#### STATE OF NEVADA

# STOREY COUNTY COMMISSIONERS

# SUPPLEMENTAL INFORMATION FOR AN AMATEUR RADIO FACILITY ACCOMPANYING AN APPLICATION FOR A SPECIAL USE PERMIT

# APN: 003-431-18, AREA VR, LOT/BLK 37



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#### EXECUTIVE SUMMARY

This special use permit application, with a supplement and relevant attachments and references, is submitted pursuant to Storey County Code section 17.62.010. The Applicants propose to erect and maintain private, non-commercial Amateur Radio antenna support structures for their personal use. They are individuals licensed by the Federal Communications Commission (FCC) since 1959 (Tom Taormina) and 1991 (Midge Taormina). A special use permit is necessary because Section 17.12.044 requires such a permit where a radio mast extends more than forty five feet above grade level. In *Taormina v. Storey County*, the United States District Court for the District of Nevada ruled that the Applicants "may apply for a special use permit pursuant to section 17.62.010." Slip opinion at 7. Section 17.62.010 is the applicable section for Applicants' application. *Id.* at n.7.

The standard, or test, for whether an applicant may receive a special use permit pursuant to section 17.62.010 is whether the use is "deemed essential or desirable for the public convenience or welfare."

Federal law is unequivocal in defining Amateur Radio as an activity that is "in the public interest, convenience or necessity." The Communications Act, under which Part 97 of the FCC's rules governing Amateur Radio are promulgated, explicitly states in 47 U.S.C. § 303 that radio licenses are issued only where the public interest, convenience or necessity require. Possession of an Amateur Radio license, therefore, demonstrates a finding by the FCC that the public convenience is being served. Indeed, the United States Supreme Court has expounded in any number of cases that granting a radio license constitutes a finding in favor of the public interest. *See, e.g., Red Lion Broadcasting Co. v. FCC*, 395 US 367, 379-380 (1969). Therefore, by Congressional action, FCC rules and case law from the United States Supreme Court, the licensing and operation of amateur radio stations is in the "public convenience, interest, or necessity." The standard of section 17.62.010 is satisfied.

The United States Supreme Court also has ruled that "This mandate to the FCC to assure that [FCC licensees] operate in the public interest is a broad one, a power 'not niggardly but expansive.'" Consistent with that ruling, there is an FCC regulation, and many cases, stating that there is to be no balancing of local interests against the federal rights of Amateur Radio Service operations.

In addition to forbidding a balancing of local interests against this federal right, "local regulation". . . "must constitute the minimum practicable regulation" and must provide reasonable accommodation.

The accompanying application, this supplement, the attachments and relevant additional submissions, contain the minimum technical solution to achieve the operational needs set forth by Applicants, consistent with current technology and in compliance with all applicable environmental, engineering and structural requirements and practices. The use of private property by a radio amateur is, by federal law, in the "public convenience, interest, or necessity," and these application materials show that the Applicants meet the sole requirement for grant of a special use permit under the Storey County standard described by the U.S. District Court. The Applicants ask for prompt approval.

# HISTORY AND BACKGROUND

In 1986, the Applicants, Tom and Midge Taormina, came to Virginia City Highland Ranches to build a home. The Property Owners Association had no restrictions on ham radio antennas, and still does

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not. At that time, there were no height restrictions in the Storey County Zoning Ordinance. Mr. Taormina visited the Storey County Building Department and was told that no building permits were required for ham radio antenna systems. From 1997 to 2008, Mr. Taormina erected as many as seven antenna support structures, at heights ranging from 40' to 140' above grade.

Tom Taormina became Emergency Coordinator for the local ARES<sup>1</sup> and RACES<sup>2</sup> emergency communications systems. See Exhibit C-1. These services are affiliated with the Department of Homeland Security, see Exhibit C-3, and the American Red Cross. He also became a member of the Storey County Local Emergency Planning Commission (LEPC), becoming familiar to Building Inspector Haymore and County Manager Whitten. Over the years, Whitten, Haymore and Taormina discussed the role of his ham radio station as first-tier backup communications for the County during emergencies. The concept was that Taormina's unique skills (among other things, he is a former NASA engineer), combined with his ham radio station, would provide previously unavailable links for VHF county and inter-county communications, and High Frequency links to national emergency centers. The station became part of the County's emergency preparedness plans. In 2007, Taormina was inducted into an amateur radio Hall of Fame for his contributions and innovations to ham radio over nearly five decades.<sup>3</sup>

Over many years, Taormina kept Haymore and Whitten apprised of his construction plans. He was repeatedly encouraged in his efforts and repeatedly advised that no building permits were necessary.

In May 2008, Taormina informed Dean Haymore of a plan to erect two antenna supports that summer, to heights of 120' and 195'. Among other uses, the 195' support was scheduled to include a 440 MHz repeater antenna at the top, to become the backbone of the county's amateur radio emergency communications system. As a courtesy, Taormina furnished copies of the PE renderings (Exhibits B-6 and B-7) to Haymore who acknowledged the plans and reinforced previous opinions that building permits were not necessary.

Since 2000, at least three years after Taormina antenna systems had been constructed, parcels at 380, 390 and 400 Panamint Road were purchased and homes built by residents new to the County. Two new antenna support structures were delivered in May 2008. In June 2008, Dean Haymore suggested that "it would be a good idea to get building permits for the two new structures." Taormina agreed and applied for a building permit, which was issued on June 27<sup>th</sup> as Building Permit No. 8354. See Exhibit A-6. Over the next two weeks, work began on the foundations for the two new structures and on modifications to existing structures. There were three compliance inspections. Each inspection was certified by the Building Department to be in conformance "with any Storey County Ordinances, the U.B.C., and the approved plans and specs."

Nonetheless, some neighbors complained to the County. In a matter of only a few days, the "comments" in the Compliance Inspection Reports escalated from none at all, to a recommendation, then demands to file for (variously) a Special Use Permit or Variance. On July 17, 2008, a Stop Work Order was issued with respect to all antenna support structures at the site. This order was the direct result of a

<sup>&</sup>lt;sup>1</sup> Amateur Radio Emergency Service, a national volunteer organization

 $<sup>^2</sup>$  Radio Amateur Civil Emergency Service, created by the Federal Emergency Management Agency and the Federal Communications Commission

<sup>&</sup>lt;sup>3</sup> http://www.contestdinner.com/page\_hall\_of\_fame.html

memo from Deputy District Attorney Laura Grant to Inspector Haymore. Interestingly, she wrote: "your department has apparently already issued building permits for the towers he wishes to build. As such, it would appear to me that you have waived the height limitations set out in SCC 17. 12.044."

Taormina responded by citing the preemptions of a Nevada statute governing amateur radio antenna support structures, NRS 278.02085<sup>4</sup>, and the federal regulation it was designed to implement, 47 CFR  $97.15.^{5}$ 

After the Grant memo, Taormina retained counsel. Over several months, counsel made a good faith attempt to present the Taormina position on the law, and filed a building permit application on August 14, 2008, **Exhibit A-7**. It contained more than a hundred pages of supporting documents but has not yet been approved or denied by the County. Taormina maintained that neither a variance, nor a special use permit, both of which had been suggested by the County as required steps, was necessary. Attempting to move the process forward, Taormina filed a suit in Federal District Court, seeking a ruling that neither a special permit, nor a variance, was required by the zoning ordinance.

In *Taormina v. Storey County*, 3:09-CV-00021-LRH-VPC (June 17, 2010)(Slip opinion), Judge Larry R. Hicks ruled that, "an individual seeking to build a structure that exceeds the height limits identified in section 17.12.044 may seek a special use permit under chapter 17.62. . . . [S]ection 17.62.010 authorizes the board of county commissioners to permit certain uses in zones in which the uses are not otherwise permitted where such uses are 'deemed essential or desirable for the public convenience or welfare.' "

The federal district court has now ruled that the applicable zoning ordinance is Section 17.62.010, for special use permits, and the test is whether such uses are "deemed essential or desirable for the public convenience or welfare." The Taormina position is that the proposed amateur radio uses are desirable for the public convenience, and that, as a result of federal law, the County cannot find otherwise.

# INFORMATION ON AMATEUR RADIO AND THE TAORMINA PROPERTY

An amateur radio antenna system is normally carried above the roof-line; and amateur radio, inherently non-commercial, is an ordinary accessory use of a residence. The proposed antenna system will be a public benefit due to the findings of the Congress, the FCC, the Courts, and, most particularly as displayed in this application, the availability of this station to serve in time of emergency – including power and cell phone blackouts. A permit for the proposed system would be consistent with public policies, both Federal and State, protecting the rights of licensed radio amateurs to construct and use

<sup>&</sup>lt;sup>4</sup> 47 CFR 97.15 (b): Except as otherwise provided herein, a station antenna structure may be erected at heights and dimensions sufficient to accommodate amateur service communications. State and local regulation of a station antenna structure must not preclude amateur service communications. Rather, it must reasonably accommodate such communications and must constitute the minimum practicable regulation to accomplish the state or local authority's legitimate purpose.

<sup>&</sup>lt;sup>5</sup> NRS 278.02085: A governing body shall not adopt an ordinance, regulation or plan or take any other action that precludes amateur service communications or that in any other manner does not conform to the provisions of 47 C.F.R. § 97.15 and the limited preemption entitled "Amateur Radio Preemption, 101 F.C.C. 2d 952 (1985)" as issued by the Federal Communications Commission. . . . Any ordinance, regulation or plan adopted by or other action taken by a governing body in violation of the provisions of this section is void.

amateur radio facilities, and the granting of a special use permit will be in harmony with the general purposes and intent of the regulations of the Storey County Code.<sup>6</sup>

Antenna systems, as mentioned above, are normally above the roof-line. They have been a part of American popular culture since the invention of radio.



Figure 1- Marconi Wireless Telegraph Station, South Wellfleet, Mass. Source: The National Park Service.

Among the very first stations for international communications, this postcard shows the antenna system constructed by Marconi, in South Wellfleet, Massachusetts, *in 1901*, which included four towers 200' tall.

Norman Rockwell made a TV antenna famous, by putting it on the cover of the Saturday Evening Post for November 5, 1949. This oil on canvas is presently in the Los Angeles County Museum of Art.



Figure 2 - Source: http://www.artchive.com/artchive/r/rockwell/thumb/rockwell\_antenna.jpg

Putting antennas up in the sky is engrained in American culture.

The position of a radio amateur in the permitting process is uniquely enhanced by a Congressional finding that "reasonable accommodation should be made for the effective operation of amateur radio from residences, private vehicles and public areas, and that regulation at all levels of government should facilitate and encourage amateur radio operation as a public benefit." Public Law 103-408, § 1 (3),

<sup>&</sup>lt;sup>6</sup> The General Purpose of the Ordinance is expressed at §17.02.020: "to serve the public health, safety, comfort, convenience and general welfare . . . " The Applicants amateur radio use promotes each of those goals.

October 22, 1994 *(emphasis added)*. While defining "effective operation" may be challenging, the Applicants are confident that, by comparison, no one would accept as "effective operation" a cell phone or TV station that was only useful three or four days a week. Nonetheless, the Applicants have used that highly compromised standard as their threshold. See the accompanying **Needs Analysis**, prepared by R. Dean Straw, an expert in the field.

The Taormina Property. Tom and Midge own the property, Exhibit A-1, which was acquired on May 1, 1997. The land is designated Lot 37, as shown on a Division of Land Map, recorded August 1, 1978 as Document 42925, Official records of Storey County, Nevada, of what is commonly referred to as Highland Ranches. Exhibits A-2 and A-3. The property, approximately 10 acres in size, is in the E-10 HR district.

#### THE TELECOMMUNICATIONS ACT OF 1996 DOES NOT APPLY

An opponent to this project may wish to emphasize the limitations of the preemption of local zoning contained in The Telecommunications Act of 1996, 47 USC §332 et seq., and cases related to the cellular telephone industry (sometimes called "personal wireless services"). Nonetheless, 47 USC §332 is unrelated to the matter at hand. It does not apply.

