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STATE OF NEW HAMPSHIRE

SITE EVALUATION COMMITTEE

September 24, 2018 - 9:05 a.m. DAY 7  
49 Donovan Street Morning Session ONLY  
Concord, New Hampshire

{Electronically filed with SEC 10/08/18}

IN RE: SEC DOCKET NO. 2015-04  
Application of Public Service  
Company of New Hampshire, d/b/a  
Eversource Energy, for a  
Certificate of Site and  
Facility.  
(Adjudicative Hearing)

PRESENT FOR SUBCOMMITTEE/SITE EVALUATION COMMITTEE:

- |                                            |                             |
|--------------------------------------------|-----------------------------|
| Patricia Weathersby<br>(Presiding Officer) | Public Member               |
| David Shulock, Esq.                        | Public Utilities Commission |
| Elizabeth Muzzey, Dir.                     | Div. of Historic Resources  |
| Charles Schmidt, Admin.                    | Dept. of Transportation     |
| Christopher Way, Dep. Dir.                 | Div. of Economic Dev.       |
| Michael Fitzgerald, Dir.                   | Dept. of Env. Services      |
| Susan Duprey                               | Public Member               |

ALSO PRESENT FOR THE SEC:

Michael J. Iacopino, Esq., Counsel for SEC  
Iryna Dore, Esq.  
(Brennan, Lenahan, Iacopino & Hickey)

Pamela G. Monroe, SEC Administrator

(No Appearances Taken)

COURT REPORTER: Susan J. Robidas, LCR No. 44

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I N D E X

WITNESS:

JAMES CHALMERS

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P R O C E E D I N G S

PRESIDING OFFICER WEATHERSBY: Good morning, all. Welcome to Day 7 of the hearings in Seacoast Reliability Project. Despite news reports to the contrary, this is not our last day of the hearings. Today we will be starting with the examination of Dr. James Chalmers. After Dr. Chalmers, we will, this afternoon most likely, be hearing from Dr. William Bailey. We also hope to get to Mr. Robert Varney later this afternoon.

Would you swear the witness in.  
(WHEREUPON, JAMES CHALMERS was duly sworn and cautioned by the Court Reporter.)

PRESIDING OFFICER WEATHERSBY:  
Attorney Needleman.

DIRECT EXAMINATION

BY MR. NEEDLEMAN:

- Q. Dr. Chalmers, could you please state your name for the record and your business address.
- A. My name is James Chalmers. My business address 616 Park Lane, Billings, Montana.

1 Q. And you submitted three pieces of testimony  
2 in this matter, which I have given you copies  
3 of. The first one is Exhibit 12, which is  
4 your prefiled direct testimony, dated April,  
5 12th, 2016; the second is Exhibit 82, which  
6 is your amended prefiled testimony, dated  
7 March 29, 2017; and the third is Exhibit 147,  
8 which is your supplemental prefiled  
9 testimony, dated July 27, 2018; is that  
10 correct?

11 A. Yes.

12 Q. Do you have any changes or corrections to any  
13 of those pieces of testimony?

14 A. No.

15 Q. Do you adopt all of them and swear to them  
16 today?

17 A. I do.

18 Q. Okay. Thank you.

19 MR. NEEDLEMAN: All set, Madam Chair.

20 PRESIDING OFFICER WEATHERSBY: All  
21 right. Thank you. First cross-examination  
22 will be Attorney Patch for the Town of Durham  
23 and UNH.

24 CROSS-EXAMINATION

1 BY MR. PATCH:

2 Q. Good morning.

3 A. Good morning.

4 Q. My name is Doug Patch. I am counsel to  
5 intervenors in this docket, Town of Durham  
6 and the University of New Hampshire.

7 I wanted to start with a question about  
8 sort of the ultimate conclusion that you  
9 reached in this docket. If I understand it  
10 correctly, while the research that you had  
11 conducted lead you to conclude there is no  
12 basis to expect that the Project would have a  
13 discernible effect on property values, you  
14 would have to agree, wouldn't you, that there  
15 can still be impacts on individual property  
16 values?

17 A. I wouldn't characterize my ultimate  
18 conclusion quite the way you did. I think,  
19 as is explained in my testimony, the  
20 conclusion is that we have now identified the  
21 characteristics of properties that in fact  
22 have a relatively high likelihood of impact  
23 from transmission lines. But we've also  
24 identified the characteristics of properties

1 that are unlikely to experience property  
2 value impacts, and those properties  
3 predominate in the vicinity of the proposed  
4 project. So the overall effect is that the  
5 effects of the Project on properties are  
6 going to be limited. But we've been very  
7 explicit.

8 And there's really sort of path-breaking  
9 research here that has for the first time  
10 given us some leverage on identifying those  
11 properties that may very well experience  
12 impacts due to their proximity to  
13 transmission lines.

14 Q. Then I guess in light of the question I just  
15 asked you, would you agree that there can  
16 still be impacts on individual property  
17 values? Sounds like you'd agree with that.

18 A. Yeah, exactly. Precisely.

19 Q. As you noted on Page 23 of your supplemental  
20 testimony, Exhibit 147, high-voltage  
21 transmission lines are generally seen as a  
22 negative attribute of a property, and there  
23 are circumstances where they can be  
24 sufficiently intrusive that the market value

1 of a property is affected. Is that fair to  
2 say?

3 A. Yeah, absolutely.

4 Q. And on Page 12 of that testimony, I believe  
5 it's Lines 5 and 6 -- actually, I'm sorry.  
6 I'm looking at your original testimony. I'm  
7 back at Page 12 of your original testimony,  
8 which I believe is Exhibit 12.

9 A. I'm sorry. The page number?

10 Q. It's Page 12 of Exhibit 12, and Lines 5 and  
11 6. You said that the proximity of the house  
12 to the right-of-way combined with clear  
13 visibility of the transmission line are the  
14 critical values. That's what you said at  
15 that point in time; correct?

16 A. Correct.

17 Q. Now, I think in your supplemental testimony,  
18 Exhibit 147, you modified that somewhat. I'm  
19 looking at, in Exhibit 147, I'm looking at  
20 Page 11, and I'm looking at Lines 9 to 12.  
21 You said for residential properties, emphasis  
22 was on the three variables, not two, three  
23 variables that research has shown best  
24 measure potential effect on the market value

1 of a property. And the three you listed are:  
2 The proximity of the house to the  
3 right-of-way, the visibility of structures  
4 both before and after construction of the  
5 Project, and the extent to which the property  
6 is encumbered by the right-of-way easement.  
7 Is that correct?

8 A. Yes.

9 Q. Now, the variable involving the visibility of  
10 structures both before and after construction  
11 would be especially true in this project,  
12 wouldn't it, because we are talking about  
13 places where the structures in many locations  
14 will be doubling in height as a result of the  
15 Project?

16 A. Yes. You know, to the extent that the  
17 Project is in an existing right-of-way,  
18 visibility is the only thing that changes.  
19 The proximity of the houses to the  
20 right-of-way doesn't change and the  
21 encumbrance doesn't change, but visibility of  
22 structures may well change.

23 Q. Right. And partly as a result, if the height  
24 of the structures doubled, then obviously the

1 visibility may change from a particular  
2 property; correct?

3 A. That's correct.

4 Q. And if the right-of-way is either widened, or  
5 where trees have grown into the right-of-way  
6 perhaps over a number of years, and those  
7 trees are now going to be cut down, then  
8 obviously that would affect the visibility  
9 from that particular property as well;  
10 correct?

11 A. That's correct.

12 Q. I'm looking at Page 20 of Exhibit 147, and  
13 I'm looking at Lines 12 to 13. And at this  
14 point you had noted that the visibility of  
15 the structures again will change for some  
16 properties. And I think there was -- the  
17 number of properties for which it would  
18 change I think has changed over the course of  
19 you filing the three different testimonies;  
20 is that fair to say?

21 A. Yes.

22 Q. I mean, it hasn't changed, but the way you  
23 have viewed it perhaps has changed, the  
24 number of properties that you now consider to

1 be ones that are affected. And what's the  
2 number that you would say we're at at this  
3 point in time? I'm talking about residential  
4 properties, to make it easier, number of  
5 residential properties that you would say are  
6 affected by the Project.

7 A. The number of properties for which visibility  
8 changes from either "none" to "partial" or  
9 "clearly" or from "partial" to "clearly"  
10 overall is about six, I think. Of properties  
11 that are within 100 feet, I believe it's  
12 four. There's one that goes from "none" to  
13 "partial," and there's three that go from  
14 "partial" to "clearly."

15 Q. And the reasons that that the number has gone  
16 down from what I think you originally said,  
17 20, and then you went to 14, and now you're  
18 saying 4. Do I have that incorrect?

19 A. Yeah. No, there's some confusion in your  
20 recollection here.

21 Q. Okay.

22 A. There is a count -- there are a lot numbers  
23 here. There's a count on the number of  
24 properties within 100 feet. There are a

1           number of properties that have homes within  
2           100 feet, and that number went from 14 -- I'm  
3           sorry -- went from 19 to 14 due to  
4           undergrounding along Hannah Lane primarily.  
5           That number is now 14. Was 14 is now 14.  
6           That's properties within 100 feet. And of  
7           those, as you can see on the page we were  
8           looking at, Page 20 of Exhibit 147, before  
9           SRP, of those 14, 2 have no visibility of  
10          structures now, 5 have partial visibility, 7  
11          have clear visibility of structures. So a  
12          total of 12 have either partial or clear  
13          visibility. And if you go to the next page,  
14          obviously the number of properties with homes  
15          within 100 feet doesn't change; there's still  
16          14 of them. But now one of them that was not  
17          visible is now partially visible, and three  
18          of them that were partially visible are now  
19          clearly visible. So you're -- the  
20          distribution changes marginally due to the  
21          Project. Total number in those categories --  
22          that is, 14 -- doesn't change.

23        Q.     Okay. But the number after SRP construction,  
24          that's -- you have those two charts where you

1           have before and after. And the after, the  
2           clearly visible number is now 10; correct?

3    A.    Correct.

4    Q.    And is it fairly common for a developer of a  
5           project like this to, in some cases, purchase  
6           properties from a landowner, or in some way  
7           compensate a landowner in the event there are  
8           negative impacts that the Project will have?

9    A.    I think you asked a couple of different  
10           questions there. The developer will often  
11           have to purchase easements. And it's not  
12           uncommon for a property to be acquired for a  
13           variety of basically logistical reasons.

14   Q.    Are there any properties that have been  
15           acquired with regard to this particular  
16           project that you're aware of?

17   A.    Well, there's been easement purchased. I  
18           really don't know the details of those  
19           transactions. But I believe there are  
20           easement acquisitions associated with  
21           university property. There's some expansion  
22           of the easement north of the university. And  
23           I'm aware that the Getchell property, which  
24           is on Little Bay, it's either the last

1 property before the project crosses Little  
2 Bay was acquired. And I believe there was a  
3 property that was owned by Bellamy Rental  
4 Properties. That would have been on the west  
5 side of the alignment, north of the  
6 university. There are two buildings there,  
7 and I believe Eversource purchased one of  
8 those. There may be others, but those are  
9 the ones that I'm aware of.

10 Q. And I think you indicated in your testimony  
11 that you had worked on Northern Pass and then  
12 also on the Merrimack Valley project for  
13 Eversource; right?

14 A. That's correct.

15 Q. Are there other examples in both of those  
16 situations where the property has been  
17 purchased by the Applicant?

18 A. Well, there were significant purchases in  
19 Northern Pass in the northern section of the  
20 route. On Merrimack Valley, I just don't  
21 recall. It was largely within the existing  
22 right-of-ways. I just don't recall whether  
23 there was any expansion of the right-of-way,  
24 any additional easements acquired. I just

1 don't recall.

2 Q. In the absence of purchasing the property  
3 from a landowner, or purchasing an easement  
4 as you've suggested, are there other things  
5 that can be done to mitigate negative  
6 property value impacts?

7 A. Yeah. The Applicant, and I think the utility  
8 industry in general, understands the visual  
9 impact that their projects may have on some  
10 adjoining properties and works very hard in  
11 both the design of the project, location of  
12 structures, types of structures, and in  
13 basically providing visual screening to  
14 mitigate the effects of the Project to the  
15 extent possible.

16 Q. And what would constitute visual screening?

17 A. Well, typically it would be landscaping.

18 Q. So, trees?

19 A. Right.

20 Q. I mean, when you plant a tree, you know, you  
21 can't plant -- well, maybe you could, but  
22 it's pretty rare to plant a 50-foot tree or a  
23 60-foot tree. It's usually something much  
24 smaller than that, which ultimately may grow

1 and provide the visual screening as you  
2 suggested. But sometimes it takes years for  
3 that to happen; is that fair to say?

4 A. In some cases, that would be the case, yes.

5 Q. So the impact, in terms of mitigating  
6 negative property values, could take a long  
7 time before it actually had that kind of  
8 impact.

9 A. Well, when we're saying "mitigating," we're  
10 talking about mitigating the visual impact.  
11 We're not necessarily talking property values  
12 here.

13 But, yeah, I would say in some cases  
14 it's possible through the location of the  
15 structures, some combination of the location  
16 of the structures and landscaping to very  
17 effectively mitigate the visual impact, and  
18 other cases not.

19 Q. But when you're say we're talking about  
20 visual screening and not property value  
21 impacts, they're very related, aren't they?

22 A. They are related.

23 Q. Okay. That's all the questions I have.

24 Thank you.

1                   PRESIDING OFFICER WEATHERSBY: All  
2                   right. Thank you. Attorney Geiger.

3                   CROSS-EXAMINATION

4 BY MS. GEIGER:

5 Q. Good morning, Dr. Chalmers. I'm Susan  
6 Geiger, and I represent the Town of  
7 Newington.

8                   Could you please turn to your  
9 supplemental prefiled testimony which has  
10 been marked as Applicant's 147. Do you have  
11 that?

12 A. Yes, I do.

13 Q. At Page 1, Lines 10 to 11, you say that the  
14 decision rendered by the New Hampshire Site  
15 Evaluation Committee in another docket lead  
16 to the updates and revisions to your earlier  
17 testimony and research that underlies it;  
18 correct?

19 A. Yes.

20 Q. Was that decision the Northern Pass decision?

21 A. Yes.

22 Q. What in particular about that decision caused  
23 you to update and revise your earlier  
24 testimony in this docket?

1 A. Well, as you know -- or I suspect you may  
2 know -- that docket was extensive. And there  
3 were concerns expressed by the Committee of  
4 three types, I think. There were concerns  
5 with respect to data accuracy; there were  
6 concerns that there were gaps or holes in the  
7 analysis, particularly with respect to the  
8 emphasis in the report was on residential,  
9 single-family residential properties, and  
10 there was a concern there wasn't adequate  
11 representation or attention paid to  
12 commercial properties, to vacation homes, to  
13 multi-family, to condominiums, to apartments;  
14 and the third area of concern was with  
15 respect to the applicability of the case  
16 studies to the particular characteristics of  
17 the proposed project, both in terms of kind  
18 of structure type, location, and that the  
19 case studies simply weren't sufficiently  
20 representative of the proposed project.

21 I understood those concerns, don't  
22 necessarily agree with all of them. But  
23 there were many legitimate concerns there. I  
24 have addressed those, responded to all of

1           them in this matter, and the testimony that I  
2           offered is now based on the evidence which  
3           has been revised in response to those  
4           concerns.

5    Q.    Okay.  And isn't it true that in the Northern  
6           Pass docket, the Site Evaluation Committee  
7           found that the Applicant did not meet its  
8           burden in demonstrating that the Project's  
9           impact on property values will not unduly  
10          interfere with the orderly development of the  
11          region?

12   A.    Yes.

13   Q.    Could you please turn to Page 3, Lines 5  
14          through 8 of your supplemental prefiled  
15          testimony.  Do you have it?

16   A.    Yes.

17   Q.    And there, I believe, you state that  
18          statistical studies present strong evidence  
19          that there are no consistent effects of  
20          high-voltage transmission lines on property  
21          values in urban and suburban regions of  
22          Massachusetts and Connecticut.  Is that your  
23          testimony?

24   A.    Yes.

1 Q. Would you agree that Newington, New  
2 Hampshire, is not an urban community?

3 A. Well, it's quite a mixture, really. It's  
4 got -- it's a combination of rural community  
5 and then heavy commercial development.

6 Q. Would you characterize it as an "urban  
7 community"?

8 A. Probably not, no.

9 Q. Would you agree that Newington, New  
10 Hampshire, can be characterized as "rural"?

11 A. Yeah, much of the town is rural. Yes.

12 Q. Okay. On Page 3, again of your supplemental  
13 prefiled testimony, on Lines 9 through 16,  
14 you state that case studies you reviewed  
15 identified the small number of residential  
16 properties that have experienced adverse  
17 sales price effects due to high-voltage  
18 transmission lines and that you estimate that  
19 there are some residential properties that  
20 will experience adverse sales price effects  
21 because of the Project; correct?

22 A. That's right.

23 Q. And you go on to say that most of these  
24 properties already share these

1 characteristics along the existing PSNH  
2 right-of-way. They are encumbered by the  
3 right-of-way easement, the houses are within  
4 100 feet of the right-of-way, and they have  
5 either unobstructed visibility or partial  
6 visibility of the structures that currently  
7 exist in the right-of-way; correct?

8 A. That's right.

9 Q. Okay. But the structures that currently  
10 exist in the PSNH right-of-way are not  
11 high-voltage transmission lines, are they?

12 A. They're not characterized as "transmission  
13 lines" by the PUC. That's correct.

14 Q. Despite that characterization of whether  
15 they're transmission or distribution because  
16 of their voltage, these are distribution  
17 system poles and wires; correct?

18 A. That's the way they're characterized. I  
19 think in the market they're viewed as power  
20 lines, typically. This distinction between  
21 distribution lines and transmission lines is  
22 an important one. I think we understand the  
23 formal definition. But in the market, we  
24 have what a lot of people think of

1 distribution lines are what's in the street  
2 which brings power to the house, and then  
3 there are power lines which are in corridors  
4 which have easements, which have  
5 rights-of-way that are cleared. And I'm not  
6 sure that -- as a matter of fact, it's my  
7 general experience that the public doesn't  
8 make a distinction between power lines of  
9 lower voltage and power lines of higher  
10 voltage in the same way that we might in this  
11 proceeding.

12 Q. But aren't the existing distribution poles  
13 that are in the existing PSNH right-of-way in  
14 Newington half as tall as the new  
15 high-voltage transmission poles that are  
16 proposed to be constructed in that same  
17 location?

18 A. Yes.

19 Q. Okay. And aren't the -- isn't the  
20 circumference of those distribution poles  
21 that currently exist in the right-of-way much  
22 smaller than the circumference of  
23 high-voltage transmission poles that are  
24 proposed for the same location?

1 A. I believe so.

2 Q. And isn't the appearance overall of the poles  
3 and wires that are proposed for that  
4 right-of-way in Newington going to be  
5 different than what currently exists in that  
6 right-of-way?

7 A. Yes.

8 Q. Now, I believe that you alluded earlier to  
9 the fact that 34.5kV distribution poles and  
10 wires exist in the roadway; is that correct?

11 A. No. It may in some cases. All I was saying  
12 is that we are -- I think the public, the  
13 market, is familiar with power lines that  
14 bring power to individual homes located in  
15 roadways typically. But corridors that  
16 contain power lines where you have a cleared  
17 corridor and an easement is viewed  
18 differently. And those are generally thought  
19 of as power lines. And the public wouldn't  
20 typically make a distinction. The public  
21 typically doesn't have any idea what the  
22 voltage is. The public just knows there's a  
23 power line corridor maybe across the street  
24 in someone's yard or maybe even in their

1 yard. But they wouldn't make the distinction  
2 between a distribution corridor and a  
3 transmission line corridor, typically.

