## BEFORE THE STATE OF WISCONSIN

## DIVISION OF HEARING AND APPEALS

In the Matter of Manual Code 3565.1 for the Approval Authorizing the Department of Natural Resources to Grade More Than 10,000 Square Feet On the Bank of North Lake, Install
A Boat Launch Structure and Two Case No. IP-SE-2009-68 Outfall Structures on the Bed of $-05745,-05746,-0547$, North Lake, Install Four Culvert -05748, -05749, -05750 Crossings Over Wetlands, and Fill
Up to 0.16 Acres of Wetland For Construction of a Public Boat Launch on North Lake and Adjacent Property Located in the Town of Merton, Waukesha County, Wisconsin

Examination of PETER WOOD, taken at the instance of Reddelien Road Neighborhood Association, under and pursuant to all applicable rules, before JESSICA R. WAACK, Registered Merit Reporter, Certified Realtime Reporter, Registered Diplomate Reporter and Notary Public in and for the State of Wisconsin, at Quarles \& Brady, 411 East Wisconsin Avenue, Milwaukee, Wisconsin, on Friday, August 26, 2011, commencing at 10:07 a.m. and concluding at 12:19 p.m.

A P P EARANCES
MR. WILLIAM C. GLEISNER, III, ATTORNEY AT LAW, 300 Cottonwood Avenue, Suite 3, Hartland, Wisconsin 53029, appeared on behalf of the Reddelien Road Neighborhood Association.

QUARLES \& BRADY, LLP, by
MR. WILIIAM H. HARBECK, 411 East Wisconsin Avenue, Milwaukee, Wisconsin 53202, appeared on behalf of Reddelien Road Neighborhood Association.

REINHART, BOERNER, VAN DEUREN, S.C., by MR. DONALD P. GALIO, N16 W23250 Stone Ridge Drive, Suite 1, Waukesha, Wisconsin 53188,
appeared on behalf of the North Lake Metropolitan District.

STATE OF WISCONSIN, DEPARTMENT OF NATURAL RESOURCES, by MS. EDWINA KAVANAUGH, 101 South Webster Street, Madison, Wisconsin 53707-7921, appeared on behalf of the Department of Natural Resources.

$$
\begin{array}{lllllllll}
A & L & S & O & R & \mathbf{S} & \mathbf{E} & \mathbf{N} & \mathbf{T}
\end{array}
$$

DR. NEAL T. O'REILLY
MR. DONALD E. REINBOLD
MR. ROBERT MOEBIUS
MS. DORIS LATTOS

I N D EX

Examination: Page

By Mr. Gallo. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 53
By Mr. Gleisner. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 62

Exhibit Identified:
Page
No. 16 - Four-Page Document of Elevations From Kapur \& Associates16

No. 110 - Bing Photo.................................... . 56

Disposition Of Original Exhibit/s:
Exhibit No. 16 was returned to Mr. Gleisner. Exhibit
No. 110 was returned to Mr. Gallo. A copy of the original exhibits was included in the original transcript.

TRANSCRIPT OF PROCEEDINGS
PETER WOOD, called as a witness herein, having been first duly sworn on oath, was examined and testified as follows:

## EXAMINATION

BY MR. GLEISNER:
Q Good morning, Mr. Wood.
A Good morning.
Q I'm Attorney Gleisner. Have you been deposed before?

A No, I haven't.
Q Okay. Let's talk a little bit about the ground rules of what we're going to be doing. We're trying to make a record of information that you may have relative to the Kraus site that we all know about.

And, therefore, it's important, Edwina and I forgot it a couple of times yesterday, that only one person talk at a time. And so when you're answering a question, we all should be quiet.

If your counsel objects or if I am asking a question, then wait until we're done with that before you continue with answering or continue with any answer that you might be giving.

Also, we're trying to make -- it
benefits both of us if we have a clean, clear record. So if we're dealing with exhibits, we want to be sure that we are talking the same language. We want to be sure that we're referring to the same information on an exhibit.

So I'm sure your counsel has gone over with you the other fine points of a deposition. Now, how are you employed, Mr. Wood?

A I'm a storm water engineer with the Department of Natural Resources, and I work out of our office in Sturtevant.
$Q$ And how long have you been employed with the DNR?
A Just over 20 years.
Q What's your educational background?
A I went to a couple colleges on the East Coast. I grew up in Connecticut. So I went to a small school in Upstate New York, Paul Smith College. I have an associate's degree in ecology from Paul Smith. Then I went to State New York School, SUNY-ESF in Syracuse, where I have a forest engineering degree.

Q And you are an engineer, and it says water resource engineer. Is that a civil -- type of civil engineer?

A Yes. I think it would be considered in that category, yes.

Your counsel has prepared -- I'm showing you now what has been marked yesterday as Exhibit No. 1-A. Your counsel has prepared a statement of what you will be testifying to. I wonder if you could read that into the record so that we can set the parameters of this deposition, please.

A "Mr. Wood may be called to testify to issues related to this matter of which he has knowledge including his analysis of information regarding elevations of various locations on the DNR, formerly Kraus, property, adjacent wetland complex and outlet channel and North Lake and his interpretation and engineering opinion regarding the preferred flow paths that service water along and across the DNR, formerly Kraus, property."

Q Thank you very much, sir. So you would have been responsible for any topos that would have been prepared?

A No, I was not responsible for that.
Okay. What was your role then at the Kraus site? My role was to be on site with Lynette Check from DNR and also the surveyor, the registered land
surveyor from -- employed by Kapur \& Associates.
I believe that was done -- I'm a little
fuzzy on the actual date. My recollection, it was last fall. I think it was the spring.

You could probably -- someone could probably help me with the exact days, but I was on-site with Lynette Check and the surveyor from Kapur \& Associates observing him survey.

At that point in time, it was the different cross-sections of the channel located on the north side of the DNR property.

Q And so you were basically overseeing the shooting of elevations?

A I would not say I was overseeing. I would say I was just observing.

Q Do you have a good understanding of the elevations?

A I have a good understanding of the elevations that were put on a map by Kapur \& Associates.

Q Well, let's start with Exhibit No. 3. That -now, I'm going to assume --

MS . KAVANAUGH: Yes.
MR. GLEISNER: Counsel, you've got your exhibits --

MS . KAVANAUGH: Yes.

Brown \& Jones Reporting, Inc.
414-224-9533

MR. GLEISNER: -- from yesterday?
BY MR. GLEISNER:
Q That is an exhibit which is actually the final plans of the DNR. I wonder if you could go to -let's start with C114 in that exhibit.

Now, that appears to be a survey complete with elevations on it, would you agree with that? You have to -- by the way, you have to say yes or no.

A No, no.
Q She cannot take -- this young lady here, we have to be good to her --

A Yes.
-- or we don't get a good record. You have to speak so she can take down what you're saying --

A Yep, got it.
Q -- yes or no. Is that the latest -- to your knowledge, is that the latest survey that has elevations on it?

A The survey that $I$ observed being done included more data points, particularly to the north of the data points that are located on this plan sheet.

Q When you say -- let's take a look at -- now I am a little confused. Looking at the sheet that is here in front of us, are you saying that you went
north of what is marked as the property line on the far top or northern portion of C114?

MS. KAVANAUGH: I'd object. He said nothing to that effect. He said there were more data points.

MR. GLEISNER: Okay. And I asked where those --

MS. KAVANAUGH: No.
MR. GLEISNER: Not at all. I'm asking where the data points --

MS. KAVANAUGH: No, that's not what you asked.

BY MR. GLEISNER:
Q How far north did the data points go?
A The data points that are not shown on this plan sheet --

Q Uh-huh.
A -- extend from the northernmost data point that you can see here to the line marked "property line." In other words, it fills in the gap between the northernmost data points shown on this plan sheet and the property line.

Q Let me ask it this way. You stated a moment ago that, "I observed being -- the survey that I observed being done included more data points
particularly to the north of the data points that are located on this plan sheet."

Can you point out for me where the northernmost data points are?

A It would be -- I don't know how to describe this, but in this area.

Okay. Before we make the record, and to the north of those data points would be where?

A (Witness points.)
Q That property line?
A Right.
All right. Having reference to C114 then -- let's just mark this so we're clear on what we're doing here. Let's take this light green marker here.

Would you draw a line along the property line
that's along the northern portion of the plat that we have in front of us?
(Witness complies.)
Thank you very much. Now, let's be clear. You did not consider any data points north of that line?

MS. KAVANAUGH: And I guess I'd object. He didn't say "consider." You asked him where he saw them take data points, so where the information he looked at had data points.

MR. GLEISNER: Actually, Counsel, I asked a very specific question.

BY MR. GLEISNER:
Q Did you consider any data points north of that line?

A I do not know the answer to that question.
Q And the data points that are involved in this plat are all south of that property line, correct?

A I would agree with that, yes.
Q All right. Now, let's take a look at the data points that run -- first of all, are you familiar with the existence of a stream or some kind of unnamed creek that is on the northern portion of the plat of survey that you have in front of you?

A Yes. I am aware that there is a drainage channel on the north side of the property.

Q Do you have in mind where that would be in reference to that plat? Don't draw with that one. Let's use this blue one. If you could give me an idea of the location of that stream, I'd appreciate it, using the blue marker.

A (Witness complies.)
Q And is it that wide, or is it wider than that?
A It's quite a bit wider than that.
Q Can you give me an approximation using that
marker?
A (Witness complies.)
Q Thank you, Mr. Wood. Now, you have drawn in blue -- and let me just ask you to -- would you initial the blue marks that you've just placed?

A (Witness complies.)
Q And also just maybe the blue marks, too.
A Oh, I'm sorry. All of them?
Q No, that's good.
A Okay.
MR. GLEISNER: Now, Counsel, just so we're clear on this, Exhibit 3 will be attached to the deposition of Mr. Hudak from yesterday, but we'll also attach this --

MS. KAVANAUGH: That's fine.
MR. GLEISNER: -- to the deposition of
Mr. Wood.
BY MR. GLEISNER:
Q The blue lines that run along the northern part that you've drawn on this plat of survey, those represent a stream, is that correct, or a stream bed?

A I would say that represents an approximate drainage channel configuration.

Q Can you explain what you mean by that?

A It's a conveyance of -- it's a channel that allows for conveyance of water from one point to another. And did you make observations yourself about that channel?

A I have been on the property approximately two times. I had never been on the property during a rain event. So I did not see flowing water during the time I was on the property; however, I did see pockets of standing water in the channel.

Q Can you tell me, looking at the blue lines that you have placed on Exhibit 3, can you tell me whether or not that water was located toward the east? toward the middle? toward the west of those blue lines?

A Can you restate? I don't understand.
Q Sure. Where was the standing water?
A The standing water was at several locations. I can't -- I'm -- off of memory, I can't pinpoint that.

All right. Fair enough. Are you familiar with bed and banks?

A I'm familiar with the concept, but I don't fulfill that role for DNR, so I'm not trained in that particular area. I'm just familiar with the concept.

Q Did you observe banks on that channel?
A Without the training, I guess I would be hesitant in making any kind of assessment or claim. I'm not trained or have any experience in defining that.

Q So you are not in a position to testify whether or not there were bed or banks on this -- what we call a channel?

A I would agree with that, yes, I'm not in a position to testify on this.

Q Can you tell me the elevations that are noted in that channel? Are there any elevations noted in that channel?

A Not on this plan sheet.
Q What plan sheet would that be in?
A There was another document that was generated by Kapur based on the surveying that I observed. That document should be available somewhere. MR. GLEISNER: Off the record for a moment.
(Discussion held off the record.)
(Exhibit No. W-1 was marked.)
BY MR. GLEISNER:
Q I want to show you what has been marked as RRNA Exhibit $\mathbf{W}-1$, which was produced for the first time
today by counsel for the DNR. And I want to ask you: Can you read the elevations on this sheet?

A With a -- probably a magnifying glass. MS. KAVANAUGH: And I have one.

BY MR. GLEISNER:
Q Well, we can't read the elevations, and we note that this is Kapur \& Associates.

MR. GLEISNER: And Counsel for the RRNA
and NLMD would like to have you, Edwina, call
Kapur \& Associates and have them send a PDF over of this document so that we can make out what's on here. We consider this to be a crucial document. MS. KAVANAUGH: Okay. Well, I'm not sure who to -- maybe --

THE WITNESS: I have it.
MS. KAVANAUGH: You have his number or
you have the document?
THE WITNESS: I actually have a PDF of this.

MR. GLEISNER: Can you get it to us now? THE WITNESS: If I can get on a computer.

MR. GLEISNER: Here you go.
(A brief recess is taken.)
(Exhibit No. 16 was marked.)
Brown \& Jones Reporting, Inc.
414-224-9533

MR. GLEISNER: Back on the record. A statement first of all. Because of the kindness of Mr. Wood and Ms. Kavanaugh, we have gotten some documents that --

MS. KAVANAUGH: A document.
MR. GLEISNER: A series of documents, actually, that constitute one group exhibit that are more legible than what was previously marked as RRNA W-1. That now has been now renumbered RRNA Exhibit 16, correct, Madame Reporter? BY MR. GLEISNER:

Q We have now given you, Mr. Wood, what has been marked as Exhibit 16. And that is a four-page document, correct?

A That is correct.
Q Now, on that document on the first page, there are a series of elevations, correct?

A That is correct.
Q Okay. Now, would this be easier for you to see? Just take a look at that and see if that's easier. Or if you can make out all of the elevations on that 11 X 17.

A I can make out the elevations on the $11 \times 17$.
Q Very good. Then we won't mark these right now. I would ask, first of all, do you see the stream bed
that we were talking about a few minutes ago?
A I see the drainage way that was surveyed when $I$ was on site portrayed on this map.

All right. Then $I$ would like you to just use the blue pen and mark the boundary line of the drainage way just so that we can have an idea of what you saw.

A What I'm going to mark is the approximate --
Q Understood.
A -- area.
Q Understood.

A (Witness complies.)
Q Thank you very much. Now, I'm also going to reference your attention -- thank you for initialling that. I appreciate that.

A I'm learning.
Q Very good. I'm referencing your attention back to what has now been marked as Exhibit 15. And there is an area that is surrounded in red. What does that refer to?

A This is an area that $I$ drew on the maps provided by Kapur that are part of Exhibit 16 to demonstrate a depression that appears to exist on the DNR property where the proposed boat launch will be located.

So the pink line represents, I would say, like, the upper limit of this depression. In other words, if the water -- if the depression was filled with water, the pink would represent where you would visually see standing water.

So I put -- I drew that on the map. And then I placed an arrow, which is the lowest elevation that -- where water would be released from this depression.
$Q \quad$ Yes.
A So that's all it represents. If water had filled up the depression, where would we prefer to leave the DNR property? And that's what that arrow represents is the lowest contour -- or the lowest data point that I could find that would basically represent where the water would tend to leave the depression.

Q Now, is Exhibit 16, the first page, what we see in Exhibit 15?

A No. The Exhibit 15 is based on page 2 of Exhibit 16.

Q Okay. Very good. Then on page 2 of Exhibit 16, again, for orientation purposes, could you, in blue, show us where the drainage ditch or stream or whatever is located?

A (Witness complies.)
Q Thank you very much. Now, could you also -- I don't have pink. I'm sorry. Could you use orange and do an approximation of that line that you see on Exhibit 15?

