

BEFORE THE OHIO POWER SITING BOARD

- - -

In the Matter of the :  
Application of Harvey :  
Solar I, LLC, for a :  
Certificate of :  
Environmental : Case No. 21-0164-EL-BGN  
Compatibility and Public :  
Need to Construct a :  
Solar-Powered Electric :  
Generation Facility in :  
Licking County, Ohio. :

- - -

PROCEEDINGS

before Mr. Jay S. Agranoff and Mr. David Hicks,  
Administrative Law Judges, at the Public Utilities  
Commission of Ohio, via Webex, called at 9:00 a.m. on  
Thursday, April 7, 2022.

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VOLUME II

- - -

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On behalf of the Applicant.

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On behalf of the Save Hartford Township  
and Individual Intervenors.

Kegler, Brown, Hill & Ritter  
By Mr. Robert Dove  
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On behalf of Carol and James Clever.

Ohio Farm Bureau Federation  
By Ms. Amy M. Milam  
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On behalf of the Ohio Farm Bureau  
Federation.

Licking County Prosecutor's Office  
By Ms. Carolyn J. Carnes  
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On behalf of the Intervenors Licking  
County Engineer; Licking County Soil &  
Water Conservation District; Board of  
Trustees of Hartford Township, Licking  
County, Ohio; and Board of Trustees of  
Bennington Township, Licking County,  
Ohio.

1 APPEARANCES: (Continued)

2 Village of Hartford Solicitor's Office  
 3 By Mr. Michael R. Moran  
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 5 Gahanna, Ohio 43230

6 On behalf of the Intervenor Village of  
 7 Hartford.

8 Dave Yost, Ohio Attorney General  
 9 By Mr. Thomas Lindgren  
 10 and Mr. Thomas Shepherd,  
 11 Assistant Attorneys General  
 12 Public Utilities Section  
 13 30 East Broad Street, 26th Floor  
 14 Columbus, Ohio 43215

15 On behalf of the Staff of the OPSB.

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1 Thursday Morning Session,  
2 April 7, 2022.

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4 ALJ HICKS: We can go ahead and go back  
5 on the record.

6 We are reconvening this morning in Case  
7 No. 21-0164-EL-BGN, Harvey Solar I, LLC. I am still  
8 David Hicks and with me is still Jay Agranoff, the  
9 Administrative Law Judges assigned to this case.

10 Before we get started, I just wanted --  
11 let's run down -- we don't need the full appearance.  
12 Just give us name, who is on for the client so we  
13 know who is on, and then we will start with the next  
14 witness.

15 So on behalf of the Applicant.

16 MR. SECREST: Good morning, your Honor.  
17 Jon Secrest, David Lockshaw, and Chris Pirik from the  
18 law firm Dickinson Wright on behalf of the Applicant.

19 ALJ HICKS: Okay. On behalf of Save --  
20 Save Hartford and the associated Intervenors.

21 MR. VAN KLEY: This is Jack Van Kley of  
22 Van Kley & Walker.

23 ALJ HICKS: On behalf of Hartford  
24 Township.

25 MS. CARNES: Carolyn Carnes on behalf of

1 Hartford Township, Bennington Township, the Licking  
2 County Engineer, and Licking County Soil & Water  
3 Conservation District.

4 ALJ HICKS: Thank you.

5 On behalf of the Village of Hartford.  
6 I'm not seeing Mr. Moran on. I will just note for  
7 the record he had previously indicated he may be in  
8 and out of the hearing as we move through it.

9 On behalf of the Clevers.

10 MR. DOVE: Good morning, your Honor.  
11 Robert Dove, law firm Kegler, Brown, Hill & Ritter,  
12 on behalf of James and Carol Clever.

13 ALJ HICKS: On behalf of Ohio Farm Bureau  
14 Federation.

15 MS. MILAM: Good morning, your Honors.  
16 Amy Milam on behalf of Ohio Farm Bureau Federation.

17 ALJ HICKS: And on behalf of Board Staff.

18 MR. LINDGREN: Good morning, your Honor.  
19 On behalf of the Board Staff, the Ohio Attorney  
20 General's Office by Thomas Lindgren and Thomas  
21 Shepherd.

22 ALJ HICKS: Thank you.

23 I believe that is everyone, so I'm going  
24 to hand things off to Judge Agranoff, and he will  
25 take -- take it from here.

1 ALJ AGRANOFF: Thank you. Good morning,  
2 everybody. Based on the schedule that we had  
3 previously discussed, I believe that our first  
4 witness this morning is Mr. Rofkar. Is Mr. Rofkar  
5 currently promoted?

6 MR. SCHMIDT: Yes. Mr. Rofkar, you are  
7 promoted. If you can enable your audio and video.

8 MR. ROFKAR: Good morning.

9 ALJ AGRANOFF: I can -- there you are.  
10 Now I can see you and hear you.

11 MR. ROFKAR: Got me? Okay.

12 ALJ AGRANOFF: Very good. So at this  
13 point in time, Mr. Secrest or Mr. Lockshaw, I don't  
14 know who is going to be counsel for the Applicant  
15 with respect to Mr. Rofkar.

16 MR. SECREST: It will be me, your Honor,  
17 Jon Secrest.

18 ALJ AGRANOFF: If you could please call  
19 Mr. Rofkar.

20 MR. SECREST: Thank you. Your Honor, may  
21 the Applicant call Jordan Rofkar.

22 ALJ AGRANOFF: Good morning, sir. If you  
23 could please raise your right hand.

24 (Witness sworn.)

25 ALJ AGRANOFF: Thank you.



1 Please proceed, Mr. Secrest.

2 MR. SECREST: Thank you, your Honor.

3 - - -

4 JORDAN R. ROFKAR, PhD

5 being first duly sworn, as prescribed by law, was  
6 examined and testified as follows:

7 DIRECT EXAMINATION

8 By Mr. Secrest:

9 Q. Good morning, Mr. Rofkar. How are you?

10 A. I'm great. How are you?

11 Q. Good, thank you. Would you please state  
12 your full name and by whom you are employed.

13 A. Jordan Rofkar. I'm employed by Verdantas  
14 formerly Hull & Associates.

15 Q. Thank you. Do you have copies of your  
16 direct testimony and your supplemental direct  
17 testimony in front of you?

18 A. I do, yeah.

19 MR. SECREST: Your Honor, may we mark  
20 the -- Mr. Rofkar's direct testimony as Applicant  
21 Exhibit 22?

22 ALJ AGRANOFF: It shall be so marked.

23 (EXHIBIT MARKED FOR IDENTIFICATION.)

24 MR. SECREST: Thank you. And may we mark  
25 Mr. Rofkar's supplemental testimony as Applicant

1 Exhibit 22A?

2 ALJ AGRANOFF: It will be so marked as  
3 well.

4 (EXHIBIT MARKED FOR IDENTIFICATION.)

5 MR. SECREST: Thank you.

6 Q. (By Mr. Secrest) Mr. Rofkar, are  
7 Applicant Exhibit 22 and Applicant Exhibit 22A true  
8 and accurate copies of your direct testimony and  
9 supplemental direct testimony filed in these  
10 proceedings?

11 A. Yes, they are.

12 Q. Do you have any changes or revisions to  
13 your testimony?

14 A. No.

15 Q. If asked the same questions today that's  
16 contained within your direct testimony and  
17 supplemental direct testimony, would your responses  
18 be the same?

19 A. Yes, they would.

20 MR. SECREST: Thank you. Your Honor,  
21 Mr. Rofkar is available for cross-examination.

22 ALJ AGRANOFF: Thank you.

23 Mr. Van Kley.

24 MR. VAN KLEY: Thank you, your Honor.

25 - - -

CROSS-EXAMINATION

By Mr. Van Kley:

Q. And good morning, Mr. Rofkar.

A. Good morning.

Q. Would you go to Exhibit C of the application, please.

A. Yes. I have a digital copy of that in front of me, so I will scroll to wherever you need me to get to.

Q. Okay. Appreciate that. This is the preliminary vegetation plan, correct?

A. Correct.

Q. Let's go to page 8 of that plan.

A. Okay.

Q. And I would like to direct your attention to the section labeled "4.2 Invasive Weed Control, Monitoring, and Management."

A. Okay.

Q. I have some questions for you about weed control. First of all, can you tell me what role, if any, is desirable for mowing as a means of weed control in a project of this nature?

A. We -- mowing, I'm sorry, would typically be used to keep weeds low, also to -- in an attempt to keep them from going to seed so cutting them down

1 before they can drop seeds to propagate the next  
2 year.

3 Q. In a facility such as the Harvey Solar  
4 facility where the project plans to plant pollinator  
5 plants and native grasses in the arrays, native  
6 grasses -- I am going to start that over.

7 So in a project like this where Harvey  
8 Solar is planning to plant native grasses in the  
9 arrays of solar panels and pollinators around the  
10 outside, how do you use mowing as a control for weeds  
11 without destroying the other benefits of the plants  
12 that are purposely planted there?

13 A. So that would need to be addressed in the  
14 final vegetation management plan when the plants are  
15 chosen, the specific species of plants and grasses  
16 are chosen. Typically one of the reasons that we  
17 like to use native plants for this type of thing is  
18 that they develop a robust root system, and they're  
19 adapted to whatever climate they are chosen to grow  
20 in. And so the idea is to mow the annual or weedy  
21 species, and the more robust native plants over time  
22 tend to take over and can thrive and propagate under  
23 mowing conditions if it's timed properly.

24 Q. So after the native plants are  
25 established, when, if ever, would mowing be employed

1 in a project of this nature?

2 A. That would, I think, partly be a  
3 maintenance issue for the -- the facility but the  
4 plants can tolerate that. And again, if down the  
5 line weedy species do become established, then mowing  
6 could be reemployed at that time to -- as one control  
7 measure.

8 Q. And is there a particular time or season  
9 where mowing can be employed for that purpose without  
10 destroying the benefits of the native vegetation?

11 A. That again would depend on the species  
12 that are present. We typically see that done early  
13 in the spring or in the fall. Part of that, again,  
14 would be in coordination with ODNR or others to work  
15 out the timing of that but also to work around any  
16 other constraints for the project wildlife, things  
17 like that.

18 Q. So I take it from your comments that the  
19 use of mowing as a tool for invasive or noxious weed  
20 control has not yet been provided in the application;  
21 is that correct?

22 A. That is my understanding.

23 MR. VAN KLEY: All right. I have no  
24 further questions, your Honor.

25 ALJ AGRANOFF: Okay. Thank you.

1 Any questions from Hartford Township?

2 MS. CARNES: I have no questions, your  
3 Honor. Thank you.

4 ALJ AGRANOFF: Thank you. Any clarifying  
5 questions from any of the signatory parties to the  
6 stip?

7 MR. DOVE: No, your Honor.

8 ALJ AGRANOFF: Thank you.

9 Any redirect?

10 MR. SECREST: No, thank you, your Honor.

11 ALJ AGRANOFF: Judge Hicks, do you have  
12 any questions?

13 ALJ HICKS: I do not. Thanks.

14 - - -

15 EXAMINATION

16 By ALJ Agranoff:

17 Q. I do have just a couple of questions,  
18 Mr. Rofkar. If you could please take a look at page  
19 3 of your testimony. Let me know when you are there.

20 A. I'm there.

21 Q. And specifically the question and answer  
22 No. 8.

23 A. Okay.

24 Q. And in line 23 and in line 26 there is  
25 reference to "temporary vegetation" and "long-term

1 vegetation." Do you see those?

2 A. Yes.

3 Q. What's the distinction or how does one  
4 differentiate between "temporary vegetation" and  
5 "long-term vegetation"?

6 A. Temporary vegetation in that case we  
7 typically refer to when we install seed mixes for  
8 something like this, an annual crop-type seed will be  
9 added that will grow for one year, maybe two years,  
10 and then the native plants that are desired for a  
11 more long-term establishment will be mixed in with  
12 that.

13 The temporary vegetation is there to sort  
14 of stabilize the soil in that first growing season  
15 before the native plants have their root system sort  
16 of established, so the temporary vegetation, the plan  
17 is for that to establish quickly and then be sort of  
18 overtaken by the native vegetation long term.

19 Q. Okay. So based on what I heard you  
20 indicate long term would be vegetation that you would  
21 desire to continue to be on the two-year time frame?

22 A. Right, correct.

23 Q. And then if you could take a look at your  
24 response to question 8, please, on page 4.

25 A. Okay. Uh-huh.

1           Q.    Is there a way to determine that the  
2           minimum -- I know that you've indicated in response  
3           to question 8 that it's possible to determine the  
4           nature of the probable environmental impact of the  
5           facility related to vegetation management. But is --  
6           are you actually making a determination that the  
7           project represents the minimum adverse impact?

8           A.    I think that we would make that  
9           determination when we have the final vegetation  
10          management plan. At this point I believe installing  
11          native plants and pollinators represents a benefit to  
12          the facility and to the site. And so the probable  
13          environmental impact would be minimal but that would  
14          be determined based on the species that are  
15          established.

16          Q.    And with respect to the planting of the  
17          vegetation, is there an expectation or a commitment  
18          to continue to maintain a certain level of survival  
19          of that vegetation?

20          A.    My understanding is that the Stipulations  
21          indicate that 70 percent of the site will be covered  
22          with beneficial vegetation, and in the preliminary  
23          plan we outlined annual surveys of the vegetation  
24          that's there to help maintain that level.

25          Q.    But to the extent that you are going to



1 be adding vegetation, is there a commitment as to a  
2 particular -- particular level of survival of that  
3 vegetation and replacement of the vegetation to the  
4 extent it does not continue to survive beyond a  
5 certain time frame?

6 A. I am not aware of that commitment.

7 ALJ AGRANOFF: Okay. Based on my limited  
8 questions, does counsel have any follow-up?

9 MR. VAN KLEY: None from me, your Honor.

10 ALJ AGRANOFF: Anything from Mr. Secrest?

11 MR. SECREST: No, thank you, your Honor.

12 ALJ AGRANOFF: Okay. If not, then,  
13 Mr. Rofkar, you are free to go.

14 THE WITNESS: Thank you.

15 ALJ AGRANOFF: And at this point in time,  
16 Mr. Secrest, would you care to deal with the  
17 exhibits?

18 MR. SECREST: Yes, please. May the  
19 Applicant move for admission of Applicant Exhibit 22  
20 and 22A?

21 ALJ AGRANOFF: Any objections?

22 There being none, Applicant Exhibits 22  
23 and 22A shall be admitted as part of the record at  
24 this time.

25 (EXHIBITS ADMITTED INTO EVIDENCE.)

1 ALJ AGRANOFF: And at this point in time  
2 I believe we have Witness Spencer next?

3 MR. SECREST: That's correct, your Honor.  
4 May the Applicant call Amanda Spencer?

5 ALJ AGRANOFF: Okay. If you could just  
6 give me a moment so that I can get situated.

7 MR. SECREST: Certainly.

8 ALJ AGRANOFF: Thank you.

9 MR. SCHMIDT: Ms. Spencer, you've been  
10 promoted. If you can enable your audio and video.

11 ALJ AGRANOFF: Good morning, Ms. Spencer.  
12 How are you?

13 MS. SPENCER: Good morning. I'm good,  
14 thank you.

15 ALJ AGRANOFF: Good. If you could please  
16 raise your right hand.

17 (Witness sworn.)

18 ALJ AGRANOFF: Thank you.

19 Please proceed, Mr. Secrest.

20 MR. SECREST: Thank you, your Honor.

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AMANDA SPENCER

being first duly sworn, as prescribed by law, was  
examined and testified as follows:

DIRECT EXAMINATION

By Mr. Secrest:

Q. Good morning, Ms. Spencer. Would you  
please state your full name and by whom you are  
employed.

A. My name is Amanda Spencer, and I am  
employed by Verdantas formerly Hull & Associates.

Q. Thank you. Do you have in front of you  
your direct testimony and your supplemental direct  
testimony?

A. Yes, I do.

Q. Thank you.

MR. SECREST: Your Honor, may we move to  
mark Ms. Spencer's direct testimony as Applicant  
Exhibit 23?

ALJ AGRANOFF: It shall be so marked.  
(EXHIBIT MARKED FOR IDENTIFICATION.)

MR. SECREST: And may we move to mark  
Ms. Spencer's supplemental testimony as Applicant  
Exhibit 23A?

ALJ AGRANOFF: It shall also be so  
marked.

1 (EXHIBIT MARKED FOR IDENTIFICATION.)

2 MR. SECREST: Thank you.

3 Q. (By Mr. Secrest) Ms. Spencer, Applicant  
4 Exhibit 23 and 23A, are those true and accurate  
5 copies of your direct testimony and supplemental  
6 direct testimony?

7 A. Yes, they are.

8 Q. Do you have anything -- any revisions to  
9 that testimony?

10 A. I do not.

11 Q. If asked the same questions contained  
12 within both the direct testimony and supplemental  
13 direct testimony today, would your answers be the  
14 same?

15 A. Yes, they would.

16 MR. SECREST: Okay. Thank you.

17 Your Honor, I tender Ms. Spencer for  
18 cross-examination.

19 ALJ AGRANOFF: Thank you.

20 Mr. Van Kley.

21 MR. VAN KLEY: Thank you, your Honor.

22 - - -

23 CROSS-EXAMINATION

24 By Mr. Van Kley:

25 Q. And good morning, Ms. Spencer.

1           A.     Good morning.

2           Q.     Let's go to your written direct testimony  
3 marked as Applicant Exhibit 23.

4           A.     Okay.

5           Q.     And go to page 2 of that testimony. And  
6 I would like to direct your attention to question and  
7 answer 2 where you discuss your experience and ask  
8 you a few additional questions about your experience.  
9 How many solar projects other than the Harvey Solar  
10 project have you worked on?

11          A.     I have not been involved in the solar  
12 projects.

13          Q.     Let's go to page 3 of your testimony.  
14 And I would like to direct you to the last -- last  
15 paragraph on page 3 of your testimony.

16          A.     Okay.

17          Q.     And if you would go to line 28 and look  
18 at the sentence starting there where it states that  
19 "Only limited earthwork and grading will be  
20 necessary, primarily for the access roads and  
21 electric substation." Do you see that sentence?

22          A.     I do, sir.

23          Q.     Do you know how many miles of access  
24 roads are planned for the solar facility here?

25          A.     I do not. I believe that will be

1 determined with the final design.

2 Q. Let's go to page 5 of your written direct  
3 testimony as Applicant Exhibit 23. And directing  
4 your attention to that large paragraph at the bottom  
5 of that page, I have some follow-up questions  
6 concerning the topic of that discussion there.

7 ALJ AGRANOFF: Mr. Van Kley, what page  
8 are you on?

9 MR. VAN KLEY: Page 5.

10 ALJ AGRANOFF: Okay. Thank you.

11 Q. (By Mr. Van Kley) Have you studied any  
12 completed solar projects to determine whether  
13 post-construction runoff exceeded the  
14 pre-construction runoff from any of those facilities?

15 A. I have not studied any post-constructed  
16 solar projects.

17 Q. Let's go to page 6 of your testimony.  
18 Directing your attention to line 7. You mentioned  
19 there minimal grading and decompaction. Do you see  
20 that?

21 A. I do.

22 Q. Do you know what equipment will be used  
23 to construct any earthmoving on this project?

24 A. My understanding is small equipment such  
25 as Bobcats will be used, something relatively similar

1 to -- in size to tractors that are used on the field  
2 right now for agricultural purposes.

3 Q. You are not aware of anything in the  
4 application that states that bulldozers will be used?

5 A. Not off the top of my head, no, sir.

6 Q. Are you aware of anything in the  
7 application stating that dump trucks will be used  
8 during construction?

9 A. Not specifically, no, sir.

10 Q. On line 7 on page 6 of your written  
11 testimony, you've used the term or terms "minimal  
12 grading and decompaction." Is minimal intended to  
13 apply to the -- to the word decompaction in that line  
14 as well?

15 A. No. I don't believe so. The  
16 decompaction will occur as necessary. The minimal  
17 grading will be an effort to not change the existing  
18 topography of the site as much as possible.

19 Q. Do you know what percentage of the area  
20 within the solar arrays will require earthmoving for  
21 construction?

22 A. At this moment I cannot tell you exactly  
23 how much area would be required because there is not  
24 a final design completed.

25 Q. Directing your attention back to line 7

1 and going to line 8 on page 6 of your testimony.

2 A. Uh-huh.

3 Q. There is some language there stating as  
4 follows: "Establishing non-erosive flow over the  
5 disconnected length." Do you see that language?

6 A. I do, sir.

7 Q. What is the disconnected length as used  
8 in this sentence?

9 A. The disconnected length ties back to the  
10 EPA solar array guidelines, and it talks about the  
11 separation between the solar panels.

12 Q. Okay. So what's the meaning then of the  
13 language "establishing non-evasive flow over the  
14 disconnected length"?

15 A. So erosive flow would be something that's  
16 concentrated to a small area which would create what  
17 a lot of people call ditches or swales across sites.  
18 So the intent of that sentence is to explain that the  
19 site will be developed so that swales, ditches that  
20 can -- where concentrated runoff can occur will not  
21 be -- will not be present on the site in between the  
22 solar arrays -- or the solar panels.

23 Q. Does that mean that the swales that exist  
24 now will be altered after construction of the  
25 project?



1           A.    No, no. My understanding from looking at  
2 the site swales, ditches, streams that are on the  
3 site will remain. Generally speaking what we are  
4 talking about there is that we are not going to add  
5 to and create new.

6           Q.    Would you go to Exhibit K of the  
7 application that is titled "Stormwater Assessment."

8           A.    Yes. Just one moment, please.

9           Q.    All right. Do you have that in front of  
10 you?

11          A.    I do, sir.

12          Q.    Have you seen this document before today?

13          A.    I have, sir.

14          Q.    Did you have any role in its preparation?

15          A.    I did not prepare the report, but I did  
16 review it.

17          Q.    Do you know who prepared this report?

18          A.    Yes. A former employee of Hull &  
19 Associates prepared this.

20          Q.    Did you supervise that employee's work on  
21 this document at the time it was being prepared?

22          A.    I did not supervise him, no.

23          Q.    And you were not involved in any way in  
24 the preparation of this document?

25          A.    Not directly, no.

1           Q.    Let's go to page 2 of Exhibit K to the  
2 application.

3           A.    Okay.

4           Q.    And we will start with the section that  
5 is labeled "2.1 Project Area Description." And I  
6 would like to direct your attention to the sentence  
7 that starts at the end of the third line of that  
8 paragraph which says "The site is relatively flat  
9 with small streams and ditches." Do you see that?

10          A.    I do, sir.

11          Q.    And then there's some information in the  
12 last paragraph on that page about some elevation  
13 slopes, right?

14          A.    Are you referring to under Section 2.2  
15 Soils?

16          Q.    Yes.

17          A.    Yes, I do see that, uh-huh.

18          Q.    All right. And the -- there is some  
19 sloped percentages there for three difference kinds  
20 of soils found in the project area, right?

21          A.    Correct.

22          Q.    And if you look at the paragraph above  
23 this one which would be the first paragraph under the  
24 heading "2.2 Soils," you will see that those three  
25 types of soils are also described in that paragraph,

1 correct?

2 A. I do see that.

3 Q. And according to that paragraph, those  
4 three types of soils are present on about 75 percent  
5 of the project area, right?

6 A. Yes, I believe so.

7 Q. Okay. Do you know what the slope is for  
8 the other 25 percent of the project area?

9 A. No, not off the top of my head. I do not  
10 know what that is.

11 Q. Are you aware of any information in the  
12 application that reveals the percentage of slope for  
13 that 25 percent of the project area?

14 A. I would have to look at the figures to  
15 see if there was any additional information about  
16 that, but I am not aware off the top of my head.

17 Q. Is there any percentage of slope that  
18 would give you any cause for concern for building a  
19 solar facility?

20 A. I mean, I think excessive slopes in the  
21 neighborhood of 10 percent or more are ones that we  
22 would focus on for potential erosion issues or issues  
23 when we were grading in access roads just for  
24 accessibility, ease of accessibility.

25 Q. Is it your understanding that if the

1 slope is 10 percent or more, that -- that grading  
2 would be required to install solar equipment?

3 A. Possibly in order for the roads to be  
4 constructed, yes, we would look at that. We would  
5 also take into consideration the types of vehicles  
6 that would be used to access the site to determine  
7 whether that was a necessity.

8 Q. Would it also be necessary to do grading  
9 on slopes of 10 percent or more to install solar  
10 panel equipment?

11 A. I don't believe that it would be  
12 necessary to do that. I believe that that can be  
13 installed on those slopes but that is not my area of  
14 expertise.

15 Q. Let's go to page 8 of Exhibit K of the  
16 application.

17 A. Okay.

18 Q. And I would like to direct your attention  
19 to Section 5.2.5 Pre vs Post-Runoff Rate Reduction.

20 A. Okay.

21 Q. Would you explain what information is  
22 contained in this section.

23 A. Yes. So what was done here is the area  
24 was broken down into the individual watersheds that  
25 are found within the project limits. With a project

1 of this size, it's typical to find multiple  
 2 watersheds. And if the areas were ran in our  
 3 stormwater program to determine what the rate of  
 4 runoff is in the existing and what the rate of runoff  
 5 would be in the post-conditions to show what that  
 6 reduction would be.

