STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL

Docket No. 446

Cellco Partnership d/b/a Verizon Wireless

Application for a Certificate of Environmental Compatibility and Public Need

for the Construction, Maintenance, and Operation of a Telecommunications Facility Located at the Pilot Corporation of America property, 60 Commerce Drive, Trumbull, Connecticut.

Council Meeting held at the Trumbull Town Hall, Council Chambers, 5866 Main Street, Trumbull, Connecticut, Thursday, April 29, 2014, beginning at 3:00 p.m.

Held Before:

ROBERT STEIN, Chairperson

1 Appearances: Siting Council Members: 2 JAMES J. MURPHY, JR., 3 4 Vice Chairperson PHILIP T. ASHTON 5 6 DR. BARBARA C. BELL ROBERT HANNON, DEEP Designee 7 8 COMMISSIONER MICHAEL A. CARON, PURA 9 DANIEL P. LYNCH, JR. EILEEN M. DAILY 10 11 Council Staff: 12 13 MELANIE BACHMAN, ESO., 14 Acting Executive Director, Staff 15 Attorney 16 ROBERT MERCIER Siting Analyst 17 18 For Homeland Towers and New Cingular 19 Wireless, PCS, LLC: 20 21 ROBINSON & COLE, LLP 280 Trumbull Street 22 23 Hartford, Connecticut 06103 2.4 By: KENNETH C. BALDWIN, ESQ. 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

1	THE CHAIRPERSON: Good
2	afternoon, ladies and gentlemen. The meeting
3	of the Connecticut Siting Council is called
4	to order this Tuesday, April 29, 2014, at 3
5	p.m. My name is Robin Stein. I'm chairman
6	of the Siting Council.
7	Other members of the Council
8	present are Senator Murphy, our vice
9	chairman; Mr. Hannon, who is designee from
10	the Department of Energy and Environmental
11	Protection; Mr. Ashton; Dr. Bell; and
12	Mr. Lynch.
13	And members of the staff,
14	Attorney Bachman, our executive director; and
15	Robert Mercier, our siting analyst.
16	This hearing is held pursuant
17	to the provisions of Title 16 of the
18	Connecticut General Statutes, and of the
19	Uniform Administrative Procedure Act upon an
2 0	application from Cellco Partnership, d/b/a
21	Verizon Wireless for a Certificate of
2 2	Environmental Compatibility and Public Need
23	for the Construction, Maintenance and
24	Operation of a Telecommunications Facility
2 5	Located at the Pilot Corporation of America
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property at 60 Commerce Drive, Trumbull, 1 Connecticut. The application was received by 2 the Council on February 26, 2014. 3 As a reminder to all, 4 off-the-record communication with a member of 5 the Council or a member of the staff upon the 6 merits of this application is prohibited by 7 8 law. 9 The Applicant to this proceeding is Cellco partnership, d/b/a 10 11 Verizon wireless and Attorney Baldwin of 12 Robinson & Cole, their representative. 13 We will proceed in accordance 14 with the prepared agenda, copies of which are available here. Also available are the 15 16 copies of the Council Citizen Guide to Siting 17 Council Procedures. At the end of this afternoon's session, we will recess and 18 19 resume again at 7 p.m. And a verbatim transcript will 20 21 be made of this hearing and deposited with the town clerk's offices in Trumbull and 22 Stratford for the convenience of the public. 23 24 And I don't believe we have any public 25 official. Unless the gentleman sitting in UNITED REPORTERS, INC. www.unitedreporters.com

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the back wants to? No? 1 Okay. And we don't have any 2 motions. Right? 3 No. 4 Okay. I wish to call your attention to those items shown on the hearing 5 program marked as Roman numeral I-D, items 1 6 7 through 54. Does the Applicant have any 8 objection to the items that the Council has 9 administratively noticed? MR. BALDWIN: 10 No, 11 Mr. Chairman. 12 THE CHAIRPERSON: Thank you. Accordingly, the Council hereby 13 14 administratively notices these existing 15 documents, statements and comments. 16 Will the Applicant present 17 your witness panel for the purposes of taking the oath, and the Council's staff attorney 18 executive director will administer the oath. 19 20 MR. BALDWIN: Thank you, 21 Mr. Chairman. Good afternoon. Kevin Baldwin 22 with Robinson & Cole on behalf of the 23 Applicant, Cellco Partnership, doing business as Verizon Wireless. 24 25 We have a witness panel for UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

you to question this afternoon which includes 1 Sandy Carter, Regulatory Manager with Verizon 2 Wireless; Mr. Ryan Ulanday, a radio frequency 3 engineer with Verizon Wireless; Carlos 4 Centore, a professional engineer with Centek 5 Engineering, the project engineers for this 6 site; Mr. Mike Libertine, an LEP and the 7 8 Director of Siting and Permitting for 9 All-Points Technology Corporation; and Dean Gustafson, the Senior Wetlands Scientist and 10 11 Professional Soil Scientist, also with 12 All-Points Technology Corporation. 13 And I would offer them to be 14 sworn at this time. 15 MICHAEL LIBERTINE, 16 GUSTAFSON, DEAN 17 SANDY M. CARTER, ULANDAY, 18 RYAN CARLOS 19 F. CENTORE, 20 called as witnesses, being first duly 21 sworn by Ms. Bachman were examined and 22 testified on their oaths as follows: 23 Mr. Chairman, we MR. BALDWIN: have five hearing exhibits listed in the 24 25 hearing program. And we actually have a UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

1	modification to one of those and an
2	additional exhibit to offer.
3	First, Exhibit 1D, the
4	Trumbull Plan of Conservation and Development
5	was just recently updated, and a March 2014
б	edition was issued to essentially update the
7	October 10, 2006, edition. Copies of that
8	technical report I'm sorry, of that
9	conservation and development plan have been
10	submitted.
11	I would point out for the
12	Council's benefit that, unlike its
13	predecessor, there is one small reference
14	that I discovered on page 94 of that document
15	to, under the utility section, related to
16	cell phone coverage in town. And it talks
17	about coverage lacking in the town center
18	area and that the Town would be working
19	actively with the providers to identify
20	appropriate ways to deal with gaps in
21	service. And that's, again, on page 94 of
22	the March 2014 plan of conservation and
23	development.
24	The additional exhibit, which
2 5	I would ask to be identified as Exhibit 6, is
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a portion of the Town Assessor's map which we 1 2 have submitted copies to the Council. This was taken from the town's GIS system. 3 There was a question that came up yesterday 4 regarding how some of the abutting properties 5 to the north, in particular, connected. 6 7 And I think this map demonstrates how the Bowen property, which is 8 identified on that map as Parcel 2975, and 9 the consumer products parcel, which is shown 10 as Parcel Number 45, connects again to the 11 12 north of the subject site. And we would ask that that be labeled as Applicant's 13 Exhibit 6. 14 15 With that, Mr. Chairman, I 16 would like to verify these exhibits. 17 THE CHAIRPERSON: Thank you. 18 Is there any objection? 19 Hearing none. 20 MR. BALDWIN: If we could ask 21 our witness panel to answer the following 22 questions. Did you prepare and assist in the 23 preparation, and are you familiar with the 24 exhibits listed in the hearing program under Roman II, Subsection B, items 1 through 5 as 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

amended, and items 6? 1 Mr. Gustafson? 2 THE WITNESS (Gustafson): Yes. 3 Mr. Libertine? MR. BALDWIN: 4 THE WITNESS (Libertine): Yes. 5 Mr. Ulanday? 6 MR. BALDWIN: 7 THE WITNESS (Ulanday): Yes, I did. 8 9 MR. BALDWIN: Mrs. Carter? THE WITNESS (Carter): Yes, I 10 11 did. 12 MR. BALDWIN: Mr. Centore? 13 THE WITNESS (Centore): Yes, I did. 14 15 MR. BALDWIN: And do you have 16 any corrections or modifications to offer to 17 any of those exhibits at this time? Mr. Gustafson? 18 19 THE WITNESS (Gustafson): No. MR. BALDWIN: Mr. Libertine? 20 21 THE WITNESS (Libertine): I do 22 have one correction I'd like to make behind 23 nine -- Tab 9 in the visibility report. On 24 page 3, the -- the paragraph above and infield activities, the second last sentence 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

states that, numerous trail systems are 1 located within the study area. That's an 2 incorrect statement and should be struck. 3 4 Although there are some footpaths associated with some of the parks, in the study area 5 there are no formal trail systems. 6 7 And with that that's the lone 8 modification I have. 9 MR. BALDWIN: Thank you. Mr. Ulanday? 10 11 THE WITNESS (Ulanday): No, I 12 don't have any corrections. 13 MR. BALDWIN: Mrs. Carter? 14 THE WITNESS (Carter): No, I 15 do not. 16 MR. BALDWIN: Mr. Centore? 17 THE WITNESS (Centore): No, I 18 do not. 19 MR. BALDWIN: And with the corrections noted, is the information 20 21 contained in those exhibits true and accurate 22 to the best of your knowledge? Mr. Gustafson? 2.3 THE WITNESS (Gustafson): 2.4 Yes. MR. BALDWIN: Mr. Libertine? 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

THE WITNESS (Libertine): 1 Yes, 2 they are. MR. BALDWIN: Mr. Ulanday? 3 THE WITNESS (Ulanday): Yes. 4 MR. BALDWIN: Mrs. Carter? 5 THE WITNESS (Carter): Yes. 6 7 MR. BALDWIN: Mr. Centore? 8 THE WITNESS (Centore): Yes. 9 MR. BALDWIN: And do you adopt the information in those exhibits as your 10 testimony today? 11 Mr. Gustafson? 12 THE WITNESS (Gustafson): Yes, 13 I do. 14 MR. BALDWIN: Mr. Libertine? 15 16 THE WITNESS (Libertine): Yes. 17 MR. BALDWIN: Mr. Ulanday? 18 THE WITNESS (Ulanday): Yes. 19 MR. BALDWIN: Mrs. Carter? 20 THE WITNESS (Carter): Yes. 21 MR. BALDWIN: Mr. Centore? THE WITNESS (Centore): I do. 22 23 MR. BALDWIN: Mr. Chairman, I offer them as full exhibits. 24 25 THE CHAIRPERSON: Thank you. UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

Since there's really no party 1 2 intervenor, I will state that the exhibits are admitted as requested. 3 4 (Exhibits II-B-1 through 5 II-B-5: Admitted in evidence - described in 6 index.) 7 And we'll now begin with cross-examination of the Applicant by Mr. 8 Mercier. 9 MR. MERCIER: Thank you. 10 11 I'll just begin with a few of 12 the things we talked about at the field review today. As for the site, why was the 13 14 rear of the building selected as a location 15 for the tower rather than the grassy area 16 adjacent to the parking lot? 17 THE WITNESS (Centore): Carlos 18 Centore with Centek Engineering. 19 At our initial site visit, 20 the -- not the property owner -- the property 21 is on the market, but the property manager 22 indicated that they wanted to keep the building and site tucked in behind the 23 24 existing building to leave the other area available, should any potential buyers want 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

to use that area in the future. 1 MR. MERCIER: Do you have the 2 approximate height of the building at the 3 4 rear? THE WITNESS (Centore): 5 It's going to vary because of the changing grade, 6 but it averages between 22 feet and 26 feet. 7 8 MR. MERCIER: Do you know the approximate height of the berm where it rises 9 10 up and turns into woodland? 11 THE WITNESS (Centore): Based 12 on the topography of our C drawings, it's 13 about 18 feet, but I can't confirm if that, that top grade elevation of 186 feet is the 14 15 top of the berm or not. So I'm going to say 16 a range between 18 and 22 feet in height. 17 MR. MERCIER: Now, to fit the 18 site back there, I understand you have to 19 build a retaining wall. Do you know the 20 approximate height of the retaining wall? Ιf 21 it varies, give me a low to high. Or --22 THE WITNESS (Centore): 23 It's -- the top of the wall from finished grade on the compound is 24 approximately 7 feet. 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

