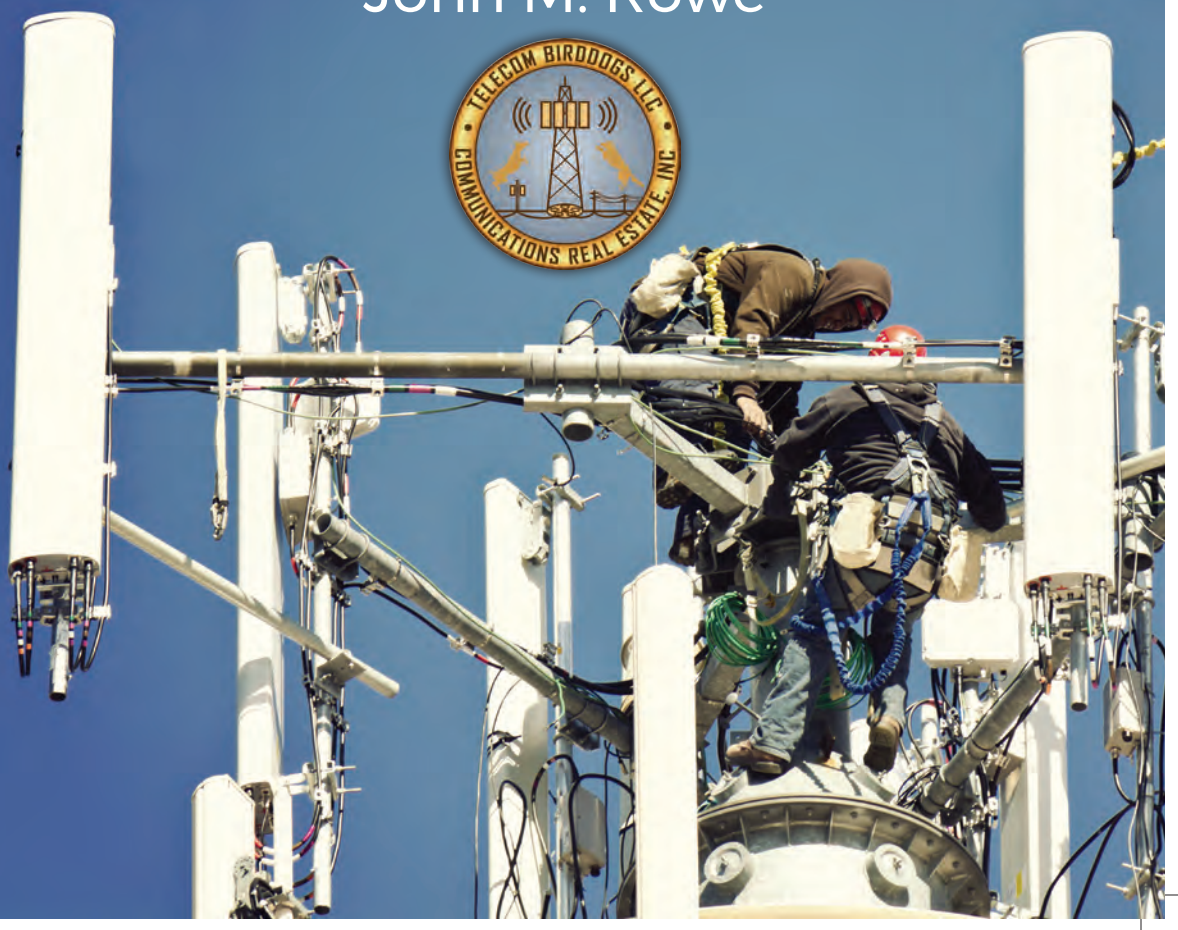
FIRMLY ANCHORED in Midair

THE HANDBOOK OF WIRELESS SITE ACQUISITION AND PERMITTING

John M. Rowe



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John M. Rowe

Edited by Kelly Anne Lenkevich

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Firmly Anchored in Midair:
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Telecom BirdDogs, LLC
P.O. Box 2523
Littleton, Colorado 80161-2523
United States of America
info@TelecomBirdDogs.com
www.TelecomBirdDogs.com

Teach a youth about the way he should go, even
when he is old he will not depart from it.

—Proverbs 22:6

Then, we who are still alive will be caught up together with
them in the clouds to meet the Lord in the air . . .

—1 Thessalonians 4:17

Preface

When acquiring and permitting cell site real estate entitlements, wireless communications companies are not allowed the right to take private property through eminent domain for the essential services they offer the public. Meanwhile, other essential services such as road transportation, power lines, and water service can be developed with the legal aid of condemnation. To develop antenna sites, we must negotiate for real estate rights and we must apply for and comply with local regulations to obtain building permits.

