

**MONTGOMERY TOWNSHIP ZONING BOARD
MONTGOMERY TOWNSHIP, SOMERSET COUNTY, NEW JERSEY
SPECIAL MEETING
JULY 30, 2019**

MINUTES

Chairman DeRochi called the meeting to order at 7:34 p.m. and read the opening statement which affirmed that adequate notice of the meeting had been posted and sent to the officially designated newspapers.

BOARD MEMBERS PRESENT: Chairman DeRochi; Mr. Fedun; Mr. Kabis; Mr. Voitach; Mr. Lopez-Lopez, Alternate #1;

ALSO PRESENT: Mark Peck, Esquire, Board Attorney; Emily Goldman, Board Planner; Jason Cline, Board Engineer; Dr. Bruce Eisenstein, Board RF Engineer; Joseph Palmer, Zoning Officer

I. SALUTE TO THE FLAG

II. APPLICATION

Case BA-04-19 Applicant: Sector Site LLC and New York SMSA Limited Partnership d/b/a Verizon Wireless

Block 25001 Lot 16 – Camp Meeting Avenue

Submission Waivers, Conditional Use Variance, Height Variance, Bulk Variances and Preliminary and Final Site Plan

Expiration Date – 120 Days from Submission Waiver Approval

Affidavit of Notification and Publication Required

Notice was in order. Frank Ferraro, Esquire represented the applicant. The application is for the installation of a new 135 foot tall wireless telecommunications monopole facility with the capability to be extended to 150 feet. Verizon is proposing nine of its panel antennas at the 130 foot antenna centerline height. The property is known as the Sculpture House property. There are a few buildings on the site one of which is an office/garage which is currently vacant. Verizon/Sector Site is planning to utilize a portion of the garage to house the ground equipment. There is very little ground disturbance proposed in this application. The pole will be designed to be 150 foot so it can accommodate future extensions. This application is a second priority location so it is a conditionally permitted use in the LM zone.

Mr. Ferraro discussed the submission waivers. A waiver is needed from providing information within 200 feet of the subject property. The information is shown on the site but not shown offsite. An application for a Letter of Interpretation has been submitted to NJDEP. The Letter of Interpretation will be submitted as a condition of approval. Waivers are needed from Items 23, 24, 25, 32, 34, 35, 36, 40, 43, 45, 46, 52, 53, 54, 55, 56, 61-63 and 68 on the preliminary checklist. Stormwater calculations and a drainage report have been provided. The Board professionals have no objections to any of the submission waiver requests. Additional stormwater information may be needed as a condition of approval. Waivers are needed from Items 11, 12 and 14 on the final checklist. A waiver is needed for Item 13 on the variance checklist.

A motion to approve the submission waivers and deem the application complete was made by Mr. Kabis and seconded by Mr. Lopez-Lopez. The motion carried on the following roll call vote:

Ayes: DeRochi, Fedun, Kabis, Voitach and Lopez-Lopez

Nays: None

Mr. Ferraro noted that there are four specific conditional use standards the application does not meet. The lease area of 20,000 square feet is not supposed to have anything in it where the proposed area has existing buildings. The conditional use section requires a facility to be located 200 feet from a lot line and they are proposing 48 feet to the rear lot line that is shared with the railroad tracks. A setback variance is required for the facility to be 490 feet from an existing residential dwelling where 500 feet is required. No wireless facility is to be located within 750 feet of an existing residential district boundary line and the proposed distance is 387.5 feet. A height variance is required to permit 135 feet up to 150 feet where 45 feet is permitted. The ordinance allows wireless communication towers up to a height of 125 feet that could be extendable to 135 feet. A d(3) variance is needed for all the deviations from the standards. Mr. Ferraro will check with the owner of the property to see if the manufacturing use or residential use will resume in the future. There is a ditch running along the backside of the property which is identified as a stream so the proposed facility is within the stream corridor which requires a variance. A bulk variance may be required for parking location. This is an unmanned facility so there will be a technician on site every 4 to 6 weeks. The existing gravel drive will be improved to get to the back of the property which will be 23 feet from the closes property line. The ordinance does not permit parking within 50 feet of the closest property line. The proposed generator location is outside the equipment building and the ordinance requires the generator to be located inside. A design waiver is requested to permit the landscape plan to be prepared by a licensed engineer instead of a landscape architect. There are two existing nonconformities on the property. The existing garage has a rear yard setback of 43.08 feet where 60 feet is required. One of the other existing buildings is setback 122.73 feet from the westerly lot line where 200 feet is required. There are a number of exceptions the applicant is seeking that will be described during testimony however they are asking for the landscaping to be calculated on the area of disturbance rather than total lot acreage.