MR. MERCIER: And the compound 1 will be fenced? 2 THE WITNESS (Centore): The 3 compound will be fenced. 4 MR. MERCIER: Is there a fence 5 on top of the retaining wall, or is it along 6 the base? 7 8 THE WITNESS (Centore): 9 There's a fence along the base that ties into the retaining wall, but 10 11 there's no -- there's no face -- there no 12 fence on top. Something -- something to be considered, though, looking at the site. 13 14 MR. MERCIER: Okay. So 15 potentially, for safety's sake, if someone is walking around the back, Verizon could 16 17 look into installing a fence? 18 THE WITNESS (Centore): Yeah, we will. We will make sure to add a fence 19 20 along the top of that wall in our D and M 21 plans. There is a safety concern. 22 MR. MERCIER: And, at the top 23 of the berm, there's the woodland on up top of the hillside there above the site. Do you 24 know the approximate height of those trees? 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

1	THE WITNESS (Gustafson):
2	After our site walk, I did go up there and
3	confirm some of the tree heights with the use
4	of a clinometer and measured trees ranging
5	from 80 to 100 feet in height. So it's about
б	an average of about 90 feet in height.
7	So, compared to the elevation
8	of the tower, the trees have an effective
9	height of approximately 110 feet.
10	THE WITNESS (Libertine): I
11	would point to Photo Simulation Number 1 in
12	Tab 9. It gives you a pretty good idea of
13	standing, essentially, at grade as you're
14	driving into the property, and it gives you
15	kind of that essentially confirms what Mr.
16	Gustafson had measured in the field and just
17	stated. It gives a pretty good perspective.
18	MR. MERCIER: Also, looking at
19	that photo, I see there's locations for two
20	platforms. Is that the current capacity
21	design for the tower?
22	THE WITNESS (Libertine): I
23	don't believe so, but I'll I think we did
24	that as just an example.
2 5	THE WITNESS (Centore): The
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current site as presented is -- is showing 1 two carriers, and provisions will be made for 2 a 20-foot extension. 3 MR. MERCIER: Have you heard 4 any inquiries from other carriers regarding 5 this location up to date? 6 7 THE WITNESS (Carter): We --8 we have received notice that neither AT&T nor T-Mobile are interested in this site, so we 9 10 did contact them, but there is no interest. 11 MR. MERCIER: And was there 12 any -- I'm not sure if you contacted the Town 13 regarding emergency services antennas or any 14 of the municipal service antennas, if they 15 were interested? 16 THE WITNESS (Carter): In our 17 discussion with the Town during the tech 18 report process, we did make that offer to 19 them, but we have not heard back from them at all. But the offer stands. 20 21 MR. MERCIER: Now, looking 22 through the materials, I understand a box 23 turtle awareness program will be implemented, 24 I believe, at the request of the DEEP. Ιs 25 that correct? UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

THE WITNESS (Gustafson): 1 That's correct. And we've submitted details 2 of that plan to DEEP for their review. 3 4 MR. MERCIER: Do you know if they had any historic records in the woodland 5 behind the site, or is that just a general 6 7 vicinity where box turtles were recorded? 8 THE WITNESS (Gustafson): We were not provided specific information 9 10 regarding the occurrence of Eastern Box 11 Turtle in the area, but based on a review of 12 the mapping, it appears that it's in the 13 vicinity and not -- may not be necessarily associated with the woodlands directly 14 15 abutting the site. But that potential 16 certainly exists, and our protection plan 17 accounts for that potential existence. Is that woodland 18 MR. MERCIER: 19 area, is that suitable habitat for the 20 turtle, box turtle? 21 THE WITNESS (Gustafson): Τt. 22 does provide some -- some habitat. It is 23 fairly highly fragmented, observing the 24 surrounding corporate office park as well as the residential development, but it does --25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

they do have a fairly small home range so 1 there is a potential that a couple of 2 individuals could be associated with that 3 4 woodland block and that stream system to the north. 5 MR. MERCIER: Just out of 6 7 curiosity, do they use grassy areas 8 frequently if they're in their home range? 9 THE WITNESS (Gustafson): 10 They're -- for the most part Eastern Box 11 Turtles are habitat generalists. They'll 12 utilize a variety of habitats and will move 13 from -- from the woodland to those grassy 14 areas as well as to the stream system. 15 MR. MERCIER: Okay. Thank 16 you. 17 THE WITNESS (Gustafson): You're welcome. 18 19 MR. MERCIER: Now, reading 20 through the application, I understand the 21 site that's presented here is to relieve 22 capacity from adjacent sites, adjacent 23 existing sites. I'm trying to determine what kind of information Verizon uses to determine 2.4 that an additional site is needed for 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

capacity relief. 1 Is it different than, you 2 know, the old style where, you know, they had 3 gaps in coverage and there's dropped calls 4 and things of that nature? Or is there other 5 types of information utilized? 6 7 THE WITNESS (Ulanday): You're 8 right. This site is purely a capacity site, and we have an historical collection of 9 info -- information and data showing that the 10 neighbor -- neighboring sectors are currently 11 12 hitting our threshold for us to add capacity 13 in that area. 14 MR. MERCIER: So when you say "a threshold," they're fully utilized for a 15 16 certain period of time or almost that? 17 THE WITNESS (Ulanday): Not actually. We take it to a point that we 18 19 still have time to react and to add 20 additional capacity. So right now it's not 21 fully in full capacity, so we just have that 22 threshold that we maintain for us to have 23 enough time to react. 24 THE CHAIRPERSON: Mr. Lynch, I 25 think, had a follow-up question. UNITED REPORTERS, INC. www.unitedreporters.com

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MR. LYNCH: Excuse me. Τf 1 this is a capacity site, what other sites in 2 the surrounding area have reached their 3 capacity so you need to hand off here? 4 5 THE WITNESS (Ulanday): Actually, not off the proposed tower. 6 We 7 have the, what we call the Shelton site -- in 8 Trumbull East. I'm sorry about that. It's the Trumbull East site. It's on the water 9 tank three quarters of a mile north of our 10 And all those sectors are 11 proposed tower. 12 hitting our threshold for exhaustion. 13 And then we have another site 14 south of our proposed tower which is 15 approximately half a mile. It's on the --16 it's on the Marriott Building. And I believe 17 just one sector of it -- the Marriott 18 Hotel -- and the sector pointing to the 19 corporate park is actually exhausting on that 20 site. 21 And we have another site 22 east -- a mile east of our proposed tower, which is what we call the Stratford North. 23 24 It's on the monopole, and all sectors on that site as well is exhausting. 25 UNITED REPORTERS, INC. www.unitedreporters.com

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MR. LYNCH: So are the sites 1 you just mentioned, only one is a tower? 2 The other facilities are all on structures? 3 THE WITNESS (Ulanday): That's 4 5 correct. MR. LYNCH: Thank you. 6 7 MR. MERCIER: With this site 8 that you're proposing here today, would that replace any of the sites that you just 9 mentioned, or they'll just work all together? 10 THE WITNESS (Ulanday): They 11 12 will work, work all together. 13 MR. MERCIER: Now, in regards 14 to the visibility, in the response to 15 interrogatories, I understand there's eight 16 residential properties that could have 17 year-round views of the facility once 18 constructed. Are any of those of abutting 19 properties? 20 THE WITNESS (Libertine): Yes. 21 The -- there's a handful along Huntington Road, which abuts to the east. Those are 22 23 properties -- you can see a few of the homes 24 through the trees. So, again, Huntington Road 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

there are a couple. And then there may be a 1 few along Twin Circle Drive, which is further 2 to the north. Our -- the property, the host 3 property extends another 200 feet, and then 4 there's another small property, a narrow 5 property in between that and the backyards of 6 the homes there. 7 8 It's very -- it was very difficult at all times of the year to try to 9 get a handle on whether or not there was that 10 much visibility on a year-round basis, 11 12 because a lot of the homes along Huntington, 13 in particular, we really could not see the 14 balloon from the roadway. But it's clear 15 because of the proximity -- we're only 16 talking a couple hundred feet -- I think, you 17 know, through the trees you're probably going 18 to see some portion of the tower. 19 The only thing I would perhaps 20 say that might be helpful is there are --21 Photo Number 2 was taken from Twin Circle 22 Drive -- actually 2, 3 and 4 -- and it gives 23 you a pretty good idea of the density of that woodland. That's also elevated above the 24 25 site, so if they were to see it through the UNITED REPORTERS, INC.

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trees, we're talking about the upper portion 1 of the tower. 2 And then a little bit further 3 into the report when we get into Photos 7, 8, 4 and 9 and we tried to give an idea of as you 5 drive down Huntington what you're going to 6 7 see, and I think we were pretty probably 8 conservative in calling a lot of these year-round views. But I would stand with 9 that and say, yeah, you know, there's going 10 11 to be some. None -- none of them are 12 unobstructed, and none of them have the 13 14 balloon or the tower, in this case, above the 15 tree line. So all of them will have some 16 kind of a buffer even on a year-round basis, 17 but those were the homes that were the -- the 18 residences that were most affected were 19 really the ones that are abutting the 20 property. 21 MR. MERCIER: Okay. So the 22 eight that were noted in the interrogatories, 23 that includes Twin Circle and Huntington? 24 THE WITNESS (Gustafson): 25 Correct. UNITED REPORTERS, INC. www.unitedreporters.com

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MR. MERCIER: No other 1 2 streets? THE WITNESS (Libertine): 3 Well, I didn't include it in this count, 4 5 although in the report I noticed, when I was cross-referencing, I do have one other photo 6 from a site that is to the west of, actually 7 8 the Merritt Parkway. And that's on St. John's drive -- I'm sorry, Route 8. 9 Thank you. 10 11 That's Route 8, and then 12 there's Merritt Boulevard that we came down 13 to access Commerce Drive. 14 Photo 5, you can see that 15 through the trees. I called it a year-round 16 view. There are real -- no residences as you 17 move to the right in this photo, but I -- so 18 I didn't include any in those. So again, 19 it's really the two roads that kind of 20 surround our site are where you're going to 21 get the majority of year-round views. 22 MR. MERCIER: Okay. Thank 23 you. 24 Just back to the tree heights again and also the height of the tower. 25 Ι UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

think the tower is about 3 feet shorter than 1 the top of the trees. I believe that was the 2 testimony earlier? 3 THE WITNESS (Libertine): 4 5 Effective tree height, yes. MR. MERCIER: So how does that 6 7 affect coverage? What's your orientation of 8 the site? And would the trees affect any type of coverage? 9 THE WITNESS (Ulanday): 10 The trees are actually to the north of the site 11 12 and we need the added capacity towards the 13 south, towards the corporate park, towards 14 the buildings around the corporate park. 15 And we -- we also need to 16 enhance vehicular traffic along Route 8 and 17 route -- Route 15. So we really don't need 18 that much coverage towards the north. So 19 that tree line actually helps us limit our --20 the extent of our coverage towards the north. 21 MR. MERCIER: Okay. Thank 22 you. And finally, could you just 23 24 describe the balloon fly that occurred during the field review today? 25 UNITED REPORTERS, INC. www.unitedreporters.com

