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SC Court of Appeals

THE STATE OF SOUTH CAROLINA
In The Court of Appeals

APPEAL FROM GEORGETOWN COUNTY
Court of Common Pleas

The Honorable B. Alex Hyman

Case No. 2020-CP-22-00356
Appellate Case No. 2023-001454

Ron Christmas,

Appellant,

v.

County of Georgetown, City of Georgetown, and South Carolina Department of Transportation,

Respondents.

**RECORD ON APPEAL
VOLUME III OF VII**

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1 **THE COURT:** Let me ask the attorneys.

2 **MR. FOREMAN:** Okay.

3 **THE COURT:** It's ultimately a decision that they can make
4 or not but --

5 **MR. FOREMAN:** Okay.

6 **MR. LUCEY:** No objection.

7 **THE COURT:** -- I have -- any objection?

8 **MR. LINDEMANN:** No objection.

9 **MR. BATTLE:** No objection.

10 **MR. FOREMAN:** All right. Thank you.

11 **THE COURT:** Yes, you may take notes. Just make sure that
12 your note-taking does not interfere in any way with the other
13 jurors. Okay?

14 **MR. FOREMAN:** Okay.

15 **THE COURT:** Thank you. Mr. Lucey, call you your first
16 witness.

17 **MR. LUCEY:** Plaintiffs called Robert Castles, sir.

18 **ROBERT L. CASTLES, JR., HAVING BEEN DULY SWORN TESTIFIES AS**

19 **FOLLOWS:**

20 **THE CLERK:** Thank you. Please be seated in the state and
21 spell your name for the record.

22 **DIRECT EXAMINATION OF MR. CASTLES BY MR. LUCEY:**

23 Q: Mr. Castles, we're going to cover some personal
24 background first, sir. Please tell the jury where you reside
25 now.

1 A: At 8009 Fortuna Drive in Myrtle Beach, South Carolina.

2 Q: And who do you reside there with?

3 A: My wife.

4 Q: What is your current occupation?

5 A: I own Castles Consulting and Forensics.

6 Q: Okay. Let's do a little personal background and then we
7 cover your education, sir. Where were you born? Where'd you
8 grow up?

9 A: Born in Columbia, South Carolina; went to Dreher High
10 School, and then after that left and went to Clemson
11 University.

12 Q: Okay. What year did you get a degree at Clemson?

13 A: 1976.

14 Q: And what was that degree in?

15 A: Civil Engineering.

16 Q: And what type of engineer are you? Are there various
17 civil specialties?

18 A: There are now, especially in certain states, but right
19 now in the State of South Carolina, at least when I got my
20 professional engineering license, I could do basically
21 anything under the civil engineering degree, which was roads,
22 bridges, sewer, pump stations, drainage, water, some very
23 broad ranges of engineering applications.

24 Q: Yes, sir. Do you recall what year you got your
25 engineering license, please?

1 A: 1980.

2 Q: 1980. So that's 43 years ago?

3 A: Yes, sir.

4 Q: And you've been practicing engineering ever since?

5 A: Yes, sir.

6 Q: We want the jury to understand what background, what
7 experience you bring to your opinions in this matter. So if
8 you would, please, let's start with Duke Energy or Duke Power.
9 Give the jury an overview of what you did as an engineer at
10 Duke, please.

11 A: Yeah. That was my first year out of college, and I
12 worked at McGuire Nuclear Station up out of Charlotte, North
13 Carolina. I started out in the general construction division
14 overseeing all parts, different aspects of construction.

15 And then quickly after that, they asked me to move to the
16 systems testing section, which in the systems testing section,
17 I would be the one that would take a system, and I'll use an
18 analogy here of one of them that I took. It was the ice
19 condenser system, which condensed the steam if you ever had an
20 accident up there at the nuclear plant.

21 So my job was to run the pumps, test the piping, clean
22 the piping, do everything right before it was turned over to
23 operations. So I was the last one in construction that would
24 do anything with that system.

25 Q: Sure. Let's move on to the next position at CH2M Hill.

1 Tell the jury, if you would, please, what you did for that
2 firm. Give us some examples.

3 A: I was a project manager, design engineer. One of the
4 first projects I did was down here at the beach. I oversaw
5 the construction of the Murrells Inlet sewer system when they
6 put the gravity sewers down Main Street of Murrells and put in
7 the pump stations down there.

8 I then did the Socastee Water System design and
9 construction inspection, which went down 544 and down 707 and
10 put in two wells and two elevated tanks that serviced the
11 hospital, Conway Hospital at the time, and then out on 501.
12 You've seen that one out there.

13 Q: Tell us about your work in designing the drainage, roads,
14 water, and sewer for the Prince George's Ocean Tract while you
15 were at that CH2M position.

16 A: Prince George's Ocean Tract was actually when I was with
17 Castles Engineering.

18 Q: Okay. I jumped ahead. I'm sorry. So let's go to
19 Castles Engineering. Let's stick with the Prince George's
20 Tract. Tell us -- you opened Castle's Engineering in 1984,
21 right?

22 A: '84, correct.

23 Q: Okay. Tell us about your work in designing the drainage,
24 roads, water, and sewers for the Prince George's Ocean Tract.

25 A: Yes. You know where Prince George is down there near

1 DeBordieu? It's two tracts. It's one on the river. It's one
2 on the ocean. We were responsible for the Ocean Tract, which
3 went from 17 all the way to the ocean. I designed the water,
4 the sewer systems included three pump stations that actually
5 ended up pumping all the way to Pawleys Island to -- I'm
6 trying to think of a golf course up there. Pawleys
7 Plantation, I guess it is, where we intercepted with another
8 pump station and then it went to the plant.

9 That was a thirteen-thousand-foot-force main, so that was
10 kind of a unique project there. The drainage was unique in
11 that you were close to the ocean, and you obviously had to
12 deal with the tides and how your ponds were going to work in
13 that area.

14 Q: And, just so we're clear, that storm drainage, sanitary
15 water for drinking, and sewage?

16 A: The first one was sanitary sewer, and then the second one
17 was for storm drainage.

18 Q: All right. And let's talk about a more notable project
19 here, Broadway at the Beach. What did your firm and you do
20 for Broadway at the Beach? What would that have been, twenty-
21 five years ago? Twenty?

22 A: '93 was actually when it was completed.

23 Q: Gotcha. Tell us -- describe your work for Broadway at
24 the Beach up in Myrtle Beach.

25 A: If you've been to Broadway at the Beach and you know

1 where the buildings are, then my responsibility is five feet
2 outside the building. So, when you get to the hardscape, we
3 did the hardscape. Then we got away from the buildings, we
4 did all the sewer system that serviced all of those projects
5 in there. We did the water system and the fire system that
6 serviced all of those buildings in there.

7 We designed all the parking lots, which was 6,000 parking
8 space -- parking lots there. We designed all those
9 surrounding roads. When you go in there, there's a loop road
10 that goes all the way around the project. We designed that
11 loop road as well as the roads that tie back into the streets
12 surrounding it.

13 We had 21st Avenue, 29th Avenue, 17 bypass, and Grissom
14 Parkway. We actually designed a section of Grissom Parkway
15 there that wasn't completed at that point.

16 Q: And you got all that done within how many months?

17 A: Six to get Phase One done.

18 Q: And that was a mile of road around Broadway at the Beach?

19 A: At least a mile of road.

20 Q: And did you have some unique soils to deal with in
21 designing Broadway at the Beach?

22 A: I did. We had gumbo clay. And, if you know anything
23 about gumbo clay, you can put it in a Trackhoe and shake the
24 Trackhoe and it won't come out. It's gummy, just like gumbo
25 is. And what happens is when you get water with it, it really

1 gums up and you can actually walk across it and it's like
2 pluff mud. You just sink up to your waist in it.

3 And so what we had to do was a special technique there
4 called lime stabilization where we took lime from a tanker
5 truck and mixed the lime in and filled it in to the gumbo,
6 which actually chemically changes the gumbo to a coarser
7 material, almost like a sand, but it's not quite a sand but it
8 will become hard over days, almost like cement, and so you can
9 actually walk on that. You could drive a concrete truck on
10 it, and then you walk off of that soil -- or that lime
11 stabilization ten feet, and you'd sink back up to your waist
12 in the clay.

13 So that's what we had to use. And then on top of that,
14 we used a base course and then three inches of asphalt to
15 basically form all of our roads and parking spaces in there.
16 First, we stabilized the site. In fact, we stabilized even
17 under the buildings so that they could physically go in there
18 and construct them.

19 Q: And, besides constructing on soft soils, have you also
20 investigated road or stormwater piping failures in soft soils,
21 sir?

22 A: I have. We have -- well, I say in soft soils. I have
23 Northwood Plaza, which I put in a sub-drainage system,
24 basically an infiltration system, in Northwood Plaza to take
25 care of the water instead of putting it into retention ponds.

1 And, when the first rain came after we finished, it backed up
2 in one of the parking lots and would not flow out.

3 So we went into the catch basins and tried to figure out
4 what was wrong and we found out that we had a crushed pipe
5 that the construction equipment had actually crushed it when
6 they were finishing it out. So we had to go in there and get
7 that pipe rebuilt.

8 Q: Let's do one more job experience, sir, and then we'll
9 move on to your background work in this matter. Tell them, if
10 you would, please, about the engineering work you did for the
11 Air Force Base.

12 A: At the Air Force Base, we did several things out there.
13 We did all the parking lots on the outside of the terminal,
14 where you would end up at the terminal, as well as the roads
15 were right there in front of the terminal. We did Harrelson
16 Boulevard, which connected -- Harrelson stopped at -- I'm
17 trying to remember, but where Coastal Grand Mall ends right
18 now, it stopped there, and so we finished it from there out to
19 17. As I said, we did all the parking lots.

20 We actually did some work, but it was more surveying work
21 on the runway to get it level and to get it to the proper
22 grades that the plans were designed for. It was designed by
23 an airport specialist. We just did the surveying for them.

24 Q: Yes, sir. And has your focus of your practice changed or
25 morphed into more of a forensic investigation practice in the

1 last ten or fifteen years?

2 A: Yeah. My company actually split up about four years ago,
3 and my president and vice president went and formed their own
4 company, and I was ready to retire anyway. So I decided to
5 get out of the physical engineering and get more into the
6 forensic side, where I've done probably six or seven projects
7 now on the forensic side.

8 Q: And tell the jury, briefly, what do you mean by forensic
9 engineering, please?

10 A: Forensic engineering is where you've got a problem in a
11 project. I've got one now in North Myrtle Beach where they
12 were supposed to put four twenty-four-inch pipes under a dam
13 to let the water out from one side to the other, and the
14 contractor didn't do that. They apparently wasn't on the
15 plans, and so they're having flooding problems now. So
16 they've hired me to come in and figure out what the issues are
17 and how we can, after the fact, install these four twenty-
18 four-inch pipes to get the system working.

19 So it's really going into whether it's a water problem, a
20 sewer problem, anything related to civil engineering, going
21 there and looking at it after the fact, where it's failing,
22 and come up with a solution on how to fix it.

23 Q: Yes, sir. Turning to this matter, sir, have you been to
24 the intersection of Front and Greenwich Drive in person?

25 A: Yes, I have, several times.

1 Q: Three times total?

2 A: At least three times, yes.

3 Q: Were the tides the same or different on the three visits?

4 A: They were different. The first time I went was an
5 extremely -- I'd say extremely high tide. It wasn't as high
6 as it can get, but it was about 5.1 tide which is a good bit
7 higher than the normal tide we would see in this particular
8 area.

9 Q: Okay. And it was lower at your other two visits?

10 A: I'm sorry, sir?

11 Q: The tide was lower at your subsequent two visits?

12 A: Yeah, they were like four and -- 4.3, I think, at the
13 other two visits.

14 Q: Okay. And, as part of your work on this matter, did you
15 travel to the City of Georgetown's conference room to review
16 their records on this matter?

17 A: Yes, we have actually contacted Orlando Ortega, I believe
18 it is, who is the city engineer, and asked him if we could
19 come see his records that he had done. We had done all the
20 improvements on East Bay Park, and so we went and stayed in
21 his conference room a couple of hours and reviewed his plans
22 there.

23 And then, at the end, we told him the plans that we would
24 like to have, and so he sent them out and had copies made of
25 them and gave those to us.

1 Q: And the plans you reviewed in his conference room, sir,
2 would they have included the plans for the ballfields and the
3 boat parking on the south half?

4 A: Yes. It was the parking lots for the tennis courts, the
5 tennis courts themselves, the boat landing parking lot, and
6 then some miscellaneous grading around the property.

7 Q: And were the plans for the walking trail included in this
8 material?

9 A: Yes, they were.

10 Q: And were the city's requests for -- excuse me -- requests
11 for proposals included in these materials?

12 A: Yes, they were.

13 Q: And did you have the opportunity to review both of those?

14 A: I did, including the contracts that they had with the
15 different agencies, the engineers, the contractor.

16 Q: Okay. And did you engage a surveyor to document the
17 elevations on Greenwich?

18 A: Yeah. We actually had a surveyor come in, and not only
19 did he do Greenwich, but we also did part of Front Drive but
20 basically in that area of -- probably from the edge of the --
21 well, actually past the tennis courts to the south, all the
22 way down to Greenwich, up to a little bit past Prince Street
23 to the south -- or north.

24 Q: And did you generate a drawing or a report as to those
25 elevations?

1 A: A drawing that showed the spot elevations on it.

2 Q: And, without going into the results, what was the purpose
3 of engaging a survey of that road area?

4 A: We felt like the road had changed over the years from
5 when it had been built, and we wanted to see exactly how it
6 looked today. So we did the elevations in order to plot a
7 centerline of the road to see how the elevations had changed
8 and how it was more left wavy instead of straight. The
9 original design was a straight road. Now we had dips and
10 valleys in it.

11 Q: And did you have an opportunity to compare your survey
12 with that performed for one of the defendants by a gentleman
13 named Parker in 2021 that's in evidence as Exhibit 43?

14 A: Yes, we did.

15 Q: And how did your elevations compare to his?

16 A: Up there where the tennis courts are and where the Alford
17 Building are on the high ground, they're basically the same.
18 We had the same elevations. What we have is better soil up
19 there, and you can see where that road has not sank up there.
20 And then, in some of the pictures you've already looked at,
21 and I'm sure you'll see more, you can see where during some of
22 the heavy tides that area is dry and stays dry.

23 As you get down toward Front Street, then the road dips
24 in certain areas, and you'll see where water is coming across
25 the road in those areas. That's where --

1 **MR. LINDEMANN:** Your Honor, if I may, I think he's
2 starting to offer opinions, it hasn't been proffered yet.

3 **THE COURT:** I agree.

4 **BY MR. LUCEY:**

5 Q: Sir, we're going to move on and just cover a little bit
6 more about what you've done before we discuss results of it,
7 if you please.

8 A: Okay.

9 Q: And did you also review photos taken by others?

10 A: Yes, I did.

11 Q: Did you review records, recorded photos, besides what you
12 were presented with at the City Engineer's Office?

13 A: Yes, I have.

14 Q: Did you investigate alternative causation for Mr.
15 Christmas' complaints?

16 A: Yes, I did.

17 Q: For instance, did you investigate the possibility of
18 perhaps sea level rise that caused it?

19 A: Yes.

20 Q: And did you research what sea level rise was recognized
21 as having occurred in the recent history?

22 A: Yes.

23 Q: Did you utilize the South Carolina Department of
24 Transportation original construction design and confirmation
25 in evidence as Exhibit 141?

1 A: Yes, I did.

2 Q: Did you have an opportunity to compare those elevations
3 to the ones documented by you and Parker?

4 A: Yes, I did.

5 Q: And did you look at the history in the surrounding
6 geographical area to see if there were other possible causes
7 of the subsidence, the road subsidence that has occurred
8 adjacent to Mr. Christmas' property?

9 A: Yes. We looked at soil maps of that area that were
10 produced by the Soil Conservation Service.

11 Q: Okay. Let's talk about those briefly, sir. I'm going to
12 show you what's been marked for purposes of identification
13 only as Plaintiffs' Exhibit 74.

14 **MR. LINDEMANN:** Your Honor, again, the previous
15 objection. I think we're going beyond --

16 **THE COURT:** I think we are as well.

17 **MR. LINDEMANN:** -- voir dire here, and he hasn't even
18 been proffered yet, Your Honor.

19 **THE COURT:** I agree.

20 **BY MR. LUCEY:**

21 Q: Do you have those soil maps you just referenced in your
22 office?

23 A: Yes, I do.

24 Q: Have you always had them there?

25 A: Yes, I have.

1 Q: And the soil maps document what's present in various
2 areas in Georgetown?

3 A: Yes, they do.

4 Q: Did you research the historical tide levels that have
5 occurred in the areas between Myrtle Beach and south of
6 Georgetown and inland as part of your analysis?

7 A: Yes, I did.

8 **MR. LINDEMANN:** Your Honor, again, same objection and
9 he's apparently not listening to Your Honor's response. I
10 think this is not proper part of voir dire. It's also leading
11 as well.

12 **MR. LUCEY:** I'm just covering his background. I'm happy
13 to tender him right now, Your Honor. The plaintiff tenders --

14 **THE COURT:** Let's excuse the jury for a moment. Ladies
15 and gentlemen, what we're going to do -- it's 12:00. I'm
16 going to let you go to lunch. If you can be back by 1:30. We
17 have a few matters of law to take up while you're gone.
18 Again, we're trying to use our time as best we can. So,
19 again, if you all would be back promptly at 1:30. Thank you,
20 y'all.

21 Again, I'll just tell you, please do not speak about what
22 you've heard so far or any other matters in regards to this
23 case. Thank you.

24 **REPORTER'S NOTE:** (Jury exits courtroom at 12:00p.m.)

25 **THE COURT:** Thank you, Mr. Lacey -- Or Lucey, I'm sorry.

1 **MR. LUCEY:** Would you like me to proceed with the tender,
2 Your Honor?

3 **THE COURT:** Yes, please.

4 **MR. LUCEY:** Plaintiff tenders engineer, Robert Castle, as
5 an expert in civil engineering with a focus on hydrology and
6 drainage and forensic engineering.

7 **THE COURT:** Mr. Lindemann?

8 **MR. LINDEMANN:** Your Honor, I had planned to reserve voir
9 dire but with the issue of hydrology coming up, I think we
10 probably do need to go into with Mr. Battle also --

11 **MR. BATTLE:** Not really.

12 **MR. LINDEMANN:** Well, I'm happy to go. Give me one
13 moment.

14 **MR. BATTLE:** It's better to be quiet, let everybody think
15 you're (inaudible).

16 **THE COURT:** I agree.

17 **MR. LINDEMANN:** If Your Honor will give me one moment.

18 **THE COURT:** Yes, sir.

19 **VOIR DIRE EXAMINATION OF MR. CASTLES BY MR. LINDEMANN:**

20 Q: Good morning, Mr. Castles. Barely afternoon. A couple
21 of quick questions about your qualifications.

22 As I understand it, you are not a registered surveyor.

23 Is that correct?

24 A: That is correct.

25 Q: All right. And who did you engage to do surveying work

1 for you?

2 A: Robert A. Warner and Associates.

3 Q: All right. And -- but ultimately, you prepared the
4 survey, did you not?

5 A: I did.

6 Q: Okay.

7 A: He gave me the points and we prepared it.

8 Q: All right. And, when you're not a licensed surveyor,
9 you're not qualified, in fact, it's violation of state law to
10 prepare a survey, is it --

11 A: You are incorrect. I am, as a civil engineer, able to
12 prepare topographic maps, any type of map except for a survey
13 where you would survey a piece of property or prepare a deed
14 and record it in the courthouse.

15 Q: All right. And --

16 **MR. LINDEMANN:** Your Honor, that ultimately be a matter
17 of law for Your Honor to decide.

18 **BY MR. LINDEMANN:**

19 Q: But, ultimately, I understood that you were being
20 proffered as a civil engineer but with expertise in hydrology.
21 Are you a trained hydrologist?

22 A: I'm a trained hydrologist as it goes to -- you know, I
23 took hydrology in college. I got my degree. I got registered
24 as a civil engineer, which as a civil engineer, I can do
25 hydrology. I've done hydrology for forty-three years.

1 Q: Hydrology is actually a recognized specialty, is it not?

2 A: It is today. It wasn't when I got my license. So I've
3 been able to practice it since.

4 Q: Have you ever gotten any type of specialized
5 certifications or licenses in hydrology?

6 A: No, I've taken courses in it. I mean, I took graduate
7 courses in hydrology. I took -- I go to seminars to get my
8 PhDs, and I take them in hydrology. I do computer programs in
9 hydrology. I'm not sure -- I don't have a piece of paper that
10 sits on the wall that says I'm a hydrologist, if that's what
11 you're looking for but I am trained. Trained and educated to
12 be a hydrologist.

13 Q: And the extent of that is you received a B.S. in civil
14 engineering from Clemson?

15 A: Yes, I did.

16 Q: All right. And you don't have any graduate degrees, do
17 you?

18 A: No, but I did graduate work at the University of South
19 Carolina. I just did not finish to get my Master's.

20 Q: And what was you -- what were you attempting to your
21 Master's in?

22 A: Basically in general civil engineering degree again.

23 Q: All right. And when did you attend graduate school at
24 the University of South Carolina?

25 A: Approximately in 1978.

1 Q: Okay. That year?

2 A: That year.

3 Q: All right. And how long was that program?

4 A: Well, to get your Master's was basically a two-year
5 program, and I did the first year.

6 Q: Okay. So you stopped after one year.

7 A: Right.

8 Q: And why was that?

9 A: I didn't feel like I needed my Master's for what I was
10 going to do, which was to go in business for myself.

11 Q: All right. And did that Master's program include any
12 type of course work in hydrology?

13 A: Yes, it did. Drainage, seepage, and hydrology.

14 Q: All right. And the portion that you completed, did that
15 include that case --

16 A: Yes, it did. I made a B in the course. Yes, sir.

17 Q: You specifically recall your grade?

18 A: Yeah. I had to have a B or better to stay in the
19 program.

20 Q: All right. In this particular case, you didn't do any
21 type of hydraulic [sic] analysis, any type of stormwater
22 analysis, did you?

23 A: I did it relative to examples I had to do within the
24 course, and then when I got out of the course, I did the
25 hydraulic analysis for all of Harbison -- and you might be

1 from Columbia, Harbison, the development out there.

2 Q: Well, I was referring more specifically to this
3 particular case. You haven't done any type of surface water
4 analysis, any type of hydraulic study, have you?

5 A: No, I haven't needed to.

6 Q: All right.

7 **MR. LINDEMANN:** I don't believe I have any further
8 questions, Your Honor.

9 **THE COURT:** Mr. Battle? Mr. Lucey, I'll allow you to
10 respond.

11 **VOIR DIRE EXAMINATION OF MR. CASTLES BY MR. BATTLE:**

12 Q: (Inaudible) hydrologist if you have not done any
13 hydrology studies? It's a simple question.

14 **THE COURT:** And, Mr. Battle, I'm sorry. I was telling
15 Mr. Lucey that I will give him a chance to respond, and I did
16 not hear what you -- no, no, no. I meant after you. I just
17 did not hear your question.

18 **MR. BATTLE:** Okay.

19 **BY MR. BATTLE:**

20 Q: If you didn't do any hydrology studies, you're not under
21 -- your testimony about hydrology would not be necessary,
22 right?

23 A: Well, what is the question? Give me the question of
24 hydrology, and I'll tell you whether it's necessary or not.

25 Q: You didn't do any hydrology studies.

- 1 A: I've looked at some hydrology stuff that was prepared by
2 others.
- 3 Q: Who else prepared it if it's a hydrologist?
- 4 A: I think it was a Mr. Rogers.
- 5 Q: Mr. Rogers? Did you --
- 6 A: There was an engineer for somebody in this --
- 7 Q: Do you have a copy of his study?
- 8 A: Yes, I have a copy of his calculation.
- 9 Q: Here? Is the study here?
- 10 A: No, I didn't bring them with me.
- 11 Q: Okay. And what did that hydrology study show?
- 12 A: He did the rainfall and the hydrology of the rain events.
13 Some of the rain events, of what the area -- how the area
14 drained.
- 15 Q: What year was that?
- 16 A: '23, I think.
- 17 Q: '23?
- 18 A: Yeah.
- 19 Q: After this lawsuit was filed?
- 20 A: Yeah.
- 21 Q: And it's my understanding you're not being tendered as a
22 geologist.
- 23 A: As a geologist?
- 24 Q: Yes, sir.
- 25 A: No, sir.

1 Q: Now, Mr. Warner, who did the survey, is he a registered
2 land surveyor?

3 A: Yes, he is.

4 Q: Okay. And what qualifications does he have to be a
5 registered land surveyor?

6 A: He has his license as a registered land surveyor in the
7 State of South Carolina.

8 Q: Okay. And do you know what he did to qualify for that?

9 A: I mean, I know he's got --

10 **MR. LUCEY:** (Inaudible) voir dire. He's got a license.
11 He does have an education, and he's licensed in the state.

12 **THE COURT:** Yeah, I'll sustain your objection.

13 **THE COURT:** Ms. Thomas?

14 **MS. THOMAS:** Thank you, Your Honor.

15 **VOIR DIRE EXAMINATION OF MR. CASTLES BY MS. THOMAS:**

16 Q: Mr. Castles, I understood you earlier to state that you
17 had done some research into alternative causations of sea
18 level rise. Is there anything about the areas that you are
19 asking to be qualified as an expert that gives you credentials
20 to proffer opinions on that subject?

21 **MR. LUCEY:** Objection, Your Honor; misstates prior
22 question and answer.

23 **THE COURT:** I'm going to let her ask it.

24 **BY MS. THOMAS:**

25 Q: I understand you're being asked to be admitted as an

1 expert in the area of civil engineering with an emphasis on
2 hydrology, drainage, and forensic engineering. Anything about
3 those qualifications that allows you to conduct a research and
4 offer opinions as to the cause of sea level rising?

5 A: That comes under civil engineering, and I have done at
6 least thirty-six hotels on the oceanfront that involved tidal
7 work. So by experience and education, I have done tidal
8 analysis.

9 Q: Would you defer to a geologist in that area?

10 A: Not a geologist. No, ma'am. I use soils.

11 Q: Do you plan to offer an opinion on to -- as to any causes
12 of subsidence --

13 A: Let me back up a minute. When you said geologist, I
14 guess I was thinking of geotag, and I'm not sure about a
15 geologist relative to tidal --

16 Q: Would you believe a civil engineering degree allows you
17 to offer testimony as to causation of sea level rise?

18 A: Yes.

19 Q: Do you plan to offer any testimony as to causes of
20 subsidence?

21 A: Yes.

22 Q: And what about the qualifications -- your qualifications
23 allow you to proffer those expert opinions?

24 A: Experience. I've worked with subsistence of soils since
25 I started in civil engineering. Soils are a major part of

1 road design.

2 **MS. THOMAS:** That's all the questions I had, Your Honor.

3 **THE COURT:** Thank you, Ms. Thompson.

4 **VOIR DIRE EXAMINATION OF MR. CASTLES BY MR. LUCEY:**

5 Q: Sir, do you have what's called a grandfathered civil
6 engineering license in the state of South Carolina?

7 A: I don't think it's called grandfathered. No.

8 Q: Is it broader than the current classifications because of
9 its age?

10 A: I don't think they've gone to specific engineering yet.
11 It's still -- you get a civil engineering license.

12 Q: Okay. And, with regards to the hydrology calculations
13 that you reviewed that the defense is apparently not aware of,
14 Mr. Craig Rogers, did he calculate the rainfall and the CFS
15 for the North Park area?

16 A: Yes, he did.

17 Q: Am I using the right term, CFS?

18 A: Yeah, cubic feet per second.

19 Q: Okay. And did you review those calculations?

20 A: I did.

21 Q: As part of your work in this matter?

22 A: I'm sorry? I --

23 Q: As part of your work in this matter?

24 A: Yes, I did.

25 Q: And did you explain to me who didn't know what CFS was?

1 And did it help you form your opinions as to the quantity of
2 water that is leaving the north end of the park and entering
3 the wetlands and this intersection and my clients' property?

4 A: Yeah, you got to be careful here because CFS is only a
5 amount of flow.

6 Q: Right.

7 A: It's cubic feet per second.

8 Q: Right.

9 A: What I was more interested in is the volume of water that
10 was going to end up at the corner of Front Street and
11 Greenwood Street.

12 Q: Okay. And did you review his calculation of the acreage
13 that is dumping into that one location?

14 A: Yes, I did.

15 Q: Do you recall what that acreage was?

16 A: Thirty-three point something, thirty-three -- probably
17 thirty-three acres.

18 Q: And did that form part of the background of your opinions
19 in this matter? Just general information.

20 A: Yes, it did.

21 **MR. LUCEY:** Thank you, sir. Nothing further.

22 **MR. LINDEMANN:** Your Honor, may I follow up?

23 **THE COURT:** You may.

24 **VOIR DIRE EXAMINATION OF MR. CASTLES BY MR. LINDEMANN:**

25 Q: Mr. Castles, you are -- you don't have any specific

1 training as a geotechnical engineer, correct?

2 A: No. I mean, I work with soil --

3 **MR. LUCEY:** Objection; exceeds the scope of my cross-voir
4 dire.

5 **THE COURT:** Well --

6 **MR. LINDEMANN:** Your Honor, I'm following -- I obviously
7 went after Ms. Thomas --

8 **THE COURT:** I'm going to allow it.

9 **MR. LINDEMANN:** -- I'm following up on what she asked.

10 **BY MR. LINDEMANN:**

11 Q: Do you have any specific training as a geotechnical
12 engineer, sir?

13 A: No, but I've dealt with soils. I've took soil courses at
14 Clemson --

15 Q: And specifically in this case, you testified previously,
16 did you not, that you're not qualified to give opinions as a
17 geotechnical engineer, did you not?

18 A: I don't remember.

19 **MR. LINDEMANN:** Do we have his deposition?

20 **THE COURT:** Yeah. It's --

21 **MR. LINDEMANN:** Can we open it?

22 **THE COURT:** Yes. Let the record reflect opening what's
23 been marked as Court's Exhibit 1.

24 **MR. LINDEMANN:** Struggling to open up Court's Exhibit
25 Number 1. I think we're good. I'm getting there. All right.

1 May I approach, Your Honor?

2 **THE COURT:** Yes.

3 **BY MR. LINDEMANN:**

4 Q: Mr. Castles, here's a copy of your deposition.

5 A: All right.

6 Q: If you'd turn to Page 127, please.

7 A: All right. Which line?

8 Q: All right. And the bottom of Page 127, Line 20, I asked
9 you: "Isn't it possible that the subsidence of the soil that
10 you have testified to resulted from conditions underground?"

11 And what did you say in response to that?

12 A: "That would be a geotechnical question."

13 Q: And then my follow-up question was: "And that's not
14 something you're qualified to give?"

15 A: And I believe I answered that is correct.

16 Q: All right.

17 A: I believe we since hired or was hired a geotechnical
18 engineer to produce that report.

19 Q: Later on Page 128, I asked you: "As I understand it, the
20 damages that have been identified are issues with the pavers
21 pulling away from the pool and the stairs pulling away from
22 the house. In order to determine the cause of those two
23 issues, isn't that something that requires the expertise of a
24 geotechnical engineer?"

25 And what did you answer, sir?

1 A: So you're reading from Lines 15 through 18?

2 Q: No, I was reading from 12 to 18. Yes, sir.

3 A: 12 to 18.

4 Q: And your answer was at Line 20, and you said: "I can
5 opine as having seen these situations before, but what my
6 professional opinion is, that would probably be best to get a
7 geotechnical engineer."

8 Wasn't that your answer?

9 A: Yes, correct.

10 Q: All right. So, to opine to have seen the situations
11 before, that's not an expert opinion. That's just saying
12 something that you've observed.

13 A: That's correct.

14 Q: And you agreed that in order to provide expert opinions
15 on the issue required a geotechnical engineer.

16 A: Yes.

17 Q: And you agreed that you did not have that expertise.

18 A: That is correct.

19 **MR. LINDEMANN:** All right. Thank you, sir.

20 **VOIR DIRE EXAMINATION OF MR. CASTLES BY MR. LUCEY:**

21 Q: Sir, in your practice, do you regularly rely on diagnosis
22 of soil types by the geotechnical engineer you rely upon in
23 then assessing the structural situation?

24 A: Yes. In fact, most of the time what they do is they do
25 the report, and they will make a recommendation, and then I'll

1 decide whether it's actually appropriate for my situation or
2 not, because sometimes their initial analysis is not what's
3 really needed in my particular case.

4 Q: And you were starting to tell the Court about those
5 volumes from the government regarding the soils that are in
6 your office before the jury left. Tell us what you were
7 referring to, please.

8 A: I'm sorry. I don't know --

9 Q: The NCS I asked you about it.

10 A: Oh, yeah. The NCS soils report.

11 Q: Tell -- describe for the Court what information is
12 contained in those.

13 A: Well, it has the soils in there, and on our particular
14 piece of property, they got a soils they call the Euripides
15 soils, which has no classification, because it's soils that
16 have been dug out or grazed out of the Winyah Bay, and they're
17 just a mixture of different soils, mud, shale, whatever.

18 Q: And did the eventual geotechnical report produced by the
19 plaintiff's geotech engineer in this matter substantiate the
20 soft soils that had already been documented in the
21 government's soil report on the shelf?

22 A: Yes.

23 **MR. LINDEMANN:** Object to leading, Your Honor.

24 **MR. LUCEY:** Nothing further. Thank you, sir. One other
25 thing.

1 **BY MR. LUCEY:**

2 Q: There was a question about observations. Isn't a lot of
3 an engineer's analysis due in part to prior observations?

4 A: I'm sorry, what was the last part?

5 Q: Is a lot of an engineer's forensic analysis often based
6 in part on prior observations?

7 A: Yes.

8 Q: Prior cause and effect?

9 A: Yes.

10 Q: And do you still apply engineering principles to that?

11 A: Yes.

12 Q: Did you do so here?

13 A: Yes, you apply the same principles.

14 **MR. LUCEY:** Thank you. Nothing further, Your Honor.