7 Q. Now, how did you go about calculating the  
 8 amount of the runoff?

9 A. For stormwater design, there are national  
 10 design manuals that are used to determine if  
 11 anticipated runoff or anticipated rainfall even for  
 12 different storm event years, we typically analyze I  
 13 believe it's seven different storm event years. It's  
 14 the 1-, 2-, 5-, 10-, 25-, 50-, and 100-year storm  
 15 events. And what's included in this is the 1 year,  
 16 the 25, and the 100 year. That information is  
 17 gathered from those national manuals and is used to  
 18 create a model of the existing site which takes into  
 19 account the existing site conditions, topography, the  
 20 soil type and then also we analyze -- we analyze that  
 21 with each storm event year to determine what that  
 22 runoff rate is.

23 Q. And what are the site conditions that are  
 24 incorporated into that model?

25 A. So we would look at the existing site

1 area, for example, Watershed W1 the acreage is  
 2 684 acres. So what we would do is we would break  
 3 that down based on what the land use is essentially.  
 4 We would find the acreage of agricultural field. We  
 5 would find the acreage of wooded areas. We would  
 6 find the acreage of residential development. Then we  
 7 would further break that down based on the soil  
 8 types. There are four different soil types. They  
 9 are A, B, C, and D. A and B are typically not found  
 10 in this region. They tend to be very sandy, very  
 11 permeable soil. And then C is the type of soil that  
 12 you would typically find in this area, more clay.  
 13 And D is also a fatty clay soil that you can find in  
 14 this area. We would assign those, the soil type, the  
 15 acreage, the coverage type, and from that we have a  
 16 chart where we would determine what the current  
 17 runoff number is. That number factors in with the  
 18 time and concentration to determine what the runoff  
 19 rate is.

20 Q. Are elevations for the area considered in  
 21 that model?

22 A. The elevation or the change in topography  
 23 comes into play when you determine what the time and  
 24 concentration is for the site and area.

25 Q. And was that done in this case to produce

1 the table in Section 5.2.5?

2 A. Yes, it has to be. Within the software  
3 modeling systems that we use, you have to determine a  
4 time of concentration as one of the key components to  
5 determine what the runoff rate is.

6 Q. And where was the -- what was the source  
7 of the elevation data used for the model?

8 A. I believe the information would have been  
9 based off of LiDAR information we could have  
10 downloaded from the website.

11 ALJ AGRANOFF: And just so the record is  
12 clear, you mentioned LiDAR. Is that an acronym?

13 THE WITNESS: Yes, sir. It's -- I cannot  
14 off the top of my head remember exactly what it  
15 stands for, but it is -- it is a drone-type  
16 topography of the site area. It's available from  
17 multiple different sources, and we can download that  
18 information and pull that into AutoCAD in order to  
19 generate contours to determine what the change of  
20 elevation is across the site.

21 Q. (By Mr. Van Kley) And what elevations  
22 were used in performing this model for the project  
23 area?

24 A. Elevation I don't --

25 Q. I'm sorry, I misspoke there. I have to

1 reask that question.

2 A. That's okay.

3 Q. No wonder you are confused. What slope  
4 percentages were used for this model?

5 A. So the way the weight concentration is  
6 determined it's made up of multiple components. You  
7 find the approximate longest path of a drop of water  
8 to leave your site. And then it's comprised of sheet  
9 flow, concentrated flow, and channelized flow if they  
10 all apply. What we would do is -- the standard  
11 engineering practice is to use somewhere between 100  
12 to 200 feet for sheet flow. Typically sheet flow can  
13 occur a lot longer than that. That's a conservative  
14 means and method of determining what time of  
15 concentration is. And we would along the path that  
16 we have determined to be the approximate longest path  
17 would look and check the topography to see what that  
18 existing slope is and that plays into that  
19 calculation.

20 We would then do the same thing for  
21 shallow -- shallow concentrated and then any  
22 channelized flow we would find along that path. And  
23 it can be made up of as many changes as it needs to  
24 be made up of. So if you find that your topography  
25 slope changes five times, then you put that in five



1 different times with the different lengths to make up  
2 what the exact path is.

3 Q. So if I am understanding your answer  
4 correctly, this model does utilize the percentage of  
5 slope for the project area?

6 A. Absolutely, it does, sir.

7 Q. Okay. And do you know what percentage  
8 of -- percentages of slope were used in the model for  
9 this project?

10 A. I do not off the top of my head. It  
11 would -- it would be based on what was determined  
12 along the longest path. Typically your flatter  
13 slopes are going to be your longer time of  
14 concentrations which are going to give you a slower  
15 runoff rate. So it's -- it's a conservative method  
16 determining the time of concentration, so likely it  
17 would be flatter slopes would be used.

18 Q. Do you know whether any slopes of  
19 10 percent or higher were utilized in this model?

20 A. Off the top of my head, I do not. They  
21 could be, but I do not know.

22 Q. Is there anything in Exhibit K of the  
23 application or anywhere else in the application to  
24 your knowledge that provides an estimate of the  
25 quantity of the stormwater discharges that will occur

1 from site clearing and construction activities?

2 A. The quantity or the rate?

3 Q. The quantity.

4 A. There should be information within the  
5 appendix that contains the HydroCAD output that  
6 provides some information about the quantity of  
7 stormwater along with the rate.

8 Q. And which appendix are you referring to?

9 A. I believe it's Appendix D.

10 Q. Is that an appendix to Exhibit K of the  
11 application?

12 A. It is, sir.

13 Q. All right. Why don't you go to that  
14 appendix and point me to the location where I can  
15 find that data. Just give us a moment so we can all  
16 find it while you are looking for it. So it looks  
17 like it's all the way at the end of Exhibit K; is  
18 that correct?

19 A. It is. So what I am looking at are the  
20 graphs that are within Exhibit K. And if you look at  
21 the graph at top -- at the top that says  
22 "Subcatchment E1: DA E1."

23 Q. Okay. And I think I have that. It looks  
24 like it's on the PDF page 136 online. Let's see if  
25 we can identify it by using the paper copy as well so

1 it's clear where we are at. Does this have the page  
2 11 in the upper right-hand corner of the page?

3 A. No. It says page 6.

4 Q. Okay. Then I am in the wrong place.

5 A. Just a couple too far.

6 Q. Okay.

7 ALJ AGRANOFF: Does it say on the type  
8 "Type II 24-hour 1-year rainfall" --

9 THE WITNESS: It does, sir.

10 ALJ AGRANOFF: -- "2.19"?

11 THE WITNESS: Uh-huh.

12 ALJ AGRANOFF: Okay.

13 Q. (By Mr. Van Kley) All right. So that  
14 would be PDF page 131, I believe, of the online  
15 version. And the preceding page has ORR027 Post in  
16 the upper left-hand corner; is that correct?

17 A. No. My -- I think the paper copy might  
18 be in a different order.

19 Q. Oh, okay. All right. Well, I think we  
20 have the correct page despite describing it, and I  
21 believe you said that this page is for subcatchment  
22 E1: DA E1; is that correct?

23 A. That is correct.

24 Q. So can you explain to me whether this  
25 page contains any information about the quantity of

1 runoff for the project area?

2 A. Yes. So this is a hydrograph that's an  
3 output from the model that we create. This is  
4 modeling this subcatchment area which is just a site  
5 area that's been defined. And it's modeling the  
6 one-year rainfall based on anticipated rain event of  
7 2.19 inches. And so if you look over on the  
8 right-hand side of the hydrograph, there is  
9 information listed and that provides you with what  
10 the runoff area is in acres, the runoff volume in  
11 acre feet, the runoff depth, the flow length, and the  
12 time of concentration, and the composite curve number  
13 that was used when determining that runoff rate.

14 So you will see that the time and  
15 concentration is 142.1 minutes, and the curve number  
16 is an 84. Then I don't know how many pages back but  
17 there is a post-condition of that same catchment area  
18 that is modeled with the post-construction site  
19 conditions.

20 And at the top of that one, it says -- it  
21 also says subcatchment E1: DA E1, but in the upper  
22 left corner where it says ORR027\_Pre, this other one  
23 says \_post so that's the post condition. And that  
24 shows that the runoff volume is 206-acre feet  
25 compared to the 234-acre feet that's in the

1 preexisting model.

2 Q. All right. And just for the record which  
3 page were you looking at for the post-construction  
4 data?

5 A. Let me --

6 Q. Page -- there is a page number in the  
7 upper right-hand corner for what you are looking at?

8 A. It's about 20 pages back. It's also  
9 listed as page 6, and it is located after the routing  
10 diagram for ORR027\_Post. So if you scroll through,  
11 you'll find a diagram that has some, I believe,  
12 hexagons for the subcategories. And then it's --  
13 it's the first graph after that page.

14 ALJ AGRANOFF: Which appendix is this in?

15 THE WITNESS: It's still within the same  
16 appendix, sir.

17 ALJ AGRANOFF: Okay.

18 MR. VAN KLEY: Yeah, I'm not finding it  
19 on the online version.

20 MR. SECREST: Sorry, your Honor. I am  
21 trying to sort something out to make sure. The paper  
22 copy that Ms. Spencer was referring to differs from  
23 the online copy, so I will let her confirm, but I  
24 believe what she was originally discussing was the  
25 preconstruction for E1: DA E1. And if we are on PDF

1 page 31, that's the post for the same subcatchment.

2 I think, Mr. Van Kley, that's why you are not finding  
3 it. You are looking at post, she was looking at pre.

4 ALJ AGRANOFF: Mr. Secrest, we would like  
5 to point out you are getting feedback. There is an  
6 echo.

7 MR. SECREST: Thank you. That was the  
8 witness's mic.

9 MR. VAN KLEY: Okay. So I think we were  
10 on the same page for the preconstruction data. That  
11 was the 132, I think, of the PDF pages. No, that's  
12 not right.

13 MR. SECREST: Those are post.

14 MR. VAN KLEY: Okay. Yeah, I see the  
15 word post.

16 MR. SECREST: It's okay. I will turn my  
17 screen so Ms. Spencer can look at the PDF version.  
18 That might make it easier.

19 MR. VAN KLEY: Okay.

20 ALJ AGRANOFF: But is this still in  
21 Appendix D?

22 MR. SECREST: Yes, that's correct, your  
23 Honor.

24 THE WITNESS: Yes. So this one -- go up  
25 one page. So page 131 of 166, this is the

1 post-condition that -- of the same catchment area  
2 that we already looked at the precondition.

3 Q. Okay.

4 A. So you'll see the runoff volume is  
5 206.325 AF which is acre feet. You'll notice the  
6 flow length which is 9,320 feet. If you reference  
7 back to the pre-hydrograph, the flow length is the  
8 same which indicates that the path that was  
9 determined was the same -- or the path that was used  
10 was the same but because in the precondition versus  
11 the post-condition, you are changing the makeup of  
12 the ground. You are going from an agricultural field  
13 which has a higher runoff rate versus a grass field  
14 which has a lower runoff rate. That's why your time  
15 of concentration now on this graph is 202.7 minutes  
16 versus the 142.1 minutes.

17 So by changing the makeup of the ground  
18 that the water is falling on, you're changing the  
19 time of concentration, and you're changing the curve  
20 numbers slightly which helps to pick up and slow down  
21 and reduce the amount of runoff.

22 Q. Is that the only different factor between  
23 the pre-construction model and the post-construction  
24 model?

25 A. Yes. The only difference that was

1 implemented into the post-model was the makeup of the  
2 ground which changes the curve number. You will  
3 notice that the CN value at the very bottom is an 82  
4 versus an 84.

5 The higher the CN number, the more water  
6 runoff there occurs and the faster the runoff occurs.  
7 For example, if you were modeling a parking lot, you  
8 would use a 98. And so the lower the curve number,  
9 the slower and less water will leave. So the only  
10 factors that were changed on this was -- were the  
11 ones that were directly related to the makeup of the  
12 ground coverage.

13 Q. Okay. And what was the origin of the  
14 information put in the model concerning the ground  
15 coverage?

16 A. For the precondition or the  
17 post-condition?

18 Q. For the post-condition.

19 A. Still the origin would have been --  
20 actually the origin would have been the same. There  
21 are predetermined curve rate numbers for all  
22 different scenarios of ground coverage. And so it  
23 would have been pulled directly from the tables that  
24 we have access to to -- for grass coverage for the  
25 area.



1           Q.    So are the -- is the information  
2   concerning the ground coverage taken from runoff  
3   rates for vegetative areas that have solar panels  
4   installed on them or that does not have solar panels  
5   installed on them?

6           A.    Are you asking me where the default curve  
7   numbers come from?

8           Q.    I'm not sure because I don't know what a  
9   default curve number is.

10          A.    Okay.

11          Q.    Let me see if I can maybe dumb it down  
12   for my own sake. I assume, and you can tell me if I  
13   am correct, that the numbers used for determining  
14   runoff from a vegetative terrain come from a database  
15   somewhere, right?

16          A.    Uh-huh, correct.

17          Q.    Okay. And my question is whether the  
18   information in that database provides runoff rates  
19   for vegetated areas of panels or vegetated areas  
20   without panels.

21          A.    I could not tell you where those numbers  
22   are derived from specifically. They are national  
23   curve numbers that are used in all engineering  
24   practices. They are not exclusive to solar panel  
25   projects, and I would not be able to tell you whether

1 solar panel projects were considered when developing  
2 those.

3 Q. All right. So you are not aware of any  
4 information that would indicate that the figures used  
5 for the runoff on vegetated soil take into account  
6 the presence of solar panels in those areas.

7 A. No, because those aren't on the ground.  
8 So once the water hits the ground it considers the  
9 ground coverage. Since those are suspended above,  
10 there would not be.

11 Q. Yeah. Well, if rainfall falls on a  
12 panel, the panel is going to redirect that flow at  
13 least somewhat to a more concentrated area of the  
14 ground than it would if the panel were not present,  
15 correct?

16 A. It's not my understanding that these are  
17 narrow or triangulated, so I would not anticipate it  
18 would concentrate the flow. My understanding of the  
19 way that the solar panels are is that it would act as  
20 a sheet flow which is -- is more kind of like your  
21 roof without the downspout.

22 Q. So just using for sake of illustration  
23 the roof scenario you just mentioned, if rainfall  
24 falls on a roof, then the rainfall runs to the side  
25 of the roof and off the roof on the ground, right?

1           A.    If it's collected in a gutter, uh-huh.

2           Q.    Okay.  And even if it's not collected in  
3 the gutter, it's going to run off the sides of the  
4 roof, right?

5           A.    Yes, it will at a much higher elevation.

6           Q.    Yeah.  And the -- the water that runs off  
7 the roof onto the ground around the structure that  
8 it's on is going to be more concentrated in that spot  
9 than it would be if it were falling directly to the  
10 ground without hitting the roof first, correct?

11          A.    Yes.  In heavier rainfalls it could, yes.

12          Q.    And so there are going to be -- so with  
13 regard to panels, there will be higher concentrations  
14 of precipitation that would fall around the outside  
15 of the panel than it would be if there were no panel  
16 present, correct?

17          A.    Yes, but it would not channel as.

18          Q.    There would be more -- there would be a  
19 greater concentration of water that would be hitting  
20 parts of the ground if the panels were present than  
21 there would be if there were no panels present to  
22 redirect some of the flow, right?

23          A.    Yes.  At that exact location, there  
24 would.

25          Q.    If the rainfall hitting the panel is more

1 concentrated in an area and the soil in that spot  
2 where the concentrated rainfall is falling is already  
3 saturated, then there's going to be more runoff from  
4 that location, correct?

5 MR. SECREST: Objection, speculation.

6 MR. VAN KLEY: I think it's a scientific  
7 principle. I think she can answer that.

8 ALJ AGRANOFF: I will allow the question.

9 A. So, yes, if the rain -- if the ground was  
10 saturated from rain and then it rained again, there  
11 would be more runoff. That is not -- we don't  
12 typically model rain events multiple days in a row in  
13 the stormwater, but we do model larger rain events  
14 which account for the ground being overly saturated.

15 So the hydrographs that you looked at  
16 were for a one-year rain event, but as I mentioned,  
17 Mr. Marquis, when he pulled this together, also  
18 modeled all the way up to the hundred year which is  
19 the largest rain event with a much higher rainfall  
20 intensity of over 5-1/2 inches so that would model  
21 the volume of water that would run off the site in  
22 the pre and the post-condition and that still shows a  
23 reduction in runoff.

24 Q. Is there anything in Exhibit K of the  
25 application or any other place in the application

1 that provides data on the water quality currently  
2 existing in the streams receiving flow from the  
3 project area?

4 A. Not that I'm aware of.

5 Q. You are not aware of anything in the  
6 application that provides any sampling data for those  
7 streams?

8 A. Not off the top of my head.

9 Q. You are aware that this project will  
10 require coverage under the Ohio EPA general permit  
11 for stormwater discharges?

12 A. I am.

13 Q. Do you know whether data is necessary to  
14 obtain coverage under that general permit?

15 MR. SECREST: Objection, vague, data.

16 Q. (By Mr. Van Kley) Well, let's -- let's  
17 break it down a little bit. Are you aware if any  
18 water quality data is necessary in order to obtain  
19 coverage under that permit?

20 A. Are you asking if there is any testing  
21 for water quality pre and post that's required?

22 Q. Yes.

23 A. No, that's -- in a -- in a site like  
24 this, that would not be something that I had ever  
25 seen.

1           Q.    Have you ever filled out an application  
2   for coverage under a general stormwater permit?

3                   ALJ AGRANOFF:   In Ohio or anywhere?

4                   MR. VAN KLEY:   Anywhere.   It's pretty  
5   much all the same nationwide.

6           A.    Yes, I have filled out multiple notice of  
7   intent applications.   Actually did one yesterday.

8           Q.    Okay.   And in what state was that a  
9   permit for?

10          A.    Ohio.

11          Q.    Okay.   And did you also prepare the  
12   stormwater pollution prevention plan for that  
13   application?

14          A.    For the one I did yesterday, I did not  
15   because the construction has not begun, but I have  
16   prepared multiple SWPPP plans for sitings that I have  
17   done design on.

18          Q.    Okay.   And what kind of information is  
19   required in order to prepare such a plan?

20          A.    The SWPPP plan is made up of a lot of  
21   information.   Generally speaking most of that is  
22   pretty standard from project to project and does not  
23   get changed.   For the individual projects you are  
24   required to put in information with a project  
25   description and all of the stormwater design

1 information as well as your BMPs that are being  
2 incorporated into the site. You are also required to  
3 pull together an erosion and sediment control plan  
4 with details and notes as applicable to the site.

5 ALJ AGRANOFF: You used an acronym DMP?

6 THE WITNESS: BMP, best management  
7 practice. Those are items that are implemented on  
8 the site to control and contain erosion and  
9 sedimentation during construction.

10 Q. (By Mr. Van Kley) Is any water quality  
11 data used in order to prepare such a plan?

12 A. You are required to put in the  
13 information for the calculations for water quality  
14 for the site into the SWPPP, or stormwater pollution  
15 production plan, that you prepare. So that  
16 information would already be completed with the  
17 design and approved by the governing authority and  
18 then that information would go into the plan.

19 Q. And what kind of water quality data is  
20 incorporated into the operations of that plan that  
21 you just mentioned?

22 A. You would put in the calculations that  
23 you used to determine what the water quality and  
24 volume for the site was based on the  
25 post-construction versus the pre-construction

1 conditions, and then you would also include  
2 information on whatever design specifications to  
3 control the water and maintain the water quality that  
4 you incorporated for that site.

5 Q. You -- I think you said that you would  
6 use water quality volume; is that correct?

7 A. Yes, sir.

8 Q. What is that?

9 A. Water quality volume is something that  
10 you have to determine for a site when you do a  
11 design. The calculations are found within the state  
12 general construction permit. It is essentially  
13 holding back a specific volume of water to allow  
14 particulates and pollution within that water to  
15 dissipate within your stormwater system before you  
16 release it into a stream.

17 Q. And so does that include water quality  
18 data that consists of numeric estimates of  
19 particulates or other pollutants that would be in the  
20 water?

21 A. No, not for this site. I believe that  
22 there are requirements on heavy industrial sites but  
23 those then get changed over to a different  
24 construction permit for the State of Ohio.

25 Q. Okay. So if that's the case then, what's



1 the nature of the water quality volume information  
2 that would be included in a SWPPP for a project of  
3 the nature of a solar project?

4 A. So the site would be evaluated, and the  
5 individual site conditions would be put into the  
6 calculation. It takes -- it uses the acreage and a  
7 few other pieces -- I'm sorry. I don't have the  
8 calculation in front of me. I can't remember all the  
9 different pieces, but it's essentially the first 9/10  
10 of an inch of rain on a site that is to be released  
11 at a slower rate.

12 Q. And is that information, that is, the  
13 water quality volume information, that you've been  
14 describing included in Harvey Solar's application in  
15 this case?

16 A. I'm not aware of that being included  
17 because that's part of a final designing, not part of  
18 a preliminary assessment typically.

19 Q. Does Harvey Solar's application in this  
20 case include an estimate of the quality of the  
21 stormwater discharges from construction?

22 A. Not that I am aware of.

23 Q. Does Harvey Solar's application in this  
24 case describe any changes in flow patterns or erosion  
25 due to site clearing or grading operations?

1           A.    Not that I am aware of off the top of my  
2 head.

3           Q.    Does Harvey Solar's application in this  
4 case describe the equipment proposed for controlling  
5 the stormwater discharges?

6           A.    No. That would be something that we  
7 would do in final design.

8           MR. VAN KLEY: All right. Your Honor, I  
9 have no more questions at this time.

10          ALJ AGRANOFF: Thank you.

11          Any cross from Hartford Township?

12          MS. CARNES: No questions, your Honor.  
13 Thank you.

14          ALJ AGRANOFF: Any clarifying questions  
15 from any of the signatory intervening parties?

16          MR. DOVE: No, thank you, your Honor.

17          ALJ AGRANOFF: Mr. Secrest, any redirect?

18          MR. SECREST: May we have a few moments,  
19 your Honor?

20          ALJ AGRANOFF: Sure. About how many  
21 minutes do you think you need?

22          MR. SECREST: Maybe 5, if we may.

23          ALJ AGRANOFF: Sure.

24          MR. SECREST: Thank you.

25          ALJ AGRANOFF: Why don't we reconvene at

1 10:20.

2 (Recess taken.)

3 ALJ AGRANOFF: Let's go back on the  
4 record.

5 Just waiting for Mr. Van Kley to return.

6 MR. VAN KLEY: I have returned.

7 ALJ AGRANOFF: So you have.

8 Mr. Secrest, have you determined if there  
9 will be any need for redirect?

10 MR. SECREST: Very brief, your Honor.  
11 Thank you.

12 ALJ AGRANOFF: Please proceed.

13 MR. SECREST: Thank you.

14 - - -

15 REDIRECT EXAMINATION

16 By Mr. Secrest:

17 Q. Ms. Spencer, are you aware -- strike  
18 that.

19 There was extensive discussion on  
20 cross-examination related to curve numbers. Do you  
21 know what the curve number is for grass versus  
22 pollinators?

23 A. Yes. So curve numbers vary slightly  
24 based on the soil condition below. But the grass,  
25 just standard grass that you would find in your yard,

1 is going to be somewhere between a 78 to an 80, and  
2 for the pollinator with a deeper root system is going  
3 to be lower, around 74 maybe to 76.

4 Q. And does that mean pollinators absorb  
5 more water?

6 A. Yes, it does. So the slower the runoff  
7 number that you use in the calculation, the more  
8 water stays on-site.

9 MR. SECREST: Thank you.

10 Your Honor, I have nothing further other  
11 than to answer your question before, if I may, LiDAR  
12 is laser imaging direction and ranging.

13 ALJ AGRANOFF: Thank you.

14 MR. SECREST: Thank you.

15 ALJ AGRANOFF: Recross.

16 MR. VAN KLEY: Yes, your Honor.

17 - - -

18 RECROSS-EXAMINATION

19 By Mr. Van Kley:

20 Q. Ms. Spencer, the pollinators for this  
21 project are proposed just around the fences  
22 surrounding the solar arrays, correct?

23 A. I believe in the conditions that it's now  
24 being used within the solar array panels as well, not  
25 just around the perimeter.

1 MR. VAN KLEY: Okay. Thank you.

2 THE WITNESS: You are welcome.

3 ALJ AGRANOFF: Judge Hicks, do you have  
4 any questions?

5 ALJ HICKS: I do not. Thanks.

6 - - -

7 EXAMINATION

8 By ALJ Agranoff:

9 Q. Okay. I have just one question for you,  
10 Ms. Spencer. Specifically when you were doing your  
11 cross-examination from Mr. Van Kley, he had you  
12 looking at Appendix D of Attachment K to the  
13 application.

14 A. Yes, sir.

15 Q. And there was conversation about a  
16 document that had subcatchment E1: DA E1 and there  
17 was numbers there for one-year rainfall of  
18 2.19 inches?

19 A. Yes, sir.

20 Q. What's the significance of the  
21 2.19 inches?

22 A. The 2.19 inches is an estimation of a  
23 rainfall event that will occur at minimum every year  
24 in an area. There have been studies done and those  
25 rainfall intensities have been developed for

1 different regions based on their historical rainfall  
2 data.

3 Q. Okay. Is the 2.19 inches then historical  
4 for the -- for the project area proposed in this  
5 case, or is that a national number?