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1	THE WITNESS (Libertine):
2	Well, unfortunately, we had a pretty breezy
3	day. We were at the site at 7:30 this
4	morning, and there have been attempts
5	throughout the the morning and early
6	afternoon. We've lost as of the site walk
7	at two o'clock, we were well, by the time
8	we left that was the seventh balloon that was
9	put up, so we did lose quite a few.
10	It's been it's been
11	difficult. As you can see, unfortunately
12	the the winds as they're blowing around at
13	ground level it doesn't feel like there's all
14	that strong a breeze, but once you get up
15	into the tree line, the problem is to keep
16	it aloft has been very difficult just because
17	we've got the trees so close to the site
18	itself. So it's not been a real successful
19	day in terms of balloon flying. We are going
20	to continue to keep balloons up until six
21	o'clock, which is the prescribed time by the
22	Council.
23	MR. MERCIER: Okay. Thank
24	you. No further questions.
2 5	THE CHAIRPERSON: Thank you.
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1	Senator Murphy?
2	SENATOR MURPHY: Thank you,
3	Mr. Chairman.
4	Just a few things.
5	Mr. Libertine, how high would this tower have
6	to be in order to be viewed from the Merritt
7	Parkway?
8	THE WITNESS (Libertine): I'm
9	going to estimate here, but I think you'd
10	probably have to get it another 30 feet or
11	more before you start to see it on the
12	Merritt.
13	SENATOR MURPHY: So in your
14	opinion, if it went up to 20 feet which
15	would effectively be 103, under the Wolinski
16	Rule, in your opinion, it would not be
17	visible from the Merritt Parkway?
18	THE WITNESS (Libertine):
19	Correct.
20	SENATOR MURPHY: Okay. If it
21	were to go up the 20, assuming the antennas
22	protrude again on the top as they will on the
23	80 feet, what will that do to the surrounding
24	visibility that you analyzed and gave us a
2 5	report for this application?
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1	THE WITNESS (Libertine): I
2	think, essentially, an effective 20-foot
3	swing or less is probably not going to
4	significantly alter the view shed or even
5	really the characteristics. I think if you
6	get above that, now you start to eclipse that
7	tree line. North and east are really the
8	major visual receptors. The corporate park
9	is going to see it from some of the locations
10	within the corporate park itself.
11	SENATOR MURPHY: They may just
12	see a little bit more?
13	THE WITNESS (Libertine): They
14	may see little bit more, but I think that
15	20-foot I'll use that 20-foot kind of rule
16	of thumb in this location where it's not
17	going to have a great affect on it again if
18	we start going above that. I think now
19	you're starting to probably have some views
20	above the trees from some of the neighboring
21	properties and even across the roads
22	themselves. They would it would open up
23	above 20 feet.
24	SENATOR MURPHY: Thank you.
2 5	THE WITNESS (Libertine):
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You're welcome. 1 SENATOR MURPHY: Mr. Ulanday, 2 on capacity, I heard the questions from Mr. 3 4 Mercier. And one of the things as a member of the Council, there's supposed to be an 5 indication from the evidence that there's a 6 7 need for this tower, and we get propagations 8 and it's a capacity thing. So really it's coverage on coverage. 9 How do you convince me that 10 11 what you've got there ain't working, or very 12 soon is not going to be working well? 13 THE WITNESS (Ulanday): Well, 14 that's --15 SENATOR MURPHY: The 16 application does spell out that the near 17 capacity of two of the three towers is almost 18 there, less so on Trumbull East. So somehow 19 you're able to discern this. So explain to 20 me how you go about this, and convince me 21 that you're really going to put this up 22 because we're going to be joking ourselves in a little while. Go ahead. 23 2.4 THE WITNESS (Ulanday): Actually, we have historical 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

data that shows all our existing sites within 1 the area are exhausting. And we know right 2 now that -- that we -- we are seeing 3 astronomical pickup and use of the new 4G LTE 4 smartphones and, with that, the use of our 4G 5 LTE resources. So that's why --6 7 SENATOR MURPHY: So what 8 increase in capacity, ballpark, have you had 9 in the last 12 months have you had that, or calendar year, or whatever it is, on Trumbull 10 North, East, and Trumbull Two, if you know? 11 12 THE WITNESS (Ulanday): Yeah. 13 We're seeing a lot of use in data, 14 specifically down -- download data from our 15 subscribers. 16 SENATOR MURPHY: Okay. And 17 what percentage of an increase can you give to us? 18 19 THE WITNESS (Ulanday): Ι don't have the exact number, but we have a 20 21 threshold that we use in Verizon Wireless. 22 Any time we hit that threshold --SENATOR MURPHY: 23 When? When 24 do you estimate that you reach your threshold 25 on Trumbull 2? UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

1	THE WITNESS (Ulanday): On
2	Trumbull 2, we do them based on our
3	historical data, we do a two-year projection,
4	and I believe Trumbull 2 is is within that
5	two-years.
6	SENATOR MURPHY: Within the
7	two years?
8	THE WITNESS (Ulanday): Yeah.
9	SENATOR MURPHY: Okay. What
10	about Trumbull North?
11	THE WITNESS (Ulanday): All
12	those three sites are actually within two
13	years.
14	SENATOR MURPHY: They're all
15	within two years?
16	THE WITNESS (Ulanday): Yeah.
17	SENATOR MURPHY: Why is it
18	then that you indicated that in the
19	application that it's not such an immediate
20	need for Trumbull East as it is for the other
21	two, as I read it, that the nearing of the
22	capacity was not so bad as to Trumbull East
23	in reading it?
24	But in any event, you're
2 5	envisioning that within the next two years
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there would be a spillover capacity of each 1 2 one of those three current towers that you're using in this area? 3 THE WITNESS (Ulanday): That's 4 5 That's right. correct. SENATOR MURPHY: And when was 6 7 this study done, this two-year study? 8 THE WITNESS (Ulanday): It was done actually almost a year ago, so we're on 9 the first year right now. 10 11 SENATOR MURPHY: Do you know 12 of any reason that it's changed in the last 13 year? 14 THE WITNESS (Ulanday): Say 15 that again? 16 SENATOR MURPHY: Do you know 17 of any reason why you would think that the 18 results of that study have changed? 19 THE WITNESS (Ulanday): 20 Actually, if it would have changed, it would 21 have been just more on the drastic side, 22 because we're seeing a lot --23 SENATOR MURPHY: So it may be 24 that the capacity might be reached on maybe two of them is less than a year? 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

THE WITNESS (Ulanday): That's 1 2 true. SENATOR MURPHY: It could be? 3 4 Okay. 5 THE WITNESS (Ulanday): Ιt б could be. 7 SENATOR MURPHY: I have no 8 other questions, Mr. Chairman. 9 THE CHAIRPERSON: Thank you. Mr. Ashton? 10 11 MR. ASHTON: Thank you. Ιn 12 that same regard you mentioned that there was 13 a volume of calls coming out of the Commerce 14 Park area along Route 8. How do you pin down 15 the source of the call, the geographic location of that call? How do you know 16 17 Commerce Park versus a car on Route 8 right in back of them? 18 19 THE WITNESS (Ulanday): 20 Actually, we have software that we use, a 21 program which takes a snapshot of our network 22 in a certain -- in a specific time. And when 23 I say, a snapshot, it takes -- on that 24 specific time, it takes all the subscribers in that cell site, all subscribers that are 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

making a voice call, texting, doing 1 downloadings or just idle. 2 And together with that 3 information there is what we call, like, a 4 timing advance where -- where the -- where 5 the handset sends out how just -- what are we 6 to call this? It sends out how high is the 7 8 signal that is receiving from the -- from the 9 cell site. And with that signal the -- the cell site then estimates how far it is, how 10 far the handset is from the cell site. 11 12 And, actually, we can gather 13 all that data and plot it on a map. We call 14 it a traffic map. So right now with this 15 proposed site we're seeing all that traffic 16 concentrated on the corporate park. 17 MR. ASHTON: Having done a 18 little long-range planning in the past, what 19 is your planning horizon? How far out do you 20 qo? 21 THE WITNESS (Ulanday): Like I 22 said earlier, we do two years. That's all? 23 MR. ASHTON: 24 THE WITNESS (Ulanday): But it depends actually, because we're continually 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

rolling out new -- new services. So before 1 we roll out new services, we kind of see and 2 make sure that all our cell sites are capable 3 of serving all our subscribers. 4 MR. ASHTON: If, for the sake 5 of argument, all the phones in this 6 7 geographical area are on the AT&T system --8 THE WITNESS (Ulanday): Uh-huh. SENATOR MURPHY: -- and if 9 AT&T decided in its infinite wisdom that it 10 11 was going to abandon all hardwire phones, and 12 the public is making a big dent in that right 13 now, what would that do to traffic on your 14 cell phones? 15 THE WITNESS (Ulanday): Ιt 16 would definitely add a lot of traffic. 17 MR. ASHTON: Quantify that. 18 Can you? 19 THE WITNESS (Ulanday): I'm 20 not sure what -- because I'm not sure what 21 you're getting at. 22 MR. ASHTON: Okay. Well, let 23 me be more specific. If I remember the 24 numbers right, and it changes by the month, 25 there's about 35 percent of all the wired UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

landlines have been abandoned. 1 THE WITNESS (Ulanday): Uh-huh. 2 MR. ASHTON: 3 Okay? 4 THE WITNESS (Ulanday): Uh-huh. 5 MR. ASHTON: Let's suppose a 6 hundred percent gets abandoned over the next 7 12 months. What would that mean in terms of 8 impact on the volume of calls Verizon is 9 likely to see on its cell facilities? 10 THE WITNESS (Ulanday): Well, 11 for example these, cell -- cell sites are --12 have a finite capacity. So --13 Well, I know, but MR. ASHTON: 14 you find ways of you put on more antennas per 15 sector, or you put up more antennas period. 16 You find a way to skin the cat. 17 THE WITNESS (Ulanday): Yeah, 18 probably we -- we'll be buying more frequencies if we see the need. 19 20 MR. ASHTON: All right. But 21 would you be able to handle those that you 22 simply load those additional frequencies on 23 to a given cell site such as this one and that would handle the volume? 24 25 THE WITNESS (Ulanday): I can UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

only speak for Verizon wireless, but yes. 1 MR. ASHTON: I understand, but 2 you're a smart RF engineer. You've got to be 3 looking over your shoulder at what's 4 5 happening to AT&T and all the rest of the world, too? 6 7 THE WITNESS (Ulanday): Yeah, 8 I think we have enough resources to handle 9 all that. MR. ASHTON: Ignoring the 10 11 ownership of facilities, in other words, 12 lumping AT&T and Verizon, and so forth, wireless together, if AT&T abandoned its 13 14 hardwired system what would that do to the 15 aggregate volume of all carriers in the cell 16 system? 17 THE WITNESS (Ulanday): We 18 will definitely see a large volume of traffic. 19 20 MR. ASHTON: Okay. What are 21 we talking about, though? Your large volume 22 and my large volume might be worlds apart. Are we talking a doubling of traffic? 23 Are we 24 talking a 10 percent increase in traffic? 25 THE WITNESS (Ulanday): Ι UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

