

**Borough of Highlands
Zoning Board of Adjustment
Regular Meeting
September 2, 2010**

Mr. Mullen called the meeting to order at 7:36 p.m.

Mr. Mullen asked all to stand for the Pledge of Allegiance.

Mr. Mullen read the following statement: As per requirement of P.L. 1975, Chapter 231. Notice is hereby given that this is a Regular Meeting of the Borough of Highlands Zoning Board and all requirements have been met. Notice has been transmitted to the Asbury Park Press and the Two River Times. Notice has been posted on the public bulletin board.

ROLL CALL:

**Present: Mr. Braswell, Ms. Ryan, Mr. Anthony, Mr. Gallagher, Mr. Britton,
Mr. Mullen, Ms. Tierney**

Absent: Mr. Fox, Mr. Kutosh

**Also Present: Carolyn Cummins, Board Secretary
Greg Baxter, Esq., Board Attorney
Joe May, P.E., Board Engineer
Marc Leaber, P.P. of East Point Engineering**

**ZB#2009-6 Sendowski, Oren
Block 43 Lot 6 – 30 Shrewsbury Avenue
Request to Postpone Public Hearing to the October 7, 2010 Meeting w/ No Further Notice**

Mr. Mullen stated that the Board received a written request from the applicants Attorney requesting that this public hearing be carried to the October 7th meeting without the need for further notice.

Ms. Ryan offered a motion to carry the Sendowski public hearing to the October 7, 2010 meeting without the need for further notice, seconded by Mr. Braswell and approved on the following roll call vote:

ROLL CALL:

**AYES: Mr. Braswell, Ms. Ryan, Mr. Anthony, Mr. Gallagher, Mr. Britton,
Mr. Mullen**

NAYES: None

ABSTAIN: None

**ZB# 2010-2 Metro PCS New York, LLC
Block 108 Lot 2.01 – 450 Highway 36
Hearing on New Business**

**Present: Michael Beck, Esq., Applicants Attorney
Dave Collins, FCC Compliance Expert
Paul Drobbin, Esq., Objectors Attorney of Highlander Dev.
Joseph May, P.E., Board Engineer
Marc Leaber, P.P., Board Professional Planner
Court Reporter**

Mr. Baxter reviewed the applicant's public notice and mail receipts and stated that notice is for conditional use approval and not for a use variance but the description satisfies notice requirements; therefore the Board has jurisdiction to proceed.

The following documents were marked into evidence this evening:

- A-1: Variance Application page 3 behind the Site Plan Application, 6 Pages and includes consent of property owner;
- A-2: Site Plan Applicant Review Form, 2 Pages;
- A-3: June 26, 2009 Wireless Communication Easement, 14 Pages;

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- A-4: FCC Form Radio Station Authorization, 2 Pages;
- A-5: Monmouth County Planning Board Form;
- A-6: Zoning Permit Application, 1 Page dated 7/8/2010;
- A-7: Deed dated 9/8/1967 from Montani to State of New Jersey DOT;
- A-8: Zoning Board Resolution dated 5/7/1998 granting Approval for Bell Atlantic Nynex;
- A-9: Zoning Board Resolution dated 7/6/2006 Approving Use & Bulk Variances to Knox 400, LLC.;
- A-10: Survey prepared by Chester D. Lorenzo dated 7/31/09;
- A-11: Site Plan prepared by Luis Meglino of MTM Design Group consisting of 5 Pages;
- A-12: Structural Analysis Report dated 7/23/09 prepared by Ellen T. Swanson;
- A-13: Antenna Site FCCRF Compliance Report by D. Collins dated 5/24/10;
- A-14: Monmouth County Planning Board letter dated 7/12/10;
- A-15: Email to D. DiStefano from Rick Clickner;
- A-16: Seven Pages Letter from State board of Engineering;
- A-17: Large Board – Showing Coverage Area;
- A-18: Resolution dated 4/7/2005.
- B-1: Board Engineers Review Letter dated 8/26/2010.