A (Witness complies.)
Q Now, could you take green, just so -- thank you for initialling that. I appreciate that. Could you take green and put the arrow that appears on Exhibit 15 so that we can see that?

A (Witness complies.)
Q Thank you. And, again, thank you for initialling that. So now at this point, except for the -(Cell phone rings.)
(A brief recess is taken.)
MR. GLEISNER: Back on the record.
BY MR. GLEISNER:
Q We were in the process of asking you if Exhibit 15 now, except for the added blue marks, corresponds to page 2 of Exhibit 16?

A That's correct.
Q Okay. Now, could you go back to page 1 of Exhibit 16 and describe for the record what we're looking at there.

A This is the representation of the additional
surveying that was done while I was present on the site last fall that pulls in the data for the drainage way, drainage channel that was located on the north end of the property.

Q So the purpose of this survey, was that done by Kapur \& Associates?

A Yes.
Q The purpose of that survey in page 1 of 16 was to establish the elevations in the drainage way, is that correct?

A That's correct.
Q And did you, at that time or anytime subsequent, address the trees on the location of the site?

A I'm not sure what you mean by that.
$Q$ The trees on the east end of where the parking lot, the proposed parking lot would be.

MS. KAVANAUGH: I would ask for clarification. What does "address" mean?

THE WITNESS: You have to point to what you mean by "trees."

BY MR. GLEISNER:
Q This area here. And for clarification, did you shoot -- or did Kapur shoot any elevations in and among the trees that are located on the eastern third of what will be the proposed parking lot for
the DNR?
MS. KAVANAUGH: On the date that -THE WITNESS: While $I$ was on site, the surveying was restricted to running a series of cross-sections on the north drainage way that we've been talking about. When $I$ was on site, there was no additional surveying points or data points collected on the site.

BY MR. GLEISNER:
Q At any time --
A At any time $I$ was there, no.
Q Can you explain to us what page 2 of Exhibit 16 shows?

A Page 2 is a representation of the data, the survey data points that were collected on the DNR property at a larger viewpoint. In other words, it pulls in a larger area versus the page 1 of the exhibit. It pulls in the whole DNR property area, whereas the first page just covers the northern section of the channel area.

Q So if I'm correct then, page 2 is an overview of the entire area where the parking lot will be?

A Exactly.
Q And page 3 then of 16.
A Page 3 are basically just the cross-sections from
the north property line or the north end of the channel --

Q Yes, sir.
A -- heading south across the DNR property.
Q Okay.
A So it's basically representing a series of cross-sections going south running down the channel to the east and then representing the elevations from -- along that point.

Q Okay. And page 4.
A Page 4 would be a continuation of the series of cross-sections.

Q Thank you. Now, going back to pages 1 and 2 of Exhibit 16. To your knowledge, are those the most current elevations that the DNR possesses?

A To my knowledge, that would be correct.
Q And those elevations were not shot by DNR personnel; they were shot by Kapur \& Associates?

A The only knowledge -- the only thing I have firsthand knowledge of is the elevation shot by Kapur on the date I was there. I don't have firsthand knowledge of any of the other data points.

Q Now, could you -- let's back up for a moment and talk about your job description. You -- I believe
you testified, I could look, but I believe you testified that you're a storm water specialist?

A Storm water engineer.
Storm water engineer?
Yes, yes, correct.
Now, in terms of your responsibilities for the DNR, are you a surface water specialist?

A I don't know what that means.
Q Okay.
A Can you restate what that means?
Q Are you concerned primarily with surface waters on properties that might interest or be of interest to the DNR?

A That would be hard to quantify. I'm in the storm water program with the DNR.

Q Okay.
A Okay. Okay? My role as a storm water program employee is to be involved in permitting and regulation of construction sites both during construction -- so that would be erosion control during construction and what we call post construction storm water management for what we call developments such as this one.

I also work in regulation of municipal storm water discharges. In both of those realms,
there is a surface water and groundwater component. One of the codes I've worked with very closely is NR-51. It's a state performance standard for both agricultural and what we call nonagricultural runoff.

As part of the performance standards for that -- that would apply to development, which I regulate. There is a groundwater component. We have a regulation on certain conditions that we require developments to take surface water and infiltrate it into the ground.

So in that component, there is a groundwater/surface water connection there. So I don't know if I'm really answering your question. But what I'm trying to say is that the storm water is not just surface water. Storm water has a -somewhat of a groundwater component --

Q Right.
A -- where it ultimately may end up. So I'm not sure if that is helpful at all.

Q It's very helpful. I would like to ask you this: I'm just going to reference this for informational purposes and not mark this.

The property where the DNR has -- that the DNR has purchased, the Kraus site, is east of
some farm fields. Have you done any studies with regard to the runoff that will be occasioned from the farm fields?

A I have not done any kind of studies or analysis of the runoff to this property.

To your knowledge, has the DNR done any studies in that regard?

A To my knowledge, no.
Q Okay. I would like to focus for a moment on your actual visits to the Kraus site.

A Uh-huh.

Q You testified earlier that you visited at least two times, is that correct?

A Yes.

Q Can you recall -- take a second and recall if you had -- if you have knowledge of when you were there?

A The first time would have been several years ago.
I was involved as a more or less technical
consultant for Kapur engineers when they were developing the site plan, particularly on the elements related to the storm water treatment practices.

So what I tried to do was give them some
advice on different ideas for treating the storm
water from the proposed boat launch area. So my first visit was base checklist just to go and get oriented with the property.

So that was several years ago. And then I was involved -- I think I met you. I was involved in the informational hearing in Waukesha.

Q Oh, on September 30?
A Yeah, I was manning the booth that had the storm water display. I know Mr. Gallo was there also, and I remember -- I recall meeting you.

Q Yes, I do, too.
A So that was my role was more of the advisory.
$Q$ Uh-huh.
A And I really had not done anything at all since that time until we started talking -- you know, some of these court cases had moved along and there was some interest in understanding the drainage patterns a little more.
$Q$ So let's go back to several years ago.
A Yeah.
Q When you were consulting with Kapur \& Associates, were you actually involved in setting up or helping to set up culverts and other --

A I wasn't involved in that part. My role was strictly just to give them some advice on
different storm water treatment practices; not flow issues, not storm water management from a flow standpoint; just a treatment standpoint.

The fact that storm water has permeable surfaces, have stuff in it and different techniques, that could be used to remove pollutants from storm water. That was my exclusive role. I wasn't involved in anything about how water moved around at all at that point. Thank you. I'm going to show you what was marked yesterday as Exhibit 5. It represents to be the Kapur \& Associates report dated September 22, 2009. Are you familiar with that report?

A Yes, I believe I am.
Q And what was the purpose of that report, to your knowledge?

A It was to quantify the storm water management system that was proposed.

Q Did you have any role in authoring that report?
A I was not involved in anything as far as any kind of calculations or any kind of role in writing any of this or any such things.

Q Would your role or would your responsibility in connection with the Kapur report that you have in front of you relate to issues such as development

Brown \& Jones Reporting, Inc.
414-224-9533
and redevelopment of the parking lot or the access road?

A Could you --
Q Different types of fill are required if you are using -- if you're building a new development as opposed to redeveloping an --

A Yes.
Q -- existing?
A Right.
Q Did you have any role in that?
A I gave some guidance on interpretation of NR-151.
Q Okay. I'd just like to talk about that for a moment, if I could. With regard to the access road now from Reddelien Road down to where the parking lot is concerned --

A Yep.
Q -- it has been characterized in that Kapur report that you have in front of you as redevelopment. Can you explain why that is?

MS. KAVANAUGH: And I guess I would object. What does that have to do -- I think storm water is arguably relevant and likely to lead to admissible evidence in terms of flow patterns and things like that.

But whether or not it's characterized as
Brown \& Jones Reporting, Inc.
414-224-9533
redevelopment or new development is relevant to the storm water permit, which isn't part of this hearing.

MR. GLEISNER: I do want to understand.
This is discovery, Counsel. I just want to understand the concept, why he reached that conclusion, if he reached that conclusion.

MS. KAVANAUGH: But you -- explain to me why that's likely to lead to you to discover admissible evidence having to do with navigability on this site.

MR. GLEISNER: I don't have to explain my strategy right now. I just want to understand if he -- or if he had any involvement in that and why that decision was made.

MS. KAVANAUGH: Okay. You can answer, but my objection stands.

MR. GLEISNER: Go ahead.
BY MR. GLEISNER:
Q Mr. Wood.
A I'm trying to figure out how to give you the right answer. The code -- okay. The code has a definition of redevelopment. It's very simple. It's any proposed development that replaces an existing development.

We consider -- and this has been
established through many, many projects that an existing gravel road is equivalent to basically essentially a paved road. It functions that way, because over time, it gets compacted, and it functions like pavement.

So the thought process was that there is an existing gravel road that runs from the main road to the boat launch. So the thought process was putting a road on top of that road is the redevelopment.

That's kind of the short version. I guess that's the -- and we have other projects where a similar approach was used.

Q Focusing on Exhibit 2, which was introduced yesterday, there is an access road which purports to be -- this is a -- this is a survey that was done back in 2005 -- that purports to be the road that will be -- where the access road of the DNR is going to be located.

And on that drawing, it says "gravel
drive." Did you ever observe gravel on that --
A Yes, I do recall seeing gravel.
Q Where?
A See, my recollection, through the entire course of
the road.
Q Okay. Thank you. I'm now going to show you what has been marked as Exhibit 7. That was marked yesterday. Do you recognize that?

A It doesn't look particularly familiar to me. Just for the record, that's the Gestra report. You never had an opportunity to study or use that?

A I don't believe so. It doesn't look familiar to me.

Q Okay. Thank you very much. I'd like to return, if I could -- I'd like to return, for a moment, to how we began this deposition. We read in what you're going to be testifying to at the hearing. And we've touched on many of the things that you indicated you'd be testifying on, but it says that you are going to be testifying on adjacent wetland complex. What's that mean?

A There is a wetland complex that I'm aware of that would be located -- I don't know how to give you a location. It would be west of the DNR proposed boat launch site running towards -- running west towards the bottom of the slope as shown on DNR wetland maps and things.

Q I apologize.
MR. GLEISNER: Off the record.
Brown \& Jones Reporting, Inc.
414-224-9533
(Discussion held off the record.)
BY MR. GLEISNER:
Q I'm going to show you, again, Exhibit 2. And I wonder if you could help me or orient me as to what you're talking about, "wetland complex."

A It is my understanding, based on this exhibit, the area marked in green is considered a wetland. And my understanding is that it is even shown on the DNR wetland inventory maps as wetland.

Q So the area in the green circle to the north of the proposed access road and the area in green or circled in green to the south of that wetland area on Exhibit 2, to your understanding, are wetland complexes?

A That's -- to my understanding, I would believe that's wetland --

Q Thank you very much. Now, turning to your description of what you'll be testifying to. It says that you will be testifying as to adjacent wetland complexes. What would you -- what would you understand your responsibility to be in that regard?

A Well, it certainly wouldn't be whether it is wetland or not. But possibly it's -- obviously the wetlands are part of the bigger storm water
picture as in any wetland.
Q Yeah.
A They tend to be large areas that accumulate water. So I think in that regard, that's how -- that's -I guess we'd view the wetlands as large storm water collection areas.

Q Thank you very much. Now, let me just -- so we're understanding each other here, my -- what I have learned from various materials that I have read and from our experts is that storm water wetlands and navigable waters are really facets of the same issue. Would you agree with that?

A I'm not sure I understand that question.
They're all interrelated?
A Can you restate just to --
Q Sure. If you have wetlands, it will often be filled, as you just testified, with storm water?

A Wetlands in many cases do receive runoff from contributing drainage areas. In other words, up-gradient lands in many, many cases drain to wetlands. And the only exceptions would be ones that are like fan-like wetlands that are dominated by groundwater inputs.

But, yes, I would say most -- not most, but in many, many cases, wetlands do receive some
of their water from the surrounding up-gradient lands.

Q Now, $I$ don't mean to imply that all navigable waters relate or are in any way related to wetlands or storm water, but wetlands or storm water can lead to the existence of navigable water. Do you agree with that?

A I'm not an expert in the navigable water issue.
Q Fair enough.
A I wouldn't want to talk much about that, so.
Q Okay. Fair enough. It also says that you're going to be testifying as to an outlet channel. Would you describe what that refers to?

A On this exhibit.
Q Sure. Let's look at Exhibit 2.
A On Exhibit 2 -
Q No, I apologize. I would like to go back to Exhibit 16 in that regard.

A Yeah. In Exhibit 16 on page 1, it would be the area that I highlighted in blue. That would be what I would describe as the outlet channel.

Q If you go to page 2 of that, there is an arrow in the -- that you've marked in green on page 2 of Exhibit 16. Is that where the outlet is going to occur?

A The green arrow on page 2 is a sub-outlet, $I$ guess I would call it. It was only used to represent what would happen if the depressional area that is on the DNR proposed boat launch site filled up with water, where the water would prefer to go.

It would prefer to drain, based on my interpretation of this map, back towards the west and to what I understand to be the wetland complex.

The drainage channel that we talked about at the north end, when I say "outlet channel," I would say this would be the outlet channel from the larger wetland complex system based on the information I have towards the lake. Does that help?

Q It does help. As I'm looking at that drawing from your perspective, to the right then is where the lake is?

A Exactly.
Q And to the left looking at it from your perspective is the west?

A Yes.
Q And so when that depression that you've marked in orange fills with water, you expect the wetlands to flush back into -- or the water to flush back
into the wetlands?
A Yes. If it filled up with water, that would be the preferred direction initially.

Okay. Thank you very much. Let's take a look at Exhibit 2. Where would that arrow be located on

Exhibit 2? And I don't expect you to mark it right now. Just point to it, and then we'll talk about it.

A It would be in approximately this location.
Q Okay. Now $I$ would like you to mark something. This time we're going to have you initial it real clearly. Would you mark where that arrow would be on Exhibit 2 in purple, please?

A (Witness complies.)

Q Thank you very much. Now could you just --
A Is that okay?
Q Maybe circle it so we can --
A Circle this?

Q Yes, thank you.
A (Witness complies.)
Q Actually, circle it just one more time so we really can see it.

A Double circle like this?

Q That's good. Now, what you have done on Exhibit 2 is you have indicated that the flushing back or
the outlet from where the depressed area is on Exhibit 16, page 2 would be to the southwest back into the large wetland that is encompassed with the green circle. Am I correct about that?

A To the best of my ability, yes.
Okay. Where would that water -- if it became really inundated in that green area, where would that water go from?

Assuming that this water becomes
filled -- the area in orange on Exhibit 2 becomes filled with water and it goes back into this green area, where would that area surrounded by the large green circle to the south of the new access road, where would that water go if it became very full?

A I have a partial answer.
Q Sure.
A And my partial answer is because I only have
limited information. The full answer could only be obtained by getting more surveying data south of the DNR property.

Q Okay.
A In other words, surveying data running down Reddelien Road and all the adjacent properties. I think that's a component. In order to make a
complete, good answer, I would need to know that information.

Q And that has not been obtained?
A No.
2 Okay.
A The only information that $I$ have is the data that was generated, I believe, again, by Kapur. Again, I wasn't privy to the surveying that was done other than when I was on site of the existing access road. We have that, I believe. That should be somewhere in the files, so.

Q Uh-huh, I believe so.
A So we have some information about the top elevation of the access road.