15 **THE COURT:** All right. Mr. Lindemann, I'm happy to hear
16 -- revisit the motion in regards to 702.

17 **MR. LINDEMANN:** All right. And, Your Honor, we obviously
18 haven't heard testimony as to that --

19 **THE COURT:** Right.

20 **MR. LINDEMANN:** -- and this was purely rendering his
21 qualifications --

22 **THE COURT:** Well, my concern is in regards to what you're
23 trying to have him classified as an expert as. And I don't
24 necessarily -- I haven't heard anything about hydrology other
25 than that you want to qualify him as an expert in hydrology,

1 and it's been his testimony that he's not a specialist in
2 hydrology.

3 Am I missing something with that?

4 **MR. LUCEY:** He's not a licensed or certified, some form
5 of extra special piece of paper saying hydrology. He implied
6 -- he employs hydrology, as I understand it, in many, many of
7 his projects and got an education in it. Am I correct in
8 that, sir?

9 **MR. CASTLES:** That is correct.

10 **THE COURT:** But did -- was there any -- did he
11 specifically do any hydrological studies on this property?

12 **MR. LUCEY:** No. He reviewed other -- he reviewed
13 hydrological information by others.

14 **THE COURT:** Are you planning on bringing those others?

15 **MR. LUCEY:** No, sir. But he reviewed their information,
16 and they're based on city maps of what the drainage is
17 actually in this area and it's the calculation of what --
18 first, it's the calculation of what flows are going in this
19 direction and then secondly, it's just the background
20 calculation of how many acres are emptying into this
21 particular location. And it -- he verified the information,
22 but it's based on city stormwater maps.

23 The stormwater maps actually show where all the catch
24 basins and outlets are for all the water drainage. Of course,
25 we're really only concerned with anything immediately close to

1 Front Street. We don't care about the rest.

2 **MR. LINDEMANN:** Your Honor, if I may --

3 **THE COURT:** Yes.

4 **MR. LINDEMANN:** -- just so the Court has this background
5 information. Craig Rogers, who the witness mentioned, that
6 was an expert that was retained by Green Wave Contracting, who
7 is now out of the case. Certainly, it's not an expert that
8 was identified by any of the remaining defendants.

9 And, quite frankly, I'd have to -- we were not given any
10 prior notice that I'm aware of. You know, obviously, Mr.
11 Castles' deposition was taken in 2021, because this case had
12 already been pending for a year and a half at that point in
13 time and so I'm not aware of any information that we were
14 provided that he was going to rely on Mr. Rogers' testimony.

15 I'd have to go -- I don't even recall -- if I do recall
16 correctly, I don't believe he had any type of specialized
17 knowledge in hydrology, but I can -- I would need to double
18 check.

19 **THE COURT:** My concern is that you don't have an ability
20 to cross-examine the findings of Mr. Rogers.

21 **MR. LINDEMANN:** That's exactly the point. And, quite
22 frankly, as Your Honor has already noted, I mean, this witness
23 doesn't have the expertise. So he would be simply parroting
24 something that somebody else said and I don't believe, number
25 one, that's proper, and number two, that he's qualified to do

1 that.

2 Also, in the deposition that we have -- that we did take
3 in August 2021, he indicated that he hadn't consulted with any
4 other engineers. Ultimately, we know they did get a
5 geotechnical engineer, who I understand will be testifying
6 tomorrow.

7 And so, obviously, Mr. Castles doesn't have to interpret
8 his testimony. A jury can hear straight from him but we
9 certainly were not given any notice, that I'm aware of, that
10 Mr. Castles was relying on any other engineers' studies,
11 reports, since he testified in 2021, that said he wasn't
12 relying on anyone else.

13 **MR. LUCEY:** Actually, the City was at Craig Rogers'
14 deposition and they heard every question I asked Craig Rogers
15 about his hydrologic calculation. They had the opportunity to
16 cross-examine Craig Rogers.

17 **THE COURT:** Yeah, but that's completely different. He's
18 not here today.

19 **MR. LUCEY:** I actually think the hydrology aspect that
20 he's addressing is so simplified that it can just be subsumed
21 within his drainage focus --

22 **THE COURT:** But you -- the problem is they can't cross-
23 examine the findings of Craig Rogers and say, are these even
24 correct findings?

25 **MR. LUCEY:** What I'm saying to Your Honor is I'm willing

1 to modify the tender to make it easier for the Court. Simply
2 tender him as an expert in civil engineering with a focus on
3 drainage and forensics. I'll take hydrology --

4 **THE COURT:** I think that he is, with his experiences,
5 would certainly be an expert in civil engineering. My concern
6 has been the hydrology aspect of it. And again, potentially,
7 geo -- I think it's a geotech issue but if you've got an
8 expert coming tomorrow for the geotechnical side of that, then
9 that may solve that.

10 **MR. LUCEY:** Well, the hydrology would be the flow of the
11 water. I don't need that. I think it's basic information for
12 anybody that you can see what pipes flow into this drainage
13 basin. It's in their maps. And he already -- in his
14 deposition, there was a city drainage map marked with him
15 penciling out what the drainage basin was that empties into
16 this location. He gave that to him before his deposition. So
17 that would just be general drainage.

18 **MR. LINDEMANN:** And, Your Honor, just for the Court's
19 awareness, Page 5, the very first question asked to Mr. Rogers
20 by Mr. Lucey in his deposition, "Tell us if you would, please,
21 your occupation," and he says, "I'm a forensic engineer and
22 structural engineer."

23 So that's Mr. Rogers. And so obviously, Your Honor is
24 exactly; we're at a loss. We can't even challenge the
25 qualifications of that witness and obviously, we wouldn't do

1 that in the middle of a discussion --

2 **THE COURT:** Sure.

3 **MR. LINDEMANN:** -- at a deposition.

4 **THE COURT:** Well, Mr. Lucey, as I said previously, I
5 think he is certainly qualified as an expert in the field of
6 civil engineering. And I'll even go so far as to put the
7 focus on -- I don't remember what your terminology --

8 **MR. LUCEY:** Forensic and -- forensic engineer, Your
9 Honor.

10 **THE COURT:** Yes. And I'm fine with that.

11 **MR. LUCEY:** All right.

12 **THE COURT:** Now, in regards to the questioning,
13 obviously, you're limited on what you can ask in regards to
14 hydrology and the geotechnical surveys. Okay?

15 **MR. LUCEY:** Yes, sir.

16 **THE COURT:** All right.

17 **MR. CASTLES:** May I ask a question since it concerns me?

18 **THE COURT:** Sure.

19 **MR. CASTLES:** There is no license out there for hydrology
20 by the LLR Board of the state of South Carolina --

21 **MR. LUCEY:** Mr. Castles, we've got it covered. The Court
22 has ruled, we're all set. Let's get lunch and get -- we can
23 start back.

24 **MR. CASTLES:** Okay.

25 **MR. LUCEY:** But thank you, sir.

1 **THE COURT:** All right. What we're going to do -- I'm
2 sorry.

3 **MR. LINDEMANN:** Yeah. Your Honor hasn't heard the
4 proffer yet that -- and again, we can do it after lunch,
5 however Your Honor wishes but --

6 **THE COURT:** Well, do we need to hear it if that's not
7 going to be the -- what he's going to be testifying to?

8 **MR. LINDEMANN:** Well, the motion in *limine* was based on
9 his opinions that the use of the dumptrucks for the renovation
10 project caused the substance to the --

11 **THE COURT:** That was on number two of your motion?

12 **MR. LINDEMANN:** Yes. And so that was the purpose of this
13 proffer as I understood it and -- you know, and our argument
14 on that obviously dealt with causation benchmarks and that
15 sort of thing. And obviously it's subject to analysis where
16 you're the gatekeeper. It's not that he's not qualified
17 necessarily; it goes to the reliability of the opinions, Your
18 Honor. And I'm happy to do that after lunch --

19 **THE COURT:** Let's do that after lunch. That way staff
20 can have a chance to have lunch as well. We'll return at
21 1:30. Okay.

22 **MR. LUCEY:** Yes, sir.

23 **THE COURT:** All right. Thank you. Thank you, Mr.
24 Castles.

25 **(COURT IS IN RECESS)**

1 **THE COURT:** All right. Mr. Lucey, I believe we were
2 still -- I believe we were going to do some proffering of
3 testimony. Is that correct?

4 **MR. LUCEY:** Your Honor, I understand the Court wanted me
5 to proffer what the testimony would be --

6 **THE COURT:** Yes.

7 **MR. LUCEY:** -- as to the issue of "trucks causing or
8 contributing to road subsidence." And, if it pleases the
9 Court, I typed it out during lunch, so I'll be reading a
10 little bit.

11 **THE COURT:** Okay.

12 **MR. LUCEY:** But it's only on a page, it'll be very
13 quickly.

14 The witness, Your Honor, is expected to testify that
15 these roads, these specific roads, were not built for truck
16 traffic, and that truck traffic is tough on roads.
17 The evidence suggests that the wetting of the west side of
18 Greenwich was a less common occurrence and slowly grew more
19 often in occurrence and greater in quantity with time.

20 That is supported by witness testimony and observation of
21 conditions, general engineering observations in coastal South
22 Carolina. That observation correlates with the defendants'
23 theory of sea level rise as the causation.

24 That observation correlates with the City moving from
25 temporary barriers for these streets, these two blocks, to

1 install chains and chain mounts during this flooding.

2 That observation further correlates to general news
3 articles regarding flooding in coastal South Carolina, and it
4 correlates to Mr. Christmas and his wife eventually moving out
5 of their residence.

6 The witness is further expected to testify that based
7 upon comparison of road elevation and historical time records
8 from NOAA. So that's actually measured road elevation,
9 surveyed road elevation, and historical time records from NOAA
10 and the United States government, and the roads are
11 experiencing wet dry saturation from under the road half or
12 more of the days of the year now, and over the road one-third
13 or more of the days of the year now.

14 This saturation process facilitates consolidation and
15 makes the subsurfaces susceptible to consolidation when weight
16 is placed over top of it.

17 Weight causes consolidation. I don't think that's
18 disputed.

19 Standing water and/or trucks placed weight on the road.
20 Trucks were utilized to move a lot of dirt and heavy equipment
21 during the park build-out from 2017 to 2018, late 2018, and
22 the roads were also -- the trucks also used the roads for what
23 the Court may or may not have heard mentioned yet, the City
24 water staging area, which was a location next to the Alford
25 building that was used to store heavy equipment and trucks and

1 dirt by the City for another project during this time period.
2 There's evidence of those trucks using this road, the City
3 trucks on that project.

4 There's evidence that the trucks used Greenwich itself.
5 There's witness statements. There's a picture of a truck, a
6 dump truck, a loaded dump truck on the street on Greenwich at
7 the intersection of Front and Greenwich.

8 There's pictures of the park lay down area, the City
9 waterworks project that I just told the court about.

10 Included in that particular picture, Your Honor, is a
11 fifty-cubic-yard dirt dumpster. Fifty cubic yards would be
12 about the weight of three dump trucks.

13 Additionally, there are construction factors which tend
14 to favor that there probably was truck traffic on these
15 streets, this intersection for these projects, including that
16 as a matter of practice, trucks will often avoid the denser-
17 populated residential areas, and in fact, East Bay is more
18 densely populated, and that there is no thruway in this area.
19 You can't go anywhere by going across these streets.
20 Essentially, this neighborhood is a dead-end neighborhood, so
21 there's no reason for trucks to be traveling through this to
22 go somewhere else.

23 And it would have made sense to establish a one-way
24 pattern, and a lot of construction jobs will do that just to
25 facilitate flow, so you don't have two wide trucks passing

1 each other going opposite directions on these very narrow
2 roads. And, again, I already mentioned that there is the lay
3 down area next to the Alford Center and the tennis courts.
4 Both of those would have been quicker to access via Front
5 Street than going the back way all the way around East Bay.

6 He's also expected to testify that there's a lack of
7 evidence of other causation of heavy traffic or usage. In
8 other words, there's no other infrastructure projects that
9 were taking place, or that we can see in the prior ten,
10 twenty, thirty years. As I said, there's no thruway; you
11 can't get anywhere here, and there's been no evidence of any
12 catastrophic storms or significant events or failures that
13 have occurred in this area in recent history that would have
14 caused these depressions.

15 He explored the -- in evaluating this theory, he explored
16 the lack of evidence that sea level rise is more of a cause
17 than the dip in the roads. And in so doing, he was able to
18 observe that all the pictures in this case, the road is still
19 above the alleged sea level rise at all locations except this
20 dip.

21 And he explored the lack of evidence of global coastal
22 subsidence. Again, most of the four-plus-foot elevated --
23 elevation of Greenwich Drive is still out of water, and Your
24 Honor is likely aware about a mile away from the site, Your
25 Honor, is a major, major bridge that crosses a number of

1 rivers with Highway 17. And so the witness looked for another
2 benchmark where you could judge whether or not there had been
3 coastal subsidence, and in particular with these bridges, Your
4 Honor, these bridges, the support columns simply go all the
5 way down to bedrock.

6 So if this was an instance of the Town of Georgetown --
7 or the City of Georgetown sinking, you'd expect to see some
8 differential movement compared to a structure like that bridge
9 that has support going down to bedrock. There is no evidence
10 of movement that we're --that we've been able to ascertain
11 relating to that bridge or any other benchmark structure.

12 Supplemental evidence making it more likely than not that
13 the flooding and the trucks caused the dips in these roads and
14 caused them in recent history is the fact, of course, that the
15 roads were fixed, the dips were fixed in 2006, and the
16 complete roads were resurfaced in 2009, and the Court may have
17 heard the witness mention earlier, during resurfacing, if
18 there were other defects present at that time, they would have
19 fixed those defects in 2009.

20 So we have -- we're in a position where in theory we're
21 coming forward with a pretty renovated road as of 2009, and
22 it's more likely than not that if there's any significant
23 damage in that road, it has occurred since then, and there's a
24 lack of events before the park renovation projects to suggest
25 that weight was placed on those roads that would have caused

1 them to consolidate.

2 Your Honor, lastly, the witness is expected to testify
3 that there are industry studies and resources that document
4 that when soils are supported -- excuse me, when roads are
5 supported by wet soils instead of dry soils, the number of
6 passes that the road can sustain by trucks is tremendously
7 reduced, and we're talking on an incredible factor, Your
8 Honor, like a thousand percent. I'm not good at math, but
9 anyway, they have studies which show that if you have a good
10 road or a good dry soil, maybe the truck can run on it 185,000
11 times before there's any subsidence.

12 If you have the same road, depending on the thickness of
13 the substrate, you have the same road, same substrate, and the
14 substrate is wet, then maybe as few as fifteen or thirty
15 passes in a truck will cause damage or subsidence to the road.

16 And, of course, take that study and everything we've
17 heard in light of the fact of what the witnesses expected to
18 testify initially, which that he can tell by his road
19 experience and looking at 141 in evidence, the SCDOT plans,
20 that these roads are not built for truck traffic. So it's not
21 a surprise that they're having this difficulty sustaining the
22 truck traffic.

23 In summary, Your Honor, more likely than not, the
24 consolidation is caused by repeated wetting and the weight of
25 the trucks and the weight of the water from more recent times

1 might be adding to that subsidence now from flood waters, but
2 nobody has measured these elevations since 2001, and that's
3 really just not an issue today because nobody is remeasuring.

4 The City -- or the County's survey -- topographical
5 survey was done in 2001, and I believe ours was, too. So by
6 now they're both not quite two years old, I believe, or right
7 at two years old.

8 Thank you, sir. If I can answer any questions the Court
9 may have them.

10 **THE COURT:** Mr. Lindemann?

11 **MR. LINDEMANN:** Your Honor, you may it please the Court.
12 That's not what I anticipated that you --

13 **THE COURT:** Not either.

14 **MR. LINDEMANN:** -- know when you asked for a proffer, I
15 mean, I've never seen a proffer under a 702 analysis being
16 given by an attorney who -- and obviously, he didn't even
17 address the point of the motion in *limine*, but I don't know
18 how Your Honor wants to proceed, but I would ask the Court to
19 handle this like a normal proffer with those opinions coming
20 from the witness rather than a litigant in the case or its
21 counsel.

22 **THE COURT:** Well, and he's the one who's being classified
23 as an expert. So I would rather have testimony from him. So
24 --

25 **MR. LUCEY:** That's fine. I thought I was asked to

1 prepare a proffer.

2 **THE COURT:** I understand, and I appreciate it, but I --
3 there are certain questions that I may have of him as well.
4 So, Mr. Castles, if you'll take the stand again, and just a
5 reminder that you're still under oath.

6 **MR. LUCEY:** And, Your Honor, would you like me to run
7 through his whole testimony, or do you want me to get right to
8 the heart of the opinions?

9 **THE COURT:** Well, Mr. Lindemann, you heard the testimony
10 that he is saying that he's going to give. Are there certain
11 areas of that testimony that you would like to --

12 **MR. LINDEMANN:** Well, my motion yesterday was based on,
13 very specifically, the testimony --

14 **THE COURT:** Of city trucks.

15 **MR. LINDEMANN:** -- dealing with causation as far as the -
16 - I represent the City, as Your Honor knows. The allegation
17 is dump trucks that were part of the renovation project, even
18 though you know my argument that those were contractors but to
19 the extent that that creates any type of liability for the
20 City, my concern is the proof that the trucks caused
21 subsistence --

22 **THE COURT:** Well, and that's my issue, is that -- is
23 being able to testify under any degree of scientific or
24 expertise that these were, in fact, the vehicles who caused
25 the issue.

1 **MR. LINDEMANN:** That's exactly it. That was the focus of
2 my motion. I mean, there may be additional -- I certainly
3 don't want to speak for my colleagues here. There may be
4 challenges to other portions of the reliability of this
5 testimony as we go through but that was the motion in *limine*,
6 and that was what I understood you wanted to hear a proffer.

7 **THE COURT:** Right. Right. Well, and that being said, if
8 you'll ask him the questions in regards to what the proffer is
9 -- or what the motion was specifically made, if you plan on
10 asking him those questions.

11 **PROFFER EXAMINATION OF MR. CASTLES BY MR. LUCEY:**

12 Q: Sir, just as a general matter, were you able to hear my
13 proffer a moment ago to the Court?

14 A: I did.

15 Q: Is there anything that I proffered that you would like to
16 correct or clarify before asking any other questions?

17 A: Yeah.

18 **MR. LINDEMANN:** Again, I know this is not before the
19 jury, but I don't think that's -- that's proffered.

20 **BY MR. LUCEY:**

21 Q: Is there just anything that stood out to you?

22 **MR. LINDEMANN:** Your Honor --

23 **THE COURT:** Do you plan on asking him questions that
24 specifically involve the City's trucks and the road and the
25 collapse of that and the -- I mean --

1 **MR. LUCEY:** Not the City trucks, Your Honor. Just the
2 trucks from the projects. Some were contractors to the City.
3 Some were the County's trucks. Some were contractors to --
4 excuse me. Yeah. Some were contractors to the County --

5 **THE COURT:** Were some boats?

6 **MR. LUCEY:** Sorry, sir?

7 **THE COURT:** I said were some boats? I mean, there's a
8 marina right there.

9 **MR. LUCEY:** The marina, Your Honor --

10 **THE COURT:** I'm not playing devil's advocate. I'm just
11 simply saying there's multiple things that can -- that are
12 heavy.

13 **MR. LUCEY:** Yes, sir.

14 **BY MR. LUCEY:**

15 Q: And, Mr. Castles, when you've been at the property, have
16 you ever had the opportunity to see boats using Greenwich
17 Drive?

18 A: No.

19 Q: Have you spent, like, a lot of -- enough time there to
20 have an opinion about it? In other words, have you walked
21 back and forth and spent a half day?

22 A: No.

23 Q: At the first visit, how long were you there, roughly,
24 please?

25 A: Two hours.

1 Q: Okay. And did you see any boat traffic at that time?

2 A: No.

3 Q: Have you been down to the end, near where the extra boat
4 parking and the ramp is?

5 A: Yes.

6 Q: Is that area more directly accessed by some other road in
7 the town?

8 A: Well, East Bay Street is closer to the boat landing than
9 Greenwich is.

10 Q: From what you've seen down there, if one was coming from
11 downtown, would you more expect them to use East Bay or to use
12 Greenwich? To use the boat themselves?

13 **MR. LINDEMANN:** Your Honor, that's not --

14 **THE COURT:** Yeah, and I was simply playing devil's
15 advocate with that, that it's a loop. Again, my concern is
16 being able to pinpoint that it's these trucks that were either
17 the City or the County's or DOT's, not just an average person
18 driving by. Is there a way scientifically that he can do that
19 with his area of expertise?

20 **BY MR. LUCEY:**

21 Q: Sir, have you attempted to evaluate the presence or
22 absence of other structures or projects in this area that
23 would cause trucks to be in this area?

24 A: No, except just riding down the road as I'm coming in and
25 out.

1 A: Have you seen any other construction projects in this
2 area?

3 A: No.

4 Q: Are there any thruways in this area? In other words, can
5 you take Greenwich -- can you start somewhere and take
6 Greenwich to get somewhere else?

7 A: No.

8 Q: Okay. Are you -- have -- when you went through the City
9 files at the city engineer's office, was there evidence of any
10 other projects that would need truck traffic besides the East
11 Bay Park projects?

12 **MR. LINDEMANN:** Your Honor, objection. He testified
13 earlier that he asked for the City's record --

14 **THE COURT:** Yeah, I'm inclined to say if he wants to
15 testify that heavy trucks can cause damage, that's one thing
16 but if he can't testify with certainty that it was these
17 trucks, which it sounds like were third parties. Is that
18 right?

19 **MR. LINDEMANN:** That's correct, Your Honor.

20 **THE COURT:** Again, if he wants to testify that heavy
21 trucks cause damage to roads, I think that's probably within
22 his purview but to say that these trucks caused it with
23 specificity through scientific evidence is not -- I don't
24 believe that's within that scope, not at all.

25 **MR. LUCEY:** Yes, sir. If it pleases the Court, I'll use

1 a hypothetical for that testimony as opposed to these trucks.

2 **THE COURT:** Well, and what would the hypothetical be?

3 **MR. LUCEY:** I'd have to think of it to make sure that it
4 was appropriate, Your Honor, but it would be something like,
5 Mr. Castles, in your opinion, if in fact trucks from these
6 projects used that road to access these projects carrying out
7 dirt, are those trucks capable of causing the kind of damage
8 we see here.

9 **MR. LINDEMANN:** Your Honor, that doesn't solve the
10 problem --

11 **THE COURT:** No.

12 **MR. LINDEMANN:** -- because that's assuming facts not in
13 evidence because --

14 **THE COURT:** No, I agree.

15 **MR. LINDEMANN:** -- it's assuming facts that -- we'll say
16 there's no evidence.

17 **THE COURT:** Again, if you want to ask him if heavy trucks
18 can cause damage to a road, he can answer that but by saying
19 as a hypothetical, you're basically getting around my ruling
20 because you're using the exact fact pattern that is not in
21 evidence. So, no, I'm not going to allow that.

22 **MR. LUCEY:** Yes, sir. We'll use the Court's suggestion.

23 **THE COURT:** Thank you.

24 **MR. LINDEMANN:** And, if I may, Your Honor, I mean, the
25 other point that we raised as part of our motion in *limine* is

1 that he is judging the roads based upon the original plans,
2 which he testified were in 1968, we're now hearing were in
3 1955, and what he actually observed after the renovation
4 project was done, and so we had a causation issue saying if
5 you don't know what the condition was before the project
6 began, how do you know that those initial -- I had said forty-
7 eight years based on 1968, so now it's sixty-one years, didn't
8 result in any subsidence, and obviously Mr. Pope today said he
9 knew in 2006 that the roads were in very bad shape. So --

10 **THE COURT:** Well, and you can use that as far as
11 impeachment. Ms. Thomas, you were standing.

12 **MS. THOMAS:** Your Honor, at this time, we also move that
13 the witness not be allowed to testify that rising sea waters
14 had nothing to do with subsidence or with the flooding out
15 there because we don't feel that he has established the
16 expertise in those areas.

17 I wrote down what he just said in the proffer that he has
18 read a news article, and that is the basis for his opinion on
19 rising sea levels. He's already testified he is not a
20 geotechnical engineer, and he's not a geologist.

21 So your Honor, the question that a regular civil
22 engineering certificate allows him to testify as to the cause
23 and degree of rising waters under a circumstance such as this.

24 **MR. LUCEY:** Yes, Your Honor. I think possibly counselor
25 inadvertently misheard the testimony. His testimony was, and

1 the proffer was, that he had done research on the official
2 United States government records of tide heights. And he
3 compared those tide heights to the elevation of the road to
4 determine how many tides would be crossing the road and
5 flooding the properties a year and how many would not be.
6 That was one aspect of the elevation testimony and proffer.

7 The other one, Your Honor, was that he researched the
8 United States government NOAA records, the official records,
9 as to what sea level rise has occurred in the past twelve
10 years, fifteen years over the relevant time period, and NOAA
11 publishes a factor every year of what they've documented the
12 sea level rise is. And he's calculated that to be for, I
13 think it's like a nine-year period, ten-year period, it was
14 one and a quarter inches, or whatever the evidence says it
15 was, one and a quarter inches according to the United States
16 government.

17 In fact, the -- several of the defendants have a -- some
18 sort of coastal seawater expert who's also using NOAA's data.
19 It's publicly available, recognized data that engineers rely
20 on all the time in doing their analysis or planning or
21 whatever it happens to be.

22 And, you know, sometimes to phrase the question is to
23 answer it. Counsel says he can't testify that sea level rise
24 is not causing this. Well, he can testify that sea level rise
25 over the last ten years is only an inch and a quarter and the

1 dip in the road since it's been repaired, that dip is two
2 point -- 1.54 net feet. And 1.54 net feet is a lot higher
3 than that sea level rise, and if that 1.54 feet wasn't there,
4 the one-inch sea level rise would not have gotten in the road.

5 That's -- those are engineering conclusions from his
6 investigatory work, his survey work, the NOAA, the published
7 NOAA tide height data, the published NOAA sea level rise data.
8 Thank you, sir.

9 **THE COURT:** Yes, Ms. Thomas.

10 **MS. THOMAS:** Your Honor, I don't think that addresses the
11 issue. The global or even East Coast rising tides has nothing
12 to do with the circumstances in Winyah Bay, and he's already
13 testified he's not qualified to calculate those differences.

14 And, therefore, we think that's irrelevant and could
15 potentially confuse the jury. It's not reliable scientific
16 information.

17 **THE COURT:** Yes, sir, Mr. Battle.

18 **MR. BATTLE:** I'll give you an example. The average
19 height of a male in the world may be five ten. The average
20 height of a male in certain areas may be six feet tall. If I
21 say a six-foot-tall person can reach a block that's, you know,
22 so many feet above his head, and then that would mean that a
23 five-foot-ten man could reach the same block. And you can't
24 compare apples and oranges and come to an opinion.

25 **THE COURT:** Right.

1 **MR. LUCEY:** Your Honor, actually, he has data from three
2 to five local NOAA stations in his study of average tide
3 heights over the -- over every third year in the last six to
4 nine years, including upriver stations and down-river
5 stations. And it's all officially published in NOAA data.

6 **THE COURT:** Ms. Thomas, would you like --

7 **MS. THOMAS:** Your Honor, I have no problem with the NOAA
8 data. I have a problem with his ability to extrapolate from
9 that data as to these things.

10 **THE COURT:** Let's take some testimony about it if you're
11 going to have him do it. Let's hear what his testimony will
12 be, and we'll allow him to cross and see exactly what his
13 expertise is on this.

14 **PROFFER EXAMINATION CONTINUED BY MR. LUCEY:**

15 Q: Sir, have you done research on what the documented sea
16 level rise by NOAA is? Sorry. I'll show you Plaintiff's
17 Exhibit 43.

18 **MR. LUCEY:** Would you put 43 on the screen, please?
19 Excuse me, 41.

20 **THE COURT:** That's 41. There we go. Yep.

21 **BY MR. LUCEY:**

22 Q: Sir, is Exhibit 41 is that your calculation on the Bates
23 Stamp Christmas 39?

24 A: It is.

25 Q: The red handwriting?

1 A: Yes.

2 Q: Tell the Court, if you would, please, what Exhibit 41 is.
3 What is this information and where did it come from?

4 A: It's from the Environmental Protection Agency. It is
5 climate change indicators of sea level over time.

6 Q: Okay. And does it set forth the information by year?

7 A: Yes, it does, starting in 1980 going through 2019.

8 Q: And did you calculate what the sea level rise was from
9 2012 to 2019 according to the United States government?

10 A: I did. It was one foot -- 1.12 inches.

11 Q: Okay. Did you look to see if there was any documented
12 evidence from the National Government as to measurable
13 difference in sea level rise between, for instance, Georgetown
14 and Charleston, or Georgetown and Myrtle Beach? Did they
15 publish any different figures?

16 A: No, I did not see any where they had different stations.

17 Q: Okay. Are there different tidal stations in this area?

18 A: Yes, there are.

19 Q: And that's where you measure the actual tide that happens
20 every, I guess, day or year?

21 A: Yes, daily.

22 Q: Have you looked at different local stations for the
23 historical tidal activity in this area?

24 A: Yes.

25 Q: Tell us, if you would, please, what local stations you

1 | looked at?

2 | A: There's only two that are really recognized as official
3 | stations because of their accuracy, and that is Springmaid
4 | Pier in Myrtle Beach and Charleston -- on the Cooper River, or
5 | up in Charleston Harbor.

6 | Q: Okay. In addition to those two stations, did you look at
7 | the tides at other stations prior to settling on those two
8 | being the most accurate?

9 | A: I did look at some around Georgetown. Yeah, there are a
10 | couple in Sumpter Ferry Dock and on Sampit River.

11 | Q: Okay. And what was your purpose in looking at the
12 | historical records of what the tides were at these various
13 | locations?

14 | A: To see if there was a significant difference.

15 | Q: Okay. And did you eventually attempt to track and
16 | categorize the heights of tides that were occurring, or were
17 | likely to occur, at the East Bay Park area in comparison to
18 | the East Bay Park elevations?

19 | A: Well, there was no good station within the East Park
20 | area. And there's also a thing with tides, and there's only
21 | one station that measures it, is your tides -- actual tides
22 | are usually different than the predicted tides.

23 | Q: Okay.

24 | A: And the only station that handles that is Charleston.

25 | Q: Okay.

1 A: Charleston and Springmaid Beach Pier are equidistant to
2 East Bay Street, one from the north, one from the south. They
3 only have a difference in .14 feet in tide elevation, so
4 they're basically the same.

5 Q: Point one four feet difference between which two
6 stations, please?

7 A: The Charleston station and the Springmaid Pier station.

8 Q: Point one four feet, is that what, an inch and a half, or
9 how does that calculate?

10 A: Yeah, basically an inch and a half.

11 Q: Okay. Is Charleston the one with the slightly higher
12 tide?

13 A: Yes.

14 Q: Now, besides all that, putting all that aside for a
15 second, you had a survey performed on Greenwich Drive,
16 correct?

17 A: Correct.

18 Q: And did you ascertain the elevations on Greenwich that
19 mattered to you?

20 A: Yes.

21 Q: What -- do you recall what the low elevation was on
22 Greenwich Drive?

23 A: 2.7.

24 Q: That's in the road, correct?

25 A: In Greenwich Road, yes.

1 Q: Do you recall what the original elevations were on those
2 roads, or do you want me to get those DOT plans out?

3 A: They're right around four -- but I mean, if we want the
4 exact number, I need the plan.

5 Q: Four is good for now. So that's almost a foot and a half
6 difference between the original elevation of the roads and the
7 low point in the road, 2.7?

8 A: Correct.

9 Q: Okay. And actually, to be clear to the Court, there's
10 actually three low points in the road. Am I correct?

11 A: One on Front Street and one on Greenwich.

12 Q: Okay. And the -- did you then go back to the tides from
13 other stations to determine how many tides were likely
14 entering under the road every year versus how many tides were
15 entering over the road?

16 A: I counted the number of tides over the road. Obviously,
17 the other ones would either be right under the road or further
18 down, closer to the low tide. So I didn't categorize those.

19 **MR. LUCEY:** Exhibit 166, please.

20 **BY MR. LUCEY:**

21 Q: Can you -- you have a screen right there. Tell the Court
22 what Exhibit 166 is, please.

23 A: It's tides over certain elevations taken at the
24 Charleston tidal gate.

25 Q: Okay. And what is the base elevation you calculated?

1 A: Three point two five, which was the base elevation at the
2 center of Greenwich Drive and Front Street.

3 Q: Okay. And that's -- you've got what year on Page 1?

4 A: I've got year 2021.

5 Q: And, if we go to the last page of Exhibit 166, do we have
6 a compilation of all those tides?

7 A: Yes, we do.

8 Q: And --

9 A: I'm sorry, it was 3.15, not two five.

10 Q: Okay. And tell the Court if you would, please, the
11 significance of 3.15.

12 A: Here again, that's the center line elevation at the
13 intersection of Front Street and Greenwich Street.

14 Q: Why didn't you use the low point, 2.7, instead of 3.15?

15 A: No particular reason.

16 Q: Was it just to give it a margin of error around the upper
17 --

18 A: Yeah. Yeah.

19 Q: Okay. And so, how many tides in -- let's use 2015 as an
20 example. How many tides would come over the middle of this
21 intersection in the year 2015?

22 A: A hundred and thirty-seven.

23 Q: And how many tides would have come over a three-and-a-
24 half-foot road in 2015 if it had been that high?

25 A: Basically none.

1 Q: And --

2 A: No, you're saying three and a half. I'm sorry.

3 Q: Three and a half.

4 A: Three and a half, 73.

5 Q: Okay. And so that would have been an increase of over a
6 third of a foot.

7 A: Yes.

8 Q: All right. Now, let's go back to your calculation of
9 what the sea level rise was between 2012 and the last year you
10 have in this exhibit, 2019, what is the total sea level rise
11 for that time period?

