Due to the current Covid-19 Pandemic, this meeting will be held virtually. If you have any questions, comments or concerns regarding the agenda item(s) below or any other issue, please submit them to Austin Page in the Planning Department at apage@springhilltn.org no later than 12:00 PM on Tuesday May 19, 2020.

A. CALL TO ORDER

B. ROLL CALL

C. CONSIDER APPROVAL OF THE APRIL 21, 2020 BOARD OF ZONING APPEALS MEETING MINUTES.

D. GENERAL ANNOUNCEMENT

The procedural rules for public comment will be as follows: The items will be taken in the order of the agenda. Audience members wishing to speak must be recognized by the Chairman and will have five minutes to address the Board of Zoning Appeals. No rebuttal remarks will be allowed.

E. OLD BUSINESS

F. NEW BUSINESS

1. **BZA 824-2020**: Submitted by Jeff Westall for 8003 Brightwater Way. The property is zoned R-2, contains approximately .25 acres and is located in the Brixworth subdivision. The applicant requests a variance from the setback requirements of the UDC to cover and screen an existing patio. Requested by Jeff & Julie Westall.

2. **BZA 825-2020**: Submitted by Jim Hall for 2826 Windy Way. The property is zoned R-1, contains approximately .45 acres and is located in the Buckner Place subdivision. The applicant requests a special use to install a new antenna that will exceed the maximum height of a radio antenna tower by approximately twenty-five feet, from 47’ to 72’ feet high. Requested by Jim Hall.

3. **BZA 826-2020**: Submitted by Jim Hall for 2826 Windy Way. The property is zoned R-1, contains approximately .45 acres and is located in the Buckner Place subdivision. The applicant requests a variance from the setback requirement of radio antenna tower to the primary residence. Requested by Jim Hall.
G. OTHER BUSINESS

H. PUBLIC COMMENT

I. ADJOURN
SPRING HILL
MUNICIPAL BOARD OF ZONING APPEALS
REGULAR MEETING MINUTES
TUESDAY APRIL 21, 2020
5:30 PM

A. CALL TO ORDER

Chairman Terry Cantrell called the meeting to order at 5:30 PM.

B. ROLL CALL

Members present were: Chairman – Terry Cantrell, Vice Chairman - Rob Roten, Alderman - Hazel Nieves and Jim Hagaman. Brandon McCulloch was not present.

Staff present were: Planning Director - Steve Foote, and Associate Planner - Austin Page.

C. Consider approval of the February 20, 2020 Board of Zoning Appeals meeting minutes.

Jim Hagaman made a motion to approve the February 20, 2020 Meeting Minutes. Motion seconded by Alderman Hazel Nieves. Motion to approve passed 4-0.

D. GENERAL ANNOUNCEMENT

General Announcement – The procedural rules for public comment will be as follows: The items will be taken in the order of the agenda. Audience members wishing to speak must be recognized by the Chairman and will have five minutes to address the Board of Zoning Appeals. No rebuttal remarks will be allowed.

E. OLD BUSINESS

F. NEW BUSINESS

1. **BZA 820-2020**: Submitted by Celebration Homes for 448 Rangeland Road. The property is zoned R-2 PUD, contains approximately .20 acres and is located in the Harvest Point subdivision. The applicant requests a variance from the setback requirements of the previous zoning ordinance to allow the front right corner and rear right corner of the home to encroach no more than one foot into their respected setbacks. Requested by Greg Welton.

   **Staff recommended conditions of approval:**
   
   1. Consistency with the plans submitted and encroachment shown and with no more than a one-foot encroachment.

   2. Per Section 13.4G of the Unified Development Code, an approved variance will expire one year from the date of approval unless a site plan review application has been submitted or, where site plan review is not required, a building permit is obtained. The Board of Zoning Appeals may grant an extension for a period of validity for no longer than an additional 6 months, so long as the applicant applies in writing for an extension of time at any time prior
to the date of expiration. No public hearing is required for approval of such extension of time.

Alderman Hazel Nieves made motion to adopt the findings of fact and conclusions of law found in the staff report and approve BZA 820-2020 with two (2) staff associated conditions of approval. Motion seconded by Jim Hagaman. Motion to approve passed 4-0.

G. OTHER BUSINESS

H. PUBLIC COMMENT

No Public Comment

I. ADJOURN

Jim Hagaman made motion to adjourn. Motion seconded by Alderman Hazel Nieves. Motion to adjourn passed 4-0.

Meeting Adjourned at 5:52PM.

_______________________________
Terry Cantrell, Chairman
Spring Hill Board of Zoning Appeals

TO: Spring Hill Board of Zoning Appeals
FROM: Austin Page, Associate Planner
THROUGH: Steve Foote, AICP, Planning Director
MEETING: May 19, 2020
SUBJECT: BZA 824-2020 (Variance – 8003 Brightwater Way)

BZA 796-2020: Submitted by Jeff Westall for 8003 Brightwater Way. The property is zoned R-2, contains approximately .25 acres and is located in the Brixworth subdivision. The applicant requests a variance from the setback requirements of the UDC to cover and screen an existing patio. Requested by Jeff & Julie Westall.

Request: The applicant is requesting a variance to reduce the building setback for a covered screened patio to encroach the 25’ rear setback. The applicant requests to cover and screen the existing 10’x19’ patio.

Property Description and History: 8003 Brightwater Way is located in the Brixworth subdivision and is zoned R-2, Single-Family Residential. All surrounding properties are also zoned R-2. The property has a rear setback of 25’ and a 10’ PUDE. The property is rectangular in shape and has no irregularities. The home is approximately 6.5’ from the rear setback and 31.5’ from the rear property line. Currently, there is an existing 10’x19’ uncovered patio that encroaches approximately 4.5’ into the rear setback (21.5’ from the rear property line), which is permissible. The property is adjacent to other residential lots in Brixworth and the backyard is enclosed by a 6’ privacy fence. The applicant has discussed the Board of Zoning Appeals process with staff to ensure a complete application has been submitted.

Analysis: The applicant is proposing to cover and screen the existing patio and add a fireplace that will extend 2’ beyond the patio. The fireplace will be approximately 19.5’ from the rear property line and well outside of the PUDE. The applicant has provided staff with a complete application submittal. A list of all adjacent property owners has been provided, along with a notification letter and proof of mailings. The applicant is proposing screen to enclose the patio and will not use any other materials for screening purposes. The proposed patio will be covered with a HIP roof system that is shingled to match the existing home. The covered patio framing and supports are proposed to be constructed with materials that match the characteristics of the home and will have a fire place on the end of the patio. This fire place will be located at the center of the patio and will project no more than two additional feet into the setback, increasing the encroachment from 4.5’ to 6.5’. Once roofed over, the proposed structure will be attached to the primary structure and is considered part of the primary structure for building setback purposes. The applicant is proposing electrical to be installed in the structure. The proposed screened patio is 11.5’ from the PUDE and will not encroach.

Findings of Fact: The applicant has met UDC requirements regarding the U.S.P.S. First Class mailing of notices to all adjacent property owners of 8003 Brightwater Way and at least ten days in advance of the first scheduled action. City staff has placed notice in the newspaper and a sign on the subject property. The findings listed below represent staff’s response to the approval standards required in Section 13.4.E of the UDC, to be considered by the Board of Zoning Appeals prior to approving a variance and a review of the applicant’s justification statements.

1. Where, by reason of exceptional narrowness, shallowness, size or shape of a specific piece of property at the time of the enactment of this Code, or by reason of exceptional topographic conditions or other extraordinary and exceptional situation or condition of such piece of property it is not able to comply with the regulations as required under this Code. The city receives many requests from property owners to cover existing patios, decks, and/or create new ones. This has often times been considered a reasonable request, based on the facts of each individual situation, when the size of the structure is reasonable, and when the encroachment is limited. With the positioning of the home and layout of the property’s setbacks, little room is available to cover the existing patio.
Per the applicant: “Total depth from back of house to rear property line is 31.53 ft. M.B.S.L. was set at 25 ft. and PUDE. at 10 ft. Requesting a variance to allow patio cover structure to extend approximately 7’ into the M.B.S.L.”

2. The strict application of any provision enacted under this Code would result in peculiar and exceptional practical difficulties to or exception or place undue hardship upon the owner of such property. The subject lot is considered a standard lot. The proposed screened patio encroaches approximately 6.5’ into the rear setback and does not encroach into the PUDE. The existing patio encroaches 4.5’ and is only increased by the addition of a fireplace.

Per the applicant: “M.B.S.L. effectively renders rear of property unusable.”

3. Such relief may be granted without substantial detriment to the public good and without substantially impairing the intent and purpose of the zoning map and this Code. The encroachment is along the rear of the property, which backs up to the rear lot line of other properties. Staff finds the home to be consistent with the surrounding lots and does not believe that the proposal will have a significant detrimental impact on the public good or any of the surrounding property.

Per the applicant: “Yes, a proposed variance that is granted would not encroach onto neighbor property or PUDE easement.”

Recommendation: If the Board of Zoning Appeals finds the request to be reasonable and compliant with the requirements for a variance, staff recommends that they adopt the findings in this report or others to support the approval. Should the Board of Zoning Appeals approve BZA 796-2020, a building setback variance request for construction of a screened patio, approval should be subject to the submitted plans and the conditions below.

Possible Motion: Motion to adopt the finding of facts and conclusions of law provided in the staff report and to approve variance BZA 824-2020 to reduce the building setback for a covered screened in patio and fireplace at 8003 Brightwater Way with the following conditions.