don't have the exact number right now. 1 2 MR. ASHTON: But use your judgment. 3 4 THE WITNESS (Ulanday): 5 Definitely, it's was more than double the 6 traffic. 7 MR. ASHTON: It would be more 8 than doubling? 9 THE WITNESS (Ulanday): Yeah. MR. ASHTON: Okay. That's 10 11 helpful. The backup generation proposed for this site is diesel. Is that correct? 12 13 Mr. Centore, I guess that's your --14 THE WITNESS (Centore): That's 15 me. 16 MR. ASHTON: -- your wigwam 17 I'm getting into? 18 THE WITNESS (Centore): Yes, 19 it is. 20 MR. ASHTON: Is there any 21 natural gas available on the site? Do you 22 know? THE WITNESS (Centore): 23 There 24 is. There is natural gas on the site. The gas at the street is 2 psi. It's low, but 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

we'd have to put a booster -- booster pump 1 2 in. 3 MR. ASHTON: Two pounds per square inch gauge pressure? 4 5 THE WITNESS (Centore): Τwο 6 per square foot. 7 MR. ASHTON: I'm sorry. 8 THE WITNESS (Centore): Two 9 psi, yes. MR. ASHTON: 10 That's a gauge 11 pressure? 12 THE WITNESS (Centore): Yes, 13 gauge pressure. 14 MR. ASHTON: And that's not 15 adequate for a diesel? 16 THE WITNESS (Centore): Not to 17 power up, not to get the initial start up on the diesel. 18 19 MR. ASHTON: Oh, I didn't know 20 Okay. Thank you. I learned something that. 21 new to me. 22 I have to be careful that I 23 don't get accused of promoting natural gas. 24 This is not Yankee territory, for whatever 25 comfort that is. In discussions with state UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

staff, and I'm going to leave it very vague, 1 2 they are very uneasy about the proliferation of diesel equipment from an air-pollution 3 standard area. Whether that's valid or not, 4 I won't debate, but insofar as they're uneasy 5 about it, do you have any strong preferences 6 7 as to natural gas versus diesel? 8 THE WITNESS (Centore): I -- I would from an operational standpoint. 9 And 10 that is that many times in -- if there is a naturally occurring emergency, a storm event, 11 12 there's power outages. Sometimes natural gas 13 needs to be shut off in the street to avert 14 any potential problems due to -- due to the 15 gas, and that would cut off any power supply 16 to our natural-gas fed generators, where we 17 don't have that problem with the -- with the 18 diesel and/or propane. 19 MR. ASHTON: I want to take 20 that slowly, because I'm not sure I 21 understand it. You're telling me, am I 22 correct, that in the event of a natural disaster of what nature? 23 2.4 THE WITNESS (Centore): 25 There's been a -- on a couple UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

of occasions, Verizon has had issues, and I 1 couldn't tell you specifically which 2 buildings, though. But it was brought to my 3 attention that they had power outages and 4 5 thought it was -- I forgot if it was a flooding event or a windstorm, but they shut 6 7 off gas to the building for -- for concerns 8 of safety of the building with the gas service going in and lost power to their 9 generator on the shelter. 10 11 MR. ASHTON: Lost power to 12 their backup generator? 13 THE WITNESS (Centore): Yes. 14 MR. ASHTON: And you're 15 telling me the utility electric supply also 16 was out? 17 THE WITNESS (Centore): 18 Correct. I've never heard 19 MR. ASHTON: 20 that before. That's surprising. 21 THE WITNESS (Centore): Yeah. 22 And they've actually been adding remote connections for drive-up emergency generators 23 24 in case that would happen on any sites that have natural gas on them, generator plugs. 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

MR. ASHTON: The generator 1 floods? 2 THE WITNESS (Centore): Pluqs 3 4 there. 5 MR. ASHTON: Oh, plugs. Okay. I've got to think about that. I've never --6 7 it's something I've never encountered before. 8 I thought you might get some brownie points 9 from the State as far as cutting back 10 emissions. I know standby units are exempt, 11 but I have other thoughts in the back of my 12 mind as to what these units can be used for. 13 Would the same apply to 14 propane? 15 THE WITNESS (Centore): Τt 16 would not. Propane can be refueled, like the 17 diesel can be refueled. It's the natural 18 gas, shut it off, the valve in the street, 19 you're done. You're not bringing in an 20 alternative. 21 MR. ASHTON: I'm puzzled 22 because I can never recall in my career a 23 situation where that occurred. Okay. I'm 24 going to have to -- we'll have to go to 25 the --UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

THE WITNESS (Centore): I can 1 try to do some homework before the afternoon 2 session to see if there's --3 MR. ASHTON: It's not 4 5 appropriate. My concern here was to avoid an emissions issue. 6 7 THE WITNESS (Centore): 8 Understood. 9 MR. ASHTON: And that's all. THE WITNESS (Centore): Yeah. 10 11 MR. ASHTON: Your experience 12 is your experience. I have to accept that. 13 Mr. Libertine, time to pick on you. I looked at the diagram of visibility 14 15 at the back of Section 9, and frankly, I was 16 amazed. This says it's visibility for --17 visible, pardon me, for roughly half a mile, 18 sort of, radius around that site, and I have 19 trouble believing it. 20 THE WITNESS (Libertine): It's 21 pretty generous. 22 MR. ASHTON: It's pretty 23 pessimistic. THE WITNESS (Libertine): What 24 25 we've done over the last couple of years with UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

the model is we really -- we've really 1 fine-tuned it with much better data in terms 2 of the topo in the way we can extract forest 3 fires. And that's all great. 4 The downside to it is that 5 it -- with the limitations that we do put 6 into the model with the assumptions, we still 7 8 find that it overpredicts. One of the challenges I have is, when I can't access 9 properties, I'm now much more reluctant to 10 extract that based on observations I can see 11 12 around me, because I just can't confirm that. 13 So we are probably now showing more visibility, on average, on our 14 15 visibility analyses than we ever have in the 16 past, and it's just that's the function of it 17 is that we have decided that we will put in 18 all the assumption we can make and try to be 19 as real-world as we possibly can, but -- and 20 this is a perfect example where it's very 21 clear. 22 Actually, beyond these photographs, I don't think you're going to 23 24 get any visibility, and I think the photographs kind of bear that out because 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

it's just so dense in that area in terms of 1 the woods. 2 MR. ASHTON: Yeah. T had --3 also had problems sorting out the difference 4 between seasonal and year round in here. 5 And the color distinction just didn't make --6 7 just didn't work for me. I'm not color blind or anything like that. 8 9 THE WITNESS (Libertine): No. We're trying to play with colors 10 Yeah. 11 as well. I've had a problem with that, too. 12 It looks better on a screen, but when we go 13 to print, we have a problem with it. 14 One of the things I've been 15 trying to do is, lately over the last year or 16 so, is presenting both a topo version as well 17 as aerial. It tends to show a little bit 18 better. Verizon is great in terms of 19 allowing me to use whatever I want to depict 20 this, but when you get in a group of people, 21 some people don't want -- I -- I would love to use red, but I know red has a connotation 22 23 of bad, so no one wants to use red. 24 And if we use blue, that tends 25 to conflict with what -- what bodies of water UNITED REPORTERS, INC. www.unitedreporters.com

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and that type of thing. We've settled on the 1 orange and the yellow, but you're absolutely 2 right. Sometimes making the distinction, 3 especially when you've got a tight grid --4 MR. ASHTON: The distinction 5 on the aerial is much clearer to me than the 6 7 previous page. 8 THE WITNESS (Libertine): 9 Absolutely. So I'm -- I'm empathetic to what 10 you're saying. We're still -- we're always trying to kind of improve that for the 11 12 reader, because obviously we're trying to 13 tell a story. 14 MR. ASHTON: The other 15 thing -- and I think we've gone around on 16 this on other dockets -- the other thing that 17 bothers me a bit is that to have the top 18 6 inches of the tower visible doesn't, in my 19 mind, mean it should be declared a visible 20 tower. It's kind of painting a pretty stark 21 all-or-nothing type of picture. 22 THE WITNESS (Libertine): 23 Right. 24 MR. ASHTON: And I really don't like it, but I have no good ideas, no 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

good suggestions as to how we get around it. 1 You know, I think, on this specific site, 2 98 percent of the visibility is going to be 3 the top 10 feet, if it's -- if that? 4 THE WITNESS (Libertine): 5 Ιf at all. Right. Absolutely. 6 7 MR. ASHTON: And I don't know 8 what to do about it. THE WITNESS (Libertine): 9 I'm struggling with it, too. You'll notice 10 11 there's a lot more -- there's a lot more 12 language in the report speaking to this very 13 issue, because again the model, the limitation is it's a point site to site. 14 And 15 if you're standing at point A and you're 16 looking at the tower at point B, if you can 17 see 1 inch, it's going to show. 18 So the purpose of the maps, 19 I've always said, is to give the numerical 20 aspect that, you know, to quantify where you 21 could potentially see it. I really try to 22 rely on the photographs to give an idea of the characteristics because that's really 23 24 what it's all about. And you're -- you're speaking exactly to an issue that we've 25 UNITED REPORTERS, INC. www.unitedreporters.com

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struggled with. 1 We've actually taken into 2 account at times where we've said, Oh, 3 let's -- let's drop 5 feet from the top of 4 the tower and see what the difference is and 5 see how many of these kind of, what I'll 6 7 call, "noise," for lack of a better term, 8 that we're showing here. 9 But I've -- I quess I -- I struggle with it. And this is the best that 10 11 we've kind of come up with a compromise 12 solution, and we're -- we're always looking for input on it. The problem I have with 13 14 extracting it and saying it's visible or 15 not -- or saying it's not visible is that, 16 theoretically, it could be visible and it is a model. 17 So it's a balance. 18 It's a 19 very -- it's a tough balance, but you're 20 absolutely right. This is one site where 21 it's very evident, when you compare the 22 photos and you compare the footprint, it's clear this -- this is showing much more 23 24 visibility than what's really happening in real life. 25

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Does your system 1 MR. ASHTON: allow for identification of a building that 2 sticks up above the topography, and hence 3 anything on the backside of that building, 4 any viewing area is blocked because of the 5 presence of the building? 6 THE WITNESS (Libertine): 7 Yes. 8 One of the things we're able to do now, which 9 we weren't able to do just a few years ago, is to have the model actually extract 10 11 buildings, forest layers. 12 We can actually tell the 13 difference by -- we wrote some script files 14 where we can actually tell the difference 15 between the different landforms. So we can 16 tell an asphalt building, we -- an asphalt 17 roof on a building, roads, systems, water 18 bodies, deciduous trees, coniferous trees, 19 open sandlots versus grassed areas. So we 20 have all these characteristics, and then we 21 have to assign certain values, and the values 22 that are most important are the tree heights 23 and building heights. In a case like this where we 24 have kind of a mix, we have commercial 25 UNITED REPORTERS, INC. www.unitedreporters.com