In particular, an opponent may be well pleased with, and cite, 47 USC §332(c)(7)(A):

(7) Preservation of local zoning authority

(A) General authority

Except as provided in this paragraph, nothing in this chapter shall limit or affect the authority of a State or local government or instrumentality thereof over decisions regarding the placement, construction, and modification of **personal wireless service facilities**. (*Emphasis added.*)

An opponent might also cite (in part) 47 USC §332(c)(7)(B):

#### (B) Limitations

(i) The regulation of the placement, construction, and modification of **personal wireless service facilities** by any State or local government or instrumentality thereof -

(I) shall not unreasonably discriminate among providers of functionally equivalent services; and

(II) shall not prohibit or have the effect of prohibiting the provision of personal wireless services. (*Emphasis added.*)

Unfortunately, an opponent is likely to overlook the definitions, which answer the question: "To whom does this apply"?

Please refer to 47 USC 332(c)(7)(C):

(C) Definitions

For purposes of this paragraph -

(i) the term "personal wireless services" means commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services;

(ii) the term "personal wireless service facilities" means facilities for the provision of personal wireless services *(Emphasis added.)* 

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The Applicants are neither a commercial mobile service, nor an unlicensed wireless service, nor a common carrier.

The Applicants are non-commercial, FCC-licensed, radio amateurs, in a wholly different service and subject to a wholly different set of regulations (47 CFR §97), and the beneficiary of a wholly different preemption (47 CFR §97.15(b)). The Telecommunications Act of 1996 does not apply. A discussion of the law that does apply is found later in this document.

#### AMATEUR RADIO IS NOT A COMMERCIAL USE

This particular use, and the structures involved, may be controversial, be it is important to point out what this is NOT. All amateur radio uses are inherently non-commercial, under the terms of the license. See especially 47 CFR §97.1 (a):

PART 97--AMATEUR RADIO SERVICE Subpart A--General Provisions Sec. 97.1 Basis and purpose.

The rules and regulations in this part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles:

(a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.

(b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.

(c) Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communication and technical phases of the art.

(d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.

(e) Continuation and extension of the amateur's unique ability to enhance international goodwill. (*Emphasis supplied.*)

These structures will be used exclusively for amateur radio, not cellular telephone, broadcasting, or any other commercial purpose. The Applicant will accept a permit condition to the following effect: "The structures shall not be used to support common-carrier cellular telephone or any other commercial purpose antennas."

#### NO COVENANT, CONDITION OR RESTRICTION APPLIES

Highland Ranches is a very rural 40,000 acre subdivision. It has, historically, appealed to residents who value their privacy and their ability to engage in non-prohibited activities such as owning and raising horses and other livestock. Many have moved from suburban areas solely for the purpose of being able to engage in activities and avocations that are not permitted in subdivisions. The CC&R's (<u>http://hrpoa.org/HRPOACCnRs2003.pdf</u>) have no prohibition against amateur radio support structures. Further, the Highland Ranches Property Owner's Association has gone on record to acknowledge that the CC&R's do not apply in this case.

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I spoke with Bill Lewis earlier today about [permission of the Architectural Committee as necessary for the antennae] and he assured me that the Committee does not consider that it has authority over the radio antennae.

Memorandum from Laura Grant, Deputy District Attorney, July 1, 2008, at 2.

See also an undated memorandum from Howard H. Depew, P.E., Chairman Architectural Committee, Virginia City Highlands Ranches Property Owners Association, included as Exhibit A-4, which states: "I have reviewed the existing association CC&Rs and find nothing which prevents erection, limits tower size, or the quantity of these structures on a member's property."

# ALL STRUCTURES WILL COMPLY WITH THE STOREY COUNTY CODE

### THE COUNTY HAS BEEN BOTH INCONSISTENT AND WRONG

In this matter, the U.S. District Court has written: "The court is sympathetic to Plaintiff's frustration with the county's inconsistent interpretation of its zoning ordinances."

The Court was saying that it has been impossible to discern a consistent interpretation of the zoning ordinance. The lack of a consistent interpretation has hampered the Taormina's *ability* to comply with the zoning ordinance.

Date	Document	County's Position
June 27, 2008	Building Permit No. 8354	Permit granted for 120 and 195' antenna support structures.
July 1, 2008	Memorandum from DDA Grant to Building Official Haymore	"Storey County Code § 17.12.044 places a specific height restriction upon the erection of radio towers" of 45 feet. The <b>County has waived</b> <b>the height limitation</b> . The height limitation relates to public safety.
July 3, 2008	Compliance Inspection Report by Building Inspector Gardner	Existing antenna support structures <b>in compliance</b> "with any Storey County Ordinances, the U.B.C., and the approved plans and specs."
July 8, 2008	Compliance Inspection Report by Building Official Haymore	"[V]ariance [required] for towers over 45' "
July 16, 2008	Code Compliance Inspection Report by Building Inspector Gardner	"Storey County is now of the opinion that a <b>special use permit</b> is required for the construction of towers over 45' in height."
July 17, 2008	Stop Work Order by Building Official Haymore	SCC § 17.12.044 requires a " <b>variance</b> for the height of the radio tower that exceeds 45 feet."
Sept. 30, 2008	Letter from DDA Grant	SCC § 17.40.020 requires a <b>special use permit</b> "for any structure over sixty feet (60') long."
July 27, 2010	Letter from Senior Planner Osborne	SCC § 17.12.044 requires "a <b>Variance</b> to maintain a radio communications tower(s) beyond (45) feet above grade level"

# Chronological Positions Taken by Storey County

Emphasis supplied.

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Position	Date	See
Building Permit granted	June 27, 2008	Building Permit No. 8354
Radio masts may not extend more than 45' above	July 1, 2008	Letter from DDA Grant
grade		
County has "waived the height limitations"	July 1, 2008	Letter from DDA Grant
Height "limit imposed relates to public safety	July 1, 2008	Letter from DDA Grant
concerns"		
Towers are in compliance	July 3, 2008	Compliance Inspection Report
Variance required for towers over 45'	July 8, 2008	Compliance Inspection Report
Special Use Permit required for towers over 45'	July 16, 2008	Compliance Inspection Report
Variance required for tower over 45'	July 16, 2008	Stop Work Order
Special Use Permit Required for structure over 60'	Sept. 30, 2008	Letter from DDA Grant
long		
Variance required for tower over 45'	July 27, 2008	Letter from Senior Planner

Here's another way of looking at the positions taken by the county:

Not only has the County's position been inconsistent, but, as we now know (because the Court has ruled that the proper approach is the special use permit process), whenever the County called for a variance, it was *wrong*, and when, by letter of September 30, 2008, the Deputy District Attorney called for a special use permit because an antenna support structure was over 60 feet long, she was also wrong. The Court's decisions have settled those questions.

The Applicants hope that, after reviewing the above table of positions taken by the county, the reasons that they took the matter to court for clarification will be more understandable. They hope the application for a special use permit can be reviewed, and a special use permit granted expeditiously, bringing this tortuous series of events to a successful close for everyone.

# SECTION 17.62.010 IS THE ONLY APPLICABLE ORDINANCE

The U.S. District Court has declared that the applicable law "specifies that an individual seeking to build a radio antenna over forty-five feet may obtain a special use permit [and] may apply for such a permit under section 17.62.010." *Slip Opinion at 8.* For the purposes of this application, the Court's ruling settles the matter as to what standard the County must apply to this application.

The test for a special use permit in this case was stated by the Court, and appears in section 17.62.010:

# Certain uses may be permitted by the board of county commissioners in zones in which they are not permitted by this title **where such uses are deemed essential or desirable for the public convenience or welfare.**

# (Emphasis supplied.)

The only legal question is whether the proposed Amateur Radio use is "deemed essential or desirable for the public convenience or welfare." Federal law answers that question for us, as shown below.

This Use Meets the Standard of Section 17.62.010

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For radio communications, the Congress and the FCC make the decisions as to what is in the public interest. The Congress has centralized this authority in the FCC "for the purpose of promoting safety of life and property through the use of wire and radio communication." 47 U.S.C. § 151.

Speaking to the Federal Communications Bar Association, on October 15, 2001, FCC Commissioner Michael J. Copps elaborated on the subject of whether or not FCC actions, including its licensing activities, are in the public interest:

> First, the Commission does not merely have the directive to **consider** the public interest in its decisions – it has the statutory obligation, pursuant to the Communications Act, to **take only actions that are in the public interest**. And not only has Congress made this obligation abundantly clear for us in the Telecommunications Act and elsewhere, but the Supreme Court has repeatedly affirmed the viability and importance of the public interest obligation in relation to broadcast and communications regulation.

> Congress did not say that we should follow our public interest mandate only if we are satisfied that we can quantify exactly what the public interest is for any possible situation. Congress did not say that if some people struggle with what they believe the public interest contains we should suspend or reduce our adherence to the mandate. Congress told us to meet our public interest responsibility. Congress made very clear that the public interest is the prism through which we should look as we make decisions. If the Commission stops making decisions based on public interest because it is difficult to pinpoint the exact parameters of public interest, it will be breaking the law.

*Emphasis in the original.* "In Defense of the Public Interest," Speech by Commissioner Michael J. Copps to the federal Communications Bar Association, Washington, DC, October 15, 2001. Source: http://www.fcc.gov/Speeches/Copps/2001/spmjc105.html

Since 1934, Federal law has been unequivocal in defining Amateur Radio as an activity that is "in the public interest, convenience or necessity." The Communications Act, under which Part 97 of the FCC's rules governing Amateur Radio are promulgated, explicitly states in 47 U.S.C. § 303 that radio licenses are issued only where the public interest, convenience or necessity require.<sup>7</sup> Possession of an Amateur Radio license, therefore, demonstrates a finding by the FCC that the public convenience is being served. Indeed,

See 47 C.F.R. § 97.1.

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<sup>&</sup>lt;sup>7</sup> The fundamental purposes of the Amateur Radio Service are expressed in the following principles:

<sup>(</sup>a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications; (b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art; (c) Encouragement and improvement of the amateur service through rules which provide for advancing skills in both the communication and technical phases of the art; (d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts; and (e) Continuation and extension of the amateur's unique ability to enhance international goodwill.

the United States Supreme Court has expounded in any number of cases that granting a radio license constitutes a finding in favor of the public interest. *See, e.g., Red Lion Broadcasting Co. v. FCC*, 395 US 367, 379-380 (1969).<sup>8</sup>

Further, as the Court said in *Howard v. City of Burlingame*, 726 F.Supp 770 (N.D. Calif. 1989) at 774: "As the district court correctly found, the Act is thus intended to benefit the general public, as opposed to any individual operator." In explaining that unusual height may be required, the Court ruled that it is: "47 C.F.R. § 97.111, which authorizes holders of the Amateur Extra class license, like Howard, to operate their stations and communicate world-wide."

Subsequent to the Howard case, in 1994, the Congress passed Public Law 103-408 wherein:

Congress finds and declares that—

...(3) reasonable accommodation should be made for the effective operation of amateur radio from residences, private vehicles and public areas, and that regulation at all levels of government should facilitate and encourage amateur radio operation as a public benefit.

Emphasis added. (Public Law 103-408 (J.Res., 103d Congress, 1994) \$1(3), http://thomas.loc.gov/cgibin/query/D?c103:1:./temp/~c103axha51::; , or http://frwebgate.access.gpo.gov/cgibin/getdoc.cgi?dbname=103 cong bills&docid=f:sj90enr.txt.pdf.

So here is what we know: By Congressional action, FCC rules and case law from the United States Supreme Court, the licensing of Amateur Radio operators, and the operation of Amateur Radio stations, is in the "public convenience, interest, or necessity" and thus satisfies the standard of section 17.62.010. Put simply, it is Applicants' position that the use of private property by a radio amateur is, by Federal law, in the "public convenience, interest, or necessity," and thus meets the only County test the U.S. District Court set out as a requirement for the grant of a special permit in this case.