1. Substantial consistency with the plans submitted and encroachment shown.
2. The covered patio shall not be enclosed with any material other than screening.
3. Subject to homeowner’s association approval as may be required for Brixworth.
4. Per Section 13.4G of the Unified Development Code, an approved variance will expire one year from the date of approval unless a site plan review application has been submitted or, where site plan review is not required, a building permit is obtained. The Board of Zoning Appeals may grant an extension for a period of validity for no longer than an additional 6 months, so long as the applicant applies in writing for an extension of time at any time prior to the date of expiration. No public hearing is required for approval of such extension of time.
# City of Spring Hill, TN

## Variance

**Board of Zoning Appeals**

**Submittal Checklist**

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<th><strong>APPLICANT MUST READ AND INITIAL EACH BOX TO THE RIGHT</strong></th>
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<td>a)</td>
<td>Published notice is required. The City of Spring Hill will publish notice in a newspaper of general circulation within the City.</td>
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<td>b)</td>
<td>Written notice must be mailed by U.S.P.S. First Class at least ten days in advance of the first scheduled action to all adjoining property owners of the subject property. The notice must include the date, time, place, and purpose of such hearing/meeting, the name of the applicant, and the address of the subject property. Nothing in this section is intended to prevent the applicant or the City from giving additional notice as he/she may deem appropriate. The <strong>APPLICANT IS RESPONSIBLE</strong> for mailing notices and must provide the City with an affidavit stating that notice was mailed to every property owner as required and provide the City with a list of names, addresses, and property identification numbers (PIN) of all notice recipients, and a map indicating the boundaries of the notice area. The applicant must also provide the City an example of the notice sent.</td>
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<td>c)</td>
<td>Posted notice is required on the property and will be installed by the City of Spring Hill. This signage must be maintained until all action on the application has been completed. Please call the Planning Department if the sign is damaged or removed.</td>
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<td>d)</td>
<td>A pre-application conference with City staff is recommended, but not mandatory.</td>
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The following information is **recommended** to facilitate review of the application:

- Letter of request outlining the nature and reason for the request
- A written narrative explaining how the request is consistent with the comprehensive plan
- A concept or plot plan that shows the property and illustrates the variance(s) being sought.
- An explanation as to why the property may not be developed and reasonably used without the variance
- A written statement from the applicant expanding how the request is consistent with the approval standards listed below.

---

**Applicant Name/Project:**  

**JEFF WESTALL**  

Variance BOZA checklist
## Approval Standards

"The Board of Zoning Appeals may authorize a variance from the strict application of this Code so as to relieve such difficulties or hardship only in accordance with the following criteria. The Board of Zoning Appeals must make findings of fact on all criteria. Please initial all that apply."

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<td>The application for a variance should provide the applicant's evidence that the application meets or exceeds the criteria below.</td>
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<td>Where, by reason of exceptional narrowness, shallowness, size or shape of a specific piece of property at the time of the enactment of this Code, or by reason of exceptional topographic conditions or other extraordinary and exceptional situation or condition of such piece of property it is not able to comply with the regulations as required under this Code.</td>
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<td>The strict application of any provision enacted under this Code would result in peculiar and exceptional practical difficulties to or exception or place undue hardship upon the owner of such property.</td>
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<td>&quot;Such relief may be granted without substantial detriment to the public good and without substantially impairing the intent and purpose of the zoning map and this Code.&quot;</td>
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<td><strong>Variance BOZA checklist</strong></td>
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<td>Yes, a proposed variance that is granted would not encroach onto neighbor property or Pude Casement.</td>
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Applicant Name/Project: **Jeff Westall**

Variance BOZA checklist
8003 Brightwater Way – Plot Plan

- Proposed Fireplace at edge of patio
- Proposed Roof Outline 12' x 19'

Plot Plan for Lot 210
Phase 3, Section 2
Brixworth Subdivision
8003 BRIGHTWATER WAY - EXISTING SITUATION & PROPOSED IMPROVEMENTS

EXISTING YARD WITH SKETCH OF PROPOSED IMPROVEMENTS

EXISTING YARD, OPPOSITE VIEW.
Example of screened in porch and roof structure. Most of the wood will be cedar.

Example of the fireplace, will use a man made gray colored stone that matches our indoor fireplace.
BZA 825-2020: Submitted by Jim Hall for 2826 Windy Way. The property is zoned R-1, contains approximately .45 acres and is located in the Buckner Place subdivision. The applicant requests a special use to install a new antenna that will exceed the maximum height of a radio antenna tower by approximately twenty-five feet, from 47’ to 72’ feet high. Requested by Jim Hall.

Request: A HAM radio antenna is a permitted use in the R-1 zoning district. The maximum height permitted for the antenna is the 10’ higher than the building height permitted in the zoning district. The R-1 district has a maximum height of 40’ so the antenna is limited to a maximum of 50’ high. A special use is required per Article 9.3.B. of the UDC to exceed this height. The applicant is requesting special use approval for a new antenna with a maximum proposed height of 72’.

In addition to this request, the applicant has submitted a variance application to reduce the setback requirement for the distance of a tower to the primary residence (BZA 826-2020).

Property Description and History: The property is located at 2826 Windy, contains .45 acres and is in the Buckner Place Subdivision. The applicant, Jim Hall has resided at 2826 Windy Way for 28 years and is licensed with the FCC. He uses his radio antenna to support Spring Hill and the surrounding area during major natural or man-made disasters. Mr. Hall is a member of the Williamson County Amateur Radio Emergency Service and a trained weather spotter by the National Weather Service. The radio antenna is also used to communicate with other radio enthusiasts via Morse code. The property currently has an antenna that when fully extended, reaches a max height of 47’. According to the applicant, communication capabilities on the current antenna have diminished due to surrounding trees, increase in the number of homes and other types of electronic emissions. Staff has had numerous discussions with the applicant about the Board of Zoning Appeals process and to ensure a complete application submitted.

Spring Hill Rising 2040: The existing single-family home and the accessory HAM radio antenna are permitted uses within the future land use designation of “Residential Neighborhood Area”. The radio antenna is not contradictory to the Comprehensive Plan.

Analysis: The property currently has an antenna that when fully extended, reaches a max height of 47’. The antenna typically stays at this height with the exceptions of storms or when the applicant is out of town. The antenna is then lowered to height around 30’ to 35’. The proposed new 72’ antenna will remain at its maximum height and will follow the same guidelines for lowering.

A radio antenna tower is a permitted use in the R-1 zoning district, allowed to be building mounted and shall not exceed 10’ in height above the primary structure. According to Article 9.3.B.3. of the UDC, if a taller antenna is technically necessary to engage successfully in amateur radio communications, than a special use is required. The applicant has provided staff with a detailed report of his history on the property and the problem’s he has been having. As mentioned above, the current antenna tower reaches a maximum height of 47’, but is no longer functioning optimally. Surrounding trees have reached heights of 65+ and more homes have been built. The additional homes result in the addition of frequency emissions from all sorts of electronic devices and have slowly diminished his signal over the years and is why he is pursuing a special use to increase the height of the radio antenna.

In accordance to 9.3.B.4, the applicant has provided the following evidence that the height is necessary;
“There are amateur radio stations that I currently am not able to successfully communicate with because of my limited antenna height. The frequencies used for local amateur radio communications are VHF and UHF, which allow communication to other stations primarily within line of site. The additional 25 feet of height would increase my range significantly, and would be extremely important during a major disaster. Longer distance communication on the HF bands benefit greatly with higher antennas, with 72 feet being the optimum height above ground for my operation and location.”

and will not be a hazard:

“The existing tower and reinforced concrete base are not robust enough to be safely extended up to the proposed 72 feet of height. The existing tower would be replaced with a sturdier, heavy duty, 72 foot crank up tower, such as the US Tower HDX-572MDPL telescoping tower. The reinforced concrete base required for the new tower would need to be approximately twice the size of the existing concrete tower base. A new concrete base would be installed adjacent to the existing one. The design specifications and structural analysis documentation for this tower is available on the ustower.com website if interested.”

“A licensed structural civil engineering firm would be hired to observe construction of the tower base, and perform final inspection of the tower installation to ensure it was done in accordance with the manufacturer’s specifications. The civil engineering firm Structural Engineering and Inspection (SFI), located in Brentwood TN, is currently being considered to perform this task.”

“One of the advantages of using a telescoping tower is that they can be easily raised and lowered using a winch. As an added safety precaution, during potential storms with expected damaging winds, I lower my existing antenna to a height of approximately 35 feet. This reduces stress on the antenna and tower. When leaving town for vacation, the tower is also lowered. I will do the same with the 72-foot tower, lowering it to approximately 45 feet during severe storms and when not in use for an extended period of time.”

“The Yagi beam antenna has been up for almost 20 years, and was specifically designed to handle extreme weather. The antenna is in perfect condition, and raising it to a height of 72 feet will not cause any issues. The proposed tower will not be a hazard because it is designed to handle much larger antennas and extreme winds conditions with a high degree of safety, it will be installed according to the manufacturer’s specifications, and inspected by a licensed structural civil engineering firm.”

The applicant has also provided information regarding electromagnetic interference:

“I am not aware of any radio frequency interference to my neighbors’ electronic equipment caused by my existing 47-foot tower and Yagi beam antenna. Raising the antenna to a height of 72 feet would actually reduce the amount of potential interference. This is because the distance from the antenna to homes on the adjacent lots will be increased. Electromagnetic interference with the existing tower and Yagi antenna to equipment located off the lot has not been an issue, and by raising the antenna to 72 feet will make it even less of a possibility.”

Findings of Fact: The applicant has met the UDC requirements regarding the U.S.P.S. First Class mailing of notices to all properties within 500’ of 2826 Windy Way and at least ten days in advance of the first scheduled action. City staff has placed notice in the newspaper and a sign on the subject property. The findings listed below represent staff’s response to the approval standards required in Section 13.3 of the UDC, to be considered by the Board of Zoning Appeals prior to approving a special use.

