

# TOWN OF NEW PALTZ

## ZONING BOARD OF APPEALS

MEMO

To: Town of New Paltz, Town Board

From: Leonard Loza Chairperson, Zoning Board of Appeals

Date: May 16<sup>th</sup>, 2022

Re: Homeland Towers ZBA20-50 (86.4-2-16)  
Request to add Consultant for Radio Frequency expertise (RF Expert)  
Douglas Fishman

The Zoning Board of Appeals has been in search of a technical wireless communications consultant (RF Expert) to assist the Board in the process of the Use Variance application submitted by Homeland Towers (60 Jansen Rd).

At our May 16<sup>th</sup>, 2022, Regular ZBA Meeting, the Board, after interviews, discussion, and vote decided that Douglas Fishman would be the preferred consultant for the 60 Jansen Road Homeland Towers project.

Mr. Fishman's rate for consultation is \$200.00 per hour and he will do all consulting via email and Zoom.

Attached please find his Bio/Resume, Sample Report and Fee for services.

Thank you for your consideration in this matter. Should you have any questions prior to his appointment, please feel free to contact me at 845-399-3115.

Sincerely,

Leonard Loza, Chairman  
Town of New Paltz Zoning Board of Appeals

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**TO: John Gotto**

**FROM: Douglas Fishman**

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**RE: RF Expert Review Services**

**SITE: New Paultz (TBD)**

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Dear Mr. Gotto:

Thank you for considering me regarding provision of radio frequency (RF) review and analysis services for applications for wireless telecommunications facilities to the Town of New Paultz. I am writing to you as an independent consultant, not as an employee or affiliate of a specific company.

I have been in the wireless business since 1987, and have held numerous engineering positions over that timeframe. I have worked for a wireless service provider, hardware and software vendors, a consulting firm and a telecom construction firm. My breadth of experience is unique and well positions me as an expert in the field. Please see my bio, included as Attachment A to this response.

For the past 10+ years, I have been working with a number of communities, similar to Poughkeepsie. These include:

- Town of Pound Ridge, NY
- Town of Wappinger, NY
- Village of Pleasantville, NY
- Village of Port Chester, NY
- Town of Poughkeepsie, NY
- Town of Ramapo, NY
- Borough of Rockleigh, NJ
- Township of Wayne, NJ

My experience working with and for Wireless Service Providers (WSP) is really what sets me apart from my competitors. With this experience, I can accurately and thoroughly review RF submissions from the WSPs, and intelligently respond on behalf of the Town with intelligent, expert questions to ensure that the applications are complete and justified, and that the resulting work actually benefits the residents of the Town.

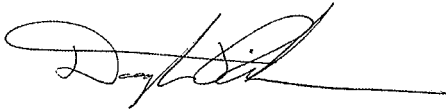
I attached a sample report for your reference as Attachment B to this response. Other reports can be provided upon request.

**Fees:** My standard rate is \$200 per hour for my consulting time. A typical report takes 4 hours of time, including review of materials, writing and submission of the report. For support of on-

site meetings, I charge my hourly rate inclusive of travel time, with a 4-hour minimum call out. This includes any expenses associated with the travel.

I look forward to working with you and the Town of New Paultz. If you have questions, please contact me directly at (201) 218-6848, or via e-mail at [dougfish@optonline.net](mailto:dougfish@optonline.net).

Sincerely,



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Douglas Fishman  
RF Engineering Consultant

Attachments:

- A. D. Fishman Bio
- B. Sample Report

**Attachment A – Douglas Fishman Bio**

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## Douglas S. Fishman, PMP

2013 – Present

**Director, DAS Design and Implementation,**  
**SQUAN Construction Services, Englewood, NJ**

SQUAN Construction Services, LLC (SQUAN) was formed in 2006 as a construction company focusing on building out macrocell networks for the wireless carriers. For the few years before I was hired, SQUAN has tried to leverage their expertise with cellular networks, project management expertise and extensive contacts at the wireless service providers (WSPs) into the in-building distributed antenna system (DAS) arena, with limited success. I was brought on board to help grow the DAS business for SQUAN by leveraging my technical knowledge, industry contacts and reputation, and the DAS business has grown significantly. My specific responsibilities include:

- Leading and Managing the DAS and WiFi design and implementation teams.
- Review/approval of all DAS, Small Cell and WiFi designs, as well as field-driven and performance-driven changes to the designs.
- Business development. Accomplishments to date include securing SQUAN’s first survey and design contracts with Verizon (DAS) and Cablevision (WiFi). Helped build the DAS team at SQUAN to \$10M in annual revenues. Before I came to SQUAN, the maximum annual DAS revenues was \$1.5M.
- Developing proposals for bid opportunities, including scopes of work, project plans, staffing and cost estimates. Including developing detailed pricing spreadsheets that account for personnel costs, subcontractor costs, materials, mark-up, margins and labor estimates.
- Project management, including controlling “scope creep” and funding containment.
- P&L responsibility for the DAS business unit at SQUAN.

