) | 17,23,25;40:3;41:3,5; | 3:9 | 38:17;39:12 | 25;27:4;28:9,10,12, |
| 33:11;37:22;38:8; | 42:11;48:16,21,23; | scope (1) | seven (1) | 15,25,25;29:8,13,15; |
| 74:22;85:21;87:4; | 51:22;58:16,20; | 49:10 | 73:23 | 30:3,3,8,9,19;31:19; |
| 90:22 | 70:12,13,14;71:1 | se (1) | several (8) | 32:3,7,7,9,12,14,14, |
| residential (4) | 73:24;74:2;91:24; | 35:25 | 13:23;16:14;28:18; | 24;33:12,13;34:3; |
| 34:7;40:12,23 | 113:6 | sea (1) | 32:12;42:5;57:14; | 37:7,13;38:6,20,21; |
| 75:10 | roads (8) | 88:11 | 71:19;83:6 | 39:16;40:6,8,16,17, |
| residents (4) | 34:17,20;35:3,9 | search (8) | severity (1) | 23;41:3,5,15,22,22; |
| 28:19;30:24;32:5; | 39:8;45:25;85:10,13 | 63:1;64:3,6,14; | 85:21 | 42:2,9,10,19,22; |
| 75:12 | Robin (1) | 109:10,23,25;113:12 | shades (1) | 43:20;47:4,8,17,21, |
| resources (3) | 4:8 | seasonal (1) | 83:3 | 23;48:3,6,9,11,20,22; |
| 48:4,8;109:4 | ROBINSON (2) | 34:1 | shallow (1) | 51:23;52:6,10,19; |
| respect (1) | 3:20;94:10 | seats (1) | 55:3 | 53:3,14,22,23;54:15; |
| 48:9 | rock (1) | 22:10 | shed (1) | 56:12;57:1,7,24;58:6, |
| respectively (4) | 58:6 | second (1) | 43:23 | 7,8,15;59:10,11,13, |
| 30:13;53:2;66:8; | Roman | 28:13 | shelter (4) | 18;60:10,10,11,12; |
| 84:24 | 24:13;95:6,13 | seconds (1) | 80:8;81:7;96:11,13 | 61:11,21;63:4,15; |
| response (5) | Room (7) | 114:8 | shift (1) | 65:11,21;66:2;67:16, |
| 6:1;95:25;96:2,4; | 4:12;13:5;44:20 | section (2) | 38:22 | 19,19;70:5,14;72:13; |
| 100:20 | 46:16;88:23;108:17 | 57:20;95:1 | short (1) | 73:3,14,15,18,19,25; |
| responses (6) | 19 | sector (4) | 40:3 | $74: 8,13,14,20,20,22$, |
| 65:23;96:9;97:22 | Roughly | 100:23;103:12,14 | shorter (7) | 25;76:21,23;77:5,15, |
| 100:19;101:12; | 18:5 | 107:21 | 20:15;34:10;47:14; | 22,23;78:2;84:6,6,6, |
| 118:16 | Route (1) | sectors (1) | 48:23;86:15,20;91:8 | 13,15;86:6,7,11,13, |
| result (1) | 4:6 | 102:24 | show (1) | 17;87:2,3,16,23,24, |
| 71:23 | ruled (1) | seems (2) | 21:18 | 25;88:21,22,22;89:7, |
| resume (1) | 70:15 | 49:16,18 | showing (1) | 8,8,13,14,15,16; |
| 94:4 | running | select (3) | $41: 22$ | 90:20,20;91:4,22,23, |
| review (3) | 66:21 | 30:24;31:25;89:14 | shown (9) | 24;92:4,15;100:21, |
| 13:15;28:18;110:14 | Ryan (2) | selection (2) | 18:14;36:12;43:14; | 23;101:1,13;102:11; |
| revised (6) | 94:16;118:4 | 65:11;78:1 | 72:1;77:18;84:8,21; | 103:6,9,17,23;104:1; |