The City’s Unified Development Code offers the following regarding special uses:
The listing of a use as a special use within a zoning district does not constitute an assurance or presumption that such special use will be approved. Rather, each special use must be evaluated on an individual basis, in relation to all applicable standards of this Code. Such evaluation will determine whether approval of the special use is appropriate at the particular location and in the particular manner proposed. The decision of the Board of Zoning Appeals must be based on findings to support each of the following conclusions:

1. The consistency of the proposed special use with the Comprehensive Plan and any adopted land use policies.
2. The special use in the specific location proposed is consistent with the spirit and intent of this Code.
3. The proposed special use will not endanger the public health, safety, or welfare.
4. The proposed special use is compatible with the general land use of adjacent properties and other property within the immediate vicinity.
5. The special use in the specific location has sufficient public infrastructure and services to support the use.

The use is permitted in the R-1 zoning district, however the increase in height requires a special use. The size of the lot is remaining unchanged and currently houses a radio antenna. Staff hasn’t found any evidence indicating that the installation of a new antenna with a taller maximum height would have negative impacts or would cause any inconsistencies with the UDC. Not only does the applicant use his radio to communicate with other radio enthusiast but his radio antenna serves a purpose as part of the Williamson County Amateur Radio Emergency Service. An increase in antenna height would provide better signal and could be extremely useful during bouts of severe weather, etc. The site is adjacent to other residentially zoned properties, and has never received a complaint regarding the radio antenna (according to the applicant). The increase in antenna height should not have any negative impact on surrounding properties. The related variance request is for a setback reduction from the applicant’s house. The antenna complies with required setbacks from adjacent properties. Staff finds that the application is consistent with the above criteria.

**Recommendation:** If the Board of Zoning Appeals agrees with staff’s findings and determines that the requested request meets the requirements for a special use, staff recommends that the Board of Zoning Appeals adopt the findings of fact and conclusions of law found in this report and approve BZA 825-2020. Approval is recommended subject to the conditions listed below.

**Possible Motion:** Motion to adopt the finding of facts and conclusions of law provided in this report and to approve special use BZA 825-2020 to permit the installation of a new HAM radio antenna with a maximum height of approximately 72’ with the following conditions:

1. Have general consistency with the plan and documents submitted to the Board of Zoning Appeals.
2. The new radio antenna shall not exceed a height of 72’.
3. Per Section 13.4G of the Unified Development Code, an approved special use approval will expire within one year of the date of approval if the licenses or permits required for the operation or maintenance of the use have not been obtained. The Board of Zoning Appeals may grant an extension for a period of validity for no longer than an additional 6 months, so long as the applicant applies in writing for an extension of time at any time prior to the date of expiration. No public hearing is required for approval of such extension of time.
April, 27 2020

James Hall
2826 Windy Way
Thompson’s Station, TN 37179

Re: Amateur Radio Antenna Elevation Change Request

To Whom It May Concern,

My name is James Hall, a Spring Hill resident in the Buckner Place subdivision at 2826 Windy Way since 1992. I have been an active amateur radio operator since the age of 16, and licensed by the FCC with the call sign AD4EB. As a hobby I use my station to communicate with other amateurs worldwide, primarily using Morse code. But of greater importance, my amateur radio station and knowledge prepares me to support Spring Hill and the surrounding area during a major natural or man-made disaster. This will be especially beneficial if commercial and government communication towers and networks become compromised. I am a member of the Williamson Country Amateur Radio Emergency Service (WCARES), and a trained weather spotter by the National Weather Service.

My communication capability has been slowly diminishing over the past 10-15 years because of issues explained in the following report. These issues would be greatly reduced by increasing the height of my antenna by 25 feet. Amateur radio antennas are covered in the Uniform Development Code, and raising the antenna height on my property will require approvals by the Board of Zoning Appeals. The approvals needed include both a special use waiver for the height, and a setback variance for the distance from the tower to my residence.

Your consideration for approval of my request is greatly appreciated. The additional antenna height will be a major improvement in my ability to communicate using amateur radio, and to assist Spring Hill in the case of a major disaster to our area.

Regards,

James Hall

James Hall
Phone: 615-794-8349
Amateur Radio Antenna Elevation Change Request

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Attachments

  A. Approval Letters from 6 Neighbors
  B. Antenna Height and Communications Effectiveness
  C. Addresses of Property Owners within 500 Feet
  D. Addresses of Adjacent Property Owners
Amateur Radio Antenna Elevation Change Request

Introduction

The purpose of this report is to obtain approval from the Spring Hill Board of Zoning Appeals for increasing the height of my amateur radio antenna tower. The approval process will require me to obtain a special use waiver for the antenna tower height, and a setback variance for the distance from the tower to my residence.

There were two reasons I chose to live in Buckner Place subdivision. First, there were no other homes behind my house, in fact no other subdivisions within a one-mile radius. And second, because the subdivision covenants allowed for me to have ham radio antennas, as long as they in the back yard.

From the 1988 covenants:

18. Any antenna or other device for the transmission or reception of television signals, radio signals or any form of electromagnetic radiation which may be erected on any lot shall be on the rear quarter of such lot.

Over the past 28 years I have installed several antennas in the back yard, including a crank up telescoping tower which can be raised to a maximum height of 47 feet. On top of this tower is a 3 element Yagi beam antenna. My antennas have served me fairly well over the past 28 years, but changes are now needed to maintain my communication capabilities.

One issue is the surrounding trees on my property, and on adjacent properties, have grown to over 65 feet tall and are affecting the antenna’s performance. Another issue is radio frequency emissions from TV/internet providers, and electronic equipment in adjacent homes, interfere with my ability to receive signals on certain frequencies. Equipment such as plasma TVs, microwaves, and switching power supplies are especially problematic. Raising my antenna to a higher elevation would help mitigate the problem. Because of these issues, and others discussed in this report, I am requesting permission to increase the height of my antenna by an additional 25 feet, to a height of 72 feet.
Amateur Radio Antenna Elevation Change Request

Photographs of the existing tower.

View of owner's property and amateur radio antenna.
I have had no complaints from anyone about the height or aesthetics of my tower or antenna. Being a good neighbor, I discussed my plans with all 6 surrounding neighbors that can see my antenna from their property. Each of them indicated they would not have an issue with raising my antenna 25 feet, and signed letters attesting to their acceptance. Copies of these letters are in Attachment A, “Approval Letters from 6 Neighbors.pdf”.
Amateur Radio Antenna Elevation Change Request

Contacting the City Engineer and City Planning Department

On April 7, 2020 I contacted the City Engineer, Tom Wolf, who referred me to Steve Foote and Austin Page of the City Planning Department. Steve pointed me to the Unified Development Code (UDC), Article 9.3 B titled “Amateur (HAM) Radio Equipment”. Upon review of the Code with Steve Foote, it became evident that I would need to apply for a special use waiver for height, and a setback variance because of the short distance between the tower and my residence.

Unified Development Code - Amateur Radio Equipment

The information below was copied from the current UDC, and relate to amateur radio antennas and towers. Pertinent details regarding my antenna height increase request are highlighted in yellow.

9.3 B. Amateur (HAM) Radio Equipment

1. Towers that solely support amateur (HAM) radio equipment and conform to all applicable performance criteria set forth in Section 9.5 are permitted only in the rear yard. Towers are limited to the maximum building height of the applicable district plus an additional ten feet. If a taller tower is technically necessary to engage successfully in amateur radio communications, special use approval is required (item 4).

2. All towers must be set back from any existing principal building on the lot and adjacent lots, measured at the nearest external wall or walls, and within the buildable area of any adjacent undeveloped lot, as defined by current setback requirements, no less than 100% of the tower height. The setback distance is measured from the nearest point on the outside edge of a tower to the nearest point on the foundation of the building.

3. Antennas may also be building-mounted and are limited to a maximum height of ten feet above the structure. If a taller antenna is technically necessary to engage successfully in amateur radio communications, special use approval is required (item 3).

4. An antenna or tower that is proposed to exceed the height limitations requires approval as a special use. The operator must provide evidence that a taller tower and/or antenna is technically necessary to engage successfully in amateur radio communications. In addition, the applicant must provide evidence that the tower and/or antenna will not prove a hazard and that it conforms to all applicable performance criteria of Section 9.5. As part of the application, the applicant must submit a site plan showing the proposed location of the tower or antenna, as well as its relation to the principal building and the distance from principal buildings on abutting lots.

5. Every effort must be made to install towers or antennas in locations that are not readily visible from adjacent lots or from the public right-of-way.
Amateur Radio Antenna Elevation Change Request

6. Any such antennas and/or towers owned or operated by the City are exempt from these requirements.

9.5 F. Electromagnetic Interference.

Electromagnetic interference from any operation of any use must not adversely affect the operation of any equipment located off the lot on which such interference originates.

Special Use Request for Increased Tower Height

Tower height limitations are covered in UDC Articles 9.3 B.1 and 9.3 B.4 (bold text), my responses follow each article (normal text).

9.3 B.1 – Tower Location and Height

9.3 B.1. Towers that solely support amateur (HAM) radio equipment and conform to all applicable performance criteria set forth in Section 9.5 are permitted only in the rear yard. Towers are limited to the maximum building height of the applicable district plus an additional ten feet. If a taller tower is technically necessary to engage successfully in amateur radio communications, special use approval is required (item 4).

The existing tower is located in the rear yard, approximately 2 feet to the east of the garage foundation. The maximum building height in my district is 40 feet, so then according to the UDC the maximum tower height for my property is 50 feet (40 + 10 feet). Since my proposed tower height is 72 feet, special use approval is required.

9.3 B.4 – Increased Antenna Height Justification

9.3 B.4 An antenna or tower that is proposed to exceed the height limitations requires approval as a special use. The operator must provide evidence that a taller tower and/or antenna is technically necessary to engage successfully in amateur radio communications. In addition, the applicant must provide evidence that the tower and/or antenna will not prove a hazard and that it conforms to all applicable performance criteria of Section 9.5. As part of the application, the applicant must submit a site plan showing the proposed location of the tower or antenna, as well as its relation to the principal building and the distance from principal buildings on abutting lots.