Q Uh-huh.
A And we have information about at least one existing culvert under that access road. Based on the -- what we call the invert elevation or the bottom elevation of that existing culvert, that would be one of the ways water that came back from the DNR land into the main larger wetland complex that you referred to would go to the north.

Q And I appreciate your honesty, first of all, about the lack of engineering reports, et cetera. Is there any -- I don't know how to say this in a way
that is not going to be -- I want to be very clear.

Is there any way that the water --
assuming that the large circle in green on Exhibit 2 became full with water, is there any way that that could wash east over the homes that are located on Reddelien Road?

A I don't know an answer to that without more detailed information.

Q And the DNR has not acquired that information?
A Not to my knowledge.
$Q \quad$ And you would be in a position to know if they had?

A I wouldn't know that. No one's ever told me. No one's ever asked me. I don't have any inside information on that.

Q I appreciate that. Your responsibility would be to have that information, I mean, as a storm water manager, right?

A I don't have any personal responsibility on this particular project other than just providing advice to people. So I'm not sure whose responsibility that would be.

Q Would you be -- who else in the DNR might have that storm water information?

A I do not know.
Q That's fair. Now I'm going to show you what has been marked as Exhibit 4. And in Exhibit 4, which is some answers to interrogatories your counsel was kind enough to provide us with -- bear with us for a moment.

A Yep.
(Discussion held off the record.)
MR. GLEISNER: Back on the record.
BY MR. GLEISNER:
Q I'm going to show you Exhibit 4, and I am going to refer your attention to Exhibit $J$ attached to Exhibit 4. That purports to be a memo from Lynette Check, I believe?

A Yes. Sorry.
Q It's an email.
MR. GLEISNER: Thank you, Mr. Harbeck.
It's an email.
BY MR. GLEISNER:
Q Now, there is attached to that email a map or actually a color -- there we go. It looks like an aerial photograph. Was that done by you?

A This is -- yes, I produced this document.
Q I just would like to address that document for a moment. Now we're dealing with hopefully the one
that was --
MR. GLEISNER: Off the record.
(Discussion held off the record.)
BY MR. GLEISNER:
Q I'd like you to take a look at that drawing and explain to me, if you would, there's a reference here in the Lynette Check email -- or memo, excuse me, to an existing depression in the proposed parking lot area, "see blue shaded area." And I have to tell you very honestly, maybe I'm old, but it all looks blue.

A There may have been -- I tried generating this using PowerPoint. We have low technology at DNR. I tried to generate this using PowerPoint. And possibly $I$ intended to have a blue area shown, and it did not end up in the final product.

But I would say what we've been talking about, and the pink area that $I$ outlined on the previous exhibits, that would have been the area that I would have highlighted as a blue area.

Q Well, I appreciate that. And I wonder if you could take -- I think red will show up the best.

A Okay.
Q I'm going to hand you a red Sharpie. And I'm going to ask you, if you could, on that aerial
photograph -- would you agree it's an aerial photograph --

A Yes, yes.
Q -- attached to Exhibit J? Could you draw what was intended to be the blue area or surround it for us?

A And, I believe, if $I$ would have sent them the one with the blue area, because $I$ was using a crude technique, it would have looked something like a very crude shape, something very similar to what I've just drawn on here.

Q Now, I would just like to have a couple understandings.

A That's the best $I$ can do without having the contour overlay.

Q Is --
A So as long as you understand that. I'm eyeballing based on --

Q I do understand that. We understand these are all approximations.

A Yeah.

Q But let me just go back and say, is it your recollection that that is what would have been the blue area that Lynette Check was referring to?

A As best as $I$ can recall, yes.

MR. HARBECK: Just for the record, it's not Lynette Check. It's Mr. Wood's email himself.

MR. GLEISNER: Thank you very much, Mr. Harbeck.

MR. HARBECK: The email that's attaching this is Mr. Wood's email of September 27, 2010.

MR. GLEISNER: I stand corrected.
BY MR. GLEISNER:
Q So you were the one who authored the email --
A Yes.
Q -- to which this is attached --
A Yeah.
Q -- this photograph is attached?
A Yes, right.
Q There are some other characteristics of this, and I just want to have you identify them. There are some green arrows --

A Yes.
Q -- or green -- what is that?
A That represents -- all this information represents a summary of what we've been talking about as my interpretation of the data generated and the maps produced by Kapur as my best guess of if a raindrop fell on the DNR boat launch site and filled up the depression, what would be a possible
flow path out of that location.

So this is my representation with the information that $I$ have following flowing water downhill, taking a general rule of thumb on Earth and just that water flows downhill and following the elevations down.

So that was my best guess based on the information that we had as to where that flow path could have occurred.

Q So let me just make sure $I$ understand what this means. The green dot in the center --

A Yes.
Q -- to the west of the -- what you call a blue area --

A Yes.

Q -- is the beginning of what you would believe to be the flow pattern?

A That would be the arrow that $I$ marked on the previous exhibits. That would represent, similar to the location where I marked --

Q The purple arrow on Exhibit 2 -
A Right.
Q -- for example?
A Yes. It would represent a spot elevation that I picked out of the Kapur survey data.

Q Explain to me the pathway that that green arrow then traverses.

A The pathway is -- again, this is just a function of using a nonengineering graphic program. It was basically a crude representation of water heading a direction -- it's not really a scientific or a calculated arrow.

It's basically a function -- it's a crude representation of a possible flow path to the next lowest point, which would be the culvert under the existing road.
$Q$ And that flow path heads out the -- what we've discussed before, the stream that is just south of the Peters' house, is that correct?

A Let's back up again. Restate that.
Q The green arrow seems to curve around and then run east between a yellow and red line. That green arrow on what is attached to Exhibit $J$, that is a flow path that is following along what we call the drainage ditch?

A Yes, yes.
Q Okay. And that green arrow presupposed that it's going to be going through a culvert under the access road, is that correct?

A Yes.

Q What data or professional evidence do you have that it would follow that path and not, instead, go south into the large green circle of wetland on Exhibit 2?

A As I stated before, I don't have any evidence of that. The only information $I$ have is the survey data in and around the access road. So this is solely based on the information that is available. So the green arrow that we have here is kind of a wish that it would go under the culvert?

MS. KAVANAUGH: Object to the characterization of that.

BY MR. GLEISNER:
Q A hope? Is there any evidence that it would go in the direction that you have?

A The evidence is the elevations of the culvert. It is pitched -- the culvert itself, based on what we call the invert elevations of the existing culvert, it's pitched to drain to the north.

Q But if there was enough water that left that arrow that we've marked on -- let's just be clear here.

The arrow that is going southwest on the photograph attached to Exhibit $J$, which is the same arrow which is going southwest out of the orange on Exhibit 2 and the same arrow -- the blue
arrow going southwest out of page 2 of Exhibit 16, that arrow showing the flow path, if there was enough water coming out of the depression, you have nothing or no evidence that it couldn't go south into that large green circle, is that correct?

A Correct.
Q So if there was enough water coming out of that orange area on Exhibit 2, it could, in fact, inundate or fill up the green area that's in the large circle on Exhibit 2, is that correct?

A Well, I guess you'd have to define what you mean by "fill up."

That's a fair statement.
A Right.
Q It could cause the water level to rise in the large green circle on Exhibit 2?

A You'd have to further clarify what you mean by "rise." The issue -- these are large flat areas. I think even without the actual survey data from the DNR property down Reddelien Road --

Q Uh-huh.
A -- there is some other information, public information available. Some of this information I got off the Waukesha County GIS website.

They do have what's called a two-foot contour interval map that gives a picture better than a 10-foot contour interval map of the topography here. If you would look at that map, it would suggest that this area is very flat, and it's all essentially at the same elevation.

That's why I'm saying it's difficult to say any of this stuff in a lot of detail, because the existing available data suggests very little change at all in topography.

Q Uh-huh.
A I don't know if that's making any sense at all or --

Q It is to a certain extent, but $I$ just want to go back to your earlier testimony that storm water will often cause wetlands to fill with water. Is that what you said?

A Yeah, storm water runoff can enter a wetland. A wetland is just like any other depression. It has a finite ability to make water disappear. When that capacity's been exceeded, it has nowhere to go except up. Similar to filling up a bathtub. I don't know if that helps explain -It does.
-- how it works, but, sure, yeah. Anytime you add
water to a bathtub, something happens. But it's really about -- it's more about the degree of. So I want to make this highlight -- this wetland complex, to my knowledge, is very large, 10 to 12 acres in size.

The green -- the large green --
A Yes.
Q
-- circle --
Yep.
-- on Exhibit 2?
Right. The situation you get into -- you can do this experiment yourself. If you take a glass of water and fill it up, maybe that would be a several-inch rise in water. If you took that same glass of water and put it in the bathtub, you wouldn't notice the change.

So that's an issue in this particular situation also. Because of the large size and the ability of that wetland to spread out water, for lack of a better word, there has to be some discussion about the degree of.

In other words, water draining off the DNR property into the wetland complex, it can be calculated what the maximum water level rise that would occur.

Q Uh-huh.
A But you would need to know a lot more information about the topography of the wetland to actually -but it can be calculated. These are things that could be done. You can calculate a volume of water --

Q Sure.
A -- and project that over the wetland, and that would tell you. The point would be, yes, that if the wetland was not able to infiltrate water, that if you added a drop of water, there would be nowhere for it to go but up. But the question is: Can you even measure what up is? I guess that's the point.

Q Uh-huh. So let's just -- as I conclude here, let's just quantify, as far as what you know, what the DNR doesn't know.

The DNR doesn't know for sure that the water flow along the arrow that is identified in the photo attached to $J$ of Exhibit 4 and at the purple arrow in Exhibit 2 and the blue arrow in the second page of Exhibit 16, the DNR doesn't know for sure that that's the path the water is going to go?

A That's correct.

Q The DNR does not know the characteristics of the wetlands surrounded by the green circle in Exhibit 2?

A That's correct, to my knowledge, yeah.
Q And the DNR doesn't know whether or not the green -- the large green circle on Exhibit 2 became sufficiently full of water? The DNR does not possess data to indicate that that water wouldn't flow east over Reddelien Road?

A That's correct, there's no definite conclusion on that.

Thank you very much. I'm going to -- do you have Exhibit 1-A in front of you?

MR. GLEISNER: Maybe, Counsel, you could provide it. Things are a little messy here right now.

MR. HARBECK: Here. You can borrow mine.

BY MR. GLEISNER:
Q We're almost done with my questioning. Mr. Gallo is going to have questions. But $I$ would just like to go back to your description of what you -- what your counsel has been kind enough to indicate what you'll be testifying to.

And it states in that description that
Brown \& Jones Reporting, Inc.
you have information that would lead to an analysis regarding elevations of various locations. What is your analysis, if it's any different from what we've been talking about?

A I think we've pretty much summarized what $I$ know and my interpretation of --

Q You have nothing to add to that?
A No.

Q And then your knowledge and information about adjacent wetland complexes, we've pretty well plumbed that subject, too?

A Yes.
Q So you have nothing to add to that?
A Nothing.
Q And with regard to the outlet channel, have we pretty well covered everything that you know about that?

A Yes.

Q And you have nothing to add to that?
A Nothing to add.

Q And your interpretation and engineering opinion regarding preferred flow paths of surface water, have we pretty well covered that?

A Yes.

Q You have nothing to add to that?

A Nothing to add.
Q Including whether it would take it along or across the DNR, formerly Kraus, property, we've covered that?

A To my knowledge, yes.
Q Is there anything you have to add to that?
A I have nothing to add.
MR. GLEISNER: Mr. Gallo.
EXAMINATION
BY MR. GALLO:
Q Is it okay if I call you Pete?
A Yeah. Can I call you Don?
Q Yes, that is fine. This figure -- this is
Exhibit $J$ of Exhibit 4 you've been discussing with
Attorney Gleisner. The elevations that are shown on this figure, did you put those on? And where did you get those elevations?

A Yes. I put the elevations on, and they came off the Kapur surveying data that we've been talking about. I round -- I did round.

Q I understand.
A What you'll see there is -- just to simplify it, I rounded it to the nearest --

Q Ten?
A Yes.

Q Okay. Thank you. Are you familiar, Pete, with the concept of ordinary high water mark?

A You know, I'm familiar with it, because I work with developers a lot. Many times in the permits I issue, navigability questions come up.

And so my role at DNR, when people ask about that is I refer them to a water management specialist to do an ordinary high water mark determination. That's my extent.

I know what the term is. I know it comes up a lot. It know it applies to navigable waterways. It sets a regulatory mark. And it becomes significant for some of the projects I permit, but I'm not involved in doing those determinations or anything like that, so.

Q Are you familiar with the concept that below the ordinary high water mark is in the public trust?

A Yes, yes.
Q Thanks.
(Pause in testimony.)
BY MR. GALLO:
Q I'm going to hand you North Lake Management
District Exhibit 104. And it's an email. And if you could just take a moment to read that. It has to deal with the ordinary high water mark. I
think the top email was an email from Jim Morrissey.
(Pause in testimony.)
BY MR. GALIO:
Q I'm not going to ask you anything in detail about the confusing --

A Okay. It's very confusing.
Q This email, the second email in the middle of the first page is an email from Dale Pfeiffle at the Army Corps to Jim McNelly, Andy, Bob Wakeman regarding some confusion over the ordinary high water mark.

But the subsequent email at the top of the page from Jim Morrissey, is it your understanding that that is the elevation of the ordinary high water mark? I believe Jim was trying to clarify between this.

A Unfortunately, Don, I'm not involved -- I've never seen this. I'm not involved with this. I've never been asked about it.

Q That's fair. I appreciate that.
A Yeah, I really have nothing to offer on that.
Q Okay. That's fine. Pete, when you were out there looking at the storm water drainage, and I appreciate you were predominantly looking at
treatment systems, but when you -- as I recall, there was a culvert under the existing driveway.

I'm going to hand you a new exhibit, so that would be exhibit, I think 108. No, it's 110. This is a Bing photo. Make sure you familiarize yourself with that. It just shows the existing driveway.

And maybe in looking at that photo and also this photo, which was RRNA 4 Exhibit J, back, again, this elevation, what I'm going to ask you about is this culvert, this existing culvert.

And when you were out on those site visits, did you -- were you able to inspect that culvert?

A I have seen the culvert.
Q It's really a small diameter. I'm not sure --
A Eighteen inches is what's shown on the Kapur --
Q Is it?
A From a culvert standpoint, it's relatively small. So based on the Kapur plans -- and I know I've seen the culvert. I never measured it myself.

Q Okay.
A But $I$ know I've seen the culvert when I've been out there.

Q Could you locate it on the new map that I...
Brown \& Jones Reporting, Inc.
414-224-9533

A Well --
Q It would be just an approximate.
A When I look at my drawing, again, I was not -this was not supposed to be --

Q The definitive --
A As far as accurate where it is spatially in the world. So this is more of a -- really approximate.

Q A graphic --
A Yeah.
Q -- depiction? Is that fair?
A But do we have any other exhibits that go down the existing road a little further?

Q Yeah.
A I found one.
Q For the record, Pete is referring to RRNA
Exhibit 3, which is a set of plans. And he's, I think, looking -- if you turn on the exhibit plans to C116.