| $\begin{aligned} & 32: 11 ; 33: 7 ; 52: 3 ; \\ & 84: 21 ; 118: 20,23 \end{aligned}$ | S | $\begin{array}{\|c} \text { selects (1) } \\ 102: 21 \end{array}$ | $\begin{aligned} & 101: 15 ; 104: 6 \\ & \text { shows }(\mathbf{2}) \end{aligned}$ | $\begin{aligned} & \text { 107:14,15;109:5; } \\ & \text { 111:7,8,12;112:17,18, } \end{aligned}$ |
| revisit (1) |  | SENATOR (28) | 41:21;60:16 | 24;113:12;118:22,25 |
| 85:4 | safe (3) | 4:1;5:21;6:2,20;7:3, | side (5) | sites (23) |
| RF (11) | 49:8,17;88 | 10,21;8:4,15;12:16, | 17:18;38:24;73:24; | 30:17;35:2;36:4; |
| 62:25;63:5,23; | safely (1) | 20;13:1;36:20,21; | 86:9,9 | 42:5;48:14;63:24; |
| 64:13;65:17;92:12; | 33:22 | 68:3,6,13,18;69:1,3, | sight (1) | 70:11,20;72:21;87:6; |
| 104:15,23;110:3,10; | same (15) | 10,17,25;104:13,14, | 52:15 | 88:25;89:24;91:18; |
| 112:16 | 5:23;13:10;14:6; | 21;105:2;118:8 | signal (2) | 92:3,4;99:21;101:25; |
| RFIs (2) | 17:6;31:20;37:10; | send (1) | 102:6;103:1 | 102:4;104:6;109:17; |
| 104:18,24 | 41:21;55:9;56:23; | 65:18 | significant (7) | 110:23;113:1,11 |
| right (27) | 88:10;91:6;100:4; | sense (13) | 32:20;33:24;43:6; | Siting (4) |
| 18:16;19:2;29:3; | 104:20;109:3,8 | 36:9,11;40:7;42:3, | 47:22;48:17;80:20; | 97:22;113:21; |
| 35:23;39:3,4;40:1; | saw (9) | 18;52:4;53:12,17; | 87:4 | 114:14;118:17 |
| 57:1,1;61:14;69:1,14, | 17:25;19:1,17,21, | 74:5;77:14;78:21; | significantly (10) | $\operatorname{six}(3)$ |
| 18,20,21;72:11; | 22;20:9;28:21;29:18; | 79:5;85:7 | 21:4;32:2;33:1,4, | 7:13;12:18;73:23 |
| 99:15;101:2,7,23,25; | 70:17 | service (6) | 17;34:2;45:8,12; | slightly (3) |
| 102:14;105:13;106:3; | saying (3) | 98:5;100:24;101:5, | 50:10;55:6 | 46:3;53:15,24 |
| 108:1;109:4;111:9 | 77:23;86:18;112:24 | 20;103:17;107:9 | signs (2) | slots (1) |


| 103:7 | 13:3;27:25;63:1 | 40:3 | supposed (1) | telecommunications (1) |
| :---: | :---: | :---: | :---: | :---: |
| small (1) | stages (1) | stretching (1) | 66:12 | 4:22 |
| 111:11 | 71:20 | 49:20 | sure (17) | televisions (1) |
| so-called (1) | stand (2) | strict (1) | 20:15,17;33:21; | 105:24 |
| 37:20 | 54:21;86:17 | 74:6 | 35:23;46:25;47:8; | temporarily (1) |
| soften (2) | standard (3) | strictly (4) | 54:10;62:17;63:8; | 4:8 |
| 31:3;55:23 | 69:6,9;110:23 | 40:11;47:7;50:5; | 64:7;67:6;72:18; | Ten (1) |