This section, 9.3 B.4, will be broken down into 3 parts, A thru C:

A. Evidence Higher Antenna is Technically Necessary

The operator must provide evidence that a taller tower and/or antenna is technically necessary to engage successfully in amateur radio communications.
Amateur Radio Antenna Elevation Change Request

There are amateur radio stations that I currently am not able to successfully communicate with because of my limited antenna height. The frequencies used for local amateur radio communications are VHF and UHF, which allow communication to other stations primarily within line of site. The additional 25 feet of height would increase my range significantly, and would be extremely important during a major disaster. Longer distance communication on the HF bands benefit greatly with higher antennas, with 72 feet being the optimum height above ground for my operation and location. This is explained in detail in Attachment B, "Antenna Height and Communications Effectiveness.pdf".

Please take the time to read the executive summary on Page 1 of Attachment B. It provides evidence as to why a higher antenna is technically necessary for my station to operate successfully.

B. Evidence the Tower/Antenna will not be a Hazard

In addition, the applicant must provide evidence that the tower and/or antenna will not prove a hazard ....

The existing tower and reinforced concrete base are not robust enough to be safely extended up to the proposed 72 feet of height. The existing tower would be replaced with a sturdier, heavy duty, 72 foot crank up tower, such as the US Tower HDX-572MDPL telescoping tower. This tower is specially designed to handle significantly larger Yagi beam antennas with high wind loads. The reinforced concrete base required for the new tower would need to be approximately twice the size of the existing concrete tower base. A new concrete base would be installed adjacent to the existing one. The design specifications and structural analysis documentation for this tower is available on the ustower.com website if interested.

A licensed structural civil engineering firm would be hired to observe construction of the tower base, and perform final inspection of the tower installation to ensure it was done in accordance with the manufacturers specifications. The civil engineering firm Structural Engineering and Inspection (SFI), located in Brentwood TN, is currently being considered to perform this task.

One of the advantages of using a telescoping towers is that they can be easily raised and lowered using a winch. As an added safety precaution, during potential storms with expected damaging winds, I lower my existing antenna to a height of approximately 35 feet. This reduces stress on the antenna and tower. When leaving town for vacation, the tower is also lowered. I will do the same with the 72-foot tower, lowering it to approximately 45 feet during severe storms and when not in use for an extended period of time.

The Yagi beam antenna has been up for almost 20 years, and was specifically designed to handle extreme weather. The antenna is in perfect condition, and raising it to a height of 72 feet will not cause any issues.

The proposed tower will not be a hazard because it is designed to handle much larger antennas and extreme winds conditions with a high degree of safety, it will be installed according to the manufacturers specifications, and inspected by a licensed structural civil engineering firm.
C. Conformance to Applicable Performance Criteria

... and that it conforms to all applicable performance criteria of Section 9.5.

Section 9.5, Environmental Performance Standards, has 8 elements (A thru H) for which only element F is applicable this amateur radio towers and antenna.

F. Electromagnetic Interference. Electromagnetic interference from any operation of any use must not adversely affect the operation of any equipment located off the lot on which such interference originates.

I am not aware of any radio frequency interference to my neighbors' electronic equipment caused by my existing 47-foot tower and Yagi beam antenna. Raising the antenna to a height of 72 feet would actually reduce the amount of potential interference. This is because the distance from the antenna to homes on the adjacent lots will be increased, as discussed on page 1 of the Attachment B, "Antenna Height and Communications Effectiveness.pdf". Quoted from this document:

"if the antenna can be moved farther away from neighboring electronic devices—putting it higher, in other words—this will greatly reduce the likelihood of interference, which decreases at the inverse square of the distance. For example, doubling the distance reduces the potential for interference by 75%"

Electromagnetic interference with the existing tower and Yagi antenna to equipment located off the lot has not been an issue, and by raising the antenna to 72 feet will make it even less of a possibility.
Amateur Radio Antenna Elevation Change Request

Site Aerial Photo Showing Proposed Tower and Base Location

2828 Windy Way

Existing Base 3' x 2.5'

New Base 5.5' x 5.5'

Roof Eave

Approximate Garage Outside Wall

James Hall

Page 10

April 27, 2020
Amateur Radio Antenna Elevation Change Request

Aerial Map Showing Tower Distances to Adjacent Properties

Aerial map showing subject owner’s home, property lines, and adjacent homes. The radius of the yellow circle is 72 feet, the height of the proposed tower. The center of the circle is the location of the tower and concrete base. The closest adjacent property owner’s home is approximately 105 feet to the south of the proposed tower location.
Amateur Radio Antenna Elevation Change Request

Special Use Board of Zoning Appeals Submittal Checklist

City of Spring Hill, TN

Special Use
Board of Zoning Appeals
Submittal Checklist

<table>
<thead>
<tr>
<th>APPLICANT MUST READ AND INITIAL EACH BOX TO THE RIGHT</th>
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<tr>
<td>a) Published notice is required. The City of Spring Hill will publish notice in a newspaper of general circulation within the City.</td>
<td>JFH</td>
</tr>
<tr>
<td>b) Written notice must be mailed by U.S.P.S. First Class at least ten days in advance of the first scheduled action to all property owners within 500 feet of the property line of the subject property. The notice must include the date, time, place, and purpose of such hearing/meeting, the name of the applicant, and the address of the subject property. Nothing in this section is intended to prevent the applicant or the City from giving additional notice as he/she may deem appropriate. The APPLICANT IS RESPONSIBLE for mailing notices and must provide the City an affidavit stating that notice was mailed to every property owner as required and provide the City with a list of names, addresses, and property identification numbers (PIN) of all notice recipients, and a map indicating the boundaries of the notice area. The applicant must also provide the City an example of the notice</td>
<td>JFH</td>
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<tr>
<td>c) Posted notice is required on the property and will be installed by the City of Spring Hill. This signage must be maintained until all action on the application has been completed. Please call the Planning Department if the sign is damaged or removed.</td>
<td>JFH</td>
</tr>
<tr>
<td>d) A pre-application meeting with City staff is recommended, but not mandatory.</td>
<td>JFH</td>
</tr>
</tbody>
</table>

The following information is recommended for a Special Use request:

1. Name, address, zoning, and property lines of all property owners adjacent to the exterior boundaries of the project | JFH     |
2. Name, address, phone numbers of owner(s), developer(s), and representatives | JFH     |
3. Plans illustrating the proposed use and development of the site including: | JFH     |
   - North arrow, scale, date of preparation, zoning classification, map/parcel numbers, total acreage, and proposed use | JFH     |
   - Title block located in the lower right hand corner indicating the name and type of project, scale, firm/individual preparing drawing, date, and revisions | JFH     |
Amateur Radio Antenna Elevation Change Request

A vicinity map of the project with a radius of 1.5 miles from the project, any Major Thoroughfare Plan streets, and the 100 year floodplain boundary  

Site coverage note indicating the percentage of the site that is currently covered by impervious surface. The location of all existing structures on the property  

Title, name, address, stamp, and signature of the design professional(s) licensed to prepare the required plans and plats  

4 Any other information essential to the complete review and consideration of the application by the City of Spring Hill.  

Approval Standards  

The listing of a use as a special use within a zoning district does not constitute an assurance or presumption that such special use will be approved. Rather, each special use must be evaluated on an individual basis, in relation to all applicable standards of this Code. Such evaluation will determine whether approval of the special use is appropriate at the particular location and in the particular manner proposed. The decision of the Board of Zoning Appeals must make findings to support each of the following conclusions. Please initial all that apply.  

The application for a special use should provide the applicant’s evidence that the application meets or exceeds the criteria below.  

1 The consistency of the proposed special use with the Comprehensive Plan and any adopted land use policies.  

Within the Plan there is mention of and enhancing the quality of life for existing and future residents. The additional antenna height will significantly enhance my amateur radio communication capabilities, and thereby increasing my ability to serve the public good during emergencies. Upon carefully reviewing the Comprehensive Plan, I did not find anything specific that should preclude me from increasing the antenna height by 25 feet.  

2 The special use in the specific location proposed is consistent with the spirit and intent of this Code.  

I chose to live in Spring Hill’s Buckner Place subdivision because the covenants at this location allow for amateur radio antennas and towers. Section 9.3 B of the Code, Amateur (Ham) Radio Equipment, states that special use approval for height would be considered if sufficient evidence of need is presented. In the report presented, reasons were provided for why the 25 feet antenna height increase is needed. Some of these reasons include the height of surrounding trees, reduced interference, and increased communication range and that could prove critical during a disaster. I believe allowing this increase in elevation would be consistent with the spirit and intent of the Code.
## Amateur Radio Antenna Elevation Change Request

<table>
<thead>
<tr>
<th></th>
<th>The proposed special use will not endanger the public health, safety, or welfare.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>The proposed additional tower height will actually be a benefit to the public health, safety, and welfare in the case of a natural or man-made disaster. The increased range and quality of communication will allow me to better serve the community and local government if their communication systems should be compromised.</td>
</tr>
<tr>
<td>4</td>
<td>The proposed special use is compatible with the general land use of adjacent properties and other property within the immediate vicinity.</td>
</tr>
<tr>
<td></td>
<td>I have not received complaints from anyone concerning the height or aesthetics of my tower/antenna. I have signed letters from all surrounding neighbors that can visually see the antenna from their property, stating they have no issue with me raising the height of my antenna by 25 feet. Copies of these letters are in Attachment A, “Approval Letters from 6 Neighbors.pdf”.</td>
</tr>
<tr>
<td>5</td>
<td>The special use in the specific location has sufficient public infrastructure and services to support the use.</td>
</tr>
<tr>
<td></td>
<td>This special use does not require any public infrastructure or services.</td>
</tr>
</tbody>
</table>

Applicant/Project: James Hall – Amateur Radio Tower Elevation Change Request

Special Use BOZA checklist

April 27, 2020
Amateur Radio Antenna Elevation Change Request

Example of Special Use Written Notice to Property Owners Within 500 Feet

April, 27 2020

Re: Proposed Special Use Request

Dear Property Owner,

This written notice is being sent to you as required by the Spring Hill Unified Development Code. The purpose of this written notice is to inform you of an existing special use request to the City of Spring Hill for property located at 2826 Windy Way, Thompson’s Station, TN 37179; owned by James and Melody Hall. Special use requests require that a public notice be mailed to the owners of all property within five hundred (500) feet of said property.