6 A. So the -- the study was done more at a  
7 national level but this is for this specific area.

8 Q. Okay. And that was over what time frame  
9 that that --

10 A. If the -- it's analyzed as a 24-hour  
11 storm.

12 Q. Okay. But that's the average number for  
13 some period of time or that's the minimum number for  
14 some period of time?

15 A. That's an average rainfall that you can  
16 expect to see in that area at least once a year.

17 ALJ AGRANOFF: Okay. Based on my one  
18 question, does any counsel have any follow-up?

19 MR. VAN KLEY: No, your Honor.

20 MR. SECREST: No, thank you, your Honor.

21 ALJ AGRANOFF: Thank you.

22 If not, Ms. Spencer, you are excused.

23 THE WITNESS: Thank you.

24 ALJ AGRANOFF: And at this point in time,  
25 Mr. Secrest, do you seek admission of two exhibits?

1 MR. SECREST: I do. May the Applicant  
2 move for the admission of Applicant's Exhibit 23 and  
3 23A?

4 ALJ AGRANOFF: Any objections?

5 There being none, the aforementioned  
6 exhibits shall be admitted as part of the record at  
7 this time.

8 (EXHIBITS ADMITTED INTO EVIDENCE.)

9 ALJ AGRANOFF: And let me just move some  
10 binders around before we call the next witness.

11 MR. SECREST: Your Honor, if we may, we  
12 are going to require some shuffling here, probably  
13 not surprising to you, so if we may take a little  
14 break in order to do so.

15 ALJ AGRANOFF: Sure. Absolutely. Why  
16 don't we take, if everybody is okay, a 10-minute  
17 recess and reconvene at 10:40.

18 MR. SECREST: Sounds great.

19 (Recess taken.)

20 ALJ AGRANOFF: Let's go back on the  
21 record.

22 Mr. Secrest, if you could please call  
23 your next witness.

24 MR. SECREST: Thank you, your Honor. May  
25 the Applicant call Ryan Rupprecht?

1 ALJ AGRANOFF: If you could please  
2 promote Mr. Rupprecht. I don't see him. There he  
3 is.

4 MR. SECREST: He is on my screen, your  
5 Honor.

6 ALJ AGRANOFF: He is on mine now as well.  
7 Good morning, Mr. Rupprecht.

8 MR. RUPPRECHT: Good morning.

9 ALJ AGRANOFF: If you could please raise  
10 your right hand.

11 (Witness sworn.)

12 ALJ AGRANOFF: Thank you.

13 Please proceed, Mr. Secrest.

14 MR. SECREST: Thank you, your Honor.

15 - - -

16 RYAN RUPPRECHT

17 being first duly sworn, as prescribed by law, was  
18 examined and testified as follows:

19 DIRECT EXAMINATION

20 By Mr. Secrest:

21 Q. And, Mr. Rupprecht, would you please mute  
22 when I am talking so we don't get feedback. Thank  
23 you.

24 Will you please state your full name for  
25 the record and let us know by whom you are employed.



1           A.    Yep.  Ryan Rupprecht, SWCA Environmental  
2 Consultants.

3           Q.    Thank you.  And do you have a copy of  
4 your direct testimony and supplemental direct  
5 testimony in front of you?

6           A.    I do.

7           MR. SECREST:  Your Honor, may I have  
8 Mr. Rupprecht's direct testimony marked as Applicant  
9 Exhibit 26?

10           ALJ AGRANOFF:  It shall be so marked.

11           (EXHIBIT MARKED FOR IDENTIFICATION.)

12           MR. SECREST:  And thank you.  And may I  
13 have Mr. Rupprecht's supplemental direct testimony  
14 marked as Applicant Exhibit 26A?

15           ALJ AGRANOFF:  It shall be so marked as  
16 well.

17           (EXHIBIT MARKED FOR IDENTIFICATION.)

18           MR. SECREST:  Thank you.

19           Q.    (By Mr. Secrest) Are Applicant Exhibits  
20 26 and 26A true and accurate copies of your direct  
21 testimony and supplemental direct testimony filed in  
22 these proceedings?

23           A.    They are.

24           Q.    Do you have any changes or revisions to  
25 your testimony?  If the same questions contained

1 within your direct and supplemental testimony were  
2 asked to you today, would your answers be the same?

3 A. They would.

4 MR. SECREST: Thank you, your Honor.  
5 Mr. Rupprecht is available for cross-examination.

6 ALJ AGRANOFF: Thank you.

7 ALJ HICKS: Let me hop in. I don't know  
8 if his answer to if he had any changes... I think he  
9 was muted so maybe just ask that again for the  
10 record.

11 MR. SECREST: Certainly.

12 Q. (By Mr. Secrest) Mr. Rupprecht, do you  
13 have any changes or revisions to your direct  
14 testimony or supplemental direct testimony?

15 A. I have no changes.

16 MR. SECREST: Thank you.

17 ALJ AGRANOFF: Mr. Van Kley.

18 MR. VAN KLEY: Thank you, your Honor.

19 - - -

20 CROSS-EXAMINATION

21 By Mr. Van Kley:

22 Q. Mr. Rupprecht, would you turn to your  
23 written direct testimony identified as Applicant  
24 Exhibit 26 and go to page 5. Let me know when you  
25 are there.

1           A.    I'm there.

2           Q.    All right.  Let's go to answer 10 on page  
3   5 of your testimony.  And I would like to direct your  
4   attention to the sentence starting at line 22 on that  
5   page where it says "The majority of impacts within  
6   the approximately 2,360 acres of fenced area will  
7   occur as a result of upland soil disturbance for  
8   construction of supporting infrastructure; and total  
9   approximate 229.3 acres of temporary impacts and  
10  approximate 40.2 acres of permanent impacts."  Do you  
11  see that sentence?

12          A.    I do.

13          Q.    All right.  So let me break the sentence  
14  down a little bit.  I have a few questions about it.  
15  In line 23, what is your reference to the upland soil  
16  disturbance mean?

17          A.    If the projector is not proposed to  
18  impact wetlands and/or streams -- actually sorry.  
19  Let me restate that.

20                There is very minimal impacts to wetland  
21  and stream to this project.  All the impacts are  
22  primarily upland soils.

23          Q.    Okay.  And what are those impacts to  
24  upland soils?

25          A.    So in this particular case, there will be

1 a small acreage of area taken up by the piles that  
2 will support the infrastructure for the solar arrays.  
3 There will be access roads and collection lines as  
4 well as a permit for the substation area.

5 Q. Will there also be impacts for upland  
6 soil disturbance for installing the inverters?

7 A. There will be.

8 Q. Those inverters will be put on a  
9 foundation, correct?

10 A. I believe they will be on gravel pads.

11 Q. And then in line 24 on page 5 of  
12 Exhibit 26, there's a reference to temporary impacts  
13 on about 229.3 acres. What is that a reference to?

14 A. Yes. There will be more impacts  
15 temporarily during construction than there will be  
16 permanently. So the temporary impacts are for wider  
17 access roads during construction so that vehicles may  
18 utilize the site for construction as well as some  
19 other temporary laydown areas that will be used for  
20 equipment staging and storage of equipment as it  
21 arrives on-site. So there is a greater, you know,  
22 footprint during construction than there is at the  
23 end of the project once construction is completed.

24 Q. Do you know what the impacts are for the  
25 lay down areas to the soil?

1           A.    I could tell you.  I would have to access  
2 one of the exhibits.

3           Q.    Okay.  Sure.  Just let us know what  
4 exhibit you are looking at.

5           A.    Yeah.  It will be the EPA ecological  
6 assessment.

7           ALJ AGRANOFF:  And that is located where  
8 within the application?

9           THE WITNESS:  Is it appendix -- Exhibit  
10 Q?  Exhibit Q, your Honor.  If you go to Table 6-2 of  
11 Exhibit Q, there's a table there labeled "Summary of  
12 Proposed Harvey Solar Project Temporary Impacts," and  
13 laydown yards is labeled as 29.2 acres.

14          Q.    Okay.  Give us all just a moment to find  
15 that page.

16          A.    Sure.

17          Q.    I believe online that's PDF page 31.  
18 Table 6.1 or 6.2?

19          A.    6.2.

20          Q.    Oh, okay.  Then it should be on PDF page  
21 32.  All right.  So we are -- we are at Table 6.2 on  
22 page 6-3 in Exhibit Q of the application, correct?

23          A.    I believe that's correct.  I am looking  
24 at a hard copy.

25          Q.    Okay.  On your hard copy does it say

1 "page 6-2" in the lower right-hand corner?

2 A. That is correct.

3 Q. Okay. All right. So looking at  
4 Table 6.2, we see a line for laydown areas, correct?

5 A. Correct.

6 Q. There are 29.20 acres of laydown areas,  
7 right?

8 A. Yep, correct, 29.2 acres.

9 Q. Okay. And what is the nature of the soil  
10 disturbance, if any, that's anticipated for the  
11 laydown areas?

12 A. There would be some compaction work so a  
13 what's called synthetic barrier would be laid down  
14 and that's basically to separate the gravel and  
15 material from the native soil and, therefore, then  
16 gravel and other materials would be laid on top of  
17 that barrier and then, therefore, that gravel pad  
18 would then be a secure area for them to be able to  
19 lay down equipment as it arrives on-site.

20 And then post-construction any of those  
21 areas would then be able to be removed where that  
22 material would be removed above the synthetic layer  
23 and then that synthetic layer be removed returning it  
24 back to its native soil, but you can expect there  
25 will be compaction from the weight that was

1 attributed.

2 Q. Okay. Let's go back to your written  
3 direct testimony marked as Applicant Exhibit 26. And  
4 now go to page 7 of that testimony. Let's go to the  
5 first full paragraph on that page which starts at  
6 line 6. And you state here that "A total of 27  
7 streams were delineated in the Study Area," correct?

8 A. That's correct.

9 Q. Is the study area, as that term is used  
10 in your testimony, the same thing as the project  
11 area?

12 A. No. It may actually be larger.

13 Q. Okay. What did you include in the study  
14 area that was not in the project area?

15 A. So the study area is defined also in the  
16 ecological assessment which was Appendix Q. And the  
17 reason that that's a larger area is the project area  
18 at the time of these surveys is not yet determined;  
19 and, therefore, we look at sometimes a larger area so  
20 may include a parcel that was being considered at the  
21 time. It may not have been included in the overall  
22 project area as the project matured.

23 Q. Can you tell me how many streams are  
24 located within the project area?

25 A. I can. Again, in Appendix Q. So in this

1 particular case all 27 streams that were delineated  
2 in the study area are also -- some portion of them  
3 are also in the project area.

4 Q. All right. And where in Exhibit Q do you  
5 obtain that information?

6 A. Absolutely. Sorry. I just lost my spot  
7 there. So this is in Section 6.3.2 of Appendix  
8 Exhibit Q which is page 6-5 of that exhibit. And  
9 under that heading it is the second paragraph.

10 Q. Can you tell me how many stream crossings  
11 are planned for installing collection lines in the  
12 project?

13 A. I can. Give me a moment to reference the  
14 exhibit.

15 Q. Yeah. Just go to the next paragraph from  
16 where you were.

17 A. Yes. There will be 35 crossings.

18 Q. Will all of those crossings according to  
19 the application be made using horizontal directional  
20 drilling?

21 A. They would be if they were not collocated  
22 with an access road across it.

23 Q. And how many are anticipated to be so  
24 collocated?

25 A. So if you go to Appendix B of Exhibit



1 Q -- I'm sorry. So in this particular case all of  
2 the crossings are proposed as open cut crossings.

3 Q. All 35 of them?

4 A. All 35 are collocated, and also the  
5 number of 35 is considered high. Each cable itself  
6 is considered a crossing, although many of the cables  
7 would be collocated. So in their case, if you look  
8 at stream 7, there will be a total of 12 crossings  
9 but they will all be collocated in the same location,  
10 in other words, 12 collection lines to go through the  
11 same area and the same footprint.

12 Q. All right. Where are you looking in  
13 Appendix B to --

14 A. Yeah, Table B-4 of Appendix B.

15 Q. Just give us a moment.

16 A. Yeah.

17 Q. Give us a moment to find that. Is there  
18 a page number on that?

19 A. There is not.

20 MR. SECREST: PDF page 69.

21 Q. All right. So you are looking at Table  
22 B-4 Proposed Waterbody (Stream) Crossing Methods and  
23 Impacts for the Harvey Solar Project, Licking County,  
24 Ohio?

25 A. That is correct.

1 Q. Okay.

2 A. If you look at stream 7 as an example  
3 that there will be an access road crossing there and,  
4 therefore, a culvert will be installed and at that  
5 same crossing collocated in that same location there  
6 will be 12 collection lines that pass through that  
7 same area.

8 Q. Okay. Does that mean there are going to  
9 be 12 open cuts, or they are all going to be in the  
10 same open cut?

11 A. They will all be in the same open cut.

12 Q. So based on the information in the  
13 application, how many open cuts will there be through  
14 streams in the project area?

15 A. 10.

16 Q. Are you familiar with how an open cut for  
17 this purpose gets made?

18 A. I have a general concept, yes.

19 Q. All right. And would you explain what  
20 that general concept is.

21 A. That is correct. It depends on the flow  
22 regime of the stream. If it is an ephemeral stream,  
23 the open cut is simply made and closed within a  
24 48-hour period, and all materials are put in there as  
25 well as the culvert is installed and backfilled as

1 designed. Let's say that it's a perennial stream,  
2 which means that it is flowing at the time, there  
3 would be a small temporary dam that is placed above  
4 and below the stream and a pump would be used to wrap  
5 the water around the two dams to have the project  
6 area dry during that construction period and allow  
7 water to continue to flow from one end to the other  
8 of the stream without interruption during that  
9 construction, and again, construction is proposed for  
10 a maximum of 48 hours. Usually though they are  
11 completed within 24 hours.

12 Q. And for the record what's an ephemeral  
13 stream?

14 A. An ephemeral stream is a stream that only  
15 flows seasonally and/or occasionally due to higher  
16 rain flow or precipitation.

17 Q. What kind of equipment is used to make an  
18 open cut through the stream?

19 A. General construction equipment, things  
20 like a backhoe.

21 Q. I'm sorry. You cut out there. Did you  
22 say a backhoe?

23 A. I did.

24 Q. Okay. And what happens generally when an  
25 open cut is made while the trench is still open?

1           A.    Yeah.  It is placed on -- again, a  
2   synthetic barrier is put down and that material is  
3   piled and stacked on that material to again separate  
4   from the native soil and then that soil would then be  
5   used to refill that area during the restoration and  
6   the repair of that open cut.

7           Q.    Let's go back to your direct testimony as  
8   Applicant's Exhibit 26, page 7.  And directing your  
9   attention to line 17, there is a reference there to  
10  observations made during on-site surveys.  Do you see  
11  that?

12          A.    I do.

13          Q.    What on-site surveys were conducted for  
14  this project for purposes of the work that was  
15  performed to assess ecological issues?

16          A.    Yes.  So there was wetland surface  
17  delineations which is wetland and streams as well as  
18  habitat assessment work was also completed for this  
19  project.

20          Q.    All right.  How many on-site surveys were  
21  done for wetland and streams?

22          A.    I believe there was three different  
23  mobilizations for the project, November of 2019;  
24  November of 2020; and spring of 2021, I believe it  
25  was April.

1           Q.    How many days of on-site activities were  
2 conducted for each of those three mobilizations?

3           A.    So the first mobilization would have been  
4 the longest and that would have been four days.  I  
5 don't have the exact number of days in front of me.  
6 The second one would have been probably two days, and  
7 the last one was only a day.

8           Q.    Okay.  You cut out there on the first  
9 mobilization.  Can you provide me with the number of  
10 days again?

11          A.    Typically three to four days.

12          Q.    All right.  And, Mr. Rupprecht, how many  
13 mobilizations were there for habitat assessments?

14          A.    At least the two November ones were --  
15 also included habitat assessments.  I would need to  
16 check to see if the March one included that or not.

17          Q.    Okay.  Go ahead and do that.

18               MR. SECREST:  Sorry, Mr. Rupprecht.  Do  
19 you need an exhibit identified?  Just one moment.  
20 Please let us know what exhibit you are referring to,  
21 Mr. Rupprecht.

22               THE WITNESS:  Yes.  So I am looking at  
23 Exhibit O of the application which is the wetland  
24 delineation report.

25          A.    So the April 2021 work would have

1 included some level of habitat assessment work.

2 Q. And what activities were conducted during  
3 the habitat assessment?

4 A. The habitat assessment in general terms  
5 review of the present habitat. That would be  
6 agricultural fields, open areas, wooded areas, things  
7 along those lines, and GPS locations, and referenced  
8 maps were marked up as part of that with information  
9 collected that would then be later used for mapping  
10 and information to be provided in these reports to  
11 determine the type of habitat that is present and  
12 also to confirm the results of the desktop  
13 assessment.

14 Q. Referring you back to page 7 of your  
15 testimony marked as Applicant Exhibit 26, let's go to  
16 line 22 on that testimony where there is a reference  
17 to "Typical evidence of wildlife species observed  
18 during the field delineations." Do you see that?

19 A. I do.

20 Q. And what is meant by the reference to  
21 field delineations?

22 A. That would have been the wetland  
23 delineation work as well as the habitat assessment as  
24 they were done concurrently.

25 Q. Was a literature search for plants

1 conducted as part of the ecological assessment?

2 A. What do you mean by literature search?

3 Q. Did -- was anybody -- was there any  
4 search on the internet or from any other sources for  
5 literature that identified the species of plants that  
6 are potentially present in the project area and  
7 within one quarter of a mile of the project area?

8 A. No, there was no literature search  
9 conducted and not necessary as our biologists  
10 actually recorded the species of plants and material  
11 that they observed during the wetland delineation and  
12 habitat assessment.

13 Q. Is there a checklist of the plants that  
14 were found in the project area in the application?

15 A. I do not know if there is a particular  
16 checklist and stuff but there are references to the  
17 types of plants that were observed in Appendix Q, I  
18 believe.

19 Q. All right.

20 A. Q.

21 Q. Let's go to Appendix Q and please point  
22 out to me where there is a list of any of the plants  
23 found in the project area.

24 ALJ AGRANOFF: This is Appendix Q of --  
25 which exhibit?

1 MR. VAN KLEY: Of the application, your  
2 Honor.

3 THE WITNESS: This is Exhibit Q of the  
4 application, your Honor.

5 ALJ AGRANOFF: Okay. Thank you.

6 A. And then as an example, Section 5.1.1.2,  
7 Forests and Woodland, which is on page 5-1 of that --  
8 of that exhibit. And second paragraph of that  
9 section "Field surveys indicate the plant communities  
10 and woodlots are dominated by northern red oak, pine  
11 oak, black cherry, sugar maple," and so forth and so  
12 on.

13 Q. All right. Is there any other  
14 information in the application that identifies the  
15 plant species found in the project area?

16 A. There are more detailed information on  
17 the actual forms as part of the wetland delineations  
18 that are in attachment to that report.

19 Q. All right. Why don't we go to those  
20 forms then. Tell me where to find those.

21 A. So again, we are going to want to go back  
22 to Exhibit O. And we are going to want to go to  
23 Appendix C.

24 ALJ AGRANOFF: Do you know what page that  
25 is on the PDF?



1 THE WITNESS: Once I get there, your  
2 Honor, I will be able to tell you. I am getting  
3 there myself.

4 ALJ AGRANOFF: Okay. Thank you.

5 THE WITNESS: So Appendix C does not have  
6 a number, sir, PDF page number.

7 Q. (By Mr. Van Kley) All right. I would  
8 think it starts at PDF page 108.

9 A. Yeah. If it's easier, there is a summary  
10 in Appendix -- I'm sorry, Exhibit O under 5-1 which  
11 is page 5-1 of that exhibit and under there it says  
12 general habitat within the study area and it does  
13 provide a number of species that were observed.

14 Q. All right. Give us a moment to find  
15 that. You say that's on page 5-1 of Exhibit O?

16 A. That is correct.

17 Q. And this is in Section 5.1 entitled -- or  
18 titled "General Habitat within the Study Area"?

19 A. That is correct.

20 Q. Does that section contain a complete list  
21 of all plant species found in the project area?

22 A. I doubt that it's a complete list.

23 Q. Does the application contain a complete  
24 list of all of the plant species found in the project  
25 area?

1           A.    It likely does not. A lot of times it's  
2   the dominant species of that particular area, so when  
3   you are identifying a wetland, you would identify the  
4   dominant species that you are using as an indicator  
5   within that, and it is usually the top two or three  
6   that you use for that. There may be some additional  
7   plants that were observed. Again, any RTE plants  
8   that would have been observed would have been noted,  
9   but smaller stands of vegetation may not have been  
10  noted.

11           Q.   And for the record what does RTE stand  
12  for?

13           A.   Yeah, rare, threatened, and endangered.

14           Q.   Was a literature search conducted to find  
15  out what species of wildlife may be present in the  
16  project area?

17           A.   No, I don't believe there was any formal  
18  literature search, no.

19           Q.   Were any field surveys conducted to find  
20  out what species of wildlife were in the project area  
21  or are in the project area?

22           A.   There were no species-specific surveys  
23  conducted. There was presence/absence surveys  
24  conducted for RTE species but no formal studies were  
25  completed for any species.

1           Q.    So the application does not contain a  
2   list of all of the wildlife species found in the  
3   project area?

4           A.    No.   There's not a total list of species  
5   observed.  Let me rephrase that just slightly.  There  
6   is no list within the reports that my team prepared.  
7   I did not prepare the application, so I'm not  
8   familiar if there is a listing within the application  
9   or not.

10          Q.    Okay.  And which reports did your team  
11   perform or prepare?

12          A.    Exhibits O which is the water delineation  
13   report, Q which is the ecological assessment, and  
14   then there should have been a wildlife report as  
15   well.

16          Q.    E?

17          A.    Mr. Secrest switched the exhibits for the  
18   wildlife report.  It's Exhibit P.

19          Q.    Okay.

20                MR. SECREST:  I just referred  
21   Mr. Rupprecht to page 3 of his direct testimony.

22          A.    Yeah.  Yep.  So in my testimony O, P, Q,  
23   and W.  And again, related to the environmental work,  
24   O, P, and Q.

25          Q.    Are you aware of any other reports on

1 wildlife contained in the application?

2 A. I am not aware of any others.

3 Q. Let's go back to your written direct  
4 testimony marked as Applicant Exhibit 26, page 8.  
5 And let's go to question and answer 14. And this  
6 question and answer discusses the visual resource  
7 assessment, correct?

8 A. Correct.

9 Q. And what is the visual resource  
10 assessment?

11 A. This is a look at the project and an  
12 assessment of its potential viewability surrounding  
13 resources within a defined distance of the project.

14 Q. Did that assessment include residences of  
15 non-participating landowners around the project?

16 A. It would.

17 Q. Did you conduct the visual resource  
18 assessment?

19 A. I was part of the team that did but, no,  
20 I did not -- there is several components to it and so  
21 we have folks that are experts in those different  
22 sections that worked on that report but I handled the  
23 overall development of that, yes.

24 Q. So what was your specific role in the  
25 visual resource assessment?

1           A.    Yeah, senior level review and strategy.

2           Q.    And what does that mean?

3           A.    That means that I met with the project  
4 team and went over the course of action, the  
5 requirements of the Siting Board to -- that was  
6 within the report as well as overall review of the  
7 report prior to it being submitted.

8           Q.    What, if any, expertise do you have with  
9 respect to the preparation of visual resource  
10 assessments?

11          A.    I am not sure I understand what you mean  
12 by expertise.

13          Q.    Well, do you have any college level  
14 training that is used in visual resource assessments?

15          A.    I do not.

16          Q.    Prior to the Harvey Solar project, had  
17 you been involved in any visual resource assessments?

18          A.    Yes, several.

19          Q.    How many specifically?

20          A.    I don't have a specific number but  
21 greater than 10.

22          Q.    And was your level involve -- of  
23 involvement the same for those projects as it is for  
24 the Harvey Solar project?

25          A.    It is. I was the project manager.

1           Q.    Go to page 9 of your written direct  
2 testimony. Directing your attention to answer 17,  
3 lines 27 and 28 state that "since the panels rotate  
4 throughout the day and for the vast majority of the  
5 day will be significantly lower than 15 feet." Do  
6 you see that?

7           A.    I do.

8           Q.    And that language refers to the height of  
9 the solar panels; is that correct?

10          A.    It does. It does.

11          Q.    During how much of the day are the panels  
12 at full height?

13          A.    There may be days that it never gets to  
14 that height.

15          Q.    What kind of days are those?

16          A.    So the panels rotate to follow the sun  
17 throughout a designated model pattern on, you know,  
18 sun's location in the sky. And the panels are then  
19 designed to track that. And as it tracks it, the  
20 15 feet is kind of at its most extreme, and so it  
21 actually very rarely gets into that position. So for  
22 its normal model, it may not even actually get to 15  
23 feet. 15 feet may be only used for maintenance to  
24 create its maximum angle for maintenance work and  
25 everything else so it can achieve that height

1 certainly. And, therefore, that's why we model it at  
2 that height because that would be the most  
3 conservative way to do it, to basically say that it  
4 would be at that height a 100 percent of the time but  
5 that's not the case and there's certainly a  
6 considerable amount of time in which it does not set  
7 at that height.

8 Q. How long of a period of time are the  
9 panels typically at 14 feet in height?

10 A. So that would be kind of at the extreme  
11 ends of the day, morning or evening, as the last bit  
12 of sunlight, so I would imagine it's probably less  
13 than an hour on each end of the day, maybe less than  
14 an hour total.

