

**REGULAR MEETING**

**Salute to Flag: 8:10pm**

**OPENING STATEMENT:**

This is the Regular Meeting of the Wanaque Board of Adjustment and adequate notice has been given and it has been duly advertised by the placement of a notice in the Herald News and the Suburban Trends on January 11, 2017 respectively, and a notice thereof has been posted on the bulletin board in the Municipal Building in the Borough of Wanaque and a copy thereof has been on file with the Borough Clerk

**ROLL CALL:** Chairman Jack Dunning, Members Frank Covelli, Bridget Pasznik Peter Hoffman, Donald Ludwig, Michael Levine and Larry Malone, and Attorney Ronald Mondello and Engineer Christopher Nash

**ABSENT:** Vice Chairman Bruce Grygus

**Application #ZBA2018-01 – Kabakci, Abibe**  
**1095 Ringwood Avenue (Block 437/Lot 3)**

Chairman Dunning questioned if anyone was here on the application. Seeing none. Attorney Mondello commented that I think it would be appropriate at this time for the Board to entertain a Motion to Dismiss Without Prejudice. Meaning the Applicant can come back and re-file and pay all the application fees again. We have carried the Application at least three or four times

and we haven't heard from the Applicant or the Applicant's Attorney.

Member Covelli questioned they have failed to respond.

Chairman Dunning answered Jennifer had sent a copy to their new attorney, Mr. Cook, before our November Meeting and he was going to respond the day after that meeting and we haven't heard anything. She reached out to him again to please respond, and there has been no response. Whether he is still their attorney or not, we don't even know at this point

**MOTION TO DISMISS WITHOUT PREJUDICE:** made by Member Ludwig, seconded by Member Pasznik.

Member Covelli wants a discussion on the Motion and questioned if they got a new attorney in October, but really their first show was November, should we give them one more meeting?

Attorney Mondello answered, let me mimic what Engineer Nash said, it is not our obligation to reach out to anybody and ask them whether or not they are going to show up at a scheduled zoning board meeting. Certainly, that is well within the Board's discretion. Member Ludwig commented I will amend it to carry.

Attorney Mondello stated there is a Motion on the table. You can certainly have discussions but you have to vote on that motion.

Member Covelli commented it is December and I am just thinking we carry it one more and January we clean house and say we gave you two meetings to come back after you got a new attorney.

Chairman Dunning questioned two? It has been at least six meetings.

Member Covelli stated you said they got a new attorney starting after the October meeting.

Chairman Dunning commented we opened it up and we have no extension of time.

Member Levine commented it has been so long since we have had anything on this.

Chairman Dunning stated we have no extension of time, and we did hear it when they first came in.

Attorney Mondello commented we have 120 days.

Member Levine commented I don't remember the whole application. I would like to have them start all over again.

Attorney Mondello stated that is what the discussion is for and, as soon as we are done, we'll have a Roll Call.

Member Covelli stated you are saying they gave testimony which I must have missed.

Chairman Dunning commented there was some testimony; they came with an architect.

Member Hoffman stated I did look it up and there was very little testimony.

Chairman Dunning stated they didn't have a site plan, application was incomplete, and the architect talked for a little while. We told them to get their paperwork together and come back.

Engineer Nash commented I believe my review letter said it was incomplete, but it has been so long.

Member Pasznik stated that is correct. This matter goes back to May or June.

**MOTION TO DISMISS WITHOUT PREJUDICE:** made by Member Ludwig, seconded by Member Pasznik. Voting yes were Chairman Dunning, Members Covelli, Pasznik, Hoffman, Ludwig, Levine and Malone.

**Attorney Mondello: Motion Carries. The Application is Dismissed Without Prejudice.**

**Application #ZBA2018-01 Subcarrier Communications**  
**1 Skyline Drive (Block 250/Lot 1)**

**EXHIBIT LIST**

- A-1 Application No. ZBA2018-01
- A-2 Wanaque Tower 300' – 94.3 Megahertz / Dated December 5, 2018
- A-3 ATC446 Tower (Sparta Tower) To Wanaque / Dated December 5 2018
- A-4 December 3, 2018 Report of Millennium Engineering, P.C.

Richard Schneider, Esq., Vogel, Chait, Collins & Schneider, is appearing on behalf of the Applicant, Subcarrier Communications, and thanked the Board of hearing this Application tonight.

Attorney Schneider explained the Application in question tonight seeks approval of wireless communication tower which, in this case, will be approximately 300'. The property in question is designated Block 250/Lot 1 on the Borough's Tax Maps. What I have learned since I have been involved in this Application is that this section of Skyline Drive, where the subject property is located, is actually on a very small portion of Skyline Drive of the geographical area of Wanaque. Most of the area surrounding that of the subject property is actually within the geographic boundaries of the Boroughs of Oakland and Ringwood. In fact, as you look at the certified list of property owners, almost all of the surrounding land is owned by the State of New Jersey, DEP. I also mention the fact that it is Block 250/Lot 1 because of a unique aspect that Lot 1 does not front directly on Skyline Drive. There is an intervening Lot 2, owned by the State of NJ. We actually have a recorded access easement which allows us to cross over that intervening Lot 2 owned by the State. Your Engineer has raised a question about and we will address that in testimony, which might require a slight modification of that easement, but I did want to point out that we do have a recorded access easement. However, as your counsel is aware, when you don't front on an approved street, that does require a specific variance commonly referred to as a D35 or D36 Variance and we will present testimony on this. I just wanted to initially highlight this little bit of a unique aspect of the Application, none of which is substantively a problem from our perspective.

In terms of the Application itself, as I mentioned, it is an Application for a 300' tower. There is a history, which I believe the Chairman may be aware of as it relates to this tower, and which I think bears some mentioning. This property has already been devoted to communications use. Presently located on the subject property is a 110' existing communications tower. That tower has existed for many years and, in fact, my client purchased that tower from a predecessor in interest. Historically, that communications tower was utilized by what is commonly referred to as the "1070 Repeater Association". It was by that association to service various public emergency service entities that used it. Without getting into the tortured history associated with that, regrettably there were issues that arose concerning getting power to the site, which ultimately resulted in those

emergency service provides vacating the site. It was their original intention to ultimately go on to this new communications tower but, because of the time period that elapsed, they chosen to go elsewhere. That being said, this tower, among the proposed users, will be made to available to all municipal emergency service providers of the Borough as well as any of the surrounding municipalities free. We have made that offer and, in fact, we've had some initial communications with your Police Chief, who expressed some initial interest but then determined that the tower itself didn't meet his requirements at this time, but that offer remains open. We have also been in communications with some EMS provider of the Borough of Oakland and awaiting further communication but that offer remains outstanding.

There are two users here and you will hear some specific testimony about who they are and what they do and why they need the site. I am mentioning the two users in the following context. It is a little different than the standard wireless communication application that I believe the Board may have previously heard but mainly that might have involved a wireless communication carrier, such as Verizon Wireless or Sprint or whoever the case may be. They are not part of this application. So it is not a wireless communication application perhaps in the standard sense that you've become familiar with. That being said, this tower will be structurally designed to accommodate not only the present users of the tower, but also all of the potential four wireless communication carriers, as well as any municipal EMS providers. This tower is being built in a manner which has the ability to facilitate future co-locators. The obvious critical point being, when you build towers of this nature, you want to avoid multiple towers. If you are going to build a tower, I adhere to the phrase "build it and they will come", so you want to avoid multiple towers so that we will be building that into our structural capability so not only to accommodate the existing users, but the four potential wireless communication carriers who might this, as well as any potential EMS providers.

In terms of the required relief, it is as follows:

(a) We need a Use Variance because wireless communication uses are not permitted in this zone. In fact, as I am sure you are all well aware, in the Borough the only places where wireless communication facilities are permitted are on Borough owned land or the high school property. There is no municipal property in any reasonable proximity to this property so the practical reality is we cannot site this facility to meet our technical needs in any municipal property which would allow us to meet our technical needs. They just don't exist in the area where we have to be.

What I would note and believe to be significant in this zone district where we are located public utility structures are a permitted use. While I am not suggesting that legally we are a public utility structure, the type of tower, albeit arguably at a higher height, is not altogether different than the type of public utility structure that would be permitted in the zone district.

So the first variance, as I just mentioned is a Use Variance.

(b) The second variance is the D35 Variance because we don't front on an approved public street, but we have the access easement and we will address the appropriate comment made by the Board Engineer in that regard.

(c) The third requested release is that Preliminary and Final Site Plan approval.

With that background in mind, let me give you a preview of who we intend to present tonight. The first witness would be Mr. Dominic Volecco, the Applicant's Radio Frequency Expert and he'll give you a brief understanding of who the Applicants are and, more importantly, why we need a tower at this particular location at the proposed height. The second witness is Mike Fisher from Millennium and I suggest his testimony will be very limited and brief. He is here for the limited purpose of just simply confirming that the levels of radio frequency emissions are in strict conformance with applicable FCC standards. I don't think his testimony will be more than five minutes just to give a sense. The third witness, time permitted, would be the Applicant's Site Plan Engineer, Jim Murawski from E 2PM. He'll testify as to all relevant site plan details and respond to your Engineer's review report. The fourth witness, who I don't think we will get to tonight for a variety of reasons, is William Masters, the Applicant's Professional Planner.

Attorney Mondello commented he didn't have proof of notice to residents within 200' so I am not sure if you have it. There is notice that you published in the newspaper and, in fact, the original meeting was scheduled for October and you requested the matter be carried to this meeting.

Attorney Schneider commented I have the original Affidavit of Service for you. For the record, we did notify the Clerk of the adjoining municipality as well as the County Planning Board as required by law.

Attorney Mondello: Call your first witness.

Attorney Mondello swore in:

Dominick Vilecco, 2540 U.S.130, Cranbury, NJ

I am an RF Engineer; a Radio Frequency Engineer. I am the principal in the firm VComm. We're a telecommunications engineering firm based in Cranbury, New Jersey. I have 37 years of in experience in the wireless industry; 10 years as the Vice President of Engineering & Operation for Comcast Cellular in Philadelphia and the other 27 years in practice as a consultant engineer. I have testified before probably before over a hundred boards in the State of New Jersey and have testified in New York, Pennsylvania, Delaware, Michigan, and North Carolina and I've testified in two courts on behalf of the FCC. I was qualified as an expert witness on behalf of the FCC in matters on telecommunications, engineering, operation and implementation of networks. I have probably been before Boards in Passaic County but I just can't remember off the top of my head, but plenty in Bergen County.

Attorney Mondello: Any objections from the Board.

Member Levine questioned what is your educational background?

Mr. Vilecco answered Bachelor of Science and Electrical Engineering from Drexler University in Philadelphia.

Member Levine questioned are you a Professional Engineer?

Mr. Vilecco answered I am not a Professional Engineer.

Attorney Mondello questioned isn't he an expert in RF radio frequency, not an engineer, but an expert?

Attorney Schneider answered that is correct and there is an exception that one need not be a P.E. to present this type of testimony.

Engineer Nash commented typically these types of engineers do not get licensed. Mr. Villecco stated that's primarily because the frequencies that we deal with are under the jurisdiction of the FCC, they are not under state jurisdiction, and the FCC does not have any licensing. Unlike the state, which has licensing for structural and other things, there is no licensing requirement for P.E.'s at the FCC. Engineer Nash commented it is not unusual. Attorney Mondello stated you may proceed.