4 Q. Okay. Are you aware of any studies regarding  
5 the effects that a 34.5 kV distribution line  
6 and a utility right-of-way or corridor has on  
7 the sale price of homes located in close  
8 proximity, say within 100 feet?

9 A. Yeah. Interestingly, in our original case  
10 studies that were published in 2015, we knew  
11 that we were light in terms of case studies  
12 in the southeastern portion of the state.  
13 And we found -- we looked for case studies  
14 locations around Portsmouth, and we found  
15 six -- I believe one in Newington, maybe two  
16 in Greenland, one in Dover, one in Durham,  
17 one in Newmarket -- and four of those six  
18 were along corridors exactly similar to the  
19 one in question here. They were 34kV  
20 corridors in hundred-foot right-of-ways. And  
21 of those four, one in Greenland and one in  
22 Newmarket, there were sales price effects  
23 along that 34.5 kV line, which interestingly  
24 is consistent with our research in general,

1           which is that -- and this is sort of  
2           surprising. But the nature of what's in that  
3           corridor doesn't seem to affect the  
4           likelihood of a sale price effect -- that is,  
5           we found -- we studied, for example, the  
6           Phase 2 corridor goes from Littleton down to  
7           the Massachusetts border, which contains  
8           three very large two 230 lines and a 450  
9           line. The 450 line is on a very big steel  
10          lattice, hundred-foot steel lattice tower;  
11          Corridor 2 was on wood H-frames, was a 115  
12          line. We got almost exactly the same  
13          results. And by the same token, in Greenland  
14          and in Newmarket, you know, we got two out of  
15          the four, we got sales price effects next to  
16          34-point [sic] kV.

17                 I think what goes on is some people are  
18          averse to living next to a power line and  
19          they wouldn't consider it, whether it's a  
20          34.5 or whether it's a 115 or whether it's a  
21          345. There are other people where there are  
22          other exigencies that drive their decision  
23          and apparently don't -- are not averse, any  
24          more averse to, you know, two lines in a

1 corridor versus one, or a 115 versus a 34.5.

2 Q. Have you conducted any studies, or are you  
3 aware of any studies that compare the sale  
4 price of homes located in close proximity to  
5 a 34.5kV distribution line where the sales  
6 prices of those same homes after a  
7 high-voltage transmission line has been  
8 constructed in the same right-of-way?

9 A. We have the 20 new case studies that were  
10 occasioned by this project which we added.  
11 So we had 58 originally in New Hampshire, but  
12 they're heavily weighted towards the northern  
13 and central portion of state. We added 20  
14 new case studies in the southeastern portion  
15 of the state. All of those had at least a  
16 115kV line in them. So I think the answer to  
17 your question is yes. We haven't studied the  
18 before and after, if that was your question.

19 Q. That was my question. My question is: Do  
20 you know or have you studied or are you aware  
21 of any studies that have considered a  
22 property that is in close proximity to a  
23 distribution line, a 345.5kV line, the sales  
24 price of those properties, with subsequent

1 sales of the same property after a  
2 high-voltage transmission line --

3 A. No, we have not done before and after. We  
4 studied the 345 and we studied the after  
5 condition of the 115, but we never tried  
6 to -- be hard to find -- well, it would be  
7 possible, but you'd have to look pretty hard  
8 to find -- particularly, are you talking  
9 about same properties?

10 Q. Talking about --

11 A. Be hard to find before and after. But we  
12 have not done that.

13 Q. Okay. Now turning to Page 3 of your  
14 supplemental prefiled testimony. On Lines 22  
15 to 25 you describe several factors that could  
16 influence the sale price of a property in  
17 proximity to a high-voltage transmission  
18 line; correct?

19 A. That's correct.

20 Q. One of the factors you cite on Line 25 is the  
21 extent that mitigation actions had  
22 successfully reduced the effect of the  
23 high-voltage transmission line on property;  
24 correct?

1 A. That's right.

2 Q. Would you consider burial of the line to be  
3 an effective mitigation action that could  
4 successfully reduce the effect or the  
5 negative impact that a high-voltage line  
6 might have on a sales price?

7 A. Yes.

8 Q. Would you agree that a property value  
9 guaranty is another way to mitigate the  
10 negative effects that a high-voltage  
11 transmission line has on a property's sales  
12 price?

13 A. I don't know whether it...

14 Q. Would you consider economic mitigation? I'm  
15 not talking about physically mitigating,  
16 obviously. I'm talking about helping the  
17 property owner deal with negative impacts.

18 A. Yes.

19 Q. Isn't it true that in the Northern Pass case,  
20 the Applicant was willing to provide property  
21 value guarantees?

22 A. Yes.

23 Q. And is Eversource willing to do that in this  
24 case, do you know?

1 A. Yeah, there were preliminary proposals in  
2 Northern Pass. I don't know that it was  
3 ever, you know, developed in any detail. But  
4 there was a proposal, the general outlines of  
5 a proposal in Northern Pass. And there is a  
6 proposal in this case for claims, my  
7 understanding, that would deal with concerns  
8 over property values.

9 Q. Could you provide some details about that  
10 claims process?

11 A. I'm sorry?

12 Q. Could you please explain what that claims  
13 process would entail?

14 A. Well, my understanding is simply that the  
15 Applicant and the Counsel for the Public have  
16 agreed on a proposal for basically a dispute  
17 resolution process which would address, you  
18 know, construction period issues or property  
19 value issues that might arise subsequent to  
20 construction of the Project.

21 Q. Okay. So that's dispute resolution. But  
22 would you agree that the dispute resolution  
23 process is not the same thing as a property  
24 value guaranty?

1 A. Yeah, they're different.

2 Q. Now turning to Page 5 of your supplemental  
3 testimony. On Lines 13 to 14 you note that  
4 there are considerable undeveloped land --  
5 there is considerable undeveloped land along  
6 the Project route of which much is  
7 conservation lands. Do you see that?

8 A. Yes.

9 Q. Did you study the Project's effects on  
10 undeveloped land?

11 A. In general terms, I reviewed the nature of  
12 the vacant lands along the project as  
13 described in the Normandeau land use report.

14 Q. But did you actually make a study of the  
15 sales prices of vacant lands along the  
16 Project route to determine whether or not  
17 there would be any adverse impacts on the  
18 sales price of those vacant lots?

19 A. Well, we have considerable work on vacant  
20 land sales in the research report on which my  
21 testimony is based.

22 Q. But did you personally assess or undertake a  
23 study of specific vacant lots along this  
24 project route?

1 A. No.

2 Q. Okay. So you don't know how this project  
3 will affect the sale price of any undeveloped  
4 property along the Project route, do you?

5 A. Well, again, we have research on vacant land  
6 sales, and we know something about the impact  
7 of transmission lines on vacant land. That  
8 hasn't been applied to specific lots along  
9 the proposed route, no.

10 Q. And could you please explain a little bit  
11 what you do know about the sale of vacant  
12 land as it relates to effects on property  
13 values from high-voltage transmission lines?

14 A. Yes. The vacant land is very tricky because  
15 you have to control for highest and best use,  
16 right. The vacant land whose highest and  
17 best use is commercial, for example, will  
18 have a very different -- will respond to a  
19 very different set of factors in the  
20 marketplace than land that has highest and  
21 best use as residential.

22 So the work that we did in the  
23 subdivision studies was to look at land that  
24 has the same highest and best use -- namely,

1 residential in a subdivision so that we're  
2 controlling for location -- and then looked  
3 at the sale of lots, both pricing and timing.  
4 And you find generally an absence of timing  
5 and pricing effects in those lot sales  
6 relative to their proximity to transmission  
7 lines, with the exception of the case where  
8 encumbrance effectively impacts the  
9 developability of the lot. So there are  
10 cases where a 2-acre lot has the right-of-way  
11 crossing it, essentially converting it into a  
12 1-acre lot, and in those kinds of cases you  
13 frequently see an effect. But it's really  
14 quite surprising. You take sort of a  
15 rectangular subdivision, 10 lots on one side  
16 and 10 lots on the other side, transmission  
17 line going down the edge of one set, and the  
18 sales seem to be random with respect to that  
19 transmission line. And there are other  
20 reasons for that. But we didn't find much.

21 The other thing to add here is simply  
22 that ultimately the demand for residential  
23 land is a function of the demand for  
24 residences. So, probably the best way to

1 study the effects of HVTL high-voltage  
2 transmission lines on residential land is to  
3 study the effect of high-voltage transmission  
4 lines on homes because that's going to be --  
5 that's what's going to drive the demand for  
6 that land. And you've got more transactions  
7 and you've got more homogeneity with respect  
8 to the homes on that as opposed to mixing up  
9 land types. As you go along the Project  
10 route, you've got lands that are in  
11 conservation. You've got lands that are  
12 publicly owned. You've got quite a variety  
13 of lands. And sorting out the highest and  
14 best use of those would be quite difficult.

15 Q. But would you agree with the notion that  
16 because housing structures can vary  
17 considerably from one lot to the next, that  
18 they can suffer very different prices because  
19 of those structures, not because of the  
20 underlying property that might be similar  
21 to --

22 A. Right. And that has to be controlled for and  
23 is controlled for using, you know, standard  
24 appraisal techniques.

1 Q. Are you familiar with a study by College of  
2 Charleston Professors Chris Mothorpe and  
3 David Wyman that found that vacant lots  
4 adjacent to high-voltage transmission lines  
5 sell for approximately 45 percent less than  
6 equivalent lots that are not located near  
7 high-voltage transmission lines?

8 A. I am familiar with that study, yes.

9 Q. Would you agree with it?

10 A. No.

11 Q. Why not?

12 A. It's an interesting sort of first attempt to  
13 do a desk analysis using some very coarse GIS  
14 databases to look at every sale that occurred  
15 in Pickens County from the year 2000 to the  
16 year 2018, about 5,000 sales. And as I say,  
17 they did some interesting things with the GIS  
18 information, but it's so -- it would  
19 require -- their approach will require a huge  
20 amount of refinement before it has any  
21 implications for the question of HVTL impacts  
22 in general, or certainly for HVTL impacts in  
23 New Hampshire. They've got a huge apples and  
24 oranges problem. They have no filter for

1 fair market sales. They have related party  
2 sales, they have short sales, they have  
3 foreclosure sales. And even more  
4 importantly, they take every land sale, and  
5 they don't have any filter for raw land  
6 tracks which may go for \$10- or \$20,000 an  
7 acre, to subdivided lots, but unimproved,  
8 kind of rural lot subdivisions, to finished  
9 lots in subdivisions where you've got water,  
10 sewer, street, curb, gutter. And I think  
11 their effects are basically -- well, the  
12 effects they find and report are really  
13 spurious. I don't think they have anything  
14 to do with the transmission lines. They go  
15 into some detail what's going on in Pickens  
16 County. But I think they have simply picked  
17 up the fact that the transmission lines in  
18 Pickens County are largely in the rural  
19 portion of the state which has land values  
20 similar to rural New Hampshire.

21 Q. Thank you.

22 A. But the transactions -- one more sentence  
23 here. But the transactions, the bulk of the  
24 transactions are in some very, very expensive

1 lakeside communities on the west part of the  
2 county that don't have any transmission  
3 lines. And it's those two very different  
4 markets. And I think they haven't adequately  
5 controlled for it. But in any event, their  
6 study would require a great deal of  
7 refinement before it would have any  
8 applicability to the questions at issue here.

9 Q. Are you aware of any other studies regarding  
10 the sales price to vacant lots relative to or  
11 as a result of high-voltage transmission  
12 lines?

13 A. Yeah. I reviewed five of those, I guess, in  
14 the New Hampshire research report.

15 Q. Okay. Have you studied whether the presence  
16 of concrete mattresses along the shoreline of  
17 Little Bay will affect shoreline property  
18 value?

19 A. Never explicitly, no.

20 Q. Thank you.

21 A. Or I have not studied that question.

22 Q. Thank you.

23 MS. GEIGER: No further questions.

24 PRESIDING OFFICER WEATHERSBY: Next

1 is Attorney Brown for the Durham Residents.

2 MS. BROWN: Madam Chair, I will be  
3 asking a few questions and then Matthew Fitch  
4 will be following up, and we have different  
5 subject matters.

6 PRESIDING OFFICER WEATHERSBY: Thank  
7 you.

8 CROSS-EXAMINATION

9 BY MS. BROWN:

10 Q. Good morning, Mr. Chalmers.

11 A. Good morning.

12 Q. My name is Marcia Brown, and I represent  
13 Donna Heald, an intervenor in this matter.  
14 And I'm also the spokesperson for the Durham  
15 Residents group.

16 And so with respect to -- well,  
17 actually, let me -- excuse me while I address  
18 this technical difficulty. I've got someone  
19 else's exhibit on my...

20 (Pause in proceedings)

21 Mr. Chalmers, I want to start with the  
22 bigger picture, if you don't mind. The  
23 purpose of your testimony in this proceeding  
24 is to look at the effect of the local and

1 regional real estate markets; is that  
2 correct?

3 A. I wouldn't put it -- look at the effects of  
4 the Project on real estate markets -- on real  
5 estate. And from that one can then derive  
6 implications both for types of properties.  
7 And then maybe based on sort of how many of  
8 those there are, you could then draw  
9 implications with respect to local or  
10 regional real estate markets, yes.

11 Q. And your opinions in Exhibit 12, which was  
12 your first testimony, are also reflected in  
13 Exhibit 147, which is your 2018 testimony?

14 A. That's right.

15 Q. And both of those are based on what you call  
16 the "research report"?

17 A. That's right, on the New Hampshire Research  
18 Report. And then contemporaneously we were  
19 doing similar research in Massachusetts and  
20 Connecticut, and so there's a  
21 Massachusetts-Connecticut Research Report  
22 which has additional case studies in it, as  
23 well as some statistical analysis which has  
24 some relevance in this matter as well. So

1           there are two research reports, both of which  
2           are drawn on in my supplemental testimony.

3    Q.    Thank you.  That answers my next question.

4                       Does the research report that was  
5           attached to your testimony, which is  
6           Attachment A, does that contain the majority  
7           of the documents you relied on in forming  
8           your opinion?

9    A.    It contains all of the research that relates  
10       to the general question of transmission line  
11       effects on property values.  It doesn't  
12       contain any of the Seacoast Reliability  
13       Project information.  That is all drawn from  
14       plans and materials provided by the  
15       Applicant, by my field investigation, by the  
16       tables that you see before you that are on  
17       the screen right now.  So you have this base  
18       of research, okay, which the most important  
19       part of which are the case studies.  And the  
20       case studies deal with New Hampshire as a  
21       whole.  In the New Hampshire report there's  
22       now 78 of them.  And then there are 42 more  
23       case studies in the Massachusetts-Connecticut  
24       report.  And that's the research basis on

1           which my opinions are based. That's the  
2           basis for sort of the key table in my  
3           supplemental research, which is on Page 7.  
4           But then all of the Seacoast Reliability  
5           Project information -- that report does  
6           not -- you won't find any reference in that  
7           report to a particular project, okay. That  
8           is then the basis that provides the  
9           information which I apply then to the Project  
10          description and to my investigation of the  
11          Project location to come to my opinions in  
12          this matter.

13    Q.    Okay. I can just parse that response out of  
14          it. When you're referring to Massachusetts  
15          and Connecticut case studies, that material  
16          is in Attachment A to your testimony, your  
17          2018 testimony; correct?

18    A.    B. Massachusetts-Connecticut is in -- is  
19          that right? I believe --

20    Q.    I don't want to -- maybe I'm confusing -- I'm  
21          trying to establish that everything you  
22          relied on to form your opinion is in the  
23          attachments to your testimony.

24    A.    And I'm trying to -- that's not quite right,

1           okay.

2       Q.    Okay.  So the next question is, did you --  
3           and you alluded to it in your earlier  
4           response -- in addition to those documents,  
5           you also relied to plans provided by  
6           Eversource; correct?

7       A.    That's right.

8       Q.    And some of those plans included  
9           environmental maps?

10      A.    Yes.

11      Q.    And construction maps?

12      A.    Yes.

13      Q.    Am I forgetting other things in that list  
14           that should be in that list?

15      A.    Yeah, absolutely.  The extensive  
16           investigation of the proposed route on four  
17           occasions, you know, my personal inspection  
18           of the route, the inspection of the route by  
19           other people.

20      Q.    I'm trying to limit it to the documents that  
21           have been offered as exhibits --

22      A.    Oh, documents.

23      Q.    -- and I'm trying to get my hands around what  
24           did you rely on in forming your opinion.

1 We've already established it's the  
2 attachments to the testimony. We've already  
3 established it's the environmental charts,  
4 it's the construction maps.

5 A. I made reference to the Normandeau Land Use  
6 Report.

7 Q. Okay.

8 A. I made reference to the proposed dispute  
9 resolution agreement. I made reference --  
10 I'm trying to think of documents here. I  
11 made heavy reference to the Application  
12 itself, which provided a good deal of detail  
13 about the Project.

14 Q. Okay. I don't want to strain your memory  
15 right now without the opportunity to refresh.  
16 But is it fair to say, then, that if you've  
17 referred to a document in your testimony in  
18 this attachments, that that formed the basis  
19 of your opinion?

20 A. Yeah, I think most everything is referenced  
21 in my supplemental testimony that I relied  
22 on.

23 Q. Let me back into it this way: Are there any  
24 documents that have not been introduced as

1 exhibits for identification, things that you  
2 relied on in forming your opinion?

3 A. Well, again I'm not sure that in my  
4 supplemental opinion, that the Application  
5 itself, which gives a lot of the detail on  
6 the segment-by-segment,  
7 structure-to-structure information, is  
8 explicitly referenced. But I relied on, you  
9 know, the Applicant materials generally.

10 Q. Thank you.

11 With respect to the criteria that  
12 established that there's a price effect, am I  
13 correct in that they include a house was  
14 within 100 feet of the right-of-way, the lot  
15 was encumbered by a right-of-way easement,  
16 and the view from outside the house was  
17 either partial or clear?

18 A. Yeah, what we have to be -- those are the  
19 criteria. But what we have to be careful  
20 about -- could we put Table 1 up for a  
21 second? That's on Page 7.

22 Q. I have it up on every screen but that one,  
23 which I understand is the last one. So as  
24 long as you can see it --

1 A. Yeah, there we go.

2 So, you know, what we found basically is  
3 there's a total of a hundred case studies in  
4 which a decision was reached and which an  
5 opinion was reached that there was either an  
6 effect or not an effect. So in 25 cases,  
7 there was an effect concluded. And in 75 of  
8 the cases there was no effect concluded. Of  
9 those 25, 23 of them occur in these two cells  
10 here which relate to the criteria you just  
11 mentioned. But the thing you have to be  
12 careful about here is that four properties  
13 within 100 feet that had partial or clear  
14 visibility and is not included in this table,  
15 but they were also encumbered by a  
16 right-of-way easement, about half of them  
17 experienced effects. So those criteria don't  
18 say there's going to be an effect. Those  
19 criteria simply say that the likelihood of  
20 effect is significant. Likelihood of effect  
21 is basically 50/50. Some of those, what were  
22 in fact there, 42 properties in these two  
23 cells, 23 of them experienced an effect. So  
24 the other half basically didn't. So, again,

1           those are the criteria that distinguish  
2           properties for which the likelihood of effect  
3           is significant.

4                     For the other roughly 75 properties, you  
5           know, based on the research, the likelihood  
6           of effect is very, very low. It's  
7           essentially zero, or very close to zero.

8    Q.    And I believe you have explained this nuance  
9           in your testimony. But what I'm trying to  
10           get at is the takeaway from all of your 4,000  
11           pages of your Exhibit 147. The takeaway, can  
12           it be boiled down to there are three buckets  
13           of criteria for a property to fall in where  
14           you can likely have a price effect?