12 A: That was the 1.12 inches. Or did you want to go from
13 2015 to -- I'm sorry, from 2015 or from --

14 Q: No, just the handwritten calculation you put on the
15 earlier exhibit, sir. Exhibit -- yes. Exhibit on the screen,
16 correct.

17 A: Forty.

18 Q: Forty-one.

19 A: Yes.

20 Q: The total is 1.12 inches?

21 A: Yes.

22 Q: For ten years?

23 A: Ten years.

24 Q: Okay. Would that 1.12 difference in ten-year incremental
25 sea level rise have made any difference, any material

1 difference in the number of flood events at Greenwich Road in
2 2015 given the current state of the road?

3 A: I'm sorry, would you repeat that?

4 Q: Would the 1.12-inch ten-year sea level rise --

5 A: Right.

6 Q: -- documented in Exhibit 41 make a material difference in
7 the number of floods coming over the road in 2015?

8 A: It could.

9 Q: What's that, please?

10 A: It could -- it could have a material effect.

11 Q: What -- like -- can you estimate a percentage to us,
12 percent more or less that would have changed? Seven percent,
13 five percent, ten percent?

14 A: (No verbal response.)

15 Q: How -- let me ask you this. How many different inches --
16 what's the distance between your first elevation and your
17 second elevation that you measured in the summary page for
18 2015? Is that a third of a foot?

19 A: You're talking about the table we did?

20 Q: Yes, sir, the table. The back of Exhibit 166, is that on
21 your screen?

22 A: No, it's not. There it is.

23 Q: Okay.

24 A: So you're saying roughly the 1.3.

25 Q: What's the elevation difference between the first level,

1 3.15, and the second level, 3.5?

2 A: Point three five.

3 Q: Point three inches?

4 A: Point three five feet.

5 Q: Is the second level?

6 A: No, 0.35 feet difference between the two.

7 Q: Okay. What's the difference between -- is that -- is
8 this numbers here on the left, is that in feet or inches?

9 A: Feet.

10 Q: Okay. What's the approximate distance between 3.15 feet
11 and 3.5 feet, the difference?

12 A: Point three five feet.

13 Q: And how does that compare -- how many inches is 0.35 feet
14 roughly, please?

15 A: Four inches.

16 Q: And how does that compare with the ten-year sea level
17 rise in Exhibit 41 that you documented?

18 A: By 1.12, so it's considerably less.

19 Q: One third?

20 A: Yes. Almost one -- yeah, one third.

21 Q: Okay. Does it appear to you, the NOAA data or the EPA
22 data you relied upon for sea level rise, is this data that
23 people in your profession rely upon from time to time in their
24 engineering work?

25 A: Yes.

1 Q: Did you utilize sea level rise data in the design of
2 those oceanfront condominiums that you told the Court about
3 earlier?

4 A: No. When I did those, sea level was not as important.
5 They were not done recently. So sea level was not as
6 important at that particular time.

7 Q: Okay.

8 A: Or at least let's say it wasn't documented like it is
9 now.

10 Q: Thank you, sir.

11 **THE COURT:** Ms. Thomas?

12 **MS. THOMAS:** Yes, Your Honor.

13 **PROFFER EXAMINATION OF MR. CASTLES BY MS. THOMAS:**

14 Q: Mr. Castles, in coming to your calculations, you did not
15 have specific data at the point that we're talking about. You
16 extrapolated from other data points. Is that correct? You
17 didn't have an exact data point for Winyah Bay, true?

18 A: Nor could I find one published out there.

19 Q: And would you defer to someone that had been doing
20 studies of the Winyah Bay and had those data points? Would
21 those be more accurate?

22 A: Depends on who the person is.

23 Q: Okay. Did any of your calculations take into effect the
24 river flows to that particular area?

25 A: No, it did not.

1 Q: How about wind direction? Did you consider wind
2 direction?

3 A: No. It's looking at it as just a general mean change in
4 time.

5 Q: And how about human land use around that area --

6 A: You're talking about specific uses that you would have to
7 go in there and particularly look at. And to me, there's no
8 data out there that goes into each area and looks at those
9 specifically --

10 Q: So that was not part of your calculations?

11 A: No, it was not.

12 Q: And how about geology, the soil composition itself, as
13 that would differ from the Charleston area or the Springmaid
14 Pier area? Did you look at that in coming to your
15 calculations?

16 A: I did not use those calculations. That would have to do
17 with the land and not necessarily the tides.

18 Q: And you think that has nothing to do with rising sea
19 levels?

20 A: Well, if the land is going down, then the sea level's not
21 going to go up as high if you've got more land for it to be
22 on.

23 Q: Is the NOAA data the only thing that you used in coming
24 to your conclusions?

25 A: Well, here again, this is the EPA data, but it was all

1 government data. When you look at the NOAA data on that -- I
2 don't know what exhibit it is, but there are five or six
3 government agencies that did this study together, besides
4 NOAA.

5 Q: And you extrapolated from that data to the Winyah Bay?

6 A: It was for the East Coast.

7 Q: The entire East Coast?

8 A: Not the entire East Coast, just for the southern East
9 Coast.

10 Q: Okay.

11 A: Between -- I think Maryland just south of -- just north
12 of Georgia -- right in the Georgia area.

13 Q: And you would admit, would you not, that there could be
14 variations in that mean, in that coastal area?

15 A: Oh, sure, there could be variations, but they'd be very
16 minor in overall what we're looking at.

17 Q: Are you qualified to explain or to point out those
18 variations?

19 A: I don't have any data with me that would show those
20 variations.

21 **MS. THOMAS:** Okay. That's all the questions I have.

22 **PROFFER EXAMINATION OF MR. CASTLES BY MR. LUCEY:**

23 Q: Sir, the report you were just referring to in answering
24 counsel's question, is that the report referred to by their
25 expert in his report, the 2022 sea level rise study published

1 by the United States government?

2 A: No, it's not.

3 Q: It's not?

4 A: No, there's a different report used in 2022.

5 Q: Okay. Thank you, sir.

6 **THE COURT:** Ms. Thomas, do you have anything else to add
7 on your motion?

8 **MS. THOMAS:** No, Your Honor. We just simply renew our
9 motion that he is not qualified to offer those opinions
10 regarding sea level.

11 **THE COURT:** I'm going to allow testimony regarding the
12 sea level. His findings based on the level of the road, I'm
13 going to allow it for those purposes, but I am going to limit
14 him into -- if it gets into anything about why sea levels rise
15 or why they don't, then I don't think he's qualified to
16 testify to that.

17 **MR. LUCEY:** I'm not going there, Your Honor. Thank you.

18 **THE COURT:** Okay. Anything else before we bring the jury
19 back in? All right. Let's bring them back in.

20 **REPORTER'S NOTE:** (Jury enters courtroom at 2:15p.m.)

21 **THE COURT:** Y'all may be seated. Good afternoon, ladies
22 and gentlemen of the jury. I'm sorry to keep you guys
23 waiting. We had a few matters we had to take up. I promise
24 we weren't wasting time in here. This was -- I'm hoping we'll
25 streamline things, but again, thank you for your cooperation

1 and your patience.

2 **MR. LUCEY:** Yes, sir. Plaintiff tenders Robert Castles
3 as an expert in civil engineering with a focus on drainage and
4 forensic engineering, Your Honor.

5 **MR. LINDEMANN:** Your Honor, subject to our previous
6 objections --

7 **THE COURT:** Over your objection, I'll qualify him as an
8 expert in those fields.

9 **DIRECT EXAMINATION CONTINUED OF MR. CASTLES BY MR. LUCEY:**

10 Q: Mr. Castles, did you have a survey commissioned for the
11 Greenwich Drive -- Road as part of your work in this matter?

12 A: I did.

13 Q: Let me approach and show you what's been marked for
14 identification purposes only as Plaintiffs' Exhibit 38. Is
15 that the survey?

16 A: Yes, sir, it is.

17 Q: Okay. And have you personally walked the roads that are
18 reflected on that survey?

19 A: Yes, sir, I have.

20 Q: Is it your belief that the survey accurately reflects the
21 elevations of Greenwich Drive and that little part of Front
22 Drive?

23 A: Yes, sir, it does.

24 Q: Okay. Are you the one that actually plotted those points
25 out for the visual appearance of the document in front of you?

1 A: I did.

2 **MR. LUCEY:** We move Exhibit 38 into evidence at this
3 time, Your Honor.

4 **THE COURT:** Any objection?

5 **MR. LINDEMANN:** With the Court's indulgence.

6 **THE COURT:** Okay.

7 **MR. BATTLE:** He refers to this as a survey, but I don't
8 see a licensed survey having a seal.

9 **MR. LINDEMANN:** Your Honor, I would join with that
10 objection --

11 **THE COURT:** Okay.

12 **MR. LINDEMANN:** -- it does not appear to be sealed by a
13 licensed surveyor.

14 **THE COURT:** Ladies and gentlemen, if you'll head back to
15 the jury room, we'll be right with you. Okay.

16 **MR. FOREMAN:** Okay.

17 **REPORTER'S NOTE:** (Jury exits courtroom at 2:18p.m.)

18 **THE COURT:** Okay. Mr. Battle?

19 **MR. BATTLE:** Your Honor, it is my understanding in order
20 to have something -- you know, before something can become a
21 survey and is referred to as a survey, it has to be sealed by
22 a licensed surveyor. That's what the whole purpose of getting
23 the license is for.

24 He may be able to refer this as some report he's made,
25 but it's not a survey that he has made, and I object to him

1 introducing it as a survey.

2 **MR. LUCEY:** Your Honor, I thought we had already covered
3 this in the voir dire, but I'm happy to call it a report to
4 move this matter along. I'm happy to call it a topographical
5 report.

6 **THE COURT:** Well, I tend to agree with Mr. Battle. I
7 know any time anything is recorded in with the registered
8 deeds office, it has to have a survey stamp on it by a
9 licensed surveyor. Whether it's tomato-to-mato, I don't know,
10 but I will sustain your objection.

11 I do believe that calling it a report of some type, he
12 certainly can testify to that, that he's made this report
13 based on survey or elevations that were given to him.

14 **MR. LUCEY:** Yes, sir.

15 **THE COURT:** Mr. Battle, does that --

16 **MR. BATTLE:** Best I can do.

17 **THE COURT:** Okay. Bring them back in.

18 **REPORTER'S NOTE:** (Jury enters courtroom at 2:20p.m.)

19 **THE COURT:** Y'all may be seated. Thank you, Mr. Lucey.
20 You may proceed.

21 **MR. LUCEY:** Yes, sir.

22 **BY MR. LUCEY:**

23 Q: And, sir, does Exhibit 38 in front of you accurately
24 depict the topography of Greenwich Drive?

25 A: Yes, sir, it does.

1 Q: And the topography being the elevation points along
2 Greenwich Drive?

3 A: That is correct.

4 Q: And tell the jury, are the elevation points -- where are
5 they located in reference to the road? Are they on the center
6 line? Are they --

7 A: They've got the center line, and then you've got the edge
8 of pavement on each side, and then you've got the ditch
9 outside of that.

10 Q: And have you had the opportunity previously to compare
11 that to the survey that's in evidence of Exhibit 43, the
12 Parker survey, as far as the key elevations go?

13 A: Yes, I have.

14 Q: And how do your elevations correlate with the Parker
15 elevations?

16 A: They're pretty close, up around what we call the Alford
17 Building, which is just south of the tennis courts, and that's
18 because that property is high and has better soils under it
19 than the lower property does. When you get down to the lower
20 property, then the elevations are less.

21 Q: And, sir, Exhibit 38 is approximately how long of a
22 stretch of the road, please, your topographical map report?

23 A: Let's see. It's stationed in two different directions.
24 It goes about 2,300 feet in one direction and about 1,800 -- a
25 little more than that, about 1,950 feet the other direction

1 going --

2 **MR. LUCEY:** Plaintiff moves Mr. Castles' topographical
3 report, Exhibit 38, into evidence, Your Honor.

4 **THE COURT:** Any objection?

5 **MR. BATTLE:** I don't have any objection to the
6 topographical report --

7 **THE COURT:** That's right. Anybody else?

8 **MS. THOMAS:** Same.

9 **THE COURT:** All right. It'll be --

10 **MR. LINDEMANN:** Same objection as Mr. Battle.

11 **THE COURT:** -- entered into evidence as Plaintiffs'
12 Number 38. Is that what --

13 **(PLAINTIFF'S EXHIBIT NUMBER 38**

14 **IS ADMITTED INTO EVIDENCE)**

15 **MR. LUCEY:** Yes, sir. Can we have it on the screen,
16 please?

17 **BY MR. LUCEY:**

18 Q: Sir, can we go to page four of your report and look at
19 the elevations at the Front Street and Greenwich intersection?
20 Is that on Page 4?

21 A: It is.

22 Q: Okay. We're going to get it up on the screen for the
23 jury, and briefly, before we get a close-up of this for the
24 jury, explain to them the relationship of the bottom chart
25 with the distances and the top chart, which has the elevation

1 markings.

2 Q: All right. The top chart is stationed every hundred feet
3 along the center line of the road, and then what you find in
4 the bottom chart is the same hundred-foot distance with a
5 point on it, and the point being a cross-section of the road.
6 As you're going down the road, it picks up the high points and
7 the low points and the different elevations.

8 Q: Does the bottom half visually depict what is reflected on
9 the measurements on the top half?

10 A: Yes.

11 Q: So, for instance, if you use the right bottom --

12 **MR. LUCEY:** And I'm going to ask our IT assistant to
13 expand that a little more to the right, Lawton.

14 **BY MR. LUCEY:**

15 Q: At station eleven plus five oh. Tell us first, what does
16 eleven plus five oh mean, eleven plus five oh from Front
17 Street? How many feet is that?

18 A: That's 1,150 feet from Front Street.

19 Q: Okay. And above that, eleven plus five --

20 A: I'm sorry. Hold on a second. Hold on a second. Front
21 Street actually starts at ten, so it's 150 feet from --

22 Q: Okay. You start it at 10, 150 feet.

23 A: Yes.

24 Q: And that portion, we've got that highlighted in yellow,
25 correct?

1 A: Yes. And above that, tell the jury what the graphic --
2 the dotted line, the graphic dotted line, tells us about the
3 elevation of Greenwich at that location.

4 A: Yeah. It's the line that's actually below the three
5 elevation, and it actually looks like it's about 2.7.

6 Q: Two point seven feet?

7 A: Yes.

8 Q: And, on your paper copy, is that written above it?

9 A: It's written down around 1,150 -- well, it's written in
10 both places. It's written on the paper copy and the plan
11 sheet at the top but it's also written on the elevation in the
12 bottom sheet, where it says 1,100 and then it says existing
13 ground 2.71.

14 Q: Sideways.

15 A: Sideways.

16 Q: Thank you, sir. Is that the low point on Greenwich?

17 A: That is.

18 Q: Where is that low point in relationship to Ron
19 Christmas's residence, please?

20 A: It's pretty much between his property line and
21 O'Donnell's property line. So it's between his house and the
22 northern house.

23 Q: Okay.

24 A: The house to the north.

25 Q: And how high does Greenwich Drive rise back to on the

1 upper end, the right end of this graph?

2 A: It rises up to approximately four feet.

3 Q: So roughly 2.71 feet. How long -- how far below -- or
4 how many -- what distance below the higher part of Greenwich
5 Drive is this low point at Ron Christmas's property line?

6 A: One point three.

7 Q: Okay. And, if we go to the other side of Front Street,
8 is there another dip in Greenwich?

9 A: There is, yes, going toward the tennis courts.

10 Q: And at what station -- what bottom number station is the
11 next dip at?

12 A: It's ten plus 87.87, so it's 87.87 feet from the center
13 line of Front Street and Greenwich Street.

14 Q: And what is the elevation of the road at that location?

15 A: Two point eight five.

16 Q: And, sir, is there another low point on Front Street at
17 the back driveway behind Mr. Christmas?

18 A: Yes, there is.

19 Q: Tell us, how far back from the intersection roughly is
20 that additional low point?

21 A: Approximately 100 feet.

22 Q: And what is the elevation -- what page are you on, so I
23 can put it on the jury screen, please?

24 A: Four.

25 Q: Page 4?

1 A: Yeah. Yes.

2 **MR. LUCEY:** Go up to the top center of Page 4, please.

3 And can you enlarge Front Street just a little bit?

4 **BY MR. LUCEY:**

5 Q: And can you tell us, sir, where on Front Street to look
6 for that lower elevation?

7 A: Yeah. It's right across from the first E in the street.

8 Q: Okay. And it's what number, please?

9 A: Two point three eight.

10 Q: So, a third of a foot lower than the one in front of Mr.
11 Christmas's property?

12 A: Well, a quarter. A quarter to the third.

13 Q: Now, did you have an opportunity to look at Exhibit 141
14 to compare the current elevations on Greenwich Drive to that
15 which were originally designed and built?

16 A: Yes.

17 Q: And were you present when I looked at sheets -- I think
18 it was 14 and 20, with an earlier witness for Front Street and
19 Greenwich?

20 A: I don't think I was looking over your shoulder at that
21 point.

22 Q: Okay. Is Front Street and Greenwich in that exhibit?

23 A: Yeah, I'm trying to remember what page it is. I'm
24 flipping through it.

25 A: Front Street is on 154. Well, no, Sheet Number 14.

1 Q: Okay. And were you able to examine Sheet 14 for the
2 comparative elevations of the different intersections at Front
3 Street?

4 A: Yes. We used East Bay and Front Street intersection as a
5 benchmark and then did a comparison of the two roads based on
6 that.

7 Q: Okay. Let me show you what's been marked for
8 identification purposes only as Plaintiffs' Exhibit 163. Did
9 you prepare that document, sir?

10 A: I did.

11 Q: And could you explain to us what that comparison is in
12 163?

13 A: Yes. It's two planes of the road. One is the plane of
14 the road when the road was built, and it was built on an
15 assumed elevation of twenty. So I took the four intersections
16 and connected them based on these plans here that we were just
17 discussing, which has slopes on them of one percent and two
18 percent.

19 So I built a plane that would look just like the top of
20 that Bible there. And then I took the other plane, which
21 we'll say the bottom of the Bible, which is based on eighty-
22 eight datum.

23 And so what you've got is you've got one plane compared
24 to the plane below it, which then would show the difference in
25 the elevations of the top plane to the bottom plane between

1 the two roads.

2 Q: The top plane being the as-built elevations and the
3 bottom plane being what, please?

4 A: Bottom plane being the actual elevations as shined --

5 Q: As measured.

6 A: As built.

7 Q: As measured by you?

8 A: As measured by me.

9 Q: Which is --

10 A: The top plane would be from the original plans.

11 Q: So the top plane of your model is from Exhibit 141, the
12 DOT.

13 A: Yes.

14 Q: And the bottom plane is from the exhibit you just
15 identified for the jury, Exhibit 38, with your topographical
16 points.

17 A: Correct.

18 Q: Okay. And is that entirely -- that comparison on your
19 sheet, is that entirely your work?

20 A: It is entirely my work.

21 **MR. LUCEY:** Plaintiff moves 163 into evidence.

22 **THE COURT:** Any objection?

23 **MR. LINDEMANN:** Your Honor, I do have an objection.

24 Number -- first of all, at the top it says Project Lake

25 Cooper. I'm not sure what that's referencing. Number two,

1 this hasn't been sealed, this part of the report that he's
2 preparing for this jury to be able to take a look at.

3 **MR. LUCEY:** Your Honor, it doesn't need a seal. It's an
4 evidence of the comparison of two different sealed exhibits
5 that are in evidence. It's prepared by this witness. It's
6 prepared in his writing. And, as counsel knows, Lake Cooper
7 is a mistake. He's in the Lake Cooper case. That's a
8 different case Mr. Castles is in. Apparently, I missed it --
9 I missed the mislabel myself with reference to there but he's
10 already testified to the Court and the jury what the two
11 comparisons are.

12 **THE COURT:** I'm going to allow it.

13 **(PLAINTIFF'S EXHIBIT NUMBER 163**

14 **IS ADMITTED INTO EVIDENCE)**

15 **MR. LUCEY:** May I have that exhibit on the screen,
16 please?

17 **BY MR. LUCEY:**

18 Q: Sir, now that the jury can see the Exhibit 163, we want
19 to explain in a little more detail the two planes. The top
20 and the bottom of the Bible as you described it that you have
21 in Exhibit 163.

22 So first I'm going to have IT Lawton to enlarge the top
23 half of the page, and let's go through what this top half of
24 the page shows.

25 Starting with the very bottom center, that's Front

1 Street?

2 A: Yes. That is Front Street.

3 Q: And that's around the corner behind Mr. Christmas?

4 A: Yeah, on the side of Mr. Christmas.

5 Q: And what's the street on the right of the diagram,
6 please?

7 A: Greenwich Drive.

8 Q: And is his house somewhere near the 150 on the other
9 side?

10 A: Yes. That's basically his property line, his north
11 property line.

12 Q: Okay. And what is the next street up from Front Street
13 in this Greenwich Drive neighborhood, please, sir?

14 A: Prince Street.

15 Q: Is that what we see on your chart?

16 A: Yes.

17 Q: And what's the parallel street to Greenwich on the back
18 of this neighborhood, please?

19 A: East Bay Street.

20 Q: Okay. And I see at the top left of this diagram you have
21 a 19.42. Tell the jury where the 19.42 came from, please.

22 A: They used a benchmark, as I said, of twenty. So, when
23 they took the elevation at Prince Street, then there was a
24 difference of not quite a foot, nine-tenths, to come up with
25 the elevation of 19.42. So that would be the assumed

1 elevation of that intersection --

2 Q: Right.

3 A: -- of that intersection.

4 Q: And, when you say "they," since we're talking about the
5 top plane, you're referring to DOT, 141?

6 A: DOT, correct.

7 Q: Okay. And does the DOT plans actually show the distance
8 from the East Bay and Prince intersection to the Greenwich and
9 Prince intersection?

10 A: Yes, it does.

11 Q: And does it show it graphically, too, in terms of equal
12 measurements?

13 A: Yes, it does.

14 Q: And does it show what the design slope is for that street
15 from the high point at 19.42 to the low point at 18.52?

16 A: Yes, it does.

17 Q: And so are you able to use all those numbers to check and
18 make sure the numbers are right?

19 A: Right. Using all those numbers, we came up with the
20 18.52 at the corner of Prince Street and Greenwich Drive.

21 Q: Okay. So tell us -- now, what does -- let's go to the
22 bottom number first. Let's go to 18.34. Where did 18.34 come
23 from on the bottom left of the design plans?

24 A: Off of one of the sheets in the design plans.

25 Q: DOT sheets?

1 A: DOT sheets, correct.

2 Q: Okay. How did you get the 17.95 down at Front and
3 Greenwich?

4 A: Here again, using the slopes going down. There are two
5 different slopes. There's one that goes down about 494 feet
6 and then it rises again -- or excuse me, it goes down a little
7 bit further for eighty-five feet to get to the corner of
8 Greenwich and Front Street.

9 Q: Okay. And, if the jury really wanted to, could they go
10 to Exhibit 141 and find this information?

11 A: Absolutely.

12 Q: Let's go to the bottom half of Exhibit 163, your
13 comparison.

14 **MR. LUCEY:** And we'll get Lawton to enlarge it for us.

15 **BY MR. LUCEY:**

16 Q: We have the same block, is that correct?

17 A: Yes.

18 Q: Surrounded by East Bay, Prince, Greenwich, and Front?

19 A: Yes.

20 Q: So tell us if you would, please, what is the 5.60 number
21 at the top left of this block?

22 A: That's an actual survey number in there to the -- where
23 we did the current survey.

24 Q: Okay. That's an actual measurement?

25 A: That's an actual measurement on today's data.

1 Q: Okay. And, if we go to the right on Prince Street,
2 there's a 4.70 "old datum (conversion)." Tell us what that
3 line means.

4 A: From the drawing above it, from the original survey of
5 the DOT plans, we took the elevation at that corner and
6 subtracted it from the Prince Street and East Bay corner and
7 came up with the 4.7 -- hold on.

8 Here's the calculation right below it. You've got 19.42,
9 which is from the DOT plans, minus 18.52 from the DOT plans,
10 minus the actual survey point at East Bay and Prince Street,
11 which then gives you the elevation at Greenwich and Prince
12 Street of 4.7.

13 Q: And that's the elevation you would have expected to find
14 there?

15 A: Yes.

16 Q: If it was built in accordance with 141?

17 A: Yes.

18 Q: Okay.

19 A: Now that's based on the old datum, so that's the
20 difference.

21 Q: And the old datum -- briefly tell the jury what a datum
22 is. Let's use NAV 88D as an example. Just tell the jury what
23 a datum is.

24 A: A datum is really just what the surfaces relate to. The
25 surfaces relate to a datum. It could be assumed datum or it

1 | could be NAV 88 datum but that really just puts all the points
2 | connected together by datum.

3 | Q: It's kind of like a universal language for engineers to
4 | talk in?

5 | A: Yeah. It's actually the North American vertical Datum.
6 | So that if I have the 8.7 here and in Canada I've got a
7 | twenty-five-point something, then you take the difference and
8 | they're -- they correlate.

9 | Q: Is it like some people on one side of the world uses
10 | inches to measure stuff and some people on the other side of
11 | the world use centimeters?

12 | A: Yes.

13 | Q: You've got to get everybody on the same language?

14 | A: Yes.

15 | Q: All right. And so there's something called a datum for
16 | measuring elevations?

17 | A: Correct.

18 | Q: Just to be clear, the 88 datum that's used by the DOT --
19 | excuse me, used by you here in the topographical report --

20 | A: Right.

21 | Q: -- that 88 datum, that's not the same as altitude above
22 | mean sea level, is it?

23 | A: No.

24 | Q: Is it the same as tide level?

25 | A: No.

1 Q: Three different datums?

2 A: Yeah.

3 Q: Three different languages people need to convert into a
4 common language?

5 A: Right.

6 Q: This one is on the 88 datum, correct?

7 A: Right, and it can be converted to the other datum.

8 Q: Your topographical survey, Exhibit 38, is the 88 datum?

9 A: Is the 88 datum.

10 Q: So you can compare apples to apples?

11 A: So I can compare it to the assumed elevation --

12 Q: Okay. And so, sticking with the intersection of Prince
13 and Greenwich for the moment, what does your comparison of the
14 design road compared to the existing road today tell you about
15 the elevations of that point? And start with telling them the
16 survey point there, please, first.

17 A: Yeah, I'm not sure I understood. I mean, I know what
18 you're -- kind of what you're looking for, but let me make
19 sure I understand so I can tell the jury the right answer.
20 What was your question?

21 Q: First, tell us, if you would, please, what is the
22 measured elevation at that intersection a year and a half ago
23 when you were out there?

24 A: 3.08.

25 Q: And how does that compare with what the as-built

1 condition of these roads were? The elevation comparison.

2 A: They would be the same.

3 Q: Okay.

4 A: 3.888.

5 Q: And going down to the next one, Front Street, what is the
6 source of the 4.42 data on the left?

7 A: That was a survey data point that we surveyed in.

8 Q: Okay. And what is the 3.15 point down at the
9 intersection of Front Street? What does that represent?

10 A: That was actually a survey data point, surveyed in.

11 Q: And what was the elevation of that intersection at the
12 time it was constructed according to Exhibit 141?

13 A: It was 17.95.

14 Q: On the pre-converted number. What did you convert that
15 down to --

16 A: We converted it down to 4.03 so that it would match the
17 88 datum.

18 Q: And so what is the elevation difference in feet between
19 the existing intersection today and that which it was built
20 to?

21 A: .87.

22 Q: Feet.

23 A: Or .82, excuse me.

24 Q: Feet.

25 A: Feet.

1 Q: Okay. .82 feet lower?

2 A: Point eight --

3 Q: Is that 0.82 lower?

4 A: Yes, that is the lower.

5 Q: Did you perform the same analysis for the low point in
6 Greenwich Drive between Mr. Christmas's house and Judge
7 O'Donnell's house?

8 A: Yes.

9 Q: Tell us where that is and explain it to us, please.

10 A: It's eighty feet from Front Street and Greenwich Street
11 on Front Street.

12 Q: Okay. Is it where the LP initial are?

13 A: Yeah, that's low point.

14 Q: And what did you determine the low point difference to be
15 between the designed elevation and the existing elevation
16 today?

17 A: Well, the old elevation conversion from the highway
18 department plans is 4.08 and the actual shot elevation is
19 2.38. So you're looking at 0.7 feet. I'm sorry, 1.7 feet.

20 Q: 1.7 feet lower than when it was built.

21 A: Yes.

22 Q: And did you perform the same exercise for the low point
23 in front of Mr. Christmas's house?

24 A: Yes.

25 Q: And how does that low point compare to the as-built

1 condition?

2 A: 1.54 difference.

3 Q: Okay. And is that the other LP location on this chart?

4 A: Yes.

5 Q: And, again, all that information is derived from Exhibits
6 141 and Exhibit 38, the DOT plans, and your as it exists today
7 topography report?

8 A: Yes.

9 Q: Let me show you what's been marked for identification,
10 this is Exhibit 47. Does this group of pictures accurately
11 reflect the conditions you observed at the Christmas residence
12 in Greenwich Boulevard when you visited on October 1st, 2019?

13 A: Yes, it appears to be.

14 Q: And you referenced earlier in your discussion with the
15 jury being there on a higher than usual tide. Is this that
16 occasion, sir?

17 A: Yes, it is a higher than usual tide.

18 Q: And did I hear your reference earlier it was about 5.1
19 feet?

20 A: Yes.

21 Q: Okay.

22 **MR. LUCEY:** Plaintiff moves Exhibit 47 into evidence.

23 **MR. LINDEMANN:** Your Honor, there are documents that are
24 interspersed in there that are not photographs.

25 **MR. LUCEY:** I'll be glad to address that. I think I

1 missed that.

2 **BY MR. LUCEY:**

3 Q: Inside this -- do you have time shots inside these
4 photographs, screenshots of what time of the tide it was as
5 the tide progressed?

6 A: If you go along, yes, there are screenshots.

7 Q: And can you tell from each screenshot what time it is
8 that the photos are being taken that follow it?

9 A: Yes, you can.

10 Q: And at what point in the tide you supposedly are when
11 it's rising?

12 A: That's correct.

13 Q: And the tide height that's reflected in a tide chart, is
14 that a really exacting matter, or is that more of a general
15 forecast?

16 A: Well, they use mean lower low water. And mean lower low
17 water is not the same everywhere.

18 Q: Okay.

19 A: So it's hard to compare it from gauge to gauge.

20 Q: And this tide chart in your photograph reflects that, for
21 instance, on Bates Stamp 94. You're at 94. Do you see the
22 Bates stamps in the lower right? Which one are you on? I'll
23 go to yours. Right here. Just tell me what your page is. Is
24 that 84?

25 A: 84.

1 Q: This tide chart on 84 reflects at the top left corner
2 that it was 10:54 in the morning on Tuesday, October 1. Was
3 it in the morning that you saw that high tide on October 1,
4 2019?

5 A: Yes, it was. I think it was closer to 11:00, 11:15, but
6 it was in the morning.

7 Q: And, with the exception of any rounding there may be in a
8 tide chart, do you believe the tide charts that you included
9 in your photos accurately depict the progression of the tide
10 as you inspected this property?

11 A: Yes.

12 **MR. LUCEY:** Plaintiff moves Exhibit 47 into evidence.

13 **THE COURT:** Counsel, any objection?

14 **MR. BATTLE:** Judge, I'm still trying to rush through.

15 Just give me a second. I have no objection, Your Honor.

16 **THE COURT:** Okay. Mr. Lindemann, Ms. Thomas?

17 **MR. LINDEMANN:** None from the City, Your Honor.

18 **MS. THOMAS:** None, Your Honor.

19 **(PLAINTIFF'S EXHIBIT NUMBER 47**

20 **IS ADMITTED INTO EVIDENCE)**

21 **MR. LUCEY:** May I have 47 on the screen, please, Lawton?

22 **BY MR. LUCEY:**

23 Q: Sir, Mr. Castles, I just want you to -- this is going to
24 be the first real progression photographs the jury has seen.
25 I just want to walk them through with you in front of the jury

1 and let the jury get a picture of what's going on here. With
2 the caveat that we've already said several times, this is a
3 higher than usual tide. We'll use the Bates numbers on the
4 bottom right.

5 The Bates Number 42, the first picture, sir, tell us, is
6 this your initial visit this morning -- October 1?

7 A: This was my first visit to the site.

8 Q: And there's water on the site. Do you know the source of
9 that water?

10 A: I don't know exactly where it came from. It could be
11 sitting there from the last tide, because the last tide would
12 have been higher and would have come over the road also.

13 Q: Okay. And --

14 A: The soils in this area are pretty clay, and the water
15 just sits there.

16 **MR. LUCEY:** All right. Fast forward, please, through to
17 44.

18 **BY MR. LUCEY:**

19 Q: Tell the jury where we're looking on Photo 44 in Exhibit
20 47, please.

21 A: That is the Alford building to the right. It should be
22 there. And this is along Greenwich Drive.

23 Q: And that's the building you've heard me refer to as the
24 aluminum building today a couple times, or the rec center?

25 A: Correct.

1 Q: Okay. And you're looking way down, almost down to the
2 end of the park?

3 A: Yeah. You can see the end of the park through the trees
4 down there.

5 Q: And going several photos to Photo 46, what are we looking
6 -- which direction are we looking now?

7 A: Now we're looking north.

8 Q: Okay. And --

9 A: Along Greenwich Street, Drive, whatever.

10 Q: And going to 48, what do we see for the first time in
11 this picture, please?

12 A: We see some water there on the side of the road.

13 Q: Okay. And we're --

14 A: You're looking to about at the Alford driveway I think.

15 Q: And we're looking at --

16 A: A little bit north, I'm sorry -- a little bit south.

17 Q: And are the tennis courts visible in your copy of 48?

18 A: Yeah, they're over to the left.

19 Q: Obviously those would be the new ones.

20 A: They're the new ones, correct.

21 Q: Okay. And 49, what are you taking a photograph of?

22 A: Just some water in the grass along the ditch.

23 Q: And 50?

24 A: 50 is the ditch itself. You can see the tennis courts in
25 the back. Here again, we're moving along Greenwich Drive to

1 the north.