15 Q. Mr. Rupprecht, could you repeat that  
16 answer, please?

17 A. Sure. So the panel height is strictly  
18 related to, you know, the angle of the panels as it  
19 tracks the sky, so it's at its maximum height  
20 essentially in the morning and in the evening and so  
21 that maximum height for the day was going to be  
22 14 feet, it could be 13 feet for that particular day,  
23 may only be for an hour or so each day.

24 Q. An hour at the end of the day and an hour  
25 at the beginning of the day?

1           A.     Maybe, maybe less.

2           Q.     Then how much of the day or what --  
3     during what time period of the day would the panels  
4     be as high as 10 feet?

5           A.     So the final design or the final panels  
6     have not been selected yet, so I wouldn't be able to  
7     answer that question. I don't know what the actual  
8     resting height, in other words, would it be 90  
9     degrees, what that height would be. As that would be  
10    part of the final selection of the panels and such,  
11    we just know that the panels will not exceed 15 feet  
12    at their maximum height. So that's what was used for  
13    modeling. We know the location of the panels to be  
14    able to model but the model -- the panels haven't  
15    been analyzed yet, so I couldn't answer that.

16          Q.     If the height of the panels is 14 feet,  
17    then during what time period of the day would the  
18    panels be at a height of 10 feet or higher?

19          A.     Could you repeat that?

20          Q.     Yeah. If the size of the panel is  
21    14 feet in height, then during what percentage of the  
22    day or how many hours per day would the panels be at  
23    a height of 10 feet or higher?

24                 MR. SECREST: Objection, asked and  
25    answered.



1 MR. VAN KLEY: No. He couldn't answer  
2 the question because he didn't understand it. I had  
3 to reask it.

4 MR. SECREST: You're on mute, Judge  
5 Agranoff.

6 ALJ AGRANOFF: I will allow the question  
7 to be asked.

8 A. Mr. Van Kley, I'm struggling to kind of  
9 understand the question and stuff. If -- if you are  
10 saying the maximum height would be 14 feet, how often  
11 would they be at a height of greater than 10 feet?  
12 Is that the question?

13 Q. Yeah. Let me just break it down for you.  
14 Let's assume that Harvey Solar selects and installs a  
15 panel that is at its greatest height 14 feet tall.  
16 Would that panel -- what period of the day would the  
17 panel be at a height of 10 feet or higher?

18 A. So I would still struggle to be able to  
19 answer that question without a little bit more  
20 engineering information. So -- and I can explain why  
21 I would struggle with that. The pivot point to where  
22 that location is is most critical. What is the  
23 height of the pivot? So, in other words, the length  
24 of the area that's overhang from that pivot point  
25 will create its maximum height. So depending on the

1 overall design of the array as far as its width would  
2 be a factor in that that I don't know.

3 So essentially the panels are generally  
4 moving in a 30-degree angle throughout the day.  
5 During extreme cases like during the winter or things  
6 like that where it is trying to chase that sun a  
7 little bit more, it may increase that angle up to  
8 60 percent or solar -- that's when you would start to  
9 get the higher heights but not necessarily during  
10 summer or during daytime conditions when the panels  
11 are most flat when the sun sets at its highest arc,  
12 the pivot point, and the height of that pivot point  
13 would be the key information to answer your question.

14 So without knowing that, I would be -- I  
15 wouldn't be able to tell you percent time that it  
16 spends at 10 feet or less at this time.

17 Q. Okay. Well, assume the worst case  
18 scenario and answer the question.

19 MR. SECREST: Objection. One,  
20 speculation. Two, he has already testified that the  
21 modeling was based on 15 feet and is conservative so  
22 that's essentially the worst case.

23 MR. VAN KLEY: No, it's not. I am asking  
24 in the scenario -- I am asking him to provide me with  
25 the number of hours per day that the panels would be

1 at a height of 10 feet or higher if the total height  
2 of the panels are 14 feet high. He previously  
3 answered the question as to how many hours of the day  
4 the panels would be at a height of 15 feet. So now I  
5 am asking him to give me the time of the day where  
6 the panels would be at a height of 10 feet or higher.

7 MR. SECREST: And I believe he has  
8 answered twice that with the information available to  
9 him, he's not able to answer that question.

10 MR. VAN KLEY: And that's why I asked him  
11 to give me an answer to that question based on the  
12 worst case scenario concerning the tilting scenarios  
13 that he just outlined.

14 ALJ AGRANOFF: If the witness understands  
15 the question as it is currently framed, you can  
16 certainly provide an answer.

17 A. Yes. So I will refrain from being able  
18 to answer. Again, it's the height of the pivot  
19 point, so if the panels are -- so I will use an  
20 example and maybe this example will answer  
21 Mr. Van Kley's question. So let's say that the  
22 panels as far as are set at a height of 6 feet so, in  
23 other words, the post out of the ground comes out of  
24 the ground 6 feet, and the racking is set on top of  
25 that. The racking itself creates about another

1 6 inches in height, so the panels are now rotating at  
2 that pivot point.

3 In that particular case the panels would  
4 be below 10 feet for the majority of the day because  
5 that pivot point is at 6 feet. So again, a 30-degree  
6 rise or fall within that would not raise the panels,  
7 you know, that greatly to put them over 10 feet.

8 But if that pivot point was at, let's  
9 say, 8 feet or higher, then the panels would have a  
10 longer period of time which they would be at --  
11 potentially at 10 feet or greater. But without  
12 knowing the height of that pivot point, I wouldn't be  
13 able to give you any type of numbers as to the  
14 duration of time that the panels would be at a  
15 particular height.

16 Q. Okay.

17 A. But again, our work and our model was  
18 basically assuming that the panels are 15 feet all  
19 day every day. And that's how the model was  
20 conducted which is the most conservative estimate to  
21 be able to use.

22 Q. Yeah. And I get that. So then the  
23 question would be at a pivot of 8 feet or higher,  
24 during what period of the day would you have panels  
25 at a height of 10 feet or higher?

1           A.    It would also change seasonally.  Again,  
2           during the summer the panels will be flatter for  
3           longer periods of time, and a pivot point of 8 feet,  
4           they would be for the majority of the day below  
5           10 feet.  During the winter when they are potentially  
6           at a steeper angle, they would have more time at  
7           potentially 10 feet or higher.  But again, I couldn't  
8           give you exact numbers.  You know, those numbers  
9           would be able to be provided once that model is set  
10          up, but I don't have that model in front of me nor do  
11          I run that model.

12          Q.    Can you give me an approximate number of  
13          hours per day?

14               MR. SECREST:  Objection, speculation.

15          A.    I cannot.

16               ALJ AGRANOFF:  If the witness is capable  
17          of making such a determination, he can answer.  If  
18          you don't believe that you have enough sufficient  
19          information, you can state as such.

20               THE WITNESS:  I don't have enough  
21          sufficient information, your Honor.

22          Q.    (By Mr. Van Kley) Let's go to page 12 of  
23          your testimony.  And I would like you to take a look  
24          at lines 21 and 22 on that page.  The first sentence  
25          on those lines states as follows:  "The viewshed

1 analysis incorporated the screening effects of  
2 existing topography, structures, and vegetation  
3 within the VSA." Do you see that?

4 A. I do.

5 Q. And the VSA for the record stands for  
6 what?

7 A. Viewshed analysis.

8 Q. Was there any viewshed analysis provided  
9 in the application that did not incorporate screening  
10 effects of existing topography, structures, or  
11 vegetation?

12 A. So there isn't any that doesn't include  
13 existing topography but there is which does not  
14 include structures or vegetation. It's called bare  
15 earth model.

16 ALJ AGRANOFF: I think you may need to  
17 repeat that answer. It was, at least on my end, got  
18 cut off in the beginning.

19 THE WITNESS: No problem. So the  
20 modeling, there is another model, it's called bare  
21 earth model that does not take into account  
22 structures or vegetation into account. It does take  
23 topography into account.

24 Q. And that type of analysis was included in  
25 the application?

1           A.     It was.

2           Q.     Okay.  Let's go to page 13 of your  
3     testimony.  And I would like to direct your attention  
4     to the last paragraph on that page which discusses  
5     simulations.  And those simulations are provided in  
6     Exhibit W of the application; is that correct?

7           A.     That's correct.

8           Q.     Going to Exhibit W and also referring you  
9     to line -- lines 28 and 29 where it's stated that you  
10    wanted a representative view of an adjacent  
11    landowner, can you show me where in the application  
12    is provided a simulation of the representative view  
13    of an adjacent landowner?

14          A.     So all the photos are taken from public  
15    access points, essentially roads.  But that's -- the  
16    distances that they were modeled would be equivalent  
17    to that of adjacent landowners.

18          Q.     So every simulation that's in the  
19    application was taken from the perspective of  
20    somebody that was on a public road?

21          A.     That is correct.

22          Q.     So when your testimony refers to a  
23    representative view of an adjacent landowner, you  
24    were referring to the distance between the viewer and  
25    the solar arrays?

1           A.     That is correct. And actually there is a  
2 relatively good example if you give me just a moment.  
3 So if you were to look at -- if you were to look at  
4 viewpoint No. 3 --

5           ALJ AGRANOFF: Which exhibit are you  
6 looking at?

7           THE WITNESS: Yes, I'm sorry. I am in  
8 Exhibit W.

9           ALJ AGRANOFF: Okay.

10          Q.     And that's in Figure 3-7; is that  
11 correct?

12          A.     No. I am actually going to refer you  
13 back to the appendix of the viewshed which has  
14 digital simulations, so they are larger pictures. So  
15 it's Appendix B of Appendix -- of Exhibit W. And I'm  
16 on Sheet 9 of 19.

17          Q.     All right. Give us a moment to find  
18 that. You said Exhibit -- Appendix B?

19          A.     B of Exhibit W, correct.

20          ALJ AGRANOFF: Do you know the PDF page?

21          ALJ HICKS: I think it's 53.

22          ALJ AGRANOFF: Thanks.

23          A.     And it starts on Sheet 9, but I would  
24 actually refer to Sheet 10. And again, you can see  
25 that the photo was taken from a public road but there



1 is an adjacent landowner home immediately in the  
2 foreground of that picture.

3 Q. Is that the simulation or the photograph  
4 that you view as being the most representative of a  
5 view by a neighboring landowner?

6 A. That depends on how far the neighboring  
7 landowner may be to the project. There may be other  
8 simulations that better represents the distance from  
9 their view to the project.

10 Q. All right. So let's go to the simulation  
11 for the scene that is depicted as existing conditions  
12 for Sheet 10 of 19. That's the one we are looking  
13 at, right?

14 A. Correct.

15 Q. Okay. So the simulation for that scene  
16 would be on Sheet 11 of 19; is that right?

17 A. That is -- that is correct.

18 Q. Okay. And what's the distance between  
19 the viewer and the solar panels in this simulation?

20 A. Just one moment. Approximately 130 feet.

21 Q. And did you obtain that distance from  
22 page 3-13 of Exhibit W?

23 A. I did.

24 ALJ AGRANOFF: Mr. Rupprecht, can I just  
25 ask a quick question? With respect to the notation

1 on the photos that we were looking at on Sheet 11 of  
2 19 where it indicates the Delaware Township in  
3 Defiance County, is that -- is that accurate?

4 THE WITNESS: No. That seems to be in  
5 error in the report, your Honor. That should read  
6 Licking -- actually I am not sure of the township but  
7 that should be Licking County, Ohio. These are all  
8 photos from the project area.

9 ALJ AGRANOFF: Okay. Delaware County is  
10 probably not correct either?

11 THE WITNESS: That's probably not  
12 correct, your Honor.

13 ALJ AGRANOFF: Would it be possible for  
14 you to correct the record so that we know  
15 specifically what this photo is supposed to  
16 represent?

17 THE WITNESS: Absolutely, your Honor.

18 ALJ AGRANOFF: When do you think you  
19 might be able to have that correction?

20 THE WITNESS: Within the next -- you  
21 know, before the week's out, sir.

22 ALJ AGRANOFF: Okay. So before we close  
23 the record in this case, I would like --

24 THE WITNESS: Absolutely.

25 ALJ AGRANOFF: -- for our witness to be

1     able to modify what this photo or photos are supposed  
2     to be representative of.

3                 THE WITNESS: Absolutely. And just for  
4     reference, your Honor, the map that is on Sheet 9 of  
5     19 there where it depicts the project area and the  
6     point in the view location of the yellow triangle,  
7     that information is accurate so you can see that  
8     these photos are taken within the project area.

9                 ALJ AGRANOFF: Okay.

10                THE WITNESS: We will correct those  
11     notations.

12                ALJ AGRANOFF: Thank you.

13                Q.     (By Mr. Van Kley) What is the height of  
14     the solar panels that's depicted in Sheet 11 of 19 in  
15     Exhibit W?

16                A.     15 feet.

17                Q.     Let's go to page 3-9 of Exhibit W. And  
18     this is a description of viewpoint 1 for the  
19     simulations; is that correct?

20                A.     That is correct.

21                Q.     And the distance between the viewer and  
22     the solar arrays is 425 feet in that simulation; is  
23     that correct?

24                A.     That is correct.

25                Q.     Then if we go to page 3-11, the distance

1 between the viewer and the solar arrays, that  
2 simulation No. 2 is 400 feet, correct?

3 A. That is correct.

4 Q. Then we go to 3-13 and that's information  
5 from viewpoint 3 in the simulations, correct?

6 A. That's correct.

7 Q. And that's the simulation that we  
8 discussed that is on Sheet 11 of 19 in Exhibit W,  
9 right?

10 A. That is correct.

11 Q. Then let's go to page 3-15. And that's  
12 information about -- on that page about viewpoint 6  
13 of the simulations, right?

14 A. That's correct.

15 Q. Okay. Why did you jump from viewpoint 3  
16 to viewpoint 6?

17 A. So we selected representative locations  
18 throughout the project for our simulations. It just  
19 so happened that 1, 2, 3, went in order, and then we  
20 moved to 6. Again, we wanted to show viewpoints that  
21 were close as well as far away as well as we wanted  
22 to represent each of the different modules that were  
23 proposed in the vegetation plan so that there would  
24 be representation of each of those in the simulation.

25 Q. Were there any simulations prepared that

1 were not included in the application?

2 A. There were not.

3 Q. So for viewpoint 6, the distance between  
4 the viewer and the solar arrays is 560 feet, correct?

5 A. That's correct.

6 Q. Then we go to viewpoint 10 on page 3-1.  
7 It looks like pagination may be a little off here  
8 because we went from 3-15 to 3-1.

9 A. We will correct that when we update the  
10 other notations as well.

11 Q. So just for clarification in the record,  
12 we are looking at Section 3.2.1.13 on that page,  
13 correct?

14 A. That's correct.

15 Q. And also we are looking at Section  
16 3.2.1.14 on that page, right?

17 A. Correct.

18 Q. And this is information in viewpoint 10  
19 in the simulations, right?

20 A. That is correct.

21 Q. And the distance between the viewer and  
22 the solar array in that simulation is .61 miles,  
23 right?

24 A. That is correct.

25 Q. Now, before we leave Exhibit W, the

1 application, let me refer you to page 1-12 of that  
2 document. Tell me when you're there.

3 A. I'm sorry. Please reference where you  
4 want me to be again.

5 Q. 1-12.

6 A. Is that page 1-12 or section?

7 Q. It's page 1-12, Section 1.2.3 titled  
8 "Distance Zones."

9 A. I'm there.

10 Q. Do you see that the second paragraph that  
11 is designated as near-foreground 0 to 0.5 miles -- or  
12 mile? Do you see that?

13 A. I am, yep.

14 Q. And the sentence is -- in that paragraph  
15 states as follows: "At this distance, a viewer is  
16 able to perceive details of an object with clarity.  
17 Surface textures, small features, and the full  
18 intensity and value of color can be seen on  
19 foreground objects." Did I read that correctly?

20 A. You did.

21 Q. So the two sentences that I just read  
22 describe the views from 0 to 0.5 miles from the solar  
23 arrays, correct?

24 A. In general, yes.

25 Q. What do you mean when you qualify your

1 answer by stating that in general?

2 A. Well, I would assume that level of detail  
3 and amount that you are able to view of a small  
4 feature diminishes with distance. So what you see at  
5 0 feet may not be exactly the same at half -- at a  
6 half a mile but that the general concept that things  
7 are much more viewable in that distance in comparison  
8 to other distances is true. But that's -- what you  
9 see at 0 is probably not equivalent to what you see  
10 at a half a mile.

11 Q. Okay. So if we go to page 14 of your  
12 written direct testimony marked as Applicant  
13 Exhibit 26, let's go to the answer to question 23. I  
14 have some questions about that.

15 A. Sure.

16 Q. All right. So on line 6 there is a  
17 sentence that starts with the word "Results." Do you  
18 see that sentence?

19 A. I do.

20 Q. And that entire sentence reads as  
21 follows: "Results of this analysis indicate that the  
22 proposed solar arrays associated with the Project  
23 will be screened from view in approximately  
24 89.7 percent of the 5-mile radius VSA." Did I read  
25 that correctly?

1           A.    You did.

2           Q.    Okay.  So my question is what percentage  
3 of the view area in the near-foreground of 0 to  
4 0.5-mile will be visible -- I better start that over.

5                   All right.  So my question is in the  
6 near-foreground area of 0 to 0.5 mile, in what  
7 percentage of that area will a person be able to view  
8 the solar panels?

9           A.    I do not have an exact percentage.  I can  
10 give you visual representation of that in the form of  
11 a map.

12           Q.    All right.  Go ahead and tell us where  
13 that's at.

14           A.    Yep.  So that's going to be Figure 3-1  
15 which is on page 3-2 of Exhibit W.

16                   ALJ AGRANOFF:  If you could please repeat  
17 that citation.

18                   THE WITNESS:  Absolutely.  So it's 3-1  
19 on --

20                   ALJ AGRANOFF:  You were cutting out.

21                   THE WITNESS:  -- of that exhibit.

22                   ALJ AGRANOFF:  On my end that was  
23 garbled, and I am not sure that -- I couldn't  
24 understand it, and I am not sure the court reporter  
25 could either.



1 THE WITNESS: Yep. No problem. I was  
2 just waiting for you. I didn't want to cut you off.

3 ALJ AGRANOFF: Okay.

4 THE WITNESS: So it's on -- so I am  
5 looking at Figure 3-1 on page 3-2 of Exhibit W in the  
6 application.

7 ALJ AGRANOFF: Do you have a PDF page  
8 number by any chance?

9 Q. (By Mr. Van Kley) Is that --

10 A. 19.

11 ALJ AGRANOFF: Okay. Thank you.

12 A. And so, here again, as you asked me  
13 before, it shows the bare earth which basically takes  
14 in no buildings and/or vegetation or anything into  
15 account and then the blue, the level of blue, as you  
16 can see, darker versus lighter is the viewability  
17 with taking into account the existing buildings  
18 and/or vegetation. Again, this is modeled at the  
19 most extreme of 15 feet. As you lower in height,  
20 obviously the viewability will go down and this also  
21 takes into account that the entire project area is  
22 filled with panels which is not the case. Again, the  
23 most conservative methods were used for the modeling  
24 so this is -- the entire project area is filled with  
25 15-foot panels all of the time. But again, it shows

1 the 0 to 5 miles and the viewability of the project  
2 within that area.

3 Q. Given the conservative assumptions you've  
4 used to put this map together, have you provided any  
5 other maps that use assumptions that aren't so  
6 conservative?

7 A. We have not at this time.

8 Q. Okay. Why not?

9 A. Because they weren't asked for.

10 Q. Did you include information in Exhibit W  
11 only where it was asked for?

12 A. I'm sorry. Could you repeat that? You  
13 broke up a little bit. I'm sorry.

14 Q. Yeah, sure. When you say that the  
15 information was not requested, who are you referring  
16 to that may have requested that information?

17 A. So when I say that, that kind of comes  
18 from two different prongs. It's not a requirement on  
19 the Siting Board as part of the application or part  
20 of the rule in which they require that information,  
21 and the developer Harvey Solar did not request that  
22 information from us.

23 Q. Do you have an understanding as to why  
24 the information was not requested?

25 MR. SECREST: Objection, speculation.

1           A.     I do not.

2                   MR. VAN KLEY:   Just asking if he had an  
3 understanding.

4                   MR. SECREST:   He answered so withdrawn.

5                   ALJ AGRANOFF:   If the witness knows the  
6 basis for his prior statement that it wasn't  
7 requested, he can certainly answer that.

8                   THE WITNESS:   I do not know why it was  
9 not requested.

10                  Q.     (By Mr. Van Kley) Going back to your  
11 testimony on page 14, line 6 through 8, we are again  
12 looking at the sentence I read to you from those  
13 lines, there you provided the approximate percentage  
14 of the 5-mile radius VSA that would be screened from  
15 view, right?

16                  A.     Correct.

17                  Q.     Does the application provide the  
18 approximate percentage of the near-foreground area  
19 that will be screened from view?

20                  A.     So what this does not take into account  
21 is the long-term vegetation that would be planted  
22 outside the fence line. And if that vegetation were  
23 to be taken into account, then I would imagine a  
24 significant amount of the foreground area would be  
25 screened, but this analysis does not take that into

1 account.

2 Q. All right. So let's just take -- just --  
3 let's just use the same assumptions that were used to  
4 provide the information in that sentence on page --  
5 on page 14, lines 6 through 8. And using those  
6 assumptions, can you tell me whether that same  
7 percentage information was provided for the near  
8 foreground area?

9 A. It was not.

10 Q. Why wasn't it?

11 A. Again, this was information that was not  
12 required as part of the application and/or requested  
13 by the developer.

14 Q. Do you -- do you think that it would be  
15 useful information to know how visible the project is  
16 to the people who are located within a half mile of  
17 the project area?

18 MR. SECREST: Objection.

19 ALJ AGRANOFF: Basis?

20 MR. SECREST: Asking him to speculate to  
21 the opinions of residents.

22 MR. VAN KLEY: No. I thought I asked him  
23 what his opinion was.

24 MR. SECREST: You asked him his opinion  
25 if it would be important to others.

1 MR. VAN KLEY: I don't understand what  
2 you are saying. Let me rephrase the question though.

3 Q. (By Mr. Van Kley) Based on your  
4 experience with visual impact analyses, do you have  
5 an opinion on whether it is important to know how  
6 visible a project is to people that might be viewing  
7 the project within one-half mile?

8 MR. SECREST: Same objection. Asking him  
9 to opine as to the impact of the VRA on others  
10 residing in or near the project area.

11 MR. VAN KLEY: I don't think that was  
12 what I was asking, but I will try again.

13 MR. SECREST: It is what you are asking.  
14 I am saying he can't opine on it. You are asking him  
15 to opine on that.

16 MR. VAN KLEY: I will reask the question.

17 Q. (By Mr. Van Kley) For purposes --

18 A. Mr. Van Kley, I think I understand what  
19 you are getting at, and I think I can answer your  
20 question. But not necessarily maybe the -- maybe the  
21 way you want. I think the simulations are exactly  
22 that, to be able to show what the project will look  
23 like and the viewability to people within that  
24 foreground which is why those simulations are  
25 conducted.

1           Q.    Yeah.  Okay.  And given what you just  
2   said, why wouldn't you provide an estimate of the  
3   percentage of the near-foreground area that -- in  
4   which you would expect the project to be viewable?

5           A.    Again, I was not part of the request of  
6   the analysis, but I believe the simulations give a  
7   depiction of what that viewability would be.

8           Q.    But the simulations don't provide any  
9   information about the percentage of the  
10  near-foreground area that would have the views shown  
11  in the simulations, correct?

12          A.    It does not.

13          Q.    Do you know how many residences owned by  
14  non-participating landowners are located within a  
15  half mile of the project area?

16          A.    I do not have that information off the  
17  top of my head.  Give me a moment and I will see if  
18  that's included.  The number of residences within the  
19  foreground is not provided in the viewshed analysis  
20  which is Appendix W, Exhibit W.

21          Q.    Let's go to the application narrative.  
22  Tell me when you are there, when you have that.

23          A.    Is there a particular section you want me  
24  to go to?

25          Q.    Yeah.  Page 9, please.

1           A.    I'm on page 9.

2           Q.    All right. Do you see towards the bottom  
3 of the page that there is a list of setbacks for the  
4 project?

5           A.    I do.

6           Q.    And you know what a setback is as used  
7 here, right?

8           A.    Correct.

9           Q.    Okay. Are there any simulations provided  
10 in the application that are representative of the  
11 view from the setback for 25 feet from the property  
12 line of any parcel whose owner is not a participating  
13 landowner?

14          A.    So I believe simulation 6 would be the  
15 most representative of that, although it does take  
16 into account also the crossing of the road, but the  
17 school across the street is a non-participating  
18 landowner and that simulation is taking it across  
19 the -- directly across the street from it.

20          Q.    All right. Give us a moment to find  
21 simulation 6 which --

22          A.    If you go to Exhibit W, Appendix B, and  
23 it is sheet -- starts on Sheet 13 of 19.

24          Q.    Is there a page number?

25          A.    It does appear to have a greater setback

1     than just the 25 feet, so it may not be as  
2     representative as you would like, but it is  
3     representative of a photo taken directly across from  
4     a non-participating landowner, the 300 feet setback.

5             Q.     Okay. Let's find the simulation first  
6     that you are looking at. I still haven't found it.  
7     Is there any other identifying information on that  
8     page that would help us to find it?