A Yes, yes.
MS. KAVANAUGH: And what exhibit is
that?
MR. GLEISNER: 3, RRNA 3.
BY MR. GALLO:
Q It doesn't --
Brown \& Jones Reporting, Inc.

MS. KAVANAUGH: And what plan page is that?

THE WITNESS: Yeah, C116, yep.
BY MR. GALIO:
Q It says to remove existing eight-inch CP?
A Yes.
Q I think that's the existing culvert?
A I believe so, too.
Q So it's an eight-inch --
A When I look at Kapur's more blown-in -- they
have --
Q Right.
A -- a more detailed view of this. It shows an 18-inch.

Q I see. Okay.
A But all or some of us are going in the field on - MS. KAVANAUGH: Yeah, with them. THE WITNESS: Yeah, we can --

BY MR. GALLO:
Q We can --
A -- determine that then, yes.
Q Okay. I appreciate that.
A But - -
Q So --
A -- you can probably by, you know --

Q Do you --
A -- seeing the curve in the road on this aerial
photo, Don --
Yeah.
A -- and trying to, like, eyeball the curve in the road up to where the proposed boat launch area is, I could probably put a pretty good --

Q That's okay.
A -- guesstimate if you wanted.
Q I don't think that's necessary.
A Okay.
Q Because what I'm going to have you do is take this yellow marker and just highlight the existing culvert on the existing driveway on drawing C116.

A Okay.
MR. GLEISNER: Off the record.
(Discussion held off the record.)
MR. GALLO: Let's do the blue, if that's
okay.
BY MR. GALLO:
Q So the blue --
A Is to show the existing culvert --
Q Yes.
A -- to my knowledge.
Q Yes, thank you. That would be great.

MR. GLEISNER: Off the record.
(Discussion held off the record.)

BY MR. GALIO:
Q Do you mind initialling --
A Yes, I did.
Q And is it fair to say that that culvert is existing in the existing driveway?

A Yes.
Q And that the proposed roadway would be to -directionally to the north of the existing driveway, what appears to be into the wetlands? MS . KAVANAUGH : Huh?

BY MR. GALLO:
Q The existing roadway is to the north of the existing driveway?

A Right.
Q What appears to be into the area that is existing wetlands --

A That's my understanding, yeah.
Q Okay. Now, on this -- on this drawing also there's a dashed -- there's a dashed line on both sides of the proposed roadway, and it's called -it's -- the area -- arrows to that dashed line say "slope intercept."

A Hang on. Yes, okay, yes, right.

Q It's noted in a couple locations.
A Yes.
Q Can you explain for us, what does that line represent?

A The slope intercept would be the location where the proposed roadway fill connects back up to the existing topography.

Q Okay. Were you involved with any of the roadway design?

A I was not involved in any of the road, no.
Q Okay. I'm sorry. Let's correct the record. I said the existing roadway is to the north of the existing driveway. What I meant to say is that the proposed roadway is to the north of the existing driveway.

A Agreed.
Q Okay. Thank you.
A Sorry about that. It's the old nodding thing again.

Q Okay. Thank you. Can you state for the record your date of birth?

A Date of birth, July 5, 1968.
MR. GLEISNER: Off the record.
(Discussion held off the record.)
MR. GALLO: I'm done.
Brown \& Jones Reporting, Inc.
414-224-9533

MR. GLEISNER: I have one more question, a follow-up question.

EXAMINATION
BY MR. GLEISNER:
Q For the sake of completeness, you were testifying earlier about development versus redevelopment, and you said you saw gravel. Does gravel have any impact on whether or not a roadway is developed or not?

A That is a good question. Gravel comes up a lot in redevelopment sites. This is not typical. The ones we normally deal with, they are coming up a lot, say -- I know there was a project in Franklin, a McDonald's redevelopment of an existing McDonald's site.

So we talk a lot about it when we talk about fitting into the rules. In that case, what they normally do is they pull up the existing asphalt and regrade the parking lot.

So our interpretation of what we tell people in this particular case is that we consider the parts where there's existing gravel -- or maybe there's an existing gravel parking lot that they want to pave over.

That's why it comes up a lot, because
there seems to be a lot of gravel parking lots that people want to pave. So that's the interpretation we've always said is that's existing.

In many cases those become exempt projects, because they're not -- they're not expanding the footprint. They're just going over the top of the gravel.

What our policy is, if you have a redevelopment site like that where you're paving beyond the gravel area, that's when we tell you, "Okay, now you have to do something. You have to do the 40 percent treatment."

I have to slow down. In the previous version of NR-151, there was an exemption for many redevelopment sites if they were not going to increase the area of parking or roads. The current code, those exemptions have been removed.

But there were many redevelopment sites, because they were working within the existing footprint, that they were essentially exempt. So, again, this is a lot of legal code stuff that --

Q No, it's very helpful. The footprint's being significantly increased here, correct?

A I don't know. I don't know if it's "significant."
Brown \& Jones Reporting, Inc.

I've never done the measurements or anything to that effect.

Q I gather from talk about parking lots and gravel and parking lots, et cetera, normally there's a lot of gravel and not just a little gravel, is that correct, for there even to be a matter?

A I don't know if the size means anything.
Q The amount -- I mean, the amount of gravel, the depth?

A That probably is not that significant.
Q It's mainly the footprint?
A It's more -- yeah, it's more the idea of is it being used as an existing urban land use, I guess, is what -- how we look at that. So it's not a natural, it's not an agricultural thing.

It's something that -- so a dirt road could be -- reconstructing a dirt road could get the same interpretation, because it's a road, not a farm field or woods or a prairie or anything like that.

Q Footprint expands, it's probably going to be redevelopment?

A Yes.

MS. KAVANAUGH: I guess I would put an objection in here, because --

MR. GLEISNER: No need, Counsel. I'm done.

MS. KAVANAUGH: Well, I would object to that last question, because it doesn't have anything to do with the navigability. You are trying to expand the scope of this deposition to cover storm water issues that do not have anything to do with navigability.

MR. GLEISNER: And I will state for the record that the DNR seems to compartmentalize things in an order to try to avoid issues, and it's very disturbing to me.

MS. KAVANAUGH: And you can have that opinion. But there are separate permits, and this is a deposition that's being conducted in relationship to this manual code approval and not to the authorization for the general permit for storm water.

I have allowed some -- without objecting, some of the questions about storm water as they relate to whether this water might back up on -- I'm assuming that's where you're getting -going on -- to these depositions.

But when you start getting into issues for the general storm water permit, that's not
relevant. That's not calculated to lead to the discovery of admissible evidence. I want a record for that.

MR. GLEISNER: As long as you have put it this way, let me just go on the record and state that if you're dealing with an issue about the filling of the wetlands to the south of the -in the large green area on Exhibit 2, the character and constitution of the, quote/unquote, access road could have an impact that would lead to problems, particularly when Mr. Hudak testified yesterday that whole area was navigable water.

MR. HARBECK: Can I suggest if you want to have an argument going forward, go off the record? You've made your point, he's made his point.

MS. KAVANAUGH: Well, you know, he's got, you know, an answer. I've made my objection.

MR. HARBECK: Okay.
MR. GLEISNER: Are we finished with
Mr. Wood?
MR. GALLO: I am. Thank you very much.
(Exhibit No. 110 was marked.)
(Proceedings concluded at 12:19 p.m.)

Brown \& Jones Reporting, Inc.
414-224-9533

```
STATE OF WISCONSIN ) SS:
COUNTY OF MILWAUKEE )
```

I, JESSICA R. WAACK, a Registered Merit Reporter, Certified Realtime Reporter, Registered Diplomate Reporter and Notary Public in and for the State of Wisconsin, do hereby certify that the above examination of PETER WOOD was recorded by me on August 26, 2011, and reduced to writing under my personal direction.

I further certify that $I$ am not a relative or employee or attorney or counsel of any of the parties, or a relative or employee of such attorney or counsel, or financially interested directly or indirectly in this action.

In witness whereof I have hereunder set my hand and affixed my seal of office at Milwaukee, Wisconsin, on September 3, 2011.

Notary Public
In and for the State of Wisconsin

My Commission Expires: September 1, 2013.

Brown \& Jones Reporting, Inc.
414-224-9533

Peter Wood - August 26, 2011

| 1 | 3 | $\begin{array}{\|c} \text { 37:24;52:10 } \\ \text { admissible (3) } \\ \text { 28:23;29:10;66:2 } \end{array}$ | $\begin{aligned} & \text { 12:23;17:8;57:2,8 } \\ & \text { approximately (2) } \\ & 13: 5 ; 36: 9 \end{aligned}$ | $\begin{aligned} & \text { authorization (1) } \\ & 65: 17 \\ & \text { available (4) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 1 \text { (5) } \\ & \text { 19:22;20:8;21:17; } \\ & 22: 13 ; 34: 19 \\ & \mathbf{1 0} \text { (1) } \\ & 49: 4 \end{aligned}$ | $\begin{aligned} & 3 \text { (8) } \\ & 7: 20 ; 12: 12 ; 13: 11 ; \\ & 21: 24,25 ; 57: 17,23,23 \\ & \mathbf{3 0}(\mathbf{1}) \\ & 26: 7 \end{aligned}$ | ```advice (3) 25:25;26:25;39:22 advisory (1) 26:12 aerial (4) 40:22;41:25;42:1;59:2 again (11)``` | $\begin{aligned} & \text { approximation (2) } \\ & 11: 25 ; 19: 4 \\ & \text { approximations (1) } \end{aligned}$ | ```14:18;46:8;47:24;48:9 avoid (1) 65:11 aware (2) 11:15;31:18``` |
| 104 (1) | 4 |  | $\begin{aligned} & 10: 6 ; 13: 24 ; 17: 10,19 \\ & 21 ; 20: 22 ; 21: 17,18,20, \end{aligned}$ | B |
| $\begin{gathered} 108(1) \\ 56: 4 \\ \text { 10-foot (1) } \\ 48: 3 \\ 11(2) \\ 16: 22,23 \end{gathered}$ | $\begin{aligned} & 4 \text { (9) } \\ & 22: 10,11 ; 40: 3,3,11,13 ; \\ & 50: 20 ; 53: 14 ; 56: 9 \\ & \mathbf{4 0} \text { (1) } \\ & 63: 13 \end{aligned}$ | $\begin{aligned} & \text { 18:23;19:12;32:3; } \\ & 38: 7,7 ; 45: 3,15 ; 56: 10 ; \\ & \text { 57:3;61:19;63:22 } \\ & \text { ago (5) } \end{aligned}$ | $\begin{aligned} & 22 ; 26: 1 ; 32: 7,10,11,12 ; \\ & 34: 20 ; 35: 3 ; 37: 1,7,10,12, \\ & 12 ; 41: 9,9,15,18,19,20 ; \\ & 42: 5,8,24 ; 44: 14 ; 47: 9,10 ; \\ & 48: 5 ; 59: 6 ; 60: 17,23 ; \\ & 63: 11,17 ; 66: 8,12 \end{aligned}$ | Back (24) <br> 16:1;17:17;19:16,22; <br> 22:13,24;26:19;30:18; <br> 34:17;35:7,25,25;36:25; <br> 37:2,11;38:20;40:9; <br> $42 \cdot 22 \cdot 45 \cdot 15 \cdot 48 \cdot 15$. |
| $\begin{aligned} & 110(2) \\ & 56: 4 ; 66 \\ & 12(1) \end{aligned}$ | 5 | $\begin{aligned} & \text { agree (6) } \\ & 8: 7 ; 11: 9 ; 14: 9 ; 33: 12 ; \\ & 34: 7 ; 42: 1 \end{aligned}$ | $\begin{aligned} & \operatorname{areas}(4) \\ & \text { 33:3,6,19;47:19 } \\ & \text { arguably (1) } \end{aligned}$ | $\begin{aligned} & \text { 42:22;45:15;48:15; } \\ & \text { 51:22;56:9;61:6;65:21 } \\ & \text { background (1) } \end{aligned}$ |
| $\begin{gathered} 49: 4 \\ 12: 19(1) \\ 66: 24 \end{gathered}$ | $\begin{aligned} & \mathbf{5}(\mathbf{2}) \\ & 27: 11 ; 61: 22 \end{aligned}$ | Agreed (1) <br> 61:16 <br> agricultural | $\begin{gathered} 28: 22 \\ \text { argument (1) } \\ 66: 14 \end{gathered}$ | $\begin{aligned} & 5: 15 \\ & \text { banks (3) } \\ & 13: 21 ; 14: 1,7 \end{aligned}$ |
| $\begin{aligned} & 15 \text { (6) } \\ & \text { 17:18; } \end{aligned}$ | 7 | $\begin{aligned} & 24: 4 ; 64: 15 \\ & \text { ahead (1) } \end{aligned}$ | $\begin{array}{\|c} \text { Army (1) } \\ 55: 10 \end{array}$ | $\begin{gathered} \text { base (1) } \\ 26: 2 \end{gathered}$ |
| $\begin{gathered} 10,18 ; \\ \mathbf{1 6 ( 1 9 )} \end{gathered}$ | $7(1)$ $31: 3$ | $\begin{gathered} \text { allowed (1) } \\ 65: 19 \end{gathered}$ | around (3) 27:9;45:16;46:7 arrow (24) | $\begin{aligned} & 14: 17 ; 18: 20 ; 32: 6 \\ & 35: 6,14 ; 38: 17 ; 42: 18 \end{aligned}$ |
| $\begin{aligned} & 18: 18,21,22 ; 19: 20,23 \\ & \text { 20:8;21:12,24;22:14; } \end{aligned}$ | A | $\begin{gathered} \text { allows (1) } \\ 13: 1 \end{gathered}$ | $\begin{aligned} & 18: 7,13 ; 19: 9 ; 34: 22 \\ & 35: 1 ; 36: 5,12 ; 44: 18,21 \end{aligned}$ | $\begin{aligned} & \text { 44:7;46:8,17;56:20 } \\ & \text { basically (7) } \end{aligned}$ |
| $\begin{aligned} & 34: 18,19,24 ; 37: 2 ; 47: 1 ; \\ & 50: 22 \end{aligned}$ | $\begin{array}{\|l\|} \hline \text { ability (3) } \\ \text { 37:5;48:20;49:19 } \end{array}$ | $\begin{gathered} \operatorname{almost}(1) \\ 51: 20 \end{gathered}$ | $\begin{aligned} & \text { 45:1,7,16,18,22;46:9,20, } \\ & 22,24,25 ; 47: 1,2 ; 50: 19, \end{aligned}$ | $\begin{aligned} & 7: 12 ; 18: 15 ; 21: 25 ; \\ & 22: 6 ; 30: 3 ; 45: 5,8 \end{aligned}$ |
| 17(2) | able (2) | $\begin{aligned} & \text { along }(9) \\ & \quad 6: 17 ; 10: 15,16 ; 12: 19 \end{aligned}$ | $\begin{gathered} 21,21 \\ \text { arrows (2) } \end{gathered}$ | $\begin{array}{\|l} \text { bathtub (3) } \\ 48: 22 ; 49: 1,15 \end{array}$ |
| 16:22, | $50: 10 ; 56: 13$ | 6:17;10:15,16;12:19; 22:9;26:16;45:19;50:19; | $\begin{array}{\|c\|} \text { arrows (2) } \\ 43: 17 ; 60: 23 \end{array}$ | $\begin{aligned} & \text { 48:22;49:1,15 } \\ & \text { bear (1) } \end{aligned}$ |
| 18-inch 58:14 | access (12) 28:1,13;30:16,19 | 53:2 | asphalt (1) | 40:5 |
| 1968 (1) | 32:11;37:13;38:10,14, | always (1) | $62: 19$ | became (4) |
| 61:22 | 17;45:24;46:7;66:10 | $\begin{gathered} 63: 3 \\ \text { among (1) } \end{gathered}$ | $\begin{array}{\|l} \text { assessment (1) } \\ 14: 3 \end{array}$ | 37:6,14;39:5;51:7 <br> become (1) |
| $\begin{aligned} & \text { 1-A (2) } \\ & 6: 4 ; 51: 13 \end{aligned}$ | $\begin{aligned} & \text { accumulate (1) } \\ & 33: 3 \end{aligned}$ | $20: 24$ | Associates (9) | 63:5 |
| 2 | $\begin{gathered} \text { accurate (1) } \\ 57: 6 \end{gathered}$ | 64:8,8 | $22: 18 ; 26: 21 ; 27: 12$ | becomes (3) <br> 37:9,10;54:13 |
| 2 (34) | acquired (1) | $6: 11 ; 25: 4 ; 52: 2,3$ | $\begin{array}{\|c} \text { associate's (1) } \\ 5: 19 \end{array}$ | 12:22;13:21;14:7; |
| $18: 20,22 ; 19: 20 ; 21: 12$ | acres (1) | Andy (1) | assume (1) | 16:25 |
| $14,21 ; 22: 13 ; 30: 15 ; 32: 3,$ | $49: 5$ | 55:10 | 7:21 | began (1) |
| 13;34:15,16,22,23;35:1; | across (3) | apologize (2) | Assuming (3) | $31: 12$ beginning (1) |
| $36: 5,6,13,24 ; 37: 2,10$ $39 \cdot 5: 44: 21: 46: 4.25$ | $6: 17 ; 22: 4 ; 53: 2$ | $\begin{aligned} & 31: 24 ; 34: 17 \\ & \text { appears (5) } \end{aligned}$ | $\begin{aligned} & \text { 37:9;39:4;65:22 } \\ & \text { attach (1) } \end{aligned}$ | $\underset{44: 16}{\text { beginning }}$ |
| 47:1,9,11,17;49:10; | $\begin{array}{\|l} \text { actual (3) } \\ 7: 3 ; 25: 10 ; 47: 20 \end{array}$ | 8:6;17:23;19:9;60:11, <br> 17 | $\begin{gathered} 12: 14 \\ \text { attached (9) } \end{gathered}$ | below (1) <br> 54:16 |
| 50:21;51:3,6;66:8 | actually (8) | 17 applies (1) | 12:12;40:12,20;42:4; | benefits |
| 20 (1) | 8:3;11:1;15:18;16:7; <br> 26:22;36:21;40:21;50:3 | $54: 11$ | $\begin{aligned} & \text { 43:11,13;45:18;46:23; } \\ & 50: 20 \end{aligned}$ | $5: 2$best (6) |
| 2005 (1) | add (9) | apply (1) |  |  |
| 30:18 | $\begin{aligned} & 48: 25 ; 52: 7,13,19,20, \\ & 25 ; 53: 1,6,7 \end{aligned}$ | appreciate (9) | attaching (1) <br> 43:5 | 37:5;41:22;42:14,25; |
| 2009 (1) |  | $\begin{aligned} & 11: 21 ; 17: 15 ; 19: 8 \\ & 38: 23 ; 39: 17 ; 41: 21 ; \\ & 55: 21,25 ; 58: 22 \end{aligned}$ | attention (3) <br> $17 \cdot 14,17 \cdot 40 \cdot 12$ | better (2) |
| 2010 (1) | ader |  | $17: 14,17 ; 40: 12$ | $\begin{aligned} & \text { 48:2;49:20 } \\ & \text { hevond (1) } \end{aligned}$ |
| 43:6 | additional (2) | approach (1) | $4: 9 ; 53: 15$ | beyond (1) |
| 22 (1) | $\begin{aligned} & \text { 19:25;21:7 } \\ & \text { address (3) } \end{aligned}$ | $30: 14$ | $\begin{gathered} \text { authored (1) } \\ 42 \cdot 9 \end{gathered}$ | bigger (1) |
| 27 (1) | address 20:13,18;40:2 | approval (1) | $43: 9$ | $32: 25$ |
| 43:6 | $\begin{aligned} & \text { adjacent (5) } \\ & 6: 13 ; 31: 17 ; 32: 19 \end{aligned}$ | $\begin{aligned} & \text { 65:16 } \\ & \text { approximate (4) } \end{aligned}$ | $\begin{array}{\|c} \text { authoring (1) } \\ 27: 19 \end{array}$ | $\underset{56: 5}{\operatorname{Bing}(1)}$ |