Mr. Beck stated that he represents Metro PCS NY, LLC they are a FCC Licensed Wireless Telecommunication Carrier. They are here before the Board seeking preliminary and final site plan approval along with conditional use variance and bulk variance approval to extend the existing monopole that located at 450 Highway 36. There is an existing 80 foot monopole there and Metro PCS is proposing to extend the monopole by fifty feet and add its antennas at the top of the extension. Also to add its radio equipment and fuel cell at the base of the monopole. That allows the cellular antennas to transmit and receive and function. We are here this evening because the applicant does not meet of the conditional use standards. So thereby we require a traditional use variance. This is located in the H-O Highway Oriented Zone.

Joseph May, P.E., and Marc Leaber, P.P. both of East Point Engineering were both sworn in.

Dave Collins of 14 Ridge Dale Ave, Cedar Knolls, NJ was sworn in and stated the following during his testimony and response to questions from the board:

1. He described his education and professional background to the board. He stated that he has a Bachelor of Science Degree in Industrial Technology from CCNY. For the past ten years he has been Manager of Radio Frequency Services and they specialize in FCC Compliance. He continued to describe his background.

Mr. Beck offered Mr. Collins as an expert witness with regards to FCC Compliance. There were no objections.

Mr. Collins continues his testimony as follows:

- 2. A-13 FCC Compliance Report was prepared under his direction.
- 3. Metro asked him to perform an assessment of compliance with regard to the FCC rules and regulations pertaining to exposure to humans. New Jersey has the Radiation Protection Statute and we were also asked to address that.
- 4. The FCC set a standard for maximum permissible exposure levels with radio frequency energy around antenna sites. They also provide a mathematical formula for determining that level, which is then compared to the maximum permitted level, then you find out if you comply.
- 5. The standard itself is very conservative, it allows only a very low level of radio frequency energy and the mathematics used is very conservative and results in calculations from the formula are always for worst case. In addition the FCC also requires that all antennas at a site must be included in the assessment, which they were.
- 6. Utilizing the FCC Guidelines they have calculated the levels of radio frequency energy to be admitted from the proposed facility including the proposed Metro PCS antennas in conjunction with the Verizon Wireless. When we do these calculations the easiest way to

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describe the results is in terms of percentage. 100% is the maximum limit and anything under that would comply with the rules and regulations. The maximum calculated level of the combination of the existing resident antennas and the proposed is 0.3233%, which is 300 times below the federal limit. The New Jersey Statute is five times less protective and the standard that they use also protects people from exposure from radio frequency energy. We would be more than 1500 times below the New Jersey Statute.

7. A kitchen produces more radio frequency energy, it runs from 3% of the same limit they applied here, up to 7%. The biggest contributor is actually the refrigerator and not the microwave, which he further explained.

8. He explained that the antenna makes radio waves not the equipment. The cables themselves are highly shielded and insulated.

9. He explained that there would not be an interference issue.

10. The FCC License comes with a frequency amount and in this case it comes with a 2100 megahertz frequency and they are the only ones allowed to use that frequency. So to avoid any frequency interference issues they are the only ones allowed to use that frequency ban in this area. So there can't be an interference issue. Along with the FCC License comes a maximum permitted power input. Using that you assume the shortest distance between the antenna and a human standing on ground, the shortest distance would be from the bottom of the antenna to the top of the human.

11. They assume no loss of power between the radio itself and however long the cable may be. Typically you lose half of the power over that distance but in they use assume the number that they quoted .3%, the proposed development would be significantly less than that because they gave a conservative number.

12. In his earlier testimony he stated that all of the carriers all operate at a low _____ and the FCC is aware of this and they have done enough modeling to know that if you mount your cellular antennas any higher than 10 meters off of the ground you automatically comply with the rules and regulations, you cannot exceed the maximum human exposure limits once you are that high off of the ground, which he further explained. So in essence we need not have performed this assessment but they did it anyway.

13. There are no compliance issues with this application.

14. They may be required to investigate surrounding sites of antennas if they are immediately adjacent to this site, it depends on their height, there may not be a need. When the antennas are a couple of hundred feet away the effect of those antennas would be de minimus.