15   A.    What did you say before price effect, though?

16   Q.    I said "likely have a price effect."

17   A.    Where the probability of a price effect is  
18           roughly 50/50. It's not likely -- I don't  
19           know what you mean by "likely." But it's not  
20           a hundred percent. It's 50/50. So of the  
21           properties that satisfy those three criteria,  
22           the research quite consistently shows about  
23           50/50. And that's been true of the case  
24           studies that we did originally, the case

1 studies that we just did in southeast New  
2 Hampshire and the case studies we did in  
3 Massachusetts and Connecticut.

4 Q. I'm going -- I don't have any other questions  
5 on this subject, but let me move on to  
6 another subject.

7 Now, what I have presented on the screen  
8 from Exhibit 147 is Page 15, Table 4. And it  
9 lists residences. And what I'd like to draw  
10 your attention to is the far right column has  
11 structures visible before and after the  
12 Project. Do you see that?

13 A. Yes.

14 Q. How do you -- what is your definition of  
15 "partial"?

16 A. Neither "none" nor "clear." "None" is  
17 straightforward, right. Means you can't see  
18 the structure leaves on, leaves off. Can't  
19 see them, period. "Clear" means you've got  
20 an unobstructed view. So you've got -- okay.  
21 You're not looking through the foliage.  
22 You've got -- so the structures are either  
23 above the tree line, visible above the tree  
24 line, or you've got a clear shot across a

1 meadow, okay. There's no tree line. So  
2 you've got an unobstructed view. And we  
3 defined it a little more precisely to say  
4 that an unobstructed view of that portion,  
5 kind of the business portion, if you will, of  
6 the structure where the conductors are  
7 attached. So it's not you have an  
8 unobstructed view of maybe a little bit of  
9 the base, but you can actually see where the  
10 three major constructors are attached to the  
11 structure, okay. And "partial" is everything  
12 in between those two. So it would be -- in a  
13 few cases it would be an unobstructed view,  
14 but you can see only a little bit of the  
15 structure. You can't see all portions of the  
16 structure to which the conductors are  
17 attached. And more typically, it's the case  
18 where a house is located on a property with a  
19 tree line fairly close to the back yard. So  
20 the back yard may be 40, 50, 60 feet deep,  
21 and then there's a 40-foot tree line. The  
22 line of sight. These measures of visibility  
23 are premised on what one would see if one  
24 walked around the edge of the house; so if

1           you walk around the perimeter of the house,  
2           what can you see of structures. And it's  
3           quite common in those cases that you can't.  
4           The line of sight over that tree canopy is at  
5           an angle, such that there's no unobstructed  
6           view of those structures. But you  
7           frequently, if the house is very close to the  
8           right-of-way, you can see the structures  
9           through the trees. And you can  
10          particularly -- that would be more so the  
11          case in a leaf-off condition than a leaf-on  
12          condition. So, "partial" frequently would be  
13          that situation. You're being able to see  
14          structures sort of through the foliage,  
15          through the vegetation. "Clear," you're able  
16          to see it above the vegetation.

17        Q.    Thank you. With respect to, still in this  
18              column, you've got "before" and "after." Do  
19              you see that?

20        A.    Yes.

21        Q.    The before, am I correct that that represents  
22              the visibility of the existing structures in  
23              the right-of-way? Is that correct?

24        A.    Yup.

1 Q. And the after would be view of the structures  
2 with the new poles after construction?

3 A. That's right.

4 Q. Okay. And the after, you've mentioned  
5 screening in your prior testimony. When is  
6 the after in this column as you're using it?  
7 Is it immediately after construction? Is it  
8 after screening has happened, through growth  
9 of trees, if you could explain?

10 A. Yeah, this is not making assumptions about  
11 mitigation. So this would be our best  
12 estimate of structure visibility as it's  
13 represented on the, in my case, on the  
14 environmental maps after construction, in the  
15 absence of any additional screening.

16 Q. Now, Mr. Chalmers, I have highlighted in red  
17 to aid in our visual today this Page 15 of  
18 Exhibit 147. The line lists No. 271,  
19 Heald-McCosker. Do you see that?

20 A. I do.

21 Q. Now, originally Ms. Heald's property was not  
22 listed in your affected properties; is that  
23 correct?

24 A. That's right.

1 Q. And you have listed for Ms. McCosker's  
2 property at 220 Longmarsh Road that the view  
3 before and after is both partial?

4 A. That's right.

5 Q. And this is a view -- the after view is from  
6 outside of her house?

7 A. Yeah, be from the -- right, if you walk  
8 around the perimeter of the house.

9 Q. Did you walk around the perimeter of the  
10 house?

11 A. No.

12 Q. Have you visited this property?

13 A. All of our property visits are from public  
14 right-of-ways. So it would either be from  
15 the street or, in some cases, from the -- we  
16 would actually walk onto the right-of-way.  
17 In this case, we simply viewed the property  
18 from the street. We also used imagery, both  
19 leaf-on and leaf-off imagery, to characterize  
20 these, to make these characterizations of  
21 visibility.

22 Q. And what time of year was this site visit  
23 that you referred to?

24 A. I visited the properties four times. They

1           were all -- well, one was in April, two were  
2           in May, and one was in August.

3    Q.    Thank you.  Now, is it fair to say that when  
4           a property goes from none to partial, there's  
5           a greater price effect or potential for price  
6           effect on the property?  I know I said  
7           potential, and I know you want to clarify  
8           it's 50/50.  But for purposes of this  
9           question, if it goes from none to partial,  
10          for instance, or partial to clear, that is a  
11          greater diminution of price effect or  
12          property value?  Is that fair to say?

13   A.    I would say, you know, if it's within a  
14          hundred feet, Table 1 that we were looking at  
15          a minute ago would indicate the likelihood of  
16          effect is going to go up, the more visible  
17          the structures are, yes.

18   Q.    And your assessment of price effect for these  
19          particular properties relied on these  
20          designations of "clear," "partial," "none"  
21          and the "before" and "after"; is that  
22          correct?

23   A.    That's right.

24                    MS. BROWN:  Okay.  So, next subject

1 area is going to be about the transmission  
2 lines themselves, and Durham Resident, Matthew  
3 Fitch will be asking those.

4 CROSS-EXAMINATION

5 BY MR. FITCH:

6 Q. Hello, Dr. Chalmers. My name is Matthew  
7 Fitch. I'm one of the Durham Resident  
8 intervenors.

9 A. How do you do?

10 Q. Good.

11 I have a picture here. This is a  
12 particular segment of this route. And  
13 associated with this I'd like to ask you,  
14 would you agree that this picture simply  
15 shows an existing distribution line, based on  
16 the structures here?

17 A. Yes.

18 Q. Okay.

19 A. Let me just ask, because I can't really  
20 answer that question just based on the pole.  
21 But is that your home that's in the  
22 background there?

23 Q. It is

24 A. Okay. I'm familiar with that site and that

1 alignment there, yes.

2 Q. All right. In your testimony on Page 4, this  
3 is supplemental testimony, Page 4, Line 11,  
4 it states that these poles average about  
5 40 feet in height. Does this pole, since  
6 you're familiar with this area, does it look  
7 to be approximately 40 feet in height to you?

8 A. I'm sorry. Was there a question? Am I  
9 familiar with that?

10 Q. Well, does it look to be approximately  
11 40 feet in height to you as well?

12 A. My understanding is they're approximately  
13 40 feet in height, yes.

14 Q. Can you tell by looking at this photo if that  
15 line is energized or not?

16 A. I cannot.

17 Q. In your opinion, would the fact that the  
18 right-of-way contains a de-energized  
19 distribution line materially alter the  
20 characteristics of the corridor with respect  
21 to portions that have an energized cable?

22 A. Affected in what respect?

23 Q. Well, would it -- let's see. Would it change  
24 the characteristics of the corridor because

1           it has -- obviously we see it has structures  
2           in it and the cables. But there's no power.  
3           If there's no power going through those  
4           lines, does it materially change it at all,  
5           in your opinion?

6    A.   Well, certainly from an engineering point of  
7           view, it would be material. Again, I think  
8           it depends in what respect are we talking  
9           about a material change. Yeah, I mean,  
10          there's is a big difference between energized  
11          and de-energized in many respects. Visually,  
12          I would said no. EMF, I would say yes. I  
13          guess those would be kind of the two dominant  
14          considerations from kind of a property value  
15          perspective.

16   Q.   In your supplemental testimony on Page 3,  
17          Lines 20 to 25, you state that, to the extent  
18          that there were adverse effects, some would  
19          be due to the pre-existing condition and some  
20          to the Project. What would actually happen  
21          in the sale of a particular property,  
22          however, cannot be presumed. And the result  
23          of any individual property would be specific  
24          to the characteristics of the property

1 relative to what was available in the market  
2 at that time, to the particular motivations  
3 of the seller and potential buyers, to  
4 overall market conditions at the time of the  
5 sale, and to the extent that mitigation had  
6 successfully reduced the effect of the HVTL  
7 on the property. Did I read that correctly?

8 A. Yes.

9 Q. And while your statement specifically  
10 references "HVTL," in this case we're talking  
11 about a distribution line. Could proximity  
12 to a de-energized distribution line be a  
13 specific characteristic of a particular  
14 property that would be considered by a buyer  
15 at the time of a sale?

16 A. Yes.

17 Q. I'd like to take a quick look here at  
18 Exhibit 106. This is the Existing Cable  
19 Removal Plan that's in the Application. And  
20 it's a little difficult to read here on the  
21 screen. But I'll read a portion here for us.  
22 On Page 1, the third bulleted paragraph down,  
23 starting at the second sentence, it reads  
24 that PSNH records indicated that this single,

1 three-core cable was installed in 1948 as a  
2 replacement to the original cables which were  
3 left in place and was operated at a voltage  
4 of 35.5kV [sic]. A fault in this cable was  
5 discovered in 1995 near the east shore of  
6 Little Bay and the cable was taken out of  
7 service.

8 Now, were you aware that portions of  
9 this existing 34.5kV distribution line were  
10 taken out of service and de-energized over 20  
11 years ago?

12 A. Yes.

13 Q. Could the foreknowledge that the 34.5kV  
14 distribution lines has been de-energized for  
15 10 years or more be a factor that a potential  
16 land or home buyer may consider when making a  
17 purchase?

18 A. Could be.

19 Q. Would it be reasonable for a potential buyer  
20 to assume that since the line had not been in  
21 use for a decade or more that it would remain  
22 that way?

23 A. I really can't say one way or the other.

24 Q. Would you agree with me that in this specific

1 instance, where the former 34.5kV  
2 distribution line was taken out of service in  
3 1995, we have a de-energized line that has  
4 sat unused for over 20 years, that it  
5 constitutes the current pre-existing  
6 condition for the properties that abut or are  
7 traversed by this right-of-way at least in  
8 this particular area?

9 A. I'm not sure I understand your question. Do  
10 I understand that it was a pre-existing  
11 condition?

12 Q. Well, as it sits today, based on the  
13 information here, that we understand it's a  
14 de-energized distribution line, that from a  
15 property buyer's perspective this could be  
16 considered as a pre-existing condition?

17 A. Yes.

18 Q. Okay. Move on to another topic here  
19 regarding conservation.

20 On Page 5 of your supplemental  
21 testimony, Lines 13 and 14, you state that  
22 there is considerable undeveloped land along  
23 the Project route, of which much is  
24 conservation land. In your expert opinion,

1           what would you say is the purpose of  
2           conservation land?

3       A.    Well, it's typically under easement that  
4           restricts its developability or prescribes --  
5           proscribes its developability.

6       Q.    And for definition purposes here,  
7           Merriam-Webster defines "conservation" as "a  
8           careful preservation and protection of  
9           something, especially plant management of a  
10          natural resource to prevent exploitation,  
11          destruction or neglect." Do you agree with  
12          that?

13      A.    That may well be the definition.

14      Q.    Generally do you agree that the purpose of  
15          conservation land is to prevent development  
16          and preserve the natural state of the parcel?

17      A.    Yes.

18      Q.    On Page 10 and 11 of your supplemental  
19          testimony, starting with Line 28 on Page 10  
20          and continuing to Lines 1 and 2 on Page 11,  
21          where we're talking about where the Project  
22          passes, you state that much of it is  
23          conservation land or is land owned by public  
24          sector entities with no development agenda.

1 As such, the presence of the Project in the  
2 existing right-of-way should have no effect  
3 on the use or utility, and hence the value of  
4 adjacent lands.

5 My question is: Is not the inherent  
6 value of conservation lands based  
7 predominantly on the fact that it will remain  
8 undeveloped and preserved in essentially some  
9 static state?

10 A. My perspective here is exclusively on market  
11 value. And it would be my opinion that the  
12 market value of these lands won't be  
13 affected.

14 Q. So how can you put a value to that, or how do  
15 you quantify that in particular?

16 A. Well, conservation lands have market value,  
17 as do -- you know, most all lands have market  
18 value. So you're talking about, I think the  
19 term that you used, the "inherent value" or  
20 it's "value in conservation." That's not  
21 something that I've addressed.

22 Q. Understood.

23 Are you aware that over 25 percent of  
24 the land in the town of Durham is under some

1 form of permanent conservation?

2 A. Just in looking at the environmental maps, it  
3 was clear to me that much of it is. I didn't  
4 have any idea what percentage of it was.

5 Q. The Town of Durham Conservation Commission  
6 has a sentence on their web page. This is a  
7 printout of that here. That reads, "The  
8 success of a long legacy of land conservation  
9 efforts means that many of Durham's most  
10 visible scenic landscapes and farms will  
11 remain intact for future generations."

12 Do 85- to 90-foot-tall weathering steel  
13 transmission poles complement scenic  
14 landscapes and support keeping conserved  
15 areas historically intact for future  
16 generations?

17 A. That's just not a subject of my opinions in  
18 this matter.

19 Q. Thank you.

20 Turning back to your supplemental  
21 testimony here, could you please turn to Page  
22 4 and read line -- excuse me -- read Lines 9  
23 through 11.

24 A. "The Project is approximately 12.9 miles in

1 length and is located for the majority of the  
2 route in an existing PSNH right-of-way that  
3 is approximately 100 feet wide and contains a  
4 34.5kV distribution line on wood pole  
5 structures that average about 40 feet in  
6 height."

7 Q. Thank you. So the majority of the route,  
8 then, as testified here, contains an existing  
9 34.5kV line; correct?

10 A. That's right.

11 Q. And could you also continue on and read Lines  
12 11 through 15.

13 A. "The Project involves the construction of a  
14 new 115kV line in the existing right-of-way  
15 with steel monopole structures that will  
16 carry both the new line and, in most places,  
17 the existing 34.5kV distribution line. The  
18 monopoles vary considerably in height from 55  
19 to 105 feet, but are generally in the range  
20 of 80 to 95 feet."

21 Q. Okay. Thank you.

22 So, again, just to confirm, the Project  
23 will be a new 115kV transmission line with  
24 poles averaging 80 to 95 feet in height,

1 based on that.

2 A. Is that a question?

3 Q. I'm just confirming, yes.

4 A. Yes.

5 Q. Thank you.

6 So next I'd like to move on and look  
7 at -- let's see. Get the exhibit number  
8 here. It's Applicant's Exhibit 65, being  
9 your New Hampshire Research Report. On  
10 Chapter 4, Page 22, which I understand is  
11 electronic Page 28, when referencing Study  
12 Area 3, the report says that the lines along  
13 which these properties are located include  
14 345kV lines and 75-foot steel H-frame  
15 structures, 115kV lines on 43-foot wood  
16 H-frame structures, and 34.5kV lines on  
17 34-foot single wood poles. Did I read that  
18 accurately?

19 A. I don't have it in front of me. Were you  
20 going to put that up on the Elmo or...

21 Q. Let's see. Well, I don't have the entire  
22 printout of that report. It was just under  
23 2400 pages, so -- well, actually --

24 A. So that was with respect to --

1 Q. -- I do have that here in particular. It's a  
2 little difficult to read and I'm not sure how  
3 to zoom in.

4 MR. FITCH: Thanks, Pam.

5 PRESIDING OFFICER WEATHERSBY: Could  
6 you repeat the page number, please.

7 MR. FITCH: Sure. It's Chapter 4,  
8 Page 22. And I believe it's electronic  
9 Page 28.

10 A. Okay. I've got that now. Yeah, I think you  
11 read that accurately.

12 BY MR. FITCH:

13 Q. Okay. Thank you.

14 Now I'm going to turn to Page 34, which  
15 is electronic Page 40, which is, again,  
16 referencing Study Area 3. Put that up here.  
17 And this says, The third group of case  
18 studies came from several HVTL corridors in a  
19 relatively small area around Portsmouth, as  
20 shown in Figures 4.1.3 --

21 PRESIDING OFFICER WEATHERSBY: Mr.  
22 Fitch, I'm going to stop you for a minute  
23 because the page numbers you're citing aren't  
24 lining up at all with what you're showing us.

1 I'm wondering if it is indeed Exhibit 65 or...

2 MR. ASLIN: Madam Chair, it appears  
3 that the pagination is just off. I see this on  
4 the bottom of electronic Page 34.

5 PRESIDING OFFICER WEATHERSBY: So  
6 this is Page 28 of the report, electronic  
7 Page 34, at the bottom of the page for those  
8 trying to find this.

9 BY MR. FITCH:

10 Q. Okay. So here again it says, "The third  
11 group of case studies came from several HVTL  
12 corridors in a relatively small area around  
13 Portsmouth, as shown in Figures 4.1.3 through  
14 4.1.5." Again, did I read that accurately  
15 here?

16 A. Yes.

17 Q. I'm going to look at the figures referenced  
18 there, 4.1.3. And these were, again,  
19 depending on how the pagination is on the  
20 documents, this is Page 22 of the actual  
21 document. So this one is Figure 4.1.3, which  
22 is a 345kV cross-section. And then the next  
23 page here is Figure 4.1.4 with a 115kV  
24 cross-section. And Figure 4.1.5 is a 34.5kV

1 cross-section. And then on Figure 4.1.5, is  
2 this an HVTL corridor?

3 A. No, it's a distribution line.

4 Q. Again turning back to your supplemental  
5 testimony on Page 10, could you please read  
6 Lines 1 through 4.

7 A. "The research is directly applicable to the  
8 effects of existing HVTL on nearby  
9 residential properties. In applying this  
10 research to the assessment of the effects of  
11 the new project, however, it is necessary to  
12 distinguish between a project being built in  
13 a new corridor and a project being built in  
14 an existing corridor that already contains  
15 one or more HVTL."

16 Q. All right. Thank you.

17 So, with the research being directly  
18 applicable to the effects of existing HVTL on  
19 nearby residential properties, that means  
20 "existing," meaning it's already there;  
21 correct?

22 A. Right.

23 Q. And then when applying the research to the  
24 assessment of the effects of a new project,

1           you state it is necessary to distinguish  
2           between a project being built in a new  
3           corridor and a project being built in an  
4           existing corridor that already contains one  
5           or more HVTL --

6    A.    That's -- I'm sorry.

7    Q.    No, go ahead.

8    A.    That's correct.

9    Q.    And does the majority of the corridor which  
10          you have testified contains an existing  
11          34.5kV distribution line already contain one  
12          or more HVTL?

13   A.    No, the majority contains the 34.5kV  
14          distribution line.  There's a footnote in the  
15          research report.  And when discussing these  
16          things generically in the original research  
17          report, almost 54 of the 58 case studies are  
18          HVTL.  There are four of them that are the  
19          34.5kV.  But referring to them generically, I  
20          use the "HVTL" acronym.  But when I'm talking  
21          specifically about distribution lines, I try  
22          to use the "distribution line" descriptor.

23   Q.    In your opinion, do you see or do you  
24          acknowledge a difference between an HVTL

1 corridor and structures and a distribution  
2 line corridor and structures?