Active competition exists among wireless operators for customers. Oversight of competitive forces is a fundamental aspect driving government policy of wireless communications, justified by allocations of the frequency spectrum[1] from the government to qualified wireless operators.[2] Within the context of their licenses, wireless competitors strive to differentiate their hand-held products, service plans, system capacity, and coverage areas. It is beneficial for those involved in developing antenna cell sites to exercise care in project development and

relationships with local property owners[3] and jurisdiction authorities. Unfortunately, this is not always the case. We do no service to the wireless industry by being anything less than professional in the process of securing local permits and lease rights.

The purpose of this book is to elevate the understanding of processes and practices employed in the wireless industry to secure property rights and local permits. These practices are essential for enabling continued growth of commercial mobile services to keep pace with consumer demand. My hope is to lend my perspective to the mission of developing cell site facilities, convey an understanding of conflicts that inevitably arise in this process, and provide enough insight to assist you in your endeavor to find and apply creative win-win solutions. A reason this is important was recently spoken of by FCC Commissioner Mignon Clyburn when she discussed how problems we have might be resolved with broadband connectivity.[4]

You ask, "Why should I listen to what you have to say?" This book provides a rare opportunity to learn about wireless facility real estate development from an industry veteran. During the past thirty-five years, I've performed communication site acquisition and local permitting in forty-five of fifty states and recruited, hired, managed, and trained crews of others to do the same. I've developed communication sites for all major wireless carriers and for large and small communication site ownership and management firms. My master's thesis in graduate school in 1983 was about developing communications towers for point-to-point long-distance telephone service.[5]

In addition to traditional antenna cell sites (at all stages of evolution) my experience includes acquisition and permitting of real estate entitlements for switching centers, fiber-optic building entrances, fiber-optic rights-of-way, and broadcast, microwave, mobile data, paging, Wi-Fi, and satellite communications with all forms of property owner entity, including special district, city, county, state, and federal governments—such as the Department of Agriculture's Forest Service (USFS) and the Department of the Interior's Bureau of Land Management (BLM). I've acquired local permits from Massachusetts to San Diego and from Florida to Washington.

My personal mantra is "fast-tracked and quality-controlled" site acquisition and permitting. What wireless facility developers want most of site acquisition and local permitting agents is for them to represent the client interests, whether the client be a wireless carrier, a site owner and manager, or an infrastructure builder or consulting firm. That is, wireless site developers want agents who move projects to completion as swiftly as possible without sacrificing quality real estate entitlements. One might liken the role of a wireless site acquisition consultant to that of an expediter or an air traffic controller because of the need to coordinate information inputs, precise processes, and anticipated outputs with members of the project team involved in site development. Competence in developing wireless sites can lead to opportunities in operations management, project management, site ownership and management, construction, public affairs, regulatory compliance, or careers in related fields.

While this book is not about spectrum auctions, environmental compliance, or wireless technology, it does touch on the relationship of wireless site acquisition and local permitting to each. This book is about wireless site search, due diligence, and site selection, as well as the disciplines that influence these processes. Though it is true that site acquisition and local permitting involve a basic understanding of real estate contracts, construction drawings, and land-use concepts, this is not a treatment of real estate law, architecture, engineering, or community land-use planning.

Wireless site development is an interdisciplinary pursuit that provides and depends on inputs among site developers, property owners, and local communities. You won't learn real estate investing here but you will come to understand prerequisites for developing quality cell site assets and favorable contracts, and speaking the language of the industry.

Alex Gellman, chief executive officer of Vertical Bridge, confirmed at the Wireless Infrastructure Show in Dallas on May 24, 2016, while speaking with executives of five large tower owner companies at a session named "A View from the Top," that the wireless infrastructure business is basically about obtaining real estate entitlements and their consequences.[6] If you want to know about wireless real estate in the context of site acquisition and permitting, you came to the right place.

This book is an accumulation of trade secrets you'll find nowhere else.

In Section I, you'll get a glimpse of how wireless carriers interface with their vendors and companies that own and manage antenna structures (sometimes called towercos). I explain the language of the wireless landscape and the fifteen essential functions of site acquisition, including the skills required to perform wireless site acquisition. To complete Section I, understanding is provided about how search areas are designed. Receipt of a search area request starts the site acquisition process.

Section II delves into the process of evaluating search area work assignments and how application of client criteria can be translated into great wireless sites. Methodology to search for qualified locations is presented the way it's done in practice. Insights into performing detailed analysis of a property's zone-ability, constructability, and lease-ability are highlighted. The section concludes by elaborating on initial conversations with prospective property owners.

Section III completes Part One of the text, leading to the development stage for each new wireless facility. This section details how the search area report (SAR) allows the project team to make an informed site selection decision about which prospective candidate location to develop. Upon selecting a site, the site candidate information package (SCIP) is prepared by the site acquisition consultant to provide the project team with greater depth of detail for the site to be developed.