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buildings and homes, it's a little bit more 1 difficult. When we're in much more urban 2 areas, then we can assign kind of an average 3 4 height. But to answer your question, yes, the -- those obstacles are built into this. 5 MR. ASHTON: There's one 6 7 building in particular that struck me as I 8 drove out and that I thought would block 9 viewing from a significant arc, because it's relatively close to the tower. 10 11 THE WITNESS (Libertine): Uh-huh. 12 13 MR. ASHTON: Relatively high. 14 THE WITNESS (Libertine): 15 Right. 16 MR. ASHTON: And anything, in 17 this case, west of that building you ain't 18 going to see it. 19 THE WITNESS (Libertine): No, 20 I agree. And again, it's -- it's I agree. 21 at the scale we're talking about, and again 22 because we have to kind of -- there's a 23 smoothing technique that has to be done so 24 that we just don't have blocks, because we 25 could have -- we could have a lot of open UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

areas that are probably more realistic, but 1 it gets very tedious to really look at and 2 try to discern at these scales. It -- it is 3 a problem from -- from that standpoint, but I 4 5 agree with you. There are some buildings that are going to just basically make it so 6 7 you can't see it beyond a certain point. 8 MR. ASHTON: Thank you. 9 Mr. Mercer answered -- got the answers to three questions I had. Mr. Murphy 10 got one. And I'm all set, so I'll turn it 11 12 over to Mr. Hannon. 13 THE CHAIRPERSON: Okay. 14 Mr. Hannon, your turn. 15 MR. HANNON: Thank you. Thank 16 you, Mr. Chairman. I do have a couple 17 questions. I noticed that the local 18 regulations talk about towers being 750 feet 19 from residential properties. I think the closest unit here is 390. Any comments from 20 21 the Town about that? 22 THE WITNESS (Carter): No. No 23 comment. 24 MR. HANNON: Okay. One of the questions I asked down at the site, I've got 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

some questions about the design for the 1 retaining wall and how the drain pipe that, 2 I'm assuming, is going to be installed behind 3 the wall is going to collect water, and then 4 5 what's going to happen to that water? Because the wall is such that 6 7 you've got the two wings on it. So, 8 theoretically, if the pipe is going to wrap around that, it's got to go somewhere. 9 And you're showing it in the schematics that the 10 pipe is going to be above grade. So I'm just 11 12 trying to figure out how you're proposing to 13 deal with any water coming out of that pipe 14 so that it's not going to potentially create some erosion problems? 15 16 THE WITNESS (Centore): Sure. 17 That's a good question. That -- that pipe is 18 to relieve hydrostatic pressure, groundwater from behind the wall. We would weep that 19 20 pipe out through the face of the wall right 21 into the compound area, and I don't anticipate it having high flows of water or 22 velocities that would cause erosion. 23 What's not shown in the detail 24 25 that you have in front of you -- and that's UNITED REPORTERS, INC. www.unitedreporters.com

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1	part of this set. I believe it's detail 3 on
2	C4, the retaining wall, is is that, as
3	part of the D and M plan, when we finalize
4	the the drainage around the site there
5	will be a a swale created along the back
6	of that while that's going to drain towards
7	the east.
8	And that, that swale will be
9	protected with it will be seeded or
10	stoned, whichever the the appropriate
11	measure is avoid erosion and allow it to
12	drain naturally to the east where the
13	where the water currently drains on site.
14	MR. HANNON: East or west?
15	THE WITNESS (Centore): North,
16	south, I got my directions wrong. To the
17	west, towards the transformer to the west.
18	MR. ASHTON: Okay. And then
19	with that I'm going to follow up on the issue
20	about the generator and going in and sort of
21	regrading so that you're putting in a swale
22	that drains towards the water body, to me,
23	would seem like this may be a good spot for a
24	propane facility rather than diesel so that
2 5	if there was a spill with the diesel, you're
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almost setting up a channel going right to 1 the water body. So I don't know if you have 2 3 any --THE WITNESS (Centore): Well, 4 I -- we could. I understand your point. I 5 don't know that this, the volume of runoff 6 7 that we're talking about at this particular site, is anything excessive, but it is 8 9 runoff. MR. HANNON: But they're 10 11 talking about tomorrow possibly 3 inches of 12 rain. You know, if that happened to tie in 13 with some type of a leak from a 14 diesel-powered generator, it can create a 15 problem down into the water body. So --16 MR. ASHTON: You have a rifle 17 shot into that water body. 18 MR. HANNON: So it's something 19 to think about. 20 THE WITNESS (Centore): It's 21 something to think about. I'm comfortable 22 with the fact we've got three forms of 23 containment on one -- on these sites, that 24 generator itself and the tank -- and the belly of the tank have -- have a containment 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

And then as tertiary containment the 1 system. floor is designed to hold the -- the volume 2 of fuel. And any other --3 4 MR. HANNON: Ts it 5 100 percent, 110 percent capacity? THE WITNESS (Centore): Excuse 6 7 me? 8 MR. HANNON: For any type of retaining area, is it about 110 percent of 9 10 the capacity of the tank? 11 THE WITNESS (Centore): 125, 12 125 percent. They're very contained. 13 They're very -- Verizon's environmental 14 policy is pretty strong, and they -- they, if 15 they have any concerns of an environmental 16 issue associated with their installation 17 being diesel, they require us to design 18 propane and/or natural gas, whichever is 19 available. 20 MR. HANNON: Okay. And I'm 21 happy to hear that you're talking about like 22 a reservoir of, like, 125 percent, because 23 that's typically greater than what you'll 24 normally see. 25 THE WITNESS (Centore): You'll UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

see in most of those shelters you actually 1 have to step up over the stoop because you 2 have the extra step up and over to get in. 3 MR. HANNON: 4 Okay. I have no 5 further questions. Thank you. THE CHAIRPERSON: Thank you. 6 7 Dr. Bell? DR. BELL: Thank you, 8 Mr. Chair. 9 Just to pursue, since we're 10 talking about this backup generator, the 11 12 matter of natural gas that you were talking about before with Mr. Ashton. The fuel cells 13 14 that have been put in all around Connecticut, 15 many of them run on natural gas. And those 16 are specifically designed for emergencies. 17 So the notion that you have 18 to -- that natural gas would be shut off 19 during emergencies, which I understand what 20 you're saying, that doesn't jibe exactly with 21 all these various fuel cells that we've seen 22 going in. That's just a comment. I'm not in 23 a position to state one way or the other, 24 because I certainly have no direct knowledge 25 of any of this. But that's playing into the

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1 matter. 2 I mean, you could put in a fuel-cell, but if there's something that's 3 different about the connection between a 4 fuel-cell and a gas, a natural-gas generator, 5 you know, I don't know. But I'm just --6 7 that's a comment and I'm --8 THE WITNESS (Centore): I'm glad it's a comment because I don't know the 9 answer to that question, either. 10 So --DR. BELL: Okay. 11 Back to 12 base. Mr. Gustafson, I have just one 13 question about the flood maps that you 14 provided in -- that are provided in Tab 14. 15 First of all, I don't know if 16 it was you, but I'm asking you because you, 17 you generally work with flood maps. Thank 18 you for the two maps, the one that's printed 19 off the site and the other one that 20 All-Points created. 21 I'm looking -- I'm just 22 looking at the Zone X markings on the map, 23 that the firm map copy has Zone X -- has two 24 Zone Xs. And I understand -- my understanding is the zone X that's stippled, 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

or that has the polka dots, is the 500-year 1 flood area, and the Zone X that has no 2 markings at all that's on the other side here 3 of Huntington Road is above the 500-year 4 5 floodplain. Is that a correct understanding? THE WITNESS (Gustafson): 6 That 7 is absolutely correct. DR. BELL: Okay. So you're 8 not -- you're showing on the other map that 9 you created the Zone X that's stippled here 10 is just shown with water, you know, blue 11 12 markings which indicate where the water would 13 come. And you just don't mark the other Zone 14 X because there wouldn't be any water? 15 THE WITNESS (Gustafson): 16 That's correct. 17 DR. BELL: Okay. Thanks. That's all I needed to review. 18 19 Maybe, Mr. Centore, is there 20 any thought about noise implications from the 21 air conditioners in the shelter, the 22 compound? THE WITNESS (Centore): We had 23 24 a -- we had a noise study, a noise compliance 25 study done. Let me just double-check our UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

1 values. Yeah, based on the findings of 2 our -- our noise study, we're well below the 3 daytime and nighttime noise limitations in 4 5 that area. DR. BELL: Okay. Thank you. 6 7 Just one last -- not a question, but a 8 comment, to Mr. Libertine, going back to your 9 conversation with Mr. Ashton on the way you 10 indicate visibility. I just wanted to say 11 thank you for giving us the topographic map 12 view that you have done that -- and that's 13 for a little while now, but you haven't 14 always done that. And I find that very 15 useful to have both types of views. So thank 16 you. 17 Mr. Hannon is asking me to 18 follow-up on my question about noise, 19 Mr. Centore, by saying, is there any way you can characterize the difference between the 20 21 noise levels that you have in that report 22 there that you just looked at and the noise 23 of the firing range that we heard this 24 afternoon? 25 THE WITNESS (Centore): I was UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

waiting for a serious question there. 1 I hope it was a firing range. 2 DR. BELL: Okay. I think we 3 don't need an exact answer on that. 4 Thank 5 you. Those are my questions, 6 7 Mr. Chair. 8 THE CHAIRPERSON: Okay. Mr. Lynch? 9 MR. LYNCH: Just to follow up 10 11 on Dr. Bell's comment on fuel cells. In my 12 area of the state where they have emergency shelters that are used -- fuel-cells as their 13 14 source with natural gas, during the hurricane 15 and the major snowstorm, all of them were in 16 use, and none of them were shut down and none of them failed. Just to follow up on our 17 18 existing -- for what it's worth. 19 THE WITNESS (Centore): Just 20 to -- just to curiosity, just for -- to find out a little more myself. Was that in our 21 22 rural area, or was it in the city? 2.3 MR. LYNCH: No both. 2.4 THE WITNESS (Centore): Okay. 25 The majority of MR. LYNCH: UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

them are in -- the emergency shelters were 1 set up in -- either in community centers or 2 in local schools, or junior high or high 3 schools. But this is in the northern part of 4 the state, but they did work rather well, and 5 they housed and fed hundreds of people. 6 7 And just to -- Mr. Libertine, 8 I don't know whether I'm more confused or, you know, I understand what you're saying 9 about the difference between that -- and it 10 goes to your Question Number 3 on the 11 12 interrogatory -- on the modeling versus actual on site, you know, because I don't 13 14 understand. The modeling just is a yes/no: 15 We can see it; we can't see it, and so on? 16 THE WITNESS (Libertine): 17 Correct. 18 MR. LYNCH: And --19 THE WITNESS (Libertine): And 20 if I could? 21 MR. LYNCH: Yeah. Elaborate, 22 please. THE WITNESS (Libertine): 23 The 24 simple question we asked the model to tell us is, if we're standing at point A, 5 feet 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

above the ground looking at where the tower 1 should be with all the intervening structures 2 and trees, can we see the top of that tower? 3 It doesn't make a distinction as to whether 4 we can see a hundred feet of it, or a 5 hundred inches or 1 inch. So all it says is, 6 is there a direct line of sight from the top 7 8 of the tower and back to where we're -- we're 9 looking from? So that creates kind of a 10 11 dilemma for us because it really doesn't give 12 us any idea of the character of the view, how 13 much. In the past we have played around with 14 how much percentage of tower is above the 15 tree line. That becomes problematic just 16 because there's so much data, even within 17 just a two-mile study area, that it presents 18 its own problems. From certain -- we can tell 19 20 from -- we can isolate an area and say, yes, 21 we can tell the percentage. To do it 22 throughout the entire study area, we found that it tends to break down just because of 23 24 modeling issues that we have. But that, 25 that -- that question and answer that we have UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