David Stern with V-Comm Telecommunications Engineering, John Ferrante with E2 Project Management (site engineer) and David Karlebach the applicant's planner were sworn in.

Dr. Eisenstein was sworn in.

David Stern gave the Board his qualifications and was accepted as an expert in radiofrequency engineering. Verizon Wireless is an FCC licensed provider of telecommunications services. The RF Analysis and Report dated January 3, 2019 was marked as Exhibit A-1. The RF Emissions Study dated January 30, 2019 was marked as Exhibit A-2. Montgomery Township VZW Skillman Gap and Fill Exhibits, a propagation map of the existing Verizon network, was marked as Exhibit A-3. Montgomery Township VZW Skillman Gap and Fill Exhibits, a propagation map of the existing Verizon network with the proposed site on air, was marked as Exhibit A-4. Montgomery Township Existing Structures VZW Skillman Zoom was marked as Exhibit A-5. Page 14 of the RF Analysis and Report showing the existing Verizon Wireless sites within the Township as well as the existing and proposed structures within two miles of the proposed location was marked as Exhibit A-6.

Mr. Stern referenced Exhibit A-3 which depicts the existing Verizon Wireless service in this area of the Township. The existing sites include the Zion site which is a 191 foot lattice tower in Hillsborough Township on Long Hill Road, the Belle Mead 1 site which is a 127 foot water tank at 38 Concord Lane, the Petro Oil site which is a 170 foot monopole at the Princeton/Montgomery border, the Hopewell Borough site which is a 125 foot concrete silo and the Rosedale (Mt. Rose) site which has a 185 foot guyed tower. The proposed Skillman site is a 135 foot monopole. The green shading on the map represents Verizon Wireless reliable service for the high band. Verizon has a 700 megahertz license and an 800 megahertz license which are known as low band. They have a PCS license and an AWS license. Verizon is operating 4G LTE service in the 700 MHz, PCS and AWS. Together that represents 100 MHz of spectrum with 80 of those Megahertz being the high band. The high band does not cover as far as the low band channel 700 and 800. The 800 MHz which is an additional 22.5 MHz of spectrum isn't due to convert over from the older technology for another 3 to 4 years. At this point in time, 90% of the calls on Verizon network are using 4G LTE.

Mr. Lopez-Lopez asked why they wouldn't use the lower band since it covers a wider area. Mr. Stern explained low band does cover further but they have a lot less of the spectrum. There is approximately 40 MHz of low band and 80 MHz of high band. Of that low band spectrum half of it they are using for 4G and the other half is still maintaining the 3G technology. In this search area there are two major items that need good in-building service with high-capacity.

Dr. Eisenstein asked what the power level in the green area is. Mr. Stern said the standard they now use is called RSRP which is receive signal power and they are using a minus 100 dBm signal strength. That gives a buffer of about 5-10 dB to cover in building. When they get down to 115 dB there are higher bit error rates which make the data bad that ultimately drops the call. That signal strength is standard in the industry for 4G LTE.

Mr. Voitach asked how the bit error rate is measured. Mr. Stern replied that the data stream you measure on a call will give you the bit error rate.

Dr. Eisenstein said because it is a random variable it cannot be measured. You can take a snapshot of it but it is going to change from millisecond to millisecond. The way you know you're getting a high bit error rate is your communication starts to slow down.

Mr. Stern said according to the CDC 50% of all US households only has a wireless phone and no landline. The NENA, The National Association for 911, identifies the fact that 80% of all 911 calls are from wireless phones. The gap in coverage is approximately 3 miles north to south and 2 miles east to west. The areas they are focusing on are the High School and the Johnson and Johnson facility. They are trying to serve about a mile of Grandview Road, a mile and a half of Skillman/Camp Meeting Road, a mile and a half of Georgetown-Franklin Turnpike, a mile of Hollow Road, a mile of Fairview Road and one and a half miles of Route 601. There is a significant gap of reliable coverage in this area.

Mr. Stern referenced Exhibit A-4 which shows the service for the new site. They are propagating at 130 feet above ground level for the center of the antennas. The sectors are pointed to the north, east and south. There is nothing pointing to the west at this time because of the rugged terrain. Significant drive testing has been done through Somerset County in this area over the years and that information is used to tune the model. The model is very close to what they would get when they measure it.