| sole (1) | standing (2) | 77:25 | 75:21,22;84:4; | 68:1 |
| 72:18 | 76:20;88:19 | strongly (1 | 110:21;113:4 | tend (5) |
| solely (1) | standpoint (9) | 17:18 | Susan (2) | 40:17,22;42:9;45:9; |
| 40:23 | 40:14,23;47:7,10; | structural (4) | 8:1;10:1 | 62:12 |
| solve (1) | 48:17;74:6;78:1; | 49:7,12,23;81:3 | swaying (1) | tends (1) |
| 108:18 | 104:15,23 | structurally (1) | 77:4 | 47:18 |
| somehow (1) | start (15) | 49:25 | swear (2) | term (4) |
| 36:13 | 7:16;13:3;31:22; | structure (3) | 7:19,22 | 35:23;82:14;109:6; |
| somewhat (8) | 34:2;39:1,19;46:8,10, | 20:19;60:23,23 | sworn (8) | 110:20 |
| 32:24;37:9;41:8; | 11;50:3,5;54:25; | stuck (1) | 8:13;22:21;23:4,8; | terminology (1) |
| 43:24;45:22;52:22; | 76:10;81:22;82:23 | 20:2 | 94:15,19,22,25 | 108:23 |
| 79:5;82:21 | starting (2) | study (2) | system (4) | terms (10) |
| somewhere (1) | 8:17;97:16 | 43:16;45:3 | 43:19,24;111:24; | 47:12;49:14;55:25; |
| $75: 9$ sorry (7) | starts (3) | subject (2) | $112: 3$ | 61:5;62:7;73:15;84:4; |
| $\begin{aligned} & \text { sorry (7) } \\ & 29: 10 ; 32: 14 ; \end{aligned}$ | 50:6;79:1;80:3 <br> state (7) | 83:25;95:8 <br> submission | $\begin{array}{\|c\|} \hline \text { systems (2) } \\ 48: 12 ; 100: 6 \end{array}$ | 86:16;88:14;108:14 terrain (1) |
| 68:17;69:21,25; | $34: 19,20,22$ | $114: 19$ |  | $\begin{aligned} & \text { rram }(1) \\ & 106: 18 \end{aligned}$ |
| 112:13 | 90:12,22;114:8 | submit (2) | T | territories (1) |
| sort (7) | stated (2) | 7:4;114:9 |  | 63:24 |
| 17:15;49:8,17; | 28:6;73:7 | submitted (8) | table (1) | testified (6) |
| 66:21;81:10;85:6,7 | statement (2) | 6:8,9,15;8:21 | 5:8 | 8:14;23:4,9;94:23; |
| sound (2) | 8:19;114:1 | 16:14,18;97:23; | $\boldsymbol{t a d}$ (1) | 95:1;106:9 |
| 90:8;108:19 | statements (1) | 101:11 | 6:19 | testimony (23) |
| south (3) | 115:1 | submitting (1) | talk (4) | 7:15;8:20;9:7,15, |
| 38:13;51:24;61:13 | states (2) | 109:15 | 36:14;78:4;85:8; | 24;10:5,13,20,21; |
| space (3) | 35:24;100:21 | subsection (1) | 105:6 | 11:3,9,18;12:6,8; |
| 34:15;92:6,17 | stating (2) | 95:6 | talked (4) | 16:20,25;17:25; |
| spacing (1) | 55:13;73:12 | substantial (3) | 37:18;49:6;85:9,10 | 23:25;24:24;25:10, |
| 106:14 | statute (1) | 45:7;51:1;87:8 | talking (21) | 21;60:4;96:24 |
| speak (6) | 35:22 | substantiated (1) | 31:22;32:19;35:19; | texture (2) |