Attorney Schneider: Before we get into your testimony Mr. Villecco, let's take a couple of moments to understand what you've done in preparation for your testimony this evening. I'm going to make the assumption that, in preparation for your testimony, you've had the opportunity to obtain data from the potential users of this tower and assess that data. Correct?

Mr. Villecco answered that's correct. I have spoken to the users as well, looked at what they are proposing to install on this tower and gone through why certain heights are needed, the services that they are trying to provide and how that impacts the requirements of this tower.

Attorney Schneider: You are familiar with the site plan at least to the extent that it relates to the type of equipment that is being proposed by the respective users, correct? And you are familiar with the provisions of the Borough of Wanaque wireless communications ordinance as it impacts radio frequency, correct?

Mr. Villecco answered yes to both questions.

Attorney Schneider: With that background, there are two users reflected on the site plan that are being proposed and I am going to refer to them as "Christian Bridge Radio Network

" and the other is "New Line". Why don't we start with the Bridge Radio Network, which is a radio station, correct?

Mr. Villecco answered Bridge Christian Radio is an FM Radio station, just like your FM dials on your radios in your car. They will transmit Bridge Christian Radio's content on this station, their programming. They have multiple stations around the state and around the country and what they do is they operate in different frequencies. It is the way that FM works. You know when you are driving up and down the road, if you go a distance, you run out of the FM station you are tuned to the next one. The way that this works is, when you go to the next area, it is tuned to the next channel. It is the same programming but just in different stations. This particular station for this tower is really an extension of the tower that they have down in West Orange. They are operating off of WNSH, which is a station that 94.7 is licensed by the FCC to the City of Newark, but it operates on a tower up in Eagle Rock Mountains in West Orange. The first thing is that it doesn't quite make it up here and the second thing is that is a digital radio station. If you have a newer car with h.d. radio in it, you can pick up 94.7, but there is 94.7 channels 1, 2, 3, etc. They actually operate on channel h.d. 4. What this site is going to do for them is really extend into this part of Passaic and also in Bergen County the coverage that they have out of that West Orange site. It is known as an FM translator so here are two antennas on this tower. One is just a pick-up antenna, it is about 100' and picks up the signal from West Orange and it just retranslates it from 94.7 to 94.3. When it does that, the other thing it does is it converts it from a digital station to an analog station. What is important about that is if you have an

older car or older radio at home you can actually hear this. If you have an old radio, it can't hear the 94.7 because it is digital. It will extend the coverage and extend that programming and extend it into this part of Passaic and also Bergen County. In order to get the coverage that we need to fill-in their FCC licensed area, their antenna is actually at the very top of this tower per the plan. Because of the ridge lines and the terrain in this area and in this part of New Jersey, there is a lot of terrain we have to overcome and when we are at the top of the tower, it will overcome these ridge lines and that is how the service is provided so they can then fill within their FCC license contour.

Attorney Schneider: When you say get into this area, this is primarily to expand the service in the easterly direction, correct?

Mr. Villecco answered that is correct, yes.

Attorney Schneider: Let us talk about providing the additional coverage in the east. You mentioned the receive antenna at 100', but their other equipment is at the top at 300'. Is that correct?

Mr. Villecco answered that is correct. That is the actual transmitting equipment. That would be if you had an FM radio in this area, you would be receiving from the antennas that are at 300'.

Attorney Schneider: If I am a Wanaque resident and I wanted to listen to station 94.3, I am receiving essentially the 300' antenna?

Mr. Villecco answered correct.

Attorney Schneider: Can you review for the Board what the parameters were, or what was the basis upon which you determined that you need the 300'?

Mr. Villecco: First of all, as of all you know, this is part of the New York Metropolitan Region, and as you drive around this part of North Jersey, Westchester County New York, there are radio stations on every spot on the dial, so a very congested market from a media standpoint/FM radio standpoint. Very limited ability to license additional channels within so what happens is they are really sort of boxed-in with the frequencies and the coverage that they can provide within the FCC rules. What the 300' does is provides for them the coverage that they need, within this shoehorned box, to comply with the FCC rules, it provides the coverage we need, this location fills it in between this and other stations, and it also keeps it from interfering with other FM stations. You are driving down the road, and as you get out of the range of your FM station, you start to hear other ones bleed-in, that is what the listeners hear, but from an FCC interference standpoint, that is what these licensees have to protect. There is always some bleed-over just because that's the way it works, but they are not allowed to step on each other to the point that you can't hear either radio station. There is a limit as to what they can build within this area to provide this extended content and extended programming and that is what this 300' tower does for them.

Attorney Schneider: All of these frequencies that you mentioned, these are all specifically allocated under the regulatory authority of the FCC?

Mr. Villecco answered yes. The way it works, but you wouldn't necessarily hear it for a wireless ATT or T-Mobile application, it is a little bit different licensing for them as compared to an FM station. FM stations, because of the FCC rules, they have to protect the channel that they are on 94.3, so they have to protect the other licensees on the adjacent channel up and down so that would be 94.1 and 94.5 and then we've got to protect stations

that are actually 10 megahertz away for another reason where you can actually cause interference within radios, so other stations up and down the dial have to be protected. It is a very limited capability and service area and license area that they can operate within and still stay within the FCC FM rules.

Member Levine questioned since you are shoehorning into a specific frequency, you'd be doing that whether you are at 300' or you are down at 100'. Why is this going to negate interference since you are still limited to that particular frequency?

Mr. Villecco answered limited to the frequency but I need to fill in the area within that licensed area. Referred to Exhibit A-2.

Member Levine: But further to my question, your normal FM radio doesn't need towers, correct? Radio stations?

Mr. Villecco answered no, they have towers everywhere. Radio stations are on towers everywhere.

Member Levine: Why can't this particular client use the same towers that other frequency uses are tied into? Why does it have to be a separate tower?

Mr. Villecco answered, for example, they do use the frequency in West Orange. They are on the same tower and the same transmitter is WNHS. It is the same coverage, but what happens is that coverage runs out so now what we are looking to do is extending it in this area and east so an additional tower is needed at point.

Member Levine: Aren't those other stations covering this area with the towers they are using?

Mr. Villecco answered I am sure there are some other FM stations that cover this area. It is different programming. So when you are going up and down your dial, some people like to listen to Christian Radio and some like to listen to rock. It is different programming.

Member Levine: Whatever frequency you are going to be on this 300' tower, you are going to be on if you are utilizing somebody else's tower to that area that is already covered?

Attorney Mondello interjected your question might be, why don't you go on the tower where the rock station is and use that? Why do you need a new tower when you can just use another tower broadcasting your frequency?

Mr. Villecco, referring to Exhibit A-2, answered this map shows what we are limited to with the FCC license. This black, squiggly line is the service contour.

Member Hoffman questioned are you covering that whole area now?

Mr. Villecco answered no, none of that now.

Chairman Dunning questioned your station is not here now?

Mr. Villecco answered that is correct. This station is not in operation now.

Chairman Dunning commented what you are trying to do is develop a new area for your station.

Mr. Villecco stated that is correct.

Member Levine commented my point is that area is being covered now by other stations.

Chairman Dunning stated yes from other towers, wherever.

Member Levine questioned why can't you use those towers since it is already covering this area for this particular use?

Mr. Villecco answered to fill this area here we need to be on one of the towers that is in and around where this location is so that we can stay within this FCC license contour that I am showing you. If we were to move to another tower five or ten miles away, we would be

outside of that FCC license are. We would not be able to do that and meet our interference protection criteria.

Member Levine questioned your transmitters have to be in this particular area? They can't be on another tower outside of this area is what you are saying.

Mr. Villecco answered they can't be on another tower outside of this area that is correct.

Member Hoffman questioned are you on any other tower that can't broadcast beyond that radius? Is that what you are saying? If you had another tower closer to your perimeter and your signal extended the perimeter that would be a violation?

Mr. Villecco answered yes, that is correct.

Chairman Dunning commented there are other towers up there.

Mr. Villecco stated there is an AM station right next door, WVNJ. Actually, there are four (4) towers there and I know them very, very well.

Chairman Dunning questioned you can't use any of these other towers for your service?

Mr. Villecco answered the four towers that are there, the WVNJ towers that are there is an AM station, and I've actually done work on that station previously last year we did it. AM towers are a little bit different. This is an FM tower and the way that works is the antenna is the device that we mount to the top of the tower and the tower is just a support structure. With an AM tower, the tower, itself, is the actual antenna. It has to do with the frequencies. The way AM towers work is WVNJ, for example, is a four tower array so there are four towers in sort of a diamond pattern. Similar to this, they have a very specific interference pattern and service pattern that they have to file and stay within to stay within the FCC rules. We actually put antennas on one of those towers about two years ago. Since we had to rebuild one of the towers, it took us a year to get that back into FCC compliance. The problem was the way that this particular station was designed "x" number of years ago and, from an engineering standpoint, it was not a particularly stable pattern. In other words, when you add things to any of the towers, it throws off the impedance of one of the towers and it makes the pattern unstable. When that happens, we start to cause interference. We had to get special temporary authority from the FCC, we had to operate them at lower power, we had to replace half of their system and do a bunch of other things, and we were able to just bring it back into compliance. If anything else goes onto any of those towers, it will go back out and stay out from an AM broadcasting perspective, not an FM. From an FM perspective, just looking at coverage, those towers could work. From an AM perspective, we would not be able to put something on those towers and get those towers back into compliance so we would actually create a different problem. It is unfortunate since the towers are right next to where we are so from a tower perspective they would work, but because they are electrically charged towers, and each tower has a different charge fed in different phase of each other, that is how an AM tower works, you just couldn't bring that pattern back in beyond the first time.

Member Levine questioned if the AM towers would affect your tower or interfere with it?

Mr. Villecco answered no. It is not unusual for AM and FM stations to be collocated on the same tower. If you are down by the Meadowlands, there are a lot of AM towers in the wet areas there and they put them specifically in the wet areas because you get this extra conductivity with the water because water conducts electricity. You can put an FM antenna on top of an AM tower but it has to be a stable AM tower. These particular towers, because of the type of pattern and this trapezoid pattern that they have, it's just not particular stable. Like I said, my firm did it and it took us a year and several new

applications with the FCC for that AM operator to bring them back into compliance. It was a very difficult process.

Member Pasznik question how far out Passaic and Bergen County will this tower reach? Mr. Villecco, referring to Exhibit A-2, answered you can see this black line is the licensed area so we have to fill within the license area as much as possible. You can see that there are areas of coverage and again here, as you know, with the terrain in this area it is very hilly, often times there are valleys and you have a problem with valleys because you skip over some of these valleys and you serve the higher elevations, so you can see that's why it is a little bit patchy here. We've got signal out to like River Vale, Old Tappan and areas like that. From about Wanaque on east into Bergen County.

Member Levine commented I live in Wanaque and we can't get radio reception where we live. Will this tower correct that problem?

Mr. Villecco answered yes it should for that station only, 94.3. Here is the thing, FCC rules allow these translators so potentially other FM stations could mount up there and get different programming. Unfortunately, the way that the equipment works is, if it's a digital station I can get two or three programs like we do in West Orange, but it's only a couple of programs that you can get and that is the limit of the capabilities.

Member Malone questioned, the AM antennas, do you know the height of those?

Mr. Villecco answered the tallest one, I think, is somewhere around 180' to 200'.