Peter Wood - August 26, 2011

| birth (2) | 20,25;61:3,20;65:13; | clearly (1) | 55:6,7 | 11:13 |
| :---: | :---: | :---: | :---: | :---: |
| 61:21,22 | 66:13 | 36:12 | confusion (1) | cross-sections (5) |
| bit (2) | capacity's (1) | closely (1) | 55:11 | 7:10;21:5,25;22:7,12 |
| 4:12;11:24 | 48:21 | 24:3 | Connecticut (1) | crucial (1) |
| blown-in (1) | case (2) | Coast (1) | 5:17 | 15:12 |
| 58:10 | 62:17,21 | 5:16 | connection (2) | crude (4) |
| blue (24) | cases (5) | code (5) | 24:13;27:24 | 42:8,10;45:5,9 |
| 11:19,21;12:4,5,7,19; | 26:16;33:18,20,25; | 29:22,22;63:18,22; | connects (1) | culvert (20) |
| 13:10,14;17:5;18:24; | 63:5 | 65:16 | 61:6 | 38:17,19;45:10,23; |
| 19:19;34:20;41:9,11,15, | category (1) | codes (1) | consider (6) | 46:10,16,17,19;56:2,11, |
| 20;42:5,8,24;44:13; | 6:2 | 24:2 | 10:20,23;11:4;15:12; | 11,14,15,19,21,23;58:7; |
| 46:25;50:21;59:18,21 | cause (2) | collected (2) | 30:1;62:21 | 59:14,22;60:6 |
| boat (7) | 47:16;48:16 | 21:8,15 | considered (2) | culverts (1) |
| 17:24;26:1;30:9; | Cell (1) | collection (1) | 6:1;32:7 | 26:23 |
| 31:21;35:4;43:24;59:6 | 19:14 | 33:6 | constitute (1) | current (2) |
| Bob (1) | center (1) | College (1) | 16:7 | 22:15;63:18 |
| 55:10 | 44:11 | 5:18 | constitution (1) | curve (3) |
| booth (1) | certain (2) | colleges (1) | 66:9 | 45:16;59:2,5 |
| 26:8 | 24:9;48:14 | 5:16 | construction (4) |  |
| borrow (1) | certainly (1) | color (1) | 23:19,20,21,22 | D |
| 51:17 | 32:23 | 40:21 | consultant (1) |  |
| both (5) | cetera (2) | coming (3) | 25:20 | Dale (1) |
| 5:2;23:19,25;24:4; | 38:24;64:4 | 47:3,8;62:12 | consulting (1) | 55:9 |
| 60:21 | change (2) | compacted (1) | 26:21 | dashed (3) |
| bottom (2) | 48:10;49:16 | 30:5 | continuation (1) | 60:21,21,23 |
| 31:22;38:19 | channel (21) | compartmentalize (1) | 22:11 | data (35) |
| boundary (1) | 6:14;7:10;11:15; | 65:10 | continue (2) | 8:21,22;9:5,10,14,15, |
| 17:5 | 12:24;13:1,4,9;14:1,8, | complete (2) | 4:24,25 | 18,21,25;10:1,4,8,20,24, |
| brief (2) | 12,13;20:3;21:20;22:2, | 8:7;38:1 | contour (4) | 25;11:4,7,10;18:15; |
| 15:24;19:15 | 8;34:12,21;35:10,12,13; | completeness (1) | 18:14;42:15;48:2,3 | 20:2;21:7,14,15;22:22; |
| building (1) | 52:15 | 62:5 | contributing (1) | 37:20,23;38:6;43:22; |
| 28:5 | character (1) | complex (9) | 33:19 | 44:25;46:1,7;47:20; |
| C | 66:9 | 6:13;31:17,18;32:5; | control (1) | $48: 9 ; 51: 8 ; 53: 19$ date (5) |
|  | 43:15;51:1 | complexes (3) | conveyance (2) | 7:3;21:2;22:21;61:21, |
| C114 (3) | characterization (1) | 32:14,20;52:10 | 13:1,2 | 22 |
| 8:5;9:2;10:12 | 46:12 | complies (10) | Corps (1) | dated (1) |
| C116 (3) | characterized (2) | 10:18;11:22;12:2,6; | 55:10 | 27:12 |
| 57:19;58:3;59:14 | 28:17,25 | 17:12;19:1,6,11;36:14, | corrected (1) | days (1) |
| calculate (1) | Check (6) | 20 | 43:7 | 7:6 |
| 50:5 | 6:24;7:7;40:14;41:7; | component (5) | corresponds (1) | deal (2) |
| calculated (4) | 42:24;43:2 | 24:2,8,12,17;37:25 | 19:19 | 54:25;62:12 |
| 45:7;49:24;50:4;66:1 | checklist (1) | computer (1) | counsel (14) | dealing (3) |
| calculations (1) | 26:2 | 15:22 | 4:22;5:7;6:3,5;7:23; | 5:3;40:25;66:6 |
| 27:21 | circle (15) | concept (5) | 11:1;12:11;15:1,8;29:5; | decision (1) |
| call (12) | 32:10;36:17,18,21,23; | 13:22,25;29:6;54:2,16 | 40:4;51:14,23;65:1 | 29:15 |
| 14:8;15:9;23:21,23; | 37:4,13;39:4;46:3;47:5, | concerned (2) | County (1) | define (1) |
| $24: 4 ; 35: 2 ; 38: 18 ; 44: 13$ | 11,17;49:8;51:2,6 | 23:11;28:15 | 47:25 | 47:12 |
| $45: 19 ; 46: 18 ; 53: 11,12$ | circled (1) | conclude (1) | couple (4) | defining (1) |
| called (4) | 32:12 | 50:15 | 4:18;5:16;42:12;61:1 | 14:4 |
| 4:2;6:9;48:1;60:22 | civil (2) | concluded (1) | course (1) | definite (1) |
| came (2) | 5:24,25 | 66:24 | 30:25 | 51:10 |
| 38:20;53:18 | claim (1) | conclusion (3) | court (1) | definition (1) |
| can (44) | 14:3 | 29:7,7;51:10 | 26:16 | 29:23 |
| 6:7;8:15;9:19;10:3; | clarification (2) | conditions (1) | cover (1) | definitive (1) |
| 11:25;12:25;13:10,11, | 20:18,22 | 24:9 | 65:7 | 57:5 |
| 15;14:11;15:2,11,20,21; | clarify (2) | conducted (1) | covered (3) | degree (4) |
| 16:21,23;17:6;19:10; | 47:18;55:17 | 65:15 | 52:16,23;53:3 | 5:19,22;49:2,21 |
| 21:12;23:10;25:15; | clean (1) | configuration (1) | covers (1) | demonstrate (1) |
| 28:19;29:16;33:15;34:6; | 5:2 | 12:24 | 21:19 | 17:23 |
| 36:17,22;42:14,25; | clear (6) | confused (1) | CP (1) | Department (1) |
| $48: 18 ; 49: 11,23 ; 50: 4,5$ | $5: 2 ; 10: 13,19 ; 12: 12$ | $8: 24$ | $58: 5$ | $5: 10$ |
| 13;51:17;53:12;58:18, | 39:2;46:21 | confusing (2) | creek (1) | depiction (1) |