| 11:13;22:19;42:18; | Statutes (1) | 79:10 | 37:19;40:11;43:4; | 83:5,13 |
| 43:2;49:22;50:16 | 4:15 | substantive (2) | 49:7,12;50:6;51:21; | Thanks (1) |
| speaking (2) | stay (1) | 45:24;46:12 | 54:18;60:6;68:7; | 26:7 |
| 48:4;50:5 | 50:13 | substituting (1) | 73:14;76:16;79:25; | Thanksgiving (5) |
| speaks (2) | stealth (4) | 4:7 | 85:5,18;88:21;91:3; | 14:20;15:10,11; |
| 72:9,14 | 27:17;49:15;60:2,3 | Sugar (2) | 105:7 | 16:3,5 |
| specific (3) | steel (1) | 70:12;71:1 | talks (1) | theoretically (1) |
| 13:24;98:7;110:19 | 51:5 | suggesting (1) | 34:14 | 84:16 |
| specimens (1) | Stein (2) | 74:24 | tall (4) | thereafter (1) |
| 54:14 | 4:8;13:4 | suggestion (1) | 49:25;54:17;61:5; | 115:4 |
| spent (1) | stepped (1) | 7:2 | 89:11 | thick (2) |
| 83:21 | 52:23 | suit (1) | taller (3) | 40:18;51:1 |
| splitting (2) | stick (2) | 72:23 | 45:8,12;54:20 | thicker (1) |
| 77:6;89:21 | 50:10;89:10 | suitable (1) | tallest (2) | 31:16 |
| spoke (1) | sticks (1) | 66:16 | 50:18,20 | thin (1) |
| 93:3 | 21:4 | summarize (1) | tangled (1) | 60:24 |
| sporadic (1) | still (11) | 91:20 | 15:23 | thinner (1) |
| 82:2 | 31:12;33:3;34:8; | summary (3) | taper (1) | 55:8 |
| spot (5) | $40: 2 ; 41: 12 ; 46: 21$ | 41:20;91:22;113:12 | $62: 3$ | thirty (1) |
| 39:17;57:15,22; | $53: 23 ; 70: 24 ; 72: 10$ | superior (1) | Taunton (3) | $89: 18$ |
| 58:2;67:24 | 73:2;84:21 | 40:8 | 70:12,14;113:6 | though (2) |
| Sprint (1) | stood (2) | supervise (4) | technical (4) | 42:10;82:22 |
| 66:4 | 52:10;53:3 | 23:16;24:17;25:2, | 57:18,25;73:9; | thought (6) |
| square (2) | Street (4) | 13 | 80:24 | $19: 24 ; 20: 1 ; 49: 9,19$ |
| $50: 25 ; 51: 3$ | $3: 6,13,21 ; 70: 12$ | supplemental (3) | technology (2) | $57: 21 ; 87: 20$ |
| staff (3) | stretches (1) | $97: 21,24 ; 101: 12$ | $110: 15,19$ | three (3) |


| 26:12;84:14;85:7 | Trails (1) | Twin (14) | 89:10;91:16;99:2,25; | viewed (1) |
| :---: | :---: | :---: | :---: | :---: |
| three-quarters (3) | 35:20 | 28:20;29:6,8,10; | 103:17,24;108:16 | 28:24 |
| 34:3;54:25;60:18 | transcript (4) | 51:21;58:17,19,22; | updated (1) | views (40) |
| threshold (1) | 5:1;13:15;56:12; | 73:24;74:21;77:7; | 34:21 | 30:25;31:11,17,21; |
| 50:14 | 115:12 | 86:6;87:3;91:3 | upon (3) | 32:19;33:13,14,25; |
| tighter (1) | transcripts (1) | two (17) | 4:16;54:18;76:19 | 35:15;42:9;45:25; |