Member Malone stated you are proposing 300', which is approximately 100' taller obviously. Is the ground set at the same sea level height?

Mr. Villecco answered they are very, very close. They are both along the top of ridge on Skyline Drive. We will be approximately 100' taller. The ground elevation is more or less the same. They are all on the same ridge line all on Skyline Drive.

Member Malone questioned you mentioned the AM height antenna would suffice your need, how are you justifying the extra footage?

Mr. Villecco answered no, I said in general AM stations you can mount an FM on an AM station.

Member Malone stated the question before was would that suffice your area need as far as distance, unless I misunderstood you.

Mr. Villecco commented that was my mistake. The 300' is what we need. I thought we were just talking about location. The location is essentially the same, but the height is 100' short.

Attorney Schneider: Anything further relative to Bridge Christian Radio that you would like to add in terms of Exhibit A-2?

Mr. Villecco answered no, other than this license there that we have, you can see that we fill it pretty well, and we'll provide service to Wanaque and the towns nearby and it will be an extension of this particular program that right now originates out of West Orange.

Attorney Schneider: Just so we are clear and to leave no stone unturned, you did, as part of your due diligence analysis, look at all alternative existing structures to determine whether there were any alternate existing structures which may be able to be utilized to meet this particular user's technical needs and, for the reasons you just articulated, there is no existing alternate structure which would allow you to meet your technical objectives. Is that a fair statement?

**Mr. Villecco answered yes that is correct.**

**Member Levine questioned are the electrical tower requirements in your area of expertise?**

**Mr. Villecco answered usually the Site Engineer will talk about.**

**Attorney Schneider commented, in terms of getting electrical service to the site, we'll have Mr. Murawski deal with that.**

**Member Covelli commented so what you're saying is that the existing 100' tower is not sufficient to take that signal from West Orange and then broadcast it further out into this service area? That is the need for the tower to go from 100' to 300'.**

**Mr. Villecco answered that is correct. The way that this works is it's a translator. The pick-up antenna, so the receive antenna to pick-up the signal from West Orange, is at around 100'. Because they operate at 94.7 and 94.3, I need to separate these two with enough distance so that I don't get a feedback loop and it will knock the whole thing out of service. So I need some separation between the two so we've got coverage up at 300' for the analog, 94.3, and I've got the digital pick-up down at 100' which would be where the existing tower is and I would use the distance between the two as enough isolation so I don't get this feedback loop and cause itself interference to the radio station.**

**Member Covelli questioned is there anything wrong structurally with the current 100' tower?**

**Attorney Schneider answered that the existing 110' is structurally failing.**

**Member Covelli commented so you need to replace that tower.**

**Attorney Schneider commented that tower, for all intents and purposes, is structurally failing and we can't get power to the site. Since you raised the question, your Governing Body was actually very fair to us, because at one point in time, when we alerted the Governing Body to the fact that the existing 110' communications tower was failing, they had given us the interim right to construct a temporary replacement tower because of the structural failure and because of the power issues. They did that on an emergent basis because what happened was we were trying to help the emergency service providers through this 1070 Repeater Association thinking they had to get off the existing communications tower and we were going to put them on the new temporary tower. Ultimately, notwithstanding everybody's good efforts, including the Borough and us, we couldn't get them quick enough on to the temporary communications tower so that explains at least what happened or what is going to be the status. The simple answer is that 110' communications tower is going to obviously be taken off the site when and if this is hopefully approved.**

**Member Hoffman, referring to the colorful chart, I see the black line, is the green colorization your coverage area or is that topography? Why red and green?**

**Attorney Schneider: Why don't we articulate to the Board what is represented by the different colors, what they signify and, specifically, the area?**

**Mr. Villecco described the black line as being called the FCC service contour. The service contour, and the way the FCC does the calculations, this is what's known as a 60dbu contour. Unlike other wireless applications you have seen, where they have a negative receive number (-60), this is a positive. It is important because the red represents 70dbu, which is a stronger signal. The reason we do this is when you are looking at FM stations, they look at different levels of signal, but 60dbu is their service contour.**

Member Hoffman commented so the stronger one is red, the weaker one is green, and the less one is yellow. Is that it?

Mr. Villecco answered yes. The red and green are within the 60dbu; red is 70dbu and green is 60dbu. The green fills in most of that black line with the signal that is required. The yellow is 54dbu which is less than the signal; it still works, but is less. What you will see is that we've filled in this coverage area pretty well at this height, which is why we need the height. We are trying to fill this in as much as possible. White is below the level that is where your radio picks up static.

Member Hoffman questioned if you went to 200', you would have less green and red?

Mr. Villecco answered we would have a lot more white. What happens is that 200' we have a significant amount of white in here and we don't fill in the whole area, and there is no other way to fill in the area at that point under the FCC rules.

**Attorney Schneider:** Any other questions on the radio network before I move on to the other user? I am not done with this witness. Let's switch gears, if we can, to the other user who I'll refer to as "New Line". What is New Line striving, in general terms, to achieve here and what's the specific service that they are looking to reach here?

**Mr. Villecco:** What is interesting is New Line has a similar problem to the FM radio station in that it is the terrain in this area. These radio services are all line-of-sight services. If I can't get over the terrain, or can't get over some of these ridge lines, it just blocks and stops the service. New Line specifically provides private secured data links for connections to the New York Stock Exchange Facility that's in Mahwah. This particular site is relay point. The relay comes from Sparta, connects through here, and then connects down to Mahwah, where there is a tower right next to the Stock Exchange. They provide for their end-users and they provide this secure and this private and reliable link to Mahwah.

**Attorney Schneider:** Without getting into the entirety of the New Line network, for purposes of our discussion here this evening, the required link that we are seeking to achieve is a line of sight or path from Sparta to Mahwah, and we are in the process of actually implementing our installation on the existing Sparta tower. Are these statements correct?

Mr. Villecco answered that is correct, and construction is going on right now in Sparta to put on an existing tower.

**Attorney Schneider:** For information purposes and as is reflected on the Site Plan that was submitted in conjunction with this Application, generally the New Line installation is at slightly below the radio network at elevations respectfully of 290' and 280'. Is that correct?

Mr. Villecco answered that is correct.

Member Levine questioned two antennas?

Mr. Villecco answered yes there are two antennas in both directions. Two antennas point towards Sparta and two antennas point towards Mahwah. It is two different paths so there are two different data connections and it is just to provide two different connections that are separate.

**Attorney Schneider:** Do you likewise have an Exhibit to help us understand why this particular ridge line is of such critical import in achieving the ability to get from Sparta to Mahwah?

Mr. Villecco answered, yes I can. Let me talk about it for a second first. As you know,

**Mahwah is on the other side of the ridge that we are proposing this tower and it is down the hill from where we are on this ridgeline. Sparta then is across the valley and there are some other smaller ridges between here and Sparta and this service that New Line provides, at a different frequency band at 11 gigahertz, is a point-to-point service; so it is a relay service. What we've got to do is get a line of sight from Sparta to here and then another line of sight from Wanaque down to Mahwah. Referring to Exhibit marked as A-3, ATC446 Sparta Tower to Wanaque, this Exhibit shows, over on the left, the representation of the tower in Sparta, and over on the right, it shows the representation of what the proposed tower location would be here in Wanaque. You can see from one point to the other point that this is sort of a cross-cut of the terrain profile of what you would see. You see we are up in the hill in Sparta; you see there are some valleys and some additional hills; then there is additional ridgelines here; and then you get back down into the valley; and you are back up on the ridge where we are by Skyline Drive. This is about a 16 mile path. I am showing a direct line of sight, but the fact of the matter is over 16 mile the 2/3 earth coverage starts to come into play. When you design these types of radio links, what you have to do is allow for a zone underneath that line so you'll see it looks kind of blurry, but it's not, but the brown line on the top is the actual point-to-point link. This bottom slightly curved line is what is known as the "Fresnel Zone", which is a zone underneath this point-to-point link that allows for earth curvature and what has to happen is, if I am designing this link, I've got to make sure that I don't have anything that pokes up into this zone. I am showing this as flat earth, but we all know it isn't. If you go fishing out in the ocean and you are five, six miles out, you can't see anything at the coast any more unless it is off of Atlantic City and there are 300' buildings and you only see the top of the building and that is because of curvature. It is the same problem that we have here. What we have to do is cross these peaks and cross them at a height where I don't have that "Fresnel Zone" being pierced because what is effectively doing is encroaching because of curvature. What we've done here, and I apologize that it is difficult to see but it's a difficult map to develop without having it so large that I couldn't bring it in here, but you can see some of the brown on this terrain and then you see the green. The green approximates an 80' tree height, so we are assuming we have 80' trees throughout this area, and we know we have a lot of 80' trees in this area. What it does when I'm designing this is I have to allow for 80' trees because trees cause problems at these frequencies. I have to get up above the trees, up above these ridges and you can see what happens is right in the middle of the path in about 8 miles or so, I just clear the ridgelines when I have this 300' structure. In fact, it is 280' is the lower of the two antennas and I just clear these ridgelines at 280'. This is the first thing and what it does is connect the path to Sparta. The second thing I have to do, but I don't have a path, is I have to connect the location in Wanaque on the ridge on Skyline Drive to Mahwah. This particular site gets a direct line of sight into Mahwah. We've looked at a handful of other towers; one of which was the AM that we talked which had structural and other interference reasons why we can't do it. There are other towers to the north and northwest that we looked at. The problem is that as you start to swing this path other ridgelines start to get in the way. This was the only location that we could get of all these other towers that would actually make this clearance and we would either have one or two problems. We either couldn't make the clearance from Sparta to one of these other towers or, if we could, those towers didn't see Mahwah. For example, there are a handful of towers to the northwest of here. They can see Sparta fine but because of this**

ridge that we are on, this whole ridge that goes north and south, they don't see Mahwah. We would have to put another tower up at that point and then we would have to introduce another link as well. So this efficiently gets us from Sparta to Wanaque down into Mahwah.

Member Levine questioned you are just clearing the 80' trees, correct?

Mr. Villecco answered that is correct. It is hard to see, but there is a little bit of clearance, so there is a little bit of growth room.

Member Levine commented that is my point. If it grows another 10' in however long it takes, what is that going to do to your line of sight?

Mr. Villecco answered it is hard to see but there actually clearance here and a little more so it allows for growth as well.

Member Malone questioned what kind of cushion are you looking at as far as the cushion of growth? It is 10', 20'?

Mr. Villecco answered it is usually about another 20' or so. We are hoping the trees don't grow more than 20'. There are pretty mature trees in this area and you may see some growth but it gets limited. You can start to encroach the very bottom of that zone. It is really when you start to pierce the zone is when you start to have these fading problems. There is a little margin of error in there so we have a little bit of room.

Member Levine questioned how is the signal now getting from Mahwah?

Mr. Villecco answered I think it gets there on fiber optic cables, but there is reliability issues with fiber optic cables and there is also delay issues. You see these FIOS commercials and how fast it is and it is fast, but what you have to know about fiber optics is there is electronics that drive it and as you send signals through there, the electronics have to process that signal and then regenerate the signal. Each time you go through more electronics, it adds more latency and then it becomes a problem for these networks.

Attorney Schneider: You need to get to Sparta from Mahwah. Is there a way to go directly from Sparta to Mahwah without essentially the Wanaque tower? Why couldn't you go directly from Sparta to Mahwah?