3 A. Well, again, I understand the technical  
4 definition. The issues are visibility, which  
5 doesn't distinguish, encumbrance, okay,  
6 whether there's an easement on the property  
7 which doesn't distinguish, and proximity,  
8 which is the distance from the house to the  
9 edge of the right-of-way. So, none of those  
10 things are voltage-specific.

11 Q. Are they structure-specific?

12 A. Not really. They're whether you can see the  
13 structure or not. But it doesn't distinguish  
14 between 40 feet, 70 feet, 90 feet, steel  
15 lattice, monopole.

16 Q. Do you believe your research report  
17 quantifies that difference with respect to  
18 properties proximate to existing HVTL  
19 compared to properties proximate to existing  
20 distribution lines that will potentially have  
21 construction of new HVTL corridor?

22 A. I believe so, yes. As we discussed earlier  
23 today, some of our case studies were along --  
24 as a matter of fact, the four that you're

1 making reference to here were along 34.5kV  
2 lines. And we got the same kind of results  
3 there when homes were close to those 34.5kV  
4 lines and the properties were encumbered. We  
5 found sales price effects, you know, in half  
6 of the cases.

7 Q. Would you say, then, that those, I believe  
8 you said four properties, underpin the entire  
9 research with respect to this project?

10 A. No.

11 Q. But those are the four properties that most  
12 closely resemble the existing conditions of  
13 the properties along this existing 34.5kV  
14 distribution line.

15 A. I'm sorry. Ask that again.

16 Q. So those four properties, however, do they  
17 most closely represent the existing  
18 conditions of the properties that currently  
19 reside along this existing 34.5kV  
20 distribution line?

21 A. As it relates to the voltage in the line,  
22 yes.

23 Q. This next document is in Durham Residents  
24 Exhibit 6. This is just a portion of your

1 testimony from the Northern Pass docket. I  
2 believe it's Page 11 of the Durham Residents  
3 exhibit. Down at the bottom here we see it's  
4 Page 47 of that document, which is the Day 25  
5 Afternoon Session from August 1st, 2017. And  
6 could you please read Lines 13 to 18, please.

7 A. "QUESTION: Is it your testimony, sir,  
8 that you are not an expert in New Hampshire  
9 property valuation?

10 Yeah, I wouldn't represent myself as an  
11 expert in New Hampshire property valuation,  
12 no."

13 Q. Would you today consider yourself an expert  
14 in New Hampshire property valuation?

15 A. No. That has pretty specific meaning in the  
16 trade. And I'm not an expert in New  
17 Hampshire property valuation.

18 Q. Are you licensed or otherwise approved to  
19 perform property valuations in the state of  
20 New Hampshire?

21 A. No, I'm not.

22 Q. I believe that is all the questions that I  
23 have. Thank you very much.

24 MS. DORE: Mr. Fitch, can I ask you

1 a few questions? You looked at two documents  
2 in the beginning --

3 (Court Reporter interrupts.)

4 PRESIDING OFFICER WEATHERSBY: Mr.  
5 Fitch, the documents you put up in the  
6 beginning, the photos, are those exhibits --

7 MR. FITCH: I'm not sure if it was  
8 sent out this morning or not. It should be.  
9 We do have the electronic version here.

10 MS. MONROE: I did receive just this  
11 morning an Exhibit 14 from the Durham  
12 Residents.

13 PRESIDING OFFICER WEATHERSBY: Thank  
14 you.

15 MR. FITCH: Sorry for  
16 the last-minute --

17 MS. DUPREY: Madam Chair, point of  
18 order for Mr. Fitch, please.

19 PRESIDING OFFICER WEATHERSBY: Yes.

20 MS. DUPREY: I just want to be sure,  
21 this being my first such proceeding, that I  
22 understand what's what here. And I'm wondering  
23 if Mr. Fitch is questioning on behalf of  
24 himself or whether he has authority to question

1 on behalf of other Durham Residents; and if so,  
2 whom.

3 PRESIDING OFFICER WEATHERSBY: Could  
4 you clarify that --

5 MR. FITCH: My understanding --

6 PRESIDING OFFICER WEATHERSBY: -- who  
7 you believe you're speaking for?

8 MR. FITCH: Yes. My understanding,  
9 and based on the preparation that I've done, is  
10 that I'm speaking on behalf of the Durham  
11 Residents, not myself.

12 MS. DUPREY: Thank you.

13 PRESIDING OFFICER WEATHERSBY: Thank  
14 you.

15 Let's take a 15-minute break and be  
16 back at quarter to 11.

17 (Recess was taken at 10:32 a.m.

18 and the hearing resumed at 10:47 a.m.)

19 PRESIDING OFFICER WEATHERSBY: Okay.  
20 We'll go back on the record. And we'll have  
21 Mr. Lanzetta for Mr. Frizzell -- oh, I'm  
22 sorry -- Janet Mackie for the Durham Historic  
23 Association. I'm sorry, Ms. Mackie.

24 CROSS-EXAMINATION

1 BY MS. MACKIE:

2 Q. Hello, my name is Janet Mackie, representing  
3 the Durham Historic Association.

4 Are you aware that the Eversource expert  
5 classified 4.86 miles, or 70 percent of the  
6 land in Durham through which the transmission  
7 lines pass as eligible for the National  
8 Historic Register?

9 A. No.

10 Q. Do you know that the communities around  
11 Little Bay are almost 400 years old?

12 A. No, that hasn't been the subject of my  
13 investigation.

14 Q. The Piscataqua communities were established  
15 four years after Jamestown, Virginia.

16 Do you know that the introduction of  
17 high-voltage transmission lines are elements  
18 out of keeping with the historic nature of  
19 the historic resources in these districts?

20 MR. NEEDLEMAN: Objection.

21 Testimony. And also, what's the basis of that  
22 statement?

23 BY MS. MACKIE:

24 Q. The historic districts include houses and

1 farm land dating from the 1600s, 1700s and  
2 1800s, as well as a college campus dating  
3 from 1893 --

4 PRESIDING OFFICER WEATHERSBY: Ms.  
5 Mackie, there was an objection to your last  
6 question. Would you like to address the  
7 objection?

8 MS. MACKIE: What was the objection?

9 MR. NEEDLEMAN: I objected based on  
10 it being testimony. Also, these are assertions  
11 without any basis.

12 MS. MACKIE: Well, the fact that  
13 70 percent of the line through Durham is within  
14 an eligible federal historic district impacts  
15 the value of the houses surrounding that  
16 district.

17 PRESIDING OFFICER WEATHERSBY: So you  
18 do need to ask a question and not testify and  
19 put in your own information. So why don't you  
20 proceed and try and do that.

21 BY MS. MACKIE:

22 Q. Did you know these historic districts include  
23 houses and farmland dating from the 1600s,  
24 1700s and 1800s, as well as a college campus

1 dating from 1893?

2 A. I'm aware of the land uses. I'm not aware of  
3 the dates.

4 Q. Are you aware that the introduction of modern  
5 industrial high-voltage transmission lines is  
6 out of keeping with a historic district?

7 A. That's really not the subject of my opinions.

8 Q. I'm asking if you're aware of that fact.

9 MR. NEEDLEMAN: Objection. It's not  
10 a fact.

11 PRESIDING OFFICER WEATHERSBY: I  
12 agree that that hasn't been necessarily  
13 established as a fact. You could ask him  
14 hypothetically if that were true, would he  
15 agree.

16 BY MS. MACKIE:

17 Q. Okay. Currently, you agree that there are  
18 transmission line-type poles through the  
19 easement in Durham; correct?

20 A. Yes, there is an easement in Durham, and  
21 there are power lines on that easement, yes.

22 Q. Would you agree that those transmission lines  
23 are an old technology, in excess of 50 years  
24 old?

1 A. Again, I'm not sure what "old technology"  
2 means. And I also don't know precisely when  
3 those lines were originally constructed.

4 Q. Would you agree that a historic district  
5 needs to have historic things in it?

6 A. I'm sorry. A historic district --

7 Q. Would you agree that a historic district  
8 ordinarily has elements in it which are  
9 historic?

10 MR. NEEDLEMAN: Objection. Madam  
11 Chair, this is completely beyond the scope of  
12 this witness's testimony.

13 MS. MACKIE: What I'm getting at is  
14 that a lot of the value of the land in Durham  
15 relates to the existing historic districts and  
16 structures in Durham and that the industrial  
17 high-voltage transmission lines are elements  
18 that destroy the historic character of the  
19 town.

20 PRESIDING OFFICER WEATHERSBY: But  
21 this -- I'll sustain the objection. This isn't  
22 the witness to discuss the historic value of  
23 the town. This is the property value witness.  
24 So you can phrase that in such a way that it

1 affects property values, the subject of his  
2 prefiled testimony.

3 BY MS. MACKIE:

4 Q. Did you consider historic value in your  
5 property study?

6 A. Not explicitly, no. We looked at market  
7 value as it's reflected in the market. And  
8 it's influenced by all kinds of things,  
9 including historical. But, you know, there  
10 are many, many, many factors that ultimately  
11 interact to determine market value.

12 Q. What are the demographic characteristics you  
13 used in the market value study?

14 A. Well, market value ultimately is revealed in  
15 transactions. So you're looking basically at  
16 prices, the prices that were arrived at in  
17 transactions. The analysis looked at the  
18 physical characteristics of the properties  
19 involved. It looked at the nature of the  
20 sale itself, you know, listing price, sale  
21 price. And it looked at the characteristics  
22 of the property in the neighborhood that are  
23 typically accounted for in an appraisal. So,  
24 you know, number of bedrooms, number of

1           bathrooms, location, I wouldn't consider any  
2           of those necessarily demographic factors,  
3           but, you know, they're property  
4           characteristics that are, you know, analyzed  
5           in the appraisals and that ultimately get  
6           reflected in the market value.

7       Q.    Well, would you agree that the demographics  
8           of a given community can affect the market  
9           values within the community?

10     A.    Yeah.  It's clearly one of the determinants  
11           of what you observe in the market.

12     Q.    I was asking about the demographics because  
13           in your previous testimony you mentioned "the  
14           public."

15     A.    I'm sorry.  Mentioned what?

16     Q.    "The public," and I didn't know what "the  
17           public" means.

18     A.    I'm not tracking your question.  Sorry.

19     Q.    Well, you're talking about how "the public"  
20           reacts to poles and how "the public" reacts  
21           to conservation land.  What do you consider  
22           to be "the public" as it relates to Durham?

23     A.    I'm not sure I said either of those things.  
24           But the market, you know, I would be

1 concerned with market participants, okay,  
2 buyers and sellers of property.

3 Q. Are you aware that the U.S. census indicates  
4 that the educational demographic in Durham  
5 exceeds most averages?

6 A. I haven't seen that data, no.

7 Q. Would you agree that people, particularly  
8 educated people, understand and value  
9 historic areas in their community?

10 A. Again, that's well beyond the scope of my  
11 analysis or opinions.

12 Q. Would you agree that the value of  
13 conservation lands that include walking  
14 trails and cross-country ski trails are a  
15 value to a community?

16 A. Yes.

17 Q. And would the environment of the community  
18 factor into the value of all houses in the  
19 community?

20 A. Yeah, it's one of many things that would get  
21 reflected in the market value of the  
22 property.

23 Q. Well, would you agree that market value might  
24 be affected because very few educated people

1 choose to live anywhere near a transmission  
2 line?

3 MR. NEEDLEMAN: Objection. Basis.

4 PRESIDING OFFICER WEATHERSBY:

5 Sustained.

6 BY MS. MACKIE:

7 Q. I'm just wondering how you factored in the  
8 specific characteristics of Durham into your  
9 market study.

10 A. You know, in terms of land use, in terms of  
11 the location of the homes relative to the  
12 existing right-of-way, in terms of the  
13 visibility of structures, in terms of the  
14 different mix of land uses along the  
15 corridor. It did not include the educational  
16 attainment of the residents.

17 Q. Thank you.

18 PRESIDING OFFICER WEATHERSBY: Next  
19 examiner will be Attorney Lanzetta for  
20 Mr. Frizzell.

21 CROSS-EXAMINATION

22 BY MR. LANZETTA:

23 Q. Good morning.

24 A. Good morning.

1 Q. My name is Josh Lanzetta. I represent  
2 Intervenor Keith Frizzell. I'll be very  
3 brief. My colleagues have asked you a lot of  
4 questions this morning.

5 If you want to, if you would, please,  
6 refer to your supplemental prefiled testimony  
7 on Exhibit 147, Page 23. Is it your opinion  
8 that there will be no discernible effects in  
9 the local and regional real estate markets  
10 due to this project?

11 A. I'm sorry. I got the Page 23 part, but --

12 Q. Can you hear me? So at the bottom of  
13 Page 23, Line 13, is it your opinion that  
14 there will be no discernible effects in local  
15 and regional markets due to this project?

16 A. Right. There will be effects on some  
17 properties, and the probability of effect,  
18 the likelihood of effect will be influenced  
19 by the Project. But the number of properties  
20 so affected is small, and it would be  
21 significant for a property so involved. But  
22 it wouldn't show up. It's not a large enough  
23 number to show up in sort of local market  
24 statistics. You wouldn't see a blip in the

1 local market, or certainly not in the  
2 regional market associated with the  
3 construction of the Project, in my opinion.

4 Q. Are you familiar with Mr. Frizzell's  
5 property --

6 A. I am.

7 Q. -- at Fox Point Lane? Did you walk that  
8 property or the right-of-way during one of  
9 the four visits?

10 A. I walked the right-of-way.

11 Q. You did. Did you see where it turned and  
12 then abuts his property on two sides?

13 A. Correct.

14 Q. If you'd refer to Page 18 of your  
15 Exhibit 147, Table 7. Is Mr. Frizzell's  
16 property listed in that table?

17 A. It is not.

18 Q. And is it true that you evaluated residential  
19 properties within 300 feet of the  
20 right-of-way?

21 A. Residential properties with homes within  
22 300 feet of the right-of-way.

23 Q. When you walked Mr. Frizzell's property, did  
24 you note that his home was just outside of

1 300 feet from the right-of-way?

2 A. According to my calculations, his home is  
3 about 400 feet from the right-of-way.

4 Q. That's correct. So the fact that it's not  
5 listed, not within 300 feet, is it your  
6 opinion that there would be no discernible or  
7 an adverse property impact or value impact to  
8 his property?

9 A. Well, in fact, that is my conclusion.

10 Q. Some of the studies in Footnote 8 that you  
11 reference reviewed properties within 1,000  
12 feet of rights-of-way; is that correct?

13 A. The case studies include properties, 50 or 60  
14 of them, that are beyond the 100 feet, and  
15 they go out to a few that are beyond 1,000  
16 feet. And, again, it's houses are beyond  
17 100 feet or houses are beyond 1,000 feet from  
18 the edge of the right-of-way.

19 Q. So, 400 feet, Mr. Frizzell's property is  
20 obviously under 1,000 feet from the  
21 right-of-way?

22 A. I'm sorry. I'm having trouble --

23 Q. At 400 feet from the right-of-way, Mr.  
24 Frizzell's property is clearly under 1,000

1 feet from the right-of-way?

2 A. Yeah, but we didn't find any effects on any  
3 properties where the homes were further than  
4 100 feet, with two exceptions. There was one  
5 at 106 feet and one at 110 feet. But of  
6 those properties that we looked at, 120 of  
7 them, some of them were indeterminate. But  
8 there were 100 where we came to a firm  
9 conclusion one way or the other. Of those  
10 properties further than a 110 feet, there  
11 weren't any where we concluded there was a  
12 price effect. All of the price effects were  
13 on properties within 110 feet. So on that  
14 basis, that research suggests that the  
15 Frizzell property was very unlikely to be  
16 affected.

17 Q. When you evaluated properties for aesthetics,  
18 visibly you're only evaluating them from the  
19 point of reference from the house; is that  
20 correct?

21 A. I'm sorry?

22 Q. So if you -- when you evaluate a property for  
23 aesthetic impact, are you evaluating it only  
24 from the house, or are you evaluating from

1 other points on the property?

2 A. Yeah, we don't evaluate it from aesthetic  
3 impact. We're talking explicitly about the  
4 visibility of structures. And when we  
5 evaluate visibility of structures, we do  
6 that, or we try to do it from the perspective  
7 of the perimeter of the house.

8 Q. So you don't evaluate that perspective from,  
9 say, a driveway?

10 A. Correct.

11 Q. Okay. Thank you.

12 PRESIDING OFFICER WEATHERSBY: Ms.  
13 Frink.

14 CROSS-EXAMINATION

15 BY MS. FRINK:

16 Q. Mr. Chalmers, my name is Helen Frink, and I  
17 represent Darius Frink Farm, which you can  
18 see here on the panel. I'd like to make  
19 sure, first, that I've understood a couple  
20 things that you said.

21 I'm understanding that you visited  
22 Newington, I think you said April, May and  
23 August; is that correct?

24 A. I visited the entire alignment on those four

1 occasions, and I've had some other occasions  
2 to visit as well when I didn't look at the  
3 entire alignment. I've actually been on  
4 Hannah Lane, I bet you 8 or 10 times. So I'm  
5 quite familiar with this immediate area.

6 Q. And what about when the leaves were off the  
7 leaves, the time of maximum visibility?

8 A. Well, certainly not in the winter. That not  
9 being the reason, just the way it's worked  
10 out. I've not seen it in a leaf-off  
11 condition. Trees are pretty well leafed-out  
12 in May. I have looked a good deal at the  
13 aerial imagery, which actually makes it  
14 pretty easy to discern the deciduous trees  
15 from the evergreens. So you get a pretty  
16 good sense in some cases, I think, of how  
17 much of the vegetative screening would  
18 continue to exist in the winter. But I have  
19 not examined the route in a true leaf-off  
20 condition.

21 Q. You seem to be quite familiar with the Hannah  
22 Lane subdivision. And of course, that's  
23 directly across from the Frink Farm. Would  
24 it be fair to say that the open conserved

1 land and the agricultural landscape adds in  
2 any way to the value of the properties on  
3 Hannah Lane as opposed, for example, to  
4 another similar subdivision immediately  
5 opposite Hannah Lane, on the other side of  
6 Nimble Hill Road Road?

7 A. On the other side of Nimble Hill? Are you  
8 talking about on the east side or the west  
9 side?

10 Q. I'm talking about if the land that you see  
11 here on the Darius Frink Farm were developed  
12 in a subdivision like that on Hannah Lane,  
13 would there be any change in the value of the  
14 properties on Hannah Lane? In other words,  
15 do the residents of Hannah Lane have a  
16 greater value or greater enjoyment of their  
17 properties because they look at vacant  
18 farmland?

19 A. I understand your question. And it would  
20 really require some property-specific  
21 research. I'm afraid to give you any kind of  
22 definitive answer. I think the setting of  
23 the Newington Historic District is definitely  
24 a locational attribute that would be viewed

1 very positively in the market.

2 Q. Thank you.

3 A. And insofar as Hannah Lane, you know,  
4 partakes of that, that would definitely be a  
5 benefit.

6 Q. Thank you.

7 Did I understand correctly that you  
8 viewed properties chiefly from the roadside?

9 A. That's right. We have not entered onto  
10 private property, which would require,  
11 obviously, permission of the individual  
12 landowners.

13 Q. So you didn't walk the Eversource  
14 right-of-way. Did you seek permission to do  
15 that, to enter into the right-of-way itself?

16 A. Yeah, we do enter into the right-of-way in  
17 some areas, not -- I haven't walked the  
18 entire right-of-way, to be sure. But I've  
19 walked, you know, significant portions of it.  
20 I've walked the portion actually on the other  
21 side of Nimble Hill Road, on the east side.

22 Q. Through Hannah Lane, in other words?

23 A. That's right.

24 Q. Yes. When you assess the impact of the power

1 line, are you looking chiefly at the  
2 appearance or the visibility of the power  
3 line from inside the house?