| 62:4 | 21:20 | 4:22;28:22;33:17, | upper (1) | 47:16,19;52:10;53:9; |
| times (3) | transform (1) | 23;34:19;40:3;43:7; | 49:8 | 55:16,23;60:11,12; |
| 42:5;50:25;81:22 | 103:8 | 57:18;84:15;87:6; | upward (1) | 61:9;62:13;73:17; |
| timing (2) | Transportation (1) | 88:7,9;94:13;98:11; | 68:9 | 75:3,5,6,12;76:7,25; |
| 26:15;71:12 | 5:12 | 103:1;108:13;109:1 | use (10) | 77:14,21;79:19; |
| Title (1) | travel (1) | type (13) | 31:11;33:19;34:23; | 85:11,11;86:10,12,16; |
| 4:14 | 42:23 | 18:21;20:18;31:2; | $35: 2 ; 78: 17,24 ; 82: 13$ | $88: 9,16,17 ; 114: 25$ |
| T-Mobile (1) | tree (33) | 35:20;36:4,6;50:12; | 100:9;105:14;106:14 | viewscape (1) |
| 66:3 | 20:22,25;21:4 | 54:18;56:2;76:11; | used (7) | 77:13 |
| today (20) | 31:13;33:3,4;34:6; | 78:20,23;89:9 | 28:23;42:23;45:22; | visibility (28) |
| 7:14,25;9:8,24; | 38:4;40:4;42:21; | types (1) | 103:7;108:12,23; | 14:13;19:22;28:5; |
| 10:13;11:3;12:8; | 44:25;45:15;48:25; | 90:15 | 110:16 | 33:8,10;34:12;37:18, |
| 23:25;24:5,11,24; | 50:8,10;52:17,21,21; | typically (5) | users (1) | 22;39:7,12,19;40:9, |
| 25:10,21;39:12;60:4; | 53:23,24;54:6,12; | $51: 2 ; 67: 23 ; 80: 1,9$ | $99: 2$ | $24 ; 45: 17 ; 47: 7,10,14$ |
| 92:24;95:5;96:24; | 61:5,17;74:12,19,24; |  | uses (1) | 49:13;52:5;56:24; |
| told (1) | 83:22;87:5 | $\mathbf{U}$ | using (2) | $78: 17 ; 79: 3 ; 84: 5 ; 85: 6$ |
| 15:7 | trees (36) |  | 18:21;31:2 | 89:11 |
| $\boldsymbol{t o p}(10)$ | 15:23;16:7;17:14, | UHF (1) |  | visible (6) |
| 61:25;66:12;67:11, | 16;18:19;19:17;20:3; | 105:23 | V | 18:8;29:19;77:16, |
| $\begin{aligned} & 13,18 ; 76: 25 ; 81: 7,19 \\ & 84 \cdot 17 \cdot 101 \cdot 17 \end{aligned}$ | $28: 21,22 ; 31: 1,6,24 ;$ $32 \cdot 2 \cdot 3 \cdot 3 \cdot 1 \cdot 34 \cdot 8$ | Ulanday (55) 94.16.95.14 |  | $24 ; 88: 21 ; 89: 1$ |
| 84:17;101:17 <br> tough (1) | 32:2,8;33:1;34:8 | 94:16;95:14,15,23 | valley (2) | visual (5) |
| $4: 6$ | 47:17;50:13;53:17; | $98: 9,13,16,23 ; 99: 3,7,$ | values (1) | $87: 11 ; 88: 15$ |
| toward (2) | 54:16,18;55:16,21; | 15;100:1,7,16;101:2, | 48:10 | voice (2) |
| 17:13;20:25 | 56:24;57:7;74:17; | 7,22;102:2,15,20; | varying (1) | 100:5;108:16 |
| towards (3) 53:6;77:5;103 | $75: 3,25 ; 77: 11 ; 79: 20 ;$ $80: 3,16 ; 81: 21$ | $103: 10,21 ; 104: 8,14$ | $34: 25$ vast (1) | W |
| Tower (44) | truck (1) | $106: 4,11,16,21$ | $\begin{array}{r} \text { vast (1) } \\ 47: 16 \end{array}$ | W |