<sup>&</sup>lt;sup>8</sup> "Applicants are licensed by the FCC, in which authority over radio communications has been centralized "for the purpose of promoting safety of life and property through the use of wire and radio communications." 47 USC § 151. The statutory authority of the FCC to promulgate regulations derives from the mandate to the "Commission from time to time, as public convenience, interest, or necessity requires" to promulgate "such rules and regulations and prescribe such restrictions and conditions. . . . as may be necessary to carry out the provisions of this chapter . . . . " 47 U.S.C. § 303 and § 303 (r). The Commission is specifically directed to consider the demands of the public interest in the course of granting licenses, 47 U.S.C. §§ 307 (a), 309 (a); 380\*380 renewing them, 47 U.S.C. § 307; and modifying them. *Ibid.* Moreover, the FCC has included among the conditions of the Red Lion license itself the requirement that operation of the station be carried out in the public interest, a broad one, a power "not niggardly but expansive," *National Broadcasting Co. v. United States*, 319 U. S. 190, 219 (1943), whose validity we have long upheld. *FCC v. Pottsville Broadcasting Co.*, 309 U. S. 134, 138 (1940); *FCC v. RCA Communications, Inc.*, 346 U. S. 86, 90 (1953); *FRC v. Nelson Bros. Bond & Mortgage Co.*, 289 U. S. 266, 285 (1933). It is broad enough to encompass these regulations."

Any contrary finding would challenge the Communications Act and the entirety of Amateur Radio as a voluntary, noncommercial communication service providing emergency communications, advancing the radio art, and the other public benefits listed in 47 C.F.R. § 97.1.

# CODE SECTIONS THAT DO NOT APPLY

#### SECTION 17.12.014 DOES NOT APPLY

A casual reader of section 17.12.014 might think that it applies to the Applicants' use. But it does not apply, and such a casual reading would be wrong. Section 17.12.014 reads:

#### CHAPTER 17.12 GENERAL PROVISIONS SECTION NO (17.12.014) USES PERMITTED.

The following regulations shall apply to uses permitted: A. Uses Listed as Permitted. Buildings, structures and land shall be used, erected, maintained, altered or enlarged only for purposes listed as permitted in the zone in which such building or land is located and then only after applying for and securing all permits and licenses required by law and ordinance. B. Any use already established within an area prior to the present zone regulations which is not a permitted use within such zone or is a permitted use only with a special use permit shall be allowed to continue therein as a nonconforming use subject to all conditions and restrictions relating to nonconforming uses as provided in Section 17.12.024. C. Number of dogs allowed in a residential zone, per residence, is limited to three dogs over twelve weeks old. All dog owners shall comply with Storey County Code, Chapter 6.04. D. Uses Not Listed as Permitted. When a use is not specifically listed as permitted, it shall be assumed that the use is expressly prohibited unless a determination is made by the board of county commissioners that the use is consistent with and compatible to those other uses permitted within the zone. Prior to determining whether such use is an appropriate use within the zone, the board of county commissioners shall consider a recommendation on the proposal by the planning commission. (Ord. 159 § 2(part), 1999)

Comments on section 17.12.014:

Part A says that permitted uses must have all required permits.

Part B says that a prior existing use, or a use under a special use permit, shall be allowed to continue.

Part C limits dogs in a residential zone to three, over 12 weeks old. A special permit to have more dogs may be obtained under section 17.12.018.

Part D deals with uses "not specifically listed as permitted." However, "radio, television and other communication television transmitters and towers" are specifically listed as permitted. Section 17.62.020, I.

The Court has instructed the parties that section 17.62.010 is the applicable section. Section 17.12.014 is not applicable.

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#### SECTION 17.12.018 DOES NOT APPLY

A casual reader of section 17.12.018 might think that it applies to the Applicants' use. But it does not apply, and such a casual reading would be wrong. Section 17.12.018 reads:

#### CHAPTER 17.12 GENERAL PROVISIONS SECTION NO (17.12.018) USES PERMITTED SUBJECT TO A SPECIAL USE PERMIT.

A. Such uses are to be considered as special exceptions within a zone where such should only occur when such permit is demonstrated by the applicant to be in the best interest of the general public and would not be incompatible with or detrimental to the surrounding area. B. A special use permit is required for all persons who have four or more dogs over twelve weeks old at their residence. Per definition Section 17.10.051, this is defined as a kennel and shall comply with kennel requirements and Storey County Code, Chapter 6.04. Kennels shall be allowed only on property with a minimum of ten acres in areas that allow residential living. (Ord. 159 § 2(part), 1999)

Part A describes the test for uses discussed in section 17.12.018.

Part B lists the only use which is the subject of section 17.12.018, which is "four or more dogs over twelve weeks old."

The Taorminas' application is not about dogs. The Court has instructed the parties that section 17.62.010 is the applicable section. Section 17.12.018 is not applicable.

# SECTION 17.40.020 DOES NOT APPLY

A similar casual reader of section 17.40.020 might think that it is the section that applies to the Applicants' use. But it does not apply, and such a casual reading would be wrong.

This section states that any accessory use of a proposed structure over forty-eight feet wide or over sixty feet long requires a special use permit. This section was intended to restrict the footprint of individual publicly accessible buildings, not the height of amateur radio towers on residential property.

As the U.S. District Court for the Northern District of Nevada ruled, "the section does not address the height of accessory use structures." Slip opinion at fn. 6.

The question has been settled by the Court. Section 12.40.020 is not applicable.

#### BALANCING TESTS ARE NOT APPROPRIATE

But while the Congress, the FCC and the courts have made it plain that an amateur radio use is a public benefit, can't the County balance those interests against local interests? No.

From a legal perspective, the City cannot simply "balance" its interests in aesthetics against a radio amateur's right to effective communications. Both the FCC and the courts have concurred that the question of balancing was resolved by PRB-1 to require that amateur radio operators be able to *effectively communicate*, notwithstanding legitimate local interests. (See *Order RM-8763*, 15 F.C.C.R. P22151 (2000) at Paragraph 7; see also *Pentel v. City of Mendota*, 13 F.3d 1261 (8th Cir. 1994); *Marchand v. Town of* 

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Hudson. 788 A.2d 250 (2001); Palmer v. City of Saratoga Springs, 180 F. Supp. 2d 379 (N.D. N.Y. 2001); Snook v. City of Missouri City, TX (2003 U.S. Dist. LEXIS 27256); overturning the "balancing test" described in Evans v. Bd. of County Comm'rs, 994 F.2d 755, 762 (10th Cir. 1993)).

In the *Pentel* case, at footnote 5, the Court wrote:

At various places in PRB-1, the FCC states that, in considering the issue before it, it weighed federal and amateur operator interests against those of local governments. After balancing these interests, the standard that the FCC concluded was appropriate was that a local government must reasonably accommodate amateur radio communications. See PRB-1 pp 22, 24

In the text of its opinion, the Pentel Court held:

PRB-1 specifically requires the city to accommodate reasonably amateur communications. <u>5</u> See *Evans*, 994 F.2d at 762-63. This distinction is important, because a standard that requires a city to accommodate amateur communications in a reasonable fashion is certainly more rigorous than one that simply requires a city to balance local and federal interests when deciding whether to permit a radio antenna.

Pentel v. City of Mendota Heights, 13 F.3d 1261, 1264 (8th Cir. 1994)

Footnote 5 of the *Pentel* decision is important. It reads:

[5] At various places in PRB-1, the FCC states that, in considering the issue before it, it weighed federal and amateur operator interests against those of local governments. After balancing these interests, the standard that the FCC concluded was appropriate was that a local government must reasonably accommodate amateur radio communications. See PRB-1 pp 22, 24.

Asked to clarify which Circuit had interpreted it correctly, in 1999 the FCC ordered:

In PRB-1, the Commission stated: "Nevertheless, local regulations which involve placement, screening, or height of antennas based on health, safety, or aesthetic considerations must be crafted to accommodate reasonably amateur communications, and to represent the minimum practicable regulation to accomplish the local authority's legitimate purpose." Given this express Commission language, it is clear that a "balancing of interests" approach is not appropriate in this context.

#### DA 99-2569 (RM-8763) (adopted November 18, 1999) at para. 7

The FCC further elaborated:

In addition, we believe that PRB-1's guidelines brings (*sic*) to a local zoning board's awareness that the very least regulation necessary for the welfare of the community must be the aim of its regulations so that such regulations will not impinge on the needs of amateur operators to engage in amateur communications.

Ibid., at ¶ 9. Source: http://www.fcc.gov/Bureaus/Wireless/Orders/1999/da992569.txt

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### DESCRIPTION OF THE PROPOSED SYSTEM

#### THE ANTENNA SUPPORT STRUCTURES

Since 1997, antenna support structures have been installed at this location. They have been continually modified ever since (amateur radio is an experimental service). Here is a description of each antenna support structure.

1. 40 Meter Rohn 45G -- 140'

This structure was installed in 1997. It has had successive iterations of antenna arrays installed on it. This tower is guyed in four places to concrete guy anchors. It meets the manufacturer's specifications and drawings.

2. 20 Meter Rohn 25G -- 85'

This structure was installed in 1998. It has had successive iterations of antenna arrays installed on it. This tower is guyed at four levels. It meets the manufacturer's specifications and drawings.

3. 160 Meter Rohn 25G - 110'

This structure was installed in 2007. The entire structure is a radiating antenna. This antenna is guyed at three levels to concrete anchors. It meets the manufacturer's specifications and drawings. This structure will be moved approximately 40'.

 20 Meter Rohn 45G – 140' This structure was installed in 2007. It is guyed at three levels to concrete anchors. It meets the manufacturer's specifications and drawings.

5. 15 Meter Monopole (proposed) – 120'

This support is scheduled to hold four 15 Meter (21 MHz) antennas. This structure was approved under Building Permit No. 8354, but construction stopped when the Stop Work order was issued. A wet-stamped PE package was supplied to the County with the original application.

6. 80 Meter Monopole (proposed) – 195' This support is under construction. It is scheduled to hold two 80 Meter (3.5 MHz) antennas, four 10 Meter (28 MHz) antennas, and a 440 MHz vertical antenna for the emergency communications repeater. This structure was approved under Building Permit No. 8354, and under construction when the Stop Work order was issued. A wet-stamped PE package was supplied to the County with the original application.

Every structure in the antenna systems at this site was designed for wind-loading of 21 lbs per square foot, equivalent to a wind-speed of 70 miles per hour per the Nevada State Building Code (the U.B.C.) and industry standard EIA-222. These structures have an abundance of safety margin, as the building code itself has safety margins within it.

#### NO EFFECT ON MICROCLIMATE

The proposed installation will not emit heat, vapor or fumes. As it is unlighted, there will be no

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impact on dark skies. It will not impact air or water resources. It will not generate noise, nor change any temperatures. No additional traffic will be associated with this installation. It is not a hazard to air traffic. The wild animal population of stray horses, deer, cougars, bobcats and coyotes are not threatened by this installation.

## EFFECTIVE VISUAL IMPACT IS MINIMAL

A Rohn 25G antenna support structure, with a 12-inch triangular lattice-style face, has an effective visual impact equivalent to that of a 2" diameter round flagpole. Put another way, the footprint of Rohn 25 is 0.433 sq. ft., or 62.354 sq. inches. One square foot is 144 square inches.

A Rohn 45G antenna support structure, with an 18-inch triangular lattice-style face, has an effective visual impact of only 0.296 square feet of gray steel. This design dramatically reduces visibility and is comparable to the mass of a 3.5" diameter round flagpole. Put another way, the footprint of Rohn 45G is 0.974 sq. ft., or 140.296 sq. inches. One square foot is 144 square inches.

The galvanized steel weathers quickly to a non-reflective, dull-gray finish, further diminishing its visibility. The rest is open air. Recall that haze-gray (as in "haze gray and under way") is the color chosen by the U.S. Navy and Air Force to make things less visible at sea and in the air.

The monopole antenna support structures, with an average 10-inch circular face, have an effective visual impact equivalent to that of a 10-inch diameter round flagpole. These structures are painted "Nevada Sand," a color employed by Sierra Pacific Power Company to blend with the surrounding landscape.

To keep things in perspective, an ordinary telephone pole is about 12 inches in diameter. It is tarbrown in color, which is much more noticeable against blue or gray skies than a dull-gray galvanized steel lattice tower, or a "Nevada Sand" monopole — and few people pay much attention to telephone poles. For a comparison between a telephone pole and the Applicants' antenna support structures, see Exhibit F-1.

See Exhibit F for photographs showing the visibility of the proposed structures from several vantage points around the neighborhood. These structures are benign.