1	from point A to point B, again, just gives us
2	a quantification of, like, here's this
3	footprint of where there may be some views.
4	And that's why I am very careful in my
5	discussions about trying to characterize the
6	views from certain areas because a lot of the
7	views that we're showing aren't really
8	necessarily necessarily above the
9	treeline.
10	As you can see from the
11	photos, we're now getting into that kind of
12	gray area where you're looking through the
13	trees, and yes, you can see the top, but it's
14	clearly not above the intervening trees.
15	It's through those trees, and that's where
16	we've made some substantial changes in the
17	model over the last year well, two years.
18	I was always very reluctant to
19	try to get into modeling for seasonal
20	visibility because it's it's impossible to
21	build the forest cover as it stands within
22	any given community just because you'd have
23	to survey every single tree and tree branch
24	and and the patterns, and you just can't
2 5	do it.
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So we had to make several 1 2 assumptions, which creates this overproduction. We're just assuming every 3 tree is a vertical pole with no branching 4 patterns of a certain value. And yes, you'll 5 see through them, but it -- again, it doesn't 6 7 really approximate -- it approximates, but it 8 doesn't give you a real world value. So 9 it's -- it's still problematic. I think this is still -- this 10 11 is a much better product than we were doing a 12 few years ago. I think it's closer, but 13 because of those limitations and that I can't 14 get onto these private properties, I'm 15 leaving those. If it's saying it's visible I've got to assume that somewhere within this 16 17 footprint it -- there's probably a view. 18 What that view looks like, 19 that's where I'm trying to use my closest 20 vantage point from a public place to get an 21 idea of what it might be from the character 22 of that view so we can extrapolate, at least 23 in that general area, what it might look like. 24 25 MR. LYNCH: And I'm assuming UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

that the modeling can't do anything that an 1 on-site view can do, like we've discussed in 2 the past, like painting the towers to make 3 it, you know, less visible? 4 THE WITNESS (Libertine): 5 No. The model can't take into account the -- the 6 human factor, because if -- in some cases 7 8 where we have high elevations at the two-mile range, I think it's clear anyone who's driven 9 around and looked at these towers, at 10 11 two miles something that's direct, right at 12 the treeline I may be showing as visible, but you're not going to be able to just discern 13 14 that from any of the surrounding features. 15 So the model really can't give 16 us that diminishing view as you move away or 17 if there's some kind of camouflaging. Either it's visible or it's not. And that goes --18 19 when we do the stealth tree options, I'm 20 always reluctant there to mess with the model 21 and what it's showing, but at the same time I 22 want to make sure people understand, if you 23 get a mile out and you're looking back at 24 this, it's going to look like every other tree out there. 25

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1	As a matter of fact, I was
2	out anecdotally, I can tell you that last
3	Friday I was out on the Appalachian Trail in
4	Salisbury and the Verizon facility that was
5	built in Falls Village recently, the tree, I
6	could see it from one open spot in a field.
7	And I looked, and it was about
8	4:30 in the afternoon. And because of the
9	light, I could see it was darker than all the
10	trees around it, but I couldn't tell I was
11	probably two miles out, but I had binoculars,
12	and sure enough I said, Wow, there's the
13	tree. And it looked great with the backdrop.
14	And the only reason it popped out was because
15	all the other trees around it weren't of
16	didn't have quite that dark feature to it.
17	But it kind of reiterated to
18	me that the limitation in these maps and what
19	we're showing as visible really is, again it
2 0	doesn't really give you that idea of what
21	that human eye perceives when you're looking
22	at one of these facilities. So
23	MR. LYNCH: Thank you.
24	Because you know your eyes can play tricks on
2 5	you, and they adjust to what they see. You
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know, not being a tree lover like my 1 colleague to my right here, but you know ... 2 Following up on something that 3 Mr. Ashton was talking about, as we go into 4 the future and less and less people are 5 having -- in their residential area and homes 6 7 are using wireline phones -- I don't think 8 anyone under 40 and I'm being generous at that -- really has a wireline phone anymore. 9 And again, Mr. Ashton hit on a 10 11 good point. How do you go about planning for 12 what's going to be coming when you get -- and I'm only talking only about calls here, not 13 14 data services or anything. You know, all these additional calls that will come in as 15 16 residence after residence, you know, gives up 17 their wireline phone, and the younger 18 generation just don't use them? They don't 19 even know what they are. 20 THE WITNESS (Ulanday): I'm 21 sure our planning folks are taking into --22 taking that into account right now. 23 MR. LYNCH: I'm sorry. Ι 24 didn't hear you. 25 THE WITNESS (Ulanday): I'm UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

sure our planning group are taking into 1 account all those scenarios right now. 2 MR. LYNCH: Well, as 3 Mr. Ashton pointed out, I hope they are. 4 And that leads me into an area here -- we're 5 going into, Mr. Underlee, Underday -- or I'm 6 7 sorry if I mispronounce it -- we've been 8 going in -- I've been asking this question for a number of hearings now as far as your 9 network switching over from your calling 10 services to your delivering data services. 11 12 THE WITNESS (Ulanday): Yeah, 13 that's correct. 14 All right? MR. LYNCH: And I 15 think that's the main focus of your whole 16 network now. And as this -- and I'm 17 following up on a question that Dr. Bell has 18 given me here -- as this technology changes, 19 as you know, as the reliability threshold 20 changes, you go from LTE to, you know, from 21 your other standards of technology, how do 22 you incorporate these changes into your 23 system? 24 THE WITNESS (Ulanday): We still maintain all those, what do you call 25 UNITED REPORTERS, INC. www.unitedreporters.com

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this --1 2 MR. LYNCH: I quess, let me ask you this then. 3 4 THE WITNESS (Ulanday): Uh-huh. 5 MR. LYNCH: As we progress into the future and LTE and other frequencies 6 become available, you know, will -- because 7 8 right now I guess your LTE 700 only delivers data? 9 THE WITNESS (Ulanday): Yeah. 10 11 Right now, yes. That's correct. 12 MR. LYNCH: Right now? 13 THE WITNESS (Ulanday): Uh-huh. 14 MR. LYNCH: When do you 15 project that it may deliver calls as well as 16 data? 17 Or I guess what I want to say 18 here is, are you going to come to -- reach a 19 time when your 800 service -- or probably not 20 800, but your 1900 service will become 21 obsolete like your -- because I remember 22 hearing, you know, don't worry, Analog 23 technology is going to be here forever. 24 It's gone? 25 THE WITNESS (Ulanday): Yeah. UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

That's a very good question actually, yeah. 1 For example, our -- our 2 initial target actually was to roll out voice 3 over LTE at the start of 2014, at the start 4 5 of the year, but it got pushed out, I think, towards the fourth quarter of the year 6 7 because of some performance issues, if I may 8 say. So we're continually testing that, enhancing -- enhancing that service, voice 9 10 over LTE. 11 And to your next point, it 12 would eventually come to that. We will 13 harvest all those older generation, all those 14 frequencies that are using the 15 third-generation services and bring that into 16 LTE as well. So all those PCS and 17 850 megahertz frequencies will -- we are 18 looking to eventually use it for LTE. 19 MR. LYNCH: Well, LTE seems to 20 be becoming the backbone here of everything. 21 THE WITNESS (Ulanday): That's 22 correct. And as -- which 23 MR. LYNCH: would be the first to go? 24 Your 1900 25 frequencies or your 800 as far as becoming UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

1 obsolete?

2 THE WITNESS (Ulanday): Ιt would be the 1900, since the 850 have more 3 4 footprint than the 1900. And going back to 5 MR. LYNCH: Senator Murphy's question, is the -- is LTE, 6 7 or the 700 or any other frequencies that may come along, are they able to handle all this 8 capacity for voice, LTE, and more 9 importantly, the data that's going to be 10 coming? Because it looks like data service 11 12 is like a tsunami: it's coming in and it's 13 coming big. 14 THE WITNESS (Ulanday): Yeah. 15 Actually right now I can say we can only 16 guess. We can only do as much to, you know, 17 to project and take into account all these 18 services that we are looking to provide. So 19 right now we can only --20 MR. LYNCH: Okay. And as far 21 as other carriers are involved, I know that 22 we've seen -- we've gotten input from other 23 carriers that they're not interested? 24 THE WITNESS (Carter): That is 25 correct. UNITED REPORTERS, INC.

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MR. LYNCH: But does the 1 2 not-interested answer really mean they're not interested, or at this time they're not 3 interested and we may see you in a year or 4 two? 5 THE WITNESS (Carter): 6 They 7 don't -- they don't tell us that. 8 MR. LYNCH: Yeah, I know that. THE WITNESS (Carter): So I 9 mean, at this time, they have told us they 10 11 are not interested. I can't foresee what another carrier will do or what their needs 12 13 will be in this area. 14 MR. LYNCH: I'm not asking you 15 to. I'm just -- go ahead. Sorry, Mr. 16 Baldwin. 17 MR. BALDWIN: I was going to 18 add, Mr. Lynch, I can tell you from our 19 perspective, it's always a caveat at this 20 time because we can never know what our needs 21 are in the future. 22 MR. LYNCH: Thank you. And 23 let's see. If we can come to the -- go up to 24 the emergency generator for a second -- and 25 I'm not talking fuel cells. So your answer UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

to Question Number 4 I found a little 1 2 confusing, but maybe that's just me. You say 3 in an emergency situation your 210-gallon tank, you know, running continuously will run 4 5 for 49 hours. Then you go on to say, at less 6 than full load under normal operating 7 conditions, it will run for four days. 8 That's 96 hours. 9 I guess what are -- my question is, what are normal operating 10 11 conditions that would have this generator 12 running other than emergency? 13 THE WITNESS (Centore): Give 14 me a chance to just take it all in so I can 15 give you a -- a good response or an 16 appropriate response. 17 I guess the simple MR. LYNCH: 18 thing would be, what are normal conditions 19 versus emergency conditions? MR. BALDWIN: 20 Just to clarify, 21 Mr. Lynch, while Mr. Centore thinks a little 22 bit more, the only time the generators are 23 operating is what we would consider during 24 emergency conditions, I believe when commercial power to the facility is shut. 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

I think the distinction is 1 between full load and normal operating 2 conditions, which is what we referred to in 3 4 the interrogatory responses. 5 MR. LYNCH: Yeah. Well, 6 that's what's confusing me. Sorry, 7 Mr. Baldwin. You know, if I could get --8 just get a little bit more clarification, I 9 quess. THE WITNESS (Centore): The 10 11 calculation on the 49 hours, the 210 gallons 12 of fuel in 49 hours assumes that the 13 generator is running at full power 14 continuously during that time period at it's 15 maximum running speed. 16 What happens is, is during 17 normal operations that -- that the generator 18 will only draw and generate the power that it 19 needs. So it will -- it will ramp up when, 20 on initial startup, especially if the 21 air-conditioning units are both running and 22 you've got all the equipment running, but when -- when those are down, or it's running 23 on one air conditioner and -- and everything 24 is charging, it's not going to demand as much 25 UNITED REPORTERS, INC. www.unitedreporters.com