| 3:3;4:17;18:3; | 20:4 | 107:16,22;109:2,12, | venture (1) | walk (1) |
| $20: 15,23 ; 21: 7 ; 22: 16$ | true (10) | 16,20;110:6,12,25; | 31:4 | 81:20 |
| $29: 7 ; 40: 4,13 ; 51: 10$ | 46:5;61:3;69:13; | 111:4,14,20;112:2,11, | verbatim (1) | walked (1) |
| 52:18;54:6;59:5; | 71:22;73:16;88:11; | 21;113:10;118:4 | 5:1 | 14:10 |
| 60:23;66:7,12;67:2, | 90:3;96:16;100:4; | under (11) | verification (1) | walking (1) |
| 10;68:8,12,22;71:2; | 112:22 | 24:12;60:6;65:5; | 95:9 | 87:18 |
| 75:14,18,19,22,24; | truly (1) | 68:13,18;69:12,19; | Verify (8) | wall (1) |
| 77:1;78:23;84:9,18, | 38:5 | 95:6,13;96:8;111:24 | 22:24;23:15;24:14; | 18:4 |
| 23;86:15,20;99:1,4; | Trumbull (1) | Understood (1) | 26:14,19;29:17; | water (1) |
| 100:13;102:9,10,13, | 3:21 | 7:6 | 45:20;95:11 | 43:23 |
| 19;106:14;111:11 | trunk (1) | unfortunate (1) | Verizon (13) | way (9) |
| Towers (10) | 80:19 | 71:12 | 3:18;66:1;67:11,12, | 11:13;13:23;62:2; |
| 3:4;4:18;28:23; | Trust (5) | Uniform (1) | 14,17;93:10;94:11; | 69:11;80:6;101:21; |
| 47:15;64:19,25; | 3:11;5:10;12:23; | 4:16 | 97:12;98:1;104:17; | 109:7;112:7,8 |
| 67:18;69:7;72:20; | 59:24;108:8 | units (3) | 108:6;113:10 | ways (2) |
| 104:16 | try (4) | 49:15;89:23;90:1 | vernal (1) | 17:13;28:15 |
| Town (12) | 13:18;35:2;84:12; | unless (2) | 43:11 | weather (3) |
| 4:12;5:3,3;13:24; | 103:5 | 39:13;114:3 | version (1) | 19:18;27:2;78:6 |
| 35:3,8;56:13;57:17, | trying (7) | unreliable (1) | 17:5 | web (2) |
| 21,23;75:13;115:14 | 6:6;19:3;46:21 | 101:9 | versus (2) | 35:2;36:4 |
| towns (2) | 70:5;78:15;81:18; | up (33) | 45:16;89:18 | welcome (1) |
| 34:25;36:14 | 98:3 | 4:6;11:13;20:4 | viable (1) | 24:4 |
| track (1) | Tuesday (2) | 21:4;26:13,24;28:4; | 58:7 | west (5) |
| 69:18 | 4:3;26:20 | 35:6;38:3;39:1,11; | vicinity (1) | 32:1;38:17;39:1; |
| trade-off (2) | TV (2) | 42:22;46:22;50:6; | 70:25 | 73:24;86:8 |
| 38:11,20 | 105:21,25 | 51:18;52:6;68:14,19; | view (4) | westerly (1) |
| traffic (4) | tweaked (1) | 69:14,21;72:1;73:9; | 30:24;38:19;53:13; | 39:25 |
| 4:5;5:12,18;103:14 | 46:1 | 77:7;79:6;82:14;87:1; | 60:16 | western (1) |


| 39:8 | 13:21;14:4,9,17,19, | 19:16;44:25;50:15; | 10 (9) | 61:10,20 |
| :---: | :---: | :---: | :---: | :---: |
| wetland (10) | 23;15:1,6,13,21;16:4, | 51:6;65:6;70:20; | 24:13;25:14;46:3; | 170 (3) |