# WIND-LOADING CONSISTENT WITH ALL BUILDING STANDARDS

Amateur radio is, by design promoted in Federal law, an experimental service. It is natural and expected that amateurs will change their antenna systems as interests change, and as propagation changes with the season and the 11-year sunspot cycle. In addition, the Applicant wishes to perform experiments in radio signal propagation, communications effectiveness, and antenna design and configuration needed to advance his knowledge and ability in the field of radio communications. Nonetheless, the antenna system shall not exceed the building code requirements of 21 psf. of wind-load, well within the manufacturer's specifications for this antenna support structure. Total wind-load of the proposed system is commensurate with the capacity of each structure, with a safety factor: of 2.5.

Wind-load is the equivalent horizontal force that will act on the structure. It is directly related to the surface area of the antenna. Safety factor describes the ratio between the maximum resistance load and the normal load. For example, if the wind-load is 10 square feet, and the structure can hold a wind-load equivalent to 20 square feet, the safety factor is 20/10 or 2.

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# SITES CAREFULLY SELECTED

# EVERY STRUCTURE IS DISTANT FROM NEARBY HOMES

The Applicant's property is a 10 acre site. The closest proposed or existing antenna support structure to the home of any neighbor (380 Panamint Road) is 610 feet.

Structure #	Tower Identifier	Distance to Nearest Home
1	40 Meter Rohn 45G	960'
2	20 Meter Rohn 25G	802'
3	160 Meter Rohn 25G	873'
4	20 Meter Rohn 45G	670'
5	15 Meter Monopole (proposed)	610'
6	80M Monopole (proposed)	721'

# Distance Schedule: Nearest Home

Figure 7

# EVERY STRUCTURE MEETS E-10-HR SETBACKS – 30' (FRONT); 40' (REAR); 15 (SIDE)

Each antenna support structure erected on site, or proposed under Building Permit No.8354, meets the setback requirements for this zone, as expressed in SCC section 17.40.050.

# Distance Schedule: Setbacks

Structure	Tower Identifier	Height of Structure	Erected	Nearest	Setback	Setback OK ?
#				Property Line		
1	40 Meter Rohn 45G	140'	1997	76'	Side	Yes
2	20 Meter Rohn 25G	85'	1998	145'	Side	Yes
3	160 Meter Rohn 25G	110'	2007	34'	Side	Yes
4	20 Meter Rohn 45G	140'	2007	170'	Side	Yes
5	15 Meter Monopole (proposed)	120'	Base installed 7/08	38'	Side	Yes
6	80 Meter Monopole (proposed)	195'	Base installed 7/08	72'	Side	Yes

Permissible setbacks for E-10-HR Zoning, as per SCC §17.40.050: Front – 30'; Back – 40'; Side – 15'

# Figure 8

Accidents involving such structures are rare. They are so rare, in fact, that ARRL Volunteer Counsel Fred Hopengarten, of Lincoln, Massachusetts, reviewing 30 years of literature in amateur radio was able to discover only a few published photographs, out of thousands of antenna photographs, showing how an antenna structure fails. In conjunction with these several photos, further discussions with mechanical

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engineers have yielded a better understanding of the failure modes of antenna structures.

A typical failure mode, which may occur when an antenna system is completely out in the open, involves a tower twisting and buckling. In effect, the structure corkscrews onto the ground. Towers do not fall the full length of their height, like a pencil. Instead, a failure occurs at the location of the highest combined stress ratio, as if there is a "mechanical fuse." This phenomenon is well known in physics, and is usually demonstrated in physics textbooks with a photograph of a falling chimney. As an example, see *Fundamentals of Physics*, 2nd Edition, by Halliday and Resnick, page 174, published by John Wiley & Sons:

When a tall chimney is toppled by means of an explosive charge at its base, it will often break near its middle, the rupture starting at the leading edge. The top part will then reach the ground later than the bottom part.

We note that as the chimney topples, it has at any instant an angular acceleration [A] about an axis through its base. The tangential acceleration  $[A_t]$  of its top is given by  $[A_t = A_r]$ .

As the chimney leans more and more, the vertical component of  $A_t$  comes to exceed g [gravity, or 9.8 m/s<sup>2</sup>], so that the bricks at the top are accelerating downward more than they would in free fall. This can happen only as long as the chimney is a rigid body. As the chimney continues to fall, internal tension stresses develop along its leading edge. In nearly all cases rupture occurs, thus relieving those stresses.

Instances of damage caused by a falling antenna system are so rare that the presence of an amateur radio antenna system has no impact on the cost or availability of insurance for the homeowner. See Exhibit E-3.

Although the casual observer might think that a greater setback to lessen visual impact is always better, this would be wrong. Take the example of a self-supporting tower placed one foot from a rear lot line. If the lot to the rear has four square miles of woods, then the least visible siting for the antenna system would be the site closest to a lot line. As a result, rigid application of standard setback rules least serves the purposes of the county code.

An aerial view of the site reveals the heavily forested nature of the entire area. See Exhibit A-3.

# WHY THIS HEIGHT? "EFFECTIVE COMMUNICATIONS"

There are 12 commonly used amateur radio bands between 1.8 MHz and 440 MHz. The choice of which band to use depends on the distance between communicating stations, time of day, time of year, position in the 11-year sunspot cycle, as well as daily propagation conditions. At any given point in time, only one or two of these bands may be useful for communication to a particular location. To have a reasonably high probability of effective communications with a given location, at any given point in time, it is therefore necessary to have high performance antennas on all or most of these bands.

High performance is obtained by using directional antennas. (Recall, before cable and satellite TV, the need to aim television antennas in the correct direction for best reception, or in some outlying areas, a tower and rotator were necessary to receive signals from more than one direction.) Directivity not only

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strengthens signals being received, but also is also extremely important because it can also be used to "null out" interfering stations.

High performance antennas can be particularly important under emergency conditions, when operating under auxiliary power sources, when operation may require communications with only low power output or communications with other stations operating under adverse conditions. In addition, doubling the height of the antenna is considered to be approximately equivalent to doubling the power output (permitting lower power, consistent with emergency batteries as power sources).

For communications at frequencies below 30 MHz (the "HF bands"), the height of an antenna above ground is the major controlling factor on the angle at which signals are transmitted ("take-off angle"), which in turn directly affects the reliability and dependability of worldwide signal paths. Besides height above ground, the local terrain in the vicinity of the structure can also affect takeoff, as it can reflect and diffract the signal in the near field. If the antenna is not of sufficient height above ground, signal reliability is compromised; in other words, communications to certain parts of the world can be strictly limited, or nonexistent.

Significant height is also required so that antennas can be separated by a distance sufficient to mitigate the potential of interaction between different antennas. Typically, in the HF bands, a separation of 8 to 12 feet is needed between the individual antennas. The exact distance is a complicated function of the individual antenna configuration and orientation, but can be predicted by computer modeling

"High enough" is commonly accepted to be, *at a minimum*, ½ wavelength high at the lowest frequency used. A height of 1 to 1½ wavelengths at this lowest frequency is preferable. The proposed antenna support structure will support antennas for 3.5 MHz and above. At 3.5 MHz, ½ wavelength is approximately 140 feet, and 1 wavelength is approximately 280 feet. Thus, the proposed structure (195') represents a significant, but acceptable, compromise<sup>9</sup> by the Applicant.

Communications at frequencies above 30 MHz (known as VHF for Very High Frequencies, or UHF for Ultra High Frequencies -- examples: FM radio, TV, police and fire departments) can be dependent on 'line of sight'. Most *local* emergency communications are conducted above 30 MHz. Here, topography, trees and buildings all cause significant signal loss. Thus, antennas that are above, free and clear of such obstructions permit the amateur to communicate more effectively, over greater distances and using lower power levels. These are the frequencies at which most local emergency communications are conducted. Doubling the height of the antenna is considered to be approximately equivalent to doubling the power output. Considered together, these two factors are strong arguments for higher antennas.

A Needs Analysis, for HF and for VHF, is provided with this supplement as a separate document. It was prepared by the author of the most popular technical treatise in the field, R. Dean Straw. It shows that the heights of the proposed structures represent a significant compromise, but one that is acceptable to the Applicant. Despite additional advantages which might be obtained, the Applicant has no intention of going over 200' in height, as that might then require lighting and painting under FAA regulations. An FAA study of hazards to aircraft is required, speaking generally, only for heights above 200 feet and in very close proximity to an airport. At the heights of structures for this amateur radio station, at this location, no lighting or painting is required. 47 CFR §17.7 See Exhibit E-2.

<sup>&</sup>lt;sup>9</sup> A "no-compromise" amateur radio installation would require at least 12 support structures, one being at least 280' in height.

The proposed total height of 195' for the tallest structure satisfies both of these concerns by:

- 1) Placing the antennas high enough to allow reliable VHF/UHF communication, free from obstruction by intervening terrain, and
- 2) Satisfying the minimum reliability requirements for HF communication at 3.5 MHz and above.

It is a well-recognized phenomenon that communications effectiveness is often a function of height.

25. Because amateur station communications are only as effective as the antennas employed, antenna height restrictions directly affect the effectiveness of amateur communications. Some amateur antenna configurations require more substantial installations than others if they are to provide the amateur operator with the communications that he/she desires to engage in. For example, an antenna array for International amateur communications will differ from an antenna used to contact other amateur operators at shorter distances.

FCC Order PRB-1, 101 FCC 2d 952, 50 Fed. Reg. 38813 ¶ 25 (September 25, 1985), ("PRB-1"). The full text of PRB-1 may be found at http://wireless.fcc.gov/services/amateur/prb/index.html

This was suggested by the American Red Cross when it encouraged the FCC to adopt its limited preemption for amateur radio antenna systems. See Exhibit H-3. The concept is also plainly stated by the FCC in PRB-1, and has been reiterated by the courts numerous times.

Both Tom and Midge Taormina, each a licensed radio amateur, have been trained in emergency communications. Their roles are discussed by Don Carlson, KQ6FM, of Reno, the Emergency Coordinator for Nevada. Exhibit C-1.

Mr. Taormina's ARES identification badge is included below. His ongoing membership and participation in the Storey County Local Emergency Planning Commission can be documented by contacting Joe Curtis, the County Emergency Officer. For example, he recently provided the concept for the new Sheriff's Department communications tower.





For the purpose of providing emergency communications, a 5 KW Troy-Bilt generator, has been installed at the residence. See Exhibit C-4.

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When complete, the amateur radio station, with its antenna systems, will be a substantial addition to the emergency communications capabilities of the community, and the County, thus aligning it with the very basis and purpose of the FCC's amateur radio service.

# INTENDED USE CONSISTENT WITH NEEDS ANALYSIS

The intended use of the support structures and antenna arrays is not a matter of whim or unfounded desire for quantity or size of towers. The applicant moved to Highland Ranches with a carefully engineered strategic plan to build an amateur radio installation that would reach its ultimate capability by 2011<sup>10</sup>. Since Mr. Taormina built his first antenna support in 1959, he has designed and built successively more effective antenna systems. The planned system is the culmination of nearly 50 years of pioneering work in antenna design and radio wave propagation experimentation. When the parcel at 370 Panamint Road was purchased in 1997, there were no County Ordinances or HRPOA CC&R's that prohibited this plan.

The Needs Analysis prepared by R. Dean Straw, B.S.E.E.<sup>11</sup>, discusses the intended purpose (reliable communications over routine paths to Europe at 1.8, 3.5, 7, 14 and 21 MHz), and the differences between performance of an antenna system at a lower height, as opposed to a really useful height, and finally the height that the Applicant is willing to accept. Straw also examines current and planned needs for VHF and UHF antennas in furtherance of the Storey County Emergency Communications Plan.

# A MAXIMUM HEIGHT OF 45' DOES NOT SATISFY THE NEED

At lower height, the performance does not meet the need. In the amateur radio cases, **the need is specific and defined by the individual radio amateur**. This concept has recently been confirmed by the Court in *Snook v. Missouri City (TX)*, No. 03-cv-243, 2003 U.S. Dist. LEXIS 27256, 2003 WL 25258302 (S.D. Tex. Aug. 26, 2003, Hittner, J.) (the Order, Slip Opinion, 63 pp.), see also the Final Judgment, Slip Opinion, 2 pp. PACER citation: https://ecf.txsd.uscourts.gov/cgi-bin/login.pl?387442335892775-L\_238\_0-14:03-cv-00243\_Snook v.\_City\_of\_Missouri, (S.D. Tex. 2003), more readily found at <a href="http://www.arrl.org/files/file/Snook%2520KB5F%2520Decision%2520%26%2520Order%252034.pdf">http://www.arrl.org/files/file/Snook%2520KB5F%2520Decision%2520%26%2520Order%252034.pdf</a> (USDC, SDTX, 2003, Hittner, J.), wherein the Court stated:

To conduct effective emergency communications, Snook must be able to achieve at least a 75 to 90 percent successful signal under the changing variables that impact emergency or other amateur radio communications. *Snook* Findings of Fact ¶9

Based on his emergency and amateur radio experience, he estimated that an antenna array of 180 to 185 feet would be optimal.