9             ALJ AGRANOFF: Or a PDF page number,  
10    please.

11            MR. SECREST: 59.

12            A.     I believe it's PDF page 59.

13            Q.     All right. Is this sheet 15 of 19?

14            A.     That is correct.

15            Q.     And what's the distance between the  
16    viewer and the solar arrays in the simulation?

17            A.     Just a moment. Approximately 560 feet.

18            Q.     So not 25 feet.

19            A.     Nope.

20            Q.     Let's go to page 15 of your testimony. I  
21    would like to direct your attention to lines 10  
22    through 12. Now, let's just start at the beginning  
23    of that entire sentence at line 8. The sentence  
24    starting with the word "Within" on line 8 which  
25    states "Within the near-foreground (0 to 0.5 miles)



1 distance zone, field re -- review revealed that  
2 although portions of the Project are technically  
3 visible as indicated in the viewshed analysis, there  
4 is a low likelihood of discerning the proposed  
5 Project due to the level of visual blending into the  
6 background at the outer edges of this distance zone."  
7 Did I read that correctly?

8 A. You did.

9 Q. Okay. Can you provide me with a  
10 quantification for what you regard as the outer edges  
11 of this distance zone as that language is used in  
12 this sentence?

13 A. Yep. That is defined as a half a mile.  
14 Again, it's the near-foreground which is 0 to half a  
15 mile, 0.5 miles.

16 Q. That's the distance zone, right?

17 A. That is correct and that's what is  
18 referred to as the outer edges of this distance zone.

19 Q. Yeah. And my question is where are the  
20 outer edges of the distance zone?

21 A. I'm not sure I understand if it would be  
22 roughly a half a mile.

23 Q. Well, the entire distance zone is a half  
24 mile, right?

25 A. Correct.

1           Q.    Okay.  And when you refer to the outer  
2 edges of that half mile, how far from the solar  
3 project does the outer edges start as used in your  
4 sentence here?

5           A.    I'm not sure I understand your question,  
6 sir.

7           Q.    Well, let me just give you an  
8 illustration.  Do the outer edges of the  
9 near-foreground edge -- or edges -- I'm sorry.  Do  
10 the outer edges as you referred to it in this  
11 sentence in the near-foreground area start  
12 four-tenths of a mile from the project area or  
13 three-tenths of a mile away from the project area or  
14 what?

15          A.    Oh, I understand.  So this is a  
16 generalization.  You look at the landscape.  A lot of  
17 the agricultural areas are surrounded by wooded or  
18 other vegetated areas, and so what this statement is  
19 basically saying is you get outside of the project  
20 area within the foreground of the outer edges that  
21 you are -- and the vegetation that will be around the  
22 project will blend in the sense of we are creating  
23 woody vegetation around the project whether it's  
24 natural and/or planted as part of the design of the  
25 project.

1 Q. Okay. So --

2 A. As far as the exact distance in which  
3 that occurs, I would say that's blended from a  
4 quarter to a half a mile.

5 Q. And is that the distance at which there  
6 is a low likelihood of discerning the proposed  
7 project as --

8 A. That's correct.

9 Q. Okay. And can you tell me the number of  
10 non-participating landowners' residences that are  
11 within one quarter of a mile from the project area?

12 A. I cannot.

13 Q. Let's go to page 15 of your testimony,  
14 answer 25. Referring you to the sentence that starts  
15 at line 22 you refer to vegetation plantings that are  
16 five to seven years after completion of construction,  
17 right?

18 A. That's correct.

19 Q. I'm sorry. You broke out there. Did you  
20 say yes?

21 A. I said that's correct. Yep, that's  
22 correct.

23 Q. Okay. And where did you get the  
24 information concerning what the plantings would look  
25 like five to seven years after completion of

1 construction?

2 A. So that information is provided by one of  
3 our landscaping engineers who determined the type of  
4 plants that were to be provided at, you know,  
5 basically times of year and what would be their  
6 growth or their development over the next five to  
7 seven years.

8 Q. Is that -- is that information that's in  
9 the preliminary landscape plan in the application?

10 A. It might be. My team did not prepare  
11 that material.

12 MR. VAN KLEY: All right. Your Honor, I  
13 have no more questions at this time.

14 ALJ AGRANOFF: Okay. Thank you. Any  
15 cross from Hartford Township?

16 MS. CARNES: No questions, your Honor.

17 ALJ AGRANOFF: Any clarifying questions  
18 from any of the intervening signatory parties?

19 I'll take silence as a no.

20 With respect to redirect, should we  
21 commence that assuming that there is going to be  
22 redirect after a lunch break; or, Mr. Secrest, what's  
23 your anticipated amount of redirect?

24 MR. SECREST: Anticipating redirect but  
25 not a whole lot. Of course, there is potential

1 recross so it's up to the Bench, the preference, if  
2 you want to do lunch right now.

3 ALJ AGRANOFF: I'm open to thoughts from  
4 counsel if there is a preference.

5 MR. VAN KLEY: I would have a preference  
6 finishing it right now so we can move on to a new  
7 witness after the break.

8 ALJ AGRANOFF: Okay.

9 MR. SECREST: Can we take a short break  
10 then?

11 ALJ AGRANOFF: Sure. Is 5 minutes  
12 sufficient for you to?

13 MR. SECREST: Yes, your Honor.

14 ALJ AGRANOFF: Okay. Why don't we -- we  
15 will reconvene let's just say 12:30.

16 (Recess taken.)

17 ALJ AGRANOFF: Okay. Let's go back on  
18 the record.

19 Mr. Secrest, have you done an assessment  
20 as to the extent of redirect?

21 MR. SECREST: I have, your Honor. And I  
22 have assessed and considered the wisdom of not being  
23 the only thing standing between everyone and lunch so  
24 we have no redirect.

25 ALJ AGRANOFF: Okay. Thank you.

1 Judge Hicks, do you have any questions of  
2 the witness?

3 ALJ HICKS: I do not.

4 ALJ AGRANOFF: I think I have just a few  
5 questions of Mr. Rupprecht.

6 - - -

7 EXAMINATION

8 By ALJ Agranoff:

9 Q. If you could please turn to page 9 of  
10 your testimony. Let me know when you are there.

11 A. I'm there, your Honor.

12 Q. Okay. Page -- question 17, line 24. Is  
13 there an estimated height for the substation and the  
14 operations and maintenance facility?

15 A. So the substation would be smaller than  
16 the existing transmission lines that it's tying into  
17 and there is a simulation that shows. And the O&M  
18 building I would estimate at the height of a standard  
19 single story building.

20 Q. And is there a particular height that  
21 that pertains to?

22 A. I would say less than 20 feet, your  
23 Honor.

24 Q. Okay. And then my last question is with  
25 respect to if you go to page 17 of your testimony,

1 question 30. Are you there?

2 A. Yes, sir.

3 Q. Okay. And -- thank you. And with  
4 respect to that particular question, I believe you  
5 answered, yes, it is possible to determine that the  
6 facility represents the minimum adverse environmental  
7 impact. That could be read two ways. One could mean  
8 that you are saying that indeed it does represent the  
9 minimum adverse environmental impact. The other  
10 could be that it's possible to do that determination,  
11 but you haven't done so as of yet. So I'm just  
12 asking for clarification as to whether or not you  
13 were stating in the affirmative that indeed the  
14 project represents the minimum adverse environmental  
15 impact?

16 A. It does, your Honor. We reviewed it and  
17 made suggestions on the minimizations, and the  
18 developer Harvey has taken those into consideration,  
19 so we considered, yes, the lowest impact.

20 Q. That the project represents the  
21 minimum --

22 A. Represents at this time, yep.

23 ALJ AGRANOFF: Okay. Based on my two  
24 questions, is there any follow-up from counsel?

25 MR. VAN KLEY: No, your Honor.

1 MR. SECREST: No, thank you.

2 ALJ AGRANOFF: Okay. Mr. Rupprecht, we  
3 appreciate your testimony.

4 And at this time, Mr. Secrest, do you  
5 care to move into evidence the two exhibits?

6 MR. SECREST: Please. May the Applicant  
7 move for the Applicant Exhibits 26 and 26A?

8 ALJ AGRANOFF: Any objections?

9 There being none, the aforementioned  
10 exhibits shall be admitted as part of the record at  
11 this time.

12 (EXHIBITS ADMITTED INTO EVIDENCE.)

13 ALJ AGRANOFF: And consistent with our  
14 conversation just before we finished Mr. Rupprecht's,  
15 we will take a lunch break at this juncture, and it  
16 will be for an hour. And when we return, looking at  
17 my scorecard here, I believe we have Witness Woods  
18 and then Witness Braman.

19 MR. SECREST: Your Honor, consistent with  
20 the conversation earlier this morning related to  
21 Mr. O'Neal, if the Bench is amenable, as well as all  
22 other counsel, we would like to call Mr. O'Neal  
23 immediately after lunch.

24 ALJ AGRANOFF: Okay. Everybody  
25 acceptable with that proposal?



1 MR. VAN KLEY: Yep. Okay with us.

2 MR. SECREST: Thank you.

3 ALJ AGRANOFF: Okay. We'll reconvene at  
4 1:35. Thank you.

5 (Thereupon, at 12:36 p.m., a lunch recess  
6 was taken.)

7 - - -

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1                                   Thursday Afternoon Session,  
2                                   April 7, 2022.

3                                   - - -

4                                   ALJ AGRANOFF: Let's go back on the  
5 record at this time.

6                                   And, Mr. Secrest, are you ready to call  
7 Mr. O'Neal?

8                                   MR. SECREST: Yes, your Honor. May the  
9 Applicant call Robert O'Neal?

10                                  ALJ AGRANOFF: I believe Mr. O'Neal has  
11 been promoted already. I just need to see him on the  
12 screen. Micah, is Mr. O'Neal --

13                                  MR. SCHMIDT: Yeah. Mr. O'Neal, if you  
14 could say something so your picture pops up on  
15 everybody's screen.

16                                  MR. O'NEAL: Yes, good afternoon,  
17 everybody. This is Robert O'Neal.

18                                  ALJ AGRANOFF: There you are. Good  
19 afternoon.

20                                  MR. O'NEAL: Good afternoon.

21                                  ALJ AGRANOFF: If you could please raise  
22 your right hand, sir.

23                                  (Witness sworn.)

24                                  ALJ AGRANOFF: Thank you. Please  
25 proceed, Mr. Secrest.

1 MR. SECREST: Thank you, your Honor.

2 - - -

3 ROBERT O'NEAL

4 being first duly sworn, as prescribed by law, was  
5 examined and testified as follows:

6 DIRECT EXAMINATION

7 By Mr. Secrest:

8 Q. Good afternoon, Mr. O'Neal.

9 A. Good afternoon.

10 Q. Will you please state your full name for  
11 the record and let us know by whom you are employed.

12 A. My name is Robert O'Neal, O-'N-E-A-L, and  
13 I am employed by Epsilon Associates, Incorporated.

14 Q. Thank you. Do you have copies of your  
15 direct testimony and supplemental direct testimony in  
16 front of you?

17 A. Yes, I do.

18 MR. SECREST: All right. Your Honor, may  
19 I move to have Mr. O'Neal's direct testimony marked  
20 as Applicant Exhibit 25?

21 ALJ AGRANOFF: It shall be so marked.

22 (EXHIBIT MARKED FOR IDENTIFICATION.)

23 MR. SECREST: Thank you. And may I mark  
24 as Applicant Exhibit 25A Mr. O'Neal's supplemental  
25 direct testimony?

1 ALJ AGRANOFF: That will be marked as  
2 well.

3 (EXHIBIT MARKED FOR IDENTIFICATION.)

4 MR. SECREST: Thank you.

5 Q. (By Mr. Secrest) Mr. O'Neal, Applicant  
6 Exhibit 25 and 25A, are those true and accurate  
7 copies of your direct testimony and supplemental  
8 direct testimony?

9 A. Yes, they are.

10 Q. Thank you. Do you have any revisions to  
11 either one of -- either your direct testimony or  
12 supplemental direct testimony?

13 A. I do not have any revisions to either  
14 one.

15 Q. Thank you. If the same questions that  
16 are set forth in Applicant Exhibit 25 and 25A were  
17 asked to you today, would your answers be the same?

18 A. Yes, they would.

19 MR. SECREST: Great. Thank you.

20 Mr. O'Neal is available for  
21 cross-examination, your Honor.

22 ALJ AGRANOFF: Thank you.

23 Mr. Van Kley.

24 MR. VAN KLEY: Thank you, your Honor.

25 - - -

CROSS-EXAMINATION

By Mr. Van Kley:

Q. And good afternoon, Mr. O'Neal.

A. Good afternoon.

Q. What have you done to prepare for your testimony today?

A. I have reviewed Exhibit L, the sound report, as well as my testimony and responses to Data Requests from OPSB Staff.

Q. Have you ever visited the project area for this case?

A. I have not.

Q. So you were not the person then who set up the sound measuring equipment to measure the background sound in the project area for this case?

A. I was not the one who did the actual set up, no. I directed them, but I didn't do it.

Q. How did you direct them to set up that equipment?

A. Mr. Chris Hoyt was the one who actually set it up, and he and I consulted and worked together, looked at a map of the area, had a conversation about the places to set up sound millimeters.

Q. How did you determine where to set up the

1 sound measuring equipment to measure the ambient  
2 sound of the project area?

3 A. Generally speaking we use the ANSI  
4 standard that recommends a deterministic spacial  
5 sampling of the sound millimeters which, in other  
6 words, we try to put them at various locations within  
7 the project site both north, south, east, west of the  
8 project site, and then specifically we try to put  
9 them at locations which are representative of homes  
10 in the area.

11 Q. Did you take into account the sources of  
12 sound in the various portions of the project area to  
13 determine whether to set up your sound measurement  
14 equipment in those locations?

15 A. Perhaps you could clarify what you mean  
16 by the various sources of sound. You mean from the  
17 proposed Harvey Solar project?

18 Q. No. I am talking about the existing  
19 sound sources in the area such as traffic on roads  
20 and farm equipment and other sources that are already  
21 there.

22 A. We don't necessarily try to set them up  
23 to take that into account. I mean, they are part of  
24 the environment today. We take -- the equipment is  
25 set up more to represent what people in the community

1 are currently experiencing so how far back they are  
2 from the roads, things like that. And as -- in the  
3 course of doing that, of course, there's going to be  
4 some contributions from some traffic noise and some  
5 farming equipment noise and, you know, natural  
6 phenomena.

7 Q. How many sound measurement locations did  
8 you use for the ambient sound measurements?

9 A. Six.

10 Q. Did you have any other sound stations in  
11 the project area other than those that you reported  
12 in the application?

13 A. No, just those six.

14 Q. At any other time besides the time where  
15 these six were being monitored, have you done any  
16 monitoring of sound in the project area?

17 A. No, just the time that's reported in  
18 Exhibit L.

19 Q. Were all six of the monitoring locations  
20 located along public roads?

21 A. I mean, we can go to the report and look  
22 at the figure that shows the locations. To some  
23 degree, yes, they are located adjacent to public  
24 roads, but they are certainly not right next to the  
25 public roads. We need to have some kind of access to

1 walk into the fields or yards where we are going to  
2 place the equipment, so we need the roads to get  
3 there, but they are not located immediately adjacent  
4 to the roads.

5 Q. All right. Why don't you direct me to  
6 whatever information you believe is best to identify  
7 the locations of the monitoring stations in the  
8 application and we will take a look together at that.

9 A. Certainly. I guess I would direct you to  
10 Figure 5-1 and it is a map of the project area and  
11 shows the six measurement locations.

12 Q. Is there a page number for that figure?

13 A. It follows page 5-1.

14 Q. And we are in Exhibit L to the  
15 application, correct?

16 A. That is correct.

17 MR. VAN KLEY: All right. That is PDF  
18 page 14 for those who are looking at these documents  
19 online.

20 Q. All right. And looking at Figure 5-1,  
21 the locations of the sound monitoring stations are  
22 designated by ML numbers; is that correct?

23 A. That is correct.

24 Q. Can you tell me the longest distance for  
25 any of these monitoring stations between the station



1 and the nearest road?

2 A. The longest distance? I can't tell you  
3 that exactly. If you look at some of the photographs  
4 that are in the report and I believe were provided in  
5 discovery, you can see that they are -- they are set  
6 back quite some distance, in some cases, you know,  
7 hundreds of feet.

8 Q. Which of the locations do you believe was  
9 hundreds of feet away from the nearest road?

10 A. ML2 was.

11 Q. Any others?

12 A. So the ML6 was at least 100 feet back  
13 from the road. ML4 similarly, at least 100 feet  
14 back. Location 1, 75 to 100 feet back from the road.  
15 Again, these are in compliance with the ANSI  
16 standard.

17 ALJ AGRANOFF: And the acronym ANSI?

18 THE WITNESS: Sorry. The American  
19 National Standard Institute.

20 ALJ AGRANOFF: Thank you.

21 Q. (By Mr. Van Kley) All right. What about  
22 the other two stations? How far are they from the  
23 nearest road?

24 A. They are more than 50 feet back from the  
25 nearest road. I can't give the precise exact feet.

1           Q.    So for ML2 you stated that it's hundreds  
2 of feet from the road. Can you tell me how many  
3 hundreds of feet approximately from the road it was  
4 located?

5           A.    I cannot, no.

6           Q.    For any of these monitoring stations, was  
7 there a building located in direct line of sight  
8 between the nearest road and the monitoring station?

9           A.    No, there wasn't.

10          Q.    Were any of these monitoring stations set  
11 up in a residential backyard?

12          A.    Yes.

13          Q.    Do you remember which one or ones?

14          A.    Well, if you go to page 5-3, which is  
15 page 15 of the PDF, it does give a description for  
16 each of the six locations, for example, location 1 is  
17 at the residence of 15218 Downing Road, for example.  
18 Location 3 is also part of a residential yard. And  
19 again, I can go through all six if you would like but  
20 there is a description of each of the six there in  
21 the report.

22          Q.    Well, I guess my question was whether any  
23 of these monitoring stations were set up in the  
24 backyard of a residence. And I don't see that  
25 information on page 5-3 of Exhibit L to the

1 application.

2 A. It's -- sorry. So I would -- I see what  
3 you are saying, I think. So, no, they were not in  
4 the backyard; in other words, they were not hidden  
5 behind the house. They were generally in the side  
6 yard.

7 Q. It's common for people to relax or have  
8 recreational activities in their backyards, right?

9 A. Probably not going to disagree with you  
10 on that, sure.

11 Q. And so isn't it true that in somebody's  
12 backyard where the house is in the direct line of  
13 sight between the backyard and the road, that the  
14 presence of the house will reduce the amount of noise  
15 heard from the road while somebody is in the  
16 backyard?

17 A. The house will tend to shield any sound  
18 that comes from traffic driving by on the road, yes.  
19 However, there are certainly other sources of sound  
20 in the area which are not necessarily shielded by the  
21 house. That's really only going to apply to traffic  
22 sound.

23 Q. I would like to direct you to another  
24 exhibit that's been marked in this case, and I  
25 believe that the exhibit number is Applicant

1 Exhibit 7 which would be the second supplemental  
2 response to second data request from Staff of the  
3 Ohio Power Siting Board.

4 A. Yes, I have that in my hands.

5 Q. And you recognize this document, don't  
6 you?

7 A. Yes, I do.

8 Q. This is an update to Exhibit L that you  
9 prepared?

10 A. Yes.

11 Q. All right. And if you look at page 1 of  
12 the memorandum in that exhibit.

13 A. Yes.

14 Q. I would like to refer you to the sentence  
15 that starts on the sixth line on that page. And  
16 there you state that -- or this report states that  
17 "All six of the measurement locations for the -- for  
18 Harvey Solar meet the definition of a quiet  
19 residential area," correct?

20 A. Yes.

21 Q. And the definition of a quiet residential  
22 area was taken from the ANSI standard that is  
23 identified in that sentence?

24 A. That's correct.

25 Q. And what is a quiet residential area as

1 defined in that standard?

2 A. I believe we can get the standard out to  
3 confirm this; I believe it is that you must have two  
4 or more hours per day of sound levels 30 decibels or  
5 less. But that's subject to check with the standard.

6 Q. Let's go to page 3 of Applicant's Exhibit  
7 7.

8 A. Okay.

9 Q. I would like to direct your attention to  
10 the third paragraph on that page under "Executive  
11 Summary."

12 ALJ AGRANOFF: And just so that we are  
13 clear, Mr. Van Kley, this is page 3 of the  
14 memorandum, not page 3 of the exhibit itself.

15 MR. VAN KLEY: That's correct, your  
16 Honor.

17 ALJ AGRANOFF: Okay.

18 Q. (By Mr. Van Kley) All right. And  
19 directing your attention to the sentence starting on  
20 the sixth line of that paragraph, do you see where it  
21 states that the "Average daytime ambient ANS-weighted  
22 sound levels (Leq) in the Project Area range from 38  
23 to 49 dba"?

24 A. Yes.

25 Q. And then the last part of that sentence

1 states that as a result of daytime benchmarks of 43  
2 to 54 dBA?

3 A. Yes.

4 Q. And those figures were based on the  
5 addition of 5 dBA to the ambient A-weighted sound  
6 levels of 38 to 49 dBA?

7 A. That is correct.

8 Q. Now, when you applied the day -- the  
9 daytime benchmarks of 5 dBA above the ambient sound  
10 levels, did you utilize the average of those ambient  
11 sound levels for the entire project area, or did you  
12 break it down to the six locations of the monitoring  
13 stations?

14 A. So it was location by location, so it was  
15 the average just for location 1 and then just for  
16 location 2. It was not average sitewide over all six  
17 locations.

18 Q. And how did you divide the project area  
19 up into the six regions that would be governed by  
20 each of the six monitoring station levels?

21 A. As I mentioned earlier, it was based  
22 somewhat on being in different parts of the project  
23 area, some to the north, some to the south, some to  
24 the east, and some to the west, so it is a spacial  
25 distribution to the project area.

1           Q.    So if you were looking at which  
2 monitoring station would set the standard for a  
3 specific receptor, did you use the monitoring station  
4 that was the closest to that receptor?

5           A.    Yes.

6           Q.    Directing your attention to the last  
7 paragraph on page 3 of the memorandum, Applicant's  
8 Exhibit 7, there is a reference to a receptor with  
9 the ID No. 246, correct?

10          A.    Yes.

11          Q.    And that receptor was a residence; is  
12 that correct?

13          A.    That's correct.

14          Q.    And since the time of the report that is  
15 included in Applicant's Exhibit 7, the substation  
16 location has been moved further away from receptor  
17 No. 246; is that correct?

18          A.    That is correct.

19          Q.    Do you know what the distance between the  
20 current location for the substation and that receptor  
21 is?

22          A.    I do, and I will direct you to  
23 Applicant's Exhibit 10 -- excuse me, Applicant's  
24 Exhibit 10.

25          Q.    January 24, 2022 --

1           A.    Yes.  It's the Fourth Supplemental  
2   Response to Second Data Request from the Staff.  That  
3   has that information in there so we can take a minute  
4   and try to find that.

5           Q.    Why not?

6           A.    So, yes, if you go to page 1 of the memo,  
7   second paragraph, there is a sentence that talks  
8   about receptor ID number 246 now being approximately  
9   1,020 feet away from the substation.

10          Q.    Is receptor 246 the closest house to the  
11   area that is currently planned for the location of  
12   the substation?

13          A.    So with the -- with the new substation  
14   location, there is a second receptor, receptor  
15   No. 245, which you can see here in the same memo  
16   which will be slightly closer.  It will be 1,013 feet  
17   away from the substation.

18          Q.    Is it your understanding that with these  
19   supplements that we've been discussing here that the  
20   application now promises to put the substation in the  
21   location that is identified in Applicant's Exhibit  
22   10?

23          A.    That is my -- excuse me.  That is my  
24   understanding, yes.

25          Q.    Let's go back to Applicant's Exhibit 7.



1 Let's go to page 5 of the memorandum in that exhibit.

2 A. Okay.

3 Q. And I would like to direct your attention  
4 to Table 5-2 on that page. And this is a table of  
5 the "Averaged Ambient Sound Levels" for the six  
6 monitored stations, correct?

7 A. That's correct.

8 Q. And this is -- is this the current  
9 information for those monitoring stations?

10 A. Yes, it is.

11 Q. And Table 5-2 provides the averaged  
12 ambient sound levels based on an ANSI method, right?

13 A. Yes. That -- that ANSI method that was  
14 cited earlier.

15 Q. And that was done at the request of the  
16 Staff, right?

17 A. That's correct.

18 Q. What's the difference or differences, if  
19 any, between the methodology you used to produce the  
20 data in Table 5-2 of this exhibit as contrasted to  
21 the data that was provided in Exhibit L to the  
22 application?

23 A. Sure. Probably the best way to answer  
24 that question is to look at Table 5-2 in Exhibit L  
25 which is page 20 of the PDF. And then from there you

1 can -- you can do a quick comparison between that  
2 table and then the table here in Exhibit 7 that has  
3 the ANS weighting in it.

4 Q. Yeah. So my question is what was the  
5 difference in the methodology between the two  
6 analyses that produced the differences in the data?