Mr. Voitach asked what would be needed to cover the area south of Route 518. Mr. Stern testified he would need a site between the proposed site and the Mt. Rose site.

Mr. Stern testified the sites are not typically planned based on consumer complaints. The proposed antenna is at a centerline of 130 feet, with the top of the antenna at 133 feet and the top of the pole at 135 feet. This is the minimum height necessary to address the area of deficient coverage. The pole is centrally located between all the existing sites in the network. If the pole is moved to a different site another pole might be needed in the area to address the coverage. Verizon has a significant gap in coverage and this additional site is needed to address the gap. Significant amounts of equipment have been added to all the existing sites to try to get the maximum amount of power out of the sites while limiting the overlap.

Mr. Stern referenced Exhibit A-5 which shows the Priority 1 sites south of the proposed location. The sites shown in the area include the Blawenburg Church steeple which is just under 50 feet high as well as existing silos which are approximately 40 to 50 feet high. They are too short to provide reliable service back towards the High School and back

towards the area north of the proposed site. They would provide small cell service to about a half mile diameter circle to each one of the silos. The proposed location is a Priority 2 site.

Mr. Voitach asked if the elevation of the Blawenburg Church would provide the same the coverage as the proposed site. Mr. Stern said it would not because it is a mile south. The propose site covers approximately 1 to 1.5 miles radius. At the Blawenburg site it would cover a little less than a mile radius which might provide coverage to the High School but not to Johnson and Johnson. Mr. Voitach said south of Route 518 has more density. In the proposed location there is coverage for a lot of field area. Mr. Stern said for Verizon it is two different search areas. To cover both areas there will have to be two towers.

Mr. Stern will provide the actual signal measurements in the area.

Mr. Voitach said he would like to see who gets covered, what the alternative is with the Church and why it wouldn't cover more people. Mr. Ferraro agreed to look at it and come back with an exhibit.

Ms. Goldman asked why the Nassau Racquet site isn't shown on the exhibits. Mr. Ferraro said there is a leasing issue so as of this date the site is not being built.

Mr. Kabis asked what impact the foliage has on the signal. Mr. Stern testified as the foliage increases the coverage will decrease. If the towers are not built above the average tree line there would be a significant impact.

Mr. Voitach noted that the report says small network nodes are used on campus or dense urban environments to supplement existing coverage and asked why they couldn't be used at J & J or the high school. Mr. Stern replied if you are using a lower tower, to get inside you need to be on the property.

Mr. Ferraro reminded the Board that although Verizon is indicating J & J and the high school as the main capacity drivers in the area, the goal is to provide service throughout the township. Mr. Stern said the goal is to provide wide-area coverage. Once you have the wide-area coverage you can focus on specific venues to provide additional capacity.

Dr. Eisenstein asked the applicant to provide a terrain map and to propagate at 120 feet to show what the falloff would be at the next meeting.

Mr. Stern referenced Exhibit A-6 which is the comprehensive plan for Verizon Wireless (Map 5 from Exhibit A-1). They used Google Earth of the area and show the two mile circle, the existing sites in the area and the proposed sites. There are no collocation opportunities in this area. The monopole at this location will provide the least amount of wireless facilities necessary. The shorter towers will require additional sites. The alternative technologies (small cells, micro cells and DAS) can't be used because of the distance between the roadways and all the utility towers. They would have to install new poles or new small towers to try to fill up the same area. The proposed facility will not cause any interference with public safety radios. This facility will improve E911 communications.

Mr. Stern referenced Exhibit A-2. An analysis was performed on the proposed facility taking into account Verizon Wireless antennas only with the antenna centers mounted at 130 feet above ground level and then measuring at a height of about 6 feet above ground level. They have found that the measurement that is taken from a facility once it is constructed is less than what was calculated. Based on the calculations they are at one half of 1% of the FCC standard so they are well into compliance. He described how the measurements are taken.

Dr. Eisenstein testified that Mr. Stern's calculations are correct and that he agreed with the report. The number for the uncontrolled environment is correct.

Mr. Lopez-Lopez asked for the population density or some metric that provides how many people are being served with this facility, outside Johnson and Johnson and the high school. Mr. Ferraro was not sure if they could provide anything but will look into it.