2 Q: And is this -- has the incoming tide started?

3 A: It's coming through the -- the incoming tide has started,
4 and it's coming through apparently the gate valve or the flap
5 valve that might be on the end of the pipe into Winyah Bay
6 because you see water start to back up in the ditch. So it's
7 not coming over the road yet.

8 Q: It's coming under the road?

9 A: It's coming under the road or through the pipe.

10 Q: And going to -- I'm just going over every other photo for
11 a moment. Going to Photo 52. What do we see, please?

12 A: More water in the ditch, roadside ditch.

13 Q: And Photo 58. Actually, let's go to 60 to save time.

14 A: Yeah, 60 is the ditch on the -- away from Winyah Bay on
15 the edge of Greenwich Drive. If you're looking at Mr.
16 Christmas's house there in the background on Front Street.

17 Q: Okay. And is there water in the ditch here now on this
18 rising tide?

19 A: Yes.

20 Q: Let's go to 61. What's starting to happen?

21 A: 61 is up to the edge of the pavement and it's starting to
22 run onto the pavement. It's not crossing the road yet, but
23 it's running onto the road pavement.

24 Q: And let's go to Photo 62. What's happening?

25 A: Now it's starting to breach the center line of the road.

1 **MR. LUCEY:** Lawton, may I have Exhibit 163 up? Bottom
2 half?

3 **BY MR. LUCEY:**

4 A: I'm sorry, do what?

5 Q: I'm going to have him pull up 163 to see --

6 A: Oh.

7 Q: -- if we can locate this breach on the road in the
8 exhibit we were just looking at.

9 Is there a location you can point to us on the bottom
10 half of 163 where the breach that the jury just saw in Photo
11 62 of Exhibit 47 is occurring?

12 A: You're talking about the low point on Greenwich Drive
13 there, 150 feet basically from Front Street down Greenwich.

14 Q: And that's where you have an LP?

15 A: LP, right.

16 Q: And that's where the current elevation is one and a half
17 feet below the built -- as-built elevation?

18 A: Correct.

19 Q: And if we go to Photo 65, please.

20 A: That's actually 1.5 feet below the old datum.

21 Q: Okay.

22 A: Not the as-built -- correct. Which one do you want to go
23 to, 65?

24 Q: That's 65.

25 A: 65, there's just water sitting in the basin.

1 Q: I'm sorry, the foaming inside of the grate?

2 A: Yeah, right, there's foaming there, foaming inside of the
3 grate.

4 Q: What did you --

5 A: Which means that the water is probably three or four
6 inches below the grate.

7 Q: Okay. And what did you perceive was going on with the
8 turbulence in the water in the grate?

9 A: That the water is coming up from the pipe system or the
10 ground, not from the overflow of the water across the road.

11 Q: Okay. And the jury has seen the intersection a couple
12 times. There's two or three grates there?

13 A: Yes.

14 Q: Can you tell us which grate this is where the water is
15 churning?

16 A: No, I can't.

17 Q: All right. We'll get to a picture and we'll get back to
18 it. Let's go to Photo 66, please. Tell us what's being
19 captured here in the center of this photo.

20 A: That's Mr. Christmas's house, and you can see where the
21 brick has separated from the brick ledger along the floor --
22 or the brick floor going into the building. And it is lower
23 by -- looks like an inch.

24 Q: Okay. Is -- Photo 70, please. Is this a similar
25 separation at the front stoop?

1 A: Yeah. It is separating itself from the building.

2 Q: And Photo 72, please.

3 A: Here again, the water has gotten deeper where it's coming
4 across the street and now climbing up the front of Mr.
5 Christmas's house.

6 Q: 73, please.

7 A: Here, we're experiencing another breach of the road
8 closer to the corner of Front Street and Greenwich Street.

9 Q: Closer to the front of his property?

10 A: Yeah, closer to the front of his property.

11 Q: Okay. And 74, tell the jury what it's looking at,
12 please.

13 A: We're looking down Front Street from the intersection of
14 Front Street and Greenwich, looking down Front Street toward
15 East Bay. And you see that water is coming around both
16 corners from where it's over the top of the road.

17 Q: What is the area in the park on the left-hand side of
18 Front Street that the jury is seeing now, please?

19 A: The water in the wetlands over there by the stop sign.

20 Q: Right. What is -- why do you call those wetlands?

21 A: They have been staked out or declared wetlands based on
22 the spartina grass that was in there.

23 Q: And what role have you seen those wetlands playing in the
24 drainage of this East Bay/Front Street/Greenwich area?

25 A: Haven't really seen them playing a whole lot because

1 they're about at the surface elevation of the street, not much
2 lower than it. I think at one time they played more more a
3 definitive role because I think they were a little lower
4 before they started mowing the grass and taking care of the
5 grass in there, which would have given them, being the low
6 point, a tension area or a detention area for stormwater.

7 Q: Okay.

8 A: Or not stormwater as much as water coming over the road.

9 Q: Photo 75, please. What direction were you looking in
10 first before you tell us what's going on?

11 A: We're looking south toward the tennis courts.

12 Q: And what's occurring in this photo, please?

13 A: This is that low point we were talking about on Greenwich
14 Street from Front Street. We're standing at the intersection
15 of Front and Greenwich, looking south on Greenwich, and that
16 is the -- another overflow low point on Greenwich Drive.

17 Q: Is that the third breach?

18 A: Yes, sir.

19 Q: Let's jump forward to, let's say, Photo 81, please.

20 A: This is where the ditch is full on the Winyah Bay side of
21 -- well, between Greenwich Drive and the park path, which is
22 between the tennis courts and Greenwich Drive. That's the
23 ditch right there. It has water in it. And there's a pipe
24 that goes under this road right here, but appears to be
25 stopped up, since the water is sitting in the ditch and not

1 draining.

2 Q: And Photo 83, please. What perspective is this?

3 A: This is where we're just getting more water onto the
4 road. This is in front of Robbie O'Donnell's house.

5 Q: Except for the one patch we see in this photo in the
6 middle, the road in front of Mr. Christmas's house, is it
7 completely covered?

8 A: Yes. Appears to be.

9 Q: And the next Bates Stamp, 84 is a tide chart?

10 A: Right. It is -- time is 10:54, Tuesday, October the 1st.

11 Q: So it looks as though it's still an hour or so before
12 high tide?

13 A: Right.

14 Q: And Mr. Christmas's road in front of his house is
15 completely covered?

16 A: Yes. Appears to be an elevation of about 4.8 -- 4.4.

17 Q: Four -- that's a tidal datum, right?

18 A: Tidal datum, 4.4.

19 Q: Okay. And, skipping forward, let's go to Photo 90.

20 A: Here again, this is flooding in front of Mr. Christmas's
21 house. You can see it's flooded pretty much all of the street
22 and the edges of the street. It actually flows in, in his
23 driveway about halfway up between the block wall and his
24 house.

25 Q: And skipping forward, please, to Photo 90 -- Photo 92,

1 please. 92, please.

2 A: Yes. Here again, more flooding. This is on Front Street
3 at Mr. Christmas's house. You can see his driveway on the far
4 left side. It's staging up pretty much where the brick
5 pillars are toward his garage.

6 Q: And that's what I've been calling the back driveway. Is
7 the back driveway now blocked by water in this photo?

8 A: You say this is back -- is the back?

9 Q: Back. Back driveway, blocked by water.

10 A: Yes.

11 Q: Jumping forward, please, to 108.

12 A: 108 is complete inundation of the marsh toward Winyah
13 Bay, the road in front of Bobby O'Donnell's house, the road
14 down in front of Mr. Christmas's house --

15 Q: All the way down to the children playing sign on the far
16 side of the intersection? The yellow sign?

17 A: Yes.

18 Q: And just for the jury's orientation, the power pole in
19 the center of this photograph at the end of the white stakes,
20 what is the location of that power pole compared to the low
21 point at the O'Donnell property line?

22 A: The one that has the transformer on it right there in the
23 middle is about at the -- where the first low point is in that
24 Greenwich Road.

25 Q: Okay. Skipping forward, please, to Photo 121 -- excuse

1 me, 122, the tide chart.

2 A: Right.

3 Q: This is -- we're almost at high tide now on October 1 --
4 excuse me --

5 A: Almost -- about 4.8, so we're almost at high tide.

6 Q: And going two photos to 124, please, what direction are
7 we looking?

8 A: We're looking from about the corner of Mr. Christmas's
9 and Bobby O'Donnell's lot south through the intersection of
10 Front Street and Greenwich Street to a little bit past the
11 yellow sign.

12 Q: Okay. And can you still see the street down there, the
13 original 1956 street?

14 A: Yes, you can see the street.

15 Q: So is the streets -- the original street that has not
16 subsided or dipped is still above the water?

17 A: Well, that portion of the street, I don't know if it's a
18 little lower than the original design or not, but at least the
19 street is visible.

20 Q: Everything might have depressed a little bit since 1956
21 or so.

22 A: Yes.

23 Q: And, conversely, it also -- if it had been resurfaced, it
24 might even be an inch higher, correct?

25 A: It could be, yes.

1 Q: Going to Photo 128, please. You can still -- can you
2 still see that part of the original street is above the flood
3 waters?

4 A: Yeah. This is looking toward East Bay. We're standing
5 in the middle of Front Street and Greenwich looking down Front
6 Street. You can see that Mr. Christmas's driveway is totally
7 inundated and the water goes all the way down and you can
8 barely, right before the orange cone down there, it looks like
9 you can see some land right there at East Bay Street.

10 Q: And going towards -- Photo 129, please. Is --

11 A: 129 is standing on Greenwich Street, somewhere in front
12 of Mr. Christmas's lot --

13 Q: And did you observe the source of the water that we see
14 in the full ditch in Photo 129 since the street is completely
15 dry at this location?

16 A: I'm sorry, you're looking -- I was looking at 127. Are
17 you looking at 129?

18 Q: 129, I'm sorry.

19 A: 129, we have the water in the ditch between Greenwich and
20 the tennis courts.

21 Q: And did you observe the source of that water given that
22 the street we see in this photograph is completely dry?

23 A: That water seems to be backing up from where it overflows
24 down in front in Greenwich Drive. That pipe where that orange
25 barrel is, is apparently clogged so there's no water coming

1 from the south side of that driveway there.

2 Q: And 138, please. Tell the jury the perspective on this
3 photograph, please.

4 A: This is standing on East Bay Street looking down Front
5 Street. That fence, that black iron fence is the first lot on
6 East Bay Street. So we're standing on about the curve of East
7 Bay Street. And you can see the water has come up Front
8 Street to almost East Bay.

9 Q: Are all the driveways on Front Street now blocked?

10 A: Yes.

11 Q: Photo 144, please. You recall pointing out the power
12 pole with the transformers on it as a location --

13 A: Yes.

14 Q: -- for the jury? Is that what we're seeing again in this
15 photo?

16 A: Yeah. The one with the transformer on it in the middle
17 is still the same.

18 Q: Okay. So this is our last high tide picture and this is
19 Greenwich Drive looking north?

20 A: Looking south.

21 Q: South? And do we still see pavement -- the old Greenwich
22 Drive pavement on the very far side down past that child play
23 sign?

24 A: Yeah, it looks like it.

25 Q: So portions of the original road are still above this

1 abnormally high tide on your last photograph down the road.

2 A: Right. This water is probably about two foot there at
3 the low point.

4 Q: Yes, sir.

5 A: Feet. And there was a comment made in my deposition
6 that, you know, if you have a heart attack, the ambulance is
7 going to get to you. I can tell you that an ambulance is not
8 going to drive down this street in the black water with two
9 feet of water.

10 **MR. BATTLE:** Your Honor --

11 **MR. CASTLES:** In my opinion.

12 **THE COURT:** The jury will strike that answer. I'll
13 sustain your objection.

14 **MR. BATTLE:** He has no -- there's nothing in evidence --

15 **THE COURT:** The jury will strike a comment about the
16 ambulance.

17 **BY MR. LUCEY:**

18 Q: Sir, have you had the opportunity to look at the
19 redevelopment plans for different projects at East Bay Park?

20 A: I'm sorry, which plans? The various redevelopment plans -
21 -

22 A: Of East Bay?

23 Q: -- the ballfield --

24 A: Yes.

25 Q: -- the boat landing, and the tennis courts?

1 A: Yes, I have.

2 Q: The walking trail?

3 A: Yes.

4 Q: And have you looked at the drainage plan on the plans
5 that relate to the north half of East Bay Park, the direction
6 of drainage?

7 A: Yes.

8 Q: And did you look at the area of drainage that is being
9 drained over to the wetlands?

10 A: Yes.

11 Q: And what effect, if any, do you believe that the
12 elevation of the tennis courts and the development of a number
13 of tennis courts and the work on the walking trail has had on
14 the drainage on the north end of the park?

15 **MR. LINDEMANN:** Objection; compound question about two
16 different things.

17 **THE COURT:** Let's separate them into two questions, if
18 you don't mind.

19 **MR. LUCEY:** Yes, sir.

20 **BY MR. LUCEY:**

21 Q: Let's talk about the tennis courts first. Tell us, if
22 you would, please, what effect you had -- what effect it had,
23 the elevation of the tennis courts and the development of the
24 tennis courts, on the stormwater drainage in the park on the
25 north half?

1 A: Well, the old tennis courts flooded a good bit, so they
2 actually stored a little water on them. When they raised
3 them, then the water just completely comes off the courts as
4 soon as it hits the courts. So, it drains quicker to the low
5 end, which is down around Front Street and Greenwich Drive.

6 **MR. LINDEMANN:** Your Honor, I believe this violates your
7 earlier ruling on the in *limine*.

8 **THE COURT:** Yeah. We need to take this up outside the
9 presence of the jury.

10 **MR. LUCEY:** Yes, sir.

11 **THE COURT:** If you'll go to the jury room, we'll take ten
12 minutes. Okay.

13 **MR. FOREMAN:** Okay.

14 **REPORTER'S NOTE:** (Jury exits courtroom at 3:16p.m.)

15 **THE COURT:** Yes, sir, Mr. Lindemann.

16 **MR. LINDEMANN:** Your Honor, I believe you -- when you
17 earlier ruled that you weren't going to allow him to testify
18 as a hydrologist, he hadn't done any studies, you know,
19 ultimately, I think that's one thing he just elicited an
20 opinion in violation of the prior orders -- or your prior
21 order.

22 **THE COURT:** If he wants to testify as to what he's seen
23 in the plans, I'm fine with that but in regards to how water
24 moves on different surfaces and that -- he's not been
25 qualified as an expert to do that.

1 **MR. LUCEY:** Your Honor said that he was certified as an
2 expert with a focus on drainage. I didn't ask him the speed
3 of the water and we really didn't even go into anything
4 scientific about the quantity of the water. He was just
5 talking about the general flows of the water. I would think
6 that that would be within the Court's certification of him as
7 a civil engineering expert with a focus on drainage.

8 **THE COURT:** Well, if he's testifying to what the ditches
9 are doing, that's one thing but if he's testifying to some
10 design of a tennis court that would cause it to sheet water
11 faster than some other, then I do have an issue with that.

12 **MR. LINDEMANN:** And that's what he just said. He was
13 talking about the flow of the water and how fast it would be.

14 **THE COURT:** Right.

15 **MR. LINDEMANN:** We would ask for an instruction from the
16 Court to ask the jury to disregard that last response.

17 **MR. LUCEY:** I don't think he was addressing the speed of
18 the flow or the quantity -- a scientific quantity of the flow
19 --

20 **THE COURT:** I think he made a generalized statement that
21 does border on what we ruled on earlier. I think that he can,
22 again, testify to ditching any other type of drainage that is
23 there and as far as that goes. I don't think he made a
24 comment either about the speed. However, it does teeter-tot
25 on what we talked about earlier.

1 **MR. LUCEY:** I would also like to point out that they have
2 several times told this jury water flows downhill.
3 Essentially, that's about what he just said to the jury, which
4 is that the tennis courts are elevated and the water is
5 flowing downhill to the north edge.

6 **THE COURT:** Why don't we do this? Let's take a five-
7 minute break. We've been at it for almost two hours. Allow
8 everyone to use the restroom if they need to, and then we'll
9 start back up. Is that good?

10 **MR. LUCEY:** Can we get ten minutes, Your Honor? I'll --

11 **THE COURT:** Does that work for y'all?

12 **MR. LINDEMANN:** Yes, Your Honor.

13 **THE COURT:** All right. Be at recess in ten minutes.
14 It's twenty after. Let's come back at 3:30.

15 **(COURT IS IN RECESS)**

16 **THE COURT:** If there are any proposed charges by the end
17 of your case, I don't know when that'll be, but if I can have
18 those by then, as I told y'all before, I'm working without a
19 law clerk. So I'm gonna have to work with my admin in Conway
20 to get those jury charges printed.

21 So if y'all can help me out with that and try to have
22 those by the end of the plaintiffs' case, that would help me
23 out.

24 **MR. LUCEY:** Yes, sir.

25 **MR. LINDEMANN:** Yes, Your Honor.

1 **THE COURT:** And certainly if something comes up in
2 y'all's case that we need to add, I'm open to that. So that
3 would help me out tremendously.

4 (Playback of testimony requested by Court, off the
5 record.)

6 **THE COURT:** All right. If you'll bring the jury back in,
7 please. And that question is struck for the record.

8 **REPORTER'S NOTE:** (Jury enters courtroom at 3:40p.m.)

9 **THE COURT:** Thank you, ladies and gentlemen of the jury.
10 I appreciate y'all's patience. I hope that y'all had a nice
11 small break. And we're going to go ahead and move forward
12 but, again, I appreciate you for your patience while we took
13 up a couple matters of law. Mr. Lucey.

14 **MR. LUCEY:** Thank you, sir.

15 **BY MR. LUCEY:**

16 Q: Mr. Castles, to avoid us spending time in the engineering
17 plans, I just want to give the jury an overview of the scope
18 of the improvements that took place at the park. Real short,
19 simple one.

20 Tell them, if you would, please, what you perceive as the
21 scope of the ballfield improvements, the baseball field
22 improvements, based upon your review of the material.

23 A: The baseball fields was really just mucked out and
24 material put back in.

25 Q: Tell the jury what you mean by mucked out.

1 A: Mucked out being they dug out the bad material, and then
2 they brought back good material and put it on the baseball
3 field.

4 Q: And when you say mucked out the bad material, what do you
5 do with it?

6 A: I think they said they spread it around. Normally you
7 just get rid of it. Usually it's --

8 **MR. LINDEMANN:** Your Honor, lack of foundation. He's
9 clearly speculating.

10 **THE COURT:** Sustained. You can't speculate to what you
11 don't know.

12 **MR. CASTLES:** Oh, okay.

13 **BY MR. LUCEY:**

14 Q: Sir, as a matter of practice in the construction
15 industry, when you muck out bad dirt from a building location,
16 what do you usually do with the dirt? The bad dirt.

17 **MR. LINDEMANN:** Your Honor, again, that's just getting a
18 different way to speculate.

19 **THE COURT:** I'm going to allow him to testify to what is
20 normally done, but if he doesn't know what was done in this
21 job, that's something completely different.

22 **MR. LUCEY:** Yes, sir.

23 **BY MR. LUCEY:**

24 A: Normally, you would just get rid of it.

25 Q: And how does one get rid of mucked out bad dirt?

1 A: Put it someplace that is not usable, that it doesn't harm
2 anything, take it to a landfill.

3 Q: And how do you get it there?

4 A: Usually by truck. Wherever you move it to, you've got to
5 do it by truck.

6 Q: You mentioned good dirt. How do you get good dirt into
7 the ballfields?

8 A: Usually bring it in by truck and dump it somewhere and
9 then move it with a front-end loader.

10 Q: And the muck -- the preparation of the grounds for the
11 new boat parking facility, was that handled in a similar
12 fashion as the ballfields?

13 A: Yes. What they did was muck out the old material, get
14 rid of it, and then bring in the rock material that they built
15 the parking lot out of.

16 Q: And was the preparation of the site for the new tennis
17 courts, was that handled in a similar fashion as the
18 ballfields and the boat parking lot?

19 A: Similar fashion.

20 Q: And the scope of work for the one-mile perimeter walking
21 field, did that include some sort of site preparation?

22 A: It did and they did some mucking before they put the base
23 and then the asphalt down.

24 Q: And what do you mean by base? As to the walking trail,
25 the one-mile walking trail, what do you mean by base?

1 A: Base is usually a granular material that's -- they put it
2 a couple inches thick, usually four inches thick, and then on
3 top of that they'll put the asphalt.

4 Q: And most of the materials for these -- all -- everything
5 you tell us about, is it all brought by truck?

6 A: Yes.

7 Q: And -- come back to that in a second, I want to cover
8 something as to sea level rise, sir. I've been put in front
9 of you what's been marked for plaintiffs' identification only
10 as Plaintiffs' Exhibit 41, and it has handwriting on Page 2.
11 Now, is that your handwriting?

12 A: Yes, it is.

13 Q: Did you do research in this matter on the reported and
14 documented sea level rise -- as reported by agencies of the
15 United States government?

16 A: Yes.

17 Q: Is this the research you did?

18 A: Yes, and another paper.

19 Q: And is this your calculation of what sea level rise has
20 occurred in Southeast United States over the last ten years?

21 A: Yes.

22 **MR. LUCEY:** Move 41 into evidence, please.

23 **MR. LINDEMANN:** Your Honor, if we may, if he could let us
24 see the exhibits, get a chance to pull them up before he uses
25 them, I mean that's customarily how I try cases.

1 **MR. LUCEY:** I sent them to them last week.

2 **MR. LINDEMANN:** That's fine, but he doesn't give us
3 advance notice out of the exhibits he sent us what he's about
4 to ask.

5 **THE COURT:** Is this what we previously saw?

6 **MR. LUCEY:** We talked about it two hours ago, yes, sir.

7 **THE COURT:** Mr. Lindemann, he's saying this is what we
8 previously discussed two hours ago?

9 **MR. LINDEMANN:** Yeah, I understand, but that was outside
10 the preference of the jury.

11 **THE COURT:** Right.

12 **MR. LINDEMANN:** I didn't say I didn't have it. It's just
13 it would help if I'd be able to get it -- look at it before he
14 starts questioning the witness about it.

15 **THE COURT:** Yes, sir.

16 **MR. BATTLE:** He gave us 174 witnesses [sic], and he calls
17 one out and says -- you know, I'd like to know which one he
18 called -- maybe have a little bit of time to look at it while
19 he's questioning him on it.

20 **MR. LINDEMANN:** I mean, typically when I try cases --

21 **THE COURT:** Right.

22 **MR. LINDEMANN:** -- I show the exhibit to my opponents
23 before I start questioning a witness about it. That would be
24 helpful here.

25 **THE COURT:** Show them the exhibit then.

1 A: Yes. That is a seven-year period, and I calculated 1.12
2 inches.

3 Q: Okay. 1.12.

4 A: Correct.

5 Q: And, if somebody wanted to use a different period than
6 your seven-year period, they could just use one of the higher
7 numbers and pick their own period?

8 A: Absolutely.

9 Q: Okay. So, if they wanted to run it from, say, 2005, the
10 first factor would be the far-right factor?

11 A: Yes, the far right.

12 Q: 7.566819965?

13 A: Yes.

14 Q: And the second factor would go back to 2019?

15 A: Yes.

16 Q: Okay. And you would just subtract the earlier factor
17 from the second factor?

18 A: Right.

19 Q: Okay.

20 A: Correct.

21 Q: And, sir, let me hand you what's been marked for purposes
22 of identification only at this point, which is Exhibit 166.
23 166. Did you prepare that document, sir?

24 A: I'm sorry?

25 Q: Did you prepare that, sir?

1 A: I did.

2 Q: And tell us -- tell the jury, please, what it is.

3 A: I took the tides for a year at the Charleston station,
4 tide station. And I went through and I looked at different
5 elevations. I looked at 3.15, 3.5, 4.0, 4.5, 5.0, and I went
6 through every tide. And I picked those tides that were above
7 those numbers and wrote the numbers, how many there were down
8 as I took them.

9 So, to give you an example, and I used three different
10 years. I used 2021, 2015, and 2018, and then I summed them
11 up, so like in 2015, there was 137 tides over 3.15 elevation.
12 And, for 2018, there were 95, so I just summed those up.

13 Q: And you used three periods separated by three years each?

14 Excuse me.

15 A: Yes.

16 Q: To give a nine-year overview?

17 A: Oh, yes.

18 Q: That would be six years --

19 A: Yes.

20 Q: Sorry. Your summation is on Page 1, documenting the
21 tides. Excuse me, Page 4.

22 A: Page 4 is the summation.

23 Q: The summation of the tides that exceeded the low points
24 in the road for each of those three years?

25 A: Yes.

1 Q: And this is based upon publicly available tidal
2 information?

3 A: Yes.

4 Q: Now, let's talk about that for one second. Most people
5 are familiar with a tide chart. Is that a forecast?

6 A: Actually, this tide chart has two variables. The
7 projected tide chart that you would normally see driving boats
8 --

9 Q: If you're go fishing, you see the forecast?

10 A: You see the forecast.

11 Q: Right. And then?

12 A: They come back about a month and a half later, and they
13 actually verify what the tide was and plot that over the top
14 of the projected tide.

15 Q: And who is they? NOAA?

16 A: They being NOAA.

17 Q: Okay. And that's available online?

18 A: Yes.

19 Q: That's what you use?

20 A: Yes.

21 Q: Okay. Do you -- in your experience as an engineer, is
22 the NOAA tidal data fairly reliable?

23 A: Yes, they are the most reliable of any entity out there.

24 Q: And did you happen to check the NOAA data at several
25 different stations north and south of Georgetown?

1 A: Only Charleston does the verified data. None of the
2 other stations could verify. They only do projected.

3 Q: Can you tell us what the adjustment was back from
4 Charleston to Myrtle Beach for the verified data?

5 A: It's like 0.14. Not verified because you can't take the
6 verified back there.

7 Q: 0.14 or so on --

8 A: The stations are 0.14 difference.

9 **MR. LUCEY:** Plaintiff moves 166 into evidence.

10 **MS. THOMAS:** Your Honor, we object on relevance as this
11 pertains to Charleston and does not reference Winyah Bay
12 specifically.

13 **THE COURT:** Your objection is noted. I'm going to
14 overrule it.

15 **MR. LINDEMANN:** Additionally, Your Honor, I don't think
16 this is a proper summary under Rule 1006. The underlying data
17 has not been put into evidence nor has it been produced.

18 **THE COURT:** Thank you. I'm going to overrule your
19 objection and allow it.

20 **(PLAINTIFF'S EXHIBIT NUMBER 166**

21 **IS ADMITTED INTO EVIDENCE)**

22 **MR. LUCEY:** Thank you, sir.

23 **BY MR. LUCEY:**

24 Q: And, sir, just to help the jury read this for a second.

25 **MR. LUCEY:** May I have Page 4 of 166 on the summary,

1 please, Lawton?

2 **BY MR. LUCEY:**

3 Q: Page 4, please. Elevation 3.15. What does that
4 correlate to in front of or next to Mr. Christmas's house?

5 A: You can see down there in the first sentence below the
6 table that 3.15 is the intersection of Front Street and
7 Greenwich Drive.

8 Q: Okay. And how many times would have exceeded that
9 intersection in 2015 according to your research?

10 A: A hundred and thirty-seven.

11 Q: And would the tides exceeding the low point to the north
12 exceed that?

13 A: Yes.

14 Q: And how many tides exceeded that in 2018?

15 A: Ninety-five.

16 Q: How many in 2021?

17 A: One fourteen.

18 Q: Roughly speaking, if you rounded up for the 2.71
19 elevation at the low point in front of Mr. Christmas's house,
20 would we be up close to a third of the days of the year?

21 A: That would have to be a guess.

22 Q: Okay.

23 A: I can't --

24 Q: Well, 137 out of 365, that would be over a third of the
25 year for 2015.

1 A: Actually, two tides a day, so 137 out of seven --

2 Q: So one-sixth of the tides.

3 A: Yeah.

4 Q: Maybe one-third of the days.

5 A: Yeah.

6 Q: And slightly less for the subsequent two periods.

7 A: Yes.

8 Q: And this is only counting tides that are topping the
9 road, correct?

10 A: Correct.

11 Q: Is there any data on here as to the number of tides that
12 are coming under the road into the ditches?

13 A: No, I didn't do that.

14 Q: Now, sir, you told us and you told the jury a little bit
15 about your road experience earlier in your testimony today,
16 including what was it, the limestone improvement and the soft
17 soils at the Broadway in Myrtle Beach?

18 A: Yes.

19 Q: And utilizing your road experience in these projects for
20 forty-three years, are you able to make observations as to the
21 nature of the roads that are designed in Exhibit 141 by DOT?

22 A: Yes.

23 Q: Are those roads designed to carry trucks?

24 A: The original design of the road that was built back in
25 1955 was not.

1 Q: Does extensive and heavy traffic have the capacity to
2 damage roads with their weight?

3 A: Yes.

4 Q: Does weight by itself damage roads?

5 A: Yes.

6 Q: Sir, I'm handing you what's been marked for purposes of
7 identification as Plaintiffs' Exhibit 40. Is this a report
8 that you wrote on June 29th, 2021, two years and one and a
9 half months ago?

10 **MR. LINDEMANN:** Your Honor, objection. The reports are
11 pure hearsay, and without any type of exception. It's an out-
12 of-court statement intended to prove the truth of what's
13 stated therein. He can testify to his opinions. He can't put
14 them in writing.

15 **MR. LUCEY:** I didn't move it into evidence, Your Honor.

16 **MR. LINDEMANN:** Well, he certainly can't hand the witness
17 a document to -- unless it's to refresh their memory so I
18 would object on that basis --

19 **THE COURT:** He's asking to identify it and let's see
20 where this goes.

21 **MR. LUCEY:** Yes, sir.

22 **BY MR. LUCEY:**

23 Q: Is that the report you wrote two years, a month, and
24 fifteen days ago?

25 A: Yes, it is.

1 Q: Have your opinions in this matter changed in any way
2 since you wrote that report?

3 A: If you don't mind, may I read it?

4 Q: Certainly. And I don't want to hear what the changes
5 are. I just want to know whether or not they've changed.

6 A: The report is accurate in my opinion as of today.

7 Q: Thank you. Have you seen any repairs performed to the
8 roads or drainage adjacent to my client's house since you
9 issued your report in this litigation two years ago?

10 A: Not that I have seen.

11 Q: Are saturated roads more susceptible to damage from heavy
12 vehicular traffic than dry roads?

13 A: Absolutely.

14 Q: Thank you, sir. No further questions.

15 **MR. LINDEMANN:** With the Court's indulgence.

16 **THE COURT:** Yes, sir.

17 **CROSS-EXAMINATION OF MR. CASTLES BY MR. LINDEMANN:**

18 Q: Good afternoon, Mr. Castles.

19 A: Good afternoon.

20 Q: Let me start with a few background questions. I
21 understand that you graduated from Clemson, I think you said,
22 when, 1974?

23 A: '76.

24 Q: '76. And you received a B.S. in civil engineering?

25 A: That is correct.

1 Q: All right. And you don't have any postgraduate degrees,
2 correct?

3 A: No, I did postgraduate work, but not a degree.

4 Q: All right. And you started a Master's program at USC,
5 but never finished it. Is that correct?

6 A: That's correct.

7 Q: Okay. And you indicated you received your professional
8 engineering license when, 1979, I believe?

9 A: 1980.

10 Q: 1980. And you've never received any type of specialty
11 licenses or certifications within your field, have you?

12 A: I have a certification as an unlimited contractor in
13 roads, wastewater plants, sewer plants. That's it.

14 Q: As a contractor?

15 A: As a general contractor, unlimited division.

16 Q: Okay. Well, that's obviously something different than
17 serving as an engineer, that's serving as a contractor to
18 actually build, correct?

19 A: I can build it. I can design it and I can build it.

20 Q: All right. But, as far as within your field of civil
21 engineering, you don't hold any specialized licenses or
22 certifications, correct?

23 A: No. I mean, there are none that I know of in South
24 Carolina.

25 Q: All right. And just so the jury understands, you are not

1 qualified as a geotechnical engineer, correct?

2 A: That is right; that is a special license.

3 Q: All right. And you're not a hydrologist, correct?

4 A: There's no license to a hydrologist that I know of.

5 Q: Let me -- let's talk a little bit about the area of the
6 park itself and Mr. Christmas's home. The jury has heard,
7 obviously, the home is at the corner of Front and Greenwich
8 Streets. Isn't that correct?

9 A: That is correct.

10 Q: All right. And there's an area of wetlands that's right
11 in this -- I don't know if you can see. Let me move this.
12 Can you see it from there?

13 A: Yes.

14 Q: All right. Everybody in the jury can see okay? I'll try
15 to stay out of your way.

16 This general area right here, the upper corner of East
17 Bay Park, that's the wetlands that you were referring to
18 earlier, correct?

19 A: It actually goes further across the site, about three
20 quarters of the way down Front Street.

21 Q: Okay. So basically -- I kind of cut it short. It's
22 basically that area right there?

23 A: Yeah, a little bit further than that.

24 Q: Okay. But we're definitely talking the northeast corner
25 of the park.

1 A: Yes, sir.

2 Q: All right. And I believe you testified that as far as
3 this particular watershed in which Mr. Christmas's house sits,
4 that is actually the low point, the natural low point for that
5 watershed, correct?

6 A: Yes.

7 Q: All right. And, by a natural low point for a watershed,
8 that means that's where the water naturally flows to, correct?

9 A: Yes.

10 Q: And that area that we just pointed out, the northeast
11 corner of East Bay Park, that was the natural low spot area
12 for that watershed prior to any renovation work that was done
13 in the park in 2016, '17, and '18, correct?