7 A. Sorry. I didn't understand the question.  
8 Okay.

9 Q. No problem.

10 A. So with this -- this ANS weighting  
11 does -- is it -- it mathematically removes all sound  
12 above a thousand hertz so anything in the high  
13 frequencies is removed and then the sound level is  
14 recalculated with just the remaining 1,000 hertz and  
15 below frequencies. So that traditionally has  
16 filtered out insect noise. That's one of the biggest  
17 reasons you might apply this ANS weighting. It  
18 filters out insects and, you know, crickets, things  
19 like that.

20 Q. And the reason for -- for filtering out  
21 the insect noise is because insect noise is not  
22 present at all times of the year, correct?

23 A. That -- that is fair. That is one of the  
24 reasons that you would -- the reason you would do it,  
25 right, because, I mean, those sound levels are the

1 real sound levels in October when we were there and  
2 some other months of the year. But in different  
3 times of the year when the insects are not there,  
4 then the sound levels will be different and that's  
5 the purpose of doing that ANS weighting.

6 Q. All right. And going back to Table 5-2  
7 on page 5 of the memorandum attached to Applicant's  
8 Exhibit 7, I see that the Leq for daytime only for  
9 Station ML3 is 49 dBA, correct?

10 A. Correct.

11 Q. And the Leq for daytime only for station  
12 ML5 is 38, right?

13 A. That's correct.

14 Q. What was the -- the reason for the  
15 difference between the 38 found at one station and  
16 the 49 dBA found at another station?

17 A. To be definitive we need to go look at  
18 the field notes taken for each of those locations. I  
19 just don't remember each of them specifically  
20 offhand. But it's not unusual in a project area like  
21 this you are going to have some variation in sound  
22 levels. You have different -- different agricultural  
23 activity, different vehicular noise perhaps. So  
24 three -- it is not surprising it would have some  
25 difference. There was also fan noise from -- from

1 silos and grain drying going on. So there's a  
2 variety of different sources.

3 Q. Is there more road noise at ML3 than  
4 there was at ML5?

5 A. I don't recall.

6 Q. And we see the same thing for the day --  
7 the nighttime Leq only data where we have 29 dBA at  
8 ML5 and 38 dBA at ML3, correct?

9 A. Correct.

10 Q. You can set aside Applicant's Exhibit 7.  
11 Are there any sources of sound that will be produced  
12 by the Harvey Solar project that will be occurring at  
13 night?

14 A. The transformer at the collector  
15 substation will run at night.

16 Q. Is it your understanding that there may  
17 be any operation of the inverters at night?

18 A. My understanding is that does -- they are  
19 not going to run at night if there's no sol -- if the  
20 sun isn't shining, the inverters are not running at  
21 any appreciable level.

22 Q. Do you know whether it is anticipated  
23 that there will be any sound produced by the  
24 inverters at night?

25 A. There may be some -- well, there may be

1 some slight sound from having them energized but my  
2 understanding on how this equipment works is that it  
3 will be nothing compared to -- you know, relatively  
4 speaking, nothing compared to daytime sound levels  
5 which is what we looked at.

6 Q. What's the basis for the statement you  
7 just made?

8 A. Conversations with the Harvey Solar team.

9 Q. So did you take a look at any sound power  
10 data or any other technical data that confirmed what  
11 the solar team was telling you?

12 A. There was -- there was no sound power  
13 data for anything that would go on at night in my  
14 expectations because that's not significant but I  
15 don't have sound power data, no.

16 Q. Did you do any modeling to figure out the  
17 amount of noise that would come from the inverters at  
18 night if they were energized?

19 A. No such data exists that we are aware of.

20 Q. Did you do any analyses to show -- okay.  
21 Let me ask a different question.

22 If the inverters were producing the same  
23 amount of sound at night as they produce during the  
24 day, would that result in sound levels above -- that  
25 are higher than 5 dBA above the ambient sound levels

1 at night for the project area?

2 A. Well, I guess I don't -- I guess the  
3 question doesn't make sense to me but that's the way  
4 they work. They don't run the same at night as  
5 during the day.

6 Q. Yeah. Well, let's assume that they do.  
7 Let's assume that they did produce the same amount of  
8 noise at night as they do during the daytime. Would  
9 that result in any sound levels higher than 5 dBA  
10 above the ambient background level for the project  
11 area?

12 MR. SECREST: Object to relevance. He  
13 already testified they don't.

14 MR. VAN KLEY: Well, I don't think he  
15 really knows. All he has is the word of the solar  
16 team.

17 MR. SECREST: Well, you can explore that,  
18 but I don't think your question is proper when he  
19 responded it's not expected to run the same at night.

20 MR. VAN KLEY: I gave him a hypothetical.

21 ALJ AGRANOFF: Mr. Van Kley, why don't  
22 you see whether or not you can lay the foundation as  
23 to what his knowledge of the nighttime operation is  
24 or is not.

25 MR. VAN KLEY: Yeah. I think I have

1 already done that, your Honor, but I can explore that  
2 a little bit more.

3 Q. (By Mr. Van Kley) Mr. O'Neal, is the only  
4 information you have about the amount of noise that  
5 may be produced by the inverters at night -- is the  
6 full extent of your information about that what the  
7 Harvey Solar team told you about the operation at  
8 night?

9 A. So as part of doing these sound studies,  
10 we get technical data from the manufacturer of the  
11 inverters and what they provide, they provide for the  
12 full operation of the inverter which is what we put  
13 into the sound model. They don't provide anything  
14 that -- that's insignificant or is not a -- not  
15 contributed to the overall sound levels. They gave  
16 us one lump sum, if you will, of the total sound. So  
17 based on the technical sheets we have from the  
18 manufacturer and conversations with Harvey Solar is  
19 how I came to my opinion.

20 Q. So just to break that down a bit, you  
21 don't have any technical data that you could use to  
22 determine the sound level from the inverters at  
23 night?

24 A. If they were significant at all, the  
25 manufacturer would -- would supply that information.

1 I take the fact they don't supply that information to  
2 mean that they are either zero or insignificant.

3 Q. So that's an assumption on your part.  
4 There haven't been any statements that you have seen  
5 from any of the manufacturers that have informed you  
6 specifically that the noise at night is nonexistent  
7 or insignificant; is that correct?

8 A. That's correct. That's correct.

9 Q. Are you aware of whether there are any  
10 other applications filed for solar facilities before  
11 the Ohio Power Siting Board that have assumed for  
12 modeling purposes that the sound from the inverters  
13 that are energized at night is the same as the volume  
14 of sound coming from the inverters during the  
15 daytime?

16 MR. SECREST: Objection, relevance.

17 MR. VAN KLEY: It's relevant. If it's  
18 being modeled that way in other applications, then  
19 there must be -- at least some of the other solar  
20 companies must believe that the sound coming from the  
21 inverters at night is significant, or they wouldn't  
22 be modeling that way.

23 MR. SECREST: You are asking about other  
24 projects developed by other Applicants with potential  
25 different models of inverters.



1 MR. VAN KLEY: I don't think that makes  
2 any difference.

3 MR. SECREST: That's three big  
4 differences right there.

5 MR. VAN KLEY: There is three non --  
6 non-differences right there.

7 ALJ AGRANOFF: I will allow the  
8 fundamental question to be answered.

9 A. I am not aware of that in other  
10 applications.

11 Q. Now, you modeled the noise coming from  
12 the project as expected to occur during daytime  
13 hours, correct?

14 A. Correct.

15 Q. Can you give me a general overview of how  
16 you conducted that modeling?

17 A. Yes. Again, I direct you to Exhibit L.  
18 Page 6-2, which is page 23 of the PDF, has a  
19 discussion of the modeling methodology that was used  
20 for the project.

21 Q. All right. Directing your attention to  
22 that page then, let's take a look at the first bullet  
23 point under Section 6.2 titled "Modeling  
24 Methodology." And that bullet point is titled  
25 "Project Layout." Do you see that?

1           A.     I do.

2           Q.     And it says there "A Project layout was  
3 provided by the Project Company on July 2, 2021,"  
4 correct?

5           A.     Yes.

6           Q.     Can you direct me to a copy of that  
7 layout either in Exhibit L or some other part of the  
8 application?

9           A.     So that layout is shown on the next page  
10 in Figure -- Figure 6-1. And Figure 6-1 is a series  
11 of inset maps that go with it.

12          Q.     And do you know whether the map in  
13 Figure 6-1 was taken from the preliminary site design  
14 in the application?

15          A.     I can't know that, no, as provided by  
16 Harvey Solar.

17          Q.     So in your model you used the locations  
18 of the inverters provided to you by the Company on  
19 Figure 6-1; is that correct?

20          A.     That is correct.

21          Q.     Okay. Did you model the amount of noise  
22 that would be predicted from an inverter that is  
23 500 feet away?

24          A.     I'm not sure I understand the question.  
25 In other words, wherever the inverters are located as

1 shown here in Figure 6-1, we modeled every one of  
 2 those, all 103, as if they are running simultaneously  
 3 at full power to whatever distance every single one  
 4 of those homes is as shown there so whatever that  
 5 distance is they were modeled at.

6 Q. So am I understanding that correctly that  
 7 you did not model the distance from -- did you not  
 8 model the inverter noise from a distance of 500 feet?

9 A. Not explicitly, no. If there was a home  
 10 500 feet from an inverter, then it got modeled that  
 11 way. Otherwise it got modeled the exact distance  
 12 every home was from every inverter.

13 Q. Are you familiar with what a tracker  
 14 motor is relative to a solar project?

15 A. Yes, I am.

16 Q. Tracker motors make sounds, right?

17 A. They make some sound, yes.

18 Q. Was tracker motor sound incorporated into  
 19 the model that you ran for this project?

20 A. The tracker motor sound data, the limited  
 21 sound data that's out there shows those sounds to be  
 22 so much lower than the inverter sound that they could  
 23 be ignored for purposes of the sound model.

24 Q. How low does the sound have to be below  
 25 the inverter sound in order to be disregarded in that

1 fashion?

2 A. Again, these -- these are generally so  
3 quiet that -- that manufacturers don't provide a lot  
4 of data. The few pieces of data I have seen in the  
5 industry have shown them to be about 20 decibels  
6 quieter than the inverter sound or lower.

7 Q. Do you have an understanding as to  
8 whether or not the application requires the sound  
9 model for the project to be conducted again if any of  
10 the inverter locations used in the model provided in  
11 Exhibit L are changed?

12 A. I'm just pulling up the Joint Stipulation  
13 and Recommendation to refresh my memory on that -- on  
14 that question before I answer it.

15 MR. SECREST: Just to be clear for the  
16 record though the question was whether the  
17 application contains any requirement.

18 Q. That's correct. Mr. Secrest is correct.

19 A. No, it doesn't.

20 Q. All right. I have no more questions.

21 Oh, wait a minute. Just a second. I  
22 might have missed a sheet of questions. You had some  
23 discussion about mitigation for inverters in Exhibit  
24 L, correct?

25 A. Technically, no. There was a discussion

1 about -- well, let me back up on that. Maybe you  
2 could show me where in Exhibit L that comes up.

3 Q. Well, I don't think that will be  
4 necessary. Let me just rephrase the question to make  
5 it go faster. Can you -- there are ways to mitigate  
6 noise from an inverter if the noise is found to be  
7 bothersome to the neighbors, correct?

8 A. Yes.

9 Q. And what types of mitigation are  
10 available for that purpose?

11 A. Generally it would be putting up a small  
12 barrier around the inverter if it was necessary.

13 Q. Is that a barrier that needs to go all  
14 the way around the inverter, or could it just be one  
15 wall located between the inverter and the receptor?

16 A. I've seen it doesn't -- I've seen just a  
17 single wall. You can also do a three-sided wall. It  
18 really depends on what direction or directions you  
19 are trying to mitigate in.

20 Q. So as long as you have a barrier wall  
21 between the receptor and the inverter, that would  
22 accomplish the purpose of reducing a noise?

23 A. Well, with the usual caveats that any  
24 engineer will give you, if it's properly designed and  
25 so forth, yes.

1           Q.    Okay.  Are there other means of  
2 mitigating sound from inverters that are just as  
3 effective as a barrier wall?

4           A.    Well, if you are asking about once a  
5 project is constructed, then, no, that barrier would  
6 be -- would be the really one option that you have.

7           Q.    So you can't put a device on the -- on an  
8 outlet for the noise coming out of an inverter, for  
9 example, after it's been constructed to reduce the  
10 amount of noise coming out of it?

11          A.    There -- there could be if the cooling --  
12 if the cooling fan noise is a significant part of it,  
13 some manufacturers do offer baffles or hoods which  
14 can also reduce sound from that piece of the  
15 equipment.

16          Q.    Those types of mitigation devices are  
17 only available for certain models of inverters?

18          A.    That -- that is what I have seen, yes.

19          Q.    And if you put up a barrier wall between  
20 the inverter and the receptor, how much of a  
21 reduction in the decibel level can be accomplished by  
22 using that type of mitigation?

23          A.    I guess before I answer that question, I  
24 would just like to put this into context.  The sound  
25 from inverters at any of the homes in this project

1 area are 35 decibels or less, so I don't -- I don't  
2 know that -- I don't know why you would even  
3 entertain putting up -- needing a barrier for  
4 something like this.

5 That being said, if you -- if you install  
6 the barrier around an inverter, you could expect to  
7 get 5 to 10 decibels of reduction pretty easily.

8 MR. VAN KLEY: All right. I have no more  
9 questions at this time.

10 ALJ AGRANOFF: Any cross from Hartford  
11 Township?

12 MS. CARNES: No, your Honor.

13 ALJ AGRANOFF: Any clarifying questions  
14 from the signatory parties to the Stipulation?

15 Mr. Secrest, redirect?

16 MR. SECREST: May I have 3 minutes, your  
17 Honor?

18 ALJ AGRANOFF: Sure. Why don't you take  
19 5.

20 MR. SECREST: Perfect. Thank you.

21 ALJ AGRANOFF: We will come back at 2:40.  
22 Thanks.

23 (Recess taken.)

24 ALJ AGRANOFF: So back on the record at  
25 this time.

1                   Mr. Secrest, the status of your redirect?

2                   MR. SECREST: There is none, your Honor.

3 Thank you.

4                   ALJ AGRANOFF: Okay. Judge Hicks, do you  
5 have any questions?

6                   ALJ HICKS: No questions.

7                                   - - -

8                                   EXAMINATION

9 By ALJ Agranoff:

10                  Q. I have just one question where I am  
11 trying to understand. If you could take a look,  
12 Mr. O'Neal, at page 4 of your direct testimony. Let  
13 me know when you are there.

14                  A. Yes, I'm there.

15                  Q. Okay. And specifically line 23 where  
16 there is a discussion about sound measurements being  
17 taken at a total of six locations?

18                  A. Yes.

19                  Q. Okay. And then I am trying to understand  
20 the correlation between the six locations referenced  
21 in your direct testimony with the reference to it's  
22 in Appendix L of the application 6-2.

23                  A. Did you say Figure 6-2 or page?

24                  Q. Page, page.

25                  A. Okay. Okay. I'm there.



1           Q.    And under the modeling receptor  
2 locations.

3           A.    Yes.

4           Q.    The discussion of the 1,191.

5           A.    Correct.  Yeah, I see that.

6           Q.    So what is the connection between the six  
7 locations and the 1,191 receptors?

8           A.    So the six locations where we -- those  
9 are the locations where we actually sent out the  
10 sound level meters and took existing condition sound  
11 level measurements for a week, basically  
12 pre-construction existing sound level measurements.  
13 Whereas, the 1,191 receptors, those are -- as you go  
14 to the next page in Figure 6-1, those are all the  
15 yellow dots that you see there and those were all the  
16 homes and sensitive receptors that we modeled the  
17 project's impacts at.

18                    So if you look at that Figure 6-1, those  
19 yellow dots represent every one of the homes in the  
20 area around those -- there are 1,191 of those.  So  
21 those are the future predicted sound levels at those  
22 locations where we measured sound levels  
23 pre-construction today at six locations in the area.

24           Q.    Okay.  Thank you for that clarification.

25           A.    Absolutely.

1 ALJ AGRANOFF: With my limited question  
2 is there any follow-up from counsel?

3 MR. VAN KLEY: No, your Honor.

4 MR. SECREST: No, thank you, your Honor.

5 ALJ AGRANOFF: Okay. Thank you very  
6 much.

7 Mr. Secrest, care to move the admission  
8 of the two exhibits?

9 MR. SECREST: Please. May the Applicant  
10 move for admission of Applicant Exhibit 25 and 25A?

11 ALJ AGRANOFF: Any objections?

12 There being none, the aforementioned  
13 exhibits shall be admitted as part of the record.

14 (EXHIBITS ADMITTED INTO EVIDENCE.)

15 ALJ AGRANOFF: And at this point in time  
16 is the Applicant ready to call its next witness?

17 MR. SECREST: We are, your Honor. We  
18 will be calling Mr. Woods. However, Mr. Lockshaw  
19 will be handling that witness, so may we just have a  
20 few moments to switch up seats?

21 ALJ AGRANOFF: Sure.

22 MR. SECREST: Thank you.

23 MR. LOCKSHAW: Your Honor, I believe  
24 we're ready.

25 ALJ AGRANOFF: Okay. At this point in

1 time if the Applicant could please call their next  
2 witness.

3 MR. LOCKSHAW: Thank you, your Honor.  
4 The Applicant calls John Woods to the stand.

5 ALJ AGRANOFF: If we could please promote  
6 Mr. Woods. I do see you. Good afternoon, Mr. Woods.

7 MR. WOODS: Good afternoon.

8 ALJ AGRANOFF: If you could please raise  
9 your right hand.

10 MR. WOODS: It is.

11 ALJ AGRANOFF: Now I see it.

12 (Witness sworn.)

13 ALJ AGRANOFF: Thank you.

14 Please proceed, Mr. Lockshaw.

15 MR. LOCKSHAW: Thank you, your Honor.

16 - - -

17 JOHN WOODS

18 being first duly sworn, as prescribed by law, was  
19 examined and testified as follows:

20 DIRECT EXAMINATION

21 By Mr. Lockshaw:

22 Q. Mr. Woods, could you please state your  
23 full name for the record.

24 A. John Woods.

25 Q. Mr. Woods, I am going to pass you your

1 direct testimony and supplemental testimony. Can you  
2 please look those over.

3 A. They appear to be accurate.

4 MR. LOCKSHAW: Your Honor, I would like  
5 to mark Mr. Woods' direct testimony as Applicant's  
6 Exhibit 28 and his supplemental testimony Applicant's  
7 Exhibit 28A.

8 ALJ AGRANOFF: They shall be so marked.

9 (EXHIBITS MARKED FOR IDENTIFICATION.)

10 MR. LOCKSHAW: Thank you.

11 Q. (By Mr. Lockshaw) Mr. Woods, are those  
12 true and accurate copies of your direct testimony and  
13 your supplemental direct testimony?

14 A. Yes.

15 Q. Thank you. Do you have any revisions to  
16 make to your testimony, the written testimony?

17 A. I do not.

18 Q. If the same questions were asked of you  
19 today that are in the written testimony, would your  
20 answers be the same?

21 A. Yes, they would.

22 MR. LOCKSHAW: Thank you.

23 Your Honors, with that Mr. Woods is now  
24 available for cross-examination.

25 ALJ AGRANOFF: Thank you.

1                   Mr. Van Kley.

2                   MR. VAN KLEY: Thank you, your Honor.

3                                 - - -

4                                 CROSS-EXAMINATION

5       By Mr. Van Kley:

6               Q.    And good afternoon, Mr. Woods.

7               A.    Good afternoon.

8               Q.    You have discussed what you've referred  
9       to as the preliminary landscape plan which is  
10      contained in Exhibit 10 -- yeah, 10 -- or X, I guess.  
11      I was reading it as Roman numeral X so let me start  
12      over again.

13                   You're familiar with Exhibit X of the  
14      application, correct?

15              A.    Yes.

16              Q.    Did you prepare that document?

17              A.    Yes. My -- me and my colleagues, yes.

18              Q.    What was your personal role in preparing  
19      it?

20              A.    I'm the project manager.

21              Q.    Did you actually write any of it  
22      yourself?

23              A.    I was responsible for writing the  
24      narrative that went along with it in addition to  
25      overseeing the development of the plans.

1 Q. This plan is not final yet, correct?

2 A. That's correct, preliminary.

3 Q. Yeah. So it's subject to change after  
4 the certificate has been issued?

5 A. Indeed.

6 Q. Let's go to page 4 of your testimony.

7 A. Okay.

8 Q. Does the preliminary landscaping plan  
9 identify the levels of planting modules that will be  
10 placed in each location near the project area?

11 A. Does it identify the level?

12 Q. Yeah. Does it identify -- does it  
13 identify the level of module that will be placed in  
14 the locations, that is, if you look at -- if you look  
15 at your landscaping plan and your homeowner who is  
16 living near the project area, would you be able to  
17 tell from your landscaping plan what, if any,  
18 planting module is planned for near your residence?

19 A. You should be able to do that, yes.

20 Q. And how would you do that?

21 A. You would use the color-coded system  
22 which is a series of graphic bars that are running  
23 in -- on the plan, they are located on the plan which  
24 are then tied to the legend which is on each plan  
25 which indicates -- indicates the mix or the level of

1 density for each area or each module. You would then  
2 go further into the document to identify what is in  
3 each module.

4 Q. And that information, like the rest of  
5 the plan, is subject to change after the certificate  
6 is issued; is that right?

7 A. That's my understanding, yes.

8 Q. So how did you decide which areas to  
9 install low density planting when you put together  
10 the preliminary landscaping plan?

11 A. Low density planting would primarily be  
12 in areas furthest away from direct view from  
13 residential properties.

14 Q. And did you have a specific distance in  
15 mind when you decided where low density planting  
16 would occur?

17 A. Not a specific distance but generally  
18 when the arrays were provided to us, we used our best  
19 judgment to determine, you know, that distance, or it  
20 was in conversations with the Applicant to work with  
21 them back and forth in an iterative process to  
22 determine where we needed to put low density.

23 Q. Uh-huh. So if a house of a  
24 non-participating landowner is located 150 feet away  
25 from a solar array, which planting module would be

1 used in that situation?

2 A. I don't have a great sense of exactly  
3 what we would have used at 150 feet because it wasn't  
4 really measured that way, I guess. But 150 feet  
5 seems like it would be in the ballpark of a medium to  
6 medium high density.

7 Q. So directing your attention back to page  
8 4 of your testimony marked as Applicant Exhibit 28,  
9 let's go to the paragraph starting at line 20.

10 A. Okay.

11 Q. Where it states that "Medium-High Density  
12 planting module provides everything in the Medium-Low  
13 module, with the addition of shade trees for  
14 additional screening capac -- capability in areas  
15 that call for more screening." Do you see that?

16 A. I see it.

17 Q. So how do you determine whether the area  
18 needs more screening in order to justify a  
19 medium-high density module instead of a medium-low  
20 density module?

21 A. That would correlate to the proximity of  
22 the -- of the array to the -- or the fence line, in  
23 our case we are pretty much just working off the  
24 fence line in our work and the proximity of that to a  
25 house or a well-trafficked street. We would add



1 additional density. In this case it's in the form of  
2 shade trees, and shade trees are going to provide  
3 more diffusion of views of the arrays or homes that  
4 may have a second level to them.

5 Q. So where is the breaking point in  
6 distance between the residence and the solar arrays  
7 at which you would start employing medium-high  
8 density planting modules instead of using low density  
9 planting modules?

10 A. I don't really have a breaking point, you  
11 know. Like I said, we didn't really say, okay, the  
12 threshold is a certain number of feet. It was done  
13 in an iterative process with the Applicant based  
14 on -- and I don't know who was a -- I don't know who  
15 is a participating resident or non-participating  
16 resident while we are going through the exercise. So  
17 it's an iterative process with the Applicant and  
18 our -- we take, you know, our best judgment at it  
19 when we are looking at the plan and proximity.

20 Q. Can you tell me the approximate number of  
21 feet or miles or whatever metric of distance you want  
22 to use of the total linear footage of the planting  
23 modules that are being proposed?

24 A. I do not have a linear feet, I think, in  
25 my -- in our narrative, and I think it's in my

1 testimony we talked about approximately 55 acres. I  
2 don't know what that is in linear feet.

3 Q. Approximately how much of that 55 acres  
4 currently is designated to receive high density  
5 planting?

6 A. I don't know, but I believe I -- I  
7 believe that we thought that it was the majority fell  
8 into the medium -- high density and medium-high  
9 density, but I don't have a specific number.

10 Q. Was that medium-high density and  
11 medium-low density that you just mentioned where the  
12 majority of the acreage falls into?

13 A. No. I said medium-high density and high  
14 density.

15 Q. Oh, okay. Given the size of the trees  
16 that are proposed in the preliminary landscaping  
17 plan, at the time of planting, how long will it take  
18 for those trees to reach 15 feet in height?

19 A. It depends on which tree you are talking  
20 about.

21 Q. All right. Why don't you try to break it  
22 down for me. You are free to look back at your  
23 preliminary landscaping plan, if you wish.

24 A. I don't have that in front of me.

25 MR. LOCKSHAW: Your Honor, I am going to

1 object. I think it's too vague for him to answer the  
2 way it is asked. I think that counsel has to narrow  
3 it down to individual trees or the number of trees.

4 ALJ AGRANOFF: There's feedback coming  
5 off of your...

6 MR. VAN KLEY: All right. Yeah. I was  
7 hoping to do it a little quicker than that, but we  
8 can break it down and draw it out a little bit, if  
9 that's what counsel prefers.