Mr. Villecco answered because the ridge that we are proposing to build this tower is in the way. Physical limitation of terrain.

Chairman Dunning questioned how high is the tower in Sparta?

Mr. Villecco answered I think it is 288'.

Chairman Dunning commented in your sketch it looks like it's half the size of the Wanaque tower.

Mr. Villecco stated it does. It's the trees when you are looking at it. You see more green there it is just shadowed by the trees that are on here, the other green.

Attorney Schneider: Can you discuss from an FCC perspective how the frequencies are allotted for this type of user? When the Board may have heard a wireless application from Verizon, the usual proper testimony is that they operate within a specific allocated frequency band depending on what technology they are using. This is a little different in terms of how the frequency is allocated by the FCC for each individual tower.

Mr. Villecco answered using Verizon or any wireless carrier as an example; they have a broad license on it and a broad geographic area. For example, this is part of the New York

Standard Metropolitan Statistical Area (NYSMS) which is a very large area that includes the Five Boroughs, North Jersey all the way down to Union County, which goes to Connecticut. These wireless companies are licensed across that huge area with a whole swath of frequencies and that is what they deploy and they deploy those same frequencies over and over again. For these particular installations, these are very, very frequency specific and their point-to-point specific so each one of these has a separate FCC license. There is no broad license like the wireless carriers have and the way that it works you actually have to go through a frequency clearinghouse to actually file the frequency. You have to tell them I need to get from point a to point b, you go to the frequency house and they will assign you a frequency and once they assign you a frequency, you are given a prior coordination notice, which is really just a reservation. You reserve the frequency and you can only reserve it for a short period of time. Once you go into construction, then you license it and it is locked in. There is this whole reservation process, they have to pre-coordinate the frequencies and then they have to reserve them and then once they get the permission to build then they license them. It is very, very site specific and very, very local specific and very frequency specific.

Attorney Schneider: So that licensing or that clearinghouse by the FCC essentially represents their licensing of this particular user at this particular tower, correct?

Mr. Villecco answered yes, exactly.

Member Levine questioned what is going to be the aesthetic impact to this tower? Where is it going to be seen?

Mr. Villecco answered there will be another witness that will discuss that.

Attorney Schneider: The Board asked you a series of questions about what you've assessed in terms of alternate tower structures both as to the Radio Network and as to this particular applicant and you've given some comprehensive testimony as to why you couldn't use the AM station for Radio Network and why essentially some of the towers to the northwest wouldn't meet your technical objectives in terms of getting the necessary site to Sparta and to Mahwah. That being said, the Ordinance in Wanaque asks us to essentially rule out whether there are any municipal properties or properties that are owned either by the school or by the high school for the siting of a new tower. I think the answer is very obvious, but can you assess why municipal properties or school properties are not suitable for this proposed installation?

Mr. Villecco answered yes, to the best of my knowledge, there is no municipal or school properties up on Skyline Drive and any municipal or school properties are more down in the valleys. What we would have to do is we need the height to clear the ridge as we discussed. If we were to locate on one of the municipal properties down in the valley, we would have to make up for all that height. If I have 300' or 400' of hill or more that I've got to make up, and I have a 300' tower on top of the ridge, I am going to need at least a 600', if not taller, tower on one of these municipal properties. For obvious reasons, it is an extremely tall structure and an extremely tall structure like that has a very, very big footprint just to support that much height, and wind loading, etc. It is not feasible to do it.

Attorney Schneider: Essentially, because of the terrain differences in order to meet your AMSL required height, the municipal or school properties would not meet your technical objectives with any practicality?

Mr. Villecco answered yes. The AMSL means above sea level. What Attorney Schneider

is referring to is the overall height above sea levels. The ground elevation at the curved property is about 867' and I have 300' on top of that so about 1167'. If I drop down 300' or 400' into the valley, I'd still have to make that 1167, but if I am down 300' or 400', my tower would be 300' or 400' taller.

**Attorney Schneider:** Mr. Chairman I have nothing further on direct for Mr. Villecco.

**Chairman Dunning:** Any other questions gentlemen.

**Member Hoffman** questioned you are proposing to lease space on this tower to regular telephone communication companies also?

**Mr. Villecco** answered yes.

**Member Hoffman** questioned so now are any of those frequencies going to interfere with any of the other frequencies of the leasees.

**Mr. Villecco** answered no. New Line is up at 11 gigahertz and the FM station is at 94.3 and wireless carriers, for example, operate at 2 gigahertz that is 700 megahertz and 800 megahertz. They are all at different bands and they don't interact with each other.

**Member Hoffman** questioned how many more proposed antennas are you suggesting putting on this tower?

**Attorney Schneider:** Our third witness will answer that, but this tower is being structurally designed to the super max. We will present to you that we would basically be able to accommodate structurally four additional carriers generally between 100' and 200', plus the MS providers. We are designing this tower to the max and you need to do that right from the start.

**Member Ludwig** commented the antennas attached to the tower don't weigh all that much in comparison to the structure itself.

**Mr. Villecco** commented that the New Line antennas are pretty hefty. The wireless antennas aren't.

**Engineer Nash** commented it is not the weight of the antenna but the area of it and wind load against it.

**Member Malone** questioning the second antenna that you are talking about it, is that a focused antenna where it's not being spread like the AM or FM antennas?

**Mr. Villecco** answered it is a dish antenna and it is very focused being part of that frequency coordination, they have to use very specific antennas that it keep it very focused. I mentioned the shoehorn before and this is the same type of thing especially when you are in the NY Metropolitan Area here and these are very popular frequencies to be used. In order to license these, I have to have antennas that have what is known as a lot of discrimination; I've got to really discriminate and get that pattern to a focused pencil or laser beam and they are designed to do that specifically without very much splatter at all so that you can coordinate these frequencies that actually get a frequency, and that is by design.

**Member Malone** questioned the frequency that you are shooting from the ATC tower to the proposed tower, is that the same frequency that the ATC is receiving as well?

**Mr. Villecco** answered no, each path is a different license, and these paths are in two directions - so it is a transmit and receive. A frequency that is being transmitted from Sparta will be received at Wanaque, and Wanaque will send a different frequency back. Two different frequencies and each path is very specific and then the path that goes from

**this proposed tower in Wanaque down to Mahwah will have two different frequencies. Again, in that same range nearby but different frequencies.**

**Attorney Mondello: Any questions from Board Members? Questions from residents within 200'? Next witness.**

**Attorney Mondello: I would not tell you how to present this application; however, I would suggest that you try to get all of your witnesses done this evening for several reasons. This Board may not have the same composition; one never knows. If possible, I suggest you do that.**

**Attorney Mondello swore in:**

**Michael Fischer, 132 Jaffrey Road, Malvern, Pennsylvania**

**I am a wireless consulting engineer with the firm Millennium Engineering. We are similar to Mr. Villecco's firm in that we are an RF Consulting Firm. We provide a variety of services to the wireless industry, including certificates of RF safety and electromagnetic field compliance. I have a Bachelor of Science in Electrical Engineering from Widener University and have been with Millennium Engineer for the past 15 years doing what a consulting radio frequency engineer would do. I am a Licensed Professional Engineer in the State of New Jersey, Pennsylvania and Maryland. I have been accepted as an expert witness in front of over hundred boards in New Jersey, Pennsylvania, Maryland, Delaware and Virginia. I believe, but can't confirm, that I've testified in Passaic County, but not in this township.**

**Attorney Mondello: You are proposing an expert in RF frequency again?**

**Attorney Schneider: We are proposing an expert in the field of compliance with FCC/EMF standards.**

**Attorney Schneider: Mr. Fischer you have had the opportunity to review the applicable the radio frequency emissions standards that would be generated from the two proposed users of this site, correct?**

**Mr. Fischer answered that is correct.**

**Attorney Schneider: You've had the opportunity to review those emissions in the context of the regulations that have been promulgated by the FCC, correct?**

**Mr. Fischer answered that is correct.**

**Attorney Schneider: Did you prepare a report which summarizes your findings and conclusions relative to whether the site will operate in strict compliance with applicable FCC standards?**

**Mr. Fischer answered yes I did.**

**Attorney Schneider: We actually had submitted an original report when we changed the number of users and we have now updated the report, which is marked as Exhibit A-4. This report was handed out to the members. Refer**

**Attorney Schneider: Referring to Exhibit A-4, the profer of A-4 is to confirm whether the levels of radio frequency emissions are in strict compliance with the applicable FCC standards, correct?**

**Mr. Fischer answered correct.**

**Attorney Schneider:** Did you undertake that analysis in conjunction with the FCC regulations, correct?

**Mr. Fischer** answered that's correct.

**Attorney Schneider:** Did you make certain worst case scenario assumptions so that the levels that you are proposing here would be the worst case scenario, correct?

**Mr. Fischer** answered that's correct.

**Attorney Schneider:** Based upon the applicable FCC standards, can you confirm whether the levels of radio frequency emissions will be in strict compliance, and let me clarify that, if can you provide the Board with some context of how much below the applicable FCC standard this site will operate with?

**Mr. Fischer** answered at ground level or any publicly accessible area, the exposure levels from the proposed antennas systems would be in strict compliance with the FCC's allowable standards. If the FCC allows up to 100% exposure level, the ground level exposure will be below 1% by a substantial margin.

**Attorney Schneider:** Referring to page 3 of Exhibit A-4 under the conclusions, utilizing the FCC required methodology in using the series of worst case scenarios and using the specific equipment that's proposed to be installed, if the FCC permits the levels to be at 100%, the cumulative emissions that are being proposed in conjunction with this application will be well below 1%, correct?

**Mr. Fischer** answered that's correct.

**Attorney Schneider:** In your professional opinion, this site will operate in strict compliance with applicable FCC standards as it relates to radio frequency emissions, correct?

**Mr. Fischer** answered that's correct.

**Attorney Schneider:** I have nothing further.

**Attorney Mondello:** Who is Mr. Dugan and why isn't he here?

**Mr. Fischer** answered Mr. Dugan is the principal engineer with our firm. We are a three person consulting firm. He was originally intending to come and when the meeting got bumped, he had a conflict, so I am filling in. I could have signed the report myself.

**Attorney Mondello:** You are familiar with Mr. Dugan's report?

**Mr. Fischer** answered yes. We work together and do the work together.

**Member Levine** stated this report was based on the two users that we are discussing tonight. What happens when all these other users get put onto the tower?

**Mr. Fischer** answered they'll be inconsequential. Even if you were to put multiple FM antennas, multiple commercial wireless carriers, there are thousands of towers with four or more wireless carriers on them at ground level.

**Attorney Mondello:** And it wouldn't change that level at 1%?

**Mr. Fischer** answered that's correct.

**Attorney Schneider:** Based upon your experience, if you added hypothetically four wireless communication carriers, would the site continue to safety operate well below the FCC standard?

**Mr. Fischer** answered yes.

**Attorney Schneider:** It might not be less than 1%, but it would still be significantly below the FCC Standard?

**Mr. Fischer** answered correct. I have personally measured with calibrated instruments at

ground level around these types of towers and loaded towers with many antennas and you never see anything above 1% at ground level.

Attorney Mondello: You did testify that even with four wireless antennas, it still would be well below 1%?

Mr. Fischer answered correct.

Attorney Mondello: Any other questions from Board Members? Residents within 200'?  
Next Witness.