15. He then spoke about his calculation on page 10 of his report speaks about a downward vertical discrimination antenna, which he further explained. He explained that once you go past 400 feet away, the use of more than one antennas pointing differently, it's so that no matter where you stand you can make a call.

16. He spoke about exhibit A-11 sheet Z-3, they don't have antennas pointed north just west, east and south. So there is less radio frequency to the north.

17. He described the antennas.

18. He spoke about how he did the Eastpointe Condo Cellular Site several years ago for Verizon.

Mr. Drobbin then cross examined Mr. Collins.

Mr. Collins stated the following during cross examination:

1. The FCC required mathematical solutions and that is what they did instead of measuring.
2. They did not do any physical tests.
3. Verizon's antenna is currently at 80-feet at this site.
4. He can not testify about Verizon remaining at 80 feet but if they were to change height then Verizon would have to come back before the board.

Mr. Beck objected to cross examination questions pertaining to Verizon Wireless.

Mr. Baxter – Mr. Collins already gave an answer.

Mr. Drobbin continued his cross examination of Mr. Collins and Mr. Collins stated the following:

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4. He cannot speak for Verizon, they are not his client.
5. Yes, Verizon currently occupies the existing tower at an 80 foot height.
5. If this application is approved Metro will occupy the tower at level 130 feet, which is the center line of the antenna. The antenna is about 4 feet so the top would be at a height of 132 feet.
6. Both Verizon and Metro can operate sufficiently on the same pole.
7. They can't operate at the same level or spot on the tower.
8. Ten foot distance between antennas so as not to interfere.
9. No service carrier would put an antenna close to a building.
10. He is vaguely familiar with the Eastpointe Condo antennas. Not sure if any changes on Eastpointe roof. He did a physical measurement for Eastpointe. He does not remember the details of his work for Eastpointe which was seven years ago.

There were no further questions from Mr. Drobbin.

Mr. Mullen asked if there were any questions from the public for Mr. Collins but there were none.

Mr. Mullen excused the witness.

David DiStefano of 100A Route 537, Colts Neck, NY was sworn in. He stated the following during his testimony and response to question from the board:

1. He stated that he is employed by CW Consulting and he was hired to locate a lease site to place the antennas and he was involved with the leasing of this site.

Mr. Beck offered Mr. DiStefano as a fact witness with regard to Metro PCS's site acquisition.

Mr. DiStefano continues his testimony as follows:

2. He contacted Eastpointe Condos in September 2007 and they provided drawings of proposed and the Eastpointe Condo Board and the Fire Inspector were not satisfied with the drawings. So they came up with a new set of drawings to accommodate them and one year later he received an email from Eastpointe Condo Board that they no longer are interested in locating anymore towers.

Exhibit A-15 was marked into evidence. – Email from Eastpointe Condos.

3. He stated again that the Fire Inspector did not feel safe to locate at Eastpointe Condos.
4. The Radio Frequency Engineer gives an area and a height to search for a location.
5. Eastpointe had the height and was a primary candidate.
6. They went to existing monopole and a water tank in Middletown. The water tank was not leasable from New Jersey American, which he further explained. The Radio Frequency Engineer also did not accept the water tower as an acceptable site.
7. Metro PCS was not able to find a willing landlord.
8. He needed to find a site within a quarter mile or less of Eastpointe.
9. He spoke about fire safety concerns for Eastpointe roof.
10. He was not able to find any other suitable sites other than the proposed site
11. Metro uses existing monopoles.
12. He did review the Borough Zoning Ordinance.

Mr. Drobbin then began to cross examine Mr. DiStefano and Mr. DiStefano stated the following:

1. He spoke about the email marked A-16 and stated that he has not spoken with Eastpointe since that email.
2. He was hired to find a lease location for Metro PCS.
3. Had agreement with Eastpointe for a 25 year lease but it was never finalized.
4. He believes that Verizon and Sprint are on the Eastpointe roof but he is not sure.
5. He does not recall the details of the Eastpointe Drawings, he then looked for them.

Mr. Beck objected to Mr. Drobbins request for the Eastpointe drawings.

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Mr. Baxter disagreed with the objection because the witness already testified about this.