4 A. No. I'm looking at it as -- again, we're not  
5 actually inside the houses, to be sure. And  
6 we're actually not on the perimeter of the  
7 house. But what we're trying to evaluate is  
8 simply that you need some kind of point of  
9 reference to describe how you're doing this.  
10 The point of reference that we've always used  
11 is that, if you walked around the perimeter  
12 of the house, what would be the visibility of  
13 structures.

14 Q. If you walked around the perimeter of the  
15 house, what would be the visibility of the  
16 structures? But you didn't actually walk  
17 around the perimeter of the house.

18 A. That's right.

19 Q. I'm just having difficulty understanding how  
20 you would assess whether a structure was  
21 visible from inside the house if you didn't  
22 enter the house and didn't walk around the  
23 perimeter of it.

24 A. Well, we didn't make any representation with

1           respect to inside the house. I think your  
2           question is how do we do -- how do we make a  
3           representation with respect to the perimeter  
4           of the house without having actually walked  
5           it. Well, if we actually walked it, it would  
6           be -- you know, you'd have a higher degree of  
7           reliability. But it's just not practical to,  
8           you know, get the permission to do that. I  
9           think in most cases you can tell from being  
10          physically on the ground on public  
11          rights-of-way or the actual utility  
12          right-of-way and from careful inspection of  
13          the maps and aerial imagery, which is now, as  
14          you know, widely available, including street  
15          view, which, you know, a lot of times will  
16          give you perspective on visibility. You  
17          know, I think we're generally characterizing  
18          the visibility accurately, you know, whether  
19          or not, A, the existing structures can be  
20          seen from the house and, B, whether the  
21          proposed structures can be seen from the  
22          house. There are some cases where the houses  
23          are very far removed from public  
24          rights-of-way and in a wooded way where we

1           have to do that aerial imagery. Again,  
2           sometimes the vegetation is pretty easy to  
3           read. And I think you can make a sound  
4           determination. There would be some other  
5           cases where it's more difficult.

6    Q.    I think I'm hearing you say that it makes a  
7           difference whether you're looking toward a  
8           structure through vegetation or through a  
9           cleared field. Would that be accurate?

10   A.    Yes. Yeah, one of our, you know, three  
11           distinctions that we're using are there's no  
12           structure visible. That's clear, right. Or  
13           another one is that the structures are  
14           clearly visible, and by that we mean you're  
15           not looking through vegetation, but there's  
16           an obstructed view. The other kind of  
17           visibility is you're looking, which we call  
18           "partial," is you can see structures, but you  
19           can only see them essentially through the  
20           vegetation. And presumably that would be  
21           more likely in a leaf-off condition. But  
22           there are a lot of places where that's true  
23           in leaf-on kind of point. You'll get  
24           glimpses through the vegetation of a

1 structure.

2 Q. Okay. I'm going to move now to a different  
3 image, which is going to be my premarked  
4 Exhibit No. 1. This property does not  
5 appear, I think, on your list of impacted  
6 properties. I'm looking at your supplemental  
7 prefiled testimony, and I believe that there  
8 is a chart on either Page 16 or 17 that lists  
9 those properties that will have an impact  
10 from the Seacoast Reliability Project.

11 A. Yeah, I wouldn't characterize those as  
12 "impacted" properties. Those are simply  
13 properties that have homes located on them  
14 that are within 300 feet of the edge of the  
15 right-of-way.

16 Q. And may I assume that you judge that 300 feet  
17 from the edge of the right-of-way, for  
18 example, based on a map provided by  
19 Eversource?

20 A. No. It's basically off of orthoimagery, off  
21 of aerial imagery. It's off of satellite  
22 imagery.

23 Q. Did that differ from the maps provided by  
24 Eversource? Were there any cases where the

1 data was different, the distance from the  
2 right-of-way, for example?

3 A. Yeah, I don't... I wouldn't think so, in  
4 general, although there could be conceivably  
5 a difference. No, they should be generally  
6 consistent.

7 Q. Good. This is an historic property. Is it  
8 fair to say that well-maintained historic  
9 properties may have a higher market value  
10 than, say, a house that was built 20 or 30  
11 years ago of a comparable size?

12 A. Yeah, historic character can certainly be an  
13 attribute that the market recognizes as  
14 valuable and would pay more for.

15 Q. And if the historic property is then impacted  
16 by a visible power line structure, does that  
17 also cause some loss in property value?

18 A. Well, it depends. You know, and that's the  
19 question that our research was really  
20 designed to come to grips with. And  
21 basically, you simply -- all I can do is look  
22 at the results of that research. And what it  
23 shows is that it's only when you get a  
24 combination of property encumbrance,

1           proximity of the house to the right-of-way  
2           and structure visibility. To get any one of  
3           those things, we simply just don't find it in  
4           the data. Now, we've done a lot of case  
5           studies now. But it's when you get a house  
6           that's within 100 feet of the edge of the  
7           right-of-way, combined with an easement on  
8           that property, combined with the visibility  
9           of structures, all of a sudden, the  
10          probability of a market value effect goes  
11          from close to zero to about 50/50.

12    Q.    So if the view from inside this house is  
13          impacted by 65-foot-tall, H-frame poles of  
14          the Seacoast Reliability Project, that will  
15          impact the market value of the property?

16    A.    I doubt it.

17    Q.    Based on what?

18    A.    Based on the criteria I just discussed.  
19          There's just no evidence in the data that  
20          we've looked at for -- I don't know the  
21          distance of your home from the right-of-way.  
22          What is the distance?

23    Q.    The distance of this house from the  
24          right-of-way is outside of your 300-foot

1           limit. But looking straight across very  
2           cleared fields, the pole, according to the  
3           maps provided, will be in clear view.

4       A.    Right. So, two points. I mean, I can tell  
5           you that I would doubt it based on the -- we  
6           haven't found any case where a house located  
7           at that distance experienced a market value  
8           effect. But I would also say that ultimately  
9           the only way you would know would be, you  
10          know, if this house came on the market and  
11          you could study it then, after the Project  
12          were constructed, and determine one way or  
13          the other.

14                 But I wanted to say that the object of  
15                 our study is not to come to a conclusion with  
16                 respect to a particular property. It's to  
17                 come to a conclusion -- what we're really  
18                 trying to do is characterize the order of  
19                 magnitude of properties that might be at  
20                 risk. And what we're saying is, of this  
21                 group of properties that are close, that are  
22                 encumbered and that have visibility, about  
23                 half of them we would expect to be affected.  
24                 We don't know which of those it would be.

1           There's no basis to know which of those might  
2           be affected.

3                     But in any case, your particular houses  
4           sort of lies outside of that group. Your  
5           house is in the group for which we haven't  
6           found any effects, and I wouldn't expect  
7           them. But, you know, you'd only know after  
8           the fact. And, you know, if it turned out  
9           that there was an effect, happily, you know,  
10          there's a dispute resolution process that has  
11          been recommended and/or has been proposed,  
12          you know, and you could approach it in that  
13          context.

14   Q.    I believe I understood you to just describe  
15          this group of properties in terms of  
16          proximity to the right-of-way, visibility of  
17          structures, and I think I missed the third  
18          criteria that you named.

19   A.    The easement actually being on the property.

20   Q.    The easement actually being on the property.  
21          Thank you.

22                     And within that group of properties,  
23          what percentage, roughly, or what fraction  
24          were in fact historic properties?

1 A. I couldn't tell you. It's a pretty good  
2 cross-section of New Hampshire. But beyond  
3 that, we'd have to look at them individually  
4 and whether -- they were certainly a number  
5 of old properties. But whether they were  
6 actually in historic districts or not or on  
7 the national district or whatever, I wouldn't  
8 know off the top of my head.

9 Q. All right. Thank you, Mr. Chalmers.

10 MS. FRINK: No further questions.

11 PRESIDING OFFICER WEATHERSBY: Thank  
12 you, Ms. Frink. Attorney Aslin.

13 MR. ASLIN: Thank you, Madam Chair.

14 CROSS-EXAMINATION

15 BY MR. ASLIN:

16 Q. Good morning, Dr. Chalmers.

17 A. Good morning.

18 Q. For the record, my name is Chris Aslin, and  
19 I'm designated as Counsel for the Public in  
20 this proceeding.

21 I want to start by following up on some  
22 of your testimony earlier about your  
23 consideration of the value of conservation  
24 easements. And I think you testified, if I

1 heard it correctly, that you looked at the  
2 value of the land and not -- well, I'll ask.  
3 Did you distinguish between the value of the  
4 land itself versus the value of the  
5 conservation easement rights?

6 A. No. You know, I didn't study the value of  
7 conservation easements, which is definitely a  
8 field of study.

9 Q. You'd agree that conservation easements have  
10 value in and of themselves separate from the  
11 fee interest in the land.

12 A. Sure.

13 Q. So when you said you don't expect a market  
14 effect on the land valuation, you're not  
15 reaching towards valuation of the  
16 conservation easement itself as a bundle of  
17 rights.

18 A. That's right.

19 Q. Okay. I just wanted to make sure I  
20 understood where you're coming from there.

21 In general, your research is based on  
22 three different types of studies; is that  
23 fair?

24 A. That's right.

1 Q. You have case studies, subdivision studies  
2 and market activity research?

3 A. That's right.

4 Q. Okay. And with regard to the latter of  
5 those, the market activity research, would  
6 you agree that, based on sample sizes, it  
7 wasn't particularly informative?

8 A. Yes.

9 Q. And in your testimony, your original prefiled  
10 testimony, which is Applicant's 12, on  
11 Page 10 you state at Line 10 that the number  
12 of observations in each corridor is so small,  
13 so not too much should be read into these  
14 results. Is that accurate?

15 A. I continue to think that's the case. Right.

16 Q. So would it be fair to say that your  
17 conclusions are based primarily on the case  
18 studies and subdivision studies that you  
19 performed?

20 A. Yeah. And as a practical matter, they're  
21 really based on the case studies. The  
22 subdivision studies I thought were worth  
23 doing and are informative. But the case  
24 studies, you know, the great virtue of the

1 case studies is that they have -- they result  
2 in sort of operational criteria that we can  
3 use to get our arms around what the  
4 magnitudes might be, magnitude of properties  
5 that might potentially be affected be,  
6 whereas much of the other research in this  
7 area ends up with generalizations. We found  
8 effects, didn't find effects. But it didn't  
9 give you much direction or leverage on how  
10 many or, you know, which are in and which are  
11 out. And, really, the case studies is the  
12 first research that's really given us some  
13 perspective on where you would find effects  
14 and where you're not likely to find effects.  
15 And in that respect, I think it's pretty  
16 important, pretty useful.

17 Q. Okay. So do I take it, then, you didn't rely  
18 heavily on the results of the subdivision  
19 studies?

20 A. Right. At this point my testimony is based  
21 on the case studies.

22 Q. Okay. Thank you.

23 In regard to both the case studies and  
24 the subdivision studies, you used a

1 visibility assessment; is that fair?

2 A. Yes.

3 Q. And that's the "clear," "partial" or "none"  
4 categories of visibility?

5 A. Correct.

6 Q. Okay. I want to understand the distinctions  
7 a little bit better. We had some testimony  
8 on it earlier. And just to be consistent  
9 with earlier testimony, I've pulled up on the  
10 screen Table 4 from your supplemental  
11 testimony, which is Applicant's Exhibit 147.  
12 And it's Page 15 of the testimony, Page 16  
13 electronically. And in the right-hand column  
14 you've listed the "before" and "after"  
15 visibility distinctions for each of these  
16 properties; correct?

17 A. Right.

18 Q. And I think you testified earlier that you  
19 said you base "partial" as everything that's  
20 not "clear" or not "none." Is that fair?

21 A. That's correct.

22 Q. So would you agree that's a wide range of  
23 visibility within that category?

24 A. Yes.

1 Q. Okay. And in your analyses, when you had a  
2 property such as Ms. McCosker's property --

3 A. I'm sorry. Such as which one?

4 Q. Ms. McCosker's property. There was some  
5 testimony on it before. It's 271 here in  
6 your line as --

7 A. Oh, okay. I've got it.

8 Q. That one was partial before and partial after  
9 for visibility?

10 A. Correct.

11 Q. Based on your system here that you're using,  
12 would you agree that if you had partial  
13 visibility of one structure before the  
14 project and partial visibility of three or  
15 four structures after the Project, it would  
16 still be partial and partial in your  
17 analysis?

18 A. That's right.

19 Q. So you wouldn't find that to be a change in  
20 visibility within your analysis.

21 A. Well, I mean, obviously from her perspective  
22 it would be a change. But in the way in  
23 which we've coded it, it would not be a  
24 change.

1 Q. Similarly, if you had clear visibility of one  
2 structure before and clear visibility of two  
3 or three after, that wouldn't be coded as a  
4 change in visibility in your analysis.

5 A. That's right.

6 Q. With regard to the case studies -- well, one  
7 more question. Sorry.

8 So, in your analysis, a property that  
9 experienced some change in visibility but  
10 fell within either clear to clear or partial  
11 to partial would not be picked up as one of  
12 the properties that you deemed to be more  
13 likely to have a price effect; is that  
14 correct?

15 A. Not really. It may very well have a price  
16 effect. But it would have had a price effect  
17 in the before condition as well as after  
18 condition is the point.

19 You know, her property is very close to  
20 the right-of-way. She's got partial  
21 visibility, as far as we could tell, in both  
22 the before and the after condition, and she's  
23 got a major encumbrance on the property. I  
24 would say there's a pretty good chance, 50/50

1 chance, she's definitely in that category of  
2 properties that may very well experience a  
3 price effect should it be sold. But the  
4 point is that it would have experienced that  
5 in the before. As it exists right now, it's  
6 got visible structures, it's heavily  
7 encumbered, and she's right on top of the  
8 right-of-way. And likewise, in the after  
9 condition, there's a good chance that there  
10 would be a price effect as well. But I don't  
11 think there's much of a differential  
12 increase, if any, in that probability between  
13 the before and the after. In other words,  
14 it's a pre-existing condition on that  
15 property. That property is definitely  
16 vulnerable to price effects as it sits out  
17 there today.

18 Q. But you would, I believe, find a  
19 "differential," as you say, if the visibility  
20 went from partial to clear; is that correct?

21 A. Yeah, small. If you remember Table 1 for  
22 those homes within 100 feet, the ratio of  
23 cases where we found effects and not effects  
24 were in the 40s, whereas where there was

1 clear visibility, it was in the 50 percent.  
2 It was north of 50. So, less likely partial.  
3 Again, based on, you know, the number of  
4 cases that we have. But the number of cases  
5 is increasing now. But I think as a general  
6 proposition, the partial would have a  
7 somewhat lower, but nevertheless significant  
8 probability of effect.

9 Q. And if I understand correctly, you haven't  
10 attempted to tease apart a difference in  
11 visibility within the partial category. So  
12 if you go from partial to more partial, but  
13 not all the way to clear, you haven't  
14 attempted to determine if that does create a  
15 differential in price effect.

16 A. Right. Yeah, and we've thought about, you  
17 know, number of structures and the extent to  
18 which they're visible. And trying to tease  
19 that out of the case study data just  
20 wasn't -- didn't get us anywhere. We didn't  
21 get any insights out of that. So we haven't  
22 tried to make those. We just can't  
23 operationalize those distinctions in a way  
24 that seems to make any difference, whereas

1           these distinctions have some coarseness to  
2           them. But nevertheless, getting to the heart  
3           of the matter, which is are those structures  
4           intrusive on the property, that basically has  
5           to do with, you know, are they screened, are  
6           they unobstructed or you can't see them.

7   Q.    But I think you would agree that a change of  
8           visibility is one of the factors that can  
9           lead to a price effect, among others.

10  A.    Sure.

11  Q.    With regard to the case studies that you  
12           performed, part of that analysis is use of a  
13           retrospective appraisal; is that correct?

14  A.    That's right.

15  Q.    And I'll summarize and see if we need to go  
16           to the document. But if I understand the  
17           retrospective appraisal approach, it's an  
18           appraisal with a special condition that  
19           assumes that there is no right-of-way near or  
20           on the property --

21  A.    Exactly.

22  Q.    -- despite there actually being one near or  
23           on the property.

24  A.    Right.

1 Q. And then it also looks back in time to the  
2 time of the sale that you're comparing it to?

3 A. That's right.

4 Q. So as a practical matter, if there was a sale  
5 in 1995 that you are assessing in a case  
6 study, the appraiser has to go look at  
7 properties in 1995 to compare them to the  
8 subject property?

9 A. Correct. That's the reason you got the  
10 "retrospective" descriptor. We try to stay  
11 as current as we can, because the further  
12 back you go, the more difficult it is for the  
13 appraisers. The original case studies went  
14 back to 2010. The 20 that we just did in  
15 southeastern New Hampshire are largely 2017,  
16 2018 sales. But they range from 2010 up to  
17 present.

18 Q. And would you agree that appraisals don't  
19 correlate perfectly with fair market value?

20 A. Well, it's your only -- it's the only way it  
21 could be estimated. But if you're saying is  
22 there a confidence around those estimates?

23 Yes.

24 Q. And in your analysis -- yeah. So looking at

1           your supplemental testimony, which again is  
2           Applicant's Exhibit 147, at Page 9 of the  
3           testimony, which is electronic Page 10, you  
4           reference on Line 6 and 7 that the case  
5           studies -- and I believe this is for all the  
6           case studies you looked at -- ranged in price  
7           effects, where there was a price effect,  
8           between 1.6 percent to a high of  
9           17.9 percent?

10          A.     That's correct.

11          Q.     That's a fairly broad range; would you agree?

12          A.     Yes.

13          Q.     And I think your overall conclusion is that  
14                 price effects are more typically in the 1 to  
15                 6 percent range?

16          A.     In the literature in the statistical studies,  
17                 that's the range, and that's where that one  
18                 to six number comes from. I don't think I  
19                 would apply that to -- you know, those are  
20                 some studies in Canada and a variety of  
21                 places. I would say the case study evidence  
22                 is the most relevant and may be the only  
23                 relevant information we have here in New  
24                 Hampshire. And I would just acknowledge that

1 in the early 2000s -- the first 58 case  
2 studies we did used data from 2010 to 2015,  
3 and there are also a lot of North Country  
4 case studies. And the market was very, very  
5 slow up there at that time. And there aren't  
6 a whole lot of sales up there, anyway. So  
7 they're really hard to appraise. The range  
8 on the last 20 that we did is much narrower,  
9 and the average is about 5 percent. The  
10 Massachusetts-Connecticut studies also have a  
11 narrower range, and their average I think was  
12 around a little bit less than 6 percent. It  
13 was like 5.8 percent. So I think part of  
14 that wide range in those initial case studies  
15 had to do with conditions in the northern  
16 part -- well, northern and central part of  
17 the state in the early, you know, 2010  
18 through 2014 period. So I think the average,  
19 though, you know, of 5, 6, 7 percent is --  
20 that's now an average over a fairly large  
21 number of properties. And I think it's a  
22 reasonable indicator for properties that have  
23 that kind of a location, that kind of  
24 visibility and that kind of encumbrance of

1           what kind of market value effects you might  
2           see.

3    Q.    Am I correct that of the hundred case studies  
4           you have analyzed at this point, six are  
5           within the Seacoast Region?

6    A.    No.   Six of the original 58 were in the  
7           Seacoast Region.  But the 20 we just did are  
8           all east of 93, south of Concord, if you  
9           will.  So they're all in the southeast  
10          quadrant of the state.  In fact, 2 of them --  
11          10 are in Dover; 4 of them are in Danville,  
12          and I believe 6 of them are in Hooksett,  
13          which is kind of on the border of that  
14          region.  But that's where we could find  
15          lines.  And in this case, we were looking for  
16          lines most like SRP.  We were looking for  
17          primarily 115 lines on monopoles.