Chairman DeRochi opened the meeting to the public to question Mr. Stern.

Craig Johnson, 71 Camp Meeting Avenue, asked what the distance is from the monopole to the western property edge. Mr. Ferrante said it was 383 feet to the property line. Mr. Johnson asked if Verizon looked at alternate sites like the Quarry which is north of Johnson and Johnson. Mr. Stern said the Zion site is in that area and it doesn't cover Johnson and Johnson. Putting another site up there would cause interference to the Belle Mead site. Putting something in the middle of all the sites will limit the impact to the adjacent sites. Mr. Johnson asked about the Elks Club.

Penny Pariso, 404 Skillman Road, asked if there is a map that shows the coverage at the low bands. Mr. Stern testified he did not have maps. There would be more coverage that what is shown on Exhibits A-3 and A-4 at a low band than at a high band. There is no more capacity at low band. Ms. Pariso said the zoning is mostly 5 to 10 acre and there are low residency rates. The coverage maps are based on models and not going around taking direct readings. She asked what kind of ratios affect distance with the RF readings. Mr. Stern referenced page 5 of Exhibit A-2. The measurements are done from 0 to 600 feet. Once you get 600 feet from the site the number is too small to measure.

Ms. Pariso asked Mr. Ferraro if he was aware of the DEP site remediation program No. 71663 related to the subject property. Mr. Ferraro confirmed they are aware.

Mr. Stern confirmed that Verizon is required to provide reliable coverage in each of the license bands.

The Board took a five minute recess.

Mr. Ferrante gave the Board his qualifications and was accepted as a professional engineer and site remediation professional. Mr. Ferrante referenced the plans last revised 4-19-2019 and described the site location and existing conditions. The monopole will be located in the rear of the office/production building. The entire northern part of the property, the entire western part of the property and most of the southern part of the property are wetlands. There is a drainage ditch that runs through the property that is piped under the building. There is an easement for the railroad. The property is well constrained for where to locate the monopole. The pole is proposed at 135 feet with two possible extensions to 150 feet. They are not proposing a tree pole. They are proposing a standard platform with nine antennas. The generator will be located inside the building. The ground disturbance for the monopole is very minor. A gravel driveway is proposed to provide access for maintenance. All the radio equipment will be located inside. No fencing is proposed. Landscaping is proposed to the east. There are two existing maple trees that provide screening that will be added to the plans. Sector Site is leasing the entire building and is proposing to ultimately build it out with four potential collocators. The site is a very level site with a lot of tree screening that will minimize the visual impact. Although the monopole will be visible, the buildings will also help screen it. The property is environmentally constrained. It is currently under DEP oversight. The entire area where the buildings are, the access roads, the former railroad siding, the loading docks and so forth are contaminated. There are 24 areas of concern that are being investigated by the LSRP that will have to be remediated. There is a historic fill issue on the site as well.

Chairman DeRochi asked what the wetland buffer will be. Mr. Ferrante testified that the environmental consultant thought it would be 50 feet. The monopole would be outside the buffer. The area has no active area of concern from an environmental perspective. However, during construction the soil will be characterized, profiled and disposed at the correct permitted landfill. The LSRP will have oversight during construction and will perform post excavation sampling.

Mr. Ferrante testified that the generator is being sized for four carriers. SectorSite has chosen to specify a 100kW generator to serve the fully built out site. Verizon will utilize outdoor equipment inside the room. The outdoor equipment is designed for extreme weather so there is no air conditioning proposed. Instead there will be two exhaust fans located on the outside wall. The noise requirements will be met. The port for the exhaust will be on the west side of the building and will comply with the property line standard. Once it is constructed, testing will be done. The building is approximately 14 to 15 feet tall. The exact height will be provided. There is a small cable bridge that brings all the coaxial cables from inside the building to the monopole. All cabling will be inside. One GPS antenna is located on the cable bridge. There is no lighting proposed. The facility is unmanned with power and telephone. The facility is typically visited once every 4 to 6 weeks by a technician. The facility is remotely monitored.

Mr. Cline asked how nuisance access is being addressed. Mr. Ferrante testified that the climbing pegs start about 20 feet above grade. A fence can be installed if requested by the Board.

Mr. Ferrante testified there is no signage other than a typical warning sign. The details of those signs will be provided.

Mr. Ferrante described the stormwater quality sand filter. The filter was sized for the increased impervious area but with the generator going inside it may not even be needed. He will work with the Board Engineer and the calculations will be revised accordingly.