Peter Wood - August 26, 2011

| 57:11 | 29:9 | draw (3) | 43:2,5,6,9;54:23;55:1,1, | exempt (2) |
| :---: | :---: | :---: | :---: | :---: |
| deposed (1) | discovery (2) | 10:15;11:18;42:4 | 8,8,9,13 | 63:5,21 |
| 4:9 | 29:5;66:2 | drawing (6) | employed (3) | exemption (1) |
| deposition (7) | discussed (1) | 30:21;35:16;41:5; | 5:9,13;7:1 | 63:15 |
| 5:8;6:8;12:13,16 | 45:13 | 7:3;59:14;60:20 | employee (1) | exemptions (1) |
| 31:12;65:6,15 | discussing (1) | drawn (3) | 23:18 | 63:18 |
| depositions (1) | 53:14 | 12:3,20;42:1 | encompassed (1) | exhibit (80) |
| 65:23 | Discussion (8) | drew (2) | 37:3 | 5:6;6:4;7:20;8:3,5; |
| depressed (1) | 14:21;32:1;40:8;41:3; | 17:21;18:6 | end (6) | 12:12,13:11;14:22,25; |
| 37:1 | 49:21;59:17;60:2;61:24 | drive (1) | $20: 4,15 ; 22: 1 ; 24: 19$ | 15:25;16:7,10,13;17:18, |
| depression (11) | display (1) | 30:22 | 35:11;41:16 | 22;18:18,19,20,21,22; |
| 17:23;18:2,3,9,12,17; | 26:9 | driveway (8) | engineer (6) | 19:5,10,18,20,23;21:12, |
| 35:23;41:8;43:25;47:3; | District (1) | 56:2,7;59:14;60:7,11, | 5:10,23,24,25;23:3,4 | 18;22:14;27:11;30:15; |
| 48:19 | 54:23 | 15;61:13,15 | engineering (4) | 31:3;32:3,6,13;34:14,15, |
| depressional (1) | disturbing (1) | drop (1) | $5: 22 ; 6: 15 ; 38: 24 ; 52: 21$ | $16,18,19,24 ; 36: 5,6,13,$ |
| 35:3 | 65:12 | 50:11 | engineers (1) | 24;37:2,10;39:5;40:3,3, |
| depth (1) | ditch (2) | duly (1) | 25:20 | 11,12,13;42:4;44:21; |
| 64:9 | 18:24;45:20 | 4:3 | enough (8) | 45:18;46:4,23,25;47:1,9, |
| describe (4) | DNR (44) | during (4) | 13:20;34:9,11;40:5; | 11,17;49:10;50:20,21, |
| 10:5;19:23;34:13,21 | 5:13;6:12,17,25;7:11; | 13:6,7;23:19,21 | 46:20;47:3,8;51:23 | 22;51:3,6,13;53:14,14; |
| description (4) | 8:4;13:23;15:1;17:24; |  | enter (1) | 54:23;56:3,4,9;57:17,18, |
| 22:25;32:18;51:22,25 | 18:13;21:1,15,18;22:4, | E | 48:18 | 21;66:8,23 |
| design (1) | 15,17;23:7,13,15;24:24, |  | entire (2) | exhibits (5) |
| 61:9 | 25;25:6;30:19;31:20,22; | earlier (3) | 21:22;30:25 | 5:3;7:24;41:19;44:19; |
| detail (2) | 32:9;35:4;37:21;38:21; | 25:12;48:15;62:6 | equivalent (1) | 57:12 |
| 48:8;55:5 | 39:10,24;41:13;43:24; | Earth (1) | 30:3 | exist (1) |
| detailed (2) | 47:21;49:23;50:17,18, | 44:4 | erosion (1) | 17:23 |
| 39:9;58:13 | 22;51:1,5,7;53:3;54:6; | easier (2) | 23:20 | existence (2) |
| determination (1) | $65: 10$ | 16:19,20 | essentially (3) | 11:12;34:6 |
| $54: 9$ | document (10) | East (8) | $30: 4 ; 48: 6 ; 63: 21$ | existing (37) |
| determinations (1) | 14:16,18;15:11,12,17; | 5:16;13:13;20:15; | establish (1) | 28:8;29:25;30:3,8; |
| $54: 15$ | 16:5,14,16;40:23,24 | 22:8;24:25;39:6;45:17; | 20:9 | 38:9,17,19;41:8;45:11; |
| determine (1) | documents (2) | $51: 9$ | established (1) | 46:18;48:9;56:2,6,11; |
| 58:21 | 16:4,6 | eastern (1) | 30:2 | 57:13;58:5,7;59:13,14, |
| developed (1) | dominated (1) | 20:24 | et (2) | 22;60:7,7,10,14,15,17; |
| 62:8 | 33:22 | ecology (1) | 38:24;64 | 61:7,12,13,15;62:15,18, |
| developers (1) | Don (3) | $5: 19$ | even (4) | 22,23;63:4,20;64:13 |
| $54: 4$ | 53:12;55:18;59:3 | educational (1) | 32:8;47:20;50:13;64:6 | expand (1) |
| developing (1) | done (19) | 5:15 | event (1) | 65:6 |
| $25: 21$ | 4:23;7:2;8:20;9:25; | Edwina (2) | 13:7 | expanding (1) |
| development (7) | 20:1,5;25:1,4,6;26:14; | 4:17;15:9 | evidence (8) | 63:7 |
| 24:7;27:25;28:5;29:1, | 30:18;36:24;38:8;40:22; | effect (2) | 28:23;29:10;46:1,5, | expands (1) |
| 24,25;62:6 | 50:5;51:20;61:25;64:1; | 9:4;64:2 | 14,16;47:4;66:2 | 64:21 |
| developments (2) | 65:2 | Eighteen (1) | exact (1) | expect (2) |
| 23:23;24:10 | $\operatorname{dot}(1)$ | 56:17 | 7:6 | 35:24;36:6 |
| diameter (1) | 44:11 | eight-inch (2) | Exactly (2) | experience (1) |
| 56:16 | Double (1) | $58: 5,9$ | 21:23;35:19 | 14:4 |
| different (6) | 36:23 | elements (1) | EXAMINATION (3) | experiment (1) |
| 7:10;25:25;27:1,5; | down (8) | 25:22 | 4:5;53:9;62:3 | 49:12 |
| 28:4;52:4 | 8:15;22:7;28:14; | elevation (9) | examined (1) | expert (1) |
| difficult (1) | 37:23;44:6;47:21;57:12; | 18:8;22:20;38:14,18, | 4:4 | 34:8 |
| 48:7 | 63:14 | 19;44:24;48:6;55:15; | example (1) | experts (1) |
| direction (3) | downhill (2) | 56:10 | 44:23 | 33:10 |
| 36:3;45:6;46:15 | 44:4,5 | elevations (25) | exceeded (1) | explain (9) |
| directionally (1) | drain (3) | 6:12;7:13,17,18;8:7, | 48:21 | 12:25;21:12;28:19; |
| 60:10 | 33:20;35:6;46:19 | 19;14:11,12;15:2,6; | except (3) | 29:8,12;41:6;45:1; |
| dirt (2) | drainage (14) | 16:17,21,23;20:9,23; | $19: 13,19 ; 48: 22$ | 48:23;61:3 |
| 64:16,17 | 11:15;12:24;17:2,6; | 22:9,15,17;44:6;46:16, | exceptions (1) | extend (1) |
| disappear (1) | 18:24;20:3,3,9;21:5; | 18;52:2;53:15,17,18 | 33:21 | 9:18 |
| 48:20 | 26:18;33:19;35:10; | else (1) | exclusive (1) | extent (2) |
| discharges (1) | 45:20;55:24 | 39:24 | 27:8 | 48:14;54:9 |
| 23:25 | draining (1) | email (15) | excuse (1) | eyeball (1) |
| discover (1) | 49:22 | 40:16,18,20;41:7; | 41:7 | 59:5 |


| $\begin{aligned} & \text { eyeballing (1) } \\ & 42: 17 \end{aligned}$ | $\begin{gathered} 22: 20,22 \\ \text { fitting (1) } \\ 62: 17 \end{gathered}$ | G | $\begin{aligned} & \text { 11,12;34:23;35:1;37:4,7, } \\ & 11,13 ; 39: 4 ; 43: 17,19 \\ & 44: 11 ; 45: 1,16,17,22 ; \\ & 46: 3,9 ; 47: 5,10,17 ; 49: 6, \\ & 6 ; 51: 2,6,6 ; 66: 8 \end{aligned}$ | $\begin{aligned} & \text { highlight (2) } \\ & \text { 49:3;59:13 } \\ & \text { highlighted (2) } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
| F |  |  |  |  |
|  | $\begin{aligned} & \text { flat (2) } \\ & 47: 19 ; 48: 5 \end{aligned}$ | Gallo (15)26:9;51:20 |  | 34:20;41:20 |
|  |  |  |  | himself (1) |
| facets (1) | flow (14) | 54:21;55:4;57:24;58:4, | $\begin{aligned} & \text { 6;51:2,6,6;66:8 } \\ & \text { grew (1) } \end{aligned}$ | 43:2 |
| 33:11 | 6:16;27:2,3;28:23; | 19;59:18,20;60:3,13; | 5:17 | homes (1) |
| fact (2) | 44:1,8,17;45:9,12,19; | 61:25;66:22 | ground (2) | 39:6 |
| 27:4;47:9 | 47:2;50:19;51:9;52:22 | gap (1)$9: 20$ | 4:12;24:11 | honestly (1) |
| Fair (8) | flowing (2) |  | groundwater (4) | 41:10 |
| $\begin{aligned} & 13: 20 ; 34: 9,11 ; 40: 2 \\ & 47: 14 ; 55: 21 ; 57: 11 ; 60: 6 \end{aligned}$ | 13:7;44:3 | gather (1) | $\begin{aligned} & \text { 24:1,8,17;33:23 } \\ & \text { groundwater/surface (1) } \end{aligned}$ | honesty$38: 23$ |
|  | flows (1) | 64:3 |  |  |
| fall (2) | 44:5 | gave (1) | 24:13 | hope (1) |
|  |  | 28:11 | group (1) | 46:14 |
| familiar (10) | $35: 25,25$ | general (3) | 16:7 | hopefully (1) |
| 11:11;13:20,22,24; | flushing (1) | 44:4;65:17,2 | guess (12) | 40:25 |
| 27:13;31:5,8;54:1,3,16 | 36:25 | generate (1) | 10:22;14:2;28:20; | house (1) |
| familiarize (1) | focus (1) | $41: 14$ | 30:13;33:5;35:1;43:23; | Hudak (2) |
| fan-like (1) | Focusin | $\begin{aligned} & \text { generated (3) } \\ & 14: 16 ; 38: 7 ; 43: 22 \end{aligned}$ | 44:7;47:12;50:13;64:13, 24 | Hudak (2) |
| 33:22 | 30:15 | generating (1) | $\begin{gathered} 24 \\ \text { guesstimate (1) } \end{gathered}$ | Huh (1) |
| far (5) | follow (1) | $41: 12$ | 59:9 | 60:12 |
| $\begin{aligned} & 9: 2,14 ; 27: 20 ; 50: 16 \\ & 57: 6 \end{aligned}$ | 46:2 following (3) | Gestra | $\begin{array}{\|c} \text { guidance (1) } \\ 28: 11 \end{array}$ |  |
| $\begin{aligned} & \text { farm (3) } \\ & 25: 1,3 ; 64: 19 \end{aligned}$ | $\begin{aligned} & \text { 44:3,5;45:19 } \\ & \text { follows (1) } \end{aligned}$ | gets (1) | H |  |
|  |  | gets (1) $30: 5$ |  |  |
| fell (1) | $4: 4$ | GIS (1) |  | $\begin{aligned} & \text { 11:20;17:6;64:12 } \\ & \text { ideas (1) } \end{aligned}$ |
| 43:24 | $62: 2$ | $\begin{gathered} 47: 25 \\ \text { given (1) } \end{gathered}$ | hand (3) |  |
| few (1) |  |  | 41:24;54:22;56:3 | $\begin{aligned} & 25: 25 \\ & \text { identified (1) } \end{aligned}$ |
| 17:1 | footprint (4) | $\begin{gathered} 16: 12 \\ \text { gives (1) } \end{gathered}$ | Hang (1)60:25 |  |
| field (2) | 63:7,21;64:11,21 |  |  | 50:19 |
| 58:16;6 | footprint's (1) | $\begin{gathered} 48: 2 \\ \text { giving (1) } \end{gathered}$ | happen (1) | identify (1) |
| fields (2) | 63:23 |  | 35:3 | impact (2) |
| 25:1,3 | forest (1) | $\begin{gathered} 4: 25 \\ \text { glass (3) } \end{gathered}$ | happens (1) |  |
| figure (3) |  |  | 49:1 | 62:8;66:10 |
| 29:21;53:13,16 | forgot (1)$4: 18$former | $\begin{array}{r} 15: 3 ; 49: 12,15 \end{array}$ | Harbeck (7) | imply (1) |
| files (1) |  | GLEISNER (56) | 40:17;43:1,4,5;51:17; | $34: 3$ important (1) |
| 38:11 | formerly (3) | 13;11:1,3;12:11,16,18; | 66:13,19 | important (1) |
| fill (6) | 6:13,17;53:3 |  | hard (1) | 4:17 |
| $\begin{aligned} & 28: 4 ; 47: 10,13 ; 48: 16 ; \\ & 49: 13 ; 61: 6 \end{aligned}$ | forward (1) | 14:19,23;15:5,8,20,23; | $23: 14$ | $\begin{gathered} \text { inches (1) } \\ 56: 17 \end{gathered}$ |
| 49:13;61:6 |  | $\begin{aligned} & 16: 1,6,11 ; 19: 16,17 \\ & 2 \cdot 21 \cdot 21 \cdot 9 \cdot 29 \cdot 412,18 \end{aligned}$ | heading (2) |  |
| filled (8) | found (1) | 20:21;21:9;29:4,12,18, | $22: 4 ; 45: 5$ heads (1) | $\begin{gathered} \text { included (2) } \\ 8: 20 ; 9: 25 \end{gathered}$ |
| $\begin{aligned} & 18: 4,11 ; 33: 17 ; 35: 4 ; \\ & 36: 2 ; 37: 10,11 ; 43: 25 \end{aligned}$ | 5715 four-page (1) | 19;31:25;32:2;40:9,10, 17,19;41:2,4;43:3,7,8; | heads (1) $45: 12$ | including (2) |
| filling (2) | 16:14 | 46:13;51:14,19;53:8,15; | hearing (3) | 6:11;53:2 |
| 48:22;66:7 | Franklin (1) | 57:23;59:16;60:1;61:23; | 26:6;29:3;31:13 | increase (1) |
| fills (2) | 62:14 | 62:1,4;65:1,9;66:4,20 | held (7) | 63:17 |
| 9:20;35:24 | front (6) | goes (1) | 14:21;32:1;40:8;41:3; | increased (1) |
| final (2) | $\begin{aligned} & 8: 25 ; 10: 17 ; 11: 14 ; \\ & 27: 25 ; 28: 18 ; 51: 13 \end{aligned}$ | $37: 11$ | 59:17;60:2;61:24help (4) | $\begin{gathered} \text { 63:24 } \\ \text { indicate }(2) \end{gathered}$ |
| 8:3;41:16 |  | Good (14) |  |  |
| find (1) | $\begin{aligned} & \text { 27:25;28:18;51:13 } \\ & \text { fulfill (1) } \end{aligned}$ | 4:7,8;7:16,18;8:12,14; | 7:6;32:4;35:15,16 | 51:8,23 |
| 18:15 | 13:22 | 12:9;16:24;17:17;18:22; | helpful (3) | indicated (2) |
| fine (4) | full (4) | $36: 24 ; 38: 1 ; 59: 7 ; 62: 10$ | $24: 20,21 ; 63: 23$ | $\begin{aligned} & \text { 31:15;36:25 } \\ & \text { infiltrate (2) } \end{aligned}$ |
| 5:8;12:15;53:13;55:23 | 37:15,19;39:5;51:7 | $\begin{array}{\|c} \text { graphic (2) } \\ 45: 4 ; 57: 9 \\ \text { gravel (17) } \end{array}$ | helping (1) |  |
| finished (1)$66: 20$ | $\begin{gathered} \text { function (2) } \\ 45: 3.8 \end{gathered}$ |  | 26:23 <br> helps (1) | $\begin{gathered} \text { 24:11;50:10 } \\ \text { information }(26) \end{gathered}$ |
|  | 45:3,8 functions (2) |  |  |  |
| finite (1) | functions (2) | $\begin{aligned} & 30: 3,8,21,22,23 ; 62: 7 \\ & \text { 7.10.22,23:63:1,8.11 } \end{aligned}$ | $48: 23$ | $\begin{aligned} & 4: 14 ; 5: 6 ; 6: 11 ; 10: 25 \\ & 35: 14 ; 37: 19 ; 38: 2,6,13 \end{aligned}$ |
| first (12) | further (2) | 64:3,5,5,8 | 4:3 | $16 ; 39: 9,10,16,18,25$ |
| 4:3;11:11;14:25;16:2, | $\begin{aligned} & \text { 47:18;57:13 } \\ & \text { fuzzy (1) } \end{aligned}$ | great (1) | hesitant (1) | 43:20;44:3,8;46:6,8; |
| 16,25;18:18;21:19; 25:18;26:2:38:23:55:9 |  | $\begin{array}{\|c\|} \hline 59: 25 \\ \text { green (32) } \\ 10: 14 ; 19: 7,9 ; 32: 7,10, \end{array}$ | high (6) <br> 54:2,8,17,25;55:11,16 | $\begin{gathered} \text { informational (2) } \\ 24: 22 ; 26: 6 \end{gathered}$ |
| 25:18;26:2;38:23;55:9 firsthand (2) | 7:3 |  |  |  |
| firsthand (2) |  |  |  |  |