14 A: From outside, I've seen it appears to be.

15 Q: All right. And, in fact, that would be the natural low
16 point for that watershed at the time Mr. Christmas built his
17 house in 2005, correct?

18 A: I believe so.

19 Q: All right. Because it's a natural low point, that
20 typically doesn't change unless man changes it, correct?

21 A: Correct.

22 Q: And, obviously, water flows downhill. So it flows
23 naturally to the low point unless there's a change based upon
24 human involvement. Would you agree with that?

25 A: Yes, I would agree with that.

1 Q: Now, the watershed that flows to that natural low point
2 includes Mr. Christmas's residence, but it doesn't include the
3 entire park, does it?

4 A: No, it doesn't include the entire park.

5 Q: And I think you've testified previously that the area at
6 least from the Alford Building south, that drainage water does
7 not drain towards Front Street or towards that natural low
8 area where the wetlands are, correct?

9 A: From the Alford Building south, correct.

10 Q: Okay. And so that would include not just the Alford
11 Building, but where the ballfields were renovated and where
12 the boat ramp parking was put in, correct?

13 A: That's correct.

14 Q: All right. That area drains to the south, or drains
15 directly out into the bay, correct?

16 A: Correct.

17 Q: All right. So, as far as the renovations that are within
18 the watershed, according to your opinion, as far as the City's
19 involvement goes, that would be simply the portions of the
20 walking track that are in the north part of the park, correct?

21 A: I'm sorry, I'm going to ask you to --

22 Q: Well, let me just make sure my verbiage is correct.

23 I'm treating basically as the north part of the park --
24 you see how there's a basically -- it looks like a dividing
25 line? I think it's a gravel access road that's right to the

1 north of the Alford Building. Can you see that?

2 A: Yes, sir.

3 Q: I'm kind of treating that as the demarcation between

4 north and south. Is that fair?

5 A: That's fair.

6 Q: All right. And so we've already talked about south of

7 that drains directly into the bay.

8 A: Yes.

9 Q: So north of that, I'm trying to get an understanding of

10 what renovations do you understand were done north of that

11 demarcation?

12 A: It would be the tennis courts and the walking path, and I

13 believe the frisbee courts.

14 Q: All right. And the frisbee court -- the frisbee course,

15 that's like disc frisbee --

16 A: It is.

17 Q: -- disc golf, right?

18 A: Yes.

19 Q: Okay. And that didn't change the terrain at all. That

20 just meant putting in some metal holes that people can throw

21 frisbees into.

22 A: They appeared to do a little bit of dirt in there just to

23 level it off and get the water out of there.

24 Q: All right. So you've got the frisbee golf, you've got

25 the tennis courts, and you've got a portion of the walking

1 track, right?

2 A: Yes.

3 Q: A good bit of the walking track, actually, most of the
4 walking track is actually in the south part of the park,
5 correct?

6 A: Correct.

7 Q: All right. Any other renovations that you understand
8 were done in the northern side of the park?

9 A: It looks like bathrooms up there to the top, but I don't
10 believe those are bathrooms out there. I'm not sure what that
11 is.

12 Q: Well, the bathroom was actually down here by the boat
13 ramp, was it not?

14 A: Yeah, I was thinking, y'all said that was a new photo
15 from last week, and I was just wondering what that was, to the
16 west of the tennis courts.

17 Q: Okay. But as far as -- I mean, you're aware they put a
18 bathroom in as part of the boat ramp renovations, correct?

19 A: Yes.

20 Q: But that was down here where I'm pointing, in this
21 general area where the boat ramp is located, correct?

22 A: Yes.

23 Q: So that would clearly be the south part of the park,
24 which drains directly into Winyah Bay.

25 A: Yeah, but there's something -- I'm still saying there's

1 something up there next to the tennis courts. I don't know
2 what --

3 Q: All right. Did you investigate what effect the
4 construction of whatever it is that's up there by the tennis
5 courts?

6 A: I can tell it's a hard surface, that's all I can tell
7 from here.

8 Q: And you -- and so that's -- and you're basing it totally
9 on this aerial, it's not something that you went out there and
10 actually looked at?

11 A: I'm basing it on that aerial there.

12 Q: Okay. Well, let me now get you to focus on Mr.
13 Christmas's property itself. When were you first retained to
14 provide any type of expert opinions or consulting with respect
15 to Mr. Christmas's property?

16 A: Somewhere around September of 2019.

17 Q: All right. And had you had any involvement at all with
18 that particular residency, the construction or any post-
19 construction work prior to September 2019?

20 A: No.

21 Q: All right. So you were not involved in the construction
22 of that home?

23 A: No, sir.

24 Q: And you were not involved in the design of that home?

25 A: No, sir.

1 Q: And by home, I'm also referring to obviously the front
2 and back yards.

3 A: No, sir.

4 Q: All right. And this term has been used a number of
5 times, I don't know if anybody has ever gotten it defined, but
6 what does the word "pervious" mean?

7 A: Pervious means that it drains water through it. You put
8 water on top of it, you can drain through it. Impervious is
9 like the top of this table. You put water on it, it's going
10 to sit there, it's not going to come through the bottom of it.

11 Q: All right. So pervious means it has absorbent qualities
12 --

13 A: Right.

14 Q: And impervious means it does not.

15 A: Correct.

16 Q: Okay. And so, as far as some of the ground substances
17 that we're dealing with in this case, typically concrete is
18 impervious, correct?

19 A: Typically. You can make pervious concrete, which we have
20 used before, but concrete typically is impervious.

21 Q: Okay. And I was going to make that point, because
22 actually the boat ramp down here, the City actually used
23 pervious concrete, correct?

24 A: Yes, sir.

25 Q: And pervious concrete is a lot more expensive than normal

1 concrete.

2 A: Yes, sir.

3 Q: And that's because it does drain.

4 A: Correct.

5 Q: All right. Now you -- we've had testimony in this case
6 so far about Mr. Christmas's residence, that obviously you've
7 seen pictures of it, you've been there. The vast majority of
8 the front yard, wouldn't you agree with me, is concrete?

9 A: Yes.

10 Q: All right. With some brick pavers interspersed, but it's
11 primarily concrete, correct?

12 A: Yes, sir.

13 Q: And that's not pervious concrete, is it?

14 A: No, sir.

15 Q: So that's concrete that's not going to allow water to
16 absorb into the ground.

17 A: Correct.

18 Q: And around the side of his home, I know it's kind of
19 small up here -- well, let me just say, this is Mr.
20 Christmas's house right here where my pen is, correct?

21 A: Yes.

22 Q: And that little light blue is a swimming pool.

23 A: Yes.

24 Q: And then this house right here is what has been described
25 to the jury as the O'Donnell or Robbie O'Donnell's residence,

1 correct?

2 A: Correct.

3 Q: All right. The side of Mr. Christmas's home that's
4 closest to the O'Donnell residence, that side is all concrete
5 as well, correct?

6 A: That is correct.

7 Q: All right. And then, of course, on the left side of the
8 home when you're looking at it, there's a concrete driveway
9 that goes into the garage, correct?

10 A: That's correct.

11 Q: And then when we get to the backyard, all around the pool
12 are brick pavers, correct?

13 A: Correct.

14 Q: Do you -- have you ever calculated what percentage -- or
15 size is Mr. Christmas's lot?

16 A: I'm not sure I've seen that. I don't know.

17 Q: Okay.

18 A: I haven't measured it.

19 Q: Have you calculated what percentage of his lot actually
20 has impervious ground cover?

21 A: No, I have not.

22 Q: Would you agree with me that there's very little grass?

23 A: Yes. I mean, there's some, but not as much as concrete.

24 Q: And most of the grass that's there is actually in the DOT
25 right of way, it's right up against the roads, correct?

1 A: Yeah, there's some on his side of the fence, but most of
2 the property is out.

3 Q: Okay. And, as far as trees go, there are no trees other
4 than a couple of palmettoes, correct?

5 A: Correct.

6 Q: And certainly no bushes, no landscaping, the types of
7 things that would have naturally absorbed rainwater or
8 stormwater, correct?

9 A: Correct.

10 Q: And so basically, any type of water that falls onto Mr.
11 Christmas's property is generally going to run off.
12 There's going to be relatively little to no absorption because
13 of the lack of natural ground cover. Would you agree with
14 that?

15 A: I would, but I'd also have to say if you took that
16 concrete off, there'd be clay under it and water would sit
17 there, based on what I've observed out there.

18 Q: Obviously, when you have vegetation planted, that will
19 absorb water, correct?

20 A: It will absorb some.

21 Q: Okay. And that's how plants live, they need water to
22 survive, right?

23 A: They do.

24 Q: All right. And you've seen Mr. O'Donnell's house next
25 door, correct?

1 A: I have.

2 Q: He doesn't have his whole yard covered in concrete, does
3 he?

4 A: No, he doesn't.

5 Q: Okay. He's got grass, he's got trees, he's got bushes,
6 he's got flowers, doesn't he?

7 A: Yes, he does.

8 Q: Okay. And the same is true for Mr. O'Donnell's backyard
9 as well, correct?

10 A: I haven't been to his backyard.

11 Q: Okay. It certainly would appear this -- I know this is --
12 - I don't know how high up in space this was taken, but you
13 definitely can see green vegetation behind his residence,
14 wouldn't you agree?

15 A: Yes, sir.

16 Q: All right. And I've asked you some questions a little
17 while ago about the watershed in which Mr. Christmas's home
18 sits. How far north of his home -- I'm sorry -- yeah, how far
19 north of his home does that watershed stretch?

20 A: I'm trying to remember. I had it drawn out on the
21 drawing, and I believe it goes up Prince Street, but I can't
22 be positive without looking at the drawing.

23 Q: All right. And you determined the watershed based on
24 looking at topo maps?

25 A: Yeah, the City's topo map.

1 Q: All right. So basically, at least this entire -- you'd
2 agree with me, this entire block that we're seeing before it
3 gets cut off at the top of the photograph, that's all in the
4 same watershed as Mr. Christmas's home, correct?

5 A: My understanding is it is.

6 Q: All right. And the area to the north of his is actually
7 at a higher elevation than his property, correct?

8 A: That is correct.

9 Q: And so, basically, all the water north of him is going to
10 be flowing to the natural low spot, which we've already
11 identified as the wetlands at the northeast corner of the
12 park, correct?

13 A: Yes.

14 Q: So, water that has fallen on the residence to the north
15 of Mr. Christmas, some of that is going to flow through his
16 property, correct?

17 A: I have not done a topo map on Mr. O'Donnell's or the
18 surrounding properties to tell you what flows through it or
19 not.

20 Q: Well, you've already told me that the area north of it is
21 at a higher elevation.

22 A: It could go around his property. I'm not sure whether it
23 goes through his property or not. There's a low point in
24 Front Street that's not where that wetland is. It's down near
25 the house behind Mr. Christmas. So, I know some water drains

1 that way.

2 Q: And then there's drains that actually run along Front
3 Street that take it down to the natural low area, correct?

4 A: That is correct.

5 Q: All right. But you haven't looked to see what effect the
6 areas north of Mr. Christmas's home has on the surface water?

7 A: No, sir, I have not.

8 Q: And --

9 A: That would be hydrology, wouldn't it? Sorry.

10 Q: Well, I'm just asking you, you drew the watershed, did
11 you not? I mean, you looked at what the size of the watershed
12 is, correct?

13 A: Yes, I did.

14 Q: All right. Well, obviously, you understand that Mr.
15 Christmas is contending in this lawsuit that the pavers and
16 swimming pool in his backyard have been damaged, correct?

17 A: Yes.

18 Q: And it's been damaged by the existence of surface water,
19 correct?

20 A: Yes.

21 Q: And has anybody -- I mean, did you as part of your
22 analysis look at -- I mean, I understand that obviously his
23 neighbors to the north are not named as defendants in this
24 case. He has sued the three governmental entities but has
25 anybody looked at the contribution to the surface water that

1 would have come to his property from the areas north of him,
2 from that area of the watershed?

3 A: I might be stepping out of line here, but I'm going to
4 answer your question as I know it from an engineering
5 standpoint is it that if the water has always come there, it's
6 allowed to continue to flow there.

7 **MR. LINDEMANN:** Right. Again, that's a legal question
8 for the Court. So I don't know if that's an engineering
9 question but my question --

10 **MR. LUCEY:** Move to strike counsel's comment.

11 **MR. LINDEMANN:** Well, I move to strike his --

12 **THE COURT:** Let's move on.

13 **MR. LINDEMANN:** -- response because he's trying to give a
14 legal opinion, Your Honor.

15 **THE COURT:** Let's move on.

16 **BY MR. LINDEMANN:**

17 Q: My question to you is very simple. Did you look at the
18 impact of any type of surface water from north of this
19 property, the northern parts of that watershed?

20 A: I did not.

21 Q: Okay. Focusing back on Mr. Christmas's property itself,
22 he doesn't have any type of French drains actually on that
23 property, does he?

24 A: Not that I have observed.

25 Q: All right. Do you know what a French drain is?

1 A: I do. I've designed many of them in my forty years.

2 Q: I figured you did. Could you explain to the jury what a
3 French drain is and how it works?

4 A: A French drain is a plastic pipe that has holes in it
5 that you put below the ground and usually you put rock around
6 it so that water gets into it from the surface and perks into
7 that pipe and then in that pipe it will run how you set it to
8 get rid of the water.

9 Q: And that's something that can be commonly used, even in a
10 residential setting, to try to provide some type of drainage,
11 even in a lot as small as Mr. Christmas's, correct?

12 A: Yeah, if you have to follow along the line to get it off,
13 correct.

14 Q: All right. Are you aware of any type of drainage system
15 that was initially designed -- and again I know you didn't
16 design -- or you weren't involved in the construction of this
17 home or his lot, but are you aware of any drainage system that
18 was put in by the original contractors?

19 A: No, I am not.

20 Q: What has Mr. Christmas done specifically to his own lot
21 to deal with the drainage issues that he's complaining about
22 in this case? What has he done to mitigate those drainage
23 issues?

24 A: To my knowledge, nothing.

25 Q: And has he asked you to make any recommendations to him

1 as to what he can do on his own lot to mitigate some of these
2 drainage issues that he's complaining of?

3 A: No, he hasn't.

4 Q: Are you aware of any other expert, engineering expert,
5 that he has consulted to inquire as to changes that he can
6 make to his own lot to mitigate some of these drainage issues
7 he's complaining about?

8 A: No, I haven't been privy to any discussions he's had with
9 any other --

10 Q: Even though you just testified that he hasn't asked you
11 to make any recommendations, as part of your service to him on
12 this case, have you made any recommendations as to things that
13 he can do to his own personal property to improve or mitigate
14 the drainage issues that he's talking about?

15 A: No, sir.

16 Q: One of the things, obviously, that he could do would be
17 plant some grass, plant some bushes, plant some trees. Isn't
18 that true?

19 A: Sure. He could tear up the pavement and put in some
20 grass and trees.

21 Q: Well, obviously, we've already talked about pervious and
22 impervious ground cover, and if you've got drainage problems,
23 one of the best ways to deal with it is to have pervious
24 ground cover that helps absorb surface water, stormwater,
25 correct?

1 A: Yes.

2 Q: So, obviously, one of the ways that he could mitigate his
3 problem is to not have a concrete front yard, but rather to
4 have a grass front yard with trees and bushes and things of
5 that nature, similar to what Mr. O'Donnell has next door.

6 A: I'm not sure -- I know Mr. O'Donnell's lot is higher,
7 just because I've visually looked out there, and I have looked
8 at his front yard, not at his rear yard. I, here again,
9 haven't looked at the soils of Mr. O'Donnell's lot to know if
10 they're pervious or not but there are several things that
11 would need to go into place before you just run out there and
12 throw grass out there and expect it to take up water.

13 Q: Well, if the soils are inappropriate, obviously, you can
14 put in -- take out the inappropriate soils, put in appropriate
15 soils, and plant a lot?

16 A: Not if it's muddy all the way down twelve feet.

17 Q: Well, Mr. O'Donnell's able to do it right next door,
18 correct?

19 A: But it could be sloped so that it drains horizontally and
20 not --

21 Q: In fact, you've testified in this case that the actual
22 low spot on Greenwich is in front of Mr. O'Donnell's home,
23 correct?

24 A: It's between the property line of Mr. Christmas and Mr.
25 O'Donnell.

1 Q: Yeah. So, when you say between Mr. Christmas' property
2 line and Mr. O'Donnell's property line, it puts it in front of
3 Mr. O'Donnell's house, correct?

4 A: Right, but when it goes across the street, then it flows
5 south.

6 Q: Okay. I mean, the lowest point isn't at the property
7 line?

8 A: No.

9 Q: Okay. And I know that's what plaintiffs' counsel has
10 kept referring it to, but it's actually north on Greenwich of
11 Mr. Christmas's property line. It's actually in front of Mr.
12 O'Donnell's home, correct?

13 A: No, what we were saying, or what I've been saying, is
14 that the low point on Greenwich is where we discussed it
15 between Mr. Christmas's lot and Mr. O'Donnell's lot. And
16 that's where the water flows across the road. Now, when it
17 flows across the road, it turns left and goes down Greenwich
18 Drive toward Front Street.

19 Q: All right. And if it's between their two -- they're
20 obviously adjacent to each other, correct? There's only one
21 property line between the two properties, correct? A Yes.

22 Q: Okay. But going back to my original point, my original
23 point is Mr. O'Donnell's right next door, and you'd agree with
24 me, he has a beautiful front yard. I mean, full of
25 vegetation, full of grass, trees. I mean, I'm sure he can

1 testify to that, but that's your observations, correct?

2 A: Yes.

3 Q: All right. And, to your knowledge, Mr. Christmas hasn't
4 even tried to have that type of pervious ground cover on his
5 property.

6 A: No, he's had to go a different route, obviously.

7 Q: Yeah. He's deliberately paved it with concrete in the
8 front and paved -- brick pavers in the back, right?

9 A: It's his choice.

10 Q: And the water has nowhere to be absorbed.

11 A: I don't know if it's running off that concrete or not. I
12 haven't taken any elevations on it.

13 Q: All right. Let me ask you about the piece of property
14 right across from Mr. Christmas's property. You understand
15 these are actually two different lots, one on the west side of
16 Greenwich, and then there's a lot between Greenwich and Winyah
17 Bay, basically where I'm pointing. You understand?

18 A: Yes, I believe Mr. Christmas owns one, and I believe Mr.
19 O'Donnell owns another one, and I believe the lady up north of
20 O'Donnell has one.

21 Q: All right. And what I'm asking is directly across from
22 Mr. Christmas's residence, there's another lot right on the
23 bay that he owns, correct?

24 A: That is correct.

25 Q: All right. And this particular -- these particular lots,

1 | you described one across from Mr. O'Donnell's residence as
2 | well, the natural vegetation there is the marsh grasses,
3 | correct?

4 | A: There is marsh grass over there close to the marsh.

5 | Q: All right. And -- but typically in this area, and I'm
6 | happy to pull out some photographs and help you out here, but
7 | typically the vegetation there are marsh grasses, correct?

8 | Let me make it a little easier. Nobody has built on the
9 | east side of the Greenwich Drive, have they?

10 | A: No, but they used to park there.

11 | Q: All right. And I'm going to get to that in a minute.

12 | So obviously there's no development on that side. The
13 | natural ground cover is the sea marshes, correct?

14 | A: It might be today. I know I knew I saw it when it wasn't
15 | my first trip out there. It wasn't.

16 | Q: It wasn't on his property. It was across from Mr.
17 | O'Donnell's property, correct?

18 | A: No, it was on his property. His property was sandy,
19 | plain.

20 | Q: Okay. But the sea marshes that I'm talking about, there
21 | are sea marshes in front of Mr. O'Donnell's house, correct?

22 | A: Out towards the bay.

23 | Q: Right. And all along here, along the park, that's the
24 | ground cover there as well.

25 | A: That's correct.

1 Q: And those sea marshes, they serve sort of like a sand
2 dune, wouldn't you agree with me that they do provide some
3 protection from the bay and from tides?

4 A: No, I disagree.

5 Q: And why do you disagree with that?

6 A: I just disagree.

7 Q: All right. You don't have a basis for disagreeing?

8 A: I've seen the water come through the marsh grass. I
9 disagree that it might slow some waves down a little bit, but
10 I disagree that it hinders the water from coming through. The
11 tide moves so slow that I don't see it restricting the tide in
12 any way when it comes across.

13 Q: All right. But I wasn't suggesting it works like a wall.
14 I'm suggesting that when it's in place, it helps -- well, at
15 least as you said -- well, number one, it helps with the
16 absorption of the water, correct?

17 A: Not if the pluff mud is there and it's basically
18 impervious.

19 Q: Well, I'm talking about having sea marshes. Is it --
20 again, I'm not talking now about Mr. Christmas's property
21 because he's cut down all the sea marsh, right?

22 A: Yeah. I mean, that's what I mean talking about Mr.
23 O'Donnell where it's fully grown up or -- whichever one you
24 want to talk about.

25 Q: And obviously where it is fully grown up, it does have

1 some beneficial effect.

2 A: Does it slow down the water? Possibly.

3 Q: All right. Mr. Christmas actually cuts his lot across
4 the street, correct?

5 A: I don't know if he cuts it down or not. I haven't been
6 down there in a while.

7 Q: Okay. Have you seen the same level of vegetation on the
8 lot to the east side of Greenwich on his property as you do
9 right next door on Mr. O'Donnell's?

10 A: I have not been out there to look in over a year.

11 Q: All right. Well, let me see if I can get the photographs
12 that you that you took that are Exhibit 47. Do you have those
13 in front of you?

14 A: No, sir. All right. These were taken in 2019, so that's
15 been a while back. A lot of things happened out there since
16 then.

17 Q: And what day in 2019?

18 A: October 1st.

19 Q: All right. And, just out of curiosity, I mean, none of
20 these photographs in Exhibit 47 have dates on them, do they?

21 A: Yeah, they do.

22 Q: Where are the dates?

23 A: I thought they did. I'm sorry. Yeah, if you look on
24 page -- it's Bates Number 105. And there's several of them
25 sprinkled out through here.

1 Q: Well, that's not what I'm referring to. Just so the jury
2 knows, that's 105 that he just --

3 A: Well, they were all taken at the same time. These were
4 in order, and they were taken at exactly the same time.

5 Q: And what is this document? It looks like it's something
6 off the internet.

7 A: It's a time gauge.

8 Q: It looks like it's from usharbors.com. What does that
9 site?

10 A: Usharbors.com. That's where you get your tides for your
11 boat from.

12 Q: All right. So this doesn't provide the date and time for
13 your photograph, does it?

14 A: Yes, it does. Right up there in the top left-hand
15 corner, 11:28 a.m., Tuesday, October 1st.

16 Q: And so how does that determine when these photographs
17 were taken? That's --

18 A: Because they were taken with the photographs. We did a
19 screenshot of the thing, and then we took the pictures of the
20 water.

21 Q: Well, my question to you, before I get back to the
22 marshes, is the photographs themselves don't have any dates or
23 timestamps, do they?

24 A: I didn't say the photographs had a timestamp. I'm saying
25 that this was taken together as a package.

1 Q: Well, my question to you originally was, why do the
2 photographs themselves in Plaintiffs' Exhibit 47 not have a
3 date stamp or a timestamp?

4 A: Because this stamp on the screenshot is built into the
5 table.

6 Q: Well, the screenshot comes off the internet, correct?

7 A: Yeah, but it's built into the table. If you look at the
8 table, you'll see that the date and the timestamp are part of
9 the screenshot. It's not --

10 Q: And you can set your -- go ahead, I'm sorry.

11 A: Well, not all the time.

12 Q: So what kind of camera did you take these with?

13 A: An iPad.

14 Q: All right. And, with an iPad, you know as an engineer,
15 you can set it so that it'll show the date the photograph was
16 taken and the time it was taken, correct?

17 A: I guess you could. I don't do that, but I guess you
18 could.

19 Q: You've never done that in all your years?

20 A: I've never done that in all my years, including my
21 iPhone.

22 Q: All right. Well, obviously, it would be of assistance to
23 the jury to know exactly what date and time these photographs
24 were taken, wouldn't it?

25 A: I guess you've got to trust me and say that we took all

1 these together.

2 Q: All right. Other than your testimony that these were all
3 taken on the same date in sequential order, there's no other
4 way to verify that, correct?

5 A: You've got to take my word for it. I mean, they're Bates
6 numbered sequentially, so they were obviously put together.

7 Q: Well, the Bates numbering was done by the plaintiffs'
8 counsel's office, correct?

9 A: Oh, okay.

10 Q: Do you know that? You didn't put the Bates numbers on.

11 A: I didn't put the Bates numbers on.

12 Q: Okay. We'll turn to --

13 A: I know they were taken sequentially because I was the one
14 out there helping take them.

15 Q: They do jump around a lot all over the area of East Bay
16 Park and Mr. O'Donnell's property and Mr. Christmas's
17 property. So you're saying these are in absolute sequential
18 order?

19 A: No, I'm not saying we didn't walk and take pictures at
20 different locations based on the time that I wanted to take
21 them. Based on the tide, there were different areas that we
22 wanted to take pictures of.

23 Q: So you can't say that these were sequentially ordered
24 because it doesn't actually follow --

25 A: I'm telling you that the time on the tide table is the

1 same time as the pictures were taken within a minute of each
2 other.

3 Q: And obviously we know what time they were actually taken
4 if you date stamp --

5 A: I'm saying -- they're not date stamped --

6 Q: That's right.

7 A: -- so I'm telling you when they were taken.

8 Q: All right. Let me move on to my original point of
9 bringing these pictures out, which was to look at -- I think
10 it's Bates Number 62. And just for -- I don't know if this
11 was explained earlier. The Bates number is the number that
12 was put on that says Christmas 62 at the bottom right corner,
13 correct?

14 A: That's correct.

15 Q: That's what we're referring to as a Bates number.

16 A: Yes, sir.

17 Q: All right. And Christmas 62, which let me hold up and
18 let the jury see. It's already in evidence. That's a
19 photograph that looks northward on Greenwich Drive towards Mr.
20 O'Donnell's property, correct?

21 A: Yes.

22 Q: All right. And the area across the street from Mr.
23 Christmas's property where you see three sets of -- it looks
24 like little white poles or sticks sticking up. Do you see
25 what I'm talking about on the right side of the photograph?

1 A: I do.

2 Q: That's Mr. Christmas's lot across the street, correct?

3 A: No. Those are actually in front of Mr. O'Donnell's lot.

4 Those white poles are.

5 Q: Those white poles are in front of his lot?

6 A: Mr. O'Donnell's lot.

7 Q: All right. So -- but farther behind it, you see the

8 vegetation -- there's sea marshes there, correct?

9 A: That's correct.

10 Q: All right. And so -- and, ultimately, as this photograph

11 shows, it is fairly cut clean there in front of Mr.

12 Christmas's lot, is it not?

13 A: I can't see the photograph. I mean, this picture, it is.

14 Obviously, that was 2019 but --

15 Q: All right.

16 **MR. LINDEMANN:** With the Court's indulgence.

17 **THE COURT:** Yes, sir.

18 **BY MR. LINDEMANN:**

19 Q: Mr. Christmas, when he built this house in 2005 -- I

20 don't know what I did with my pen -- he built this house

21 actually in a flood zone, correct?

22 A: He had gotten all of -- where I do work, Myrtle Beach, is

23 in a flood zone. Every hotel downtown is in a flood zone.

24 Q: Right. But this particular lot is in a FEMA flood zone,

25 correct?

1 A: Sure. So are a lot of lots.

2 Q: All right. And, ultimately, that's something that
3 somebody who is purchasing a lot is going to be advised, is it
4 not?

5 A: No, because that doesn't mean -- the FEMA flood zone has
6 nothing to do with the ground elevation. It has to do with
7 the first floor of your house [sic].

8 Q: All right. And so, based upon the flood zone --what's
9 the flood zone designation for that particular lot?

10 A: I think it's elevation ten, maybe eleven. It might split
11 it. Ten and eleven might split it. AE.

12 Q: AE 10, correct?

13 A: Yes.

14 Q: All right. AE 10 means that the first floor of the
15 residence needs to be at least ten feet off the ground.

16 A: About one foot over ten feet?

17 Q: One foot over. So it needs to be eleven feet off the
18 ground.

19 A: According to FEMA. N\ow, some regulations or some
20 cities, like the City of Myrtle Beach requires there to be
21 three feet over.

22 Q: Okay.

23 A: It depends on where you are and what the regulations are.

24 Q: All right. In this particular instance, his first floor
25 of his residence is above ten feet, correct? Above eleven

1 feet.

2 A: Yes.

3 Q: All right. And his house is built on pilings, correct?

4 A: That's correct.

5 Q: And I don't know if you did any type of inspection within
6 the residence, but there's no damage within the residence that
7 he's claiming here, correct?

8 A: I have never been inside.

9 Q: Now, when you -- you had meetings with Mr. Christmas, or
10 at least one meeting with Mr. Christmas, when you were first
11 retained, correct?

12 A: Correct.

13 Q: And he told you at that time that he had been
14 experiencing what he described as flooding problems since at
15 least 2012, correct?

16 A: I believe so, that he started having flooding problems,
17 yes, sir.

18 Q: And that's the year he told you, 2012?

19 A: I believe it is.

20 Q: All right. And, when he first met with you, he had
21 several pages of notes on a yellow pad that he used to discuss
22 with you, correct?

23 A: I believe so.

24 Q: All right. And you saw him referring to those notes as
25 he was meeting with you?

1 A: I believe I did, yes, sir.

2 Q: And that meeting with you was after you had been retained
3 for this case, correct?

4 A: I believe so.

5 Q: Was that meeting after the lawsuit itself had been filed?

6 A: I do not know.

7 Q: Did you have more than one meeting with Mr. Christmas?

8 A: Seems like we met twice on site and then maybe one time
9 at his house.

10 Q: Did he ever provide you a copy of those notes that he was
11 referring to?

12 A: No, sir, he did not.

13 Q: Has his attorneys ever provided you copies of those notes
14 as part of your work on the case?

15 A: No, sir, they have not.

16 Q: Now, my client in this case is the City of Georgetown. I
17 am correct, am I not, that Greenwich Drive is not a City-owned
18 street, correct?

19 A: That's my understanding, yes.

20 Q: All right. And Front Street in the location near Mr.
21 Christmas's property, that's not a City-owned street, is it?

22 A: That's correct.

23 Q: And then the -- Greenwich and then East Bay basically
24 encircle the entire park, do they not?

25 A: They do.

1 Q: All right. And that, again, is not a City-owned street.

2 A: To my knowledge.

3 Q: All right. Are you -- am I correct that the only
4 drainage facilities at issue in this case all are within the
5 roadway or the right-of-way of SCDOT with the exception of the
6 outfall at the end of Front Street?

7 A: That is my understanding.

8 Q: Okay. Now, let me ask you about the outfall at the end
9 of Front Street. Is it -- basically, there's a pipe that runs
10 down Front Street, correct?

11 A: Correct.

12 Q: And it runs then into the marsh, correct?

13 A: Correct.

14 Q: And the outfall is actually into Winyah Bay, correct?

15 A: It doesn't go that far. My understanding is it goes out
16 about ten -- from what I've heard, ten feet. I have not seen
17 it personally.

18 Q: So you have never actually gone and looked at it?

19 A: No, sir.

20 Q: So you've offered testimony about a tidal gate at the end
21 of that pipe, correct?

22 A: I think I understood that somebody said there was. The
23 city engineer showed me a piece of paper and said there was a
24 tidal gate at the end of the pipe.

25 Q: Okay. But you --

1 A: I took him at his word.

2 Q: I gotcha. So that tidal gate at the end of that pipe
3 coming across -- down Front Street, across Greenwich, and into
4 the marsh, you haven't seen, actually personally observed, the
5 end of that pipe or the tidal gate on the end of that pipe.

6 Is that correct?

7 A: No, sir. I have not.

8 Q: So that's correct, what I just said.

9 A: That's correct. Yes.

10 Q: All right. And, as far as the history of that tidal
11 gate, you don't have information as to when it was put in and
12 how it was maintained, anything along those lines, do you?

13 A: No, sir.

14 Q: All right. And just so I'm clear, then, as far as,
15 again, the drainage facilities at issue here, that is the only
16 one that is outside of the right-of-way that would be the
17 City's responsibility to maintain, correct?

18 A: I do not know.

19 Q: You do not know. Well, I think --

20 A: I do not know anything about the other ones.

21 Q: I think I just asked you, are there any other drainage
22 facilities that, to your knowledge, are at issue in this
23 litigation that don't fall within the roadway or the right-of-
24 way of the roads that -- essentially Greenwich, Front, and
25 East Bay?

1 A: I'm sorry. I misunderstood your question in that I was
2 thinking you were talking about either swells or drainage
3 pipes along the edge of the road. I didn't know you were
4 talking about additional flap valves going out to the marsh.

5 Q: Okay. And so -- well, let's just -- I'll come back to
6 that.

7 So other than flap valves going out to the marsh, are
8 there any other drainage facilities that you're aware of that
9 are city owned?

10 A: I haven't observed any, except the ones that I've been
11 interested in are the ones on Front Street and Greenwich
12 Street right there at the intersection.

13 Q: All right. And I'm going to ask you more detail about
14 those in a second.

15 You just mentioned that you didn't understand my previous
16 question to include tidal valves or flap valves. And we know
17 the one on Front Street. Are you aware of any others?

18 A: I've heard there might be others, but I have never seen
19 them or seen the pipes that go to them.

20 Q: Okay. Have you attempted to investigate that at all?

21 A: No.

22 Q: Okay. Now, the actual drainage facilities around Mr.
23 Christmas's home, there are actually five different catch
24 basins in the general vicinity of his home, correct?

25 A: Yes.

1 Q: All right. And what is a catch basin?

2 A: A catch basin is basically a concrete block or a concrete
3 -- square that's probably three feet wide, and on top of it,
4 in this particular case, I think they have a grate on top of
5 them for the water to come in and go down. I know the one
6 that's next to the stop sign on Greenwich and Front Street
7 actually has a slot in the side of it where water can come in
8 from the dirt and get into the side of the basin as well as
9 the grate.