Snook Findings of Fact §15. [Note that Snook's requirements were for Texas, where hills – which impact propagation needs – are rare. In VC Highlands, they are not rare.]

<sup>&</sup>lt;sup>10</sup> The 11-year solar sunspot cycle is predicted to reach its maximum benefit for HF radio communications in 2011.

<sup>&</sup>lt;sup>11</sup> Mr. Straw is currently considered one of the preeminent authorities on amateur radio wave propagation and antenna design. He is the editor, and significant author, of the standard works in these fields.

The key test is: What communications does the amateur desire? That is what must be accommodated by the municipality. Here is the way the test was originally stated by the FCC in 1985.

Amateur station communications are only as effective as the antennas employed, antenna height restrictions directly affect the effectiveness of amateur communications. Some amateur antenna configurations require more substantial installations than others if they are to provide the amateur operator with the communications that he/she desires to engage in. For example, an antenna array for International amateur communications will differ from an antenna used to contact other amateur operators at shorter distances.

Federal Preemption of State and Local Regulations Pertaining to Amateur Radio Facilities (FCC 85-506) (known as "PRB-1"), 9/16/85, ¶ 25. *Emphasis added*. Source: http://wireless.fcc.gov/services/amateur/prb/index.html (last visited December 15, 2010)

As some courts and municipalities were to later misread the FCC's rule, the FCC found it necessary to clarify its ruling in 1999, by recognizing that there might be differences between "heavily-populated urban or suburban locales" and the rural situation involved here, wherein the Applicant resides on 10 acres of rural land, stating:

We believe that the effectiveness of these guidelines or standards can be gauged by the fact that a local zoning authority would recognize at the outset, when crafting zoning regulations, the potential impact that high antenna towers in heavily-populated urban or suburban locales could have and, thus, would draft their regulations accordingly. In addition, we believe that PRB-1's guidelines brings to a local zoning board's awareness that the very least regulation necessary for the welfare of the community must be the aim of its regulations so that such regulations will not impinge on the needs of amateur operators to engage in amateur communications.

(Emphasis added) http://wireless.fcc.gov/services/amateur/prb/prb1999.html at ¶9.

# LOCAL TERRAIN REQUIRES HEIGHT

This Applicant's need for the height proposed is greatly influenced by intervening local terrain. This topographic map shows that the terrain rises in all from the proposed site in the directions of desired communications.

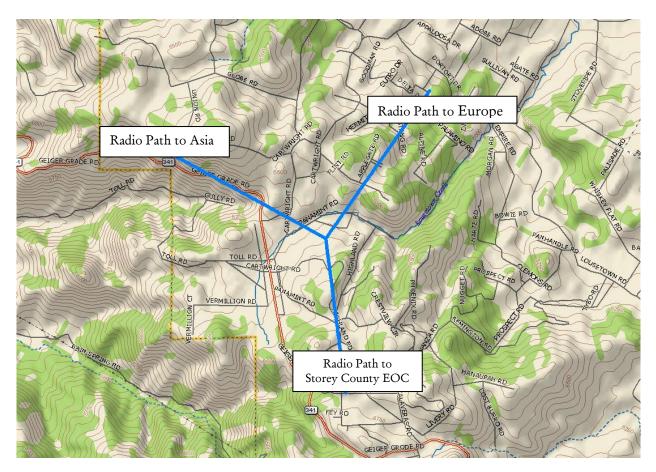


Figure 10 - Topo map showing that terrain rises in the desired directions of communication.

As the Court noted in *Bodony v. Sands Point*, 681 F. Supp. 1009 (E.D. NY 1987), http://scholar.google.com/scholar\_case?case=13458580615427783727&q=Bodony+v.+Sands&hl=en&as\_sdt=400 00002 or www.qsl.net/k3qk/bodony.html (preempting a 25' height limit, permitting an 86' antenna support structure):

One factor in determining the range and effectiveness of radio communication is the height of the antenna. Measurement from the ground tells us little. A 25 foot antenna in a valley surrounded by hills might be useless, while that equipment on a mountain top might give optimum results. An antenna rising above the obstacles that interfere with radio signals obviously gives a greater range and better reception than an antenna of a lesser height.

The Applicants need height to overcome local terrain. One example of a very specific need is the path to the Storey County Emergency Operations Center, to the South. To the extent any decision fails to account for local terrain, it would fail to be a reasonable accommodation.

# ENVIRONMENTAL EFFECTS INSIGNIFICANT

The maximum legal limit for transmitter output power is 1500 watts. As an amateur radio station, and a hobby of the Applicant, the transmitter will be in limited service. Even when an amateur is active, transmissions occupy less than 50% of the time of activity, as amateurs listen for other signals more than

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half the time.

By contrast, typical FM broadcast or AM broadcast stations use from 5,000 to 50,000 watts, continuous duty. Think of it another way—the energy of a ham radio station, at maximum power output, is about the same as a kitchen toaster. Nonetheless, in accordance with 47 CFR §97.13(c)(1), as the proposed power output exceeds 50 watts at 10 meters (28 MHz), the Applicant has performed the required "routine RF environmental evaluation prescribed by 47 CFR §1.1307(b)," see http://edocket.access.gpo.gov/cfr 2006/octqtr/pdf/47cfr97.13.pdf.

Using the output power at the antenna, after feed-line losses, and calculating the energy per square centimeter, the standard units of measurement in these matters are expressed in mW/cm<sup>2</sup>, this amateur station, in a worst-case scenario, will produce only 0.00301 milliwatts per square centimeter of power, or 1.3% percent of the American National Standards Institute (ANSI) safety standard at that frequency (the worst case frequency), as measured at 721 feet away from the antenna support structure, at the nearest home line. Exhibit E-4 contains the computations for the engineering calculations supporting the statements above.

In this case, if the Applicants were to put up the antenna at a lower height, the power required for the same reliability of the outbound communications would increase significantly (but received communications would be reduced significantly and cannot be overcome with greater power at the Applicants' end). Thus, a lower antenna would be closer to a neighbor and increase exposure (although exposure would still remain well below the regulatory threshold).

Under the Environmental Policy Act of 1969 (NEPA), 42 USC §4321 et seq. (1976) at §4332 (2)(c), and as allowed by regulations of the Council on Environmental Quality (CEQ), 40 CFR. §1508.4, the FCC has ordered categorical exclusion of amateur radio stations from the need to do Environmental Assessments. FCC Gen. Docket No. 79-144, adopted February 12, 1987.

Furthermore, a search of the literature fails to find a single example in the history of radio in which an amateur radio station has caused injury or death to a neighbor from exposure to amateur radio signals at any power level.

When amateurs complete FCC Form 605, to obtain or renew a license, they must understand and certify by signature the following statement: "Amateur Applicant certifies that the construction of the station would NOT be an action that is likely to have a significant environmental effect" (see FCC Rules 47 CFR §§1.1301-1.1319 and §97.13(a)). The only amateurs who may be required to file an Environmental Assessment (EA) under the National Environmental Policy Act of 1969 are those whose stations will be located in an officially designated wildlife area; areas that are significant in American history, architecture, archeology, engineering or culture; areas that are listed, or are eligible for listing, in the National Register of Historic Places; where the facility may affect Indian religious sites; facilities located in a flood plain; facilities whose construction will involve significant change in surface features (e.g., wetland fill, deforestation or water diversion), those which require tower lighting; and stations that exceed the maximum permitted RF exposure limits. 47 CFR §1.1307 (a)-(b).

The Applicants' location for the antenna system does not involve any such concerns. No environmental assessment need be filed.

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#### GOOD ENGINEERING PRACTICES EMPLOYED

The design criteria included the assumption of ½ inch of ice loading on both the support and all antennas, at a wind velocity of 70 miles per hour (Basic Wind Speed for Storey County, Nevada under the EIA/TIA code is 70 miles per hour (EIA/TIA-222 code, page 44), the antenna support structures at the site are overbuilt.

P.E. certificates and manufacturer's drawings accompany the various applications for building permits.

#### INSURANCE COVERS POTENTIAL LOSSES

If a tree falls in a forest and no one is around to hear it, does it make a sound? This popular philosophical riddle may not have any practical application to the matter at hand, but it does beg the question: What if the antenna support structure falls?

The Applicant's standard Nevada homeowner's policy provides coverage for personal liability and medical payments due to failure of an amateur radio antenna structure, without additional premium. See **Exhibit E-3**, from the Applicants' American Family insurance agent. From an actuarial point of view, this means that *these structures are considerably safer than allowing a teenage boy to drive*.

#### PROPERTY VALUES UNAFFECTED

Research by the American Radio Relay League, the National Organization for Amateur Radio, has failed to find any evidence in the appraisal literature, or anywhere else, that home values are harmed by the presence of amateur radio antenna systems. The only study found concluded:

In the course of this study, I have looked at seven different locations. I have considered thirty three matched pairs. As I indicated in the introduction, this has covered a variety of types, styles locations, time periods, and lot sizes. In no instance have I been able to discover any measurable, uniform decline in value that can be attributed to the presence of a radio antenna. This is verified by my general real estate experience in over 35 years of selling various kinds of residential properties throughout the Denver Metropolitan Area. The presence of a radio antenna has not only failed to make a measurable difference in value, it has not affected the sales time for the properties involved. Therefore, I have concluded that it is not a measurable factor in value.

Russ Wehner, Jr., MAI, SRPA (Appraiser), evidence in *Evans v. Boulder*, 994 F2d 755 (10th Cir., 1993) (decided on other grounds).

Finally, the Applicant assures the County that should he no longer reside at the property, assuming no other person residing there wishes to continue using the structure, he will remove the antenna-support structures and the antennas. He has every intention of taking the structures and antennas to his next home.

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#### RADIO FREQUENCY INTERFERENCE PREEMPTED

The question of the potential for radio-frequency interference (RFI) has been completely preempted by Federal law on the matter. In amending the Communications Act of 1934 in 1982, the Congress clearly expressed its opinion:

The Conference Substitute is further intended to clarify the reservation of exclusive jurisdiction to the Federal Communications Commission over matters involving RFI [radio frequency interference]. Such matters shall not be regulated by local or state law, nor shall radio transmitting apparatus be subject to local or state regulation as part of any effort to resolve an RFI complaint. [T]he Conferees intend that regulation of RFI phenomena shall be imposed only by the Commission.

H.R. Report No. 765, 97th Cong., 2d Sess. 33 (1982), reprinted in 1982 U.S. Code Cong. & Ad. News 2277, referring to amendments to Section 302(a) of the Communications Act.

In a private letter opinion to the American Radio Relay League, Inc., dated February 14, 1990, Robert L. Pettit, General Counsel of the Federal Communications Commission (FCC) adopts the position of the Congress as the position of the FCC, writing:

State laws that require amateurs to cease operations or incur penalties as a consequence of radio interference thus have been entirely preempted by Congress.

These opinions have been confirmed repeatedly by the courts. See, for example, *Broyde v. Gotham Tower*, 13 F.3d 994 (6th Cir., 1994),

http://scholar.google.com/scholar\_case?case=9708633445436834557&q=Broyde+v.+Gotham+Tower& hl=en&as\_sdt=4000002. For an excellent discussion, and a wealth of cases, see *Southwestern Bell Wireless, Inc. v. Johnson County Board of County Commissioners*, 199 F.3d 1185 (10th Cir. 1999), cert. denied, 2000 WL 343599 (2000), U.S. S. Ct. Dkt. No. 99-1575, 529 U.S. (2000), http://laws.findlaw.com/10th/983264.html

Another well-written and thorough discussion states plainly: "We conclude that allowing local zoning authorities to condition construction and use permits on any requirement to eliminate or remedy RF interference 'stands as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress." *Freeman v. Burlington Broadcasters, Inc.,* 204 F. 3d 311 (2d Cir. 2000), cert. denied, 531 U.S. 917 (2000) http://www.fcc.gov/ogc/documents/opinions/2000/97-9141.doc

Late in the second term of President Clinton, the Congress passed, and the President signed, P.L. 106-521 which further clarified, if there was room for doubt, that municipalities have no authority to act with respect to interference. The Communications Act, at 47 USC §302a, now reads, in relevant part:

#### 47 USC § 302a. Devices which interfere with radio reception

SUBCHAPTER III - SPECIAL PROVISIONS RELATING TO RADIO

 $\dots$ (f)(2) A station that is licensed by the Commission pursuant to section 301 of this title in any radio service for the operation at issue shall not be subject to action by a State or local government under this subsection. A State or local government statute or ordinance enacted for purposes of this subsection shall identify the exemption available under this paragraph.