Mr. Ferrante referenced the Stormwater Runoff Quality Calculations report dated April, 2019. There is no drainage concerns associated with the application. Mr. Ferrante referenced the Environmental Impact Statement dated April 2019. The primary environmental concerns are noise and there are some threatened and endangered species identified in the area. The species are not water-dependent so the conclusion is they will not be impacted by the wetlands. If they were impacted, the buffer would increase to 150 feet. The noise issue will be addressed by putting the generator inside the building. The tower is 431 feet from the Skillman Road property line, 387 feet from the western property line and 48 feet from the rear property line. With all the constraints on the property there is very little room to be able to meet the 200 foot setback from a property line requirement of the 500 foot separation requirement from a residence. The area was selected because the building aid in shielding the tower as much as possible. The tower cannot be located to meet the 750 foot setback requirement from a residential zone district. The property can accommodate the two uses. The existing buildings are currently empty and not being used. The gravel driveway is an access for the technician and will be used for access to the rear. The technician can park on the existing gravel and the tracking pad can be removed after construction. The existing gravel will provide access to the generator for fueling purposes. The generator will be tested for 20 minutes every two weeks. There is no issue with the construction of the facility within the stream corridor.

Ms. Goldman noted that there is an access easement for the rail company and both the plantings and the stormwater management are located within that easement. She wondered if the easement precludes them from constructing anything in it. Mr. Ferraro will submit a copy of the easement for review.

Mr. Ferrante testified that there will be no changes to the stream, ditch or pipe under the building.

Chairman DeRochi asked what happens if the tower falls down and stops the train lines. Mr. Ferrante said the towers are designed per the TIA/EIA 222 Standard plus the applicable NJ Building Code. The monopole comes in sections so in most cases if there is a failure it will get formed in one of the slip joints and the tower will bend on itself. Very rarely

will a tower come completely down. The facility has to be designed to meet soil criteria. Most Sonotubes for this type of tower would be a 6 foot diameter minimum down about 20 to 30 feet deep. The historic fill is about 5 or 6 feet. A structural report would be provided as a condition of approval. The building that will house the generator will have to be retrofitted to meet the current building code. There might be some asbestos in the building that would have to be cleaned up.

The plans will be revised to include the floor area ratio, update the lot coverage and show the generator inside the building. The applicant is asking for a waiver or exception from having to put the critical areas into a conservation easement. This is a very minor improvement to the property from the standpoint of impervious coverage. There may be further redevelopment of this property in the future at which time a conservation easement could be required.

Mr. Woitach asked if there would be structural impact from the significant rail traffic that goes by the site. Mr. Ferrante testified there would not be.

Mr. Kabis asked for additional information on the retrofitting of the building to meet the NJ Fire Code and Building Code. Mr. Ferrante will provide what upgrades would be required to put the generator in the building.

Mr. Ferrante testified that they meet the 1,000 foot setback to a historic district. The garage they are utilizing is taller than the 15 foot permitted but it is a pre-existing condition that they are not changing. The maximum shelter area is met per bay which is 225 square feet for each carrier. The tower is located behind buildings per the ordinance. The wooded area in the front of the property is not being disturbed. The property can accommodate the additional use. It does not pose any hazard to the general public.

Ms. Goldman asked that the stream corridor requirements be submitted for the next hearing.

Chairman DeRochi opened the meeting to the public to ask Mr. Ferrante questions.

Ms. Pariso asked if they will use the existing door that faces north for the entrance. Mr. Ferrante testified they will install a new door to the rear and will have to see if they will use the existing door for access to the generator. Ms. Pariso said the lay by track is used quite often by CSX and they run the diesel engines 24/7 when they are parked. She was concerned with the impact of the train diesel fumes and the generator's diesel fumes. Mr. Ferrante said their generators have to meet the latest DEP standards. The generator runs 10 to 20 minutes during testing. There is a utility pole on the site they will get power from.

The crane test was scheduled for August 16th and 17th. The crane will be at a height of 150 feet with a flag hanging at 135 feet so both heights can be seen.

The application was continued to the September 17, 2019 Zoning Board meeting with no further notice.

III. MINUTES

June 18, 2019 – Regular Meeting

July 16, 2019 – Regular Meeting

The minutes were carried to the September 17, 2019 meeting.

There being no further business to come before the Board, the meeting was adjourned at 10:48 p.m.