Attorney Mondello swore in:

James C. Murawski, 87 Hibernia Avenue, Rockaway, NJ

I have a Bachelor and Masters Degree in Civil Engineering from Manhattan College and graduated in 1977. 40 years' experience in civil, structural, engineering management and project management. The last 10 years being dedicated to the wireless industry. Licensed Professional Engineer in the State of New Jersey and have testified before numerous municipalities over the last 10 years in that regard.

Attorney Mondello: Board have an objection to admitting Engineer Murawski as in expert in the field of engineering? Hearing none, seeing none, your witness.

Attorney Schneider: You visited the site? You are familiar with the relevant ordinances of the Borough of Wanaque as it relates to this application? Your firm, or you, are the preparer of the Site Plan that is before the Board? The Site Plan that is mounted represents the latest revised plans that were submitted to the Board, with no changes?  
Engineer Murawski answered correct to all questions.

Engineer Murawski stated if you are not intimately familiar with where the site is it's located off of Skyline Drive at Mile Marker 2.0 and approximately two miles from where it begins at Route 287. Skyline Drive is also known as County Route 692. As we stated earlier, it does not front on Skyline Drive. Access to the site is via an existing easement with the State of New Jersey DEP.

Attorney Schneider questioned the intervening Lot is owned by the NJDEP and that is where we have recorded access easement, correct?

Engineer Murawski answered correct.

Attorney Schneider: What would you summarize as the relevant characteristics of the subject property? Essentially, the property is now used as a communications site, correct?  
Engineer Murawski answered it is a communications site usage. It is an existing graveled area approximately 8000 square feet in total area. No changes are proposed to that extent of existing gravel. The site is about 1.3 million acres in total area. As you can see from the sheet that I have opened, SP-1 from the set that was submitted with the application, there are various shades on the property indicating areas where the slope varies from moderate to severe. The area that is graveled is relatively flat since it does slope at about 4% and drops down about 6' from the entrance off of Skyline Drive down to where the proposed tower is to be located. The darkened areas that are immediately adjacent to the access drive and the proposed fence going into the fenced area is nothing more than an old trench that was formerly dug to route electrical conduits. That is not really a steep slope

area, it's just an existing trench where the work was never completed and it was never backfilled and that is why that darkened area is there. There is an existing easement running through the easterly portion of the property for a trail. To the east of that, where the eastern most property line does border on the Borough of Oakland and east of that are existing wetlands. Associated with the wetlands is what we call a buffer area so we're not permitted to develop within that buffer area. The edge of the existing graveled area is right on the edge of the wetlands transition line, so we are not in violation there. The property is also within the Highlands Preservation Area. However, due to the nature of the development not being classified as a major development in the eyes of the Highlands. In other words, the area of disturbance is below threshold and the area that is impervious is below threshold and we are not proposing to add any new impervious. The total area of disturbance is maybe a .10 of an acre and we are allowed to disturbed up to an acre. We meet the criteria for Highlands Preservation Exemption No. 4, so we don't need to file for Highlands' approval in this case.

The proposed site improvements is a 300' lattice tower. In addition to that, there are two equipment shelters currently on site now. One of them is going to be retained and be used and the second one is going to be removed off the site. Bridge Christian Radio is going to occupy the existing equipment shelter. New Line is going to install their ground equipment on a pre-engineered steel platform that comes together as a package with a canopy and a canopy is required for overhead protection for their equipment. We've indicated the location of the relocated equipment shelter to be within the footprint of the lattice tower and there is a reason for that. It's not ideal, but being that we are also hoping that there will be future co-locators onto this tower, we want to make available as much of the existing footprint as we can for ground space for future co-locators. The tower base is an equal lateral triangle with each side being about 30'.

I am going to come back to the site clearance issue with the edge of the drive. Referring to Sheet Drawing E-1, which illustrates an elevation of the proposed tower. It is a lattice tower. It is high strength steel, hot dipped galvanized for corrosion protection and a tower of this nature that is properly maintained will last indefinitely. We didn't show a foundation because this structure is not yet designed, but it will most likely have a mat type foundation with clearance for each leg and the mat will be about 36' square and might be something like 3' thick with 100 yards of concrete and it will take a month to build. On the elevation of the lattice tower, we are showing the Bridge Radio antennas on our drawing at elevation 200 and now that is going to be changed to elevation 100. This is an error so elevation 200 is going to be elevation 100 for the bottom antenna for Bridge Christian Radio. The second antenna for Bridge Christian Radio is located at the top of the 300' lattice tower. In addition, we are showing New Line's microwave dishes at the top at their respective elevations along with the ancillary equipment, i.e., electronic devices called remote radio heads and diplexers which are integral to the operation of the microwave antennas, not substantial in size or weight.

There has been some conversation about what the tower is going to be designed for. It will be designed for another set of microwave dishes at the top and four (4) wireless antenna carriers starting at elevation 210' working their way down. So it is the weight of the added carriers' equipment, plus the wind load, that this tower's foundation is going to be designed to handle. In addition, as a requirement dictated to us by the FAA due to the tower's height, the location and height is approved with the condition that it's lite with

**FAA warning lights. So we have two red strobes halfway up the tower and we have a red and white strobe at the tower's top. Red is for daytime illumination and the white is for night time illumination. This is an FAA requirement and the type of light is mandated by the FAA. It is an LED fixture and it is backed-up with on-site battery reserve so if power goes down, the lights still work for a total of three days.**

**Attorney Schneider: I would like to go back to some of the structural issues that were raised by a couple of Board Members. You've indicated who the present users are and what respective elevations and you have also indicated the potential structural ability to accommodate four (4) other carriers. You are familiar with the general weight of the antennas that would be associated with these wireless carriers and there are a specific structural code provisions that are applicable to towers of this nature, is that correct, and we have an ongoing standard and I think we are up to REG G now?**

**Engineer Murawski answered that is correct, with H forthcoming.**

**Attorney Schneider: Just to give the Board that assurance that obviously you will deal with this, if we are fortunate enough to get approval. At permit time, this tower will be in strict compliance with the applicable structural code provision, and it is being designed right from the get go to potentially accommodate the wind load and the actual weight of the four additional wireless communication carriers if they ever are installed on the tower. And there is enough additional structure capacity to ultimately accommodate potential EMS provides. Are these statements correct?**

**Engineer Murawski answered yes, they are correct.**

**Engineer Murawski continued stating there are two other issues I would like to go back to; the access easement being the first one, referring again to SP-1. The first thing you'll notice is that the extent of the gravel access drive does not closely follow the limits of the deeded access way and we have two options. The simplest option, and the option we elected to proceed with, and are in progress of accomplishing, is to have the deed's metes and bounds re-written to follow the edge of the existing development that is out there now.**

**Attorney Schneider: To put that in layman's terms, we would agree as a condition, if we get this approval, we'll agree to get a modification to the existing access easement to reflect the actual current physical means of access. Is this correct?**

**Engineer Murawski answered yes, that is the intention.**

**Attorney Mondello commented this is in response to Engineer Nash's question: "The access driveway is shown outside the limits of the easement on Lot 2. Lot 2 is owned by the State of New Jersey. Is this going to be an issue? The Applicant shall provide testimony on this matter."**

**Attorney Schneider commented that is exactly the response.**

**Engineer Murawski commented yes it is an issue and we are already working to get it resolved.**

**Engineer Nash questioned, since it's the State of New Jersey land and DEP owned land, it is Green Acres Land. Is that true? Would you need to get a Diversion of Use, which takes one year to get?**

**Engineer Murawski answered if we do, I have not been informed of that yet.**

**Engineer Nash commented you would need land to occupy a driveway and a driveway use may not be permitted. Even to get that small amount of land, it could take at least one**

year, but this is on you.

Engineer Murawski stated I understand and absolutely. We have not been advised of that yet.

Engineer Nash stated are you going to have to make strong arguments that you don't need a Diversion of Use.

Engineer Murawski commented our other option is to conform to the metes and bounds obviously.

Attorney Schneider: Option B is if it in fact requires a diversion, and were hopeful because it is a swap for swap, the other option would be to physically relocate the driveway to conform to the current metes and bounds description.

Engineer Murawski stated the applicant is certainly willing to do that.

Attorney Schneider: To bring some conclusion to that, the condition, if it is of approval, can be stated in the alternative.

Attorney Schneider: Let's go back to the shelters. You talked about the use of the existing shelter for Bridge Christian Radio and the new shelter for New Line. Just to give the Board some sense of the required maintenance visits to this site once they are up and running. I am not talking about the initial construction. Generally every four to six weeks is that a fair statement?

Engineer Murawski answered that is a fair statement, yes.

Attorney Schneider: Referring to E-1, you gave the details about the tower, the equipment on the tower and I know for the record there is a lightning rod that is mounted to the top of the tower but could you describe the inconsequential appearance of the lightning rod and for what purpose it is proposed.

Engineer Murawski commented it is fairly standard lightning protection system. Most lightning rods that you may have noticed in the past have been in the order of 6' for 150' tower for example. We made this one 12' to ensure that we have adequate protection for the equipment that's at the top of this tower, so it is nothing more than a 3/4" thick diameter copper rod 300' above ground level, 12' tall and it's going to be barely visible at all from the ground.

Attorney Schneider: To the extent the Ordinance applies, the Ordinance permits a 2 square foot sign disclosing the contact information of the site. Can we comply with that?

Engineer Murawski answered we will comply with that.

Attorney Schneider: We are not proposing any "advertising sign" as is prohibitive by Ordinance. Is that correct?

Engineer Murawski answered that's correct.

Attorney Schneider: In this Zone District, just for purposes of the record, in the WRC Zone, with the exception of minimum lot width, there are actually no bulk requirements in that Zone. Is that correct?

Engineer Murawski answered that's correct.

Attorney Schneider: Let's talk about landscaping which is an Ordinance provision that is probably meant to be applied to other types of facilities then really the type and location proposed here. The Ordinance references the use landscaping to screen the compound from adjacent public uses, public property or residential property and to preserve natural vegetation or replace that which is lost. Can you discuss from a site plan perspective

whether there is any essentially any trees or landscaping that is going to be lost and/or the need to provide any supplemental landscaping, if applicable?

Engineer Murawski answered we have not proposed any supplemental landscaping for several reasons. We are proposing to fence in the compound. It is not fenced in now and in our application we are proposing an 8' chain link fence around the parcel, not the entire graveled area, but enough to form a compound to define the footprint for future co-locators, and that is shown on our plans.

Attorney Schneider commented the Ordinance requires a minimum 6' high fence.

Member Levine questioned is that 8' fence the total amount of security?

Engineer Murawski answered yes.

Attorney Schneider questioned isn't the site remotely monitored?

Engineer Murawski commented, in terms of security, no barbed wire is being proposed and we frankly don't see the need for it. The site has been exposed all these years. It's relative to define the footprint of the compound and to keep trespassers out for the most part. The site is monitored 24/7 remotely so when a piece of equipment goes down, their base will be aware of it. There are no cameras proposed. We are monitoring physical operation, data and power. There will be a locked gate. It will be a double gate so that you can get in and out with equipment in the future, but it will be locked. One equipment is completely enclosed in an equipment shelter that is locked and is very secure. New Line's cabinet is going to be on an open platform and there is no need to it secure any further than that.