10 Q: Okay. And so the one that you just referred to is
11 actually on the south side of the intersection right next to
12 the stop sign at Front and Greenwich. Is that right?

13 A: Correct.

14 Q: All right. And then the other four are actually
15 essentially adjacent to Mr. Christmas's property in the right-
16 of-way, correct?

17 A: I don't know where his property line is. So I don't know
18 whether his wall is on his property or in the right-of-way,
19 but they are adjacent.

20 Q: All right. Well --

21 A: There's a block wall there.

22 Q: I just want to give the jury some indication of where
23 those four are. There's one up basically near the property
24 line with Mr. O'Donnell, correct, on Greenwich?

25 A: Yes.

1 Q: And then there's another one essentially at the corner of
2 his lot on Greenwich, correct?

3 A: Yes.

4 Q: And then there's another one at the corner of his lot on
5 Front, correct?

6 A: Yes.

7 Q: And then there's another one on the other side of his
8 driveway, or on the east side of his driveway, correct?

9 A: I thought it was the west side.

10 Q: Okay. So --

11 A: It's on the driveway.

12 Q: So it's actually on the west side of his driveway?

13 A: I was thinking so.

14 Q: All right. But all of those, in essence there -- he
15 lives in a corner, so there are two -- so obviously there are
16 two streets that come together, but in total, on his side of
17 the street, there are four different catch basins.

18 A: Yes.

19 Q: All right. And then again, the one across the street
20 right where the wetlands are.

21 A: Right. And then one that goes up Front Street all the
22 way up almost to East Bay.

23 Q: That one is not right adjacent to his property. It's a
24 little farther up Front Street, correct?

25 A: Yes.

1 Q: All right.

2 A: But that's the system that we're talking about.

3 Q: And you have offered the opinion in this case, have you
4 not, that of the water that impacts Mr. Christmas's property,
5 at least ninety percent of it is tidal coming from the bay,
6 correct?

7 A: Yes.

8 Q: And, as far as the other ten percent, that's not a number
9 that you actually did any calculations to determine, correct?
10 That's an estimate on your part.

11 A: Yes. That was an engineering estimate on my part.

12 Q: All right. And that would include water that flows from
13 the north as part of that watershed, correct?

14 A: Yes.

15 Q: All right. And, as far as East Bay Park is concerned,
16 you have not done any type of surface water study,
17 hydrological study, to actually determine how much water, if
18 any, flows from East Bay Park towards Front Street. Is that
19 correct?

20 A: I have not.

21 Q: So you can't actually tell this jury the amount of water
22 that runs off of East Bay Park.

23 A: You've already had me disclaim that you're a hydrologist,
24 so I can't answer your question.

25 **REPORTER'S NOTE:** (Whereby bench conference was held not

1 on the record.)

2 **MR. LUCEY:** Your Honor, may we have a motion to strike
3 the last question and answer, please?

4 **THE COURT:** Yes. The jury will disregard the last
5 question and answer.

6 **BY MR. LINDEMANN:**

7 Q: Am I correct, Mr. Castles, that you have never actually
8 observed any flooding in Mr. Christmas's backyard. Is that
9 correct?

10 A: That is correct.

11 Q: All right. So even on October 1st, 2019, when you took
12 those photographs, there was no flooding whatsoever in his
13 backyard?

14 A: Not that we saw, no.

15 Q: And I think your testimony was that was a higher tide
16 than normal that day. Is that right?

17 A: Yes.

18 Q: Let me ask you about Exhibit Number 166. Do you have
19 that?

20 A: Yes, sir, I do.

21 Q: All right. And that's a summary that you prepared,
22 correct?

23 A: Yes, sir.

24 Q: And you didn't bring with you today the underlying
25 information that you based this on, did you?

1 A: No, I didn't.

2 Q: All right. And so basically what Plaintiffs' Exhibit 166
3 is, as I understand it, is you were looking at -- looking for
4 high tides in the calendar years 2015, 2018, and 2021 that
5 equaled or exceeded elevation of 3.15. Is that right?

6 A: Correct, up to elevation of five.

7 Q: All right. And you found that in 2015 there were a total
8 of 137?

9 A: Above 3.15, yes, sir.

10 Q: All right. And in 2018 that number dropped to ninety-
11 five, correct?

12 A: Correct.

13 Q: And then in 2021 it went up slightly to 114?

14 A: Right.

15 Q: All right. And I think I heard you testify earlier that
16 there are typically two tides in a day. Is that right?

17 A: Yeah, a tide every six hours. So that would be two high
18 tides in a day.

19 Q: Two high tides a day. So these are only looking at high
20 tides.

21 A: Correct.

22 Q: All right. And so ultimately -- and this data came from
23 Charleston Harbor, correct?

24 A: That's correct.

25 Q: All right. Charleston Harbor and Winyah Bay are two

1 totally different bodies of water, are they not?

2 A: They are close to being the same. You've got the Cooper
3 River that comes down and brings a lot of water into
4 Charleston Bay. You've got the Pee Dee and the Black River
5 and the Waccamaw that bring a lot of water into Winyah Bay but
6 Winyah Bay is closer together. Charleston Harbor is wider.
7 Their numbers are 0.14 apart.

8 Q: And --

9 A: High tide numbers.

10 Q: Well, the numbers you say are 1.4 apart between
11 Charleston Harbor and the data you looked at for Myrtle Beach,
12 correct?

13 A: I'm sorry, Springmaid Beach. So since this is thirty-
14 three miles each way, each one is thirty-three miles from East
15 Bay Park --

16 Q: But you don't have --

17 A: -- which would be 0.07.

18 Q: You're not providing the jury data from actually Winyah
19 Bay where East Bay Park and Mr. Christmas live. Is that
20 correct?

21 A: Would you repeat that, please?

22 Q: Yeah. This data is not from Winyah Bay where -- this
23 case --

24 A: There's no tide gauge at Winyah Bay that's close to East
25 Bay Park that would be representative.

1 Q: Well, certainly, this data would show that the number of
2 tides -- high tides over 3.15, of the three years you looked
3 at, they were the highest in 2015, correct?

4 A: It looks over five feet, three of them over five feet.

5 Q: Okay. And that would be true for all the other
6 elevations, the ones over 3.50, 2015 has more than the other
7 two years you looked at, correct?

8 A: Appears to be.

9 Q: 3.75 elevation, 2015 had more than 2018 and 2021,
10 correct?

11 A: Yes.

12 Q: All right. And that's the case for every single
13 elevation you looked at. Correct?

14 A: Yes. On these three years.

15 Q: All right. And you'd agree with me that 2015 was before
16 any renovations were done to East Bay Park, correct?

17 A: I believe so. Yes, sir.

18 Q: All right.

19 **THE COURT:** Let me have the attorneys step up here for a
20 minute.

21 **REPORTER'S NOTE:** (Whereby bench conference was held not
22 on the record.)

23 **THE COURT:** All right. Ladies and gentlemen of the jury,
24 we are going to break for the day. Y'all have been most
25 patient, and I can tell, I've watched y'all. Y'all have been

1 very attentive of all of the evidence that's been put forward
2 today. I appreciate that.

3 You are dismissed for the evening. Please be back here
4 promptly at 9:30 tomorrow morning. Thank you.

5 **REPORTER'S NOTE:** (Jury excused for the day at 4:57p.m.)

6 **MR. CASTLES:** You're through with me up here?

7 **THE COURT:** For the time being, yes, sir.

8 **MR. CASTLES:** For the time being.

9 **THE COURT:** Counsel, I'm planning on starting back
10 promptly at 9:30 if that's okay with you guys.

11 **MR. LUCEY:** Yes, sir.

12 **THE COURT:** Anything else we need to take up before I
13 release everyone?

14 **MR. LINDEMANN:** If you would just give direction to the
15 witness that he's not entitled to talk, speak with anybody --

16 **THE COURT:** That is correct.

17 **MR. LINDEMANN:** -- while he's still on the stand.

18 **THE COURT:** You are still under oath and still a witness.
19 You're not entitled to talk to any of the attorneys outside of
20 this or involve anyone else.

21 **MR. CASTLES:** Yes, sir.

22 **THE COURT:** All right. Thanks, everyone.

23 **MR. LUCEY:** That's my paperwork, sir. You can leave it
24 right there on the desk and I'll put it away. Thank you so
25 much.

1 **THE COURT:** All right. Mr. Battles, anything before we
2 bring in the jury?

3 **MR. KIRK BATTLE:** I don't think so.

4 **THE COURT:** Ms. Thomas?

5 **MS. THOMAS:** None, Your Honor.

6 **THE COURT:** All right. Please bring in the jury.

7 **REPORTER'S NOTE:** (Jury enters courtroom at 9:32a.m.)

8 **THE COURT:** Be seated, please. Good morning, ladies and
9 gentlemen, again I thank y'all for being prompt this morning.
10 I got caught behind quite a bit of traffic this morning coming
11 from Conway. I think they had every bushhog in Horry and
12 Georgetown County cutting the sides of the roads. But, again,
13 I thank y'all for being here and thank you for being prompt.
14 We're going to resume the cross examination of Mr. Robert
15 Castle.

16 Yes, sir, Mr. Lindemann.

17 **MR. LINDEMANN:** Thank you, Your Honor. May it please the
18 Court?

19 **THE COURT:** Yes, sir.

20 **CROSS EXAMINATION CONTINUED BY MR. LINDEMANN OF MR. CASTLE:**

21 Q: Good morning, Mr. Castle.

22 A: Good morning.

23 Q: Just a few more questions for you, and I think I'll be
24 passing you to other defense counsel. Do you have a copy of
25 Exhibit 41 in front of you, Mr. Castle? Let's see. I believe

1 | you testified yesterday about this particular document, about
2 | sea level change; is that correct?

3 | A: Yes, sir. I did.

4 | Q: All right. And this is something that was printed off of
5 | a website from the United States EPA; is that correct?

6 | A: That is correct.

7 | Q: All right. And the data that's reflected on this are
8 | global averages, correct?

9 | A: Um.

10 | Q: Let me try to steer you. If you look at figure 1 on the
11 | first page, does it not say global average absolute sea level
12 | change 1880 - 2019?

13 | A: Yes, it does.

14 | Q: All right. And if you flip over to the third page, that
15 | is the data that you used -- the copy of this from 1880 to
16 | 2019, correct?

17 | A: Yes, sir. That's correct.

18 | Q: All right. The very top line of the third page, I think
19 | these are somewhat out of order, I think you put the last page
20 | that you printed off first because that had the most current
21 | dates. But the very first page right before it gives the data
22 | for 1880, it actually says again global average absolute sea
23 | level change, correct?

24 | A: Yes, it does.

25 | Q: So this data is not specific to this particular area of

1 the world, particularly Winyah Bay, is it?

2 A: It doesn't appear to be.

3 Q: All right. It's not even specific to the United States,
4 is it?

5 A: It says global, so I assume that's the world.

6 Q: All right. And why didn't you use data that would be
7 more specific to this particular area?

8 A: I did pull some data that was more specific to the area.
9 I do not know why it's not in the court today.

10 Q: All right. Now, obviously that's not in evidence, is it?

11 A: Sir?

12 Q: That's not in evidence, this is what's been put in
13 evidence, the global -- the global figures, correct?

14 A: This got put in first.

15 Q: All right. You would agree with me that that doesn't
16 really have any relevance to what the condition are just down
17 the street on Winyah Bay?

18 A: Well it's global, so that's all over the world. Now how
19 you want to interpret it, that's a different story.

20 Q: All right. Wouldn't it be more pertinent for this jury
21 to get information or data from this specific area than
22 worldwide?

23 A: Yes, it could be a little more specific and accurate.

24 Q: All right. You testified yesterday about the conditions
25 of the roads, and I'm certainly going to let Ms. Thomas deal

1 with those issues, but I did have a couple of questions about
2 that. The Greenwich Drive, I believe your testimony was it was
3 actually built in either 1955 or 1956, correct?

4 A: Correct.

5 Q: All right. And those are the plans from SCDOT back in
6 the mid-50s that have been put into evidence, correct?

7 A: Correct.

8 Q: All right. And you compared those plans as to how the
9 road, the as-built specs for those roads, to what your topo
10 map, topo report, I guess as we're calling it, it's basically
11 a survey, reflected in 2021, correct?

12 A: The elevations.

13 Q: The elevations?

14 A: Yes.

15 Q: All right. And you gave the jury the -- your testimony
16 that there was actually a drop in the elevation of the roadway
17 in certain places, correct?

18 A: That is correct.

19 Q: All right. Now, prior to the park renovation project,
20 and I think we've all agreed that that process began in 2016,
21 correct?

22 A: Yes.

23 Q: Have you personally observed the condition of Greenwich
24 Drive prior to the park renovation project?

25 A: No.

1 Q: So you yourself can't testify what the conditions were?

2 A: Not prior to it, no.

3 Q: All right. First time you actually took a look at

4 Greenwich Drive was in 2019?

5 A: That is correct.

6 Q: And that's after the project was completed, correct?

7 A: That's correct.

8 Q: All right. And so in essence, there were 60 years

9 roughly, 1956 to 2016 is 60 years, is it not?

10 A: Okay.

11 Q: I mean my math is correct, right?

12 A: Yes.

13 Q: Okay. And so during that 60 years, those roads were

14 subject to weather conditions, flooding, all types of

15 different natural conditions, correct?

16 A: I assume so, yes.

17 Q: Presumably, over those 60 years it was subject to

18 different types of traffic as well, correct?

19 A: I would assume so, yes.

20 Q: All right. And you have no data, no survey, no actual

21 information as to the elevations of that roadway in 2015 or at

22 any point prior to the beginning of the renovation project at

23 the park, do you?

24 A: No, only the original design drawings.

25 Q: Okay. And again, we are agreeing that that was actually

1 60 years before it started.

2 A: Yes.

3 Q: All right. So we have no idea what the elevations were
4 in 2016 when the project began?

5 A: No, sir.

6 Q: All right. I don't have any further questions.

7 **THE COURT:** Thank you, Mr. Lindemann.

8 Mr. Battle.

9 **CROSS EXAMINATION OF MR. CASTLES BY MR. BATTLE:**

10 Q: Good morning, Mr. Castles. My name is Mike Battle and I
11 represent the County. There are four areas I want to talk
12 about with you, and I hope to be brief.

13 Can everybody see that okay? Can you see this okay, Mr.
14 Castles?

15 A: Yes, I can see it.

16 Q: Okay. So the four things I want to talk about are the
17 impact of these courts here on something that took place about
18 200 yards away on Mr. Castles (sic) property, okay. That's
19 the first area. The second area is I want to explore a little
20 bit in the explanation you have as to why the roads are
21 sinking in 2006. I want to talk a little bit about your New
22 Mexico drawings, I mean your reference to the New Mexico
23 manuals as authority for detecting heavy loads on asphalt or
24 roads and that sort of thing. And finally, I'm going to look
25 at your tidal studies.

1 But this is, basically what your theory is, is that
2 somehow what they did here affects this property up here; is
3 that correct?

4 A: Yes, sir.

5 Q: Okay. Did you say yes or no?

6 A: Yes.

7 Q: Okay. And it's basically that the storm water runs off
8 and goes up here; is that it?

9 A: Yes.

10 Q: Okay. Now, let me show you a picture of the flooding.

11 **MR. BATTLE:** If you'd do me 128, please.

12 **MR. KIRK BATTLE:** It should be up there.

13 **MR. BATTLE:** Can y'all flip the switch? Can y'all see
14 it?

15 **FOREMAN:** Yes.

16 **MR. BATTLE:** I can't see it here.

17 **BY MR. BATTLE:**

18 Q: All right. Can you see it, sir?

19 A: Yes, sir.

20 **MR. BATTLE:** May I walk around so I can look?

21 **THE COURT:** Yes, you may. And I've got it on my screen
22 too, Mr. Battle.

23 **BY MR. BATTLE:**

24 Q: Okay. Now, let's first of all, can you tell me what
25 water from the tennis courts -- storm water from the tennis

1 courts went into that particular water that's pictured here?

2 A: It would be the water at the bottom.

3 Q: All right. Now let's look at the sky there. You took

4 this on this day, there was no rain that day, was there?

5 A: No.

6 Q: So there couldn't have been any water from the tennis

7 courts into that flooded water, not one drop because there was

8 no drop of rain there.

9 A: It was from the tidal.

10 Q: Right. Not from the storm water runoff from the tennis

11 courts.

12 A: That's hydrology and I think you've disqualified me in

13 hydrology.

14 Q: Well, Mr. Castles, if it's not raining you're not going

15 to have any storm water, is it? I mean if it's dry, it's dry?

16 A: I never said storm water was a big issue here.

17 Q: I thought you just said that?

18 A: I didn't say storm water was a big issue here.

19 Q: And so the runoff from the tennis courts down here is not

20 an issue? There's no water running from the tennis courts up

21 here, is there?

22 A: It needs to be stored there, the water from the tennis

23 courts.

24 Q: Well now, has the water even reached the tennis courts

25 when you see it in this picture here? Let's -- this is

1 exhibit 47.

2 **MR. BATTLE:** Could you show the movie of where the water
3 comes from and how it comes up?

4 **MR. LUCEY:** Do you have the exhibit number on the movie?

5 **MR. KIRK BATTLE:** 22.

6 **MR. BATTLE:** 26.

7 **MR. LUCEY:** 26.

8 **MR. BATTLE:** Yes, sir. Is it 26 or 22?

9 **MR. KIRK BATTLE:** It's 22.

10 **MR. BATTLE:** 22.

11 **BY MR. BATTLE:**

12 Q: So this is the water and it's running from Mr.

13 O'Donnell's property ---

14 **MR. BATTLE:** I can't see it. I apologize. I want the
15 one showing the -- there you go.

16 **BY MR. BATTLE:**

17 Q: Now, this is a -- this particular -- where that car is,
18 is right in front of Mr. O'Donnell's property, isn't it?

19 A: Yes, sir.

20 Q: And the water is coming from here, across Mr. O'Donnell's
21 property, across that mowed lawn, and then it starts filling
22 up in here, Front Street, and then to the extent it can go
23 back, it might up a little bit down this ditch; isn't that
24 basically what happens?

25 A: Well it gets in those catch basins over there in front of

1 Mr. Christmas' lot.

2 Q: So Mr. Christmas' property is already flooded.

3 A: I'm sorry, it's what?

4 Q: Mr. Christmas' property is already flooded?

5 A: It looks like it's flooded in the edge of the road there.

6 I don't know if it is all the way into Mr. Christmas' property

7 or not.

8 Q: All right. Now you say this particular -- there's no
9 storm water, but you say it somehow -- there was a catch basin
10 here. Now, where was the catch basin?

11 A: They are all along the wall there at Mr. Christmas'
12 property.

13 Q: Okay. Not the tennis courts. As a matter of fact, the
14 tennis courts were elevated when they had the three courts
15 before any of this improvement began. Did you look at the
16 Stantec drawings?

17 A: I did.

18 Q: And did you see that they were in fact, the tennis courts
19 were already elevated?

20 A: No, I didn't see that.

21 Q: Well I'll just cover that in a little bit. What did you
22 see on the Stantec drawings? Did you see it was a depression,
23 those tennis courts were in a depression?

24 A: They were pretty much flat with the ground.

25 Q: And the area -- well the area is elevated, what elevation

1 is not the tennis courts themselves, because you don't have an
2 immediate drop off at the tennis courts, it's in this area in
3 here, right?

4 A: Yes, it's in that area.

5 Q: Okay. Now, what is your explanation for the sinking of
6 the road that you heard Mr. Pope talk about in 2006?

7 A: I don't know. I don't have any data relative to 2006.

8 Q: Now, with regard to your explanation about the roads
9 being sinking as a result of truck activity, this soil
10 mechanics, this is what you referred to, this particular study
11 is the one you referred to in your deposition as the authority
12 for your decision making; is that correct?

13 A: I used it to show how detrimental water is to roads.

14 Q: Okay. It's a reliable study?

15 A: Yes.

16 Q: With regard to truck activity, I want to read to you what
17 it talks about with types of failures due to truck activity.
18 The first one is a sign of road failure as a result of truck
19 activity or heavy load activity, it's alligator cracking; is
20 that correct?

21 A: If that's what it says.

22 Q: Okay. And this is a picture of what alligator cracking
23 looks like.

24 A: I know what it looks like.

25 Q: And that's what it looks like?

1 A: Yes, sir.

2 **MR. LUCEY:** Do you have a copy of that to share with
3 counsel?

4 **MR. BATTLE:** I can show it to you right here.

5 **MR. LUCEY:** Do you have a copy I can follow along with
6 and a copy for the witness so the witness can read? Perhaps
7 the witness could have the book if you're using the copy.

8 **MR. BATTLE:** Actually, this is an impeachment. It's not
9 necessarily an introduction but do you want me to give it to
10 the witness?

11 **MR. LUCEY:** I would like to see what you're showing the
12 witness. You asked me yesterday for copies.

13 **MR. LUCEY:** If you don't have another copy, you can use
14 mine and perhaps give the witness the book.

15 **MR. BATTLE:** Okay.

16 **BY MR. BATTLE:**

17 Q: Do you mind if I look on with you?

18 A: No, sir.

19 Q: All right. The first sign, Page 443, talks about
20 alligator cracking. And that's a sign of roads being affected
21 by heavy weights.

22 A: All right.

23 Q: Did you see alligator cracking on that road? Do you have
24 pictures of any alligator cracking on that road on Greenwich
25 Avenue?

1 A: Yeah. There's some pictures of alligator cracking out
2 there.

3 Q: Where, out on Greenwich Road --

4 A: Yeah. On some of the pictures that have been provided.

5 Q: In here? Show them to me, sir. Let's look at that
6 picture. Bates Number 48.

7 A: I don't see any particular alligator cracking on this
8 particular photo.

9 Q: All right. Thank you.

10 A: But there are other photos that have cracking on them.

11 Q: All right. I'm sorry. You can look at every one of
12 them.

13 A: That's fine. In Photo 61, there's the beginning of
14 alligator cracking right there.

15 Q: That's a horizontal crack, isn't it?

16 A: It's a horizontal crack but that's the beginning of
17 alligator cracking.

18 Q: How does that compare with this picture here?

19 A: That thing is -- the whole thing is alligator cracking.
20 It doesn't start off with -- the whole thing just pops up as
21 alligator cracking.

22 Q: Okay. So you're saying these longitudinal cracks, these
23 single longitudinal cracks are what you would describe as
24 alligator cracking?

25 A: The beginning of it.

1 Q: And when were these pictures taken?

2 A: October 1st of 2019.

3 Q: 2019. That's after the project was built.

4 A: That's correct. Alligator cracking really shows up after
5 the water has receded and the outlines of the cracks are shown
6 with the water. It's hard to see them when they are -- when
7 it's dry. That one is wet -- appears to be wet.

8 A: I don't see it in these particular pictures, but there
9 are pictures that are in evidence that show alligator
10 cracking.

11 Q: Turning to the next page, there is a statement, "Another
12 side of heavy truck loading is" -- or "heavy loading is
13 permanent deformation of the pavement and surface ruts." Did
14 you see any ruts?

15 A: I did not.

16 Q: You did not. Another one says "shear failures." Did you
17 see any shear failures?

18 A: I did not.

19 Q: And then you had longitudinal cracking. Did you see any
20 longitudinal cracks?

21 A: Yes.

22 Q: You saw that one.

23 A: Well, there were more than one out there. I saw several.

24 Q: And that is a - but you only have a picture of one that
25 you've seen, that you've shown us?

1 A: Yes. I have seen all those in my work in the past forty
2 years. They're not all -- you can have different types of
3 loading, heavy loadings out there. So you don't see all those
4 things in every road you look at. There's different loads
5 depending on the type of load. You'll see those, some of
6 those.

7 Q: All right. So I'm going to leave the issue of the --
8 now, this is your picture. These three documents that y'all
9 provided to us, I don't have a number or a Bates stamp for
10 them, but I'll show them to you.

11 **MR. LUCEY:** That's Plaintiff's Exhibit 49. No objection.

12 **MR. BATTLE:** So you've already introduced Plaintiff's
13 Exhibit Number 49?

14 **MR. LUCEY:** I have not, but I was going to. So you're
15 welcome to. And, if you want the original, I have it.

16 **MR. BATTLE:** This is fine for me.

17 **BY MR. BATTLE:**

18 Q: Is this your document -- did you prepare this document?

19 A: It's actually a document of the city map. There's some
20 drawings on there, some lines drawn on it that I prepared.

21 Q: You prepared drawing the lines on them?

22 A: Yes, sir.

23 **MR. BATTLE:** Let me go ahead and introduce them. I don't
24 mind --

25 **MR. LUCEY:** No objection to Plaintiff's 49.

1 **THE COURT:** Are y'all introducing them as a plaintiff's
2 exhibit or a defense exhibit?

3 **MR. BATTLE:** I'm a defendant's.

4 **THE COURT:** Well, that's what I'm asking.

5 **MR. BATTLE:** So he said he would, but I'm going to do it
6 anyway.

7 **MR. LUCEY:** No objection either way, Your Honor.

8 **THE COURT:** All right. So would this be Defense Number
9 1?

10 **MR. BATTLE:** Number 1, yes, sir.

11 **THE COURT:** Okay.

12 **(DEFENDANT'S EXHIBIT NUMBER 1**
13 **IS ADMITTED INTO EVIDENCE)**

14 **BY MR. BATTLE:**

15 Q: I'm not going to ask you any questions about that, but I
16 have deemed the need to get them into evidence for our experts
17 that are coming in.

18 Now, going to Exhibit Number 166. This is your
19 computation of the various times that the water crossed over
20 the road for three years. Is that correct?

21 A: That's correct.

22 Q: Okay. Now, in 2015, you had -- let's see, 137 times that
23 the water crossed over the road and went over to Mr.
24 Christmas's property.

25 A: At elevation of three one five.

1 Q: Okay. And, in 2018, there were only ninety-five. So,
2 there were fewer times, forty-some -- let's say forty-two
3 times less flooding after the project was built than before
4 the project was built. Is that correct?

5 A: In that particular year, yes, sir. Each year varies. As
6 you can see, 2021 is back up to 114.

7 Q: And that means that in 2021, which was approximately four
8 years after the project was completed, you had 114. So, it
9 flooded in 2015, before the project was built, roughly six --
10 twenty-three times more in 2015. So, it's still better off
11 now than it was before the project was built, based on your
12 studies.

13 A: This is three years out of a seven-year period and tides
14 are not -- as you see, they change year to year, day to day.
15 So, I don't think you can take this study and compare it to
16 that whole time frame.

17 Q: Well, you did. It's been put in as evidence -- into
18 evidence. That's what you tried to convince the jury that
19 this is how you proved that we flooded this property after we
20 built the improvements but, in fact, the flooding improved
21 after -- I mean, the flooding increased after -- before the
22 project was built, and it decreased after the project was
23 built.

24 **MR. LUCEY:** Objection; misstates prior testimony and
25 compound question, Your Honor.

1 **BY MR. BATTLE:**

2 Q: Did the flooding decrease after the project was built,
3 based on your computation?

4 A: In these particular years, but not in all years.

5 Q: Well, how would you know about other years? You didn't
6 do any studies.

7 A: I looked at them.

8 Q: You didn't include them in your study.

9 A: They're not in -- they're not in evidence.

10 **MR. BATTLE:** That's all the questions. Thank you, Mr.
11 Castles.

12 **THE COURT:** Ms. Thomas?

13 **MS. THOMAS:** May it please the Court, Your Honor.

14 **THE COURT:** Yes, ma'am.

15 **CROSS-EXAMINATION OF MR. CASTLES BY MS. THOMAS:**

16 Q: Good morning, Mr. Castles.

17 A: Good morning, Ms. Thomas.

18 Q: Did the Department of Transportation do anything to
19 direct water onto Mr. Christmas's property?

20 A: I'm sorry, will you clarify --

21 Q: Sure. Did they do anything, any type of construction or
22 repair that directed water going towards Mr. Christmas's
23 property that wasn't going towards his property before?

24 A: I mean, they let the roads change over the years without
25 correcting them, and therefore water --

1 Q: Well, they didn't let the roads -- I mean, weather and
2 flooding and things affected the roads just like it affected
3 all of the land around there, correct? But did the Department
4 of Transportation do anything, any type of act, that directed
5 water onto Mr. Christmas's property?

6 A: They didn't maintain the roads. Isn't that an act?

7 Q: So your answer is they didn't do anything. You're saying
8 they -- no act that you can name. How about subsidizing of the
9 roads or of the land around there; did the Department of
10 Transportation do anything that caused the subsidence?

11 A: No.

12 Q: And let's talk a little bit about some of the things you
13 brought up yesterday. Plaintiff's Exhibit 163. It's probably
14 right there. There you go.

15 Now, you told us yesterday this was your calculations
16 based on the original design of the road and the survey that
17 you did based on the '88 data, correct?

18 A: Correct.

19 Q: That's a little unfair, isn't it? Did Mr. Christmas
20 build this house in 1955?

21 A: No, ma'am.

22 Q: Built his house in 2005, correct?

23 A: From my understanding.

24 Q: So you don't have any data to show how much the road may
25 have subsided from 2005 -- from 1955 to 2005?

1 A: No, I don't have any data.

2 Q: And that would be the most important data because when he
3 built in 2005, obviously the road was already there, had been
4 there several decades. And he built his home knowing the
5 condition of that road at the time, true?

6 A: I mean, I assume; I wasn't there.

7 Q: And, in fact, when he built his home, he built it on
8 pilings. He drove down to good solid rock, true?

9 A: I don't know. I know it's on pilings. I don't know if
10 it's solid rock.

11 Q: Okay. Okay. And he hadn't had any flooding into his
12 home?

13 A: Not in his home. It's ten feet above the ground.

14 Q: Correct. And let's talk a little bit about -- you showed
15 us a picture yesterday of a ditch that had water in it. Now,
16 if most of the flooding is coming from the bay across the
17 road, and the outfall, the flooding in the bay had already
18 reached the outfall, the water is not going to drain from the
19 land back out to the bay, is it?

20 A: Not as long as the tide out there is higher than the
21 water on the inside.

22 Q: Right. If it's higher than the pipe, the pipe -- there's
23 no place for that to go, so the ditch could be full, true?

24 A: Right.

25 Q: That doesn't mean there's anything wrong with the ditch,

1 correct? And, in fact, didn't you testify in your deposition
2 that you don't know if there's anything wrong with the
3 drainage system because in order to know that, you would have
4 to actually go down and explore it. You would have to either
5 find the source of a clog, or you would have to take a camera
6 down and look at it. Is that true?

7 A: That's correct.

8 Q: And we touched on a little bit about Plaintiff's Exhibit
9 41, and that was the -- your calculations based on the global
10 average sea change. Is that your understanding?

11 A: Yes.

12 Q: Now, could there be other factors that can determine the
13 specific changes in tide in Winyah Bay? Things such as the
14 particular river flows from the various rivers that empty into
15 the bay? Could that make a difference?

16 A: It would make a difference at some times of the year, but
17 not every day tides.

18 Q: And could the wind direction make a difference as to the
19 tidal flow?

20 A: It could.

21 Q: And how about the use of the land around the bay, could
22 that make a difference?

23 A: I don't think the land around the bay has a significant
24 impact on the change in tidal flow.

25 Q: But you haven't done that study?

1 A: No, I haven't.

2 Q: And if you would, Mr. Castles, look at one more exhibit
3 you put in yesterday. I believe these were the pictures that
4 you made. Exhibit 47. Do you have that in front of you? I'd
5 be happy to get it.

6 A: No, I do not.

7 Q: If you would go like a quarter of the way through that
8 stack to a picture that is Bates Stamped Number 72.

9 A: I'm sorry, you said 72?

10 Q: Yes, sir. The Bates stamp in the right-hand lower
11 corner.

12 A: All right.

13 Q: Now, that picture shows the portion of the marsh going
14 into the Winyah Bay across the street from Mr. Christmas's
15 house, true?

16 A: Yes.

17 Q: And it also shows that the marsh grass has been cut
18 there. Is that correct?

19 A: Yeah. Part of the marsh grass has been cut there. Isn't
20 that where the water is crossing the road?

21 A: Well, part of the marsh grass is still there where the
22 water is crossing the road.

23 Q: Well, that's behind where the water is crossing the road,
24 isn't it?

25 A: Well, I mean, the water is there. It's just those marsh

1 grass growing and you can't see it.

2 Q: Now, I think others have touched on, and I won't belabor
3 the point, but Mr. Christmas doesn't have very much grass or
4 soil or vegetation in his yard, does he?

5 A: No.

6 Q: And, in fact, I think it's been called impervious
7 surfaces. And that just means water won't drain through what
8 he's got in his backyard, true?

9 A: It'll drain off, won't drain through.

10 Q: Absolutely. And, in fact, have you done any studies or
11 looked at any studies about whether or not other parts of that
12 area, in Front Street, Greenwich, on up to Prince Street, are
13 subsiding, are sinking? Not just the roads, but the whole
14 area.

15 A: No, I have not.

16 Q: Didn't you opine in your deposition that the damage to
17 the decking and the pavers in Mr. Christmas's backyard was
18 caused by subsidence?

19 A: Yes, it is.

20 **MS. THOMAS:** That's all the questions I have for you.

21 Thank you, Mr. Castles.

22 **THE COURT:** Mr. Lucy, any redirect?

23 **MR. LUCEY:** Yes, sir. Thank you, sir.

24 **THE COURT:** Thank you.

25 **REDIRECT EXAMINATION OF MR. CASTLES BY MR. LUCEY:**

1 Q: Mr. Castles, please tell the jury everything that Mr.
2 Christmas can do in his front yard to mitigate the damage
3 being caused by the sunken road at the property line between
4 him and Mr. O'Donnell.

5 A: All right. Well, first we need to take out the concrete
6 and find out where the subsidence is. If it were clay, is it-
7 -

8 Q: Take out his whole front yard.

9 A: Huh?

10 Q: Take out his whole front yard.

11 A: Yes.

12 Q: Okay. And then what, build it up a couple feet?

13 A: Well, we need to see what material is there to see if
14 that material needs to come out or if it will remain and we
15 just build on top of it.