18   Q.    Would you agree that the results of the case  
19           studies, I'll say don't correlate perfectly?  
20           In terms of the closest to the properties --  
21           properties that are closest in proximity, the  
22           greatest encumbrance, and the greatest change  
23           in visibility do not always have the largest  
24           price effect?

1 A. That's right. Yeah. No, and in fact, you  
2 know, as data show in Table 1, there are a  
3 whole bunch of properties that have those  
4 characteristics that don't have any effect at  
5 all, right. About half of them, right.

6 There are 42 that are close, are encumbered  
7 and have visibility, and of those, only 23  
8 showed a price effect. So there are a lot of  
9 other variables interacting there in the  
10 market. But, you know, it turns out some of  
11 the properties are affected and some aren't.

12 Q. And you mentioned there are a lot of other  
13 variables. Did you control or analyze the  
14 difference between effects across the type of  
15 structure or the voltage for any of these  
16 properties in the case studies?

17 A. No, but there's -- it's been looked at in the  
18 research. And as I think I discussed briefly  
19 earlier, the upshot to date is that voltage  
20 doesn't matter. And again, somewhat  
21 surprisingly, the intensity of the  
22 development of the corridor, you know, one  
23 line, two lines, three lines, it doesn't  
24 matter. Because, I mean, if you just think

1           about the common sense of it for a second, if  
2           a home is located next to an alignment, next  
3           to a power line corridor, what's quite clear  
4           is that there's some people -- and it's  
5           encumbered by the easement, let's say, and  
6           the structures are visible -- there are some  
7           people who just are not interested in that,  
8           period. They wouldn't consider that  
9           property. Okay. They drop out of the  
10          market. The brokers tell us that. The  
11          market "thinned" as a result.

12                 But what about the people who are  
13          willing to look at it, of which there are  
14          clearly many, and who end up buying these  
15          properties, sometimes at a discount,  
16          sometimes not. You think there are many  
17          people that look at that home and say, gee,  
18          I'd be interested in that house if only it  
19          was 345kV not 115, or only if it was 115 and  
20          not 230 or only if it was one line and not  
21          two lines. I've got an easement across my  
22          back yard.

23                 So I think what happens in the market is  
24          that the people who are averse to power

1 lines, you know, stay out of it. But the  
2 people who are willing to consider that  
3 property have somehow kind of rationalized  
4 that, which they probably view as a negative  
5 attribute. But they sort of rationalize it  
6 and say, well, gee, we really want to be in  
7 this school district. And I reference in my  
8 testimony, you know, you got these comments  
9 like, We were looking for a mother-in-law  
10 apartment and couldn't find it. But when we  
11 found it, it was great. There's a power line  
12 there, but we found just what we were looking  
13 for. Again, there are all kinds of  
14 rationalizations that people offer, but  
15 they're obviously willing to consider it.  
16 And I don't think, again, the intensity of  
17 the development of the corridor has much to  
18 do with it. At least that's what the  
19 research shows to date.

20 Q. You mention research. Is any of that New  
21 Hampshire- or New England-based research?

22 A. Well, our research supports that, right. I  
23 mean, we find effects, same intensity of  
24 effects with the 34kV lines that we did with

1 the others. We also -- the comparison  
2 between the Phase 2 corridor and the proposed  
3 Northern Pass corridor, those two corridors  
4 are radically different in terms of  
5 intensity, and we got the same basic result.  
6 And the published literature addresses it.  
7 Not a lot of it, but some of it does. And  
8 the published literature comes to the same  
9 conclusion, that there's simply no suggestion  
10 in the literature out there of the  
11 differential response to voltage or to width  
12 of right-of-way or to the number of lines,  
13 which is a little surprising on the face of  
14 it. But I think there's a rationale there  
15 that makes some sense from kind of a common  
16 sense perspective.

17 Q. That's your common sense perspective as  
18 opposed to your expert opinion?

19 A. Well, I'm just trying to understand why. But  
20 you'd think, I guess -- I would think the  
21 Phase 2 corridor would be a bigger deal than  
22 the Northern Pass corridor. I mean, they're  
23 radically different. But it doesn't show up  
24 that way in the data. So then you wonder:

1 Well, why is this? You know, so you sort of  
2 develop hypotheses, and that's what I've  
3 thought about.

4 But the fact of the data is that the  
5 intensity of the corridor doesn't seem to  
6 make a difference, and that's supported in  
7 the literature.

8 Q. When you say it doesn't make a difference,  
9 with regard to the case studies, you're  
10 essentially saying that you see the same  
11 characteristics of proximity and encumbrance  
12 and visibility that matter, not that you  
13 specifically analyzed the difference between  
14 all the case studies that are on the 115kV  
15 line versus a 345 or versus a 34.5 line.

16 A. Yeah. Actually, we've looked at this  
17 question. We haven't presented the data  
18 because it's complicated. But thought about  
19 it a good deal. And there's no suggestion in  
20 the data that we have in the case studies of  
21 a differential effect associated with the  
22 intensity or the voltage of the line.

23 Q. You said you haven't presented that  
24 testimony.

1 A. We haven't presented any tables on that. But  
2 I've looked at it pretty carefully, and  
3 there's no suggestion of that in the data.

4 Q. You also talked about some of the variables  
5 that people consider when purchasing a home  
6 and that those may overwhelm perhaps the  
7 effect of proximity to a HVTL. Are you able  
8 to control in your analyses for those kinds  
9 of effects, whether it's the tightness of the  
10 market or attributes that a specific buyer is  
11 looking for that they're willing to overlook  
12 a proximity issue with an HVTL?

13 A. No. Ultimately all we have are the facts,  
14 right, that somebody bought it. And  
15 ultimately we really don't know, right, what  
16 all those considerations were in any  
17 particular case. But we observed that some  
18 properties are purchased that are very  
19 heavily impacted and that the impacts on the  
20 property in some cases are nil and in some  
21 cases are small. Now, in other cases they're  
22 larger. But there's no way for us to know  
23 how those other considerations weigh into the  
24 ultimate market result. And we noticed that,

1           you know, sometimes you get a market result  
2           of no effect and sometimes you get a market  
3           result of an effect.

4    Q.    And that could be just luck of the draw with  
5           the buyer that you happen to link up with.

6    A.    Exactly.  Yeah, timing and...

7    Q.    And that's the reason for the caveat that you  
8           have in a couple places in your testimony,  
9           that it really is property-specific and  
10          case-by-case-specific what the actual effect  
11          will be.

12   A.    Yeah.  We don't begin to pretend that this  
13          allows us to predict what will happen to  
14          individual properties.  But what it does let  
15          us do, very importantly, is to make some  
16          useful generalizations about groups of  
17          properties that have certain characteristics.  
18          And then once we know what that group is, we  
19          can count them and see, you know, are we  
20          dealing with a large number, medium number,  
21          small number, whatever.  And presumably  
22          that's something that's relevant in this case  
23          before us.

24   Q.    Okay.  And you testified earlier that you

1 didn't rely heavily on the subdivision  
2 studies, but they do make up a significant  
3 portion of your report and your testimony, so  
4 I wanted to take a quick look.

5 This is a table out of your report in  
6 Applicant's 147, Attachment A. And it is  
7 Page 89 of that report, and PDF Page 120.  
8 And this is the Study Area 3 subdivisions  
9 studies you performed?

10 A. Right.

11 Q. And am I correct that you found a greater  
12 price effect in the Study Area 3 subdivision  
13 studies than the other areas that were  
14 studied?

15 A. Right. We found -- right. We found in two  
16 of the three we concluded there was a price  
17 effect.

18 Q. And I believe you attributed that, to some  
19 extent, to characteristics of the types of  
20 properties that are in the study area, which  
21 includes the Seacoast Area?

22 A. Yeah. The lots are smaller. A lot of the  
23 lots in the subdivisions that we looked at  
24 north/south in New Hampshire were larger.

1           And on these in particular, significant  
2           portions the lots were encumbered, okay. So,  
3           for instance, in the Greenland subdivision,  
4           the encumbrance ranged from 40 percent to  
5           almost 60 percent; in Newington, 12 percent  
6           to 40 percent. And these encumbered lots --  
7           and you don't know -- encumbrance, proximity  
8           and visibility all tend to go together, and  
9           you don't quite know which of those is  
10          driving the result. There's really no way to  
11          know. You just know when they're together,  
12          you get an effect.

13                 But my suspicion here is you get a small  
14          lot that's heavily encumbered. Your building  
15          envelope is constrained. Whereas, if you  
16          have an 8-acre rural lot in Lancaster and the  
17          easement is on the back of the lot, it  
18          doesn't really affect the lot much. It  
19          doesn't affect the building envelope. And,  
20          you know, it doesn't show up effective in  
21          sales price.

22                 But on these subdivisions, we did see a  
23          preference for the unencumbered lots, which  
24          also were further away from the right-of-way,

1 obviously, and had less visibility.

2 Q. Would you agree that the way your studies are  
3 designed, there's sort of a tendency to have  
4 more encumbered lots than unencumbered lots  
5 in subdivision studies?

6 A. Absolutely. Yeah. No, I mean, we wanted to  
7 start with those. We wanted to study the  
8 things that we thought were most likely to  
9 have effects. So kind of start in close and  
10 then work out as required.

11 Q. And when you're doing your subdivision  
12 studies, I believe you based your conclusions  
13 off of these spreadsheets which are included  
14 in the appendices. So I want to look at one  
15 of the subdivisions in that Study Area 3. So  
16 I'm looking at -- turn the page. But this is  
17 the spreadsheet that's in the appendix to  
18 Attachment A, which is your report, to  
19 Appendix 147. And it's specifically for the  
20 subdivision in Newington. Do you see that?  
21 And the spreadsheet itself is on Appendix --  
22 I think this the page number from the  
23 Appendix -- but it's Page 85, PDF Page 1795.  
24 Try to zoom in.

1           And so if I understand correctly, this a  
2           compilation of the data you used to come to  
3           your conclusions for the subdivision  
4           studies -- for this particular subdivision  
5           study?

6    A.    Yes.

7    Q.    Okay. And that includes the date of the  
8           sales, the sale price. And then you have  
9           some notes on the right-hand column; is that  
10          correct?

11   A.    Correct.

12   Q.    And some of the notes, if I understand  
13          correctly, you're identifying which of the  
14          sales may not be fair market value sale?

15   A.    That's right.

16   Q.    So there's some that don't get considered in  
17          your analysis?

18   A.    That's right.

19   Q.    Then also you had some notes that were more  
20          complicated. So I'm looking at Lot 7A, I  
21          guess it is. And you have a note here that  
22          it was -- you were unable to tell if this was  
23          being sold along with a second lot; is that  
24          correct?

1 (Witness reviews document.)

2 A. Correct. One of the things to keep in mind  
3 here is what we're trying to do is we're just  
4 running the chain of title back because we're  
5 trying to get back to the lot sale, okay. So  
6 we're starting out with the current owner,  
7 and you're going grantor, grantee, grantor,  
8 grantee, back to the original lot sale. And  
9 sometimes there are intermediate transactions  
10 there that may be problematic or ambiguous.  
11 What we're really after is that original lot  
12 sale. So I would be tending to look at the  
13 bottom of these, you know, to the last entry  
14 in this list.

15 Q. For each property you mean?

16 A. For each property.

17 Q. That being the original sale?

18 A. That would be the sale of the lot.

19 Q. Okay. For example, the first one on the top  
20 of the chart, which I guess is Lot 7F, the  
21 original sale was in 1987, and it appears to  
22 be for \$107,000 and change?

23 A. That's correct. I need to have the map in  
24 front of me. And be careful. These are

1           tricky. But that appears to be the case,  
2           yes.

3       Q.    Okay. And then the next one down is 7E, also  
4           a 1987 sale?

5       A.    Right. And Graves appears to be the original  
6           land developer.

7       Q.    And that one was for \$80,000?

8       A.    That's right.

9       Q.    And so the way you performed the analysis was  
10           to look at the, I guess the lot plans, and  
11           determine whether they were encumbered or  
12           unencumbered lots --

13      A.    That's right.

14      Q.    -- and then compare the two?

15      A.    That's right. And also in some of these,  
16           wetlands were playing a big role, too. So we  
17           were trying to control for the wetlands  
18           effect. Essentially, we're trying to get  
19           some sense of what the usable portion of the  
20           lot is.

21      Q.    But that information doesn't appear in this  
22           spreadsheet.

23      A.    That's right. This is purely the chain of  
24           title.

1 Q. Is there another spreadsheet somewhere --

2 A. No.

3 Q. -- that includes that other information?

4 A. No. All the rest would be in the description  
5 that's in the text of the report. It  
6 summarizes the results that are taken from  
7 the chain of title and any other  
8 considerations. The wetland issue is, I  
9 don't remember which of these three. The  
10 wetlands were particularly important to --

11 Q. I believe it was the Portsmouth subdivision.

12 A. Okay. It's discussed at length in the text  
13 of the research report.

14 Q. Thank you.

15 And were you the person who did that  
16 analysis for each of these, or was it some  
17 other -- yourself? You're pointing to  
18 yourself.

19 A. Well, I'm sorry. The construction of the  
20 spreadsheet, I had legal assistance or  
21 paralegal, real estate attorney or paralegal  
22 did the actual work on the deeds. So I got  
23 this spreadsheet as you see it. But there's  
24 still a lot of interpretation involved from

1           this point forward. And I was involved, you  
2           know, from this point forward.

3    Q.    Okay. Thank you.

4                    At the end of your testimony you have  
5           Attachment D, which is the list of all the  
6           properties within 300 feet of the  
7           right-of-way for this project; is that  
8           correct?

9    A.    Yeah, all the properties with homes within  
10           100 feet, right.

11   Q.    Yes, thank you. Okay. And that's on  
12           Applicant's Exhibit 147. It's the last page,  
13           which is electronic Page 4389.

14                   And am I correct that only 6 of those 63  
15           properties met your specific criteria of  
16           being within -- the home being within  
17           100 feet of the right-of-way boundary, the  
18           property being encumbered by the right-of-way  
19           and a change in visibility?

20   A.    No, four, if you compare Tables 8 and 9,  
21           which are on Pages 20 and 21 of my testimony.  
22           So, in Table 8 there are two homes, two  
23           properties with homes within 100 feet where  
24           the structures are currently not visible.

1 Switch over to Table 9, there's only one now.  
2 So we've had one change there. And then back  
3 to Table 8, there are five where structures  
4 are partially visible. In fact, three of  
5 those become Clearly Visible. So that middle  
6 cell is down three and up one, so a net  
7 change of two. So it's now three. And the  
8 Clearly Visible cell in Table 9 that we're  
9 looking at right now is now 10 instead of 7.  
10 So there basically have been four changes on  
11 the properties that are within 100 feet: One  
12 from none to partial and three from partial  
13 to clearly. There are two others where  
14 there's a change in visibility, which is how  
15 you get to six, but those are on properties  
16 that are further away than 100 feet,  
17 properties with homes further away than  
18 100 feet.

19 Q. So if I were to attempt to summarize that,  
20 there are six properties in Attachment D that  
21 show change in visibility, but only four of  
22 them are within 100 feet?

23 A. Correct.

24 Q. Thus your conclusion that there are four

1 properties that fall into the category that  
2 you conclude to be more likely to potentially  
3 have an impact on property value.

4 A. Yeah, more likely after the project than  
5 before the Project.

6 Q. And you have not, kind of circling back, you  
7 have not assessed visibility changes within  
8 the categories you have here. So there may  
9 be properties like Ms. Heald's that are  
10 encumbered within 100 feet of the  
11 right-of-way and have a change of visibility,  
12 but not a change that's great enough to go  
13 from partial to clear?

14 A. Yeah. Absolutely.

15 Q. And you don't -- you haven't counted how many  
16 of those exist, have you?

17 A. Right. Yeah, I think to the extent there is  
18 some change, then, you know, again these --  
19 we're making a generalization about that  
20 group as a whole. And I think this sort of  
21 general 50/50 proposition is probably a  
22 useful one. But, again, the effects of it on  
23 any individual property of the kind of  
24 changes you're talking about will depend on,

1           you know, on the specifics about the Project,  
2           how turns out on mitigation, market  
3           conditions and so on and so forth. So, hard  
4           to predict.

5    Q.    And you testified earlier that your  
6           visibility determination was based on a  
7           combination of viewing the properties from  
8           public rights-of-way, whether it's roads or  
9           the corridor, and using aerial imagery; is  
10          that fair?

11   A.    That's right.

12   Q.    So you did not use any sort of viewshed  
13          modeling to determine views from each of  
14          these properties?

15   A.    No, nothing that I'd characterize as  
16          "viewshed modeling." We did a little  
17          geometry along the way but...

18   Q.    And I think you said you looked at your  
19          assessment of the visibility from the full  
20          perimeter of each house?

21   A.    Yeah, that's was the perspective that we were  
22          trying to envision, yes.

23   Q.    And that's a ground-based view?

24   A.    I'm sorry?

1 Q. You're basing that from being on the ground?

2 A. That's right.

3 Q. So you didn't consider views from  
4 second-story windows or things like that?

5 A. Correct.

6 Q. And I just wanted to come back and see... so  
7 I wanted to take one example where you  
8 found -- get a sense of how you characterize  
9 "visibility" a little better. On Page 13 of  
10 your supplemental testimony, Applicant's 147,  
11 you have a Table 3, which is showing  
12 properties in the Route 4/UNH portion of the  
13 Project; is that correct?

14 A. Yes.

15 Q. And for all of these you found the visibility  
16 to be none before and after?

17 A. That's right.

18 Q. And that includes a number of properties on  
19 Fairchild Drive; is that right?

20 A. Yes.

21 Q. And it happens that Fairchild Drive was one  
22 of the examples used by the Applicant's  
23 aesthetics expert to look at impacts from  
24 properties, private properties. Are you

1 familiar with that?

2 A. I understand that those kinds of assessments  
3 have been made. I'm not familiar with -- I  
4 have not seen them.

5 Q. That's fair. So I pulled up Applicant's  
6 Exhibit 52, which is I think the amended set  
7 of visual assessment maps from LandWorks.  
8 And this is Exhibit 14, which is the existing  
9 conditions at Fairchild Drive. Would you  
10 agree that that's the vicinity of those  
11 properties you were -- that were on the table  
12 we were just looking at? And I can go back  
13 to that if it helps.

14 A. It's in vicinity.

15 Q. So on your table, you have a number of  
16 properties on Fairchild Drive.

17 A. Right.

18 Q. And in the visual assessment, this is the  
19 before picture. And there's a photo  
20 simulation of the Project in the after  
21 condition. You see there's an obscured  
22 structure in the background. Do you see  
23 that?

24 A. I do.

1 Q. Now, you categorized this as "none" in  
2 visibility.

3 A. That's right.

4 Q. If this were the view you were looking at,  
5 would this count as partial in your analysis,  
6 or would this still be a none?

7 A. This would be partial. But what happens --  
8 and I don't have, you know, photographs with  
9 a simulation. But what happens there -- and  
10 I can't tell the perspective here, but the  
11 back yards are very shallow on all of those  
12 homes and --

13 Q. Just so you have a perspective, here's the...

14 A. If you back up far enough, you'll be able to  
15 see something poking over the tree tops. But  
16 from the perimeter of those houses, we got a  
17 tree line on average about 40 feet for those  
18 houses. So from the back of the house to the  
19 tree line was about 40 feet. And the towers,  
20 you know -- if you're 40 feet from the tree  
21 line, and the trees are 40 feet high, the  
22 towers would have to be 250 feet tall to be  
23 able to see the top. So it's a pretty remote  
24 chance. So it looked to me like that

1 perspective was from the street and not from  
2 the perimeter of the house. And you can see  
3 it's just barely visible there. But I think  
4 I felt pretty confident. I've been there  
5 several times, looked at it very carefully,  
6 and it's a very, very dense canopy right up  
7 against the back of those houses. And I  
8 don't think from the perimeter of the houses  
9 you're going to see any structures.