The special use request is related to increasing the height of an amateur radio antenna on said property from 47 feet to 72 feet. Refer to section 9.3 of the Unified Development Code for additional information if necessary. This code can be found on the City of Spring Hill website.

There will be a meeting by the City of Spring Hill Board of Zoning Appeals on Tuesday May 19, 2020 at 5:30 PM. Due to the COVOD-19 virus, there is no way for the public to attend the meeting. If you would like the Board to receive your public comments regarding this item, please submit them to Austin Page by email no later than noon on Tuesday May 19, 2020.

If you have any questions or concerns, please contact:

Austin Page, Associate Planner
City of Spring Hill, TN
(931) 486-2252 ext. 232
apage@springhilltn.org

Thank you,

James Hall

James Hall
Amateur Radio Antenna Elevation Change Request

Aerial Photo Showing Boundaries of the 500 Foot Written Notice Area

560-foot circle indicating all property owners within 500 feet of the property lines of subject property.

For names and addresses of property owners within this circle, refer to Attachment 3 "Addresses of Property Owners within 500 Feet.txt"
Amateur Radio Antenna Elevation Change Request

Setback Variance Request for Distance of Tower to Primary Residence

9.3 B.2 – Tower Setback Requirements

B.2 All towers must be set back from any existing principal building on the lot and adjacent lots, measured at the nearest external wall or walls, and within the buildable area of any adjacent undeveloped lot, as defined by current setback requirements, no less than 100% of the tower height. The setback distance is measured from the nearest point on the outside edge of a tower to the nearest point on the foundation of the building.

As shown on the aerial map on Page 11, all homes on adjacent lots are located greater than 72 feet from the tower. The closest home is to south, an acceptable 110 feet from the tower. As shown on the site aerial photo on Page 10, the proposed distance from the new taller tower to the principal building is only 4.5 feet. This is the reason the setback variance is being requested.

The location of the tower was chosen because it is the furthest distance away from all the adjacent properties when taken as a whole. The average distance from the base of the tower to the 5 adjacent residences is approximately 135 feet. If the tower was located 72 feet from the principal building, then the antenna would partially extend over adjacent property lines.

Placing the tower very close to the principle building is the optimum location when taking the adjacent lots and homes into consideration. As the homeowners of the principal building, my wife Melody and I accept all liability in the unlikely event the tower or antenna should ever cause damage to the home.

James Hall
Page 17
April 27, 2020
Amateur Radio Antenna Elevation Change Request

Variance Board of Zoning Appeals Submittal Checklist

City of Spring Hill, TN

Variance

Board of Zoning Appeals

Submittal Checklist

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<td>b) Written notice must be mailed by U.S.P.S. First Class at least ten days in advance of the first scheduled action to all adjoining property owners of the subject property. The notice must include the date, time, place, and purpose of such hearing/meeting, the name of the applicant, and the address of the subject property. Nothing in this section is intended to prevent the applicant or the City from giving additional notice as he/she may deem appropriate. The APPLICANT IS RESPONSIBLE for mailing notices and must provide the City with an affidavit stating that notice was mailed to every property owner as required and provide the City with a list of names, addresses, and property identification numbers (PIN) of all notice recipients, and a map indicating the boundaries of the notice area. The applicant must also provide the City an example of the notice sent.</td>
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<td>c) Posted notice is required on the property and will be installed by the City of Spring Hill. This signage must be maintained until all action on the application has been completed. Please call the Planning Department if the sign is damaged or removed.</td>
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<td></td>
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The following information is recommended to facilitate review of the application:

- Letter of request outlining the nature and reason for the request
- A written narrative explaining how the request is consistent with the comprehensive plan
- A concept or plot plan that shows the property and illustrates the variance(s) being sought.
- An explanation as to why the property may not be developed and reasonably used without the variance
# Amateur Radio Antenna Elevation Change Request

A written statement from the applicant expanding how the request is consistent with the approval standards listed below.

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>&quot;The Board of Zoning Appeals may authorize a variance from the strict application of this Code so as to relieve such difficulties or hardship only in accordance with the following criteria. The Board of Zoning Appeals must make findings of fact on all criteria. Please initial all that apply.&quot;</td>
</tr>
</tbody>
</table>

| The application for a variance should provide the applicant’s evidence that the application meets or exceeds the criteria below. |
| 1 "Where, by reason of exceptional narrowness, shallowness, size or shape of a specific piece of property at the time of the enactment of this Code, or by reason of exceptional topographic conditions or other extraordinary and exceptional situation or condition of such piece of property it is not able to comply with the regulations as required under this Code."

| This variance appeal pertains to the setback requirement from the antenna tower to the primary residence. The exceptional shallowness of the back yard does not allow placement of the tower 72 feet from the primary residence without placing it too near the adjacent property lines and residences. The proposed tower location, 4.5 feet from the primary residence, is the optimum location. James and Melody Hall, the homeowners, accept all liability should there ever be damage to the home because the tower is so near to it. |

| The strict application of any provision enacted under this Code would result in peculiar and exceptional practical difficulties to or exception or place undue hardship upon the owner of such property. |

| The strict application of the antenna setback requirement would require placing the antenna tower very close to property line to the rear of the primary residence. This would cause a portion of the antenna itself to extend over the adjacent homeowner's property as well as the tower being too close to their residences. |

| "Such relief may be granted without substantial detriment to the public good and without substantially impairing the intent and purpose of the zoning map and this Code." |
Amateur Radio Antenna Elevation Change Request

This variance, allowing placement of the tower close to the rear of the primary residence, will then allow the antenna to be 25 feet higher in elevation. This higher elevation will significantly extend the range and quality of radio communication. It is my assertion that approval of this variance would be a substantial benefit to the public good in the case of a natural or man-made disaster. In my opinion, locating the tower in the back yard near the primary residence does not substantially impair the intent and purpose of the zoning map and this Code.

Applicant/Project: James Hall – Amateur Radio Tower Elevation Change Request

Special Use BOZA checklist
Amateur Radio Antenna Elevation Change Request

Example of Variance Written Notice to Adjacent Property Owners

April, 27 2020

Re: Proposed Variance Request

Dear Property Owner,

This written notice is being sent to you as required by the Spring Hill Unified Development Code. The purpose of this written notice is to inform you of an existing variance request to the City of Spring Hill for property located at 2826 Windy Way, Thompson’s Station, TN 37179; owned by James and Melody Hall. Variance requests require that a public notice be mailed to the owners of all property adjacent to said property.

The variance request is to allow an amateur radio tower on said property to be located closer to the said property owner’s residence than specified in the Code. Refer to section 9.3 of the Unified Development Code for additional information if necessary. This code can be found on the City of Spring Hill website.

There will be a meeting by the City of Spring Hill Board of Zoning Appeals on Tuesday May 19, 2020 at 5:30 PM. Due to the COVOD-19 virus, there is no way for the public to attend the meeting. If you would like the Board to receive your public comments regarding this item, please submit them to Austin Page by email no later than noon on Tuesday May 19, 2020.

If you have any questions or concerns, please contact:

Austin Page, Associate Planner
City of Spring Hill, TN
(931) 486-2252 ext. 232
apage@springhilltn.org

Thank you,

James Hall
James Hall
Amateur Radio Antenna Elevation Change Request

Map Showing the 5 Adjacent Properties for Written Notices

Note: For names and addresses of adjacent property owners refer the Attachment 4, "Addresses of Adjacent Property Owners.txt".
April 21, 2020

Jim Hall
2826 Windy Way
Thompson's Station, TN 37179

Dear Neighbor,

I would like to increase the height of my amateur radio antenna tower by 25', and want to ensure that your family is agreeable to my doing so. The reason for increasing the height is to improve communication capability during emergencies and general use. This capability has been impacted by the 5 tall trees in my back yard, which have grown significantly since the tower was installed 20 years ago.

The existing crank up tower has a maximum height of 47', and I wish to replace it with one in the same location but with a maximum height of 72'. According to the current City of Spring Hill Unified Development Code (August 20, 2018), there are two conditions with raising this antenna that will require approval from the Spring Hill Board of Zoning Appeals. These conditions are:

1) The antenna tower will exceed the maximum allowable height allowed for this residential area, which will require me to obtain a special use waiver for height.
2) Antenna towers are to be set back from the principal and adjacent buildings by at least the height of the tower, in this case 72'. The set back requirements are met for all adjacent houses, by not my house. This condition will require me to obtain a set back variance.

I am in the process of submitting my request for the waiver and variance to the Board of Zoning Appeals.

If you and your family are agreeable to me increasing the height of my antenna to 72', and have no issue with me obtaining the special use waiver for height and the setback variance, please fill out and sign below.

Many thanks for your assistance with this matter.

Name: Robert C. Walker
Address: 2826 Windy Way
City, State: Thompsons Sta., TN
Zip Code: 37179
Signature: Robert C. Walker
Date: 4/21/20
Dear Neighbor,

I would like to increase the height of my amateur radio antenna tower by 25', and want to ensure that your family is agreeable to my doing so. The reason for increasing the height is to improve communication capability during emergencies and general use. This capability has been impacted by the 5 tall trees in my back yard, which have grown significantly since the tower was installed 20 years ago.

The existing crank up tower has a maximum height of 47', and I wish to replace it with one in the same location but with a maximum height of 72'. According to the current City of Spring Hill Unified Development Code (August 20, 2018), there are two conditions with raising this antenna that will require approval from the Spring Hill Board of Zoning Appeals. These conditions are:

1) The antenna tower will exceed the maximum allowable height allowed for this residential area, which will require me to obtain a special use waiver for height.

2) Antenna towers are to be set back from the principal and adjacent buildings by at least the height of the tower, in this case 72'. The set back requirements are met for all adjacent houses, by not my house. This condition will require me to obtain a set back variance.