Peter Wood - August 26, 2011

| initial (2) | 22:25 | lead (6) | looks (2) | 33:9 |
| :---: | :---: | :---: | :---: | :---: |
| 12:5;36:11 | July (1) | 28:23;29:9;34:6;52:1; | 40:21;41:11 | matter (2) |
| initialling (4) | 61:22 | 66:1,10 | $\boldsymbol{l o t}$ (20) | 6:10;64:6 |
| 17:15;19:8,12;60:4 |  | learned (1) | 20:16,16,25;21:22; | maximum (1) |
| initially (1) | K | 33:9 | 28:1,15;41:9;48:8;50:2; | 49:24 |
| 36:3 |  | learning (1) | 54:4,11;62:10,13,16,19, | may (4) |
| inputs (1) | Kapur (22) | 17:16 | 23,25;63:1,22;64:5 | 4:15;6:9;24:19;41:12 |
| 33:23 | 7:1,8,19;14:17;15:7, | least (2) | lots (3) | maybe (8) |
| inside (1) | 10;17:22;20:6,23;22:18, | 25:12;38:16 | 63:1;64:3,4 | 12:7;15:14;36:17; |
| 39:15 | 21;25:20;26:21;27:12, | leave (2) | low (1) | 41:10;49:13;51:14;56:8; |
| inspect (1) | 24;28:17;38:7;43:23; | 18:12,16 | 41:13 | 62:23 |
| 56:13 | 44:25;53:19;56:17,20 | left (2) | lowest (4) | McDonald's (2) |
| instead (1) | Kapur's (1) | 35:20;46:20 | 18:7,14,14;45:10 | 62:14,15 |
| 46:2 | 58:10 | legal (1) | Lynette (6) | McNelly (1) |
| intended (2) | KAVANAUGH (26) | 63:22 | 6:24;7:7;40:14;41:7; | 55:10 |
| 41:15;42:5 | 7:22,25;9:3,8,11; | legible (1) | 42:24;43:2 | mean (10) |
| $\begin{aligned} & \text { intercept (2) } \\ & 60 \cdot 24 \cdot 61 \cdot 5 \end{aligned}$ | $\begin{aligned} & 10: 22 ; 12: 15 ; 15: 4,13,16 \\ & 16: 3,5 ; 20: 17 ; 21: 2 \end{aligned}$ | $16: 8$ less (1) | M | $12: 25 ; 20: 14,18,20$ |
| interest (3) | 28:20;29:8,16;46:11; | 25:19 |  | 18;64:8 |
| 23:12,12;26:17 | 57:21;58:1,17;60:12; | level (2) | Madame (1) | means (4) |
| interpretation (9) | 64:24;65:3,13;66:17 | 47:16;49:24 | 16:10 | 23:8,10;44:11;64:7 |
| 6:15;28:11;35:7; | kind (9) | light (1) | magnifying (1) | meant (1) |
| 43:22;52:6,21;62:20; | 11:12;14:3;25:4; | 10:14 | 15:3 | 61:13 |
| 63:3;64:18 | 27:20,21;30:12;40:5; | likely (2) | main (2) | measure (1) |
| interrelated (1) | 46:9;51:23 | 28:22;29:9 | 30:8;38:2 | 50:13 |
| 33:14 | kindness (1) | limit (1) | mainly (1) | measured (1) |
| interrogatories (1) | 16:2 | 18:2 | 64:11 | 56:21 |
| 40:4 | knowledge (17) | limited (1) | making (2) | measurements (1) |
| interval (2) | 6:10;8:18;22:14,16, | 37:19 | 14:3;48:12 | 64:1 |
| 48:2,3 | 19,20,22;25:6,8,16; | line (18) | management (5) | meeting (1) |
| into (15) | 27:16;39:11;49:4;51:4; | 9:1,19,20,22;10:10,15, | 23:22;27:2,17;54:7,22 | 26:10 |
| $6: 7 ; 24: 11 ; 35: 25 ; 36: 1$ | $52: 9 ; 53: 5 ; 59: 24$ | 15,21;11:5,8;17:5;18:1; | manager (1) | memo (2) |
| 37:3,11;38:21;46:3; | Kraus (7) | 19:4;22:1;45:17;60:21, | 39:19 | 40:13;41:7 |
| 47:5;49:11,23;60:11,17; | $4: 15 ; 6: 13,17,23$ | 23;61:3 | manning (1) | memory (1) |
| 62:17;65:24 | $24: 25 ; 25: 10 ; 53: 3$ | lines (3) | 26:8 | 13:18 |
| introduced (1) |  | 12:19;13:10,14 | manual (1) | messy (1) |
| 30:15 | L | little (8) | 65:16 | 51:15 |
| inundate |  | 4:12;7:2;8:24;26:18; | many (12) | met (1) |
| 47:10 | lack (2) | 48:9;51:15;57:13;64:5 | $30: 2,2 ; 31: 14 ; 33: 18$ | 26:5 |
| inundated (1) | 38:24;49:20 | locate (1) | 20,20,25,25;54:4;63:5, | middle (2) |
| 37:7 | lady (1) | 56:25 | 15,19 | 13:13;55:8 |
| inventory (1) | 8:11 | located (12) | $\boldsymbol{m a p}(9)$ | might (4) |
| 32:9 | Lake (4) | 7:10;8:22;10:2;13:12; | 7:19;17:3;18:6;35:7; | 4:25;23:12;39:24; |
| invert (2) | 6:14;35:14,18;54:22 | 17:25;18:25;20:3,24; | 40:20;48:2,3,4;56:25 | 65:21 |
| 38:18;46:18 | land (3) | 30:20;31:19;36:5;39:7 | maps (4) | mind (2) |
| involved (14) | 6:25;38:21;64:13 | location (7) | 17:21;31:23;32:9; | 11:17;60:4 |
| 11:7;23:18;25:19; | lands (2) | 11:20;20:13;31:20; | 43:22 | mine (1) |
| 26:5,6,22,24;27:8,20; | 33:20;34:2 | 36:9;44:1,20;61:5 | mark (15) | 51:18 |
| 54:14;55:18,19;61:8,10 | language (1) | locations (4) | 10:13;16:24;17:5,8; | minutes (1) |
| involvement (1) | 5:5 | 6:12;13:17;52:3;61:1 | 24:23;36:6,10,12;54:2,8, | 17:1 |
| 29:14 | large (15) | long (3) | 12,17,25;55:12,16 | moment (9) |
| issue (6) | 33:3,5;37:3,13;39:4; | 5:13;42:17;66:4 | marked (20) | $9: 23 ; 14: 20 ; 22: 24$ |
| 33:12;34:8;47:19; | 46:3;47:5,11,17,19;49:4, | $\xrightarrow{\operatorname{look}(13)}$ | 6:4;9:1,19;14:22,24; | 25:9;28:13;31:11;40:6, |
| 49:17;54:5;66:6 | 6,18;51:6;66:8 | 8:23;11:10;16:20; | 15:25;16:8,13;17:18; | 25;54:24 |
| issues (6) | larger (4) | 23:1;31:5,8;34:15;36:4; | 27:10;31:3,3;32:7; | more (18) |
| 6:9;27:2,25;65:7,11, | 21:16,17;35:13;38:21 | 41:5;48:4;57:3;58:10; | 34:23;35:23;40:3;44:18, | 8:21;9:4,25;16:8; |
| 24 | last (3) | 64:14 | 20;46:21;66:23 | 25:19;26:12,18;36:21; |
|  | 7:4;20:2;65:4 | looked (2) | marker (4) | 37:20;39:8;49:2;50:2; |
| J | $\begin{array}{\|c} \text { latest (2) } \\ 8: 17.18 \end{array}$ | 10:25;42:9 <br> Looking (9) | $\begin{aligned} & 10: 14 ; 11: 21 ; 12: 1 \text {; } \\ & 59: 13 \end{aligned}$ | $\begin{aligned} & 57: 7 ; 58: 10,13 ; 62: 1 \\ & 64: 12,12 \end{aligned}$ |
| Jim (4) | launch (7) | 8:24;13:10;19:24; | marks (3) | morning (2) |
| 55:1,10,14,16 | 17:24;26:1;30:9; | 35:16,20;55:24,25;56:8; | 12:5,7;19:19 | 4:7,8 |
| job (1) | 31:21;35:4;43:24;59:6 | 57:18 | materials (1) | Morrissey (2) |

Peter Wood - August 26, 2011

| 55:2,14 | 48:21;50:12 | 35:2;37:18,19;38:6;46:6 | partial (2) | 4:2 |
| :---: | :---: | :---: | :---: | :---: |
| most (3) | NR-151 (2) | on-site (1) | 37:16,18 | Peters' (1) |
| 22:14;33:24,24 | 28:11;63:15 | 7:7 | particular (4) | 45:14 |
| moved (2) | NR-51 (1) | opinion (3) | 13:24;39:21;49:17; | Pfeiffle (1) |
| 26:16;27:9 | 24:3 | 6:15;52:21;65:1 | 62:21 | 55:9 |
| much (14) | number (1) | opportunity (1) | particularly (5) | phone (1) |
| 6:19;10:19;17:13; | 15:16 | 31:7 | 8:21;10:1;25:21;31:5; | 19:14 |
| 19:2;31:10;32:17;33:7; |  | opposed (1) | 66:11 | photo (5) |
| 34:10;36:4,15;43:3; <br> 51:12;52:5;66:22 | 0 | 28:6 | $\begin{gathered} \text { parts (1) } \\ 62: 22 \end{gathered}$ | 50:20;56:5,8,9;59:3 <br> photograph (5) |
| municipal (1) | ```oath (1) 4:3 object (5) 9:3;10:22;28:21; 46:11;65:3 objecting (1) 65:20``` | $\begin{aligned} & 19: 3 ; 35: 24 ; 37: 10 \\ & 46: 25 ; 47: 9 \end{aligned}$ | path (8) | $\begin{aligned} & 40: 22 ; 42: 1,2 ; 43: 13 \\ & 46: 23 \end{aligned}$ |
| 23:24 |  |  | 44:1,8;45:9,12,1 |  |
| myself (1) |  | order (2) | 46:2;47:2;50:23 | picked (1) |
| 56:21 |  | ```37:25;65:11 ordinary (6) 54:2,8,17,25;55:11,16 orient (1)``` | $\begin{aligned} & \text { paths (2) } \\ & 6: 16 ; 52: 2 \end{aligned}$ | $44: 25$ |
| N |  |  | $6: 16 ; 52: 2$ | picture (2) |
| N |  |  | 45:1,3 | pink (4) |
|  | objection (3) | 32:4 | pattern | 18:1,4;19:3;41:18 |
| $5: 11 ; 64: 15$ | 29:17;64:25;66:18 | orientation (1) | 44:17 | pinpoint (1) |
| navigability (4) | objects (1) | 18:23 | patterns (2) | 13:18 |
| $29: 10 ; 54: 5 ; 65: 5,8$ | 4:22 | oriented (1) | 26:18;28:24 | pitched (2) |
| navigable (6) | observations (1) | 26:3 | Paul (2) | 46:17,19 |
| 33:11;34:3,6,8;54:11 | 13:3 | out (17) | 5:18,19 | placed (3) |
| $66: 12$ | observe (2) | 5:11;10:3;15:11; | Pause (2) | 12:5;13:11;18:7 |
| nearest (1) | 14:1;30:22 | 16:21,23;29:21;44:1,25; | 54:20;55:3 | plan (8) |
| 53:23 | observed (4) | 45:12;46:24;47:1,3,8; | pave (2) | 8:22;9:15,22;10:2; |
| necessary (1) | 8:20;9:24,25;14:17 | 49:19;55:23;56:12,24 | 62:24;63:2 | 14:14,15;25:21;58:1 |
| 59:10 | observing (2) | outlet (8) | paved (1) | plans (4) |
| need (3) | 7:8,15 | 6:14;34:12,21,24 | 30:4 | 8:4;56:20;57:17,18 |
| 38:1;50:2;65:1 | obtained (2) | 35:11,12;37:1;52:15 | pavement (1) | plat (5) |
| New (7) | 37:20;38:3 | outlined (1) | 30:6 | 10:16;11:7,14,18; |
| 5:18,20;28:5;29:1; | obviously (1) | 41:18 | paving (1) | 12:20 |
| 37:13;56:3,25 | 32:24 | over (10) | 63:10 | please (2) |
| next (1) | occasioned (1) | 5:7,14;15:10;30:5; | PDF (2) | 6:8;36:13 |
| 45:10 | 25:2 | 39:6;50:8;51:9;55:11; | 15:10,18 | plumbed (1) |
| NLMD (1) | occur (2) | 62:24;63:7 | pen (1) | 52:11 |
| 15:9 | 34:25;49:25 | overlay (1) | 17:5 | pm (1) |
| nodding (1) | occurred (1) | $42: 15$ | people (4) | $66: 24$ |
| $61: 18$ | 44:9 | overseeing (2) | 39:22;54:6;62:21;63:2 | pockets (1) |
| nonagricultural (1) | off (18) | $7: 12,14$ | percent (1) | 13:9 |
| 24:5 | 13:18;14:19,21;31:25; | overview (1) | 63:13 | point (15) |
| nonengineering (1) | 32:1;40:8;41:2,3;47:25; | 21:21 | performance (2) | 7:9;9:18;10:3;13:2; |
| $45: 4$ | 49:22;53:18;59:16,17; |  | 24:3,6 | $\begin{aligned} & 18: 15 ; 19: 13 ; 20: 19 ; 22: 9 ; \\ & 27: 9: 36: 7: 45: 10: 50: 9 \end{aligned}$ |
| $\begin{aligned} & \text { normally (3) } \\ & 62: 12,18 ; 64: 4 \end{aligned}$ | $\begin{aligned} & \text { 60:1,2;61:23,24;66:14 } \\ & \text { offer (1) } \end{aligned}$ | P | $\begin{array}{\|c} \text { permeable (1) } \\ 27: 4 \end{array}$ | $\begin{aligned} & \text { 27:9;36:7;45:10;50:9, } \\ & 14 ; 66: 15,16 \end{aligned}$ |
| North (23) | 55:22 | page (26) | permit (4) | points (23) |
| 6:14;7:11;8:21;9:1,14; | office (1) | 16:16;18:18,20,22; | 29:2;54:14;65:17,25 | 5:8;8:21,22;9:5,10,14, |
| 10:1,7,20;11:4,16;20:4; | 5:11 | 19:20,22;20:8;21:12,14, | permits (2) | 15,21,25;10:1,4,8,9,20, |
| 21:5;22:1,1;32:10; | often (2) | 17,19,21,24,25;22:10, | 54:4;65:14 | 24,25;11:4,7,11;21:7,8, |
| 35:11;38:22;46:19; | 33:16;48:16 | 11;34:19,22,23;35:1; | permitting (1) | 15;22:23 |
| 54:22;60:10,14;61:12,14 | old (2) | 37:2;47:1;50:22;55:9, | 23:18 | policy (1) |
| northern (5) | 41:10;61:18 | 14;58:1 | person (1) | 63:9 |
| 9:2;10:16;11:13; | one (16) | pages (1) | 4:19 | pollutants (1) |
| 12:19;21:19 | 4:19;11:18,19;13:2; | 22:13 | personal (1) | 27:7 |
| northernmost (3) | 15:4;16:7;23:23;24:2; | parameters (1) | 39:20 | portion (3) |
| 9:18,21;10:4 | 36:21;38:16,20;40:25; | 6:8 | personnel (1) | 9:2;10:16;11:13 |
| note (1) | 42:7;43:9;57:15;62:1 | parking (13) | 22:18 | portrayed (1) |
| 15:6 | ones (2) | 20:15,16,25;21:22; | perspective (2) | 17:3 |
| noted (3) | 33:21;62:12 | 28:1,15;41:9;62:19,23; | $35: 17,21$ | position (3) |
| 14:11,12;61:1 | one's (2) | 63:1,17;64:3,4 | Pete (4) | 14:6,10;39:12 |
| notice (1) | 39:14,15 | part (6) | 53:11;54:1;55:23; | possess (1) |
| 49:16 | only (9) | 12:19;17:22;24:6; | 57:16 | 51:8 |
| nowhere (2) | 4:19;22:19,19;33:21; | 26:24;29:2;32:25 | PETER (1) | possesses (1) |