10 Q. Okay. Thank you.

11 Now, your ultimate conclusion is that  
12 there's no discernible effect in the local or  
13 regional real estate markets. You testified  
14 about that before. And for reference, that's  
15 on Page 23 of your supplemental testimony.

16 When you say "local real estate market,"  
17 what defines the "local" market?

18 A. Yeah, I mean my assumption has always been  
19 that the object here was, you know, orderly  
20 development of the region. And sort of  
21 backing down from that, in order to affect  
22 that -- and Mr. Varney will address that.  
23 It's not the subject of my testimony. But  
24 what we'd want to know is if we looked at the

1 data on the regional real estate market,  
2 would there be any evidence of these effects.  
3 The answer is no. If we looked at, say, data  
4 for the town of Durham, more local market,  
5 the evidence would be that there wouldn't be  
6 any evidence of the Project discernible.  
7 There are, however, you know, a small number  
8 of properties that are potentially subject to  
9 effect now, and there'd be some marginal  
10 increases due to the Project in the future.  
11 But the number of properties is very small.  
12 And I don't think there's any possibility  
13 that you'd get any kind of market-wide  
14 effects either on the local level or  
15 certainly not on the regional level.

16 Q. So I hear you saying the "local level" is  
17 essentially the town level?

18 A. Yeah, for a town like Durham. For a city, it  
19 gets a little more complicated. You'll have  
20 some markets, presumably. But I would think  
21 Durham would be a reasonable definition of a  
22 "local market."

23 Q. And in a town like Newington, you might have  
24 a couple different markets, given the

1 commercial district versus the rural areas?

2 A. Correct.

3 Q. Okay. Thank you.

4 And now your work on these types of  
5 topics has primarily been on behalf of  
6 utilities and transmission line developers;  
7 is that a fair statement?

8 A. Well, on the transmission line cases, I've  
9 done a lot of work for the federal  
10 government, U.S. attorneys, for state  
11 government and for utility companies. I've  
12 done a lot of work for the states.  
13 Represented State of Nevada with respect to  
14 the effects of the Yucca Mountain Nuclear  
15 Waste Repository, the huge study that had all  
16 kinds of property value issues associated  
17 with it. And that was, you know, on behalf  
18 of the state. So I've worked for a variety  
19 of clients. But the transmission line work  
20 is largely for the utility industry or for  
21 the public sector.

22 Q. All right. Thank you much.

23 MR. ASLIN: No further questions.

24 PRESIDING OFFICER WEATHERSBY: We

1           actually are going to break for lunch and be  
2           back at five minutes after one.

3                       (Lunch recess taken at 12:08 p.m. and  
4                       concludes the Morning Session. The  
5                       hearing continues under separate cover  
6                       in the transcript noted as Afternoon  
7                       Session.)

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C E R T I F I C A T E

I, Susan J. Robidas, a Licensed  
Shorthand Court Reporter and Notary Public  
of the State of New Hampshire, do hereby  
certify that the foregoing is a true and  
accurate transcript of my stenographic  
notes of these proceedings taken at the  
place and on the date hereinbefore set  
forth, to the best of my skill and ability  
under the conditions present at the time.

I further certify that I am neither  
attorney or counsel for, nor related to or  
employed by any of the parties to the  
action; and further, that I am not a  
relative or employee of any attorney or  
counsel employed in this case, nor am I  
financially interested in this action.

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Susan J. Robidas, LCR/RPR  
Licensed Shorthand Court Reporter  
Registered Professional Reporter  
N.H. LCR No. 44 (RSA 310-A:173)

|                                                               |                                                                                                                                                          |                                                                                                                                                                                                                                    |                                                                                                                                |                                                                                                                         |
|---------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
|                                                               | <b>actual (4)</b><br>63:20;88:11;<br>115:10;122:22                                                                                                       | <b>9:15;19:12;30:5;<br/>42:3;43:24;53:7;<br/>60:22;62:15;63:10,<br/>14,18;64:4;66:3;<br/>67:15;74:1;77:10;<br/>81:16;87:4;89:1;<br/>103:3;106:1;109:20;<br/>111:13,16;125:18,22</b>                                                | <b>among (1)</b><br>104:9                                                                                                      | <b>32:24;75:23;<br/>104:13,17,18</b>                                                                                    |
| <b>\$</b>                                                     |                                                                                                                                                          |                                                                                                                                                                                                                                    | <b>amount (1)</b><br>33:20                                                                                                     | <b>appraisals (2)</b><br>76:5;105:18                                                                                    |
| <b>\$10- (1)</b><br>34:6                                      | <b>actually (22)</b><br>7:5;15:7;29:14;<br>36:17;46:9;49:16;<br>53:20;61:23;84:3,13;<br>86:20;87:5,6,16;88:4,<br>5;94:19,20;95:6;<br>104:22;113:16;133:1 | <b>against (1)</b><br>130:7                                                                                                                                                                                                        | <b>analyses (2)</b><br>100:1;114:8                                                                                             | <b>appraise (1)</b><br>107:7                                                                                            |
| <b>\$107,000 (1)</b><br>120:22                                |                                                                                                                                                          | <b>agenda (1)</b><br>57:24                                                                                                                                                                                                         | <b>analysis (15)</b><br>17:7;33:13;37:23;<br>75:17;77:11;100:17,<br>20;101:4,8;104:12;<br>105:24;119:17;<br>121:9;122:16;129:5 | <b>appraiser (1)</b><br>105:6                                                                                           |
| <b>\$20,000 (1)</b><br>34:6                                   |                                                                                                                                                          | <b>ago (3)</b><br>50:15;55:11;91:11                                                                                                                                                                                                | <b>analyze (1)</b><br>109:13                                                                                                   | <b>appraisers (1)</b><br>105:13                                                                                         |
| <b>\$80,000 (1)</b><br>121:7                                  | <b>add (1)</b><br>31:21                                                                                                                                  | <b>agree (34)</b><br>5:14;6:15,17;<br>17:22;19:1,9;27:8;<br>28:22;32:15;33:9;<br>51:14;55:24;57:11,<br>14;73:12,15,17,22;<br>74:4,7;76:7;77:7,12,<br>23;96:9;97:6;99:22;<br>100:12;104:7;<br>105:18;106:11;<br>108:18;118:2;128:10 | <b>analyzed (3)</b><br>76:4;108:4;113:13                                                                                       | <b>approach (3)</b><br>33:19;94:12;<br>104:17                                                                           |
| <b>[</b>                                                      | <b>added (2)</b><br>25:10,13                                                                                                                             |                                                                                                                                                                                                                                    | <b>and/or (1)</b><br>94:11                                                                                                     | <b>approved (1)</b><br>68:18                                                                                            |
| <b>[sic] (2)</b><br>24:16;55:4                                | <b>addition (1)</b><br>40:4                                                                                                                              |                                                                                                                                                                                                                                    | <b>angle (1)</b><br>47:5                                                                                                       | <b>approximately (6)</b><br>33:5;52:7,10,12;<br>59:24;60:3                                                              |
| <b>A</b>                                                      | <b>additional (3)</b><br>13:24;37:22;48:15                                                                                                               |                                                                                                                                                                                                                                    | <b>apart (1)</b><br>103:10                                                                                                     | <b>April (3)</b><br>4:4;50:1;83:22                                                                                      |
| <b>able (5)</b><br>47:13,15;114:7;<br>129:14,23               | <b>address (6)</b><br>3:22,24;28:17;<br>36:17;72:6;130:22                                                                                                |                                                                                                                                                                                                                                    | <b>apartment (1)</b><br>111:10                                                                                                 | <b>area (15)</b><br>17:14;51:1;52:6;<br>56:8;61:12;62:16,19;<br>63:12;84:5;98:7;<br>116:8,12,20,21;<br>118:15           |
| <b>above (3)</b><br>45:23,23;47:16                            | <b>addressed (2)</b><br>17:24;58:21                                                                                                                      |                                                                                                                                                                                                                                    | <b>apartments (1)</b><br>17:13                                                                                                 | <b>areas (5)</b><br>59:15;77:9;86:17;<br>116:13;132:1                                                                   |
| <b>absence (3)</b><br>14:2;31:4;48:15                         | <b>addresses (1)</b><br>112:6                                                                                                                            | <b>agreed (1)</b><br>28:16                                                                                                                                                                                                         | <b>apparently (1)</b><br>24:23                                                                                                 | <b>arise (1)</b><br>28:19                                                                                               |
| <b>absolutely (4)</b><br>7:3;40:15;118:6;<br>125:14           | <b>adds (1)</b><br>85:1                                                                                                                                  | <b>agreement (1)</b><br>41:9                                                                                                                                                                                                       | <b>appearance (2)</b><br>90:5;121:21                                                                                           | <b>arms (1)</b><br>98:3                                                                                                 |
| <b>abut (1)</b><br>56:6                                       | <b>adequate (1)</b><br>17:10                                                                                                                             | <b>agricultural (1)</b><br>85:1                                                                                                                                                                                                    | <b>appears (2)</b><br>22:2;87:2                                                                                                | <b>around (16)</b><br>23:14;40:23;46:24;<br>47:1;49:8,9;62:19;<br>63:12;71:10;87:11,<br>14,17,22;98:3;<br>105:22;107:12 |
| <b>abuts (1)</b><br>80:12                                     | <b>adequately (1)</b><br>35:4                                                                                                                            | <b>ahead (1)</b><br>65:7                                                                                                                                                                                                           | <b>apparent (1)</b><br>63:2;120:21;121:1,<br>5                                                                                 | <b>arrived (1)</b><br>75:16                                                                                             |
| <b>According (2)</b><br>81:2;93:2                             | <b>adjoin (1)</b><br>14:10                                                                                                                               | <b>aid (1)</b><br>48:17                                                                                                                                                                                                            | <b>appendices (1)</b><br>118:14                                                                                                | <b>ASLIN (6)</b><br>63:2;95:12,13,15,<br>18;132:23                                                                      |
| <b>accounted (1)</b><br>75:23                                 | <b>adopt (1)</b><br>4:15                                                                                                                                 | <b>alignment (5)</b><br>13:5;52:1;83:24;<br>84:3;110:2                                                                                                                                                                             | <b>appendix (4)</b><br>118:17,19,21,23                                                                                         | <b>assertions (1)</b><br>72:10                                                                                          |
| <b>accuracy (1)</b><br>17:5                                   | <b>adverse (5)</b><br>19:16,20;29:17;<br>53:18;81:7                                                                                                      | <b>allows (1)</b><br>115:13                                                                                                                                                                                                        | <b>apples (1)</b><br>33:23                                                                                                     | <b>assess (3)</b><br>29:22;86:24;87:20                                                                                  |
| <b>accurate (2)</b><br>89:9;97:14                             | <b>aerial (5)</b><br>84:13;88:13;89:1;<br>90:21;126:9                                                                                                    | <b>alluded (2)</b><br>22:8;40:3                                                                                                                                                                                                    | <b>applicability (2)</b><br>17:15;35:8                                                                                         | <b>assessed (1)</b><br>125:7                                                                                            |
| <b>accurately (4)</b><br>61:18;62:11;63:14;<br>88:18          | <b>aesthetic (2)</b><br>82:23;83:2                                                                                                                       | <b>almost (4)</b><br>24:12;65:17;71:11;<br>117:5                                                                                                                                                                                   | <b>applicable (2)</b><br>64:7,18                                                                                               | <b>assessing (1)</b><br>105:5                                                                                           |
| <b>acknowledge (2)</b><br>65:24;106:24                        | <b>aesthetics (2)</b><br>82:17;127:23                                                                                                                    | <b>along (21)</b><br>11:4;20:1;23:18,<br>23;29:5,12,15,23;<br>30:4,8;32:9;35:16;<br>56:22;61:12;66:23;<br>67:1,13,19;78:14;<br>119:23;126:17                                                                                       | <b>Applicant (7)</b><br>13:17;14:7;18:7;<br>27:20;28:15;38:15;<br>42:9                                                         | <b>assessment (7)</b><br>50:18;64:10,24;<br>99:1;126:19;128:7,<br>18                                                    |
| <b>acquired (4)</b><br>12:12,15;13:2,24                       | <b>affect (8)</b><br>9:8;24:3;30:3;<br>35:17;76:8;117:18,<br>19;130:21                                                                                   | <b>alter (1)</b><br>52:19                                                                                                                                                                                                          | <b>Applicant's (10)</b><br>16:10;61:8;97:10;<br>99:11;106:2;116:6;<br>123:12;127:10,22;<br>128:5                               | <b>assessments (1)</b><br>128:2                                                                                         |
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| <b>acre (1)</b><br>34:7                                       | <b>afraid (1)</b><br>85:21                                                                                                                               | <b>always (3)</b><br>87:10;108:23;<br>130:18                                                                                                                                                                                       | <b>applied (1)</b><br>30:8                                                                                                     | <b>associated (5)</b><br>12:20;51:13;80:2;<br>113:21;132:16                                                             |
| <b>acronym (1)</b><br>65:20                                   | <b>afternoon (4)</b><br>3:8,11;68:5;133:6                                                                                                                | <b>ambiguous (1)</b><br>120:10                                                                                                                                                                                                     | <b>apply (2)</b><br>39:9;106:19                                                                                                |                                                                                                                         |
| <b>across (6)</b><br>22:23;45:24;84:23;<br>93:1;109:14;110:21 | <b>again (26)</b>                                                                                                                                        | <b>amended (2)</b><br>4:6;128:6                                                                                                                                                                                                    | <b>applying (2)</b><br>64:9,23                                                                                                 |                                                                                                                         |
| <b>action (1)</b><br>27:3                                     |                                                                                                                                                          |                                                                                                                                                                                                                                    | <b>appraisal (5)</b>                                                                                                           |                                                                                                                         |
| <b>actions (1)</b><br>26:21                                   |                                                                                                                                                          |                                                                                                                                                                                                                                    |                                                                                                                                |                                                                                                                         |
| <b>activity (2)</b><br>97:2,5                                 |                                                                                                                                                          |                                                                                                                                                                                                                                    |                                                                                                                                |                                                                                                                         |

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| <b>lakeside (1)</b><br>35:1<br><b>Lancaster (1)</b><br>117:16<br><b>land (43)</b><br>29:4,5,10,13,20;<br>30:5,7,12,14,16,20,<br>23;31:23;32:2,6,9;<br>34:4,5,19;41:5;<br>55:16;56:22,24;57:2,<br>15,23,23;58:24;59:8;<br>71:6;72:1;73:2;<br>74:14;76:21;78:10,<br>14;85:1,10;96:2,4,11,<br>14;121:6<br><b>landowner (3)</b><br>12:6,7;14:3<br><b>landowners (1)</b><br>86:12<br><b>lands (12)</b><br>29:7,12,15;32:10,<br>11,13;58:4,6,12,16,<br>17;77:13<br><b>landscape (1)</b><br>85:1<br><b>landscapes (2)</b><br>59:10,14<br><b>landscaping (2)</b><br>14:17;15:16<br><b>LandWorks (1)</b><br>128:7<br><b>Lane (12)</b><br>3:24;11:4;80:7;<br>84:4,22;85:3,5,12,14,<br>15;86:3,22<br><b>Lanzetta (4)</b><br>70:21;78:19,22;<br>79:1<br><b>large (4)</b><br>24:8;79:22;107:20;<br>115:20<br><b>largely (4)</b><br>13:21;34:18;<br>105:15;132:20<br><b>larger (2)</b><br>114:22;116:24<br><b>largest (1)</b><br>108:23<br><b>last (7)</b> | <b>Mackie (13)</b><br>70:22,23;71:1,2,<br>23;72:5,8,12,21;<br>73:16;74:13;75:3;<br>78:6<br><b>Madam (6)</b><br>4:19;36:2;63:2;<br>69:17;74:10;95:13<br><b>magnitude (2)</b><br>93:19;98:4<br><b>magnitudes (1)</b><br>98:4<br><b>major (2)</b><br>46:10;101:23<br><b>majority (5)</b><br>38:6;60:1,7;65:9,<br>13<br><b>makes (3)</b><br>84:13;89:6;112:15<br><b>making (4)</b><br>48:10;55:16;67:1;<br>125:19<br><b>management (1)</b><br>57:9<br><b>many (13)</b><br>8:13;17:23;37:7;<br>53:11;59:9;75:10,10,<br>10;77:20;98:10;<br>110:14,16;125:15<br><b>map (2)</b><br>90:18;120:23<br><b>maps (9)</b><br>40:9,11;41:4;<br>48:14;59:2;88:13;<br>90:23;93:3;128:7                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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| <b>March (1)</b><br>4:7                                                                                                                                                                                                                                                                                                       | 50:2;55:16;57:13;<br>83:22;84:12;90:16;                                                                              | 14:5,14;15:17;27:9                                                                                                                                                                                  | 102:11;107:8;<br>111:17;117:18;<br>132:22                               | 5:6;16:14;19:1,9;<br>21:14;25:9,11,14;<br>33:23;34:20;35:14;<br>37:17;38:20,21;45:1;<br>48:2;60:14,16,23;<br>61:9;64:11,13,24;<br>65:2;66:21;68:8,11,<br>14,16,20;95:2;<br>105:15;106:23;<br>111:20,21;116:24 |
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| <b>marginal (1)</b><br>131:9                                                                                                                                                                                                                                                                                                  | 119:14;120:10;125:8                                                                                                  | <b>mitigation (6)</b><br>26:21;27:3,14;<br>48:11;54:5;126:2                                                                                                                                         | <b>myself (2)</b><br>68:10;70:11                                        | <b>Newmarket (3)</b><br>23:17,22;24:14                                                                                                                                                                        |
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| <b>marked (1)</b><br>16:10                                                                                                                                                                                                                                                                                                    | <b>McCosker's (3)</b><br>49:1;100:2,4                                                                                | <b>mixing (1)</b><br>32:8                                                                                                                                                                           | <b>name (9)</b><br>3:21,23;5:4;36:12;<br>51:6;71:2;79:1;<br>83:16;95:18 | <b>next (15)</b><br>11:13;24:15,18;<br>32:17;35:24;38:3;<br>40:2;50:24;61:6;<br>63:22;67:23;78:18;<br>110:2,2;121:3                                                                                           |
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| Massachusetts-Connecticut (4)<br>37:21;38:23;39:18;<br>107:10                                                                                                                                                                                                                                                                 | <b>measures (1)</b><br>46:22                                                                                         | <b>Montana (1)</b><br>3:24                                                                                                                                                                          | <b>nature (4)</b><br>24:2;29:11;71:18;<br>75:19                         | <b>north (4)</b><br>12:22;13:5;103:2;<br>107:3                                                                                                                                                                |
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| <b>materially (2)</b><br>52:19;53:4                                                                                                                                                                                                                                                                                           | <b>meet (1)</b><br>18:7                                                                                              | <b>morning (14)</b><br>3:3;5:2,3;16:5;<br>36:10,11;69:8,11;<br>78:23,24;79:4;95:16,<br>17;133:4                                                                                                     | <b>nearby (2)</b><br>64:8,19                                            | <b>Northern (14)</b><br>13:11,19,19;16:20;<br>18:5;25:12;27:19;<br>28:2,5;68:1;107:15,<br>16;112:3,22                                                                                                         |
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| <b>matter (14)</b><br>4:2;18:1;21:6;<br>36:13;37:24;39:12;<br>59:18;66:24;97:20;<br>104:3;105:4;109:20,<br>24;113:12                                                                                                                                                                                                          | <b>mention (1)</b><br>111:20                                                                                         | <b>mother-in-law (1)</b><br>111:9                                                                                                                                                                   | <b>needed (1)</b><br>64:11;65:1                                         | <b>noted (3)</b><br>6:19;9:14;133:6                                                                                                                                                                           |
| <b>matters (1)</b><br>36:5                                                                                                                                                                                                                                                                                                    | <b>mentioned (5)</b><br>43:11;48:4;76:13,<br>15;109:12                                                               | <b>Mothorpe (1)</b><br>33:2                                                                                                                                                                         | <b>need (4)</b><br>72:18;87:8;104:15;<br>120:23                         | <b>notes (3)</b><br>119:9,12,19                                                                                                                                                                               |
| <b>Matthew (3)</b><br>36:3;51:2,6                                                                                                                                                                                                                                                                                             | <b>Merriam-Webster (1)</b><br>57:7                                                                                   | <b>motivations (1)</b><br>54:2                                                                                                                                                                      | <b>Needleman (8)</b><br>3:17,19;4:19;<br>71:20;72:9;73:9;<br>74:10;78:3 | <b>noticed (1)</b><br>114:24                                                                                                                                                                                  |
| <b>mattresses (1)</b><br>35:16                                                                                                                                                                                                                                                                                                | <b>Merrimack (2)</b><br>13:12,20                                                                                     | <b>move (4)</b><br>45:5;56:18;61:6;<br>90:2                                                                                                                                                         | <b>needs (1)</b><br>74:5                                                | <b>notion (1)</b><br>32:15                                                                                                                                                                                    |
| <b>maximum (1)</b><br>84:7                                                                                                                                                                                                                                                                                                    | <b>met (1)</b><br>123:15                                                                                             | <b>much (18)</b><br>14:23;19:11;21:21;<br>29:6;31:20;56:23;<br>57:22;59:3;68:23;<br>84:17;97:13;98:6,9;                                                                                             | <b>negative (8)</b><br>6:22;12:8;14:5;<br>15:6;27:5,10,17;<br>111:4     | <b>nuance (1)</b><br>44:8                                                                                                                                                                                     |
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|                                                                                                                                                                                                                                                                                                                               | <b>miles (2)</b><br>59:24;71:5                                                                                       | <b>Mother (1)</b><br>33:2                                                                                                                                                                           | <b>Neither (1)</b><br>45:16                                             |                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                               | <b>mind (2)</b><br>36:22;120:2                                                                                       | <b>mothorpe (1)</b><br>33:2                                                                                                                                                                         | <b>net (1)</b><br>124:6                                                 |                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                               | <b>minute (2)</b><br>50:15;62:22                                                                                     | <b>motives (1)</b><br>54:2                                                                                                                                                                          | <b>Nevada (1)</b><br>132:13                                             |                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                               | <b>minutes (1)</b><br>133:2                                                                                          | <b>mountain (1)</b><br>132:14                                                                                                                                                                       | <b>nevertheless (2)</b><br>103:7;104:2                                  |                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                               | <b>missed (1)</b><br>94:17                                                                                           | <b>move (4)</b><br>45:5;56:18;61:6;<br>90:2                                                                                                                                                         | <b>New (36)</b>                                                         |                                                                                                                                                                                                               |
|                                                                                                                                                                                                                                                                                                                               | <b>mitigate (4)</b>                                                                                                  |                                                                                                                                                                                                     |                                                                         |                                                                                                                                                                                                               |