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power from the generator. 1 2 MR. LYNCH: All right. I'm 3 still not getting it. But --4 THE WITNESS (Centore): T ' m going to -- what I'd like to do is I can 5 provide a better response. I'll tell you my 6 7 background is structural engineering, but 8 I'll let -- I can consult with one of our 9 team of electrical engineers who can explain 10 that better. 11 But my understanding is that 12 the facility's -- that generator is sized to -- to provide clean, clean power because 13 14 of the types of equipment that's in the 15 gen -- in the generator room. And the fact 16 that it's clean power, it needs to be a 17 larger generator, but it doesn't operate at 18 it's maximum output. So it -- it allows it 19 to run more cleanly. 20 MR. LYNCH: I quess where I'm 21 confused, Mr. Centore, is that I can't 22 understand the scenario where, if it's an 23 emergency situation, it's not operating under 24 maximum power? 25 THE WITNESS (Centore): Okay. UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

I think that the misconception -- that the 1 misunderstanding is in the fact that it's not 2 saying emergency. It's saying "under normal 3 operating conditions, "which is what it's 4 normally operating at, that the calculation 5 is based on the generator running at full 6 capacity now, what it's capable of running 7 8 at. In other words, if you have a 9 10 Porsche that can do 280 miles an hour, 11 250 miles an hour, whatever the speed of that 12 car is, you're not running it anywhere on our 13 local highways at that speed, but it's 14 capable of doing that. How much gas would 15 you get at full load on a Porsche versus if 16 you were driving it under normal operating 17 conditions, I think that might be better type of --18 19 MR. LYNCH: So let me ask you 20 this, let me put it this way. It may be an 21 emergency condition, but it's not operating 22 at it's maximum? THE WITNESS (Centore): 23 That's 24 correct. 25 MR. HANNON: Okay. I got it UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

1 now. THE WITNESS (Centore): Okay. 2 Thank you for 3 MR. LYNCH: 4 bearing with me. And the other thing I noticed 5 6 here is -- it's the first time I've seen 7 it -- when we come to shared generators, you 8 said there's a possibility with the size of the generator that you would consider sharing 9 the generator, is that correct, with other 10 11 carriers or the town services, whatever may be available? 12 13 Well, just I MR. BALDWIN: 14 think the response is you can always put a 15 generator in large enough so that it can be 16 shared, and I think we have shared generators 17 in the past, but I'll let Mrs. Carter respond further. 18 19 THE WITNESS (Carter): Yes. 20 It's -- it's always been Verizon's policy to 21 have a generator at its site. And in the past, when we've had a site such as a round 22 hill where all the carriers were going to be 23 on that site and we were confined to one 24 building under unusual circumstances, we knew 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

from the get-go that everyone was going to be 1 2 part of that application. We have shared generators in the past. 3 We do not want to share 4 5 generators with someone else that has put in a generator, because in the past we have 6 7 found out that they do not maintain the 8 generators. And when we have had an emergency, we do not have power at our site 9 and, actually, that another carrier just 10 11 kind -- came in and brought up an emergency 12 generator for themselves, so that is not 13 reliability as part of Verizon's service. We find that other carriers do 14 15 not want to share our generators. They do 16 not want to maintain the generators. They do 17 not want to contribute to the cost or have 18 any agreement to have shared generators. So 19 that poses a real problem for us as well. 20 So we have found that we, on 21 the few rare occasions where we have had full 22 responsibility for the maintenance and the service of the reliability of those 23 24 generators that belong to us, we have shared those generators. But, for 99 percent of the 25 UNITED REPORTERS, INC. www.unitedreporters.com

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cases, we provide for our own service and 1 we -- we know that it's going to be reliable, 2 and we find that other carriers do not want 3 to share their generators with us. 4 5 MR. LYNCH: I know that's your 6 policy, and I know you have shared generators 7 in the past. This is the first time I've 8 ever seen it in an interrogatory that there's a possibility of doing it again. That's all 9 10 I was saying. Yeah. 11 THE WITNESS (Carter): We --12 we just feel very strongly about having our 13 reliable service. And when we're in charge 14 of the generators and they belong to us and 15 we maintain them, we make certain that 16 they're ready to go as needed. Verizon does 17 that as best we can. 18 Okay. And my last MR. LYNCH: question is going back to data services 19 20 again, and delivering these services to 21 whether they're phones or, you know, iPads or 22 computers, whatever is out there. You know, 23 over the last year, do you have any projections on what the percentage increase 24 25 of this data service may be over the next UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

1 couple of years? 2 THE WITNESS (Ulanday): Right 3 now I don't have any numbers to present, but it sure is a big number. 4 5 MR. LYNCH: Then let's work 6 backwards then. 7 THE WITNESS (Ulanday): Uh-huh. 8 MR. LYNCH: You know, two 9 years ago to the present, do you have any idea what that percentage of increase might 10 11 have been on your system? 12 THE WITNESS (Ulanday): Т 13 believe nationwide it's over a hundred 14 percent over the last two or three years. 15 MR. LYNCH: Okay. Thank you, 16 Mr. Chairman. 17 THE CHAIRPERSON: Can I ask a 18 question? 19 MR. ASHTON: Oh, absolutely. 20 After you. 21 THE CHAIRPERSON: The 22 generator, the compound that you're 23 proposing, is that sized for one or two? Or 24 how many generators could fit in that 25 compound without having to come back if they UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

1 were separate? THE WITNESS (Centore): 2 Generators or carriers? 3 Т 4 think the compound size to -- to accommodate 5 two carriers at this point. It would need further expansion should additional carriers 6 7 come on. As far as generator space for 8 another generator, the second carrier could 9 fit in -- in a shelter and generator. So --THE CHAIRPERSON: 10 Okay. So 11 it's? 12 THE WITNESS (Centore): Τwο carriers, both have generators. 13 14 THE CHAIRPERSON: The two are 15 separate. And I won't go -- there have been 16 others more eloquent than I am about 17 maintaining generators, just like other 18 portions of your infrastructure are 19 maintained by others and your -- it seems to 20 work pretty well, such as these, the 21 utilities that provide power to you. 22 So -- but we won't get into 23 that argument, although I think you've heard the sense from the Council on this issue, and 24 I don't think we're going to -- we're ready 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

to send out the white flag yet, because I 1 can't -- just can't understand why if some 2 entity is responsible and -- that they won't 3 maintain in their ways to cost share, but 4 5 okay. That's a statement, not a question. So unless you feel absolutely you have to, 6 7 you don't have to respond to that. 8 I did have a totally separate question. I was just curious, because I 9 10 think it was Attorney Baldwin who mentioned 11 the latest version of the Trumbull -- is it 12 the plan of conservation and development 13 had -- I think you read -- had some brief mention of telecommunication towers or 14 facilities? 15 16 And my question is, just out 17 of curiosity, is that -- since I haven't had 18 a chance to look at it -- is that something 19 that you're seeing more and more in the newer 20 plans of conservation and development, that 21 there's at least some acknowledgment that 22 that is an issue and may be a part of an 23 important infrastructure? I'm just curious. 24 MR. BALDWIN: If I could, Mr. Chairman? Yeah, we are. We are seeing 25 UNITED REPORTERS, INC. www.unitedreporters.com

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that more and more with more updated plans 1 where there's some inclusion, usually in the 2 utilities section, that wireless service is 3 4 becoming something that towns are now 5 thinking about in their planning efforts, which obviously we see as a favorable thing. 6 7 But in the older plans it's still something 8 that is hardly ever seen. 9 THE CHAIRPERSON: Mr. Ashton. Thank you, 10 MR. ASHTON: 11 Mr. Chairman. 12 I want to go back to the 13 planning horizon just a little bit, because 14 there's -- I'm not sure we're talking on the 15 same wavelength. 16 Mr. Baldwin, you used the 17 term, "at this time," and we've heard that 18 before. But aren't there really two planning horizons? One is where you go to your 19 20 management and ask for capital authorization, 21 or tell them that you expect to go for 22 capital authorization of a carrier, of a cell tower location of X, Y and Z versus 23 24 long-range planning where there's no capital authorization involved. It's rather a layout 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

of facilities to meet expected needs over a 1 period of time. 2 Is that a fair distinction? 3 Т guess, Mr. Ulanday, I'm looking at you. I'm 4 5 picking up on Mr. Baldwin's remark? THE WITNESS (Carter): I think 6 7 at Verizon there are -- there are groups that 8 are simply there -- they're the planning group to determine what the needs of Verizon 9 are going to be based upon certain 10 11 parameters. 12 MR. ASHTON: Right, but there 13 are two levels of approval in most businesses 14 that I've encountered. 15 THE WITNESS (Carter): Right 16 now Verizon is looking at a plan that will meet the demand of the customers that we have 17 18 and the services that we provide to them. 19 And, as was mentioned earlier by Mr. Ulanday, 20 the bulk of our services are the data 21 services, and they are growing at a -- at a 22 great rate in the last two years. And Verizon is looking at that 23 24 and anticipating the number of sites that it may need in the future. So we know that we 25 UNITED REPORTERS, INC. www.unitedreporters.com

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have tools that our RF personnel use. 1 They know when a site is exhausting or a sector of 2 a site is exhausting, such as we're 3 discussing in the Trumbull area today. 4 And they look at how many 5 sites we're going to be needing. And based 6 7 upon that need, they come up with a budget 8 for a number of sites to be determined to be built in a certain time frame. So there is a 9 capital budget put together for the large 10 overall planning. 11 12 And then we know, as we 13 indicate in our application today, that a 14 site of this magnitude is going to cost X 15 number of dollars. So I think -- here I 16 think it was \$700,000. So there are -- there 17 are two levels, as you indicate, but there is 18 a major plan that takes into account a number of sites that will have to be built in a 19 20 certain -- certain period to meet the demands 21 of the customers. 22 MR. ASHTON: I going to put a 23 few little words in your mouth, and you tell 24 me if I'm wrong, but from my experience in planning, we would look at the totality of 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

the need in a geographic area, the state of 1 Connecticut, for example. We would surmise 2 that, to serve that totality of need, we're 3 going to need a defined number of facilities 4 5 spread out over a long period of time. However, we know that the 6 7 needs for total coverage in the town of 8 Union, or at least parts of Union that are not next to 84 are going to be way low on the 9 priority list. And so they're not going to 10 get into that capital budgeting horizon for 11 12 five, or eight, or ten years. 13 However, we are going to have needs in the Meriden area, an urban center, a 14 15 major interstate, major highways going though 16 it. We're going to know that we've got to 17 cover the capital to satisfy all the needs, 18 including data, which is obviously the 19 driver, in the next couple of years. And so 20 you budget those capital dollars for the 21 years 2014 and '16 and '15, but we don't 22 worry about Unionville, except we've identified it as something we've got to 23 24 address. 25 Isn't the planning work UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

something like that? 1 THE WITNESS (Carter): I would 2 say something like that, yes. 3 Yeah. MR. ASHTON: Okav. 4 And one of the frustrations we have on the 5 Council is that when we ask carriers, other 6 7 than the one proposing a facility before us, 8 do they have a plan for it, they come back 9 and say no. And we can never figure out whether that's because they haven't included 10 it in the capital budget, or it's not on 11 12 their long-range plan. 13 My suspicion, it's in the 14 long-range plan, but it ain't in the capital 15 budget for the next couple of years, which is 16 the one that goes before the board of 17 directors for approval. And I guess I'm 18 going to make a plea here that, when you get 19 that question and answer it, you answer it 20 with a, yeah, it's in our long-range plan but 21 not in our capital budget, or it's, yeah, 22 it's in our capital budget as well as in our long-range plan. That's a distinction that I 23 24 understand explicitly, and I think the rest of the Council would, too. 25