Peter Wood - August 26, 2011

| 22:15 | 24:24;25:5;26:3;37:21; | 55:22;56:16;57:7 | relate (3) | $31: 10,11$ |
| :---: | :---: | :---: | :---: | :---: |
| possible (2) | 47:21;49:23;53:3 | realms (1) | 27:25;34:4;65:21 | Right (21) |
| 43:25;45:9 | proposed (15) | 23:25 | related (3) | 10:11,12;11:10;13:20; |
| possibly (2) | 17:24;20:16,25;26:1; | recall (6) | 6:10;25:22;34:4 | 16:24;17:4;24:18;28:9; |
| 32:24;41:15 | 27:18;29:24;31:20; | 25:15,15;26:10;30:23; | relationship (1) | 29:13,21;35:17;36:7; |
| post (1) | 32:11;35:4;41:8;59:6; | 42:25;56:1 | 65:16 | 39:19;43:14;44:22; |
| 23:21 | 60:9,22;61:6,14 | receive (2) | relative (1) | 47:15;49:11;51:15; |
| PowerPoint (2) | provide (2) | 33:18,25 | 4:15 | 58:12;60:16,25 |
| 41:13,14 | 40:5;51:15 | recess (2) | relatively (1) | rings (1) |
| practices (2) | provided (1) | 15:24;19:15 | 56:19 | 19:14 |
| 25:23;27:1 | 17:21 | recognize (1) | released (1) | rise (4) |
| prairie (1) | providing (1) | 31:4 | 18:8 | 47:16,19;49:14,24 |
| 64:19 | 39:21 | recollection (3) | relevant (3) | road (33) |
| predominantly (1) | public (2) | 7:3;30:25;42:23 | 28:22;29:1;66: | 28:2,14,14;30:3,4,8,9, |
| 55:25 | 47:23;54:17 | reconstructing (1) | remember (1) | 10,10,16,18,19;31:1; |
| prefer (3) | pull (1) | 64:17 | 26:10 | 32:11;37:14,24;38:10, |
| 18:12;35:5, | 62:18 | record (31) | remove (2) | 14,17;39:7;45:11,24; |
| preferred (3) | pulls (3) | 4:14;5:3;6:7;8:1 | 27:6;58:5 | 46:7;47:21;51:9;57:13; |
| 6:16;36:3;52:22 | 20:2;21:17,18 | 10:7;14:19,21;16:1; | removed (1) | 59:2,6;61:10;64:16,17, |
| prepared (3) | purchased (1) | 19:16,23;31:6,25;32:1; | $63: 18$ | 18;66:10 |
| $6: 3,5,21$ | 24:25 | 40:8,9;41:2,3;43:1; | renumbered (1) | roads (1) |
| present (1) | purple (3) | 57:16;59:16,17;60:1,2; | 16:9 | 63:17 |
| 20:1 | 36:13;44:21;50:21 | 61:11,20,23,24;65:10; | replaces (1) | roadway (8) |
| presupposed (1) | purports (3) | 66:2,5,15 | 29:24 | 60:9,14,22;61:6,8,12, |
| 45:22 | 30:16,18;40:13 | red (4) | report (7) | 14;62:8 |
| pretty (5) | purpose (3) | 17:19;41:22,24;45:17 | 27:12,13,15,19,2 | role (12) |
| 52:5,10,16,23;59:7 | 20:5,8;27:15 | Reddelien (5) | 28:17;31:6 | 6:23,24;13:23;23:17; |
| previous (3) | purposes (2) | 28:14;37:24;39:7 | Reporter (1) | 26:12,24;27:8,19,21,23; |
| 41:19;44:19;63:14 | 18:23;24:23 | 47:21;51:9 | 16:10 | 28:10;54:6 |
| previously (1) | put (9) | redeveloping (1) | reports (1) | round (2) |
| 16:8 | $7: 19 ; 18: 6 ; 19: 9 ; 49: 15$ | 28:6 | 38:24 | $53: 20,20$ |
| primarily (1) | 53:16,18;59:7;64:24; | redevelopment (12) | represent (7) | rounded (1) |
| 23:11 |  | $28: 1,18 ; 29: 1,23$ | 12:21;18:4,16;35:2; | 53:23 |
| privy (1) | putting (1) | 30:11;62:6,11,14;63:10, | $44: 19,24 ; 61: 4$ | RRNA (7) |
| 38:8 | $30: 10$ | 16,19;64:22 | representation (5) | 14:24;15:8;16:9,10; |
| probably (7) |  | refer (3) | $19: 25 ; 21: 14 ; 44: 2$ | 56:9;57:16,23 |
| $\begin{aligned} & 7: 5,6 ; 15: 3 ; 58: 25 ; 59: 7 \\ & 64: 10,21 \end{aligned}$ | Q | $\begin{aligned} & 17: 20 ; 40: 12 ; 54: 7 \\ & \text { reference (5) } \end{aligned}$ | $45: 5,9$ <br> representing (2) | $\begin{array}{\|c\|} \hline \text { rule (1) } \\ 44: 4 \end{array}$ |
| problems (1) | quantify (3) | 10:12;11:18;17:14 | 22:6,8 | rules (2) |
| 66:11 | 23:14;27:17;50:16 | 24:22;41:6 | represents (7) | 4:13;62:17 |
| PROCEEDINGS (2) | quiet (1) | referencing (1) | 12:23;18:1,11,1 | run (3) |
| 4:1;66:24 | 4:21 | 17:17 | 27:11;43:20,20 | 11:11;12:19;45:16 |
| process (3) | quite (1) | referred (1) | require (1) | running (5) |
| 19:18;30:7,9 | $11: 24$ | 38:22 | 24:10 | 21:4;22:7;31:21,21; |
| produced (3) | quote/unquote (1) | referring (3) | required (1) | $37: 23$ runoff (5) |
| 14:25;40:23;43:23 |  | 5:5;42:24;57:16 | 28:4 | runoff (5) |
| $\begin{gathered} \text { product (1) } \\ 41: 16 \end{gathered}$ | R | refers (1) $34: 13$ | $\underset{\text { resource (1) }}{\text { 5:24 }}$ | $\begin{aligned} & 24: 5 ; 25: 2,5 ; 33: 18 \\ & 48: 18 \end{aligned}$ |
| professional (1) |  | regard (7) | Resources (1) | runs (1) |
| 46:1 | rain (1) | 25:2,7;28:13;32:2 | 5:11 | 30:8 |
| program (3) | $13: 7$ | $33: 4 ; 34: 18 ; 52: 1$ | responsibilities (1) 23:6 | S |
| project (3) | $43: 24$ | $6: 11,15 ; 52: 2,22 ; 55: 11$ | responsibilit | S |
| 39:21;50:8;62:13 | reached (2) | registered (1) | 27:23;32:21;39:17,20, | sake (1) |
| projects (4) | 29:6,7 | 6:25 | 23 | 62:5 |
| 30:2,13;54:13;63:6 | read (6) | regrade (1) | responsible | same (8) |
| properties (2) | 6:6;15:2,6;31:12;33:9; | 62:19 | 6:20,22 | 5:4,6;33:11;46:24,25; |
| 23:12;37:24 | 54:24 | regulate (1) | restate (4) | 48:6;49:14;64:18 |
| property (27) | real (1) | 24:8 | 13:15;23:10;33:15; | saw (3) |
| 6:13,18;7:11;9:1,19, | 36:11 | regulation (3) | 45:15 | 10:24;17:7;62:7 |
| 22;10:10,15;11:8,16; | really (10) | 23:19,24;24:9 | restricted (1) | saying (3) |
| 13:5,6,8;17:24;18:13; | 24:14;26:14;33:11; | regulatory (1) | 21:4 | 8:15,25;48:7 |
| 20:4;21:16,18;22:1,4; | 36:22;37:7;45:6;49:2; | 54:12 | return (2) | school (2) |

Peter Wood - August 26, 2011

| 5:18,20 | shows (3) | 44:24 | suggests (1) | 42:9 |
| :---: | :---: | :---: | :---: | :---: |
| scientific (1) | 21:13;56:6;58:13 | spread (1) | 48:9 | techniques (1) |
| 45:6 | side (2) | 49:19 | summarized (1) | 27:6 |
| scope (1) | 7:11;11:16 | spring (1) | 52:5 | technology (1) |
| 65:6 | sides (1) | 7:4 | summary (1) | 41:13 |
| second (3) | 60:22 | stand (1) | 43:21 | Ten (1) |
| 25:15;50:22;55:8 | significant (3) | 43:7 | SUNY-ESF (1) | 53:24 |
| section (1) | 54:13;63:25;64:10 | standard (1) | 5:21 | tend (2) |
| 21:20 | significantly (1) | 24:4 | supposed (1) | 18:16;33:3 |
| seeing (2) | 63:24 | standards (1) | 57:4 | term (1) |
| 30:23;59:2 | similar (4) | 24:6 | sure (19) | 54:10 |
| seems (3) | 30:14;42:10;44:19; | standing (4) | 5:4,5,7;13:16;15:14; | terms (2) |
| 45:16;63:1;65:10 | 48:22 | 13:9,16,17;18:5 | 20:14;24:20;33:13,16; | 23:6;28:23 |
| send (1) | simple (1) | standpoint (3) | 34:15;37:17;39:22; | testified (6) |
| 15:10 | 29:23 | 27:3,3;56:19 | 44:10;48:25;50:7,18,23; | 4:4;23:1,2;25:12; |
| sense (1) | simplify (1) | stands (1) | 56:5,16 | 33:17;66:11 |
| 48:12 | 53:22 | 29:17 | surface (6) | testify (3) |
| sent (1) | site (20) | start (3) | 23:7,11;24:1,10,16; | 6:9;14:6,10 |
| 42:7 | 4:15;6:23,24;17:3; | 7:20;8:5;65:24 | 52:22 | testifying (9) |
| separate | 20:2,13;21:3,6,8;24:25; | started (1) | surfaces (1) | 6:6;31:13,15,16; |
| 65:14 | 25:10,21;29:11;31:21; | 26:15 | 27:5 | 32:18,19;34:12;51:24; |
| September (3) | 35:4;38:9;43:24;56:12; | State (5) | surround (1) | 62:5 |
| 26:7;27:12;43:6 | 62:15;63:10 | 5:20;24:3;61:20;65:9; | 42:5 | testimony (3) |
| series (5) | sites (4) | 66:6 | surrounded (3) | 48:15;54:20;55:3 |
| 16:6,17;21:4;22:6,11 | 23:19;62:11;63:16,19 | stated (2) | 17:19;37:12;51:2 | Thanks (1) |
| service (1) | situation (2) | 9:23;46:5 | surrounding (1) | 54:19 |
| 6:16 | 49:11,18 | statement (3) | 34:1 | therefore (1) |
| set (3) | size (3) | 6:5;16:2;47:14 | survey (14) | 4:17 |
| 6:7;26:23;57:17 | 49:5,18;64:7 | states (1) | 7:8;8:6,18,20;9:24; | third (1) |
| sets (1) | slope (3) | 51:25 | 11:14;12:20;20:5,8; | 20:25 |
| 54:12 | 31:22;60:24;61:5 | storm (35) | 21:14;30:17;44:25;46:6; | thought (2) |
| setting (1) | slow (1) | 5:10;23:2,3,4,14,17, | 47:20 | 30:7,9 |
| 26:22 | 63:14 | 22,25;24:15,16;25:22, | surveyed (1) | thumb (1) |
| several (4) | small (3) | 25;26:8;27:1,2,4,7,17; | 17:2 | 44:4 |
| 13:17;25:18;26:4,19 | 5:17;56:16,19 | 28:22;29:2;32:25;33:5, | surveying (8) | times (4) |
| several-inch (1) | Smith (2) | 10,17;34:5,5;39:18,25; | 14:17;20:1;21:4,7; | 4:18;13:6;25:13;54:4 |
| 49:14 | 5:18,20 | 48:15,18;55:24;65:7,18, | 37:20,23;38:8;53:19 | today (1) |
| shaded (1) | solely (1) | 20,25 | surveyor (3) | 15:1 |
| 41:9 | 46:8 | strategy (1) | 6:25;7:1,7 | told (1) |
| shape (1) | someone (1) | 29:13 | sworn (1) | 39:14 |
| 42:10 | 7:5 | stream (7) | 4:3 | took (1) |
| Sharpie (1) | somewhat (1) | 11:12,20;12:21,21; | Syracuse (1) | 49:14 |
| 41:24 | 24:17 | 16:25;18:24;45:13 | 5:21 | top (6) |
| sheet (8) | somewhere (2) | strictly (1) | system (2) | $9: 2 ; 30: 10 ; 38: 13 ; 55: 1,$ |
| $\begin{aligned} & 8: 22,24 ; 9: 16,22 ; 10: 2 \\ & 14: 14,15 ; 15: 2 \end{aligned}$ | $\begin{aligned} & 14: 18 ; 38: 11 \\ & \text { sorry (5) } \end{aligned}$ | $\begin{gathered} 26: 25 \\ \text { studies (3) } \end{gathered}$ | $\begin{aligned} & 27: 18 ; 35: 13 \\ & \text { systems (1) } \end{aligned}$ | 13;63:8 <br> topography (4) |
| 14:14,15;15:2 <br> shoot (2) | sorry (5) 12:8;19:3;40:15 | studies (3) $25: 1,4,6$ | $\begin{array}{\|c} \mid \operatorname{systems}(1) \\ 56: 1 \end{array}$ | topography (4) 48:4,10;50:3;61:7 |
| 20:23,23 | 61:11,18 | study (1) |  | topos (1) |
| shooting (1) | south (10) | 31:7 | T | 6:20 |
| 7:12 | 11:8;22:4,7;32:12; | stuff (3) |  | touched (1) |
| short (1) | 37:13,20;45:13;46:3; | 27:5;48:8;63:22 | talk (9) | 31:14 |
| 30:12 | 47:5;66:7 | Sturtevant (1) | 4:12,19;22:25;28:12; | toward (3) |
| shot (3) | southwest (4) | 5:12 | 34:10;36:7;62:16,16; | 13:12,13,13 |
| 22:17,18,20 | 37:2;46:22,24;47:1 | subject (1) | 64:3 | towards (4) |
| show (9) | spatially (1) | 52:11 | talked (1) | 31:21,22;35:7,14 |
| 14:24;18:24;27:10; | 57:6 | sub-outlet (1) | $35: 10$ | trained (2) |
| 31:2;32:3;40:2,11; | speak (1) | 35:1 | talking (9) | 13:23;14:4 |
| 41:22;59:22 | 8:15 | subsequent (2) | 5:4;17:1;21:6;26:15; | training (1) |
| showing (2) | specialist (3) | 20:12;55:13 | 32:5;41:17;43:21;52:4; | 14:2 |
| 6:3;47:2 | 23:2,7;54:8 | sufficiently (1) | 53:19 | TRANSCRIPT (1) |
| shown (7) | specific (1) | 51:7 | technical (1) | 4:1 |
| $9: 15,21 ; 31: 22 ; 32: 8$ | 11:2 | suggest (2) | 25:19 | traverses (1) |
| 41:15;53:15;56:17 | spot (1) | 48:5;66:13 | technique (1) | 45:2 |

Peter Wood - August 26, 2011