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(3) The Commission shall, to the extent practicable, provide technical guidance to State and local governments regarding the detection and determination of violations of the regulations specified in paragraph (1).

(4) (A) In addition to any other remedy authorized by law, a person affected by the decision of a State or local government agency enforcing a statute or ordinance under paragraph (1) may submit to the Commission an appeal of the decision on the grounds that the State or local government, as the case may be, enacted a statute or ordinance outside the authority provided in this subsection.

(B) A person shall submit an appeal on a decision of a State or local government agency to the Commission under this paragraph, if at all, not later than 30 days after the date on which the decision by the State or local government agency becomes final, but prior to seeking judicial review of such decision.

(C) The Commission shall make a determination on an appeal submitted under subparagraph (B) not later than 180 days after its submittal.

(D) If the Commission determines under subparagraph (C) that a State or local government agency has acted outside its authority in enforcing a statute or ordinance, the Commission shall preempt the decision enforcing the statute or ordinance.

(5) The enforcement of statute or ordinance that prohibits a violation of a regulation by a State or local government under paragraph (1) in a particular case shall not preclude the Commission from enforcing the regulation in that case concurrently.

(6) Nothing in this subsection shall be construed to diminish or otherwise affect the jurisdiction of the Commission under this section over devices capable of interfering with radio communications.

Finally, we call the attention of this Board to a ruling of the United States District Court for the Northern District of New York in *Palmer v. City of Saratoga Springs*, 180 F. Supp. 2d 379 (N.D.N.Y. 2001),

http://scholar.google.com/scholar\_case?case=6669713392523172990&q=Bodony&hl=en&as\_sdt=40000\_002\_

Slip Opinion at 18:

The few planning Board requests that Palmer refused to agree to were unreasonable on their face. . . . Palmer refused to give the Planning Board any additional information on the issue of interference for the simple reason that the issue of possible interference was beyond the Board's purview. . . .

Normally, the Court would simply instruct the Planning Board to comply with [the preemption]. However, given that the Planning Board was already fully apprised of its duties under [the preemption] when it reconsidered Palmer's application, such action would likely be futile. The Court thus enjoins the Planning Board from taking further action interfering with Palmer's special use permit application and orders the Planning Board to grant the application with the conditions already agreed to by Palmer.

Nonetheless, amateurs generally, and this Applicant in particular, are prepared to offer aid beyond the requirements of law. Should it be necessary, the Applicant pledges to cooperate with any individual, whether or not an abutter, who owns equipment that might be affected.

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At least one study by the FCC Field Operations Bureau has shown that amateurs are responsible for less than 1% of all interference complaints (400 of 42,000 complaints during a fiscal year in the early 1970's) filed with the Commission. (Source: FCC data, as reported in *QST*, July 1974, p. 10). Part of the preparation for licensing involves studying how to minimize and correct such problems, if they should ever occur.

Furthermore, many home entertainment electronic devices, including portable telephones, bear the following required label, in accordance with 47 CFR §15.19(a)(3):

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Actually, the erection of this antenna system will have a tendency to *decrease*, not increase, the likelihood of television interference, as higher antenna systems (with directional arrays) are farther away from neighboring television sets and transmit over nearby homes. Lower antennas, erected in trees, or on shorter antenna support structures, for example, have a greater likelihood of interference, since they would direct more energy toward a neighboring TV set.

This is exactly the position that was taken by the FCC's Chief of the Private Radio in a letter to the Board of Zoning Appeals of Hempstead, NY (October 25, 1994):

Antenna height is inversely related to the strength, in the horizontal plane, of the radio signal that serves as a catalyst for interference in susceptible home electronic equipment. It is a matter of technical fact that the higher an amateur antenna, the less likely it is that radio frequency interference will appear in home electronic equipment.

For a review of the field of radio frequency interference (RFI), see "The Ghost in the Computer: Radio Frequency Interference and the Doctrine of Federal Preemption", Brock, 1999 Computer L. Rev. & Tech. J. 17 (Fall 1998-Spring 1999). <u>http://www.sbot.org/1999/06/15/article/</u> [SBOT stands for State Bar of Texas.]

For information on resolving problems, the FCC's Interference Handbook is available on the Internet. The 22-page booklet, available from the Compliance and Information Bureau via the FCC World Wide Web home page, includes the same information and illustrations contained in the recently published Interference to Home Electronic Entertainment Equipment Handbook. It includes information about equipment installation, identifying interference sources, curing interference problems, and filters. It also contains a list of home electronic equipment manufacturers and telephone numbers. Pictures illustrate different TV interference problems, including ham or CB transmitter interference. http://www.fcc.gov/ftp/Bureaus/Mass Media/Databases/documents\_collection/1993InterferenceHandbook.pdf

### LEGAL: PREEMPTION & CASE LAW SUPPORT THE APPLICATION

Zoning for amateur radio antenna systems is one of those rare areas of law where an application must be considered against the background of a federal preemption of local zoning law. The Congress of the United States has weighed in on the subject.

#### SENSE OF CONGRESS

Sec. 10

(a) The Congress finds that —

(1) more than four hundred thirty-five thousand four hundred radio amateurs in the United States are licensed by the Federal Communications Commission upon examination in radio regulations, technical principles, and the international Morse code; (2) by international treaty and the Federal Communications Commission regulation, the amateur is authorized to operate his or her station in a radio service of intercommunications and technical investigations solely with a personal aim and without pecuniary interest;

(3) among the basic purposes for the Amateur Radio Service is the provision of voluntary, noncommercial radio service, particularly emergency communications; and (4) volunteer amateur radio emergency communications services have consistently and reliably been provided before, during, and after floods, tornadoes, forest fires, earthquakes, blizzards, train wrecks, chemical spills, and other disasters.

(b) It is the sense of Congress that -

(1) it strongly encourages and supports the Amateur Radio Service and its emergency communications efforts; and

(2) Government agencies shall take into account the valuable contributions made by amateur radio operators when considering actions affecting the Amateur Radio Service.

Federal Communications Commission Authorization Act of 1988. Pub. L. No. 100-594, 102 Stat. 3021, 3025 (November 3, 1988); *see also* Joint Explanatory Statement of the Committee of Conference on H.R. Conf. Rep. No. 386. 101st Cong., 1st Sess. 415, 433 (November 21, 1989), *reprinted in 1990* U.S. Code Cong. & Admin. News 3018, 3037 (amateur licensees exempted from new Commission-wide fees program because "[t]he Conferees recognize that amateur licensees do not operate for profit and can play an important public safety role in times of disaster or emergency"). Joint Explanatory Statement of the Committee of Conference on H.R. Conf. Rep. No. 765, 97th Cong., 2d Sess. 18-19 (August 19, 1982), *reprinted in* 1982 U.S. Code Cong. & Admin. News 2261, 2262-63.

#### PUBLIC LAW 103-408-OCT. 22, 1994

#### 103d Congress Joint Resolution

# To recognize the achievements of radio amateurs, and to establish support for such amateurs as national policy.

Whereas Congress has expressed its determination in section 1 of the Communications Act of 1934 (47 U.S.C. 151) to promote safety of life and property through the use of radio communication;

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Whereas Congress, in section 7 of the Communications Act of 1934 (47 U.S.C. 157), established a policy to encourage the provision of new technologies and services;

Whereas Congress, in section 3 of the Communications Act of 1934, defined radio stations to include amateur stations operated by persons interested in radio technique without pecuniary interest;

Whereas the Federal Communications Commission has created an effective regulatory framework through which the amateur radio service has been able to achieve the goals of the service;

Whereas these regulations, set forth in Part 97 of title 47 of the Code of Federal Regulations clarify and extend the purposes of the amateur radio service as a -

(1) voluntary noncommercial communication service, particularly with respect to providing emergency communications;

(2) contributing service to the advancement of the telecommunications infrastructure;

(3) service which encourages improvement of an individual's technical and operating skills;

(4) service providing a national reservoir of trained operators, technicians and electronics experts; and

(5) service enhancing international good will;

Whereas Congress finds that members of the amateur radio service community has provided invaluable emergency communications services following such disasters as Hurricanes Hugo, Andrew, and Iniki, the Mt. St. Helens Eruption, the Loma Prieta earthquake, tornadoes, floods, wild fires, and industrial accidents in great number and variety across the Nation; and

Whereas Congress finds that the amateur radio service has made a contribution to our Nation's communications by its crafting, in 1961, of the first Earth satellite licensed by the Federal Communications Commission, by its proof-of-concept for search rescue satellites, by its continued exploration of the low Earth orbit in particular pointing the way to commercial use thereof in the 1990s, by its pioneering of communications using reflections from meteor trails, a technique now used for certain government and commercial communications, and by its leading role in development of low-cost, practical data transmission by radio which increasingly is being put to extensive use in, for instance, the land mobile service: Now, therefore, be it

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled,

#### SECTION 1. FINDINGS AND DECLARATIONS OF CONGRESS

Congress finds and declares that-

(1) radio amateurs are hereby commended for their contributions to technical progress in electronics, and for their emergency radio communications in times of disaster;

(2) the Federal Communications Commission is urged to continue and enhance the development of the amateur radio service as a public benefit by adopting rules and regulations which encourage the use of new technologies within the amateur radio service; and

(3) reasonable accommodation should be made for the effective operation of amateur radio from residences, private vehicles and public areas, and that regulation at all levels of government should facilitate and encourage amateur radio operation as a public benefit.

Approved October 22, 1994.

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Sources:

(text) <u>http://thomas.loc.gov/cgi-bin/query/z?c103:S.J.RES.90.ENR:</u> (PDF) <u>http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=103\_cong\_bills&docid=f:sj90enr.pdf</u>

The Applicant wishes to call attention to Federal law that preempts certain elements of regulation by a municipality. Federal Communications Commission Order PRB-1, 101 FCC 2d 952, 50 Fed. Reg. 38813 (September 25, 1985), declares in pertinent part:

Local regulations which involve placement, screening, or height of antennas based on health, safety or aesthetic considerations must be crafted to accommodate reasonably amateur communications, and to represent the **minimum** practicable regulation to accomplish the local authority's legitimate purpose. (*Emphasis added.*)

Source: http://wireless.fcc.gov/services/amateur/prb/index.html

The above order has subsequently become part of the Code of Federal Regulations, as 47 C.F.R. §97.15 (b):

Except as otherwise provided, a station antenna structure may be erected at heights and dimensions sufficient to accommodate amateur service communications. State and **local regulation of a station antenna structure** must not preclude amateur service communications. Rather, it **must reasonably accommodate** such communications **and must constitute the minimum practicable regulation** to accomplish the state or local authority's legitimate purpose.

# (Emphasis added.) Source:

http://frwebgate.access.gpo.gov/cgi-bin/get-cfr.cgi?TITLE=47&PART=97&SECTION=15&YEAR=1999&TYPE=TEXT

In 1999, the FCC amplified the restrictions on the powers of this Board when it issued a further Order, holding that:

... the very least regulation necessary for the welfare of the community must be the aim of its regulations so that such regulations will not impinge on the needs of amateur operators to engage in amateur communications.

*(Emphasis added.) In the Matter of* Modification and Clarification of Policies and Procedures Governing Siting and Maintenance of Amateur Radio Antennas and Support Structures, etc. http://www.fcc.gov/Bureaus/Wireless/Orders/1999/da992569.txt, at ¶9.

A local authority that ignores these federal laws violates the supremacy clause of the U.S. Constitution, Article VI, clause 2 which states:

This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, **any Thing in the Constitution or Laws of any state to the Contrary notwithstanding.** 

(Emphasis added.)