2005 – 2013

**Managing Director, Northeast Region,**  
**RCC Consultants, Inc., Woodbridge, NJ**

RCC Consultants. (RCC) is an international telecommunications consulting, integration, and outsourcing firm who has served the industry since 1983. RCC specialized in technical consulting for Public Safety radio systems. Clients include primarily State, County and local government agencies (Police, Fire, EMS, etc), transit corporations (MTA, NJ Transit, etc) as well as public utilities. Specific responsibilities included:

- Leading and Managing the Northeast Region consulting team consisting of 10 Radio Consultants with varying capabilities and specialties.
- RFP Development, Design Procurement and implementation oversight of outdoor, in-building and underground radio and distributed antenna systems (DAS).
- Clients include Related Management, Gotham Organization, the Jacob Javits Convention Center and Dover Speedway.

- Acting as an RF Expert on behalf of various municipalities, evaluating wireless carrier applications for cell towers.
- Ensuring that the needs of our Public Safety clients are being met. Current clients being supported from the Northeast Region include the Port Authority of NY and NJ, New Jersey Transit Corporation, NY City Transit, the City of Philadelphia, the City of Stamford, CT, and the Townships of Woodbridge and Wayne, NJ.
- Providing consulting expertise in all Public Safety communications technologies, including P25, OpenSky and other digital technologies, analog systems, trunked and conventional systems, Simulcasting, as well as in-building and tunnel coverage solutions. Gained first hand experience with both Motorola and Harris P25 radio systems.
- Project management, including controlling “scope creep” and funding containment.
- Full P&L accountability for the Northeast Region.

2001 – 2005

**Sr. Director, Professional Services,**  
**SCHEMA, INC., Rochelle Park, NJ**

Schema is an international corporation that develops and markets “optimization” software and solutions to the wireless telecom industry around the world. Our products include automatic frequency planning (AFP) and antenna design optimization tools which enable clients to improve the quality of their wireless networks, introduce new services, and maximize capital efficiency. Clients included AT&T Wireless, Cingular, Cellcom, US Cellular, among other international companies. Specific responsibilities included:

- Leading North American Professional Services Organization for Radio Access Network (RAN) optimization of TDMA, GSM, CDMA, and UMTS networks.
- Delivering winning RAN optimization solutions that exceed customer expectations, realizing millions of dollars in CapEx and OpEx savings, while maximizing utilization of Schema’s technical resources.
- Managing multiple teams of Project Managers, Software and RF Engineers, all at remote locations, to ensure project goals were met in a timely and effective manner.
- Managing the Technical Customer Support organization.
- Leading development of internal technical training programs to enhance capabilities of Professional Services personnel.
- Revenue generation, including bringing in over \$25M in revenue to Schema from 2001-2005.
- Full P&L accountability for Professional Services operations within Schema Inc.
- Attracting and retaining top wireless engineering talent while maintaining organizational flexibility/scalability.
- Ensuring that the product offerings meets company profitability and customer objectives.

- Supporting product development initiatives by contributing user/customer insights to drive product improvement opportunities.

**1996 - 2000     Manager, Radio Frequency (RF) Engineering,  
AT&T WIRELESS SERVICES, INC., Paramus, NJ**

As Manager of RF Engineering, I managed a team of 8-10 RF Engineers and Tech Assistants with responsibility for network optimization and RF Design in the largest market in the country. During my tenure, I managed all three markets of the Tri-State Region – from Long Island to Manhattan to New Jersey. I was responsible for meeting performance goals and build plan objective in my region, as well as network growth.

**1993 - 1996     Sr. Applications Engineer, ADC TELECOMMUNICATIONS, WIRELESS  
SYSTEMS DIVISION, Wayne, NJ**

**1990 - 1992     Project Manager: Systems Engineering, MILLICOM, INC., New York, NY.**

**1987 - 1990     Systems Engineer, PLESSEY ELECTRONIC SYSTEMS CORPORATION, Totowa,  
NJ.**

**EDUCATION:         LEHIGH UNIVERSITY**

Major: **Electrical Engineering** w/ minor in **Applied Mathematics**  
Degree: **Bachelor of Science**

**STEVEN INSTITUTE OF TECHNOLOGY**

Major: **Electrical Engineering** w/ focus on **Communications**  
Degree: **Masters of Engineering**

**Attachment B – Sample Report**



March 6, 2020

Chairperson Bruce Flower  
And Members of the Planning Board  
20 Middlebush Road  
Wappingers Falls, NY 12590

**SUBJECT: RF ENGINEERING EVALUATION OF TARPON TOWERS  
APPLICATION TO CONSTRUCT A WIRELESS  
TELECOMMUNICATIONS FACILITY ON THE PROPERTY OF 110  
CHELSEA ROAD IN THE TOWN OF WAPPINGER, NY**

Honorable Chairman Flower and Members of the Planning Board:

This purpose of this report is to provide the Planning Board with a summary of my review of the documents received related to the Tarpon Towers application to install a 150 foot tall monopole on the property of 110 Chelsea Road in the town of Wappinger, NY. The documents received and reviewed in preparation for this report included:

- Town of Wappinger Wireless Telecommunications towers, antennas and personal wireless service facilities regulations (§240-81)
- Cuddy + Feder Applicant\_Letter (October 9, 2019)
- Techtonic Engineering Plans (October 24, 2019)
- Site Safe RF Compliance Certification (October 31, 2019)
- Verizon Wireless RF Report (September 17, 2019)

This report will focus on evaluating the RF Engineering components of the submission with respect to the Town of Wappinger Wireless Telecommunications Facilities regulations cited above. As a result, the specific reports that will be evaluated under this report are:

- Techtonic Engineering Plans (October 24, 2019)
- Site Safe RF Compliance Certification (October 31, 2019)
- Verizon Wireless RF Report (September 17, 2019)

**A. Tectonic Engineering Plans (October 24, 2019)**

The Engineering Plans show the Tarpon Towers planned 150 foot high monopole. The initial tenant will be Verizon Wireless, who is taking the 146' above ground level (AGL) centerline position, which is the top location on the monopole. Below them, every 10 feet, are reserved locations for other wireless carriers (four positions at 136', 126', 116' and 106' AGL). The existing treeline is also illustrated at 72' AGL. Note that all of these positions have good clearance above the existing treeline.

Overall, these plans appear to be consistent with the other application documents received.

**B. Site Safe RF Compliance Certification (October 31, 2019)**

Town of Wappinger rule §240-81, subparagraph J (1) details requirement for the RF compliance certification. Specifically, they state "...Certification shall include site specific calculations showing expected worst case power density levels at the closest publicly accessible point to the PWSF, using the methodology described in FCC OET Bulletin No. 65..." The report provided by Site Safe, provides a very high level statement that verifies certification per the above guidelines, and is signed/sealed by a Professional Engineer. No calculations or data assumptions are detailed, so it is impossible for this reviewer to comment on the accuracy of these claims.

*Typically, these certifications are accompanied by a report with the backup information. If the Board wishes, I would be happy to review such a report to ensure consistency with the application.*

Note that no issues with respect to RF compliance are expected or anticipated from this application due to the height of the monopole relative to the accessible areas in and around the site.

**C. Verizon Wireless RF Report (September 17, 2019)**

This report, included as Exhibit E to the October 2019 application, details the reasons behind Verizon's desire for this site. Data is presented detailing existing capacity and coverage challenges, and how the proposed site will solve both of these issues. Some of my observations related to each of these items:

Capacity: The report provides data showing how the following sites/sectors are near, at or exceeding capacity limitations currently: Beacon Gamma, Balmville Alpha, Groveville Gamma and Groveville Beta. With the addition of the proposed monopole site, coverage footprints are reduced significantly for all of the above sectors with the exception of Beacon Gamma. Even without knowing the exact distribution of the traffic, it is evident that this site, as currently designed, will do a nice job of offloading capacity from 3 of the 4 sectors.

Coverage: Verizon provides "before" and "after" predicted coverage plots, showing coverage in their 2 primary bands of operation – 700 MHz and 2100 MHz. As expected, the 700 MHz plots show much better propagation, due to the lower frequency band. Existing coverage at 700 MHz is primarily pretty good, with a few areas to the northeast and southwest of the proposed site that can be considered marginal. With the addition of the

proposed site, coverage appears to be solid throughout the Castle Point area. At 2100 MHz, the existing coverage is much worse, showing gaps in coverage (“holes”) to the northeast and southwest, in areas marginally covered by 700 MHz. Once the new site is added, much (not all) of the coverage gaps in the Castle Point area are filled in. It is important to note that the 2100 MHz band coverage, also known as AWS band, is particularly important to Verizon as they utilize a wideband channel (20 MHz) in this band, which provides for a much increased capacity / data throughput when compared to the 10 MHz channel at 700 MHz.

Though the report was thorough and technically proves the RF need for the site, it does not address the rationale for choosing the 146’ AGL height for the monopole. Given the height of the monopole in comparison to the treeline and terrain, I would anticipate that lower heights are likely to solve the challenges to be addressed by this site. *I would like to see an additional analysis provided at lower heights (say 136’ and 116’) to see if the site goals are still met. In addition, I would like to understand why the 2100 MHz best server plot was run at 116’ AGL, while the other plots were all run at 146’ AGL.*

### Summary and Recommendations

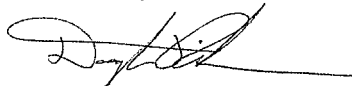
I agree that, from an RF engineering standpoint, the proposed monopole at 110 Chelsea Road is necessary to improve both capacity and coverage for Verizon Wireless voice and data services in the Castle Hill area of Wappinger.

To complete the Application, it is requested that the Applicant provide the following modifications/explanations as detailed in this report:

1. FCC RF Compliance Report
2. Expanded RF Report to include alternate antenna elevations.

I am ready to continue and complete the review of the application upon receipt of the Applicant’s responses. Please feel free to reach out to me with any questions or comments.

Sincerely,



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Douglas Fishman

RF Engineering Consultant

(201) 218-6848