Engineer Murawski commented, regarding landscaping, it is all State owned land with no private residential properties adjacent. The only public that is going to view this compound is people driving on Skyline Drive and, believe me they are not going to see you, and people hiking on the trail to the east on the easement, if that is still a trail. I am pretty sure it is still an active trail there. There are a lot of trails in the area. We didn't propose any landscaping because the property and surrounding parcel is wooded as it is. It is very dense and we see no need to add any vegetation to the existing vegetation.

Attorney Schneider: The Applicant is confirming its willingness to make available the tower to either this Borough or the surrounding municipalities' emergency services providers at no cost. Is that your understanding?

Engineer Murawski answered yes, that's correct.

Member Levine questioned if there was sufficient electrical power now at the site to power the two uses plus any additional uses?

Attorney Schneider: Why don't we discuss utility services?

Engineer Murawski answered this site required electrical power and it requires a hard-wire connection to the telephone system. Both utilities are going to be brought onto the site brand new. There is an overhead transmission system on the far side of Skyline Drive. There is a new pole that was set a few years back right at the entranceway to the site. There is no power to the site now. The plan is to bring power in.

Member Levine questioned the existing tower that you are taking down has no power?

Engineer Murawski answered correct. There is no power to it now. So all of that has to be

brought in and will be brought in in coordination with the utility company. The way they do it is they set a meter bank, which has the potential of up to four (4) meters for future co-locators, and they'll tap their power needs from the meter bank instead of going back to the pole again.

Member Levine questioned what is the voltage level coming into the transformer?

Engineer Murawski answered on the primary side I am not sure if we are going to need a transformer on site or if we are just going to have a pole-mounted transformer. I'm not sure because we didn't bridge that gap with the utility company yet. But if there is a transformer on site, then primary will be brought to the transformers, secondary coming out will be just 12208 on the order of 400 to 600amps. We will see what is available.

Chairman Dunning commented this property has been backfilled somewhat to level it out. Are you going to expand that footprint?

Engineer Murawski answered no.

Chairman Dunning: Are you going to stabilize the crushed, very thick gravel that is there now? Or you just going to let it eventually sink?

Engineer Murawski answered I have seen this before. If you notice at the entranceway for the first 50' or so it is relatively compacted and you can drive on it, but when you get closer to the end, it is like soup. I was stuck in it as well and had to get towed out of it. Over time it compacts.

Chairman Dunning: Why don't you use quarry process instead?

Engineer Murawski stated I can't answer that.

Member Hoffman stated you are going to be doing excavation work anyway. Is that going to be re-graveled?

Engineer Murawski answered that whole entire site is going to be disturbed to some extent. Where we are working under the base of the antenna that is all going to be excavated because of the 900 square foot bed being installed.

Chairman Dunning: How deep do you have to go to support this tower?

Engineer Murawski stated I am not really sure. We don't have an engineering design of it yet, but based on past experience, probably 5'. It's probably going to be a 36' square, 5' thick which is a lot of weight. If rock is encountered, and there is a very good chance that it will be, they will install rock anchors to keep it stable.

Chairman Dunning stated on the plan that you drew, you don't show, to the south, that there is another small tower on a small tower. Does that have any bearing on this site?

Engineer Murawski answered no, none whatsoever. Honestly, I don't know what it is.

Member Hoffman commented it's a private club that does h.a.m. radio; it is a repeater for a h.a.m. radio club. It has been there forever.

Member Hoffman questioned you said you can put in four other cell carriers, is each one going to require an equipment shed and, if so, what size would they be and where would they fit inside this compound?

Engineer Murawski answered the fence layout was kind of sized with that in mind. Some carriers employ equipment shelters, and some don't. Generally a footprint for a carrier is on the order of 12x20 and sometimes it is more than that, but that is an average.

Member Hoffman commented that you can't fit four 12x20 sheds in that compound. Engineer Murawski stated they have gotten away from sheds.

Attorney Schneider commented, historically you're correct. For example, the carrier Verizon historically was 12x20 or 12x30 to accommodate a generator. Now all of their designs are just using cabinets and no longer shelters so the footprint is significantly less. They no longer use equipment shelters and speaking from experience in having represented generally their footprint is less than 100 square feet, exclusive of a generator. T-Mobile and Sprint have historically always also just used equipment cabinets as compared to a shelter. The sizes are a lot less than it was ten years ago on a standard installation. Whereas formally they were taking either 240 or 360, the footprint now is probably close to 1/3 of that.

Member Hoffman commented to put four shelters in it would crowd out of your space quite a bit. This is a concern that they would have to expand later on.

Engineer Murawski commented the intention is to not. The intention is to establish the footprint and hopefully we did an adequate job of doing that, for four more carriers.

Member Covelli stated, speaking of generators, is there a generator proposed for this site?

Engineer Murawski answered there is not. There is battery backup just for the FAA lighting.

Member Covelli commented if the power goes down, this tower goes down then there is no Christian radio for you.

Engineer Murawski commented I just want to indicate that New Line and Bridge Christian inside their shelter more than likely has battery backup as well some type of UPS system.

That is there concern but I honestly don't know what their equipment is that is going into the shelter. We will accommodate them utility wise.

**Chairman Dunning:** We are going to ask it, and the County has asked about the line of sight clearance at the end of your driveway where it meets Skyline Drive.

Engineer Murawski, regarding the sight line distance and referring to SP-3, the County requires 360' in both directions. We can maybe say we safely have we've got 250'. If you visited and you exited that driveway as I have, you can look to the right with some fair amount of confidence that you can adequately see what's coming. If you look to the left, it's much more difficult so the County has asked us what we are going to do about it. I am going to go out on a limb and say it is physically impossible to correct that due to the geometry of the road and the terrain. The road turns away and dips down. So if we were going to clear a path, we'd probably have to blast rock, clear vegetation, get Highlands involved, which would probably preclude that from happening, and our line of sight would be too high. It would be above the profile of the road because that road dips down as you go to the left, so it is probably impossible for us to rectify. What we've agreed to do as a condition of approval with the County is, during construction, have a road crew in coordination with the municipality and police department, provide flagmen to accommodate deliveries during construction. The biggest deliveries being the tower sections and, of course, the concrete trucks for the foundation pour. There will be approximately 20 trucks coming in a single day. The County was okay with that approach given the fact that the remainder of the site visits will be limited to once a month, possibly twice a month tops. That is all we can say about that.

There are two things to consider. We are doing some tree clearance to the north where

we're within the right-of-way of the road. There is nothing we can do looking south.

Attorney Schneider: Your office has had a series of discussions with the County on this issue and, without speaking for the County, they are generally satisfied with what you are doing in recognition of the limited access to the site once or twice a month.

Engineer Murawski answered that is correct. We will get that in writing from the County.

Engineer Nash questioned who did you speak to at the County?

Attorney Schneider answered I think it was Jason Miranda.

Member Ludwig commented that the site visits once the construction is done isn't going to be that much different than it has been all along.

Engineer Nash questioned you didn't speak to Chuck Silverstein?

Engineer Murawski answered I didn't.

Attorney Schneider commented it was Mr. Miranda from the Planning Department.

Engineer Murawski commented Jason is our Project Manager.

Attorney Mondello swore in:

Jason Smolinski, 87 Hibernia Avenue, Rockaway, NJ

I am a Principal at E 2 Project Management

Attorney Schneider: You are the point person who has discussions with the County?

Mr. Smolinski stated I have had multiple discussions with both Jason Miranda and Mr. Silverstein at the County. We went to the point of actually even proposing some signage through our last iteration to provide warning signs for our driveway. Actually the last iteration when we sent it in they actually asked us to remove it and they accepted the 250' as a limited sight distance provided that, during construction, that we go through the iterations of having flagmen, which we did throw out given the fact that the sight distances there are a challenge with the terrain and with the existing road contours where we are at the bend.

Attorney Schneider: The point being Jason you've had a series of probably two or three communications with the County as this application has unfolded, correct? And they are well aware of all the issues raised by the Board?

Mr. Smolinski answered yes sir and, the only reason why we don't have final approval is we were waiting to get through the hearing before we submitted for final approval with one set of plans.

Attorney Schneider: Nothing further on the County Mr. Chairman.

Chairman Dunning, referring to SP-1 drawing, you have a lot of little blocks drawn in around this site, what do they represent?

Engineer Murawski answered what you see is a twelve auto cad anomaly. It is supposed to have been the contour elevation in that block and it is missing. Whenever you see a little square or rectangle that is where a contour elevation was intended to be.

Member Hoffman stated there are two other what look like utility sheds, and I think they are off your site.

Engineer Murawski stated they are off of our site. They are existing wood sheds. They are not ours so they are going to remain. I don't know if they are abandoned; I can't answer that. I don't know whose they are or why they are there.

**Attorney Schneider:** Turning your attention to Engineer Nash's review report, if we can just refer to page 2 of that report, the first comment I think we've discussed which is the alternate way of addressing the access easement, correct?

**Engineer Murawski** answered correct.

**Attorney Schneider:** Second comment essentially is asking us to describe how the construction will be sequenced. Why don't you take a minute and go through that?

**Engineer Murawski** commented that the tower's bottom segments will come in 30' lengths and will be trucked to the site. It will be erected by a crane up until elevation 180' and at that point the crane is not tall enough to add the next section so what they do is they install a device called a "gin pole". A gin pole is an ancillary piece of equipment that bolts to the side of the tower. It is like a crane; it has a wench, has pulleys and it pulls up the next tower section, slides it over and the next tower section gets bolted on, the gin pole gets raised and the process is repeated until the 300' is topped out. At this point, the gin pole slides down the tower to be dismantled. The foundation construction given its size is excavation, rebar, etc. and it is probably going to take about a month. The tower erection is going to take less than a month (3 weeks) and that is about the extent of the field work.

**Engineer Nash** questioned are you going to be blasting rock?

**Engineer Murawski** answered no.

**Engineer Nash** questioned how are you going to excavate the rock?

**Engineer Murawski** answered right now, where we are, we have 6' to 8' of soil below us before we hit rock, so the little footings for the fence should go in without difficulty. If that is incorrect, and if we do encounter rock when we do an actual soil boring, we'll employ rock anchors in the foundation design.

**Member Hoffman** questioned are there any guys on this tower or is it just self-supporting?

**Engineer Murawski** answered it is self-supporting; there are no guys on this tower.

**Chairman Dunning** questioned how earthquake proof is this tower?

**Engineer Murawski** answered it will meet all building code criteria. New Jersey is not a real big earthquake area, but does have earthquake loading requirements. Given the height of this tower and the type of appurtenances on it, wind controls the design over seismic.

**Chairman Dunning** commented, in this area, we do get a little ground shake every once in a while.

**Engineer Murawski** stated sure, but not like other areas of the country so it is not a controlling factor. It is a factor and it is checked.

**Chairman Dunning** questioned how tornado proof is it?

**Engineer Murawski** answered, if there is a tornado that hits, probably the only thing that'll be standing is the tower. I think it is going to be very tornado proof.

**Member Ludwig** commented it did surprise me to see that the base was not that wide in relation to the height.

**Engineer Murawski** stated relative to a building of the same height, it's a very light structure.

**Member Ludwig** questioned and the wind load?

**Engineer Murawski** answered it is not a solid structure so it's not as bad as you think, but every time you add an appurtenance to it, like a microwave dish or other antennas, sure.