O-1 was marked into evidence which is a four page lease exhibit drawing for Eastpointe Condos.

Mr. DiStefano continued his testimony as follows:

5. O-1 were the second set of drawings that were sent to Eastpointe.
6. The drawings were prepared under the direction of Metro PCS.
7. He does not know if the Fire Official denied these drawings.
8. He does not have the address of the water tank that he previously referred to but it was not a viable site.
9. He is given an approximate height from anywhere from 100 feet to 200 feet. He provides the structure to the RF Engineer and the RF Engineer does his props to determine what height we would need to get the signal to work.
10. He brought this site to Metro even though it was 80 feet because it's an extendable pole.
11. He tries to do a review of zoning ordinance but he is not a Professional Planner.
12. He did not look at Shadow Lawn.
13. Eastpointe was center of search areas for location.

Mr. Drobbin had no further questions for Mr. DiStefano.

Mr. Mullen asked if there were any questions from the public for Mr. DiStefano but there were none.

Mr. DiStefano was then excused.

Mr. Mullen called for a five minute recess at 9:06 P.M.

Mr. Mullen called the meeting back to order at 9:18 P.M.

ROLL CALL:

**Present: Mr. Braswell, Ms. Ryan, Mr. Anthony, Mr. Gallagher, Mr. Britton,
Mr. Mullen, Ms. Tierney**

Absent: Mr. Fox, Mr. Kutosh

Hardak Gandhi of 130 Clinton Road, Fairfield, NJ was sworn and stated the following during his testimony and response to questions from the board:

1. He described his education and background experience. He has a Masters Degree in Electrical Engineering from the University of Texas and he has been working as a Radio Frequency Engineer for over seven years. As a Radio Frequency Engineer he designs and optimize Metro PCS's wireless network.

Mr. Beck offered Mr. Gandhi as an expert with regard to Metro PCS's radio frequency design and optimization.

Mr. Baxter questioned if Mr. Gandhi was a licensed engineer.

Mr. Gandhi stated that he is not a P.E.

Mr. Beck explained that NJS45: 8-3 states that engineers in the field of telecommunications are not required to be licensed engineers.

A-16 was marked into evidence.

Mr. Drobbin and the board reviewed Exhibit A-16.

Mr. Drobbin then questioned Mr. Gandhi's expertise.

Mr. Beck stated that he is a Radio Frequency Design Expert of Metro's Network.

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Mr. Baxter explained that as he reads Exhibit A-16 which is a letter from the Department of Community Affairs, Board of Professional Engineers and Land Surveyors. Basically the DCA states that it is the position of the Board of Professional Engineers and Land Surveyors that engineers in the field of telecommunications as a profession are not required to be licensed professional engineers in order to perform their duties in this industry. Mr. Gandhi's duties are as a RF Network Design for Metro PCS and in that sense he can give that testimony.

Mr. Ghandi then continued his testimony as follows:

2. Metro PCS is a wireless provider of voice, text, data services to the public.
 3. Metro PCS is licensed by the Federal FCC.
 4. The FCC has license requirements to build out the networks in a timely fashion or they can lose license, which he further explained.
 5. The two alternate sites were the Eastpointe Condo Complex as well as a water tank in Middletown and he is familiar with those sites. Metro PCS was not able to collocate their antennas on either one of them.
 6. The Eastpointe Condo would work but not able to obtain a lease. The water tank does not satisfy their coverage needs and would not service Highlands, which he further explained.
 7. Radio Frequency, if you can see from distance should get good signal. If you are behind trees and buildings then there are obstacles to coverage.
 8. He spoke about how terrain changes also affect the signals.
 9. The higher the antenna the more coverage that is provided.
 10. The water tank was not appropriate because of its height of 70 feet.
 11. Stewarts, the subject site he looked at site. The height is at 80 feet for Verizon but he can't collocate at the same height because there would be signal interference.
 12. Ten foot center to center vertical separation is needed . Verizon is at 80 feet and if they were to go to 70 feet it would not cover the needs of the coverage.
- A-17 was marked into evidence.
13. He then stated that he prepared Exhibit A-17 which shows the coverage in green and the gaps in white, which he further explained.
 14. Green shows coverage and they need overlap so a person doesn't lose calls.
 15. Shows proposed overlay of coverage if approved in a purple color at 70 feet.
 16. They want to cover Highlands, Route 36 and common surrounding roads.
 17. He explained how he calculates coverage of area and height of antennas.
 18. He described the crane testing then measurement strength to see at the height, what coverage will be provided.
 19. He then shows another overlay on A-17 which shows coverage at proposed height of 130 feet.
 20. If approved they would not need another tower location in Highlands.
 21. The orientation of the antennas plays a part of where coverage is.
 22. The Antenna is facing west, south and east, it is not pointing at Eastpointe building because it would block coverage.
 23. He described area topography.
 24. Six antennas at proposed site.
 25. The site meets the technical needs.
 26. He did try other elevations but only reached goal coverage at 130 feet.
 27. Seventy feet to 130 feet is not satisfactory.
 28. Any lower than 130 feet won't provide the coverage.
 29. The proposed antennas would not interfere with existing communications or borough communications.
 30. He spoke about Verizon's different frequency and how frequencies are assigned by the FCC.
 31. Eastpointe building is higher than proposed height of monopole.
 32. There are other gaps in the communities that they are working on.
 33. If went higher than 130 feet could provide coverage to southern portion of the town.
 34. This would serve the water area.
 35. He can't tell you for certain but Eastpointe Condos would allow for greater coverage.
 36. In future will look at areas not covered. They try to collocate before constructing new towers.
 37. The crane test was placed on subject property which he further explained.

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Exhibit A-18 was marked into evidence it's a 4/7/05 Board Resolution.

- 38. They do put multiple antennas to service their customers.
- 39. They are proposing six antennas which are four feet tall.

Mr. Drobbin began his cross examination of Mr. Ghandi.

Mr. Ghandi stated the following during his cross examination testimony:

- 1. He is employee of Metro PCS for two and a half years. He works on site needs.
- 2. Metro have areas of coverage needs so they look for structures to locate antennas.
- 3. He does Monmouth and Ocean Counties.
- 4. DiStefano finds the tallest sites.
- 5. He did not look at other tall structures in area.
- 6. No, he did not look at properties within 200 feet of this site.
- 7. His analysis is to look at topography and clutter.
- 8. He does not go out and survey areas, someone else does.
- 9. Regarding this site there are three structures next to this site that are taller than Eastpointe.
- 10. He is not pointing antennas toward Eastpointe Condos but the Shadow Lawn Buildings may have impact.

Mr. Beck stated that just because the application was granted approval for high rise development does not mean that it will be built.

Mr. Drobbin – need to look at impact. He wants Planning Board approval to be taken into account, the impact of the approved site is important.

Marc Leaber, Board P.P. questioned why would a building to the north impact this.

Mr. Mullen – I think applicant is not aware of this high rise development and is unable to determine if it will effect this application.

Mr. Beck requested that Mr. Drobbin provide site plans and elevations to him.

Mr. Drobbin agreed.

Mr. Mullen – Mr. Ghandi will need to come back.

Mr. Ghandi will also need the latitude and longitude.

Mr. Beck requested to continue this hearing at the November 4th meeting.

Mr. Gallagher offered a motion to carry this hearing to the November 4, 2010 Meeting without the need for further notice, seconded by Ms. Ryan and approved on the following roll call vote:

ROLL CALL:

**AYES: Mr. Braswell, Ms. Ryan, Mr. Anthony, Mr. Gallagher, Mr. Britton,
Ms. Tierney, Mr. Mullen**

NAYES: None

ABSTAIN: None

Approval of Minutes:

Mr. Mullen offered the approval of the August 5, 2010 Zoning Board Minutes, seconded by Mr. Braswell and all eligible members were in favor.

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Communications:

Mr. Baxter spoke about his Memo regarding Board Member Tierney and the Sendowski case.

Ms. Tierney offered a motion to adjourn the meeting, seconded by Ms. Ryan and all were in favor.

The meeting adjourned at 10:39 p.m.

CAROLYN CUMMINS, BOARD SECRETARY