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# FIRM, FIXED, UNVARYING HEIGHT RESTRICTIONS ARE VOID

The Courts have routinely enforced the federal regulation and FCC rulings that favor amateur radio, which have the power of federal law. The U.S. District Court has already ruled in this matter that the 45-foot height limit of section 17.12.044 is not the maximum permissible height. Nor could it rule that the apparent 45-foot height limit ("Radio, television and other communication masts may extend not more than forty-five feet above grade level, . . .") is valid. See:

# Bodony v. Sands Point, NY, 681 F. Supp. 1009 (E.D.N.Y. 1987),

http://scholar.google.com/scholar case?case = 13458580615427783727&q = Bodony + v. + Sands&h<u>l=en&as sdt = 40000002</u>. Ordinance with a firm 25' height limit. Proposed antenna support structure: 86'. Summary judgment for ham; settled with permit granted and \$60,000 in legal fees to ham on §1983 claim, because town was seeking ways to deny his rights (soliciting opinion of counsel on how to deny, without regard to merits).

# Izzo v. River Edge, NJ, 843 F.2d 765 (3d Cir. 1988).

<u>http://scholar.google.com/scholar\_case?case = 1092956254220276722&q = Izzo + v. + River + Edge & hl = en&as\_sdt = 4000002</u>. Upholds preemptive effect of PRB-1 on 35' height limitation. "The effectiveness of radio communication depends on the height of antennas." *Id.* at 768. The court need not abstain. Court awarded fees of \$10,000.

# Brower v. Indian River County Code Enforcement Board, FL, No. 91-0456 CA-25 (June 23, 1993), 1993 WL 228785 (Fla.Cir.Ct.).

http://www.google.com/url?sa=t&source=web&cd=2&ved=0CCUQFjAB&url=http%3A%2 F%2Fmillerlawoffices.us%2FRepresentative\_cases%2FMy\_Cases%2FBrowervIndianRiverCounty CodeEnforcementBoard\_1993WL228785.doc&rct=j&q=Brower%20v.%20Indian%20River%20C ounty%20Code%20Enforcement%20Board&ei=OIUVTdbiJYO8lQeC3vzpCw&usg=AFQjCN HH8wzP50h7BARHMJbRVfCdiH1fHg&sig2=f69QzZcT\_ngUuwtyC0f-Fw&cad=rja

Support structure of 68.88 feet, plus antenna to total of 95.6 feet; 72.4 feet from neighbor's property line. By-law had an absolute prohibition on towers over 70'. Ham erected without first attempting to obtain a permit. Court held that any application for a permit would have been futile ("a circular dead-end"). Ordinance facially void as an unvarying maximum height: "We agree with the Evans court's adoption of prior rulings in that case which concluded that flat prohibitions of this nature are not permitted, Evans, at 976." [Refers to *Evans I*]

*Pentel v. Mendota Heights, MN*, 13 F3d 1261 (8th Cir. 1994) <u>http://cases.justia.com/us-court-of-appeals/F3/13/1261/631910/</u>. Ham applied for 68' antenna (crank-up 30-68' and two Yagis). Absolute 25' height limit in ordinance preempted. Rejects balancing test, as the FCC did the balancing. Accepts 56.5' height as ineffective.

Palmer v. Saratoga Springs, NY, 180 F. Supp. 2d 379 (N.D.N.Y. 2001), http://scholar.google.com/scholar case?case=6669713392523172990&q=Bodony&hl=en&as sdt =40000002

Absolute height limit of 20' in ordinance preempted. "(A)n unvarying height restriction on amateur radio antennas would be facially invalid in light of PRB-1." (Citing *Pentel, Evans and Bulchis.*) Commentary on bad faith of town. Request for information on Radio Frequency Interference "unreasonable on (its) face." Grant of permit as applied for, at 47', without further proceedings. This, and Snook, are only cases that ever went to trial in a Federal District Court on PRB-1.

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Marchand v. Town of Hudson, NH, 788 A.2d 250, 147 N.H. 380 (N.H. 2001),

http://www.courts.state.nh.us/supreme/opinions/2001/march221.htm. Three, 100' tall antenna systems. Ruling that balancing is not appropriate. "(T)o "reasonably accommodate" amateur radio communications . . . the ZBA may consider whether the particular height and number of towers are necessary to accommodate the particular ham operator's communication objectives. Remand to determine if three towers is a customary accessory use under NH law. [On remand, Hudson, NH Board held that three towers qualifies as a customary use.]

Snook v. Missouri City, TX, No. 03-cv-243, 2003 U.S. Dist. LEXIS 27256, 2003 WL 25258302 (S.D. Tex. Aug. 26, 2003, Hittner, J.) (the Order, Slip Opinion, 63 pp.), see also the Final Judgment, Slip Opinion, 2 pp. PACER citation: https://ecf.txsd.uscourts.gov/cgi-bin/login.pl?387442335892775-L\_238\_0-14:03-cv-00243\_Snook v.\_City\_of\_Missouri, (S.D. Tex. 2003), more readily found at

http://www.arrl.org/files/file/Snook%2520KB5F%2520Decision%2520%26%2520Order%25203 4.pdf

(the Order, Slip Opinion, 63 pp.), see also the Final Judgment, Slip Opinion, 2 pp. PACER citation: https://ecf.txsd.uscourts.gov/cgi-bin/login.pl?387442335892775-L\_238\_0-14:03-cv-00243\_Snook v.\_City\_of\_Missouri, (S.D. Tex. 2003).

http://www.arrl.org/files/file/Snook%2520KB5F%2520Final%2520Judgment%252035.pdf

Original bylaw permitted only 35', second bylaw permitted more by specific use permit. After grant of building permit under first bylaw (B/I recognized 35' was not legal), Ham built 114'. City cited Ham for repeated violations of second bylaw for failure to have specific use permit, which it declined to grant. City expert recommended 50-60' for 20 meter antenna, and just above tree tops (60-80') for VHF/UHF, but ignored 40 and 80 meter antenna argument. For no special reason, City decided 65' as acceptable. "To conduct effective emergency communications, Snook must be able to achieve at least a 75 to 90 percent successful signal under the changing variables that impact emergency or other amateur radio communications." Findings of Fact ¶9. City Ordinance preempted. Order for City to issue permit (no remand) consistent with existing structure. Citing *Younger v. Harris*, Court declined to enjoin City, but received assurances City would not further prosecute. "PRB-1 requires a site-specific, antenna-specific, array-specific, operations-specific, ordinance-specific, and city action-specific analysis. PRB-1 at p. 7." [Referring to PRB-1 paragraphs 24 and 25.]

Chedester v. Town of Whately, MA, Superior Court, Franklin ss., Civil Action No. 03-00002, Hillman, J., November 22, 2004, <u>http://www.antennazoning.com/docs/chedester-decision.pdf</u> (2004). Bylaw permitted no more than 35'. Ham granted permit for 140' on 10 acres in agriculture/residential zone when Building Inspector decided bylaw was preempted. Planning Board appeals to ZBA. ZBA revokes permit. Superior Court ruled that town misinterprets both state and federal preemption in holding that while the ordinance may permit antennas over 35', restrictions on antenna support structures are not similarly affected. Height limit of 35' found to be "an absolute and unvarying height restriction" and preempted. "A 35' height restriction would effectively mean that no radio communications would be able to be transmitted." Building permit reinstated. In addition to the above matters of Federal law, Nevada law limits local action. NRS 278.02085 Amateur radio has been enacted to read:

Limitations on restrictions on amateur service communications; limitations on regulation of station antenna structures; exception.

1. A governing body shall not adopt an ordinance, regulation or plan or take any other action that precludes amateur service communications or that in any other manner does not conform to the provisions of 47 C.F.R. § 97.15 and the limited preemption entitled "Amateur Radio Preemption, 101 F.C.C. 2d 952 (1985)" as issued by the Federal Communications Commission.

2. If a governing body adopts an ordinance, regulation or plan or takes any other action that regulates the placement, screening or height of a station antenna structure based on health, safety or aesthetic considerations, the ordinance, regulation, plan or action must:

(a) Reasonably accommodate amateur service communications; and

(b) Constitute the minimum level of regulation practicable to carry out the legitimate purpose of the governing body.

3. The provisions of this section do not apply to any district organized pursuant to federal, state or local law for the purpose of historic or architectural preservation.

4. Any ordinance, regulation or plan adopted by or other action taken by a governing body in violation of the provisions of this section is void.

5. As used in this section:

(a) "Amateur radio services" has the meaning ascribed to it in 47 C.F.R. § 97.3.

(b) "Amateur service communications" means communications carried out by one or more of the amateur radio services.

(c) "Amateur station" has the meaning ascribed to it in 47 C.F.R. § 97.3.

(d) "Station antenna structure" means the antenna that serves an amateur station, including such appurtenances and other structures as may be necessary to support, stabilize, raise, lower or otherwise adjust the antenna.

(Added to NRS by 2001, 596)

#### (Emphasis added.)

Why is it important for this Board to know about all of this legal background? Because this Board has an obligation to accommodate the radio amateur in the communications that he or she desires to realize, because the Town may only impose "the minimum practicable regulation," and the Board may not balance the amateur's needs with the needs of the municipality. The FCC has already done the balancing.

#### MULTIPLE TOWERS ARE PERMISSIBLE

If an opponent to this project should argue that perhaps one amateur radio antenna support structure may be permissible, but multiple antenna systems are not, the response would be first, that the Applicant is entitled to use all of the amateur frequency bands, which may require wholly separate antennas, at varying heights, for effective communications in accordance with the needs of the radio amateur. Second, no limitation on the number of antenna support structures or antennas themselves can be found in the County Code, nor state or federal law. Third, there is substantial case law supporting the concept of multiple antennas.

First, as to the radio amateur's need for different antennas at differing heights, this is well addressed elsewhere in the Applicant's submission, including the Needs Analysis.

Second, as to the lack of limit on number, the County has demonstrated fully that it can draft an ordinance specifically, to deal with single and plural uses. For example:

- Section 17.40.020 permits "a private garage," but all other enumerated uses are plural.
- Section 17.40.025 permits "one detached family guest home," but all other enumerated uses are plural.
- In addition, the County knows how to specify numbers, as in section 17.12.014 (three dogs).
- Section 17.62.020 permits "towers" (plural).

Furthermore, NRS 278.02085 requires that regulation by the County shall "constitute the minimum level of regulation practicable . . ." Attempting to limit an applicant to one antenna system would be more than "the minimum level of regulation practicable." The County Code contains no indication whatsoever that multiple amateur radio antenna systems accessory to a single-family residence are forbidden.

Third, there are many cases where multiple antenna systems were found allowable, despite claims to the contrary.

Bay v. ZBA of New Canaan (CT) 1993 Conn. Super. LEXIS 2345 (Super. Court of Stamford-Norwalk, Sept. 9, 1993). Ham had lawful existing retractable 72-foot structure and proposed to add one antenna to it, as well as to install a new 57-foot vertical. Court finds that an amateur radio antenna is a customary accessory use, and disregards *Presnell v. Leslie*. Good discussion of why Court adopts the majority view. Court finds that additional antenna may be placed 10 feet above present antenna (total 82') due to interaction. Court finds multiple antennas are customary and accessory. Court finds that the height is necessary. Ham's appeal sustained.

Baskin v. Bath Twp. ZBA (OH)

Baskin I: 15 F.3d 569 (6th Cir. 1994), <u>http://pacer.ca6.uscourts.gov/cgi-bin/getopn.pl?OPINION=94a0030p.06</u> Abstention not appropriate despite a somewhat parallel state court action.

Baskin II: 101 F.3d 702 (6th Cir. 1996), 1996 WL 678228 (6th Cir. Ohio). Four towers plus one antenna without a tower. Bylaw required special approval from BZA for structures > 50'. Drop zone imposed – not invidious discrimination as "similarly situated" class for equal protection purposes is amateurs with towers of similar height. Section 1983 claim denied on grounds that PRB-1 not intended to benefit Baskin. Court declined to exercise pendant jurisdiction and Cir.Ct. found this was not an abuse of discretion. However, Cir. Ct. affirmed Dist. Ct. declaratory judgment that the height/location was not a reasonable accommodation and therefore void and unenforceable.