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THE WITNESS (Carter): Or else 1 2 sometimes we get an explanation or we give an explanation when asked by other carriers, do 3 you need this site? And we -- we may have a 4 5 site that's right near it that provides the services for that area, and so we can say 6 that --7 8 MR. ASHTON: And that's okay. 9 That's okay, but my guess is that nine out of 10 ten times that's not the case. My quess is 11 that the vast majority of times you're 12 working in an area where there is a service, 13 particularly the big carriers, AT&T and 14 Verizon especially. 15 But we're not trying to get 16 into your innermost thoughts. We're not 17 trying to invade your competitive positions 18 or anything like that, but we are trying to 19 figure out what the hell is going on in the 20 state of Connecticut because we're charged 21 with that. 22 And it would be helpful to 23 have a response from the carrier about 24 talking to you today -- I'll talk, if I can remember it, to others that come down the 25 UNITED REPORTERS, INC. www.unitedreporters.com

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pike -- that says, Yeah, this is something 1 that is not immediate, but in a longer range. 2 If you can say it's in the three to five-year 3 range, or the four-to-ten-year, 4 5 four-to-eight-year range, that would be helpful because that gives us a sense of 6 7 where we're going. THE WITNESS (Carter): I -- I 8 understand where you're coming from, 9 Mr. Ashton, but I don't think a carrier 10 11 would -- or another carrier would tell us, or 12 maybe we wouldn't tell another carrier either that, you know, maybe we're going to need you 13 14 in two years or four years or next year. 15 I think that's just part of 16 the -- the competitive process in -- in the 17 industry. 18 MR. BALDWIN: And I think, and 19 to add to that, Mr. Ashton, we did just 20 respond to a request from the Council 21 regarding AT&T's Ridgefield location and said 22 something similar to what you suggested, which is we certainly have a need in the 23 24 area. I think there are no facilities up in that part of the Town of Ridgefield for 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

example, but that it's not currently in the 1 budget, if you will, for development. 2 MR. ASHTON: I don't have any 3 problem with that. It would be more helpful, 4 5 perhaps, to give us a sense of rough year, but it's no question in my mind that AT&T and 6 7 that Verizon and others, as they come out, 8 want to cover the state of Connecticut. So you've got 5,000 square miles that's in the 9 target. It's just a question of when. 10 MR. BALDWIN: Right. I could 11 12 also tell you --13 MR. ASHTON: As a competitor 14 that wouldn't surprise me one iota. And I 15 don't think I'm trespassing on secret 16 information to draw that conclusion. 17 MR. BALDWIN: I can also tell 18 you, from my experience working with Verizon 19 for as long as I have, those budget 20 priorities can change overnight. 21 MR. ASHTON: Oh, absolutely. 22 MR. BALDWIN: So sometimes we 23 may say something one day, and the next day 24 it changes, and all of a sudden, we can move forward with the site. So we may jump --25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

1	MR. ASHTON: I have no doubt
2	about that whatsoever. You're no different
3	from any other utility. I'll say that
4	point-blank, electric, gas, or
5	communications.
6	Mr. Centore, I want to go back
7	a little bit on this generator. You really
8	surprised me when you said that a natural gas
9	source is prone to be cut off. I've never
10	experienced that in my professional life, as
11	I said. The only instance I could think of
12	was if there was a fire, in taking this
13	explicit example, in the pilot building and
14	it got going really hot, you'd want to shut
15	off all sources of ignition. And I would
16	argue then that you'd want to probably direct
17	water on the propane or diesel systems so
18	that didn't ignite if the roof above it is
19	burning merrily.
20	And so I find it your
21	answer really troubles me, and I can't think
22	of, other than that instance, a basis for
23	shutting it off. If the power is out, you
24	need this. And more and more we're
2 5	understanding what you guys understand is
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that these are critical facilities, and the 1 feds are looking at it that way, and so we're 2 going to have to move heaven and earth to 3 keep them online. 4 I don't know. The one thing I 5 will say, and forgive me for testifying, 6 7 Madam Executive Director, is that my view of 8 the experience of the bad storms we had in the past couple of years was lousy, that 9 diesel didn't work because we couldn't get 10 fuel to the sites. 11 12 Next time you testify, I hope 13 you'll have a detailed answer, because I'm --14 THE WITNESS (Centore): Ι 15 will. 16 MR. ASHTON: I'd like to hear 17 it. THE WITNESS (Centore): 18 Ι 19 will. Thanks, 20 MR. ASHTON: 21 Mr. Chairman. 22 THE CHAIRPERSON: And if, at 23 such time, we get to the D and M plan, that's 24 if -- that might be an opportunity to explain what type of generator, slash, fuel you 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

intend to use and why. So you and we will 1 get another shot at that one. 2 DR. BELL: Mr. Chairman. 3 THE CHAIRPERSON: 4 We're 5 determined to run this -- okay. Yes, Dr. Bell? 6 7 DR. BELL: I just have one 8 question not on this subject. We heard this afternoon two types of data that, in response 9 to council members' questions. One had to do 10 with so-called "historical data" on each site 11 12 and that Mr. Ulanday mentioned, and also Mr. 13 Ulanday mentioned so-called "traffic maps." We understood what those are 14 15 and took those into account in terms of the 16 need, but we generally do not see those two 17 types of data on applications. My question 18 is, are these types of data regarded as 19 proprietary, or could they be put on 20 applications? 21 MR. BALDWIN: Were you looking 22 at my notes, Dr. Bell? Because I wrote that, 23 that very question down. When we prepare for 24 these hearings we talk about this data, and 25 we're always concerned about whether it's UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

proprietary or not, but we always need to go 1 back and ask the question. 2 I think, since we have a 3 4 number of applications that are in the works right now, and many of them just like this 5 one are capacity sites, we'll have that 6 7 answer for you in future dockets. But we 8 will be sure to include some additional data 9 information testimony to provide you with that additional information to justify the 10 capacity need, as we do with a more standard 11 12 coverage site, in the future to address those 13 concerns. 14 Thank you. That's DR. BELL: 15 my question, Mr. Chair. 16 THE CHAIRPERSON: Mr. Mercier? 17 MR. MERCIER: Thank you. 18 Just going back, we talked 19 about the tower being constructed to support 20 a 20-foot extension potentially. If that 21 were the case, the compound would have to be 22 enlarged. What direction would that enlargement go? Has that been discussed with 23 24 the property owner at all, any type of extension of the tower and also expansion of 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

the compound lease area? 1 THE WITNESS (Carter): The --2 we have a limited leased area in this, this 3 4 particular application, and if we were to go beyond two carriers, then we would have to 5 try to expand that compound as well as the 6 leased area. 7 8 MR. MERCIER: Okay. So that would be up to negotiation, I presume, which 9 way it would be expanded? 10 11 MR. HANNON: I quess it would 12 have to go toward the rear, because we're 13 right on the property line there. 14 THE WITNESS (Centore): There 15 you can -- there's potential for expansion within the -- within the area. It would just 16 17 mean that the -- the property owner would 18 have to accept whatever expansion we'd -- we 19 would want to do, and that could probably be 20 negotiated, yeah. 21 THE CHAIRPERSON: And you 22 definitely have to go to a shared generator because that would take a lot less space than 23 24 three or four separate generators. 25 THE WITNESS (Centore): A UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

natural, gas --1 2 THE CHAIRPERSON: So we have the answer to that one. 3 THE WITNESS (Centore): A 4 5 natural gas generator. 6 MR. MERCIER: Thank you. 7 Is there THE CHAIRPERSON: 8 anyone else? 9 (No response.) If not, I declare this portion 10 11 of the hearing closed and we will resume deliberations at 7 p.m. 12 13 Thank you, all. (Whereupon, the witnesses were 14 excused, and the above proceedings were 15 16 adjourned at 4:38 p.m.) 17 18 19 20 21 22 23 24 25 UNITED REPORTERS, INC. www.unitedreporters.com Nationwide - 866-534-3383 - Toll Free

1	CERTIFICATE					
2	I hereby certify that the foregoing 96					
3	pages are a complete and accurate computer-aided transcription of my original					
4	verbatim notes taken of the Council Meeting in Re: DOCKET NO. 446, CELLCO PARTNERSHIP					
5	D/B/A VERIZON WIRELESS APPLICATION FOR A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY					
6	AND PUBLIC NEED FOR THE CONSTRUCTION, MAINTENANCE, AND OPERATION OF A					
7	TELECOMMUNICATIONS FACILITY LOCATED AT THE PILOT CORPORATION OF AMERICA PROPERTY, 60					
8	COMMERCE DRIVE, TRUMBULL, CONNECTICUT, which was held before ROBERT STEIN, Chairperson, at					
9	the Trumbull Town Hall, Council Chambers, 5866 Main Street, Trumbull, Connecticut on					
10	April, 29, 2014.					
11						
12						
13						
14						
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1	I N D E X				
2	WITNESSES MICHAEL LIBERTINE				
3	DEAN GUSTAFSON				
4	SANDY M. CARTER				
5	RYAN ULANDAY				
6	CARLOS F. CENTORE Page 6				
7	EXAMINATION				
8	Mr. Mercier Page 12				
9	EXHIBITS				
10	(Admitted in evidence.) EXHIBIT DESCRIPTION PAGE				
11	II-B-1 Application for a Certificate of 12				
12	Environmental Compatibility and				
13	Public Need filed by Cellco				
14	Partnership d/b/a Verizon Wireless,				
15	received February 26, 2014, with				
16	attachments and bulk file attachments				
17	including:				
18	a. Technical Report, dated 12				
19	October 30, 2013				
2 0	b. Town of Trumbull Zoning 12 Regulations, revision Dec. 14, 2012				
21	c. Town of Trumbull Inland Wetland 12				
2 2	and Watercourses Regulations, amended February 2, 2010				
23	d. Town of Trumbull Plan of 12				
24	Conservation and Development, October 10, 2006				
2 5					
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1		I N D E X (Cont'd.)	
2	EXHIBIT	DESCRIPTION	PAGE
3	II-B-2	Certificate of Publication and	12
4		Cover letter dated March 7, 2014	
5			
6	II-B-3	Responses to Pre-Hearing	12
7		Interrogatories, dated	
8		April 22, 2014	
9			
10	II-B-4	Sign Posting Affidavit,	12
11		dated April 17, 2014	
12			
13	II-B-5	Avian Resources Evaluation,	12
14		dated April 22, 2014	
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