I am in the process of submitting my request for the waiver and variance to the Board of Zoning Appeals.

If you and your family are agreeable to me increasing the height of my antenna to 72', and have no issue with me obtaining the special use waiver for height and the setback variance, please fill out and sign below.

Many thanks for your assistance with this matter.

Name: Nancy Sautzman
Address: 2841 Sutherland Dr.
City, State: Thompson's Station, TN 37179
Zip Code: 37179

Signature: N Sautzman Date: 4.27.20
April, 21 2020

Jim Hall
2826 Windy Way
Thompson’s Station, TN 37179

Dear Neighbor,

I would like to increase the height of my amateur radio antenna tower by 25’, and want to ensure that your family is agreeable to my doing so. The reason for increasing the height is to improve communication capability during emergencies and general use. This capability has been impacted by the 5 tall trees in my back yard, which have grown significantly since the tower was installed 20 years ago.

The existing crank up tower has a maximum height or 47’, and I wish to replace it with one in the same location but with a maximum height of 72’. According to the current City of Spring Hill Unified Development Code (August 20, 2018), there are two conditions with raising this antenna that will require approval from the Spring Hill Board of Zoning Appeals. These conditions are:

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2) Antenna towers are to be set back from the principal and adjacent buildings by at least the height of the tower, in this case 72’. The set back requirements are met for all adjacent houses, by not my house. This condition will require me to obtain a set back variance.

I am in the process of submitting my request for the waiver and variance to the Board of Zoning Appeals.

If you and your family are agreeable to me increasing the height of my antenna to 72’, and have no issue with me obtaining the special use waiver for height and the setback variance, please fill out and sign below.

Many thanks for your assistance with this matter.

Name: Nolan Williams
Address: 2830 Windy Way
City, State: Thompson’s Station, TN
Zip Code: 37079

Signature: [Signature] Date: 04/21/2020
April, 21 2020

Jim Hall
2826 Windy Way
Thompson’s Station, TN 37179

Dear Neighbor,

I would like to increase the height of my amateur radio antenna tower by 25’, and want to ensure that your family is agreeable to my doing so. The reason for increasing the height is to improve communication capability during emergencies and general use. This capability has been impacted by the 5 tall trees in my back yard, which have grown significantly since the tower was installed 20 years ago.

The existing crank up tower has a maximum height of 47’, and I wish to replace it with one in the same location but with a maximum height of 72’. According to the current City of Spring Hill Unified Development Code (August 20, 2018), there are two conditions with raising this antenna that will require approval from the Spring Hill Board of Zoning Appeals. These conditions are:

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2) Antenna towers are to be set back from the principal and adjacent buildings by at least the height of the tower, in this case 72’. The set back requirements are met for all adjacent houses, by not my house. This condition will require me to obtain a set back variance.

I am in the process of submitting my request for the waiver and variance to the Board of Zoning Appeals.

If you and your family are agreeable to me increasing the height of my antenna to 72’, and have no issue with me obtaining the special use waiver for height and the setback variance, please fill out and sign below.

Many thanks for your assistance with this matter.

Name: Aubin Fowler
Address: 2800 Pedrito Place
City, State: Thompson’s Station, TN
Zip Code: 37179

Signature: Aubin Fowler Date: 4·22·20
April, 21 2020

Jim Hall
2826 Windy Way
Thompson's Station, TN 37179

Dear Neighbor,

I would like to increase the height of my amateur radio antenna tower by 25’, and want to ensure that your family is agreeable to my doing so. The reason for increasing the height is to improve communication capability during emergencies and general use. This capability has been impacted by the 5 tall trees in my back yard, which have grown significantly since the tower was installed 20 years ago.

The existing crank up tower has a maximum height of 47’, and I wish to replace it with one in the same location but with a maximum height of 72’. According to the current City of Spring Hill Unified Development Code (August 20, 2018), there are two conditions with raising this antenna that will require approval from the Spring Hill Board of Zoning Appeals. These conditions are:

1) The antenna tower will exceed the maximum allowable height allowed for this residential area, which will require me to obtain a special use waiver for height.
2) Antenna towers are to be set back from the principal and adjacent buildings by at least the height of the tower, in this case 72’. The set back requirements are met for all adjacent houses, by not my house. This condition will require me to obtain a set back variance.

I am in the process of submitting my request for the waiver and variance to the Board of Zoning Appeals.

If you and your family are agreeable to me increasing the height of my antenna to 72’, and have no issue with me obtaining the special use waiver for height and the setback variance, please fill out and sign below.

Many thanks for your assistance with this matter.

Name: Charles Harris
Address: 2826 Windy Way
City, State: Thompson Station, TN
Zip Code: 37179

Signature: [Signature] Date: 4/21/20
April, 21 2020

Jim Hall
2826 Windy Way
Thompson’s Station, TN 37179

Dear Neighbor,

I would like to increase the height of my amateur radio antenna tower by 25\textdegree, and want to ensure that your family is agreeable to my doing so. The reason for increasing the height is to improve communication capability during emergencies and general use. This capability has been impacted by the 5 tall trees in my back yard, which have grown significantly since the tower was installed 20 years ago.

The existing crank up tower has a maximum height of 47\textdegree, and I wish to replace it with one in the same location but with a maximum height of 72\textdegree. According to the current City of Spring Hill Unified Development Code (August 20, 2018), there are two conditions with raising this antenna that will require approval from the Spring Hill Board of Zoning Appeals. These conditions are:

1) The antenna tower will exceed the maximum allowable height allowed for this residential area, which will require me to obtain a special use waiver for height.
2) Antenna towers are to be set back from the principal and adjacent buildings by at least the height of the tower, in this case 72\textdegree. The set back requirements are met for all adjacent houses, by not my house. This condition will require me to obtain a set back variance.

I am in the process of submitting my request for the waiver and variance to the Board of Zoning Appeals.

If you and your family are agreeable to me increasing the height of my antenna to 72\textdegree, and have no issue with me obtaining the special use waiver for height and the setback variance, please fill out and sign below.

Many thanks for your assistance with this matter.

Name: Carlos Cordero
Address: 2815 Windy Way
City, State: Thompson’s Station, TN.
Zip Code: 37179

Signature: ____________________ Date: 04-21-2020
BZA 826-2020: Submitted by Jim Hall for 2826 Windy Way. The property is zoned R-1, contains approximately .45 acres and is located in the Buckner Place subdivision. The applicant requests a variance from the setback requirement of radio antenna tower to the primary residence. Requested by Jim Hall.

Request: A radio antenna is a permitted use in the R-1 zoning district. This variance request is concurrent to the special use request (BZA 725-2020) asking for the increased height of a radio antenna tower. The applicant is requesting a variance for the distance of a radio antenna tower to the primary residence on the same property.

Property Description and History: The property is located at 2826 Windy Way. The property contains .45 acres and is in the Buckner Place Subdivision. The applicant, Jim Hall has resided at 2826 Windy Way for 28 years and is licensed with the FCC. He uses his radio antenna to support Spring Hill and the surrounding area during major natural or man-made disasters. Mr. Hall is a member of the Williamson County Amateur Radio Emergency Service and a trained weather spotter by the National Weather Service. The radio antenna is also used to communicate with other radio enthusiasts via Morse code. The property currently has an antenna that when fully extended, reaches a max height of 47’. The current antenna is located a 3’x2.5’ concrete base directly up to the rear exterior wall of the garage. If the special use application (BZA 825-2020) was approved, a new antenna and tower (pole) is proposed in a new location on the property. The proposed height of the new antenna is a maximum of 72’. Staff has had numerous discussions with the applicant about the Board of Zoning Appeals process and to ensure a complete application submitted.

Analysis: According to Article 9.3.B.2. of the UDC, “All towers must be set back from any existing principal building on the lot and adjacent lots, measured at the nearest external wall or walls, and within the buildable area of any adjacent undeveloped lot, as defined by current setback requirements, no less than 100% of the tower height. The setback distance is measured from the nearest point on the outside edge of a tower to the nearest point on the foundation of the building.”

According to the above regulation, the proposed tower is required to be setback a minimum of 72’ from the applicant’s residence and the adjacent residences. There is no vacant property. Based on the location of the proposed new tower/antenna, the applicant indicates that the pole is more than the required distance to any neighboring primary residence. However, the property is not sufficiently large enough to meet the setback from the applicant’s residence. The existing tower that has been on the property for many years does not meet the new setback in the UDC. The current 47’ high antenna is located in a 3’x2.5’ concrete base directly up to the rear exterior wall of the garage.

If the special use application (BZA 825-2020) was approved, the new antenna will be placed in a new 5.5’x5.5’ concrete base that is approximately 4.5’ from the rear exterior wall of the garage.

Findings of Fact: The applicant has met UDC requirements regarding the U.S.P.S. First Class mailing of notices to all adjacent property owners of 2826 Windy Way and at least ten days in advance of the first scheduled action. City staff has placed notice in the newspaper and a sign on the subject property. The findings listed below represent staff’s response to the approval standards required in Section 13.4.E of the UDC, to be considered by the Board of Zoning Appeals prior to approving a variance and a review of the applicant’s justification statements.
1. Where, by reason of exceptional narrowness, shallowness, size or shape of a specific piece of property at the time of the enactment of this Code, or by reason of exceptional topographic conditions or other extraordinary and exceptional situation or condition of such piece of property it is not able to comply with the regulations as required under this Code. The city receives many requests from property owners to cover existing patios, decks, and/or create new ones. This has often times been considered a reasonable request, based on the facts of each individual situation. Very rarely has the Board seen a variance request for a radio antenna tower. Staff finds that the properties location to very large trees and large amount of surrounding homes have limited the property owners radio capabilities. The existing antenna does not comply with the new UDC requirement for setbacks. Simply replacing the antenna on the existing tower with a new antenna and extending the height is not a practical option. The setback variance will allow the property owner the continued use and enjoyment of his property for radio purposes. The tower complies with setbacks from adjacent property.