10 Q. (By Mr. Van Kley) So why don't we go to  
11 your preliminary landscaping plan.

12 ALJ AGRANOFF: And just so that everybody  
13 is clear, what document are you referencing, either  
14 PDF or from?

15 MR. VAN KLEY: Exhibit X, the preliminary  
16 landscaping plan in the application.

17 MR. LOCKSHAW: Your Honor, if I could  
18 just have one moment to hand that to him.

19 ALJ AGRANOFF: Mr. Lockshaw, we are still  
20 getting feedback from your system.

21 A. Okay. I have the document in front of me  
22 now.

23 Q. All right. Good. Let's go to page L-20.  
24 I appreciate the fact that all of these pages are  
25 numbered sequentially. That will really help us

1 speed through the document. And there you will find  
2 the low density planting pollinator mix, correct?

3 A. Correct.

4 Q. And for this mix we have proposed some  
5 shrubs, correct?

6 A. Correct.

7 Q. And the size at planting identified for  
8 those shrubs is 18 inches to 24 inches in height,  
9 correct?

10 A. Yes.

11 Q. And those would be contained in a No. 3  
12 container; is that right?

13 A. Yes, approximately.

14 Q. Okay. What's the maximum height for the  
15 shrubs that are identified in this mix of plantings?

16 A. The maximum, it's going to vary. You can  
17 be looking at some of these getting up to 20 feet.

18 Q. Which ones -- which ones would reach  
19 15 feet or higher?

20 A. I don't have -- honestly I don't have all  
21 these materials memorized as far as their mature  
22 height.

23 Q. Well, can you tell me which, if any, of  
24 those shrubs listed here will reach 15 feet in  
25 height?

1           A.    I believe viburnum lentago, nannyberry,  
2   15 feet.

3           Q.    And how many years would it take that  
4   species of shrub if planted at a size of 18 to  
5   24 inches to reach 15 feet in height?

6           A.    It's really subject to conditions of the  
7   site year to year, how much watering it gets, how  
8   much rainfall it gets. It's really -- there's no  
9   real data out there that says this plant grows at  
10   this rate on this site. This site has -- if there  
11   was data out there, said a particular growth rate,  
12   how would we apply that to this particular site and  
13   these growing conditions?

14          Q.    Can you give me a range of the number of  
15   years that it would take to reach 15 feet in height?

16          A.    It would be a guess.

17          Q.    So you're not aware of any rules of thumb  
18   as to how many inches of height a nannyberry can grow  
19   in a year?

20          A.    I don't have a rule of thumb on that  
21   committed to memory, that's for sure.

22          Q.    In the low density planting pollinator  
23   mix, what is the spacing that will be used to  
24   separate the shrubs at the time of planting?

25          A.    For all the shrubs and small trees, we

1 space those basically at random to -- in the  
 2 simulations really. They weren't spaced out on a  
 3 regimented spacing at this point in the process for  
 4 preliminary planting design. So they were spaced  
 5 such that staff with a conservative effort to say  
 6 here is about how big that is in the simulations at  
 7 five years and then at eight years and spaced enough  
 8 of them in there to help diffuse the views of the  
 9 solar arrays. That's how that was done. I do know  
 10 that the trees, the shade trees, the larger material  
 11 were spaced at 40 feet apart, approximately.

12 Q. So the answer that you just gave me about  
 13 there being random spacing between the small trees  
 14 and the shrubs applies to all of the planting modules  
 15 in this plan?

16 A. Let's think. Yes. With respect to  
 17 anything that's not a shade tree, that would apply.

18 Q. Are any of the planting modules designed  
 19 to have a complete screen from view of the solar  
 20 project?

21 A. No. None of the modules have the type of  
 22 plant material and density to provide a complete  
 23 screen. The intent, as outlined in the testimony, is  
 24 to diffuse the views of the arrays.

25 Q. Let's go to page L-21 of Exhibit X.

1           A.    Okay.

2           Q.    And here we have lists of plant species  
3 for the other three modules of planting in the plan,  
4 correct?

5           A.    Yes.

6           Q.    Can you tell me the estimated growth rate  
7 for any of those species?

8           A.    I don't have an estimated growth rate for  
9 these offhand.

10          Q.    For any of these species, can you tell me  
11 how long it would take after planting for them to  
12 reach 15 feet in height?

13          A.    I can't say that for certain.

14          Q.    Let's go to page L-24. And here we have  
15 some simulations that are designed to depict the  
16 appearance of the planting modules in front of solar  
17 panels, correct?

18          A.    Yes.

19          Q.    And on page L-24, we have simulations for  
20 low density planting at periods of five years and  
21 eight years after planting the plants in that  
22 planting module, correct?

23          A.    Yes.

24          Q.    And the same is done for all of the other  
25 modules as well on that page and on page L-25,

1 correct?

2 A. Yes.

3 Q. Now, if you can't tell me how fast the  
4 plants will grow, then how did you come up with the  
5 heights of the plants you put in these simulations at  
6 the intervals of five years after planting and eight  
7 years after planting?

8 A. We used the conservative estimate of  
9 about a foot of growth per year.

10 Q. And is that --

11 A. It could be -- it could be greater than  
12 that, but we didn't want to show something that we  
13 didn't feel was achievable. We didn't want to  
14 overstep, you know, show, oh, this is going to  
15 completely, you know, block the views of the panels  
16 because it's really not something we can predict. We  
17 are showing something that we feel is a conservative  
18 representation.

19 Q. And was that figure of one year growth --  
20 or one foot growth per year used for all of the trees  
21 and shrubs in your modules?

22 A. I believe so. The other limitation I do  
23 want to point out is the trees and shrub material  
24 that we are working with from a digital standpoint  
25 are -- we have this palate of images and materials



1 that we use. So that's kind of the constraint with  
2 these simulations as well but to the best of my  
3 knowledge, it's -- the growth rate that we use for  
4 these was about a foot per year.

5 Q. And that was the growth rate you used for  
6 both the shrubs and the trees?

7 A. To the best of my knowledge, yes.

8 Q. So looking at page L-25 and the  
9 simulation on that page for eight-year high density  
10 planting, what -- what are the approximate sizes of  
11 the gaps between the trees shown in that simulation  
12 where you can see panels behind the trees?

13 A. You said the eight-year high density?

14 Q. Yes, sir.

15 A. And are you talking about the larger  
16 trees that are there looking up above the panels?

17 Q. Yes, sir.

18 A. Those would be 20 feet on center. Those  
19 are the one plant that I do know there is an  
20 approximate.

21 Q. Okay. So there is 20 feet between the  
22 trunks of those trees or 20 feet between the outer  
23 branches of those trees?

24 A. Typically it would go by the trunk. I  
25 will say the two in the center do look like they

1 might be a slightly different dimension by eyeballing  
2 it than the two on either side, so I said it's  
3 approximate.

4 Q. Yeah. All right. So my question  
5 concerns the gaps between the trees through which you  
6 can see the panels. So let's take, for example, in  
7 that eight-year high density planting simulation on  
8 page L-25, the distance between the outer branches of  
9 the tree that's furthest to the right and the tree to  
10 the left of it, what would the distance between the  
11 outer branches of those trees be?

12 A. Oh, wait a minute. I need to step back a  
13 moment. Did I say 20 feet between each tree?

14 Q. You did. I bet you are going to change  
15 that to 40, aren't you?

16 A. I am, yes, because the -- because the --  
17 wait a minute. Forgetting something. High density.  
18 I need to refer back to the legend here. Yeah, high  
19 density it should be 20 feet because we increased the  
20 number of trees by a multiple of -- factor of 2, so  
21 it should be 20 feet.

22 Q. So that would be a distance of 20 feet  
23 from trunk to trunk for the large trees in the high  
24 density planting module?

25 A. It should be.

1           Q.    All right.  So with that fact then,  
2   what's the approximate distance between the tree on  
3   the right and the tree to the left of it in the  
4   simulation for the eight-year high density planting  
5   on page L-25 of the plan?

6           A.    I don't know.  It's really hard to say  
7   but maybe 15 feet.  No, 10 to 12 feet.

8           Q.    All right.  And so a person looking at  
9   this compilation of plants would be able to see the  
10  panels between those two trees through the 12- to  
11  15-foot wide space, right?

12          A.    Well, you can see them in the simulation.

13          Q.    Yeah.  The answer to my question is yes  
14  though, right?

15          A.    Yes.

16          Q.    All right.  When you decided what  
17  planting module to use for the various locations  
18  around the project area, did you take into account  
19  any differences in the elevations for the nearby  
20  homes and the panel locations?

21          A.    When you -- can you clarify what you mean  
22  by the elevations of the home?

23          Q.    Yeah.  I am talking about the elevation  
24  of the ground, the ground surface.  So, for example,  
25  if -- if the neighboring home is located on ground

1 that's higher in elevation than the solar panels next  
2 to the home, is that information that you have taken  
3 into account in deciding what module of planting to  
4 use at that location?

5 A. It is mostly really proximity, not so  
6 much elevation, ground elevation. But if the  
7 proximity of the fence was close to the home, it got  
8 additional density.

9 Q. Let's go back to your written direct  
10 testimony marked as Applicant Exhibit 28. And I  
11 would like to start with the sentence that begins at  
12 the bottom of page 3 and goes onto the top of page 4.  
13 So on page 3, let's take a look at the sentence that  
14 begins on line 31 which reads as follows: "As  
15 committed to by the Applicant, the fencing around the  
16 perimeter of the buildable area will be of a type to  
17 allow small wildlife to move freely through the  
18 planting modules and into the secured array areas to  
19 maximize their ability to secure food and cover." Do  
20 you see that?

21 A. Yes, sir.

22 Q. As a person who is involved in landscape  
23 design, is the information in this sentence something  
24 that you are qualified to opine about?

25 A. No. I am not a wildlife expert. We do

1 install fencing in lots of applications of our work.  
 2 This is -- this is a statement that's reinforcing the  
 3 commitment by the Applicant to provide that fencing.

4 Q. As a landscape designer, do you know  
 5 whether trees -- or whether deer eat trees?

6 A. I -- I am not a wildlife expert, but I  
 7 know that deer eat plant material.

8 Q. Plant material is another word for  
 9 plants, right?

10 A. Yes, sir.

11 Q. And you know that rabbits will eat  
 12 branches of shrubs that are close enough to the  
 13 ground for them to reach?

14 A. I don't know. You would have to talk to  
 15 the wildlife folks about that.

16 Q. Have you ever constructed a landscape  
 17 yourself?

18 A. Sorry. I don't understand the question.  
 19 Constructed?

20 Q. Yeah. Have you ever -- have you ever  
 21 gone out in the field and either yourself built the  
 22 landscape or supervised somebody who is building the  
 23 landscape?

24 A. I have installed some plant material at  
 25 my -- my residence and I've installed it in my --

1     yeah, my residence.

2             Q.     Just your residence?

3             A.     Yes, nothing commercial. I am -- we do  
4     design work. We don't supervise construction.

5             Q.     I see. Okay.

6             A.     We observe construction.

7             Q.     Have you personally done any maintenance  
8     for landscaping plants in projects that you've  
9     designed other than plants at your own house?

10            A.     No.

11            Q.     What's the habitat setting like at your  
12     house? You have trees in the area? Forest in the  
13     area? What kind of -- what kind of habitat do you  
14     have there?

15                   MR. LOCKSHAW: Your Honor, I am going to  
16     object to the lack of relevance.

17                   MR. VAN KLEY: It's relevant because it  
18     has to do with his own personal experience with the  
19     critters that like to eat plants which vary depending  
20     upon the habitat you're in.

21                   ALJ AGRANOFF: I'll allow a limited line  
22     of questioning with respect to his familiarity with,  
23     as you say, critters.

24            Q.     (By Mr. Van Kley) All right. Mr. Woods,  
25     do you remember the question?

1 A. Would you mind repeating it?

2 Q. I wouldn't mind at all. Describe the --  
3 the habitat around your house insofar as it being  
4 located next to trees and shrubs.

5 A. It's located next to trees and shrubs.

6 Q. Okay. Is it located next to a wooded  
7 area?

8 A. No.

9 Q. Do you have any rabbits in your yard?

10 A. I haven't seen any for quite some time.

11 Q. Do you have any deer in your yard?

12 A. Occasionally.

13 Q. Does your yard contain any species of  
14 plants that the deer enjoy?

15 A. They have eaten some of our plants.

16 MR. VAN KLEY: Okay. All right. I have  
17 no more questions, your Honor.

18 ALJ AGRANOFF: Hartford Township?

19 MS. CARNES: No questions, your Honor.

20 ALJ AGRANOFF: Any limited clarifying  
21 questions from the signatories to the Stipulation?

22 MR. DOVE: No, your Honor.

23 MR. LINDGREN: No, your Honor.

24 ALJ AGRANOFF: Redirect?

25 MR. LOCKSHAW: Your Honor, if we could

1 just have 5 minutes to consider that.

2 ALJ AGRANOFF: Certainly. We can  
3 possibly come back at 3:40.

4 (Recess taken.)

5 ALJ AGRANOFF: Okay. Let's go back on  
6 the record at this time.

7 MR. LOCKSHAW: Thank you, your Honor. We  
8 have no further questions.

9 ALJ AGRANOFF: Okay. Judge Hicks, do you  
10 have any questions?

11 ALJ HICKS: No questions.

12 - - -

13 EXAMINATION

14 By ALJ Agranoff:

15 Q. I could have just one question with  
16 respect to the proposed landscape plan. Are you  
17 aware of any commitment to the replacement of planted  
18 vegetation over a certain period of time if the  
19 plantings did not survive a minimum lifespan?

20 A. Yes, I'm aware of the Stipulation. I  
21 believe it's Condition 18 where the Applicant has  
22 committed to substituting or replacing plants over a  
23 five-year period with the goal of minimum of 90  
24 percent survival from my understanding.

25 ALJ AGRANOFF: Okay. Based on my one



1 question, does counsel have any questions?

2 MR. VAN KLEY: No.

3 MR. LOCKSHAW: No, your Honor.

4 ALJ AGRANOFF: Thank you, Mr. Woods.

5 THE WITNESS: Thank you.

6 ALJ AGRANOFF: At this point,  
7 Mr. Lockshaw, care to move relative to the exhibits?

8 MR. LOCKSHAW: Yes, your Honor. We would  
9 move to admit Exhibits 28 and 28A.

10 ALJ AGRANOFF: Any objections?

11 There being none, the aforementioned  
12 exhibits shall be admitted as part of the record at  
13 this time.

14 (EXHIBITS ADMITTED INTO EVIDENCE.)

15 ALJ AGRANOFF: And is the Applicant  
16 prepared to call its next witness?

17 MR. LOCKSHAW: Yes, your Honor. The  
18 Applicant calls Thomas Braman.

19 MR. SCHMIDT: Mr. Braman, you have been  
20 promoted. If you can enable your audio and video.

21 MR. LOCKSHAW: Your Honor, if I -- if I  
22 may, he's in a separate room. If we could just have  
23 2 minutes to switch the witnesses. The lawyers are  
24 staying the same.

25 ALJ AGRANOFF: That's fine. We'll take

1 a -- we can take a 5-minute recess.

2 MR. LINDGREN: Judge Agranoff, may I  
3 interject with a question at this point?

4 ALJ AGRANOFF: Yes.

5 MR. LINDGREN: Actually two questions.  
6 Would your intent still be to have some Staff  
7 witnesses testify? If you do, I just wanted to let  
8 you know one of them has a hard stop at 5:00 and  
9 another has a hard stop at 5:00, so I didn't know  
10 what your plans for the rest of the day were.

11 ALJ AGRANOFF: I believe that Judge Hicks  
12 and I have decided that we do not have any questions  
13 for the Staff witnesses so.

14 MR. LINDGREN: Thank you. That answers  
15 that.

16 My other question, but I was also asking  
17 whether you wanted any of the four Staff witnesses  
18 that are going to testify take the stand yet today.

19 ALJ HICKS: I would think based on the  
20 cross estimates, unless Mr. Van Kley corrects me, I  
21 would imagine that the remaining Staff witnesses will  
22 probably take us through the rest of the day.

23 MR. VAN KLEY: Yeah, I think that's a  
24 pretty fair statement. I think Mr. Braman will take  
25 maybe 15 minutes and then Mr. Peterson about a half

1 hour.

2 ALJ HICKS: Unless anyone wants to object  
3 to this, I would throw out we finish with the  
4 Applicant, unless I am reading it wrong, I think we  
5 have plenty of time to do the Save Hartford witnesses  
6 and my understanding would only be four of Staff  
7 witnesses actually testifying?

8 MR. LINDGREN: That's right. So you  
9 would have the Staff testify tomorrow then?

10 ALJ HICKS: Yes. Does that work for  
11 everyone?

12 MR. LINDGREN: Yes. That will be fine.

13 ALJ HICKS: Since no one is arguing with  
14 me, that's what we will go with.

15 (Discussion off the record.)

16 ALJ AGRANOFF: If you could please call  
17 your next witness.

18 MR. LOCKSHAW: The Applicant calls Thomas  
19 Braman.

20 ALJ AGRANOFF: Need to locate Mr. Braman  
21 on my screen. There he is. Good afternoon,  
22 Mr. Braman.

23 MR. BRAMAN: It's Braman.

24 ALJ AGRANOFF: Sorry.

25 MR. BRAMAN: That's okay.

1                   ALJ AGRANOFF: If you could please raise  
2 your right hand.

3                   (Witness sworn.)

4                   ALJ AGRANOFF: Thank you. Please  
5 proceed, Mr. Lockshaw.

6                   MR. LOCKSHAW: Thank you, your Honor.

7                   - - -

8                   THOMAS BRAMAN

9 being first duly sworn, as prescribed by law, was  
10 examined and testified as follows:

11                   DIRECT EXAMINATION

12 By Mr. Lockshaw:

13                 Q. Mr. Braman, do you have your direct  
14 testimony and supplemental direct testimony in front  
15 of you?

16                 A. Yes, I do.

17                 MR. LOCKSHAW: Your Honor, may we mark  
18 the direct testimony and supplemental direct  
19 testimony Exhibits 29 and 29A respectively?

20                 ALJ AGRANOFF: They shall be so marked.

21                   (EXHIBITS MARKED FOR IDENTIFICATION.)

22                 MR. LOCKSHAW: Thank you.

23                 Q. (By Mr. Lockshaw) Mr. Braman, are those  
24 true and accurate copies of your direct testimony and  
25 supplemental direct testimony that we just marked

1 Exhibits -- Applicant's Exhibit 29 and 29A?

2 A. Yes, it is.

3 Q. Do you have any revisions to make to your  
4 direct testimony or supplemental direct testimony  
5 today?

6 A. No.

7 Q. We didn't hear you.

8 A. Oh, no, I don't. I don't.

9 Q. If the same questions were asked to you  
10 that appear in your direct testimony and your  
11 supplemental direct testimony were asked of you  
12 today, would your answers be the same?

13 A. Yes, they would.

14 MR. LOCKSHAW: Your Honors, with that  
15 Mr. Braman is available for cross-examination.

16 ALJ AGRANOFF: Thank you.

17 Mr. Van Kley.

18 MR. VAN KLEY: Thank you, your Honor.

19 - - -

20 CROSS-EXAMINATION

21 By Mr. Van Kley:

22 Q. And good afternoon, Mr. Braman.

23 A. Good afternoon.

24 Q. Let's go to your written direct testimony  
25 marked as Applicant Exhibit 29. And please go to

1 page 3 of that testimony.

2 A. I have it.

3 Q. Let's go down to line 21 where we have a  
4 statement that "Westwood assessed potential impacts  
5 on 30 residential receptors (discrete observation  
6 receptors) and drivers along modeled road segments."  
7 Do you see that language?

8 A. Yes.

9 Q. What's your definition of the term  
10 "residential receptors" as used in this sentence?

11 A. It would be a residential unit, a house,  
12 an occupied house.

13 Q. Okay. And how were the 30 residential  
14 receptors selected, that is, by what cri -- what  
15 criteria were used to select the 30 residential  
16 receptors who would be included in the assessment for  
17 glare?

18 A. We oftentimes will use air photography or  
19 county parcel information.

20 Q. Is that what you did here?

21 A. I believe so.

22 Q. Okay. Did you do the glare analysis  
23 yourself?

24 A. I assisted with it.

25 Q. Were there any particular criteria that

1 were used in the glare analysis to decide which homes  
2 would be assessed and which homes would not be  
3 assessed in the area?

4 A. We assessed homes within 500 feet of the  
5 arrays.

6 Q. Do you know how many homes are located  
7 within 500 feet of the proposed locations for the  
8 solar arrays?

9 A. I believe it was the ones we assessed.

10 Q. So you believe you assessed all of the  
11 homes within 500 feet -- it was 500 feet of the  
12 project panels, the panel areas?

13 A. I believe that's correct.

14 Q. Does glare from solar panels go in all  
15 four directions or go all -- can you see glare from  
16 solar panels everywhere around the solar panel or  
17 just in particular directions from the solar panels?

18 A. It's gen -- it follows the sun, so it's  
19 the -- it's the angle of reflection from the sun. So  
20 depending on where the tracker is or where the angle  
21 of the sun is, then the glare will correspondingly  
22 reflect. It's a reflection from the sun depending on  
23 how the sun is shining and also how the tracker or  
24 the module is positioned.

25 Q. The solar panel is angled toward the sun,

1 right?

2 A. Most of the time.

3 Q. Okay. And the time that it's not angled  
4 from the sun, is it flatted or angled in a different  
5 direction?

6 A. Oftentimes flat, it could be angled at a  
7 different direction. In this case we modeled it with  
8 a 5-degree rest angle, so it is not flat during the  
9 sunrise and sunset periods in order to minimize  
10 glare.

11 Q. So you said that you modeled the glare at  
12 a 5 percent angle of the solar panels?

13 A. 5-degree rest angle.

14 Q. Okay. Is that the condition in which the  
15 maximum amount of glare is produced?

16 A. We frequently would see most glare  
17 produced with a 0-degree rest angle and that  
18 occurring near sunrise, just after sunrise, and then  
19 near sunset, just before sunset.

20 Q. So why didn't you do the modeling based  
21 on a 0-degree resting angle?

22 A. To minimize glare.

23 Q. I guess I didn't understand your -- your  
24 answer. Am I correctly understanding that a panel  
25 produces the most amount of glare at a 0-degree



1 resting angle?

2 A. It produces the same amount of glare. It  
3 would it be intercepted -- better receptor is the  
4 question.

5 Q. Okay.

6 A. And then so, I mean, in most cases the  
7 glare is going to be reflected high in the sky, so  
8 when we see a glare angle that's towards zero, then  
9 that oftentimes will be nearer the receptors.

10 Q. Okay. So if that's the case, then why  
11 did you model the glare in a 5-degree angle instead  
12 of a 0-degree angle?

13 A. We would likely have seen more glare if  
14 we would have had a 0-degree rest angle at the  
15 receptors. That's been my experience in doing glare  
16 studies.

17 Q. Okay. So if that's the case, why not  
18 model it at 0 degrees?

19 A. We didn't want the glare -- it was a  
20 mitigation alternative we designed in the project.

21 Q. I guess I didn't understand that answer.

22 A. Well, if the objective would be to reduce  
23 glare to receptors and using a 5-degree rest angle  
24 reduces the glare to receptors in most cases. So  
25 rather than having a 0-degree rest angle and more

1 glare, the developer chose to have a 5-degree rest  
2 angle with less glare at the receptors.

3 Q. Okay. Now I am getting it. Okay. So is  
4 there anything in the application that promises to  
5 use a 5-degree resting angle?

6 A. I'm not aware of that but that's what we  
7 modeled for this particular project.

8 Q. Is the amount of glare ordinarily higher  
9 at -- to the south of the solar panels than to other  
10 directions?

11 A. Not necessarily.

12 Q. There wouldn't be much glare to the north  
13 of a solar facility, would there, if the --

14 A. There --

15 Q. -- panels are pointed towards the sun?

16 A. Sure, there could be.

17 Q. There could be? Okay.

18 A. Yes.

19 Q. Is that because sometimes the panels are  
20 pointed towards the north?

21 A. The panels could be pointed towards the  
22 north. The sun could be in the southerly direction.  
23 The panels could be flat so there's several different  
24 combinations that could cause glare to be there.

25 Q. In the 30 houses that were included in

1 the glare analysis, were there some houses on all  
2 directions from the solar panel areas?

3 A. I would have to refer to Exhibit 2.

4 Q. Okay. Feel free to do that. Go ahead.

5 A. I don't see --

6 Q. You are on -- and tell us what exhibit  
7 number in the application you are referring to,  
8 please.

9 A. Stand by here.

10 MR. LOCKSHAW: Your Honor, Mr. Van Kley,  
11 we will hand him the application binder in just a  
12 second, please.

13 ALJ AGRANOFF: No problem.

14 MR. LOCKSHAW: Your Honor, Mr. Van Kley,  
15 the witness has been handed Applicant's Exhibit 6  
16 which is actually a Data Response.

17 MR. VAN KLEY: Oh, okay. What's the date  
18 of that document?

19 Oh, I guess it's September 24, 2021.

20 A. Oh, excuse me.

21 Q. Mr. Braman, would you read the title to  
22 the document that you are looking at so we can all  
23 find it?

24 A. Sure. It's -- it's Attachment 1, Glare  
25 Analysis, Westwood, September 17, 2021.

1 MR. LOCKSHAW: Mr. Van Kley, your Honor,  
2 if I may, it was filed on September 24, 2021.

3 ALJ AGRANOFF: Okay.

4 ALJ HICKS: The Supplemental Response to  
5 the Second Data Request, I believe, because I think  
6 there were two filed on September 24.