| 42:15;43:2,4,17,24; | 8,12,21;17:10,21; | 79:11;83:14;113:1 | 68:15,19;80:4,8; | 30:3;59:8;84:22 |
| 48:1,2,3,8,12 | 18:5,11,24;19:6,10, | worked (2) | 92:11;96:5 | 170-feet (1) |
| wetlands (4) | 14;20:9;23:7,19,23; | 50:20;59:9 | 100 (1) | 66:8 |
| 43:9,10,14;48:6 | 24:1,3,18,22,25;25:4, | working (1) | 82:20 | 170-foot (1) |
| what's (6) | 8,11,15,19,22;26:22; | 52:22 | 10-foot (1) | 21:7 |
| 5:17;30:5;41:1; | 27:11,19;28:11;29:1, | works (1) | 84:9 | 19 (1) |
| 52:4;58:16;108:13 | 9,12,25;30:7,12,18; | 101:14 | 11 (9) | 4:25 |
| Whereupon (5) | 32:17,23;33:16; | written (2) | 4:4;17:22;25:14; | 1900 (1) |
| 13:4;44:19;46:15; | 34:18;35:11,17;36:8; | 73:2;115:1 | 70:11;92:11;96:1,3,5; | 100:5 |
| 93:11;115:17 <br> wherever (1) | $37: 14,24 ; 38: 10 ; 39: 9 ;$ 40:10;41:4,10,16; | Y | $109: 21$ $\mathbf{1 1 : 3 0}(\mathbf{1})$ | 2 |
| 55:1 | 42:4,12,16;43:3,12; |  | 17:22 |  |
| White (15) | 44:5;45:2,6,13,18; | yards | 1115 (1) | 2 (57) |
| 8:1;10:1,2,7,11,14; | 46:7;47:6,24;48:19; | 75:7 | 3:6 | 26:20,21,25;28:10, |
| 17:6,10,21,24;18:5, | 49:11,21;50:19; | year (1) | 12 (9) | 25;29:15;30:3,8; |
| 11,24;19:6;28:20 | 51:12;52:7;53:14,19; | 57:18 | 29:5;33:13;70:12; | 31:19;32:3,7,12; |
| whole (1) | 54:10,13,22;55:11; | year-round (2) | 81:8;92:11;96:10,11, | 33:14;37:20;38:20; |
| 31:6 | 56:6,15,22;57:4,9,12; | 33:13,14 | 12;97:24 | 40:6,8,23;41:22; |
| who's (2) | 58:13,17,19,23;59:2, | years (2) | 12:49 (1) | 42:19;43:18;48:9,23; |
| 59:23;94:16 | 7,11,15,19;60:5,13, | 57:14;89:6 | 93:13 | 53:3,23;56:12;57:1,7; |
| wider (1) | 19,25;61:7;62:14,24; |  | 120 (8) | 58:7,7;59:12;60:10; |
| 50:3 | 63:8,13;64:4,16,22; | Z | 30:10,20;59:17 | 61:11,21,22;67:19; |
| width (1) | 65:3,13,16,25;66:9, |  | 67:15;77:14;84:24; | 73:15,19;74:22; |
| 62:7 | 13,18,24;67:5,14,22; | zero (1) | 87:24;101:13 | 77:22,24;84:6,15; |
| wife (1) | 68:1,10,16,23;69:3, | 80:22 | 120-feet (1) | 85:15;86:7,13;87:2, |
| 11:24 | 15;70:7,22;71:11; | zoom (1) | 67:10 | 24,25;88:22;89:8,14; |
| Winchester (1) | 72:25;73:6,11,22; | 6:12 | 13 (2) | 90:20;91:4;92:3;93:9; |
| 50:21 | 74:15,23;75:8,15,20; |  | 70:12;92:4 | 118:25 |
| wind (3) | 76:18;77:2;78:8,14; | 0 | 130 (1) | 2:14 (1) |
| 27:2;78:7;79:16 | 79:21;81:1,5,13; |  | 89:10 | 115:19 |
| Windaway (3) | 82:18;83:18;84:10, | 06103-3597 (1) | 131 (1) | 20 (11) |