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| visibility (68)<br>7:13;8:3,9,18,21;<br>9:1,8,14;10:7;11:9,<br>10,11,13;20:5,6;<br>43:14;46:22;47:22;<br>48:12;49:21;66:4;<br>78:13;83:4,5;84:7;<br>87:2,12,15;88:16,18;<br>89:17;92:2,8;93:22;<br>94:16;99:1,4,15,23;<br>100:9,13,14,20;<br>101:1,2,4,9,21;<br>102:19;103:1,11;<br>104:8;107:24;<br>108:23;109:7;<br>113:12;117:8;118:1;<br>123:19;124:14,21;<br>125:7,11;126:6,19;<br>127:9,15;129:2 | water (1)<br>34:9                                                                                                                                                                                   | willing (6)<br>27:20,23;110:13;<br>111:2,15;114:11                                                                                                                                                                                         | years (9)<br>9:6;15:2;55:11,15;<br>56:4;71:11,15;73:23;<br>91:11                                       | 12.9 (1)<br>59:24                                                                                                                             |
| visible (21)<br>11:17,17,18,19;<br>12:2;45:11,23;50:16;<br>59:10;87:21;89:12,<br>14;91:16;102:6;<br>103:18;110:6;<br>123:24;124:4,5,8;<br>130:3                                                                                                                                                                                                                                                        | way (27)<br>5:18;9:22;12:6;<br>20:18;21:10;27:9;<br>31:24;41:23;55:22,<br>23;74:24;82:9;84:9;<br>85:2;88:24;93:9,12;<br>100:22;103:13,23;<br>105:20;112:24;<br>114:22;117:10;<br>118:2;121:9;126:17 | wires (3)<br>20:17;22:3,10                                                                                                                                                                                                                 | Yucca (1)<br>132:14                                                                                    | 12:08 (1)<br>133:3                                                                                                                            |
| visibly (1)<br>82:18                                                                                                                                                                                                                                                                                                                                                                                   | weathering (1)<br>59:12                                                                                                                                                                             | within (36)<br>10:11,24;11:1,6,<br>15;13:21;20:3;23:8;<br>42:14;43:13;50:13;<br>72:13;76:9;80:19,21;<br>81:5,11;82:13;90:14;<br>92:6;94:22;99:23;<br>100:20;101:10;<br>102:22;103:11;<br>108:5;123:6,9,16,16,<br>23;124:11,22;125:7,<br>10 | Yup (1)<br>47:24                                                                                       | 120 (2)<br>82:6;116:7                                                                                                                         |
| visit (2)<br>49:22;84:2                                                                                                                                                                                                                                                                                                                                                                                | WEATHERSBY (25)<br>3:2,16;4:20;16:1;<br>35:24;36:6;62:5,21;<br>63:5;69:4,13,19;70:3,<br>6,13,19;72:4,17;<br>73:11;74:20;78:4,18;<br>83:12;95:11;132:24                                              | without (3)<br>41:15;72:11;88:4                                                                                                                                                                                                            | <b>Z</b>                                                                                               | 12th (1)<br>4:5                                                                                                                               |
| visited (4)<br>49:12,24;83:21,24                                                                                                                                                                                                                                                                                                                                                                       | web (1)<br>59:6                                                                                                                                                                                     | witness (4)<br>3:12;74:22,23;<br>120:1                                                                                                                                                                                                     | zero (3)<br>44:7,7;92:11                                                                               | 13 (6)<br>9:13;29:3;56:21;<br>68:6;79:13;127:9                                                                                                |
| visits (2)<br>49:13;80:9                                                                                                                                                                                                                                                                                                                                                                               | weigh (1)<br>114:23                                                                                                                                                                                 | witness's (1)<br>74:12                                                                                                                                                                                                                     | zoom (2)<br>62:3;118:24                                                                                | 14 (13)<br>10:17;11:2,3,5,5,5,<br>9,16,22;29:3;56:21;<br>69:11;128:8                                                                          |
| visual (10)<br>14:8,13,16;15:1,10,<br>17,20;48:17;128:7,18                                                                                                                                                                                                                                                                                                                                             | weighted (1)<br>25:12                                                                                                                                                                               | wit (10)<br>16:13;42:20;50:14;<br>54:22;57:20;64:6;<br>90:4;102:21;106:14;<br>109:2                                                                                                                                                        | <b>1</b>                                                                                               | 147 (19)<br>4:7;6:20;7:18,19;<br>9:12;11:8;16:10;<br>37:13;44:11;45:8;<br>48:18;79:7;80:15;<br>99:11;106:2;116:6;<br>118:19;123:12;<br>127:10 |
| Visually (1)<br>53:11                                                                                                                                                                                                                                                                                                                                                                                  | Welcome (1)<br>3:3                                                                                                                                                                                  | 1,000 (5)<br>81:11,15,17,20,24                                                                                                                                                                                                             | <b>10</b>                                                                                              | 15 (4)<br>45:8;48:17;60:12;<br>99:12                                                                                                          |
| voltage (10)<br>20:16;21:9,10;<br>22:22;55:3;67:21;<br>109:15,19;112:11;<br>113:22                                                                                                                                                                                                                                                                                                                     | well-maintained (1)<br>91:8                                                                                                                                                                         | 1.6 (1)<br>106:8                                                                                                                                                                                                                           | <b>10 (14)</b><br>12:2;16:13;31:15,<br>16;55:15;57:18,19;<br>64:5;84:4;97:11,11;<br>106:3;108:11;124:9 | 15-minute (1)<br>70:15                                                                                                                        |
| voltage-specific (1)<br>66:10                                                                                                                                                                                                                                                                                                                                                                          | weren't (2)<br>17:19;82:11                                                                                                                                                                          | 10 (14)<br>106:8                                                                                                                                                                                                                           | <b>10:32 (1)</b><br>70:17                                                                              | 16 (3)<br>19:13;90:8;99:12                                                                                                                    |
| vulnerable (1)<br>102:16                                                                                                                                                                                                                                                                                                                                                                               | west (3)<br>13:4;35:1;85:8                                                                                                                                                                          | 10 (14)<br>106:8                                                                                                                                                                                                                           | <b>10:47 (1)</b><br>70:18                                                                              | 1600s (2)<br>72:1,23                                                                                                                          |
| <b>W</b>                                                                                                                                                                                                                                                                                                                                                                                               | wetland (1)<br>122:8                                                                                                                                                                                | 100 (24)<br>10:11,24;11:2,6,<br>15;20:4;23:8;42:14;<br>43:13;60:3;81:14,17;<br>82:4,8;92:6;102:22;<br>123:10,17,23;124:11,<br>16,18,22;125:10                                                                                              | <b>10:32 (1)</b><br>70:17                                                                              | 17 (1)<br>90:8                                                                                                                                |
| walk (8)<br>47:1;49:7,9,16;<br>80:7;86:13;87:16,22                                                                                                                                                                                                                                                                                                                                                     | wetlands (3)<br>121:16,17;122:10                                                                                                                                                                    | 105 (1)<br>60:19                                                                                                                                                                                                                           | <b>10:47 (1)</b><br>70:18                                                                              | 17.9 (1)<br>106:9                                                                                                                             |
| walked (10)<br>46:24;80:10,23;                                                                                                                                                                                                                                                                                                                                                                         | what's (8)<br>10:1;21:1;24:2;<br>32:5;34:15;69:22;<br>71:21;110:3                                                                                                                                   | 106 (2)<br>54:18;82:5                                                                                                                                                                                                                      | <b>110 (3)</b><br>82:5,10,13                                                                           | 1700s (2)<br>72:1,24                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                        | whereas (4)<br>98:6;102:24;<br>103:24;117:15                                                                                                                                                        | 11 (9)<br>7:20;16:13;52:3;<br>57:18,20;59:23;<br>60:12;68:2;70:16                                                                                                                                                                          | <b>110 (3)</b><br>82:5,10,13                                                                           | 1795 (1)<br>118:23                                                                                                                            |
|                                                                                                                                                                                                                                                                                                                                                                                                        | WHEREUPON (1)<br>3:13                                                                                                                                                                               | 110 (3)<br>82:5,10,13                                                                                                                                                                                                                      | <b>115 (7)</b><br>24:11,20;25:1;<br>26:5;108:17;110:19,<br>19                                          | 18 (2)<br>68:6;80:14                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                        | whole (4)<br>38:21;107:6;109:3;<br>125:20                                                                                                                                                           | 115 (7)<br>24:11,20;25:1;<br>26:5;108:17;110:19,<br>19                                                                                                                                                                                     | <b>115kV (6)</b>                                                                                       | 1800s (2)<br>72:2,24                                                                                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                        | whose (1)<br>30:16                                                                                                                                                                                  | 119 (1)<br>19                                                                                                                                                                                                                              |                                                                                                        | 1893 (2)<br>72:3;73:1                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                        | wide (3)<br>60:3;99:22;107:14                                                                                                                                                                       |                                                                                                                                                                                                                                            |                                                                                                        | 19 (1)<br>11:3                                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                        | widely (1)<br>88:14                                                                                                                                                                                 |                                                                                                                                                                                                                                            |                                                                                                        | 1948 (1)<br>55:1                                                                                                                              |
|                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                     |                                                                                                                                                                                                                                            |                                                                                                        | 1987 (2)<br>120:21;121:4                                                                                                                      |
|                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                     |                                                                                                                                                                                                                                            |                                                                                                        | 1995 (4)<br>55:5;56:3;105:5,7                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                     |                                                                                                                                                                                                                                            |                                                                                                        | 1-acre (1)<br>31:12                                                                                                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                     |                                                                                                                                                                                                                                            |                                                                                                        | 1st (1)                                                                                                                                       |

|                                                                                                        |                                                                                                         |                                                                        |                                                                       |
|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------|
| 68:5                                                                                                   |                                                                                                         | 20,21                                                                  | <b>65 (2)</b><br>61:8;63:1                                            |
| <b>2</b>                                                                                               | <b>3</b>                                                                                                | <b>400 (4)</b><br>71:11;81:3,19,23                                     | <b>65-foot-tall (1)</b><br>92:13                                      |
| <b>2 (7)</b><br>11:9;24:6,11;<br>57:20;108:10;112:2,<br>21                                             | <b>3 (10)</b><br>18:13;19:12;26:13;<br>53:16;61:12;62:16;<br>116:8,12;118:15;<br>127:11                 | <b>40-foot (1)</b><br>46:21                                            | <b>7</b>                                                              |
| <b>20 (13)</b><br>9:12;10:17;11:8;<br>25:9,13;53:17;55:10;<br>56:4;91:10;105:14;<br>107:8;108:7;123:21 | <b>30 (1)</b><br>91:10                                                                                  | <b>40s (1)</b><br>102:24                                               | <b>7 (8)</b><br>3:3;11:10;39:3;<br>42:21;80:15;106:4;<br>107:19;124:9 |
| <b>2000 (1)</b><br>33:15                                                                               | <b>300 (7)</b><br>80:19,22;81:1,5;<br>90:14,16;123:6                                                    | <b>42 (3)</b><br>38:22;43:22;109:6                                     | <b>70 (3)</b><br>66:14;71:5;72:13                                     |
| <b>2000s (1)</b><br>107:1                                                                              | <b>300-foot (1)</b><br>92:24                                                                            | <b>4389 (1)</b><br>123:13                                              | <b>75 (2)</b><br>43:7;44:4                                            |
| <b>2010 (4)</b><br>105:14,16;107:2,<br>17                                                              | <b>34 (3)</b><br>62:14;63:4,7                                                                           | <b>43-foot (1)</b><br>61:15                                            | <b>75-foot (1)</b><br>61:14                                           |
| <b>2014 (1)</b><br>107:18                                                                              | <b>34.5 (5)</b><br>23:5,23;24:20;<br>25:1;113:15                                                        | <b>45 (1)</b><br>33:5                                                  | <b>78 (1)</b><br>38:22                                                |
| <b>2015 (2)</b><br>23:10;107:2                                                                         | <b>34.5kV (17)</b><br>22:9;25:5;55:9,13;<br>56:1;60:4,9,17;<br>61:16;63:24;65:11,<br>13,19;67:1,3,13,19 | <b>450 (2)</b><br>24:8,9                                               | <b>7A (1)</b><br>119:20                                               |
| <b>2016 (1)</b><br>4:5                                                                                 | <b>345 (3)</b><br>24:21;26:4;113:15                                                                     | <b>47 (1)</b><br>68:4                                                  | <b>7E (1)</b><br>121:3                                                |
| <b>2017 (3)</b><br>4:7;68:5;105:15                                                                     | <b>345.5kV (1)</b><br>25:23                                                                             | <b>5</b>                                                               | <b>7F (1)</b><br>120:20                                               |
| <b>2018 (5)</b><br>4:9;33:16;37:13;<br>39:17;105:16                                                    | <b>345kV (3)</b><br>61:14;63:22;<br>110:19                                                              | <b>5 (8)</b><br>7:5,10;11:10;<br>18:13;29:2;56:20;<br>107:9,19         | <b>8</b>                                                              |
| <b>21 (1)</b><br>123:21                                                                                | <b>34-foot (1)</b><br>61:17                                                                             | <b>5,000 (1)</b><br>33:16                                              | <b>8 (6)</b><br>18:14;81:10;84:4;<br>123:20,22;124:3                  |
| <b>22 (4)</b><br>26:14;61:10;62:8;<br>63:20                                                            | <b>34kV (2)</b><br>23:19;111:24                                                                         | <b>5.8 (1)</b><br>107:13                                               | <b>80 (2)</b><br>60:20,24                                             |
| <b>220 (1)</b><br>49:2                                                                                 | <b>34-point (1)</b><br>24:16                                                                            | <b>50 (5)</b><br>46:20;73:23;81:13;<br>103:1,2                         | <b>82 (1)</b><br>4:5                                                  |
| <b>23 (8)</b><br>6:19;43:9,23;79:7,<br>11,13;109:7;130:15                                              | <b>35.5kV (1)</b><br>55:4                                                                               | <b>50/50 (8)</b><br>43:21;44:18,20,23;<br>50:8;92:11;101:24;<br>125:21 | <b>85 (1)</b><br>118:23                                               |
| <b>230 (2)</b><br>24:8;110:20                                                                          | <b>4</b>                                                                                                | <b>50-foot (1)</b><br>14:22                                            | <b>85- (1)</b><br>59:12                                               |
| <b>2400 (1)</b><br>61:23                                                                               | <b>4 (10)</b><br>10:18;45:8;52:2,3;<br>59:22;61:10;62:7;<br>64:6;99:10;108:11                           | <b>52 (1)</b><br>128:6                                                 | <b>89 (1)</b><br>116:7                                                |
| <b>25 (7)</b><br>26:15,20;43:6,9;<br>53:17;58:23;68:4                                                  | <b>4,000 (1)</b><br>44:10                                                                               | <b>54 (1)</b><br>65:17                                                 | <b>8-acre (1)</b><br>117:16                                           |
| <b>250 (1)</b><br>129:22                                                                               | <b>4.1.3 (4)</b><br>62:20;63:13,18,21                                                                   | <b>55 (1)</b><br>60:18                                                 | <b>9</b>                                                              |
| <b>27 (1)</b><br>4:9                                                                                   | <b>4.1.4 (1)</b><br>63:23                                                                               | <b>58 (4)</b><br>25:11;65:17;107:1;<br>108:6                           | <b>9 (7)</b><br>7:20;19:13;59:22;<br>106:2;123:20;124:1,<br>8         |
| <b>271 (2)</b><br>48:18;100:5                                                                          | <b>4.1.5 (3)</b><br>63:14,24;64:1                                                                       | <b>6</b>                                                               | <b>90 (1)</b><br>66:14                                                |
| <b>28 (4)</b><br>57:19;61:11;62:9;<br>63:6                                                             | <b>4.86 (1)</b><br>71:5                                                                                 | <b>6 (9)</b><br>7:5,11;67:24;<br>106:4,15;107:12,19;<br>108:12;123:14  | <b>90-foot-tall (1)</b><br>59:12                                      |
| <b>29 (1)</b><br>4:7                                                                                   | <b>4/UNH (1)</b><br>127:12                                                                              | <b>60 (3)</b><br>46:20;81:13;117:5                                     | <b>93 (1)</b><br>108:8                                                |
| <b>2-acre (1)</b><br>31:10                                                                             | <b>40 (14)</b><br>46:20;52:5,7,11,<br>13;60:5;62:15;66:14;<br>117:4,6;129:17,19,                        | <b>60-foot (1)</b><br>14:23                                            | <b>95 (2)</b><br>60:20,24                                             |
|                                                                                                        |                                                                                                         | <b>616 (1)</b><br>3:24                                                 |                                                                       |
|                                                                                                        |                                                                                                         | <b>63 (1)</b><br>123:14                                                |                                                                       |