**Chairman Dunning:** Do you count the 12' lightning rod on top of it as part of the height of the tower?

**Engineer Murawski** answered regulatory speaking we do, but the tower is 300'. Just to get it on record, that the total height of the structure is 312', which is an accurate statement because it has a 12' lightning rod.

**Chairman Dunning:** At 300', it is very similar to the one in Pompton Lakes. The one right on 287.

**Engineer Murawski** questioned is it?

**Attorney Schneider:** That one might even be closer to 400', but I could be wrong.

**Chairman Dunning** commented the one at the Elks is 230'.

**Attorney Schneider:** Referring to Engineer Nash's report, No. 3 consideration should be given to realigning the driveway versus the access gate?

**Engineer Nash** commented right. The gate is perpendicular to the driveway.

**Engineer Murawski** stated where the gate is now kind of centers on where the gravel is now and it kind of works.

**Engineer Nash** commented it's not perpendicular to the driveway. It's inconsequential.

**Engineer Murawski** commented I understand the comment. It's just where the gate is versus the direction of the vehicles will be driving in from. Our intention is to drive straight through the gate.

**Engineer Nash** commented I like gates and driveways to line up, but I am not going to dig my heels on this, it's just your choice.

**Attorney Schneider:** No. 4 comment of Engineer Nash's report.

**Engineer Murawski** commented the number of trenches is for the electric and telephone utilities and they'll be about 2 foot 60. They can be accommodated without hitting rock. They are trenches there now that are that deep.

**Engineer Nash** commented I am glad you have that confidence.

**Engineer Murawski** commented I don't disagree and I am a little perplexed by it as well, but I just have a feeling that fill was brought in many years ago to create this plateau. Because just to our east, it drops off shortly, so there is some room to play.

**Attorney Schneider:** The last comment in Engineer Nash's report I think we beat up in terms of the sight distance. I don't think anything further is required. I just have one follow-up question. One of the variances is that we don't front on an approved public street. The point being here is that we don't direct access to Skyline Drive. Under the Municipal Land Use Law, the relevant inquiry is to confirm when you don't meet that condition is whether there is adequate access for firefighting or emergency service vehicles. Having visited the site and being familiar with the existing site conditions, do you have an opinion as to whether there would be adequate access for these vehicles if they needed to access the site?

**Engineer Murawski** answered you can turn onto this site. It is wide enough but the only issue is knowing exactly where this driveway is because you come up on it kind of quick. There is certainly enough room for an emergency vehicle to turn and enter this site.

**Attorney Schneider:** In your professional opinion, there should be issues about adequate access, correct?

**Engineer Murawski answered there shouldn't be.**

**Attorney Schneider: Mr. Chairman this concludes my direct of Engineer Murawski.**

**Attorney Mondello: Questions from Board Members?**

**Member Malone questioned what type of fencing are you putting up? I know it is 8' but are you doing chain link?**

**Engineer Murawski answered right now it is just proposed to be chain link.**

**Member Covelli: Gray chain link, not black?**

**Engineer Murawski stated we can easily change the color, we can pvc coat it or vinyl coat it, whatever they do to change the color, sure.**

**Attorney Mondello: If there aren't any other questions, the Board would like to take a five minute break.**

**Chairman Dunning: Counselor we cut it off at 10:30pm.**

**Attorney Schneider: Before you take a break, you've been really great in going fast so let me ask you, I could try to get my last witness in, but it may take some time. I realize the issue about carry over, but the last thing I want to do is present him and then not get through and he'll have to come back.**

**Chairman Dunning commented let's take our five minute break and then we'll figure that out.**

**Board requests recess.**

**Recess 10:11:46**

**Reconvened 10:19:21**

**Let the record show that everyone is present that was present before the recess.**

**Attorney Schneider: Someone raised the question about the height of the Pompton Lakes' tower and it is 499'.**

**Attorney Mondello swore in:**

**William F. Masters, Jr., 19 Ironwood Drive, Morris Plains, NJ**

**Attorney Mondello: I have known Mr. Masters as a Professional Planner for at least two decades so does the Board have any objections to admitting him as a professional plan expert in the field of planning? See hearing none, seeing none, your witness.**

**Attorney Schneider: Mr. Masters you've the opportunity to prepare for this testimony and visit the site, correct? You are familiar with the relevant provisions of the Wanaque wireless communication Ordinance and the WRC Zone District as it impacts this application, correct? You've listened to the testimony that has been presented by the prior witnesses, and you've had the opportunity to review the site plan, correct?**

**Mr. Masters answered yes to all above questions.**

**Attorney Schneider:** The subject property is located in a WRC Zone District and the use is not permitted in that District. Correct?

**Mr. Masters** answered yes.

**Attorney Schneider:** As I mentioned in my opening remarks that “necessary public utility structures are a permitted use in the zone district, correct?

**Mr. Masters** answered yes they are.

**Attorney Schneider:** The existing use of the subject property is already devoted to communications use, albeit an existing lower tower. Is that correct?

**Mr. Masters** answered correct.

**Attorney Schneider:** By virtue of the fact that the use is not permitted in this zone district, we require a Use Variance, correct?

**Mr. Masters** answered D-1 Variance.

**Attorney Schneider:** The relevant statutory criteria for the granting of a D-1 Variance is as follows: We are not arguing that we are an inherently beneficial use, but the profer for wireless communication purposes is to show that the use served the general welfare because the site is particularly suitable for the proposed use, correct? And that is the relevant standard, correct? And is it a correct statement of planning and law that by virtue of a particular user and, in this case, the two applicants having been licensed by the FCC that their use is a matter of law has been held to serve the general welfare, correct?

**Mr. Masters** answered correct to all the questions and also stated the courts in NJ has said that generally the issuance of an FCC license should suffice for a carrier to establish that the use serves the general welfare.

**Attorney Schneider:** Having that established, than a relevant inquiry of the Board is to determine whether this site is particularly suitable for the proposed use. Based primarily on the testimony of Mr. Villecco and others, do you have an opinion as to whether the proposed use is particularly suitable for the subject property?

**Mr. Masters** answered I do. I believe that the site, which is the subject of this application, is a site that is particularly suited for this particular use; the telecommunications use, the FM radio station, for several reasons. First, the testimony of Mr. Villecco establishing the fact that the site, at this particular location, satisfies the radio frequency requirements. In other words, achieves the coverage objectives both for the radio station as well as New Line is certainly a factor contributing to the particular suitability of this site. The fact that there is, as was mentioned earlier, an existing tower already at this site so that there is a prior existence of this particular type of use coupled with the fact that public utility uses are permitted in the Water Resource Conservation Zone District. Another factor contributing to the particular suitability, is the fact that the site is already an existing disturbed site. Given the fact that we’re within the Highlands Preservation Area, we can achieve the proposed use without expanding upon the existing disturbed area on the property. The remoteness of the site is certainly a factor contributing to the particular suitability. The fact that, although we are not in one of the permitted locations given the fact that this is not a municipal owned property or property owned by the Board of Education, the fact that your wireless telecommunications ordinance specifically talks in terms of considering whether or not to grant approval for towers on the proximity of the tower to adjoining structures and residences or residential district boundaries. Number one we are not in a residential district albeit many of the municipal owned properties and Board of Education owned properties are within residential zone districts. The remoteness of the property and

the closest residential uses or residences to this tower site are in excess of 1600' away so that is certainly a condition or characteristic contributing to the particular suitability. The fact that the site can accommodate co-location for future potential wireless telecommunication carriers at this location. Perhaps the greatest characteristic of this property contributing to its suitability, as was well documented in Mr. Vilecco's testimony, is the terrain. The fact that we are on a piece of a property and there is actually at the top of the very terrain that both users are attempting to see over so the terrain is clearly probably the most significant characteristic contributing to its particular suitability. In addition to the ability to accommodate future wireless telecommunication co-locators, it's also the ability to accommodate future potential public emergency users at the subject property.

I would submit to the Board that all of these factors contribute to the particular suitability of this site for the proposed users.

Attorney Schneider: To follow-up, you referenced that, among the things that the ordinance asked is to look at is proximity to of the tower to residents and you've addressed that, but, consistent with what you just said about topography, the ordinance also talks among the factors that the Board should consider is surrounding topography, surrounding tree coverage and foliage. All of those would support a conclusion of particular suitability and a relevant factor for the Board in hopefully granting the application, correct?

Mr. Masters answered correct.

Attorney Schneider: The ordinance asks us to make this inquiry and you're are satisfied specifically based on the testimony of Mr. Vilecco that there are no available, suitable and existing towers which would allow the two respective users to meet their technical objective. Is that the conclusion you draw from Mr. Vilecco's testimony?

Mr. Masters answered yes it is.

Attorney Schneider: That would establish so-called positive criteria or special reasons for the granting of the Use Variance. That doesn't end our inquiry since we must also establish and prove to the Board that we satisfy the negative criteria. The inquiry there is as follows: While are not inherently a beneficial use, we must satisfy what's commonly referred to as the seek and balancing test. This is a test that the courts require us to use, but it's a test that applicable to an inherently beneficial use even though we are not an inherently beneficial use, but it's a test that applies to wireless communications, correct?

Mr. Masters answered correct. The courts created a kind of hybrid review for wireless communications utilizing the seek and balancing test, which had been previously reserved solely for inherently beneficial uses. While these uses are not inherently beneficial uses, the courts have found that the application of the seek and balancing test should be applied for the negative criteria balances for the four (4) step balancing test .

The first step being that the Board should identify the public interest at stake. I would submit to the Board that the public interest at stake here is significant and this particular aspect of the seek and balancing test is essentially satisfied by the fact that both of these users are FCC licensed entities.

The second step is the Board should identify the detrimental effect that will ensue from the granting of the variance relief. I would remind the Board that these are unoccupied, unmanned facilities, that are routinely visited periodically for routine maintenance purposes, but other than that they are somewhat unique from a land use

planning perspective in that they don't generate large volumes of traffic. They don't generate other factors that are associated with other uses. They are in the nature of a public utility, but they're not regulated by the Board of Public Utility Commissioners. Commonly, the primary focus with regard to these types of uses in terms of the analysis of detrimental effect is visual impact. Clearly, with a 300' tower here there is going to be a visual impact. However, I would submit to the Board given the remoteness of this location, and there being a dwelling or two on state property that is approximately 1700' away and the closest neighborhood is really approximately 1800' away to the west, Ramapo Mountain Drive, given that distance I would submit to the Board that, while there will be some detrimental impact, there will be without a doubt some visibility, I believe the majority of the visibility will be to the east in Oakland in the residential areas proximate to the Ramapo River. As far as to the west, I think that the visibility will be diminished by the distance of both horizontally as well as the topographic change as you go down into the valley. While there will be some visual impact, I believe that the detrimental effect here does not rise to the level of substantial detriment and, as such, satisfies the second step of the seek and balancing test.

The third step, in some situations, the local Board may reduce the detrimental effect by imposing reasonable conditions on the use. I believe we are proposing here a structure that is really the least visible or least intrusive structure visibly, that being a lattice tower, because you can actually see through the lattice work of the tower as opposed to a monopole. A gain, the lattice tower type structure is a structure that is very often used by public utilities, which again are a permitted use in the WRC Zone.

The fourth step is the Board should then weigh the positive and negative criteria to determine whether on balance the granting of the variance relief would cause a substantial detriment to the public good. I would submit to the Board in considering the positive benefits of the communication uses of this tower and its co-location potential for additional wireless users that the positives far outweigh the negatives and, as such, the application satisfies the seek and balancing test which balances the positive and negative criteria.