Per the applicant: “This variance appeal pertains to the setback requirement from the antenna tower to the primary residence. The exceptional shallowness of the back yard does not allow placement of the tower 72 feet from the primary residence without placing it too near the adjacent property lines and residences. The proposed tower location, 4.5 feet from the primary residence, is the optimum location. James and Melody Hall, the homeowners, accept all liability should there ever be damage to the home because the tower is so near to it.”

2. The strict application of any provision enacted under this Code would result in peculiar and exceptional practical difficulties to or exception or place undue hardship upon the owner of such property. Due to signal quality, the applicant is not able to have a radio antenna to support his broadcasting capabilities and he must increase his antenna height. The current code would push the antenna towards the property lines and would place the antenna closer to neighboring properties and their homes. A variance would allow the antenna to be closer to the subject home and push the antenna further away from neighboring lots and residences. Denying the variance would not permit the continuation of the long use of the property for HAM radio purposes.

Per the applicant: “The strict application of the antenna setback requirement would require placing the antenna tower very close to property line to the rear of the primary residence. This would cause a portion of the antenna itself to extend over the adjacent homeowner’s property as well as the tower being too close to their residences.”

3. Such relief may be granted without substantial detriment to the public good and without substantially impairing the intent and purpose of the zoning map and this Code. The antenna is located on the rear of the home, which backs up to the rear lot line of other properties. Staff finds the home to be consistent with the surrounding lots and does not believe that the proposal will have a significant detrimental impact on the public good or any of the surrounding property.

Per the applicant: “This variance, allowing placement of the tower close to the rear of the primary residence, will then allow the antenna to be 25 feet higher in elevation. This higher elevation will significantly extend the range and quality of radio communication. It is my assertion that approval of this variance would be a substantial benefit to the public good in the case of a natural or man-made disaster. In my opinion, locating the tower in the back yard near the primary residence does not substantially impair the intent and purpose of the zoning map and this Code.”

Recommendation: If the Board of Zoning Appeals finds the request to be reasonable and compliant with the requirements for a variance, staff recommends that they adopt the findings in this report or others to support the approval. Should the Board of Zoning Appeals approve BZA 825-2020, a building setback variance request for construction of a new radio antenna. Approval should be subject to the submitted plans and the conditions below.

Possible Motion: Motion to adopt the finding of facts and conclusions of law provided in the staff report and to approve variance BZA 826-2020 to reduce the distance of a radio antenna tower to the primary residence at 2826 Windy Way with the following conditions.
1. Substantial consistency with the plans and documents submitted.
2. Subject to homeowner’s association approval as may be required for Buckner Place.
3. Per Section 13.4G of the Unified Development Code, an approved variance will expire one year from the date of approval unless a site plan review application has been submitted or, where site plan review is not required, a building permit is obtained. The Board of Zoning Appeals may grant an extension for a period of validity for no longer than an additional 6 months, so long as the applicant applies in writing for an extension of time at any time prior to the date of expiration. No public hearing is required for approval of such extension of time.
April, 27 2020

James Hall
2826 Windy Way
Thompson's Station, TN 37179

Re: Amateur Radio Antenna Elevation Change Request

To Whom It May Concern,

My name is James Hall, a Spring Hill resident in the Buckner Place subdivision at 2826 Windy Way since 1992. I have been an active amateur radio operator since the age of 16, and licensed by the FCC with the call sign AD4EB. As a hobby I use my station to communicate with other amateurs worldwide, primarily using Morse code. But of greater importance, my amateur radio station and knowledge prepares me to support Spring Hill and the surrounding area during a major natural or man-made disaster. This will be especially beneficial if commercial and government communication towers and networks become compromised. I am a member of the Williamson Country Amateur Radio Emergency Service (WCARES), and a trained weather spotter by the National Weather Service.

My communication capability has been slowly diminishing over the past 10-15 years because of issues explained in the following report. These issues would be greatly reduced by increasing the height of my antenna by 25 feet. Amateur radio antennas are covered in the Uniform Development Code, and raising the antenna height on my property will require approvals by the Board of Zoning Appeals. The approvals needed include both a special use waiver for the height, and a setback variance for the distance from the tower to my residence.

Your consideration for approval of my request is greatly appreciated. The additional antenna height will be a major improvement in my ability to communicate using amateur radio, and to assist Spring Hill in the case of a major disaster to our area.

Regards,

James Hall

James Hall
Phone: 615-794-8349
# Amateur Radio Antenna Elevation Change Request

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## Attachments

- A. Approval Letters from 6 Neighbors
- B. Antenna Height and Communications Effectiveness
- C. Addresses of Property Owners within 500 Feet
- D. Addresses of Adjacent Property Owners
Amateur Radio Antenna Elevation Change Request

Introduction

The purpose of this report is to obtain approval from the Spring Hill Board of Zoning Appeals for increasing the height of my amateur radio antenna tower. The approval process will require me to obtain a special use waiver for the antenna tower height, and a setback variance for the distance from the tower to my residence.

There were two reasons I chose to live in Buckner Place subdivision. First, there were no other homes behind my house, in fact no other subdivisions within a one-mile radius. And second, because the subdivision covenants allowed for me to have ham radio antennas, as long as they in the back yard. From the 1988 covenants:

18. Any antenna or other device for the transmission or reception of television signals, radio signals or any form of electromagnetic radiation which may be erected on any lot shall be on the rear quarter of such lot.

Over the past 28 years I have installed several antennas in the back yard, including a crank up telescoping tower which can be raised to a maximum height of 47 feet. On top of this tower is a 3 element Yagi beam antenna. My antennas have served me fairly well over the past 28 years, but changes are now needed to maintain my communication capabilities.

One issue is the surrounding trees on my property, and on adjacent properties, have grown to over 65 feet tall and are affecting the antenna's performance. Another issue is radio frequency emissions from TV/internet providers, and electronic equipment in adjacent homes, interfere with my ability to receive signals on certain frequencies. Equipment such as plasma TVs, microwaves, and switching power supplies are especially problematic. Raising my antenna to a higher elevation would help mitigate the problem. Because of these issues, and others discussed in this report, I am requesting permission to increase the height of my antenna by an additional 25 feet, to a height of 72 feet.
Amateur Radio Antenna Elevation Change Request

Photographs of the existing tower.

View of owner's property and amateur radio antenna.
I have had no complaints from anyone about the height or aesthetics of my tower or antenna. Being a good neighbor, I discussed my plans with all 6 surroundings neighbors that can see my antenna from their property. Each of them indicated they would not have an issue with raising my antenna 25 feet, and signed letters attesting to their acceptance. Copies of these letters are in Attachment A, "Approval Letters from 6 Neighbors.pdf".
Amateur Radio Antenna Elevation Change Request

Contacting the City Engineer and City Planning Department

On April 7, 2020 I contacted the City Engineer, Tom Wolf, who referred me to Steve Foote and Austin Page of the City Planning Department. Steve pointed me to the Unified Development Code (UDC), Article 9.3 B titled “Amateur (HAM) Radio Equipment”. Upon review of the Code with Steve Foote, it became evident that I would need to apply for a special use waiver for height, and a setback variance because of the short distance between the tower and my residence.

Unified Development Code - Amateur Radio Equipment

The information below was copied from the current UDC, and relate to amateur radio antennas and towers. Pertinent details regarding my antenna height increase request are highlighted in yellow.

9.3 B. Amateur (HAM) Radio Equipment

1. Towers that solely support amateur (HAM) radio equipment and conform to all applicable performance criteria set forth in Section 9.5 are permitted only in the rear yard. Towers are limited to the maximum building height of the applicable district plus an additional ten feet. If a taller tower is technically necessary to engage successfully in amateur radio communications, special use approval is required (item 4).

2. All towers must be set back from any existing principal building on the lot and adjacent lots, measured at the nearest external wall or walls, and within the buildable area of any adjacent undeveloped lot, as defined by current setback requirements, no less than 100% of the tower height. The setback distance is measured from the nearest point on the outside edge of a tower to the nearest point on the foundation of the building.

3. Antennas may also be building-mounted and are limited to a maximum height of ten feet above the structure. If a taller antenna is technically necessary to engage successfully in amateur radio communications, special use approval is required (item 3).

4. An antenna or tower that is proposed to exceed the height limitations requires approval as a special use. The operator must provide evidence that a taller tower and/or antenna is technically necessary to engage successfully in amateur radio communications. In addition, the applicant must provide evidence that the tower and/or antenna will not prove a hazard and that it conforms to all applicable performance criteria of Section 9.5. As part of the application, the applicant must submit a site plan showing the proposed location of the tower or antenna, as well as its relation to the principal building and the distance from principal buildings on abutting lots.

5. Every effort must be made to install towers or antennas in locations that are not readily visible from adjacent lots or from the public right-of-way.
Amateur Radio Antenna Elevation Change Request

6. Any such antennas and/or towers owned or operated by the City are exempt from these requirements.

9.5 F. Electromagnetic Interference.

Electromagnetic interference from any operation of any use must not adversely affect the operation of any equipment located off the lot on which such interference originates.

Special Use Request for Increased Tower Height

Tower height limitations are covered in UDC Articles 9.3 B.1 and 9.3 B.4 (bold text), my responses follow each article (normal text).

9.3 B.1 – Tower Location and Height

9.3 B.1. Towers that solely support amateur (HAM) radio equipment and conform to all applicable performance criteria set forth in Section 9.5 are permitted only in the rear yard. Towers are limited to the maximum building height of the applicable district plus an additional ten feet. If a taller tower is technically necessary to engage successfully in amateur radio communications, special use approval is required (item 4).

The existing tower is located in the rear yard, approximately 2 feet to the east of the garage foundation. The maximum building height in my district is 40 feet, so then according to the UDC the maximum tower height for my property is 50 feet (40 + 10 feet). Since my proposed tower height is 72 feet, special use approval is required.