| 38:17;39:17;51:22 | 19;85:17;86:3;87:7, | 3:22 | 113:6 | 30:8,12;31:13;51:3; |
| windy (3) | 14;88:2,5,12,18; | 06507-1694 (1) | 13th (2) | 53:2;67:25;69:8;76:4, |
| 15:22;17:11;19:16 | 89:25;90:4,10,25; | 3:15 | 28:8;114:17 | 16;81:11;89:6 |
| winter (6) | 91:1,7;92:1,8,13,18, | 06604 (1) | 14 (2) | 2013 (5) |
| 14:12,16;15: | 25;94:21;95:15,18, | 3:7 | 32:13;92:15 | 19:22;20:11;28:15; |
| 31:7;39:14;79:13 | 24;96:7,19,21,25; |  | 140 (2) | 52:12;87:1 |
| wintertime (2) | 97:2;98:9,13,16,23; | 1 | 50:6,14 | 2014 (5) |
| 55:22;75:25 | 99:3,7,15;100:1,7,16; |  | 14th (1) | 14:25;15:11;16:5; |
| Wireless (6) | 101:2,7,22;102:2,15, | 1 (68) | $4: 3$ | 28:7;29:15 |
| 3:19;94:12;97:12; | 20;103:10,21;104:8, | 20:11;23:11,12,18; | 15 (3) | 2015 (8) |
| 98:12;102:18;113:11 | 18,24;105:11,15,22; | 26:20,23;28:9,12,25; | 76:4,16;80:4 | 4:3,11,25;26:21; |
| wise (1) | 106:4,11,16,21; | 29:8,13;30:3,9,19; | 150 (17) | 65:21;118:19,22,25 |
| 108:19 | 107:16,22;109:2,12, | 32:9,14,14;33:13; | 30:3,8,10;31:22; | 2020 (1) |
| withdrawing (1) | 16,20;110:6,12,25; | 37:8;39:16;40:17; | 49:9,18;50:6,14; | 65:20 |
| 71:23 | 111:4,14,20;112:2,11, | 41:3,5,22;42:22;47:8; | 59:15;66:7;77:9;78:5; | 2100 (9) |
| withdrew (1) | 21 | 48:6,20;51:23;52:10, | 83:11;84:22,24; | 98:6,14,19,22,24; |
| 72:5 | witnesses (11) | 19;53:14,22;57:24; | 87:24;89:18 | 99:10,24;107:14,23 |
| within (14) | 7:13;8:12;22:3,14, | 58:15;59:10,13,18; | 150-feet (2) | 22nd (1) |
| 43:16;48:6;55:18; | 20;26:12;93:11; | 60:10;67:19;73:14, | 67:10;89:10 | 21:18 |
| 74:12;75:9,9;82:7,7, | 94:13;95:10;115:17; | 18,25;74:8,20,25; | 150-foot (2) | 23rd (1) |
| 19;99:4,4;105:9; | 118:3 | 76:23;77:5,15;78:2; | 67:15;77:22 | 28:8 |
| 109:23;115:1 | WOLF (1) | 84:6,6,13;85:15;86:6, | 16 (2) | 24-foot (1) |
| Without (4) | 3:5 | 17;87:3,16,23;88:22; | 4:14;81:11 | 51:3 |
| 33:18;72:5;83:7; | Wolfpits (1) | 89:8,15;90:20;91:23; | 160 (2) | 25 (1) |
| 115:9 | 32:16 | 95:7,14;101:13; | 49:25;50:17 | 33:12 |
| WITNESS (250) | wondering (2) | 118:22 | 160-foot (1) | 25-foot (1) |
| 8:24;9:4,9,12,16,21, | 13:18;19:11 | 1:48 (1) | 50:21 | 46:9 |
| 25;10:2,7,11,14,17, | woods (3) | 94:2 | 1694 (1) | 26 (4) |
| 22,25;11:4,6,11,16, | 40:19;79:4;81:21 | 1:50 (1) | 3:14 | 96:13;118:16,20,23 |
| 20,25;12:4,10,14; | work (9) | 94:5 | 17 (2) | 261 (1) |