Marchand v. Town of Hudson (NH) 147 N.H. 380, 788 A.2d 250 (N.H. 2001), http://www.courts.state.nh.us/supreme/opinions/2001/march221.htm

Bylaw had no regulation on number or height of towers. Three, 100' tall antenna systems on 6.04 acres of forest in an R-2 zone. Ruling that balancing not appropriate. "(T)o "reasonably accommodate" amateur radio communications . . . the ZBA may consider whether the particular height and number of towers are necessary to accommodate the particular ham operator's communication objectives." Remand to determine if three towers is a customary accessory use under NH law. [On remand, Hudson, NH Board held that three towers qualifies as a customary use.

http://www.antennazoning.com/ham/marchand-decision.pdf]

Smith v. Bd. of Co. Commr's., County of Bernalillo, 137 N.M. 280, 110 P.3d 496 (2005). http://scholar.google.com/scholar\_case?case=2070167121891186080&q=Smith+v.+Bernalillo+ County&hl=en&as\_sdt=40000002

Smith was not a PRB-1 case, it is an ordinary accessory use case. The case involves two 130-foot towers with ten-foot masts (a total height of 140 feet each) on five acres in the A-2 (rural residential) in the East Mountain area. On the subject of customary accessory use, the Court found:

{25} Our review of cases from other states supports Plaintiff's belief that amateur radio antennas are generally considered customarily incidental to residential use without adding a reasonableness inquiry. See, e.g., Town of Paradise Valley v. Lindberg, 551 P.2d 60, 61-62 (Ariz. Ct. App. 1976) (holding that the erection of a ninety-foot amateur radio tower in conjunction with a homeowner's hobby as a ham radio operator is a permissible accessory or incidental use); Skinner v. Zoning Bd. of Adjustment, 193 A.2d 861, 863-64 (N.J. Super. Ct. App. Div. 1963) (upholding a 100-foot radio antenna tower used as a hobby as an accessory use customarily incidental to the enjoyment of a residential property); Dettmar v. County Bd. of Zoning Appeals, 273 N.E.2d 921, 922 (Ohio Ct. Com. Pl. 1971) (finding that even an unusual customarily incidental use is permissible unless specifically excluded by a zoning restriction).

{37} The results of this case may be unfortunate for the neighbors who understandably regard Plaintiff's radio towers as an eyesore. But Plaintiff fairly relied on the express language of the ordinance and the assurances of the county zoning officials in buying his property. After the County granted Plaintiff a permit, he complied with its terms in the construction of his radio antenna towers. If the County wanted to prevent towers on this scale, the problem could easily have been avoided by doing exactly what has been done since: expressly amending the ordinance with specific height limitations. See Bernalillo County, N.M., Ordinance 2004-1 (adopted Jan. 27, 2004) (amending the zoning ordinance to provide for amateur radio towers as permissive uses up to sixty-five feet or conditional uses up to 100 feet). The County has every right and responsibility to

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regulate structures such as amateur radio towers, but it did not do so explicitly and in fact exempted such antenna towers from height restrictions. The County cannot after the fact come up with a new legal rationale to block an unpopular activity, which was previously permitted, to the detriment of a property owner who did everything in his power to follow the rules.

 $\{38\}$  ... We hold that Plaintiff is entitled to a declaratory judgment that the building permit for his antenna towers was properly issued and that the County's stop work notices are invalid.

*Evans v. Burruss (MD)* 401 Md.586, 933 A. 2d 872 (MD Court of Appeals, 2007), <u>http://www.courts.state.md.us/opinions/coa/2007/1a07.pdf</u> (last visited December 29, 2010). Ham applied for building permit (not special permit, not variance) for four 190' towers, which was granted as a matter of right. He began construction. Over a year later, new bylaw passes. Court holds his rights have vested. Held, the grant of a building permit is a ministerial act. No notice to neighbors is required. Note: Neighbors subsequently filed a suit claiming "private nuisance." When the ham filed a fully briefed Motion for Summary Judgment, Plaintiffs withdrew with prejudice – ending the litigation.

# AMATEUR RADIO IS AN ORDINARY ACCESSORY USE

Amateur radio antennas, which are used and useful solely for non-commercial, volunteer emergency preparedness and hobby purposes, are generally considered customarily incidental to residential use. See, e.g., Town of Paradise Valley v. Lindberg, 551 P.2d 60, 61-62 (Ariz. Ct. App. 1976) (holding that the erection of a ninety-foot amateur radio tower in conjunction with a homeowner's hobby as a ham radio operator is a permissible accessory or incidental use); Skinner v. Zoning Bd. of Adjustment, 193 A.2d 861, (N.J. Super Ct. App. Div 1963) (upholding a 100-foot radio antenna tower used as a hobby as an accessory use customarily incidental to the enjoyment of a residential property); Dettmar v. County Bd. of Zoning Appeals, 273 N.E. 2d 921, 922 (Ohio Ct. Com Pl. 1971) (finding that even an unusual customarily incidental use is permissible unless specifically excluded by a zoning restriction).

Another common thread in these cases is that neighbors do not determine what is customarily incidental to a particular homeowner's use of his property. *Lindberg*, 551 P.2d at 62; *Dettmar*, 273 N.E.2d at 922 (use customarily incidental "does not limit the use to the incidental activity chosen by the neighbors"). Finding no law to the contrary anywhere in the United States, and substantial law to support the proposition, it is therefore clear that amateur radio antenna supports are customarily incidental to residential use.

#### THE COUNTY MUST ACCOMMODATE THIS INDIVIDUAL RADIO AMATEUR

The New Hampshire Supreme Court has decided:

In light of the FCC's requirement, a zoning board's fact-finding and analysis should focus, first, on whether the three towers are permitted under local zoning regulations. If, as we have determined here, they are not, the zoning board should then consider what steps must be taken to "reasonably accommodate" amateur radio communications. In making this determination, the ZBA may consider whether the particular height and number of towers are necessary to accommodate the particular ham operator's communication objectives.

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There was some evidence presented to the ZBA that the tower and antenna operation "was not the typical installation, but rather was something that every ham who was interested in reliable international communication on a regular basis aspired to own." The ZBA, however, did not make any factual findings regarding whether Muller even requires the proposed three radio towers **to facilitate his international ham radio operations**. Therefore, we vacate the superior court's decision and remand with instructions to remand to the ZBA for proceedings consistent with this opinion.

Marchand v. Town of Hudson, 788 A.2d 250 (N.H. 2001) (Emphasis added.).

So the question is not whether some other amateur might be satisfied, or some communications would be effective. The question relates to "the particular ham."

As the Federal District Court said in the Snook case:

PRB-1 requires a site-specific, antenna-specific, array-specific, operations-specific, ordinance-specific, and city action-specific analysis. PRB-1 at p. 7.

Snook v. Missouri City, TX No. 03-cv-243, 2003 U.S. Dist. LEXIS 27256, 2003 WL 25258302 (S.D. Tex. Aug. 26, 2003, Hittner, J.) (the Order, Slip Opinion, 63 pp.), see also the Final Judgment, Slip Opinion, 2 pp. PACER citation: https://ecf.txsd.uscourts.gov/cgi-bin/login.pl?387442335892775-L\_238\_0-14:03-cv-00243\_Snook v.\_City\_of\_Missouri, (S.D. Tex. 2003), more readily found at http://www.arrl.org/files/file/Snook%2520KB5F%2520Decision%2520%26%2520Order%252034.pdf

The reference to "PRB-1 at p.7" by the Snook Court is to PRB-1 ¶ 25, which reads:

25. Because amateur station communications are only as effective as the antennas employed, antenna height restrictions directly affect the effectiveness of amateur communications. Some amateur antenna configurations require more substantial installations than others if they are to provide the amateur operator with the communications that he/she desires to engage in.

FCC Order PRB-1, 101 FCC 2d 952, 50 Fed. Reg. 38813 (September 25, 1985, ("PRB-1"), http://wireless.fcc.gov/services/amateur/prb/index.html (last visited December 29, 2010).

Again, the test is NOT what would satisfy some ham. Under PRB-1, the test is whether or not the municipality will reasonably accommodate a proposed installation "to provide the amateur operator with the

communications that he/she desires to engage in."

If another radio ham were to come along and say: "I'm perfectly happy with a dipole at 18 feet," that would not, in any way, address the PRB-1 requirement "to provide the amateur operator with the communications that he/she desires to engage in."

This Board should note that this not a "Reasonable Man" test, and it is not a "reasonable ham" test. Re-read the FCC Preemption (PRB-1) at ¶25:

Some amateur antenna configurations require more substantial installations than others if they are to provide the amateur operator with the **communications that he/she desires to engage in**.

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# (Emphasis added.)

It is very important to understand that this is a subjective test. The amateur determines the communications desired. After the amateur operator has determined that, regulation "must constitute the **minimum practicable regulation**" 47 CFR Sec. 97.15(b). Furthermore, the law requires that such regulation "will **not impinge on the needs** of amateur operators to engage in amateur communications." FCC DA 99-2569, at ¶9. <u>http://wireless.fcc.gov/services/amateur/prb/prb1999.html</u> (*Emphasis supplied.*) Moreover, as discussed *supra*, balancing local interests against the Federal government's interest in promoting amateur communications is not permitted.<sup>12</sup>

#### SUPPORT FROM NEIGHBORS

Letters supporting this application may be found in Exhibits D-1, D-2 and D-3. The originals of Exhibits D-2 and D-3 were sent directly to the County.

#### REMOTE CONTROL IS NOT AN OPTION

Recall that amateur radio is an ordinary accessory use of a residential property. In additional, under 47 CFR § 97.15(b), local regulation must not preclude amateur radio communications. Put those two concepts together and the conclusion is that local regulation cannot preclude antennas on the radio amateur's property. A requirement that a radio amateur's antennas must be located at a remote site would be a requirement that precludes communications from the amateur's home site. A requirement that antennas be located off-site would also frustrate the requirement of the law that regulation must be "the minimum practicable,"<sup>13</sup> and must be regulation that "will not impinge on the needs of amateur operators to engage in amateur communications."<sup>14</sup> Furthermore, a remote-site requirement would frustrate one of the purposes of amateur radio, which is to have stations ready from residences<sup>15</sup> in time of emergency. An amateur radio station designed to be available when telephone and internet communications systems go down would be useless when needed most.

#### CONCLUSION

Returning to where we started, as the U.S. District Court has ruled in this matter, § 17.62.010 is the applicable section of the zoning ordinance, and federal law, the supreme law of the land, declares that the use proposed by Applicants is in the public interest. As the United States Supreme Court has ruled, "This mandate to the FCC to assure that [FCC licensees] operate in the public interest is a broad one, a power

<sup>13</sup> 47 C.F.R. §97.15(b)

<sup>&</sup>lt;sup>12</sup> See discussion at pp. 16-17, *supra*.

<sup>&</sup>lt;sup>14</sup> FCC DA 99-2569, at ¶9. <u>http://wireless.fcc.gov/services/amateur/prb/prb1999.html</u>

<sup>&</sup>lt;sup>15</sup> Public Law 103-408 (J.Res., 103d Congress, 1994)§1(3), <u>http://thomas.loc.gov/cgi-bin/query/D?c103:1:./temp/~c103axha51::</u>, or <u>http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=103</u> cong bills&docid=f:sj90enr.txt.pdf

"not niggardly but expansive." The United States Supreme Court also has ruled that "This mandate to the FCC to assure that [FCC licensees] operate in the public interest is a broad one, a power "not niggardly but expansive." Consistent with that ruling, and as explained above, there are myriad cases stating that there is to be no balancing of local interests against the federal rights of Amateur Radio Service operations. Moreover, as also explained in detail herein, it is long held that local regulations must "represent the minimum practicable regulation" and must provide reasonable accommodation.

The subject application, supplement, attachments and relevant additional submissions contain the minimum technical solution to achieve the operational needs set forth by Applicants, consistent with current technology and in compliance with all applicable environmental, engineering and structural requirements and practices. It is the position of Applicants that the use of private property by a radio amateur is, by federal law, in the "public convenience, interest, or necessity," and that its application materials meet the Storey County standard set out by the U.S. District Court as the sole requirement for grant of a special use permit.

For the reasons set forth above, the Applicant requests that this application be granted expeditiously for the antenna support systems at the proposed sites as submitted.

Respectfully submitted,

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