**Attorney Schneider:** Therefore, in your professional opinion the statutory criteria for the granting of the required Use Variance has been satisfied. Is that correct?

**Mr. Masters** answered I believe it has both in regard to the D-1 Use Variance as well as the D-6 height variance and the D-35 Variance again based upon the testimony of the professional engineer, I believe that the variance could be granted as well given the fact that emergency vehicles will, in fact, be able to access the property.

**Attorney Mondello:** Questions from Board Members? Hearing none, seeing none.  
Questions from residents or the public? Hearing none, seeing none.

**Attorney Schneider:** Thank you for accommodating us tonight and allowing us to present the whole application. I realize it is a year-end thing so I am not going to take much of your time. It is never easy to propose a 300' tower, but I want to put it in perspective. I think there has been a well-established basis by Mr. Villecco as to why that height is uniquely required here by virtue of the two users. I would highlight to the Board, and based on my experience and I think that of your Counsel, the key aspect here is not only of

the two users but, obviously, the potential to accommodate additional users both in terms of available space on the ground and the ability of the tower to structurally accommodate it. What history teaches us, build it and they will come. What you really want to do in a municipality is to ensure to avoid the possible potential multiplicity of towers. I think we've addressed that by being able to structurally accommodate all multiple users and I think it is equally important that we try to plan this on ground perspective to be able to accommodate co-locators. I don't want to beat up too much what I've offered in terms of EMS, but I think, and especially you know better than I do, issues normally associated with Skyline Drive and the potential for emergencies. I think it is a condition that should not be taken lightly or frivolously and frankly we hope that the Borough, either now or at the appropriate time, avail itself of that opportunity as well as Oakland and potentially Ringwood.

I would respectfully urge you to approve the applicate submitted and I would offer the following that if the Board is so inclined to grant approval it would be conditioned upon:

1. The access easement as we discussed either relocating it or getting necessary approval from the DEP.
2. The applicant will agree to make available its communications tower free of charge to all municipal emergency service providers.
3. Will agree to be bound by all stipulations and representations made during the course of the public hearing. To the extent applicable, will comply with all recommendations (I don't know if there are really any specific recommendations by Engineer Nash) by any reasonable engineering recommendations we will agree to comply with.

Attorney Mondello commented the only thing that I hesitate to put this in as a condition, I wouldn't want to restrict the applicant, but because of the site distance problems and issues, the testimony is that there will be only one to two visits per month. If it turns into twenty-five, we have a problem.

Attorney Schneider commented I think we are comfortable with that representation.

Attorney Mondello stated okay, fair enough.

Attorney Schneider: If there are four other carriers, I can't say that's it's only going to be one or two. Frankly, I represent all the wireless carriers and they are all one every four to six weeks. I prefer to you that, even if you have four uses, you probably have, four, five or six visits a month. It is not going to be twenty-five.

Attorney Mondello stated okay. Board Members?

Member Malone: The structure underneath the tower, what is the distance between that structure and the tower in case of a fire, and would that effect the structural integrity of the tower? From what I see, your main power supply going in there, so I would say that would be more susceptible to a fire.

Mr. Murawski commented it is a great point, but that structure is fire-rated and it's alarmed. Yes, if there was a massive fire there, it would be an issue, but it is a two-hour fire-rated wall.

Member Malone: To your knowledge, are they going to have any fire suppression in there?

Mr. Murawski answered I don't know, but it can be accommodated. There are fire suppression systems, self-contained, that a lot of carriers employ in their shelters.

**Attorney Mondello:** Is that what the applicant is doing? You are going to be installing some type of fire suppression system.

**Mr. Murawski** answered no. I don't know since that is tenant space. Unless it's a requirement, we can certainly make it a requirement.

**Attorney Mondello** commented what he is saying is if the Board thinks it is a reasonable condition, you can impose it whether it is the owner or the tenant.

**Engineer Nash** questioned why does the Board care if they lose their equipment?

**Member Malone** commented the reason why I questioned is because there are hikers there and, if there is a fire and the structure is weakened by the time responders get up there, it could fall down on the other buildings that are adjacent to the tower.

**Engineer Nash's** concern is a forest fire.

**Member Covelli** commented that is my concern. There is a neighborhood in the area. You light that mountain on fire, eventually you are going to get to a neighborhood.

**Member Ludwig** questioned the building at the base is going to be masonry or steel?

**Mr. Murawski** answered it is concrete. It is non-combustible.

**Member Malone** questioned is it open, are you going to see the panels if you are 10' away?

**Mr. Murawski** answered no, not at all. Everything is contained inside. Yes, it is a concrete building, fire-rated.

**Member Covelli** questioned if the applicant would concede if we were to approve that some form of fire suppression, acceptable to you and to our engineer, be considered part of the project?

**Attorney Schneider & Mr. Murawski** both answered yes. That is a great suggestion.

**Member Covelli** commented I think there is a concern for forest fire. The bottom line is if that tower is not there, there is no energy to that site. There is no energy to that site and if the ground catches fire it's because a lightning bolt came down the sky.

**Attorney Schneider** commented we will agree to concur in good faith with the recommendation of your Fire Marshall.

**Member Covelli:** The trenches that you talk about that were dug at some time for the power and conduits to be brought in, are they going to be backfilled or left open?

**Mr. Murawski** answered yes, they are going to be backfilled.

**Member Covelli:** The fencing you are putting up is 8'.

**Mr. Murawski** answered correct.

**Member Covelli:** Why are you not considering any ribbon, fire ribbon or anything like that in terms of security? I am a little concerned about the security of this. Listening to what you are talking about, you are telling me that right now this site is open. I can go over there a climb a 100' derelict tower that right now is not being used. So I am really listening to this as almost a new application. I am not expanding the use; it is abandoned as we speak.

**Mr. Murawski** stated there is a tower on it.

**Attorney Schneider:** Everyone has left that tower.

**Member Ludwig** commented whether it is being used or not, there is a tower there that can be climbed on.

**Attorney Schneider:** The 100' existing guide tower is going to be removed. Counselor that is another condition of approval. We will remove the existing guide tower. The answer to

your question is very easy. If the Board wants, we will put barbed wire on top of the fence. Member Covelli: What other security would you do? I would like there to be some dialogue with our Police Department if they want there to be any kind of camera or alarm systems or security measures that they would like because you are creating a lot more of an attractive nuisance than what is there. You are intensifying the nuisance factor of the facility.

Attorney Mondello: We will frame it this way that we ask that whether it is the Engineer or Counsel reach out to the Chief of Police and see if he thinks there needs to be some type of additional security imposed. He may say no, he may say yes why don't you do this. If you can't come to an agreement, you'll come back to the Board.

Attorney Schneider: That is fine.

Chairman Dunning: And the Fire Department.

Member Ludwig: Barbed wire is not the worst idea.

Attorney Schneider: Whatever the Board wants in that regard.

Mr. Murawski: Also, the Fire Department will have their own lock on it.

Member Covelli: Will you make that a black fence?

Mr. Murawski: We can very easily. We can also employ a non-climbable chain link fence where the mesh is, instead of two, is one. It is a lot more difficult to climb.

Member Covelli: That could be an expense and I'm not looking to spend your money. You feel you do what is best to protect your site. I think at the end of the day it's a more intensive use of a nuisance. Particularly since it's semi-derelict right now and you're going to make this brand new facility that everybody wants to go poke around and look at.

Member Covelli: Now this facility is currently taxed by the Borough of Wanaque as a private concern?

Attorney Schneider: I don't know if it is. Without spending my client's money, I guess it could be. To the best of my knowledge, it certainly is not tax exempt. The taxes are current.

Member Covelli: These improvements are actually going to increase the value of the property. Merely asking the question for process and procedure since taxes had to be current to come before the Board.

Chairman Dunning: We need a Motion for or against this application.

**MOTION TO APPROVE:** made by Member Ludwig, seconded by Member Pasznik.

**Attorney Mondello: FOR USE PERMIT OR PHYSICALLY RELOCATE THE DRIVEWAY TO COMPLY WITH THE LIMITS OF THE EASEMENT; TO PROVIDE EMERGENCY SERVICE ACCESS TO THE BOROUGH AT NO COST; SITE VISITS ONE TO TWO TIMES A MONTH HOWEVER THE NUMBER WILL PROPORTIONATELY INCREASE WITH ADDITIONAL CARRIERS PERHAPS FOUR TO SIX TIMES A MONTH; SOME FORM OF FIRE SUPPRESSION SYSTEM TO BE INSTALLED AND THE APPLICANT IS TO CONSULT WITH FIRE MARSHALL AND BOARD ENGINEER TO DEVELOP SOMETHING; THE EXISTING TOWER TO BE**

**REMOVED; THE APPLICANT TO DISCUSS WITH THE CHIEF OF POLICE TO ASCERTAIN IF CAMERAS OR SOME OTHER SAFETY MEASURES MAY OR MAY NOT BE REQUIRED TO BE USED AT THE SITE; AND FINALLY A BLACK FENCE WITH BARBED WIRE.**

**Member Covelli:** That the Board Engineer will be in charge, regardless of whether there is a Developer's Agreement by the Borough; the Board Engineer will do all inspections and all compliance issues thereof.

**Attorney Mondello:** Typically what happens is the Town Engineer does that and we've had some bumps in the road, so we would prefer if the Board Engineer do that.

**VOTING YES** were Chairman Dunning, Members Covelli, Pasznik, Hoffman, Ludwig, Levine and Malone. **Motion Carried**

Attorney Mondello is not requiring the Exhibits be given to the Board unless there is an appeal (Exhibits A-2 and A-3).

Member Ludwig left at 10:45pm

**PUBLIC DISCUSSION:** Seeing none – there is no public here tonight.

**RESOLUTION:** Application #ZBA2017-01 & 02 – Agostino Properties, LLC  
Attorney Mondello commented that the Agostino Properties came before the Board for a Use Variance to maintain a rooming house. Any comments or changes? Hearing none, seeing none, I'd ask for a Motion followed by a Second.

**MOTION TO MEMORIALIZE THIS RESOLUTION AS PREPARED BY BOARD ATTORNEY:** made by Member Ludwig, seconded by Member Hoffman. Voting yes were Chairman Dunning, Members Covelli, Hoffman and Pasznik. **Motion Carried**

**CORRESPONDENCE:** None

**VOUCHERS:** submitted by Ronald Mondello, Esq. for attendance at the December 5, 2018 Meeting in the amount of \$400; and for the Agostino Application in the amount of \$1,200.

**MOTION TO APPROVE:** made by Member Covelli, seconded by Member Pasznik. Voting yes were Chairman Dunning, Members Covelli, Pasznik, Hoffman, Levine and Malone.

**DISCUSSION:** None

**ENGINEER'S REPORT:** None

**MOTION TO APPROVE November 7, 2018 MINUTES:** made by Member Covelli, seconded by Member Hoffman. Voting yes were Chairman Dunning, Members Covelli, Hoffman, Levine and Malone. Member Pasznik is not qualified.

**ENGINEER'S REPORT:** None

**MOTION TO ADJOURN AT 10:55 PM:** Motion to adjourn meeting made by Chairman Dunning. Motion carried by a voice vote.

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Jennifer A. Fiorito  
Board of Adjustment Secretary