Part Two starts in Section IV where a description of the process to prepare a selected site for construction begins. I discuss initial preparations to kick off the project, title reports, and site design drawings. Some attention is given to making applications for collocation on existing structures at this stage. Completion of Section IV preparations tee up the project for realization of the two types of real estate entitlement that the site acquisition function is responsible for securing: property or space rights and local permit rights.

Section V focuses on aspects of space rights relevant to wireless site acquisition. The leasing process is addressed from a conceptual perspective, and with emphasis on typical provisions found in wireless leases, such as non-negotiables for wireless developers. Alternative and

supplemental agreements are often necessary to address conditions that a lease might not, including the purchase of property. Collocation agreements are given special attention. I complete the space rights discussion by covering the process to finalize leases.

Local permitting is the topic examined in Section VI. I start with thoughts related to making complete and timely permit applications. This section discusses application review by the local jurisdiction and typical due diligence questions that are raised by the community with suggestions and resources for addressing community concerns. The final approval process is covered regarding public hearings, governing bodies, and verification documentation.

Section VII reviews the project at the real estate entitlements complete milestone. In regard to Essential Function 13, I provide a summary regarding project management concepts to consider in the wireless site selection and development process. Documentation to close out the project is summarized in reference to Essential Function 14. Essential Function 15 establishes the basis for a discussion about post-project inquiries that may reach a site acquisition consultant and some concluding perspective regarding the completed project. Section VII completes Part Two of this book.

Overall, the goal of this book is to provide you a good perspective to prepare wireless sites for construction with a thoughtful approach. That approach may take a different tack from one project to another. The point is that your perspective is on the end goal of achieving the space rights and local permit entitlements as quickly and efficiently as possible without incident. I hope to help you know the questions to ask and suggest ways to approach each task. Every possible situation cannot be addressed in Parts One and Two, which are only a survey of this field of study. Nevertheless, this book provides a framework for more in-depth education and training for the many disciplines of wireless site acquisition and permitting. Please feel free to contact me at JRowe@TelecomBirdDogs.com or PO Box 2523, Littleton, CO 80161, to ask questions or share your comments about the text that follows. As we say in the business, "happy hunting."

Introduction

It was the first week of 1980. Twelve months before, the University of Colorado Interdisciplinary Telecommunications Program (ITP) had suspended me for letting my grade point average drop below a 3.0. The ITP had admitted me with a provision that my grade point average not fall below a 3.0. If not for a 750 score on the Graduate Record Exam and solid references from my sales manager, some of my previous customers, and the training manager of Belden Corporation, the electronic cable manufacturing company that employed me, my application in 1977 to enter graduate school in the ITP probably wouldn't even have been accepted.

I'd previously been a factory sales representative for Belden in New York City in the 1970s. My sales territory predominantly served the national headquarters offices of broadcasters ABC, NBC, and CBS, the national headquarters offices of cable television industry multiple system operators (MSOs) Teleprompter Corporation and Warner Cable Corporation, and the two local cable television systems on

Manhattan Island, Manhattan Cable Company (owned by Time Life Corporation) and Teleprompter Manhattan Corporation (owned by Teleprompter Corporation). In November 1975, I originated and arranged a meeting between Belden's Vice President of Marketing, Jack McCarthy, and the President of Teleprompter Corporation's Cable-TV Division, William Bresnan, to discuss a partnership to deploy light-wave technology via fiber-optic glass strands in cable television. On July 9, 1976, the *New York Times* reported, "TV Begins to Use Fiber Technology,"[1] and the *Wall Street Journal* reported, "Teleprompter Adds Light-Wave System to Cable-TV Unit."[2] The cable television industry obtained rights to pole attachment in public right-of-way from the FCC in 1978.[3]

After a summer session and the fall term in 1978 my grade point average slipped below a 3.0 due to a statistics class. An average grade on the eight-hundred-point final landed me a C, just enough to send me packing. The ITP program director advised that if I waited at least one year and got an A at another school in a qualifying class, that might get my master's degree back on track.

A week later my neighbor recruited me for oil field work in Red Desert, Wyoming. The weekend I left for a camp job, thirty-five miles north of Wamsutter, Wyoming, a news report on the radio announced that the astrologer and self-proclaimed psychic Jeane Dixon predicted it would get to forty degrees below zero in Wyoming and one of every four people would die.

There was a solar eclipse that month, February 1979, in the middle of the day on the 26th while I was working on an elevated platform. I realized that four years before I'd had a dream about working on a machine that made mud. I had never heard of such a thing. It was so obvious to me how weird it sounded to the girl I was dating at the time when she heard about my mud-machine dream.