7 MR. VAN KLEY: Yeah. It looks like there  
8 were actually four maybe. Or maybe I just have  
9 duplicates in here but.

10 MR. LOCKSHAW: That's correct, your  
11 Honor, the Supplemental Response to the Second Data  
12 Request.

13 ALJ AGRANOFF: 288 pages?

14 ALJ HICKS: Yes. And then the page that  
15 Mr. Braman just referenced begins on page 7 of the  
16 PDF, if that helps you, Mr. Van Kley.

17 MR. VAN KLEY: Sure does.

18 ALJ AGRANOFF: That's captioned  
19 "Attachment 1, Glare Analysis, Westwood"?

20 ALJ HICKS: I believe that's what he  
21 referenced, but I will let the witness or  
22 Mr. Lockshaw correct it.

23 Q. (By Mr. Van Kley) All right. Mr. Braman,  
24 I think we are all on Attachment 1 of the Applicant's  
25 Exhibit 6. And would you further direct us to where

1 you are looking?

2 A. So I am looking at Figure 2. It says  
3 "Glare Study Overview Map."

4 ALJ HICKS: PDF page 14, I think.

5 Q. Did you say Figure 1, Mr. Braman, or  
6 Figure 2?

7 A. Figure 2.

8 Q. Okay. Great. Okay. I think we're  
9 there. So the question on the table was whether you  
10 included residences in your assessment that are  
11 located in all directions from solar panels. Based  
12 on the information you have now found, can you answer  
13 that question?

14 A. Sure. I don't know if I could say all  
15 directions, but I would say nearly all directions.  
16 If you want to start on -- in the northwest corner of  
17 array 01, there are receptors to the south of 1 and  
18 to the west of 2. There are -- if you look at 03,  
19 array 03, there are receptors to the northeast of  
20 that array. If you look at 04, there are receptors  
21 to the southwest. If you look at 05, there are  
22 receptors to the east. If you look at array 08,  
23 there are receptors to the east and southeast and  
24 west. If you look at 09, there are receptors to the  
25 east. 10, receptors to the east. There are

1 receptors between 16 and 17 so it would be to the  
2 east, the east of 16, the west of 17, the south of  
3 17.

4 If you look at 15, there are receptors to  
5 the north, to the east, to the southeast, to the  
6 south, and to the west. There are receptors to the  
7 north of 19, to the east of 19, to the west of 18, to  
8 the west of 19, to the east and northeast and north  
9 and west of 20.

10 I think that covers all of them. I think  
11 that's most directions.

12 Q. Okay. Yeah, it sounds like it. Can you  
13 tell me how far glare from solar panels can be  
14 detected?

15 A. No. It's reflected -- reflected  
16 sunlight, so I don't know the distance.

17 Q. Can you tell me the distance from the  
18 solar panel that glare can be an annoyance to people?

19 MR. LOCKSHAW: I object, your Honor.  
20 Annoyance is a term that doesn't have standard  
21 definition. I don't think he can answer the question  
22 as asked.

23 ALJ AGRANOFF: Mr. Van Kley, could you  
24 maybe provide a little more context to --

25 MR. VAN KLEY: Yeah.

1           ALJ AGRANOFF:  -- what you are attempting  
2   to accomplish?

3           Q.    (By Mr. Van Kley) Yeah.  Let's provide a  
4   little bit of background here.  Mr. Braman, does --  
5   does glare cause any problems for motorists who may  
6   be in the area?

7           A.    It could.

8           Q.    What kind of problems are those?

9           A.    It could be a distraction.  It could be  
10  direct light in your eyes.

11          Q.    Okay.  And can you tell me whether  
12  there's a specific distance from the source of the  
13  glare where those potential problems are no longer  
14  existent?

15          A.    I couldn't tell.

16          Q.    And with respect to residences in the  
17  area, does glare cause the same kind of problems as  
18  it does for motorists?

19          A.    I would think not because a person that's  
20  driving a vehicle is responsible for moving a piece  
21  of equipment where someone in their home doesn't  
22  necessarily have that same level of commitment or  
23  responsibility.

24          Q.    A person who is stationary can still be  
25  exposed to glare that shines in their eyes, right?

1           A.    Could you repeat that, please?  I didn't  
2   hear you.

3           Q.    Yeah, sure.  A person who is standing  
4   stationary can still be exposed to glare that shines  
5   into their eyes, right?

6           A.    Yes, yes.

7           Q.    Can you tell me how far from the source  
8   of the glare that can occur?

9           A.    No.  Again, I don't know.  That could be  
10  a long distance.

11          Q.    Redirecting your attention to your  
12  testimony marked as Applicant Exhibit 29 on page 4,  
13  let's take a look at the sentence starting on line 15  
14  which starts that "A driver traveling 30 miles per  
15  hour would see the glare in the southwest for a few  
16  seconds as the driver travels along this portion of  
17  Tagg Road."  Do you see that?

18          A.    Yes.

19          Q.    Do you know how many seconds that can  
20  occur?

21          A.    Not exactly how many seconds but it's  
22  only a few because the glare report shows only a  
23  small segment of the entire segment where the glare  
24  would impact that driver.

25          Q.    Is the speed limit on that portion of



1 Tagg Road 30 miles an hour?

2 A. I don't know that. It's a gravel road as  
3 I know.

4 Q. So why is the travel rate of 30 miles  
5 used in that sentence?

6 A. As a point of reference.

7 Q. Is there anything in the application that  
8 has been provided in order to prevent the glare on  
9 this portion of Tagg Road?

10 A. Can you rephrase that or restate it?

11 Q. Yeah. Has anything been placed into the  
12 application in this case to prevent glare from  
13 affecting this portion of the Tagg Road?

14 A. I'm not -- I'm not clear whether or not  
15 this specific segment has mitigation in the document.

16 Q. Is there anything that can be done to  
17 minimize glare from solar panels?

18 A. Yes.

19 Q. What can be done?

20 A. Well, one of the things we've done  
21 already is to change the rest angle. That redirects  
22 the glare higher away from the receptors. Fences can  
23 be used. Vegetative screening can be used. There  
24 are occasions when moving an array can mitigate,  
25 eliminate glare. So there are multiple different

1 things that could be done. You could change your  
2 tracker timing if it -- if it occurred during the  
3 tracking episode so there are several different  
4 alternatives.

5 Q. Are there antiglare coatings that can be  
6 used to reduce glare from the solar panels?

7 A. Yes, there are. I've seen that happen in  
8 some cases, and I believe that we modeled  
9 antireflective coating on this set of arrays.

10 Q. Did you also model glare from solar  
11 panels that do not have antireflective coating?

12 A. Not in this case.

13 Q. Is there anything to your knowledge in  
14 the application that requires antireflective coating  
15 to be used on the solar panels for this project?

16 A. Not to my knowledge.

17 MR. VAN KLEY: Okay. Thank you.

18 I have no further questions.

19 THE WITNESS: Thank you.

20 ALJ AGRANOFF: Anything from Hartford  
21 Township?

22 MS. CARNES: No questions, your Honor.

23 ALJ AGRANOFF: Any clarifying questions  
24 from the signatory parties?

25 MR. DOVE: No questions, your Honor.

1 ALJ AGRANOFF: Redirect?

2 MR. LOCKSHAW: Your Honor, if we may just  
3 have 5 minutes to consider?

4 ALJ AGRANOFF: Certainly.

5 MR. LOCKSHAW: Thank you.

6 ALJ AGRANOFF: We'll reconvene at 4:25.

7 (Recess taken.)

8 ALJ AGRANOFF: Okay. Let's go back on  
9 the record and ask the Applicant what they decided  
10 regarding redirect.

11 MR. LOCKSHAW: Yes, your Honor. We have  
12 no redirect.

13 ALJ AGRANOFF: Okay. Judge Hicks, do you  
14 have any questions?

15 ALJ HICKS: No questions.

16 - - -

17 EXAMINATION

18 By ALJ Agranoff:

19 Q. I have just one question, Mr. Braman.

20 A. Okay.

21 Q. Would you please turn to page 5 of your  
22 testimony.

23 A. I'm there.

24 Q. Question 12.

25 A. Yes.

1           Q.    And you're responding as to whether or  
2   not it's possible to determine that the facility  
3   represents the minimum adverse environmental impact  
4   specifically to glint and glare.  Are you saying  
5   that -- are you testifying that indeed the project  
6   does represent the minimum adverse environmental  
7   impact?

8           A.    No.  I would say that it could.  
9   Obviously the minimum would be zero, but I would also  
10  suggest that this is negligible.

11           ALJ AGRANOFF:  Okay.  With respect to my  
12  one clarifying question, is there any follow-up from  
13  counsel?

14           MR. VAN KLEY:  None from me.

15           MR. LOCKSHAW:  Your Honor, just one  
16  question, if I may.

17           ALJ AGRANOFF:  Certainly.

18                                 - - -

19                                 REDIRECT EXAMINATION

20   By Mr. Lockshaw:

21           Q.    Mr. Braman, could you give the judge a  
22  little bit more context based on how many solar  
23  projects you've modeled, the amount of glare that is  
24  shown from this project, how that fits into context  
25  with what you've seen across the work you've done.

1 MR. VAN KLEY: Objection, your Honor.  
2 Falls outside the context of your Honor's questions.

3 ALJ AGRANOFF: I would prefer that the  
4 witness give me the context of his testimony taking  
5 into account the criteria that the Board looks at for  
6 the purposes of the eight components of 4906.10. So  
7 if you can ask a question, Mr. Lockshaw, in that  
8 parameter, I would prefer that you do it that way.

9 MR. LOCKSHAW: Yes, your Honor.

10 Q. (By Mr. Lockshaw) With respect to  
11 considering the minimum environmental impact of this  
12 project, how would you describe the amount of glare  
13 that your modeling produced?

14 A. Very little, very little glare. I see a  
15 lot more glare on many projects than this particular  
16 one. And I think that's -- OPSB Staff that reviews  
17 glare projects would also agree with that.

18 ALJ AGRANOFF: Anything further from  
19 counsel?

20 MR. LOCKSHAW: No further questions, your  
21 Honor. Thank you.

22 ALJ AGRANOFF: Any recross based on that  
23 one question Mr. Lockshaw just asked?

24 MR. VAN KLEY: No, your Honor.

25 ALJ AGRANOFF: Okay. Thank you very

1 much, Mr. Braman.

2 And at this point in time, Mr. Lockshaw,  
3 are you, I assume, seeking the admission of certain  
4 exhibits?

5 MR. LOCKSHAW: Yes, your Honor. The  
6 Applicant moves to admit Exhibits 29 and 29A.

7 ALJ AGRANOFF: Any objections?

8 There being none, the aforementioned  
9 exhibits shall be admitted as part of the record at  
10 this time.

11 (EXHIBITS ADMITTED INTO EVIDENCE.)

12 MR. LOCKSHAW: Thank you, your Honor.

13 ALJ AGRANOFF: You're welcome.

14 Let's go off the record.

15 (Discussion off the record.)

16 ALJ HICKS: Go ahead and go back on the  
17 record.

18 I will turn it over to the Applicant to  
19 call their next witness.

20 MR. LOCKSHAW: Your Honor, we would like  
21 to call Ryan Peterson.

22 ALJ HICKS: Okay. I can see him.  
23 Mr. Peterson, if you could raise your right hand.

24 (Witness sworn.)

25 ALJ HICKS: Please go ahead,

1 Mr. Lockshaw.

2 MR. LOCKSHAW: Thank you, your Honor.

3 - - -

4 RYAN PETERSON

5 being first duly sworn, as prescribed by law, was  
6 examined and testified as follows:

7 DIRECT EXAMINATION

8 By Mr. Lockshaw:

9 Q. Mr. Peterson, can you please state your  
10 name for the record.

11 A. Ryan John Peterson.

12 Q. Mr. Peterson, do you have your direct  
13 testimony and your supplemental direct testimony in  
14 front of you?

15 A. Yes, I do.

16 MR. LOCKSHAW: Your Honor, may we mark  
17 the direct testimony Exhibit 27 and the supplemental  
18 direct testimony Exhibit 27A?

19 ALJ HICKS: They will both be so marked.  
20 (EXHIBITS MARKED FOR IDENTIFICATION.)

21 MR. LOCKSHAW: Thank you.

22 Q. (By Mr. Lockshaw) Mr. Peterson, are those  
23 true and accurate copies of your direct testimony and  
24 supplemental direct we just marked Exhibits 27 and  
25 27A?

1           A.    Yes, they are.

2           Q.    Do you have any revisions to make to your  
3 direct testimony or supplemental direct testimony  
4 today?

5           A.    No, I do not.

6           Q.    If the same questions that appear in your  
7 direct testimony and supplement direct testimony were  
8 asked to you today, would your answers be the same?

9           A.    Yes, they would.

10           MR. LOCKSHAW: Your Honor, with that  
11 Mr. Peterson is available for cross-examination.  
12 Thank you.

13           ALJ HICKS: Thank you. We will start  
14 with Save Hartford.

15           MR. VAN KLEY: Yep.

16                               - - -

17                               CROSS-EXAMINATION

18 By Mr. Van Kley:

19           Q.    All right. Mr. Peterson, let's go to  
20 your written direct testimony marked as Applicant  
21 Exhibit 27.

22           A.    Yes, I have it.

23           Q.    Please go to page 4, please.

24           A.    Yes. Got it.

25           Q.    All right. And I would like to direct



1 your attention to question and answer 10 on that  
2 page.

3 A. Yes, sir.

4 Q. Am I interpreting your answer to question  
5 10 to say that -- or am I accurately interpreting  
6 your answer to say that there are 10 archeological  
7 sites known within the project area that --

8 A. Oh, sorry. Excuse me.

9 Q. All right. Am I accurately interpreting  
10 this answer to say that there are 10 archeological  
11 sites within the project area?

12 A. Correct. There were 10 archeological  
13 sites that were documented prior to our current  
14 investigation. So when we did the research prior to  
15 starting, that's how many were documented within the  
16 project area.

17 Q. Okay. And after you did your  
18 investigation, how many additional archeological  
19 sites, if any, did you find within the project area?

20 A. I don't have the specific number in front  
21 of me, but it was in excess of 300 additional  
22 archeological sites. Could I qualify that, sir?

23 Q. Sure.

24 A. In many instances in rural Ohio there  
25 hasn't been formal investigation of this broad of

1 acreage. It's been farmed and not developed in the  
2 past, so it's not uncommon to find a larger number of  
3 archeological sites when you conduct a systematic  
4 survey.

5 Q. Are any of those archeological sites  
6 within the project area above the surface of the  
7 ground?

8 A. No. Inherently archeological sites are  
9 below the ground with the exception of occasional  
10 foundational remnants from a historical site or  
11 perhaps a mound site, but we did not encounter mound  
12 sites on this project, maybe a couple remnant  
13 foundations if I went back through the documents.  
14 But inherently archeological is below the ground, and  
15 historic architecture would be the above-ground  
16 resources we looked at primarily.

17 Q. Are there any known archeological sites  
18 within the project area that consists of building  
19 foundations or portions of buildings?

20 A. There were historic archeological sites  
21 documented. I would have to go back through side by  
22 side to tell you how much of that foundation was  
23 actually left. Sometimes they are buried at the  
24 site. You have to see them. You have to find them  
25 by digging. I don't have that information right off

1 the top of my head what the exact breakdown was of  
2 the number of sites we found, but it is typical for  
3 us to find historical farmsteads from the 19th and  
4 20th Century when we do conduct these surveys in  
5 rural landscapes like this.

6 Q. Did you find any burial ground within the  
7 project area?

8 A. No, sir, we did not.

9 Q. On page 6 of your testimony on line 6,  
10 there is a reference to a potential cemetery referred  
11 to locally as Potter Cemetery. Do you see that?

12 A. Yes, sir, I do.

13 Q. And what is the information that you  
14 received concerning Potter Cemetery?

15 A. We received -- we received that  
16 information directly from a local resident,  
17 Mr. Potter. I think you are familiar with him. He  
18 indicated that their family history, their oral  
19 history indicated that there were potentially a  
20 couple of burials of his ancestors and supplied a  
21 general area when we met with him out on the site.

22 Unfortunately we cannot verify that  
23 through any of the written records that we have or  
24 documentation that we've discussed with the SHPO's  
25 office, but out of an abundance of caution, the

1 Applicant has agreed to go above and beyond and avoid  
2 any impacts of this potential cemetery by taking  
3 additional caution that would normally not be done  
4 for a project like this.

5 Q. And what -- what is the nature of those  
6 precautions?

7 A. To remove the plow zone deposits, scrape  
8 the upper soil to look to see in areas of  
9 construction within a 200-foot wide buffer from a  
10 property boundary if there are any indications of a  
11 grave shaft there. Then precautions would be taken  
12 and consultation would occur.

13 Q. Mr. --

14 A. So to --

15 Q. Go ahead.

16 A. So to clarify, I want to make sure that  
17 my answer was clear. We did not find a cemetery or  
18 burial ground. This is an oral reporting of it from  
19 a local informant so that's why I answered in the way  
20 that I did, that we did not actually find one that I  
21 could verify.

22 Q. Mr. Potter is Native American?

23 A. That is what he has told me, yes.

24 Q. And can you tell me the approximate area  
25 where the Potter Cemetery is alleged to have been

1 located?

2 A. It is -- I believe it's in the MOU that's  
3 part of the 27A in the application. Let's figure out  
4 where it's at in here. A lot of documents. Let's  
5 see, it is Appendix C, the first page of Appendix C  
6 and the MOU which is part of 27A. I do not have a  
7 page number on that because it was an appendix on  
8 this. Anyone else have that handy?

9 ALJ HICKS: I think, if it helps, I don't  
10 know if you are on it, Mr. Van Kley, but I do have a  
11 PDF number. Page 27 of this PDF, page 27 of the  
12 supplemental testimony.

13 THE WITNESS: Thank you.

14 Q. (By Mr. Van Kley) Okay. Let's go to page  
15 5 of your testimony marked as Applicant's Exhibit 27.  
16 And I am interested in some of the information you  
17 put in answer 12 on that page. Specifically can you  
18 tell me how many sites inside the project area have  
19 been found to be potentially eligible from listing on  
20 the National Register of Historic Places?

21 A. Yes. Pretty much my response to question  
22 13, it is 15 sites have been determined eligible.

23 Q. And could you describe the nature of  
24 those sites.

25 A. The majority of these are prehistoric or

1 precontact sites, Native American sites that consist  
2 of a scatter of artifacts that were identified in  
3 agricultural fields. Limited excavation was done  
4 just to look at the depth of the soils on those sites  
5 but that's been the extent of the investigation to  
6 create a boundary of where that site was at to then  
7 assess whether or not it could be avoided or if  
8 further measures would need to be taken.

9 Q. Other than the type of site that you just  
10 mentioned, are there any other types of sites within  
11 the project area that are potentially eligible for  
12 listing on -- in an NRHP?

13 A. I did not itemize them out in this  
14 response and certainly is in the exhibit of the full  
15 report that's on the docket. There are  
16 multi-component sites which both include historic and  
17 prehistoric sites. I believe one or two of those  
18 sites might include a historic component that was not  
19 considered eligible for the National Register. Most  
20 on this specific project were prehistoric sites or  
21 precontact sites. I can get specifics for you from  
22 the document, if you would like me to.

23 Q. Yeah.

24 A. Just take some digging.

25 Q. Yeah. I guess my question is a little

1 more general in nature which is if you can tell me  
2 whether any of the 15 sites involve structures or  
3 other things besides scattered arrowheads and that  
4 sort of thing.

5 A. Not to my recollection. None of them  
6 were associated with clear structures. There may be  
7 some remnants near a road but I can't confirm that  
8 without going back through the report to give you the  
9 specifics on that.

10 Q. And these 15 sites were inside the  
11 project area, right?

12 A. That is correct.

13 Q. And continuing on with our discussion  
14 about page 5 of your written testimony, it states on  
15 lines 26 and 27 that 4 of the 15 potentially eligible  
16 sites will be avoided by all project activities. Do  
17 you see that?

18 A. Yes, that is correct.

19 Q. And is that stated in the application as  
20 well or any of the data --

21 A. Yes.

22 Q. Okay.

23 A. It's stated in the MOU and the maps  
24 characterizing those sites with the 50-foot boundary  
25 have been included in that document which is part of

1 the 27A.

2 Q. And how will the project activities be  
3 avoided in those areas?

4 A. Typically the agreed upon language that  
5 is in the MOU is that at minimum temporary  
6 construction fencing will be put around that buffer,  
7 and it will be on the radar of the environmental  
8 monitor also so there will be a physical boundary  
9 around those sites as well as the property being  
10 checked on by the monitor that's on-site during  
11 construction.

12 Q. Does the application also say that no  
13 solar equipment will be installed on those sites?

14 A. Yeah. That's a total exclusion zone.

15 Q. Go to page 7 of your testimony. And  
16 let's take a look at line 16 and 17 where it states  
17 that "the Curry Farm Historic District has been  
18 provided substantial setbacks and robust screening."  
19 Do you see that?

20 A. Yes, sir.

21 Q. Can you tell me what the substantial  
22 setbacks are that are referenced here?

23 A. This is based on my personal experience  
24 with solar projects in Ohio. I believe the minimum  
25 setback is approximately 400 feet which is multiple



1 times more than I have seen on other projects for  
2 historic properties and the screening is -- was  
3 offered was an added -- an evergreen component to  
4 already the highest level screenings. So in my  
5 professional opinion, it was the most robust  
6 screening and setbacks that I had seen for historic  
7 boundary.

8 MR. VAN KLEY: Okay. Very good. I have  
9 no more questions, your Honor.

10 ALJ HICKS: Thank you, Mr. Van Kley.

11 Any questions from Hartford Township?

12 MS. CARNES: No questions, your Honor.

13 ALJ HICKS: Okay. Any clarifying  
14 questions from stipulating parties or Board Staff?

15 MR. LINDGREN: No, thank you, your Honor.

16 MR. DOVE: No, thank you, your Honor.

17 ALJ HICKS: Okay. Mr. Lockshaw, any --  
18 do you need any time for redirect discussions?

19 MR. LOCKSHAW: Your Honor, we would  
20 appreciate just a little bit of time.

21 ALJ HICKS: I have a -- let's go off the  
22 record. We will come back at 5 o'clock.

23 MR. LOCKSHAW: Thank you.

24 (Recess taken.)

25 ALJ HICKS: Okay. Let's go back on the

1 record.

2 Mr. Lockshaw, any redirect for this  
3 witness?

4 MR. LOCKSHAW: Thank you, your Honor. No  
5 redirect.

6 ALJ HICKS: Thank you.

7 Judge Agranoff, any questions? You're  
8 muted.

9 - - -

10 EXAMINATION

11 By ALJ Agranoff:

12 Q. I have one question. If you could please  
13 take a look at page 7, question 16.

14 A. I have it.

15 Q. There's a discussion where the Applicant  
16 commits to continue to consult with the State  
17 Historical Preservation Office to mitigate or avoid  
18 potential adverse effects upon the cultural  
19 resources. Do you see that statement?

20 A. Yes, sir.

21 Q. Is there -- is there any process  
22 contemplated to the extent that there are disputes  
23 that cannot be amicably resolved?

24 A. The commitments to consult with the SHPO  
25 are clarified in the MOU in Exhibit 27A. That

1 consultation will occur based on the results of  
2 additional investigation. I am not quite sure to  
3 answer it beyond that other than I haven't had  
4 professional experience that hasn't resulted in --  
5 ultimately an amicable agreement with the Agency with  
6 an Applicant.

7 ALJ AGRANOFF: Okay. Thank you.

8 ALJ HICKS: Any -- that was your only  
9 question?

10 ALJ AGRANOFF: That was it.

11 ALJ HICKS: Okay. Any from counsel? Any  
12 questions triggered by Judge Agranoff's single  
13 question?

14 MR. VAN KLEY: No.

15 MR. LOCKSHAW: No, your Honor.

16 ALJ HICKS: Thank you. Mr. Peterson,  
17 thank you for your time and testimony today.

18 THE WITNESS: Thank you.

19 ALJ HICKS: Mr. Lockshaw, we can take up  
20 the exhibits.

21 MR. LOCKSHAW: Yes, your Honor. The  
22 Applicant moves to have admitted Exhibits 27 and 27A.

23 ALJ HICKS: Any objection to the  
24 admission of either of those exhibits?

25 Hearing none, 27 and 27A are admitted.

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(EXHIBITS ADMITTED INTO EVIDENCE.)

ALJ HICKS: Okay. Let's go off the  
record.

(Discussion off the record.)

(Thereupon, at 5:05 p.m., the hearing was  
adjourned.)

- - -

CERTIFICATE

I do hereby certify that the foregoing is  
a true and correct transcript of the proceedings  
taken by me in this matter on Thursday, April 7,  
2022, and carefully compared with my original  
stenographic notes.

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Karen Sue Gibson, Registered  
Merit Reporter.

(KSG-7263)

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Summary: Transcript in the matter of the Harvey Solar I, LLC hearing held on  
04/07/22 - Volume II electronically filed by Mr. Ken Spencer on behalf of Armstrong  
& Okey, Inc. and Gibson, Karen Sue Mrs.