16 Q: Well, assuming it's good enough, where would you replace
17 it? Do you then elevate the yard a couple feet? A Yes.

18 Q: To avoid the flood?

19 A: Yes.

20 Q: How do you drive in and out of a yard and driveway that's
21 two feet above the road?

22 A: Well, it's tricky, but you can -- you'll have to slope
23 the road -- the driveway back some from the road.

24 Q: Or make a bridge?

25 A: I'm sorry?

1 Q: Or make a bridge from the higher point of the road to the
2 higher point of the property?

3 **MR. LINDEMANN:** Your Honor, leading.

4 **BY MR. LUCEY:**

5 A: You could make a bridge in there, that would be a pretty
6 expensive thing, but yeah, I mean, that is a way to do it.

7 Q: Is the existence or non-existence of marsh grass in front
8 of Mr. O'Donnell's property or Mr. Christmas's property
9 affecting the flooding that is occurring at the sunken load
10 points?

11 A: No.

12 Q: Is the mowing -- if one of the neighbors is mowing their
13 grass out front, is that affecting the flooding at the low
14 points in the road?

15 A: No, it's not.

16 Q: Is the existence or non-existence of trees in Mr.
17 Christmas's front yard affecting the flooding coming over the
18 road at the sunken points?

19 A: No.

20 Q: Did you attempt to get down to see the condition of the
21 flood gate at the foot of Front Street?

22 A: I did not.

23 Q: Is it in the marsh, the mud?

24 A: Yes, it is.

25 Q: Tell the jury, if you would please, how if at all the

1 existence of the 2006 repair of the dip of the road and the
2 2009 repaving of the roads affected your opinion as to when
3 the current existing damage occurred.

4 A: By making those improvements in 2006, I believe you said,
5 and 2009, it obviously made the road better, stronger by
6 putting that additional asphalt on top of it. It also stopped
7 the water from coming in.

8 Water is very detrimental to a road. To give you an
9 example, that book that they provided has the table in there
10 where they did some tests on a wheel going around in a circle,
11 and they took different base thicknesses and put the different
12 thicknesses in there. When it was dry, the wheel ran around
13 145,000 times before it saw any deformation of that section.

14 When they saturated it with water, which is what happens
15 when you have tidal flows in that area, the wheel only went
16 around six times before you had detrimental problems with
17 that. So water is the worst enemy for roads, period.

18 So this -- the tides that we're talking about out there,
19 with the raising of the road in the 2006 and 2009, that would
20 have kept some of the tides from coming in and would have
21 helped the area to dry out between tides and not have caused
22 damage as was happening before or after.

23 Q: Thank you, sir. And speaking of that book you were
24 asking about and that you just referenced again, that table
25 that you were examined about, Table 9.6 in that book, what is

1 the title of that table up here under 9.6 -- 9-6?

2 A: "Phases of Flexible Pavements and Their Principal
3 Characteristics."

4 Q: And the third characteristics box -- or excuse me, the
5 middle characteristics box in that table is labeled what,
6 please?

7 A: "Elimination."

8 Q: And is deformation also -- deformation and consolidation
9 also part of that box?

10 A: Yes, sir.

11 Q: And what is this box here, permanent what?

12 A: Deformation.

13 Q: Did you see permanent deformation at Greenwich Drive?

14 A: We observed permanent deformation where it had subsided
15 down.

16 **MR. LUCEY:** Let me have Plaintiffs' Exhibit 47 in
17 evidence, Photo 142.

18 **BY MR. LUCEY:**

19 Q: Sir, what is it that we see at the very left-hand corner
20 of this north end of Greenwich Drive past Mr. O'Donnell's
21 house?

22 A: Pavement.

23 Q: Excuse me?

24 A: Pavement.

25 Q: What kind of pavement?

1 A: The road pavement.

2 Q: From what year?

3 A: 2019.

4 Q: When you were there?

5 A: Yes.

6 Q: When was this pavement built, that is above the tide mark
7 at the left-hand side of the road?

8 A: It would have been in that '55 to '68 range. I think
9 part of it was built in 1955, part of it was built in 1968.

10 Q: Is that evidence of what the elevation was in the road
11 when it was built?

12 A: I can't tell you if it's the exact elevation or not.

13 Q: Is it evidence of the relative elevation?

14 A: Yes. It is evidence of the relative elevation.

15 Q: Am I correct, it could have gone down slightly for
16 subsidence and up slightly for repavement?

17 A: Yes.

18 Q: Would there be any -- would you expect there to have been
19 any major change in elevation from what we see in this
20 photograph?

21 A: Doesn't appear to be, no.

22 Q: I'm going to the other end of the low portion of
23 Greenwich at Photo 144, excuse me, 47, please. What do you
24 see exposed at the very far end of Greenwich Drive down by the
25 wetlands past the flooded area, past the yellow "Children

1 Playing" sign?

2 A: The road is going back up again and so the road is dry.

3 Q: Okay. And that road back up there was built when,

4 please?

5 A: I'm sorry?

6 Q: That road that we see in this photograph that's above the

7 flood level was built when, please?

8 A: It was built in that '55 to '68 range.

9 Q: The two or three videos, I believe three videos that the
10 defendants showed you in your examination, did those videos

11 appear to be accurate depictions of rising waters in the

12 Greenwich area when you saw them?

13 A: Yes, sir.

14 **MR. LUCEY:** Plaintiff moves Defendants 22, 25, and 26
15 videos into evidence.

16 **MR. BATTLE:** Without objection.

17 **THE COURT:** Any objection from any other --

18 **MR. LUCEY:** Thank you, sir.

19 **THE COURT:** It'll be -

20 **MR. LUCEY:** Page 155, please, Slide Number 2.

21 **(PLAINTIFF'S EXHIBIT NUMBERS 22, 25 & 26**

22 **ARE ADMITTED INTO EVIDENCE)**

23 **BY MR. LUCEY:**

24 Q: The photographs marked for identification purposes only.

25 Sir, on the screen is the second photograph in this

1 collection. Describe for the jury what condition the pavement
2 is illustrating in this photo, please.

3 A: The pavement has some alligator cracking in it.

4 Q: Next photograph, please.

5 **MR. BATTLE:** You didn't introduce it, first of all, and
6 second of all, I'd like an explanation of what -- where that
7 road is because it's --

8 **MR. LUCEY:** These are your expert's photographs.

9 **MR. BATTLE:** I know, but you're asking somebody who says
10 it's an accurate depiction, and my point of that is accurate
11 depiction of what? What is -- how is it relevant? He hasn't
12 explained the relevance to it. This could be anywhere on that
13 road.

14 **MR. LINDEMANN:** Your Honor, I also have an objection that
15 he's asked it to be marked for identification, but it's being
16 shown to the jury before it's in evidence.

17 **THE COURT:** He put it into evidence.

18 **MR. LINDEMANN:** I don't think he put it in evidence when
19 it got shown to the jury.

20 **MR. LUCEY:** Not on 155 yet, Your Honor.

21 **THE COURT:** Okay.

22 **MR. LUCEY:** It's marked for identification purposes.

23 **THE COURT:** Okay. I'm sorry. I thought this was one of
24 the ones that you had just put into evidence.

25 **MR. LUCEY:** No, sir.

1 **THE COURT:** Okay.

2 **MR. LUCEY:** It's not one of the videos. It's marked for
3 identification purposes, and he was cross-examined about the
4 alligating in the concrete. These are photographs from the
5 defendants' experts.

6 **THE COURT:** But can you lay a foundation from where that
7 photo was taken?

8 **MR. LUCEY:** Yes, sir.

9 **BY MR. LUCEY:**

10 Q: Sir, have you had the opportunity prior to today to
11 review the photographs produced by the defense expert, Dr.
12 Hannibeth (ph)?

13 A: Yes, I have.

14 Q: Have you had an opportunity to review his report?

15 A: Yes, I have.

16 Q: Have you had an opportunity to review his file materials,
17 such as photographs, and his sea level rise information?

18 A: Yes. Whatever he provided, I was able to review.

19 Q: And were you able to recognize that his photos came from
20 the Greenwich Drive area?

21 A: They appeared to be.

22 Q: Because that's what he studied, right?

23 A: Yes, sir.

24 Q: Okay. And does this appear to be just such a photo of
25 the alligating in the road that was in Dr. Hanebuth's

1 materials?

2 A: It appears to be, yes.

3 **MR. LUCEY:** Plaintiff moves 155 into evidence.

4 **MR. BATTLE:** Without objection.

5 **THE COURT:** Mr. Lindemann, you had raised an objection to

6 --

7 **MR. LINDEMANN:** My objection was just showing it the jury

8 before it was in evidence, Your Honor. Just basic --

9 **THE COURT:** It will be admitted into evidence.

10 **MR. LINDEMANN:** -- proper handling of evidence.

11 **THE COURT:** Thank you, sir.

12 **(PLAINTIFF'S EXHIBIT NUMBER 155**

13 **IS ADMITTED INTO EVIDENCE)**

14 **BY MR. LUCEY:**

15 Q: Sir, let's go back to Exhibit 47 and Photograph 61. Sir,

16 this is some of the photographs from October 1, 2019, when --

17 on your initial visit. Is there road cracking in this

18 photograph?

19 A: There's a longitudinal crack that goes all the way across

20 the road.

21 Q: And what's the significance of a longitudinal crack? Or

22 just tell us what that means.

23 A: A longitudinal crack is one that instead of paralleling

24 the road, it actually goes across the road. It can be caused

25 by several things, shrinking of the asphalt due to

1 temperature, loadings, input on the asphalt in that particular
2 area where it cracked.

3 Q: Yes, sir. And 62, please, next photograph. Is this the
4 same crack going all the way across the road now? Go back one
5 so we can see both of them and see if it's the same crack.
6 Please. That's --

7 A: I'm looking for a particular identifier and I don't see
8 it, so I can't tell if it's the exact same crack.

9 Q: Okay. Let's go to Photo 77, please. Oh, stop there,
10 please. I'm sorry. I apologize.

11 Now, 62, there's water already coming over the road
12 there, correct?

13 A: Yes, it is.

14 Q: That's what you told the jury about being the low point?

15 A: Yes, sir.

16 Q: Are you able to document the cracking under the low point
17 when there's water on top of it?

18 A: There is some cracking. This is some longitudinal
19 cracking in the area where the water is.

20 Q: Okay. And let me go to 77, please. All right. This is
21 where it's been breached twice. Is there cracking running
22 down the center of the road in this picture?

23 A: Yes, it is.

24 Q: And is there any significance that this is now parallel
25 with the road rather than longitudinal that we saw --

1 A: It's parallel with the road, correct. There's actually
2 two cracks out there that are parallel with the road.

3 Q: Okay. And the next photo, please, 78, I believe. More
4 cracking in the road, sir?

5 A: Yes.

6 Q: Photo 132, please. What type of cracking is this over by
7 the park in the road on the lower right-hand corner?

8 A: It looks like the beginning of alligator cracking in that
9 area. It's a random crack, not a longitudinal or parallel
10 with the road.

11 Q: Sir, you were examined for a while about global sea rise.
12 Do you recall that conversation?

13 A: Yes, sir.

14 Q: Would you explain to the jury why global -- the United
15 States sea level rise is unlikely to be a whole lot different
16 than global sea level rise over time?

17 A: You do have some changes in global sea level rise in
18 different parts of the world, and it's really because of how
19 it lines up with the moon, which causes the tides but also you
20 have -- because of the way the tides are, you have larger
21 tides up north. They can be ten or twelve feet in Alaska, the
22 change in tides, whereas in Myrtle Beach, you have basically a
23 foot and a half tide.

24 Because of those changes, then you can have some changes
25 in tide levels globally over the time period of sea level.

1 Q: Yes, sir. But those, as you say, are local changes in
2 tides.

3 A: I'm sorry? You want to repeat your question?

4 Q: That's all right. I'll move on, sir.

5 Exhibit 1 is in evidence with your recent discussion with
6 counsel, and that's the same as exhibit -- Plaintiffs' Exhibit
7 49, correct?

8 A: Yes, sir.

9 **MR. LUCEY:** I'm going to move Plaintiffs' 49 into
10 evidence so I can use it on the screen. We have it on --

11 **THE COURT:** Any objection?

12 **MR. BATTLE:** Need to see it first.

13 **MR. LINDEMANN:** That's the same as was just put in --

14 **THE COURT:** This was what I think Mr. Battle put in?

15 **MR. LUCEY:** Yeah, the same as Defendant 1.

16 **MR. LINDEMANN:** Yeah, I have no problems, Your Honor.

17 **THE COURT:** All right.

18 **(PLAINTIFF'S EXHIBIT NUMBER 49**

19 **IS ADMITTED INTO EVIDENCE)**

20 **BY MR. LUCEY:**

21 Q: Sir. Tell the jury, please, what this is a map of before
22 you get to the lines that you drew on it, please.

23 A: It is a map from the City of Georgetown showing ditches
24 and drainage pipes and swells that are within the City.

25 Q: Okay. And you -- is that your handwriting at the bottom

1 right in the red? That's --

2 A: The redline is in the --

3 Q: And what did you write in the bottom right?

4 A: Drainage basin.

5 Q: And what did you mean by that or why is this a drainage
6 basin?

7 A: I was outlining the drainage basin that flowed to the
8 corner of Greenwich and Front Street.

9 Q: Okay. And so tell the jury if you would, please, where
10 your redline goes here and just an overview of why you placed
11 it where you did. Let's start with the top half, the portion
12 near Mr. O'Donnell or Judge O'Donnell's house and Mr.
13 Christmas's house.

14 A: When you look at drainage and you're looking at a
15 drainage map, you have a bunch of catch basins on it and you
16 have it interconnected with the pipes that connect up
17 different segments of the drainage system. (Inaudible) of the
18 drainage system. Then you will go somewhere, and you'll find
19 the next beginning of the drainage system and usually, ninety
20 percent of the time, your drainage basin area will start
21 between those two points. So you have a high point in there.
22 And it goes one way to get one part of the drainage system.
23 It goes another way to get another part of the drainage
24 system. So you can draw a line in there and say, okay, this
25 part goes in this direction, this goes in this direction and

1 once you get your lines put together, you can tell what part
2 is coming to the area that you're interested in.

3 Q: Okay. Now, where -- what is the outflow for this entire
4 drainage basin?

5 A: It is the eighteen-inch pipe that goes out of -- goes
6 under Greenwich Street, along Front Street, and out to Winyah
7 Bay.

8 Q: Okay. Is that the pipe that we've heard discussion about
9 a tidal gate on?

10 A: Yes.

11 Q: And, when you say drainage basin, we've talked about the
12 north half a little bit, north of Front Street. Tell the jury
13 about your drawing of the drainage basin on the left half of
14 this, south of Front Street, please.

15 A: South of Front Street, it goes all the way up to a road
16 that is actually between the tennis courts and the Alford
17 Building. There's a road that goes all the way from
18 Greenwich, all the way over to East Bay Street. And that is
19 the defining line between the two basins, one basin being
20 north, going toward the ballfields and -- excuse me, I'm
21 sorry, south, I believe, toward the ballfields and the boat
22 landing in the other part coming from the tennis courts down
23 toward Front Street and Greenwich Street.

24 Q: Okay. And roughly, would the Alford Building, or
25 somewhere near the Alford Building would be a good north-south

1 dividing line?

2 A: Yes.

3 Q: So what you're telling the jury is, south of that is a
4 different basin?

5 A: Yes.

6 Q: And you've drawn the basin that exists north of that?

7 A: Yes.

8 Q: Approximately how many acres is that basin?

9 A: I don't know that particular basin, but when you look at
10 the total basin, which actually goes on further up into the
11 City, past East Bay Street and on up to Meeting Street and
12 over to High Market Street, you end up with somewhere around
13 thirty acres.

14 Q: Now, could you blow up the area surrounding Front Street
15 in the left center of this photograph for the jury, please, or
16 this drawing?

17 A: I'm sorry, what's your question?

18 Q: Just blow up -- enlarge the top left quadrant of the
19 diagram, please, would be more suitable. I'm having Lawton
20 enlarge it so we can show -- you just referenced the part of
21 the City draining into this drainage basin, sir. Can you use
22 the enlarged diagram now to tell the jury a little more about
23 the -- where the west end of this drainage basin begins at
24 Upper Front Street?

25 A: It looks like it's over there, halfway between Meeting

1 Street and James Street.

2 Q: Okay. And so roughly -- can you tell us roughly how many
3 city blocks west of Bay Street are included in this drainage
4 basin that comes down to the eighteen-inch pipe at Front
5 Street?

6 A: Well, I'm taking the blockage from street to street. So
7 you've got at least three blocks -- two and a half blocks.

8 Q: And then roughly how many blocks between East Bay,
9 Greenwich, Prince, and High Market are included within this
10 same drainage basin to that eighteen-inch pipe?

11 A: Looks like four.

12 Q: And is -- compare for us, if you would please, the
13 relative size of the north half of the park that's in this
14 drainage basin with the portions of the residential blocks
15 that are in this drainage basin. In other words, is the park
16 a third of the basin, is it half? Just roughly, please.

17 A: My recollection is that it's roughly about a quarter,
18 about twenty-five percent.

19 Q: Okay. Now, if in fact the tide is at or above, say, two
20 and a half or three feet, such that it's above the tidal gate,
21 it's above that eighteen-inch pipe, what happens to the
22 rainwater or stormwater in this drainage basin?

23 A: It just sits at that low point.

24 Q: And, if it continues to rain or continues to flood, what
25 happens in the drainage basin?

1 A: It sits down there in the low point until the tide goes
2 out enough where it can start draining out to the Winyah Bay.

3 Q: Okay. The flooded areas that we showed the jury at high
4 tide in your October 1, 2019 visit, would all that water have
5 found all the low points in this drainage basin?

6 A: Yes. It would have found the low points.

7 Q: Is that the nature of water? It's like a natural
8 leveler?

9 A: It is.

10 Q: Now, when this condition exists, such as that particular
11 high tide and perhaps rain, and the tidal level is above that
12 eighteen-inch pipe, is there any city drainage for this entire
13 drainage basin? Exhibit 49.

14 A: Is there any what?

15 Q: Is there any drainage? When the tidal gate is blocked by
16 a mid-level or higher tide...

17 A: Then there's no drainage out of the area.

18 Q: Nowhere in the entire basin?

19 A: In the entire basin.

20 Q: For any of the houses?

21 A: For any of the houses.

22 Q: For the park?

23 A: Right.

24 Q: For the roads?

25 A: Right.

1 Q: Have you had an opportunity to observe how long this
2 lower quarter or so of the drainage basin holds this water
3 after it gets trapped?

4 A: I looked at -- when I was looking at the tidal gate in
5 there, it gets trapped for a couple hours, two and a half
6 hours.

7 Q: When the water rises in this drainage basin that's
8 blocked from rain or from tidal influence or both, what
9 effect, if any, does the raised and enlarged tennis courts
10 have upon the path of the water?

11 A: I'm not sure I understand exactly -- understood your
12 question. That's why I was hesitating.

13 Q: Yes. When the water is rising in this drainage basin at
14 a stage where it's trapped --

15 A: Right.

16 Q: -- and it's trying to find a place to go, what effect, if
17 any, does the higher enlarged tennis courts have upon where
18 that water goes?

19 A: Well, obviously, none of the water can sit up there by
20 the tennis courts because they are higher. So that water has
21 to go somewhere. So it tends to go down and increase the
22 water in the low area.

23 Q: Okay. And, during rain events, does water come off the
24 front, back, or sides of the tennis courts?

25 A: It comes off of all four sides, but there are just three

1 sides that actually drain toward the low point down there.

2 Q: Okay. And tell us how that drainage gets to the wetlands
3 and how the other drainage gets to the Front Street
4 intersection, please, in this drainage map, Exhibit 49.

5 A: You've got part of the area up there from the tennis
6 courts to East Bay Street that runs down over to East Bay
7 Street and gets into the curb and gutter there and then runs
8 down the curb and gutter and turns the corner onto Front
9 Street and gets into a catch basin down there, which then runs
10 down to the corner of Greenwich and Front Street. So that
11 water is getting down there that way.

12 The water up by the tennis courts is being collected in a
13 pipe and just dumps out onto the ground in the direction of
14 the low point.

15 So it's really just sheet flowing basically. It comes
16 out of the pipe and then kind of spreads and just flows down
17 there to the wetlands in the low area.

18 Q: So it's the back and the front? The water from the
19 tennis courts is flowing from the back and the front of the
20 courts?

21 A: Yeah. It's actually coming around the side in the ditch
22 and flowing to the pipes.

23 Q: Okay. And how does the ditches behind the tennis courts,
24 how do they connect down to the wetlands?

25 A: Well, you've got the one on Greenwich Street that this is

1 a ditch along Greenwich Street that goes down to the Front
2 Street and Greenwich. And on the other side, as I was saying,
3 it gets into the gutter system of East Bay and then gets to
4 Front Street and turns the corner and goes down that
5 direction.

6 Q: And, sir, what is the effect of the sunken portion of the
7 road on how often the lower quarter or so of this drainage
8 basin is inundated with water?

9 A: Please repeat.

10 Q: What is the effect of the sunken portion of the road --
11 just for instance the 2.7-foot part, what is the effect of
12 that -- the existence of that portion on how often this
13 drainage basin becomes a holding pond?

14 A: Well, first of all, it becomes a holding pond after each
15 rain. So you're talking about the rain events and then you're
16 talking about the tide events and also --

17 **MR. BATTLE:** Your Honor, he's now getting into an area
18 that's outside of his expertise. He hasn't done any surface
19 water studies and --

20 **THE COURT:** Let's stick to my prior ruling.

21 **MR. LUCEY:** Your Honor, the defendants' counsel opened
22 the door on all this testimony in their examination. They're
23 actually the ones that put this map in, and they asked him
24 about flows and flooding and roads, and we believe the door
25 had --

1 **MR. BATTLE:** -- after your ruling.

2 **THE COURT:** Let's have the jury step out for just a
3 moment.

4 **REPORTER'S NOTE:** (Jury exits courtroom at 10:48a.m.)

5 **THE COURT:** Mr. Battle, I'll let you be heard now. I'm
6 sorry.

7 **MR. BATTLE:** First off, all I did was introduce the
8 exhibit. I did not ask him any questions about any flows,
9 anything along those lines because he's not an hydrologist,
10 hasn't done any surface water studies. He's opened up a gate.
11 I have not opened up that door, first of all.

12 Second of all, you've already ruled that he's not
13 qualified to testify about that because one, he doesn't have
14 any expert credentials. And then second of all, he's not done
15 any surface water testing. And now Mr. Lucey is trying to say
16 I've opened up a door simply because I introduced an exhibit,
17 which I'm going to have another expert talk about, not this
18 gentleman because now he's just speculating and talking about
19 a holding pond, which never came up during any of my
20 examination.

21 And I think it's clearly and obvious -- well, I'll stop
22 there.

23 **THE COURT:** Well, and Mr. Lucey, I tend to agree with Mr.
24 Battle on the line of questioning. I never heard anything in
25 their cross-examination of him about these retention ponds,

1 about these holding ponds, about flow, anything like that.

2 I don't see how they've opened up a door for this
3 testimony now by introducing simply a map of what the drainage
4 would be.

5 **MR. LUCEY:** This map, Your Honor --

6 **THE COURT:** And it's my understanding it's a city map,
7 correct?

8 **MR. BATTLE:** It is a city map.

9 **THE COURT:** Right.

10 **MR. LUCEY:** It is a city map. It has his handwritten
11 drawings on it as to what the drainage is that's feeding that
12 single eighteen-inch part at the bottom. They put this in.

13 As to some of their other arguments, Your Honor, the
14 Court did not rule that he wasn't qualified. The Court only
15 ruled that he hadn't done hydraulic calculations, so he wasn't
16 going to testify about flows, that he had not done his own
17 calculations.

18 The questions I'm asking him are completely responsive to
19 what the defendants have examined him about, and they're
20 certainly contained within the subject matter of Exhibit 49
21 that they put into evidence, and they said in front of the
22 Court and then in front of the jury that they put in evidence
23 for him so they can use it with their expert --

24 **THE COURT:** Well, and I have no question whether you're
25 asking him about where the water is going, but when you're

1 asking about flow rates and how much water, I mean even -- I
2 think you were teeter-tottering on it when we were talking
3 about the water shedding off of the tennis center.

4 **MR. LUCEY:** If I used the words "flow rates," then I
5 missed it, and I apologize. That was never my intention. We
6 have clearly talked in very general senses about the drainage
7 directions and what the source and quantity of the water is,
8 not in a cubic feet per second
9 --

10 **THE COURT:** The quantity is the problem.

11 **MR. LUCEY:** But the quantity -- the only quantities I'm
12 talking about are the quantities that are shown in his
13 photographs in Exhibit 47. We're not talking about how many
14 gallons per minute or anything like that. We're talking about
15 this big flooded area that you've already shown the jury.
16 Where is it coming from, where can it go, does it have
17 drainage. And he was qualified as an expert in drainage.

18 **THE COURT:** Well, and if that's the question you want to
19 ask him, I don't have a problem with that, but I have a
20 feeling that that's not going to be the question.

21 **MR. LUCEY:** All right. I apologize, Your Honor. At this
22 point, I don't even remember my last question. I apologize.
23 I can --

24 **THE COURT:** Well, again --

25 **MR. LUCEY:** If you can tell me what it was --

1 **THE COURT:** -- my prior ruling was that he not be allowed
2 to testify as far as the quantities of flows or anything like
3 that that deal with hydrology.

4 **MR. LUCEY:** I did not --

5 **THE COURT:** If you're talking about -- let me finish
6 here. If we're talking about specific drainage from the map
7 that he obtained from the City of Georgetown, I don't have a
8 problem with him testing about that -- or excuse me,
9 testifying about that.

10 Now, if we're trying to in some way get him to tell you
11 how much water that is and whether or not that much water,
12 based on some quantification, can go through that, I'm
13 assuming we're going to get an objection for that.

14 **MR. LUCEY:** I believe my last question was, and I could
15 be corrected what I was going to say -- in conversations,
16 sometimes I lose my place. I believe my question was, how
17 long does this basin act as a holding pond before it's able to
18 drain back out. I'm not talking about cubic feet per second.
19 I'm just saying per hour. Is it one hour, two hours, three
20 hours.

21 In fact, their report says it's two hours, that he has
22 studied that they have -- apparently intend to put up the
23 testimony. I don't think anybody disputes that it's a two-
24 hour -- a two-plus-hour holding period.

25 **THE COURT:** But could he testify to that without being

1 the person who designed it?

2 **MR. BATTLE:** Exactly.

3 **THE COURT:** I mean, what I'm saying is, how is that not
4 speculation?

5 **MR. LUCEY:** Your Honor, if I may -- if I may supplement
6 what I've said and I apologize.

7 **THE COURT:** Right.

8 **MR. LUCEY:** I should give you more information. Your
9 Honor, apparently, since in recent times, being somewhere
10 between one and five years, this Dr. Hannibeth (ph) has had a
11 measuring device in this marsh, which floats atmospheric
12 pressure or something. It floats up when it's saturated with
13 water and goes back down when it's out.

14 That data has been produced to us. It shows us how long
15 the water stays up there and how long it goes back out. It's
16 their data that we rely in part on and his observations when
17 he's there but they have this little logger that says, okay,
18 it takes two hours for the tide to go back out and for this
19 basin to get back down to something reasonable.

20 That's some of the other data that is available to the
21 parties, Your Honor.

22 **THE COURT:** But you're saying that he relied on it. Was
23 he provided the data before he produced his reports?

24 **MR. LUCEY:** No, sir, but his deposition was -- and his
25 report was two years ago. And, you know, the case matures.

1 They hired a recent expert. We look at their information and
2 we address it but I mean --

3 **THE COURT:** Mr. Battle?

4 **MR. BATTLE:** Your Honor, he's trying to be a hydrologist.

5 **THE COURT:** I think he --

6 **MR. BATTLE:** And if Mr. -- if he wants to let Mr.

7 Hannibeth (sp) testify about it, he's going to be honest and
8 tell him exactly what he's done. He's not going to be
9 stretching it one way or the other.

10 This gentleman is not qualified to talk about how long
11 the water is going to stay in a pond. He can talk about where
12 it's supposed to drain. I haven't objected to that but he's
13 talking about how much water. He's talking about a holding
14 pond, and then that's what's creating the problem there.

15 Clearly, it's outside of his area that he's been
16 qualified to testify about, and he should not -- you know --

17 **THE COURT:** Well, and I think he could probably testify
18 to it if he was the person who designed it but we're talking
19 about a retention pond that he didn't design. Am I right? I
20 mean, is that --

21 **MR. LUCEY:** Correct.

22 **THE COURT:** -- this retention area? Yes, Mr. Lindemann.

23 **MR. LINDEMANN:** Your Honor, I would also just add to that
24 by just simply pointing out that he's on redirect. And so I
25 think to the extent he's trying to now suggest that somehow

1 this system is inadequate, that was not touched on a bit in
2 his direct or in his cross by any of us. And that's kind of -
3 - and I've sort of kept my seat a little bit, but it seems
4 like talking about this whole western side of this drainage
5 basin and how much goes to this eighteen-inch pipe is starting
6 to tread on suggesting that somehow this is an inadequate
7 system and that's beyond the scope here, Your Honor.

8 **THE COURT:** Mr. Lucey, I think we're treading on ground
9 that I've already ruled on about the hydrology and while you
10 say he relied on someone else's reports for this, it's my
11 understanding that person is here. If you want to cross-
12 examine him at the appropriate time, you'll have the
13 opportunity but I'm not going to let him testify to his
14 findings while he's here.

15 **MR. LUCEY:** Yes, sir.

16 **THE COURT:** Thank you. Why don't we -- y'all want to
17 take a five-minute break --

18 **MR. LUCEY:** Sure.

19 **THE COURT:** -- while we've got the jury out rather than
20 thirty minutes from now doing the same. We'll be back in
21 five.

22 **(COURT IS IN RECESS)**

23 (Proceedings resume at 11:06 p.m.)

24 **THE COURT:** Let me get the attorneys to come up here for
25 a minute. Mr. Lucey.

1 **REPORTER'S NOTE:** (Whereby bench conference is held.)

2 **THE COURT:** I don't ever want to pressure lawyers to get
3 going, but it doesn't -- I don't see how in the world we're
4 going to finish this this week. Do y'all? I mean, in all
5 honesty.

6 **MR. LUCEY:** We're going to make an effort to.

7 **THE COURT:** Well, they've still got experts, too, though,
8 is the problem. I don't mind y'all being thorough. I really
9 don't, I just wanted to try to move this quickly as we can.

10 **MR. LUCEY:** Yes, sir.

11 **THE COURT:** Again, I'm not trying to pressure y'all. I'm
12 just saying if I need to call court administration, then I
13 will, but they have ragged us about the fact that if you're
14 going to do that, don't do it Friday. So I need to let them
15 know as quickly as possible. And I probably need to let this
16 jury know as quickly as possible so they can deal with --
17 we've got some young jurors who probably need to look at
18 childcare. But again, I'm not telling you how to try your
19 case, I'm just simply saying if we can move as quick as
20 possible. I know we've got a lot to get through, but I
21 appreciate y'all's patience.

22 **MR. LUCEY:** Thank you, Your Honor.

23 **MR. LINDEMANN:** Thank you, Your Honor.

24 **REPORTER'S NOTE:** (End of bench conference.)

25 **THE COURT:** Anything prior to us bringing in a jury?

1 **MR. LINDEMANN:** No, sir.

2 **THE COURT:** All right.

3 **MR. LINDEMANN:** Thank you, Your Honor.

4 **THE COURT:** Mr. Lucey, anything?

5 **MR. LUCEY:** No, sir.

6 **THE COURT:** All right. Sir, if you'll bring in the jury.

7 Thank you.

8 **REPORTER'S NOTE:** (Jury enters courtroom at 11:06a.m.)

9 **THE COURT:** Thank you, sir.

10 Thank you, ladies and gentlemen.

11 Mr. Lucey?

12 **MR. LUCEY:** Yes, sir. Thank you, sir.

13 **BY MR. LUCEY:**

14 Q: Mr. Castles, we missed two pictures in Exhibit 47. 73,
15 please. Two pictures and we'll been done, sir. This is Photo
16 73 in Exhibit 47. Is there a cracking in this photo?

17 A: Yes.

18 Q: How about 74, please? Describe the cracking in the
19 intersection here before it gets covered up.

20 A: These cracks look like the beginning of alligator
21 cracking on both the center and over on the edge toward the
22 stop sign.

23 Q: Okay. Is there additional cracking of the other side,
24 lower right?

25 A: Yes, there is on the lower right.

1 Q: Is there any additional cracking between the main
2 cracking at the front and that little reflector we see back on
3 Front Street? Can you go up to the center of the photograph,
4 please, and enlarge it, please.

5 A: Yes, there is.

6 Q: Sir, have the opinions that you've given and provided to
7 the jury today and yesterday, have those opinions been given
8 to a reasonable degree of certainty in your field of
9 expertise?

10 A: Yes, they have.

11 **MR. LUCEY:** Thank you, sir. Nothing further.

12 **MR. LINDEMANN:** Nothing further from the City, Your
13 Honor.

14 **MR. BATTLE:** Nothing further.

15 **MS. THOMAS:** Nothing further, Your Honor.

16 **THE COURT:** May Mr. Castle be excused?

17 **MR. BATTLE:** He may as far as I'm concerned.

18 **MR. LINDEMANN:** No objection, sir.

19 **THE COURT:** Mr. Castles, you may step down. Thank you.

20 **MR. CASTLES:** Thank you, Your Honor.

21 **THE COURT:** Thank you, Mr. Lucey. You may call your next
22 witness.

23 **MR. EVANS:** The plaintiff calls Robert O'Donnell.

24 **THE COURT:** Okay.

25 **ROBERT H. O'DONNELL, HAVING BEEN DULY SWORN TESTIFIES AS**

1 **FOLLOWS:**

2 **THE CLERK:** Thank you. Please be seated, and then state
3 and spell your name for the record, please.