In fact, it was just as the shuttle bus arrived on the remote drilling rig site that the drill bit broke off the drill pipe and was lost about 9,200 feet below ground. For the next two weeks, my entire first tour on that rig, all I did was pour dirt powder into a mixer that added water to create mud. The mud was circulated continuously through the entire

depth of the drill pipe to keep the natural gas well from exploding while efforts were made to find and retrieve the lost drill bit.

After spending the winter of '79 as a roughneck on oil drilling derrick platforms, providence brought me home to Chicago (where my parents lived) for my dad's fiftieth birthday celebration. That July, MCI Communications hired me as a long-distance sales representative in downtown Chicago. That year also saw me work as an extra in the movie *The Blues Brothers* in uniform the same weekend the US Air Force thought I might report. My sales were respectable and included signing Second City to MCI's phone service. By the end of 1979, MCI planned to lay off half the sales force because all daytime system capacity had been sold. MCI would soon be concentrating on television advertising to increase residential calling on the network in the evening hours. The layoff might have included me but did not.

One day in December 1979 I was prompted to ask Tom Wynne, the vice president of sales in Chicago, for a promotion. Days later Tom Leming, the Vice President of Transmission Systems Engineering, was in town regarding the antitrust hearings against AT&T. We met and chatted during a cab ride from the John Hancock Building to MCI's lawyers' offices next to the Sun-Times Building. During the cab ride he offered me the opportunity to work in the network engineering department.

Of the choices offered to me, communications tower site acquisition sounded the most interesting. My dad had performed real estate development and construction for gas stations in the Chicago area and beyond from the 1950s to the 1970s.

So, there I was. My first site acquisition assignment the first week of 1980 was to acquire a site for a microwave communications repeater station in Streetsboro, Ohio. After one week in the Streetsboro area I returned to the office in Washington, DC, with an acceptable lease signed by the property owner for the target location. Three more search areas were assigned to me in upstate New York. After the next three weeks traversing the hills between High Point, New Jersey, and Cooperstown, New York, three more acceptable signed leases were acquired. After obtaining ten signed leases in the first ten weeks of

1980, my company asked me to start processing zoning and building permits for these sites. That year I completed site acquisition and local permitting for a twenty-site microwave route from West Orange, New Jersey, through upstate New York to North Royalton, Ohio. This was critical for MCI as it was the final leg completing a figure-eight network route of redundant long-distance telecommunications transmission capacity between New York and Chicago.

The next year MCI made me a supervisor and awarded me the company's Excellence in Service Award, which was given to 2 percent of the employees for having made exceptional contributions to the company and its customers. By the end of 1982, I had hired and trained thirty-two others to do the same work, based in four offices across the country, and MCI made me a manager.

In 1983, MCI was applying for cellular radio licenses and acquiring cross-country fiber-optic routes. I finished my master's degree requirements and graduated from the ITP in Boulder, Colorado, while working for MCI in Washington, DC. This book is a sequel to my master's thesis, "The Process of Developing Specialized Common Carrier Telecommunications Routes: A Handbook for Land Agents." Since 1984 I have done freelance work to develop many antenna site applications throughout the United States.

Disclaimer

"These people were more open-minded than those in Thessalonica, since they welcomed the message with eagerness and examined the Scriptures daily to see if these things were so."

Acts 17:11

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Part One

Introduction to Wireless Site Acquisition and Permitting

Part One is the first half of the story about how to select wireless infrastructure facility locations. Part Two will take the selected site and prepare it for implementation. Capital budgeting precedes Part One activities. Construction takes over after Part Two.

The Section I dialogue starts with an explanation of the importance of infrastructure in the commercial mobile services or wireless industry and gravitates to a discussion of the environment in which the site acquisition role exists. Twelve qualifications and fifteen essential functions are provided for the role of site acquisition. Detailed milestones are presented that cast light on the typical tasks and outcomes derived from site acquisition projects. Some background concerning how wireless systems are designed and the types of components that make up wireless infrastructure help portray the texture of wireless facilities. Finally, the search area design translates to an assignment for site acquisition activities to commence.

Section II focuses on what the site acquisition consultant does with an assignment once it is received. Initially, the information contained with a search area assignment is reviewed and analyzed. Existing structures are considered. The search area is mapped to isolate existing structures and favorable zoning and to determine property ownership. Environmental factors are considered. The zone-ability, constructability, and lease-ability of potential locations are evaluated. Conversations and negotiations with property owners of qualified locations complete the site search due diligence process. Next, the most desirable options will be documented.

Section III completes the first half of the story. The search area report is a compilation of feasibility data that allows pertinent members of the project team to decide which location to develop. Upon site selection, an in-depth report of due diligence information collected for the chosen property is compiled by the site acquisition consultant for distribution to the project team. At this point the first half of the story and the introduction to wireless site acquisition is complete.