4 **MR. O'DONNELL:** It's Robert Harry. It's R-o-b-e-r-t H-a-
5 r-r-y. O'Donnell is spelled capital O apostrophe D-o-n-n-e-l-
6 l.

7 **THE COURT:** Good morning, Mr. O'Donnell.

8 **MR. O'DONNELL:** Good morning, Judge.

9 **THE COURT:** Yes, sir, Mr. Evans.

10 **DIRECT EXAMINATION OF MR. O'DONNELL BY MR. EVANS:**

11 Q: Good morning, sir.

12 A: Good morning.

13 Q: Briefly give the jury a little introduction. Tell us who
14 you are, where you live, and what you do.

15 A: Robert O'Donnell. I've been practicing law in Georgetown
16 for -- it'll be fifty years this year. I'm a part-time judge
17 in the City of Georgetown, been doing that forty-nine years.
18 My office is on Front Street where they're building a new
19 hotel right next to it, and my house is obviously on Greenwich
20 Drive. We built it in 1988.

21 Q: Just for the jury's reference here, this is the
22 intersection of Front and Greenwich, correct?

23 A: Yes, sir.

24 Q: And that's the Christmas house, and you can kind of see
25 the blue of the pool in the backyard there.

1 A: Yes, sir.

2 Q: And that would be you, one house up, correct?

3 A: That's right. Exactly.

4 Q: When did you purchase your house?

5 A: I purchased the lot in the early '80s. The lot in the --
6 lot across the street and then I bought the back lot a couple
7 years later but we built, completed this construction in 1988.

8 Q: Okay. And for the jury's reference, there's a little
9 street off of Prince here called Bolick, correct?

10 A: Bolick Street.

11 Q: And Bolick comes behind, and you have essentially a
12 double lot, correct?

13 A: Yes.

14 Q: And the back of your lot ties into Bolick here.

15 A: Fortunately, if there's a lot of water, I can usually get
16 to my backyard via the dead end street of Bolick.

17 Q: Why did you buy the lot?

18 A: My next-door neighbor sold it to me, Mr. Abe Vogel (ph),
19 and sold me the other lots as well. Lived in Beaufort,
20 several other places on the water. It's a magnificent place.
21 You can see the sun rise across Winyah Bay. You can see the
22 moon rise. The trees that Mr. Ballard (ph) planted back in
23 the '50s arch. It's just -- it's quiet there and it's a
24 passive park. It didn't always used to be. I miss the Little
25 League baseball games, but it's a passive park and if you've

1 got to have a neighbor, a park is a good thing. The only
2 thing better is probably a cemetery because it's even more
3 quiet.

4 Q: Let's talk about -- let's start up -- I'm going to break
5 up some periods of time. Okay? Let's first talk about your
6 move-in from 1988 up until about 2016. Okay. I'm going to
7 stick with that period of time first. Tell us about the
8 flooding on the roads that you saw in that period of time.

9 A: Very little.

10 Q: Tell us about that.

11 A: Hurricane Hugo struck near Awendaw and McClellanville in
12 the northeast quadrant was here, so it hit Georgetown pretty
13 hard. I mean -- with Hugo, my house is about fourteen feet
14 above grade and about fifteen, sixteen steps up from my main
15 floor, and the second floor was, of course, another set of
16 steps but Hugo, I thought the water would creep in my garage
17 and creep back out, but it builds up, and when the garage
18 doors go, it goes whoosh, you know, so I had about eight
19 inches of water in my garage under my house.

20 Q: In Hugo?

21 A: With Hugo. But other than -- I mean, Matthew, you know,
22 if you had a tropical storm, if you have a full moon with a
23 strong northeast wind, you know, you can have water, but it's
24 extremely rare.

25 Q: Okay.

1 A: We had a couple of parties there. Anyway, so you get
2 together, but you have to plan it now around the time.

3 Q: Okay. And you didn't have to back in the '88 to 2016
4 time frame?

5 A: Correct. Matter of fact when the Christmases have a get-
6 together one Christmas, a year or two after they built the
7 bank -- the people who work at the bank, they were parking
8 their cars on the marsh across the street.

9 Q: Let's make sure --

10 A: I was there.

11 Q: -- everybody understands what you're talking about.

12 So the marsh across the street, you're talking about the
13 lots that you own and Mr. Christmas owned on the east side of
14 Greenwich. Is that correct?

15 A: Correct. Correct. Matter of fact, we would have people
16 pull up not realizing it's private property and pull their
17 Winnebago up there and get a grill out, you know, and get a
18 little tan. I didn't say keep out, but it's -- it was a whole
19 lot firmer over there than it is now, no question.

20 Q: As we got closer to the 2016 period, still in that time
21 frame, did the flooding on the roads increase?

22 A: It has increased.

23 Q: And did you talk to anybody about it?

24 A: Well, the inquiry I did -- my part-time job at the City,
25 you know, I didn't want to get involved in anything that would

1 be problematic. So I did speak to Mayor Barber once or twice
2 just in passing --

3 **MR. LINDEMANN:** Your Honor, objection to speaking with
4 the mayor. Can we approach?

5 **THE COURT:** Yes, sir.

6 **REPORTER'S NOTE:** (Whereby bench conference is held.)

7 **MR. LINDEMANN:** I didn't know he was going to go into
8 this. Obviously, Your Honor, this goes for Mr. Christmas as
9 well. Any testimony about conversations --

10 **THE COURT:** Well, that's hearsay and it's inadmissible.

11 **MR. LINDEMANN:** Number one, it's hearsay but here's the
12 problem, it's not relevant to any issue that goes to the jury.
13 To the extent that they're arguing equitable estoppel or
14 saying that the statute of limitations was tolled because of
15 equitable estoppel, that is a question for you, not for them
16 under Cayman vs (inaudible). So that -- if that testimony is
17 coming in, it should be only for you, not for the jury because
18 they don't have a misrepresentation (inaudible).

19 **MR. EVANS:** I don't intend to get into the hearsay. What
20 was your understanding, did you talk to anybody because
21 they're saying that we didn't talk to anybody, that we just
22 let it go.

23 **THE COURT:** Well, there was questions --

24 **MR. LINDEMANN:** But that's relevant for you, not for
25 them.

1 **THE COURT:** Well, there was questions of Mr. Pope, they
2 talked to him as well.

3 **MR. LINDEMANN:** Well, that's because his lawyer didn't
4 object.

5 **THE COURT:** Keep the hearsay out, but if he's just going
6 to say that he had a conversation -- just -- I'm going to keep
7 it very limited.

8 **MR. LINDEMANN:** I mean, to the extent they're arguing
9 that there were some promises made, that doesn't go to any
10 issue before this jury.

11 **THE COURT:** Is that what you're --

12 **MR. LINDEMANN:** That goes to equitable estoppel --

13 **MR. EVANS:** That he talked to people.

14 **MR. LINDEMANN:** -- that there were promises made.

15 **MR. EVANS:** That he had an understanding that it was on
16 folks' radar.

17 **THE COURT:** Well Mr. Pope he didn't testify to that.

18 **MR. LINDEMANN:** What the extent of the conversation is, I
19 mean, is what I'm concerned about. I don't want this jury to
20 hear --

21 **THE COURT:** Right. Let's just keep it very limited on
22 that.

23 **MR. EVANS:** Okay.

24 **MR. LINDEMANN:** Thank you.

25 **THE COURT:** Yes, sir.

1 **REPORTER'S NOTE:** (End of bench conference.)

2 **THE COURT:** Mr. Evans, you may proceed.

3 **MR. EVANS:** Thank you, Your Honor.

4 **BY MR. EVANS:**

5 Q: Judge, I don't want to know what the conversation
6 specifically was. You had a conversation with, I think you
7 said Mayor Barber?

8 A: In passing, yes. It wasn't a meeting with him. It just
9 -- he walks the boulevard a lot, not as much as he used to.

10 Q: And what was the topic of the conversation?

11 A: Just a little concerned about the increasing water.

12 Q: Did you speak to anybody else besides Mayor Barber? With
13 the City, with the County, or DOT?

14 A: I think a fellow attorney, Jack Scoville, I may have
15 mentioned it to him, not for any preferential treatment, just
16 to express concern. He helped create a little doggy park in
17 the park, East Bay Park. And it's fenced in, they've got the
18 water for the dogs. Anyway, he doesn't walk as much now.
19 He's got some vision problems but yes, I mentioned it to him
20 on maybe one or two occasions in passing.

21 Q: Okay. Is that the former Mayor Scoville?

22 A: Yes. He was on just a block or two from there also.

23 Q: Anybody else with the City or County or DOT that you
24 spoke with?

25 A: No, I didn't think it was appropriate for me to -- you

1 know, to get involved but just as a homeowner, you know, it's
2 very problematic. If I tried to sell my home, I would have
3 been very successful, you know, five or six years ago but it's
4 a problem.

5 Q: Let's move -- you mentioned the parties, the Christmas
6 parties. The Christmases' Christmas parties.

7 A: True.

8 Q: When was that time frame?

9 A: A couple of years after they built the house, I guess the
10 house was still fairly new.

11 Q: And, when there were more extreme events, the Hugos, the
12 Matthews, you mentioned extreme king tides. When water came
13 over the road, where did it go before the park project?

14 A: It would dissipate. There are several storm drains or
15 whatever they're called that it flows into. And how much is
16 coming from the salt -- it's brackish water, it's not salt
17 water in Winyah Bay because of the five rivers, the four
18 rivers that flow into it but it would flow into those storm
19 drains, the grates but then it would fill them up and was --
20 how much is coming from surface water, one way or the other,
21 it appeared to me that with the elevation, the work that was
22 done at the park --

23 Q: Hold on.

24 A: Yes.

25 Q: I want to keep you before the park.

1 A: Right.

2 Q: Before the park project.

3 A: Yeah.

4 Q: 2016-2017 park project. Before that time frame. When
5 water would flood into the streets and into the park, where
6 would it go? Where did you see it go?

7 A: Some would go into the retention pond. Some would go
8 through the grates, which I guess is stormwater, and I don't
9 know where those underground -- the pipes, which direction
10 they flow in. The City probably has that written down. The
11 flow is expected to be gravity flowed this way or this way or
12 that way but when it comes up and it starts just rising, it's
13 hard to tell where it's coming from. It just swells up out of
14 the ground.

15 Q: You said the retention pond, I think was the word you
16 used.

17 A: Yes.

18 Q: Are you referring to the wetlands that are at the north
19 end of the park --

20 A: Yeah.

21 Q: -- in this area right here along front?

22 A: Correct. Phragmites is a vigilant plant and it's
23 springing up across the street and in the area as I mentioned.
24 You can tell from the vegetation what's going on there.

25 Q: Before the park project, before the 2016 and beyond park

1 project, would water flood in from the bay? Would it flood
2 across the tennis courts?

3 A: Yes. The old tennis courts.

4 Q: Right. Pre-project, back when it was three courts and
5 they weren't elevated to where they are now.

6 A: That's correct.

7 Q: Let's move forward in time. So now we're talking 2016
8 and beyond. The park project is now under way. Okay. That's
9 the time frame I want to work with. How did the flooding
10 change then, in your observation?

11 A: It increased.

12 Q: How so?

13 A: There was a rain event several years ago that we've had
14 several times where I have not been able to get to my house.
15 They erected, in like five corners, intersections, yellow
16 metal -- about four feet high -- poles, and contained in there
17 are yellow plastic chain. And instead of bringing big
18 barricades they used to, you know, as it got worse and worse,
19 now they have this chain and they'll come in and instead of
20 bringing the big, big things on a truck, they just reach in
21 there, pulled it out, and then stretch it to the other side of
22 the street.

23 There's one at Greenwich and Front, Front and East Bay,
24 Highmark -- even Prince and East Bay, and Greenwich and East
25 Bay. Anyway, it's gone up at times. It has flooded Prince

1 Street and it stays there. It's like a teacup. And it has
2 spread as far as Highmarket Street, which is a long way from
3 Front.

4 Q: Okay. And you said it's increased. Are we talking that
5 it's increased in quantity --

6 A: And --

7 Q: -- or frequency?

8 A: Frequency.

9 Q: Okay.

10 **MR. LINDEMANN:** Your Honor, I don't believe he's
11 qualified -- he's certainly not a hydrologist and hasn't been
12 qualified as an expert to talk about quantity here, Your
13 Honor.

14 **THE COURT:** I'll let him testify limited to just his
15 observation.

16 **MR. EVANS:** Thank you, Your Honor.

17 **BY MR. EVANS:**

18 A: It's been more frequent and it's been worse.

19 Q: And those barricades, why are they up?

20 A: To prevent people from driving through and having their
21 car flooded.

22 Q: You mentioned having access problems to get to your
23 house.

24 A: Yes.

25 Q: How much water, if you know, how deep of the water has

1 | been in front of your house?

2 | A: I'd say two, three feet at times. My Bolick entrance is
3 | my good fortune because, you know, it's not as often there but
4 | one of these events not long ago, I had to park my car across
5 | East Bay Street and walk three blocks because I couldn't park
6 | it somewhere within our subdivision. And, when I did, I had
7 | to wade with pants legs up, up to my knees to come down
8 | Prince, turn onto Bolick and go in my backyard, and when I
9 | finally reached my little patio out my back door to the rear
10 | of my property, I finally got to where I was not, you know,
11 | ankle deep in water.

12 | Q: When you've had water in your backyard from the -- that
13 | you accessed from Bolick --

14 | A: Yes.

15 | Q: -- have you observed the flow of water and meaning which
16 | direction it comes from?

17 | A: It seems to me it's coming from several directions. It's
18 | coming down from the other end of the park and some is coming,
19 | you know, making landfall, but the water in the storm drains
20 | and so forth, it just swells up.

21 | Q: When you say it comes from the other end of the park --

22 | A: Yeah, the south end.

23 | Q: -- and just for reference, we're talking about the
24 | backyard of your house, which is --

25 | A: Yep.

1 Q: -- right here where my pen is pointing. When you say it
2 comes from --

3 **MR. LINDEMANN:** Excuse me, Your Honor. Objection.

4 Again, I don't believe he's qualified to offer this opinion.
5 It's absolutely contrary to what Mr. Castles even said. It's
6 the size of the watershed.

7 **MR. EVANS:** May we approach, Your Honor?

8 **THE COURT:** Yes.

9 **REPORTER'S NOTE:** (Whereby bench conference is held.)

10 **MR. EVANS:** If he's sitting in his house, he's certainly
11 able to testify as to where he sees the water coming.

12 **THE COURT:** Well, I'll agree with you on that. He's not
13 been classified as an expert, but he can testify to what he's
14 witnessed.

15 **MR. LINDEMANN:** But their own expert put in scientific
16 evidence that basically said that (inaudible) south end of the
17 park isn't in the watershed.

18 **THE COURT:** So you can use that in cross. I'm going to
19 allow it.

20 **REPORTER'S NOTE:** (End of bench conference.)

21 **BY MR. EVANS:**

22 Q: Judge O'Donnell, we're talking about your backyard here,
23 and you said that -- I think you said some water is making a
24 landfall coming directly from the bay here, correct?

25 A: Yes.

1 Q: And then you said water is coming from somewhere else.

2 Tell me what you observed, where that water seems to be --

3 A: Front Street from Greenwich to East Bay, which you're

4 touching Greenwich.

5 Q: Okay.

6 A: That -- there are four or five houses there, some of them

7 are neighbors. It is -- in recent events, it is going in

8 their garage, out their backyard, in that direction, north.

9 And it's winding up, ponding on Prince Street, and on occasion

10 it goes beyond Prince Street and is flooding Highmarket

11 Street. That's two city blocks from up --

12 Q: Up Front, and then it's past the neighbors -- through the

13 neighbors' yards and it's into your backyard.

14 A: Into their garage, into their backyard, and to the next

15 street of Prince.

16 Q: Okay.

17 A: And on occasion, two blocks --

18 Q: Now that we're talking about this 2016 to forward point

19 of time, have you had any conversations with the City, County,

20 or DOT folks?

21 A: I've tried not to, and I haven't, really, essentially.

22 Even though I'm very concerned, I don't want to -- I'm not

23 looking for, you know, any favorable treatment or anything

24 like that. It's just a problem.

25 Q: And what do you mean by favorable treatment? Why would

1 | you be concerned with favorable treatment?

2 | A: I just don't think that's right. I'm just a regular old
3 | guy like everybody else.

4 | Q: Are you referring to favorable treatment because you are
5 | a part-time City employee?

6 | A: That's what I mean. Yeah. I mean, I serve at the
7 | pleasure of the mayor and council, basically.

8 | Q: Now that we're in the -- well, strike that.

9 | Have you had occasion to walk Front Street -- excuse me,
10 | Greenwich, from your house, down to the park --

11 | A: Oh, yeah. Going --

12 | Q: -- on dry days?

13 | A: Yeah.

14 | Q: Have you noticed anything about the condition of the road
15 | in your --

16 | A: It seems to be in better shape further down toward Morgan
17 | Point than it is on our end of the park.

18 | Q: What do you mean?

19 | A: It seems to me that they have less water standing as you
20 | approach -- if you don't know where Morgan Park is, it's just
21 | off the pit -- the tip here of the --

22 | Q: In case anyone doesn't know, Morgan is down here at the
23 | end --

24 | A: Right.

25 | Q: -- of the park.

1 A: And the streets above it, north of it, they don't seem --
2 I don't know how much fill they brought, but I'm talking about
3 riprap, big riprap, gravel, I'm talking about dirt, I'm
4 talking about -- the project went on for a long time, I guess
5 I was stupid not to speak up and say something. I mean,
6 truckload after truckload, it just was an enormous amount of
7 everything brought to that park.

8 Q: As a result of your conversations -- strike that.

9 Have you noticed anything about the catch basins, the
10 grates, and their appearance around the corner of your house?

11 A: Yes. Yes. It's eroded, if you're not watching where
12 you're walking, you may step into a hole to the outside of the
13 boxes, you know, it's got weeds and grass growing, and if
14 you're not careful, you'll turn your ankle. It's eroded,
15 eroded. Those boxes you're talking about, they look like,
16 like the expert said, two feet by two feet or three feet by
17 three feet, and it just washes. It washes around the outside
18 of it as well as flowing water into it.

19 Q: How has that changed --

20 A: It's worsened. It's worsened. I'm careful. I cut my
21 own grass and I'm careful, you know, not to step in one of
22 those recent holes on the outside of the storm drain, grate.
23 The Christmas's mailbox is right there on the corner, and it's
24 taking a licking, too.

25 Q: As -- we've heard how the tennis courts were elevated a

1 couple of feet during the park renovation project --

2 A: I think it's three or four feet because they're ramped up
3 like this -- when they first planted the grass, they did like
4 they at the highway department, you know, they spray this
5 green stuff and it's got the grass seed, so it wouldn't wash
6 away, it was that steep.

7 I haven't measured them, but I think it's closer to three
8 and a half, four feet above.

9 Q: Have you observed tidal flooding come in from the bay and
10 go towards the tennis courts?

11 A: No. Not up toward the tennis courts.

12 Q: Well --

13 A: Eventually -- eventually, if it gets high enough, it'll
14 reach that.

15 Q: Sure. Have you observed tidal flooding come across the
16 road and head into the park after the park project?

17 A: No.

18 Q: Okay. Why not? Where does the water -- where does the
19 water go -- where have you observed the water go now?

20 A: Those fortunate people who happen to be on Front, Prince,
21 and toward Highmarket, and on Greenwich. Greenwich is much
22 worse than East Bay. We had a parade, a Christmas parade a
23 couple of years ago, big Christmas parade, surrounded the
24 entire park, ready to go down Front Street with the little
25 kids and the candy and everything.

1 Halfway through, they had to reverse, because when they
2 got to the Christmases' house, the water was so deep, the
3 floats and the things pulling them could not get through that
4 water. They had to turn around. It took about an hour and a
5 half, and go the other way. I don't know who did the
6 research, but it was happening around high tide, and it did a
7 180 for the Christmas parade, Santa Claus in the back.

8 Q: Were the tennis courts still dry at that point?

9 A: I haven't seen them inundated. At their present
10 location, I haven't seen them inundated, ever. Far from it.

11 Q: But, before the park project, they were underwater?

12 A: Yes.

13 **MR. EVANS:** Thank you, Judge O'Donnell.

14 **MR. O'DONNELL:** Thank you.

15 **CROSS-EXAMINATION OF MR. O'DONNELL BY MR. KIRK BATTLE:**

16 Q: Judge, my name is Kirk Battle. Do you remember getting
17 your Zoom deposition taken on March 25, 2022?

18 A: I wouldn't swear by the date, but it was around the
19 Episcopal House home tours, that couple of dates. It was --
20 probably was in March.

21 Q: Yes, sir. Was it over Zoom?

22 A: I think it was, yeah.

23 Q: Connection got spotty at times?

24 A: Yes.

25 Q: All the questions I'm going to ask you are based on what

1 was at your deposition. Does that sound fair?

2 A: Sure.

3 Q: When did the plaintiff buy his lot?

4 A: I'm not positive when the Christmases bought their lot.
5 I remember them buying -- I remember them building, but I
6 don't remember the year.

7 Q: When did he build his house?

8 A: Again, the exact year, I don't recall.

9 Q: Does 2003 sound right?

10 A: Sounds about right.

11 Q: Was it built on sixty pilings to elevate it above the
12 ground?

13 A: Mine was. How many they had -- I saw them driving the
14 pilings, but it was a comparable amount to what we drove.

15 Q: Fair enough, sir. It was on pilings?

16 A: Oh, yes, sir.

17 Q: All right. Is the Christmas lot itself lower than your
18 lot?

19 A: Yes, it is. By how much? Not a huge amount. Some
20 degree.

21 Q: Now, in regards to the water that's pooling here, my
22 understanding is the tides are coming in, right? That's the
23 principal issue?

24 A: It's not ocean water. It's flowing up from Winyah Bay
25 and coming from the rivers. Yeah, it's a combination of the

1 seawater and freshwater.

2 Q: Well, right. So Winyah Bay, we'll just call it that. The
3 Winyah Bay water is crossing the street at various portions
4 and pooling here, correct?

5 A: Some more than others, yeah.

6 Q: Yep. Is the water crossing here?

7 A: Yes.

8 Q: Is the water crossing about here?

9 A: Probably. Yeah, feeding to -- feeding into it.

10 Q And is it crossing about here?

11 A: Probably so.

12 Q: And the argument is the water here is traveling up and
13 coming and contributing to the pooling water.

14 A: Confluence, yes.

15 Q: But there's also water coming in here and here, correct?

16 A: Right.

17 Q: And it's all Winyah Bay.

18 A: Yeah, some of it may be from our stormwater system. I
19 just don't know which way it's flowing whether -- I know the
20 way the streets are elevated slightly, but not where it was
21 below, if it's flowing east to west or west to east or north
22 to south.

23 Q: But, ultimately, we've got the water that's directly from
24 Winyah Bay crossing y'all's lots and hitting Front Street, and
25 the water that is being redirected by the tennis courts.

1 A: Right.

2 Q: It's traveling up here. Did tidal water ever come over
3 Greenwich Drive before the renovation of East Bay Park?

4 A: I don't reckon any.

5 Q: Did you ever complain about the rising water before the
6 renovation of East Bay Park?

7 A: No. Not that I can recall.

8 **MR. BATTLE:** Permission to approach, Your Honor?

9 **THE COURT:** Yes.

10 **BY MR. BATTLE:**

11 Q: Page 44, sir.

12 A: Yes.

13 Q: If you could start Line 8, just review your testimony for
14 me.

15 A: Okay. Does that seem to indicate that while obviously
16 your testimony is that the renovations worsened the water
17 flow, it did occur beforehand?

18 A: Correct.

19 Q: Do you want to just read it?

20 A: Yeah.

21 Q: All right. I'll read, you do answer.

22 "Was there a problem with rising waters before the
23 renovation of the park?"

24 A: Not to the degree that they were and have been since. Not
25 like a mark in the sand, but it certainly worsened when that

1 project began.”

2 Q: “All right. Describe what the issue with rising waters
3 was prior to the renovation of the park. What were the
4 concerns?”

5 A: “Primary concerns are storm-driven water, hurricanes,
6 tropical storms. We did have problems when those occurred.

7 Q: We're good. Thank you. I think we're done with that
8 topic.

9 A: Okay.

10 Q: Before Mr. Christmas built his house, did it have
11 standing water on it?

12 A: On the lot?

13 Q: Yes, sir.

14 A: No. Not that I can recall. Other than tropical storms,
15 something of that sort.

16 Q: If you can turn to Page 66, please; Line 21, then on to
17 Page 67 to Line 5.

18 A: Your question?

19 Q: “Based on your response and your memory at the time a
20 year ago, does it appear that Mr. Christmas did have water on
21 his lot?”

22 A: Which line is that?

23 Q: So the question starts at Page 66. Your response starts
24 Page 67, Line 2.

25 **MR. LINDEMANN:** Your Honor, if I may, maybe you did this

1 yesterday and I just don't recall it, but explain to a jury
2 what a deposition is so that they have this information --

3 **THE COURT:** Sure. Ladies and gentlemen, a deposition is
4 a prior questioning of a witness done in the presence of
5 another court reporter. Those answers are taken down in the
6 form of a written statement, as Mr. Battle has handed him.
7 Those are sworn by a -- and they are transposed by a court
8 reporter.

9 The witness before a deposition is under oath, and that
10 testimony is to be just as used as much as testimony. Is that
11 sufficient, Mr. Lindemann?

12 **MR. LINDEMANN:** Yes, thank you, Your Honor.

13 **THE COURT:** Yes, sir.

14 **BY MR. BATTLE:**

15 Q: Would you like to just read it, Mr. O'Donnell -- or Judge
16 O'Donnell?

17 A: You're talking about with maybe twenty, starting on Page
18 66.

19 Q: Let's see.

20 "And since you had your home there for quite a while and
21 your home was there prior to the Christmas home being built,
22 do you have any observations about standing water on the lot
23 where the Christmas home is? Any issues that you noted prior
24 to that home being built?"

25 A: "I think what I've observed is the same thing since the

1 house was built. It was there before -- before the house has
2 been there and it's gotten worse. Gradually, but now
3 consistently a problem."

4 Q: Thank you, sir. When did Mr. Christmas abandon his home?

5 A: I believe they haven't lived in it a couple of years.
6 They keep checking on everything, obviously, and I see them
7 coming and going, but I don't believe they've lived in the
8 house roughly two years, would be my guess.

9 Q: In regards to your lot, you and Mr. Christmas both own
10 these two lots up here, correct?

11 A: Yes, sir.

12 Q: Did you originally both used to mow it?

13 A: I still mow mine.

14 Q: All right. And Mr. Christmas stopped mowing his?

15 A: Well, not as often, put it that way. Okay. It's --

16 Q: Did it use -- what -- you said you use it for parking.
17 Did you ever use it for any other purpose?

18 A: No.

19 Q: Did you ever play golf on it or anything?

20 A: Mr. Joe Westbrook, who was a Chevrolet dealer here for
21 many years, and his neighbors, Mr. Joe Parish, anyway, they
22 had a chip and putt that covered about in front of four
23 houses. It was beautiful. It was beautiful. That green
24 grass, that blue water beyond it, and you couldn't hit, you
25 know, a three-wood or a driver because you could chip and

1 putt, you know, and I would say it went to about a block and a
2 half, two blocks.

3 Q: So it was a neighborhood golf course?

4 A: No, it was just the owners started playing golf across
5 the street. Yeah, it was beautiful.

6 Q: Have you noticed any difference in flow since Mr.
7 Christmas started to allow grass to grow on his lot?

8 A: I don't think it's stopping for -- the grass. It flows
9 through it. That Phragmites is a real aggressive plant. I'm
10 not an expert. I'm not speaking as an expert but it --

11 Q: Yeah, I don't want --

12 A: -- it flows through it. And also flowing through it are
13 raccoons, possums, snakes. So I'm not criticizing anybody,
14 but the water passes through it. And a lot of other stuff
15 comes out of it as well, through it.

16 **MR. BATTLE:** No further questions from the County.

17 **MR. O'DONNELL:** Thank you.

18 **CROSS-EXAMINATION OF MR. O'DONNELL BY MR. LINDEMANN:**

19 Q: Thank you, Mr. O'Donnell. How are you doing?

20 A: Good morning, counsel.

21 Q: Just a few questions for you. You mentioned when you
22 started to testify that you're a full-time practicing lawyer.

23 Is that correct?

24 A: Yes, sir.

25 Q: All right. And as, basically, I guess a side job, you've

1 | also served as a municipal judge here in the City of
2 | Georgetown?

3 | A: Yes, sir.

4 | Q: And you did mention that you're actually in an appointed
5 | position, correct?

6 | A: Yes, sir.

7 | Q: You're not considered an employee of the City, are you?

8 | A: I'm a part-time employee.

9 | Q: Through your appointment as a municipal judge?

10 | A: Oh, yeah. Yeah.

11 | Q: Okay. You don't have any other role with the City?

12 | A: No.

13 | Q: You don't have anything to do with day-to-day operations,
14 | correct?

15 | A: Just holding court, setting bonds, search warrants,
16 | arrest warrants, jury trials, that type of thing.

17 | Q: And the rest of the time, you're a practicing attorney
18 | totally separate and apart from the City?

19 | A: Absolutely.

20 | Q: All right. And, just to be clear, since the City is a
21 | defendant in this case, who I represent, you're not here in
22 | any capacity as a city employee, correct?

23 | A: Absolutely not. To the contrary.

24 | Q: You're here -- you're here in your capacity because
25 | you're the next-door neighbor?

1 A: Exactly right.

2 Q: All right. And so, just to make certain again, not to
3 beat a dead horse here, but you are not speaking for the City
4 as you are here today?

5 A: Absolutely not.

6 Q: All right. Thank you, sir.

7 You had mentioned before about the depth of the water at
8 times. Have you ever measured it?

9 A: Well, from the bottom of my foot to my knee is a good
10 indicator. I haven't been measuring to the number of inches,
11 but it's been above the knee.

12 Q: Okay. And is that -- that's very rare.

13 A: Less rare than it used to be. I'm not exaggerating. I'm
14 just telling you like it is.

15 Q: I mean, you used the term earlier, "ankle-deep."

16 A: Well, it could -- deeper than an ankle, yes.

17 Q: Okay.

18 A: I had to roll my pants legs up several times to wade
19 through my backyard to my back door.

20 Q: Didn't you use the term "ankle-deep" in your testimony?

21 A: I may have at some point.

22 Q: All right. And ankle is a lot less than, obviously, the
23 knee, correct?

24 A: All I'm telling you is I may have mentioned ankle-deep in
25 places, but it has been knee-deep.

1 Q: All right. Has been, but that's, again, something very
2 rare.

3 A: Not -- it's certainly not every day. No.

4 Q: All right. And you had also discussed your observations
5 regarding the south end of the park but you're not a
6 hydrologist, are you?

7 A: Never been.

8 Q: And you're certainly not --

9 A: Don't aspire to be.

10 Q: -- and you're not an engineer.

11 A: No, sir.

12 Q: You're an attorney.

13 A: Yes, sir.

14 Q: Okay.

15 A: A homeowner, that's all I am.

16 Q: All right. And, obviously, if the scientific evidence in
17 front of this jury told them that the south end of the park
18 from the building back is not part of this watershed, you
19 don't have any reason to challenge that scientific evidence.

20 A: No. The building you're talking about was left of the
21 Alford building?

22 Q: The Alford building, yes.

23 A: I don't have any professional opinion at all.

24 Q: Okay. Last question, your backyard. Your backyard, I
25 believe, is covered with grass, flowers, shrubs, trees,

1 correct?

2 A: That's true.

3 Q: And that differs, obviously, from the backyard of Mr.

4 Christmas.

5 A: He's got a pool, I don't.

6 Q: Okay. And he's also got a lot of brick pavers back

7 there, correct?

8 A: He's got some pavers.

9 Q: Okay. And his front yard is entirely concrete, and yours
10 isn't, is it?

11 A: Well, I wouldn't say entirely, but a good bit of it is.

12 Q: Your front yard is grass, trees, bushes. It's

13 landscaped, correct?

14 A: Well, yes. A concrete circle drive and a driveway

15 leading to my two garage doors.

16 Q: And other than your driveway, it's landscaped?

17 A: Pretty much, yeah.

18 Q: All right. So that's ground cover that obviously absorbs

19 water, correct?

20 A: Sure, some do.

21 **MR. LINDEMANN:** I don't have any further questions.

22 Thank you.

23 **MR. O'DONNELL:** Thank you.

24 **THE COURT:** Mr. Evans, anything else?

25 **MS. THOMAS:** I have no questions.

1 **THE COURT:** Oh, I'm sorry. I saw you shook your head
2 earlier. I assumed that that was the case. I'm sorry, Ms.
3 Thomas.

4 **REDIRECT EXAMINATION OF MR. O'DONNELL BY MR. EVANS:**

5 **Q:** Judge O'Donnell, in your observation, when you've had
6 ankle-deep or knee-deep water, how long does it take to
7 dissipate?

8 **A:** A while. Hours, half a day. On the street, it may flow
9 as low tide approaches to some degree but the problem is the
10 backyard is -- again, on Bolick Street, it ponds. And it may
11 be two cycles. It may be a day and a half before that street
12 is anywhere near dry.

13 **MR. EVANS:** Thank you, Judge.

14 **MR. O'DONNELL:** Thank you.

15 **THE COURT:** All right. Mr. O'Donnell, you may step down.
16 Thank you.

17 **MR. O'DONNELL:** Leave this here?

18 **THE COURT:** Mr. O'Donnell, you can hand it to me.

19 **MR. O'DONNELL:** Yes, sir.

20 **THE COURT:** All right. Mr. Lucey, Mr. Evans, please call
21 your next witness.

22 **MR. EVANS:** Plaintiffs call, Stephen Geiger. I think
23 he's out in the hall.

24 **MR. LINDEMANN:** Just for the record, for my edification,
25 are the sidebars recorded?