9.3 B.4 – Increased Antenna Height Justification

9.3 B.4 An antenna or tower that is proposed to exceed the height limitations requires approval as a special use. The operator must provide evidence that a taller tower and/or antenna is technically necessary to engage successfully in amateur radio communications. In addition, the applicant must provide evidence that the tower and/or antenna will not prove a hazard and that it conforms to all applicable performance criteria of Section 9.5. As part of the application, the applicant must submit a site plan showing the proposed location of the tower or antenna, as well as its relation to the principal building and the distance from principal buildings on abutting lots.

This section, 9.3 B.4, will be broken down into 3 parts, A thru C:

A. Evidence Higher Antenna is Technically Necessary

The operator must provide evidence that a taller tower and/or antenna is technically necessary to engage successfully in amateur radio communications.
Amateur Radio Antenna Elevation Change Request

There are amateur radio stations that I currently am not able to successfully communicate with because of my limited antenna height. The frequencies used for local amateur radio communications are VHF and UHF, which allow communication to other stations primarily within line of site. The additional 25 feet of height would increase my range significantly, and would be extremely important during a major disaster. Longer distance communication on the HF bands benefit greatly with higher antennas, with 72 feet being the optimum height above ground for my operation and location. This is explained in detail in Attachment B, “Antenna Height and Communications Effectiveness.pdf”.

Please take the time to read the executive summary on Page 1 of Attachment B. It provides evidence as to why a higher antenna is technically necessary for my station to operate successfully.

B. Evidence the Tower/Antenna will not be a Hazard

In addition, the applicant must provide evidence that the tower and/or antenna will not prove a hazard ....

The existing tower and reinforced concrete base are not robust enough to be safely extended up to the proposed 72 feet of height. The existing tower would be replaced with a sturdier, heavy duty, 72 foot crank up tower, such as the US Tower HDX-572MDPL telescoping tower. This tower is specially designed to handle significantly larger Yagi beam antennas with high wind loads. The reinforced concrete base required for the new tower would need to be approximately twice the size of the existing concrete tower base. A new concrete base would be installed adjacent to the existing one. The design specifications and structural analysis documentation for this tower is available on the ustower.com website if interested.

A licensed structural civil engineering firm would be hired to observe construction of the tower base, and perform final inspection of the tower installation to ensure it was done in accordance with the manufacturers specifications. The civil engineering firm Structural Engineering and Inspection (SFI), located in Brentwood TN, is currently being considered to perform this task.

One of the advantages of using a telescoping towers is that they can be easily raised and lowered using a winch. As an added safety precaution, during potential storms with expected damaging winds, I lower my existing antenna to a height of approximately 35 feet. This reduces stress on the antenna and tower. When leaving town for vacation, the tower is also lowered. I will do the same with the 72-foot tower, lowering it to approximately 45 feet during severe storms and when not in use for an extended period of time.

The Yagi beam antenna has been up for almost 20 years, and was specifically designed to handle extreme weather. The antenna is in perfect condition, and raising it to a height of 72 feet will not cause any issues.

The proposed tower will not be a hazard because it is designed to handle much larger antennas and extreme winds conditions with a high degree of safety, it will be installed according to the manufacturers specifications, and inspected by a licensed structural civil engineering firm.
Amateur Radio Antenna Elevation Change Request

C. Conformance to Applicable Performance Criteria

... and that it conforms to all applicable performance criteria of Section 9.5.

Section 9.5, Environmental Performance Standards, has 8 elements (A thru H) for which only element F is applicable this amateur radio towers and antenna.

F. Electromagnetic Interference. Electromagnetic interference from any operation of any use must not adversely affect the operation of any equipment located off the lot on which such interference originates.

I am not aware of any radio frequency interference to my neighbors’ electronic equipment caused by my existing 47-foot tower and Yagi beam antenna. Raising the antenna to a height of 72 feet would actually reduce the amount of potential interference. This is because the distance from the antenna to homes on the adjacent lots will be increased, as discussed on page 1 of the Attachment B, “Antenna Height and Communications Effectiveness.pdf”. Quoted from this document:

“if the antenna can be moved farther away from neighboring electronic devices—putting it higher, in other words—this will greatly reduce the likelihood of interference, which decreases at the inverse square of the distance. For example, doubling the distance reduces the potential for interference by 75%”

Electromagnetic interference with the existing tower and Yagi antenna to equipment located off the lot has not been an issue, and by raising the antenna to 72 feet will make it even less of a possibility.
Amateur Radio Antenna Elevation Change Request

Site Aerial Photo Showing Proposed Tower and Base Location
Amateur Radio Antenna Elevation Change Request

Aerial Map Showing Tower Distances to Adjacent Properties

Aerial map showing subject owner's home, property lines, and adjacent homes. The radius of the yellow circle is 72 feet, the height of the proposed tower. The center of the circle is the location of the tower and concrete base. The closest adjacent property owner's home is approximately 105 feet to the south of the proposed tower location.
Amateur Radio Antenna Elevation Change Request

Special Use Board of Zoning Appeals Submittal Checklist

City of Spring Hill, TN

Special Use
Board of Zoning Appeals
Submittal Checklist

<table>
<thead>
<tr>
<th>APPLICANT MUST READ AND INITIAL EACH BOX TO THE RIGHT</th>
<th>INITIALS</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Published notice is required. The City of Spring Hill will publish notice in a newspaper of general circulation within the City.</td>
<td>JFH</td>
</tr>
<tr>
<td>b) Written notice must be mailed by U.S.P.S. First Class at least ten days in advance of the first scheduled action to all property owners within 500 feet of the property line of the subject property. The notice must include the date, time, place, and purpose of such hearing/meeting, the name of the applicant, and the address of the subject property. Nothing in this section is intended to prevent the applicant or the City from giving additional notice as he/she may deem appropriate. The APPLICANT IS RESPONSIBLE for mailing notices and must provide the City with an affidavit stating that notice was mailed to every property owner as required and provide the City with a list of names, addresses, and property identification numbers (PIN) of all notice recipients, and a map indicating the boundaries of the notice area. The applicant must also provide the City an example of the notice.</td>
<td>JFH</td>
</tr>
<tr>
<td>c) Posted notice is required on the property and will be installed by the city of Spring Hill. This signage must be maintained until all action on the application has been completed. Please call the Planning Department if the sign is damaged or removed.</td>
<td>JFH</td>
</tr>
<tr>
<td>d) A pre-application meeting with City staff is recommended, but not mandatory.</td>
<td>JFH</td>
</tr>
</tbody>
</table>

The following information is recommended for a Special Use request:

1. Name, address, zoning, and property lines of all property owners adjacent to the exterior boundaries of the project | JFH |
2. Name, address, phone numbers of owner(s), developer(s), and representatives | JFH |
3. Plans illustrating the proposed use and development of the site including: | JFH |
   - North arrow, scale, date of preparation, zoning classification, map/parcel numbers, total acreage, and proposed use | JFH |
   - Title block located in the lower right hand corner indicating the name and type of project, scale, firm/individual preparing drawing, date, and revisions | JFH |
Amateur Radio Antenna Elevation Change Request

A vicinity map of the project with a radius of 1.5 miles from the project, any Major Thoroughfare Plan streets, and the 100 year floodplain boundary

Site coverage note indicating the percentage of the site that is currently covered by impervious surface. The location of all existing structures on the property

Title, name, address, stamp, and signature of the design professional(s) licensed to prepare the required plans and plats

Any other information essential to the complete review and consideration of the application by the City of Spring Hill.

Approval Standards

The listing of a use as a special use within a zoning district does not constitute an assurance or presumption that such special use will be approved. Rather, each special use must be evaluated on an individual basis, in relation to all applicable standards of this Code. Such evaluation will determine whether approval of the special use is appropriate at the particular location and in the particular manner proposed. The decision of the Board of Zoning Appeals must make findings to support each of the following conclusions. Please initial all that apply.

1. The application for a special use should provide the applicant's evidence that the application meets or exceeds the criteria below.

2. The consistency of the proposed special use with the Comprehensive Plan and any adopted land use policies.

Within the Plan there is mention of and enhancing the quality of life for existing and future residents. The additional antenna height will significantly enhance my amateur radio communication capabilities, and thereby increasing my ability to serve the public good during emergencies. Upon carefully reviewing the Comprehensive Plan, I did not find anything specific that should preclude me from increasing the antenna height by 25 feet.

I chose to live in Spring Hill's Buckner Place subdivision because the covenants at this location allow for amateur radio antennas and towers. Section 9.3 B of the Code, Amateur (Ham) Radio Equipment, states that special use approval for height would be considered if sufficient evidence of need is presented. In the report presented, reasons were provided for why the 25 feet antenna height increase is needed. Some of these reasons include the height of surrounding trees, reduced interference, and increased communication range and that could prove critical during a disaster.

I believe allowing this increase in elevation would be consistent with the spirit and intent of the Code.
The proposed special use will not endanger the public health, safety, or welfare.

The proposed additional tower height will actually be a benefit to the public health, safety, and welfare in the case of a natural or man-made disaster. The increased range and quality of communication will allow me to better serve the community and local government if their communication systems should be compromised.

The proposed special use is compatible with the general land use of adjacent properties and other property within the immediate vicinity.

I have not received complaints from anyone concerning the height or aesthetics of my tower/antenna. I have signed letters from all surrounding neighbors that can visually see the antenna from their property, stating they have no issue with me raising the height of my antenna by 25 feet. Copies of these letters are in Attachment A, “Approval Letters from 6 Neighbors.pdf”.

The special use in the specific location has sufficient public infrastructure and services to support the use.

This special use does not require any public infrastructure or services.

Applicant/Project: James Hall – Amateur Radio Tower Elevation Change Request

Special Use BOZA checklist
Amateur Radio Antenna Elevation Change Request

Example of Special Use Written Notice to Property Owners Within 500 Feet

April, 27 2020

Re: Proposed Special Use Request

Dear Property Owner,

This written notice is being sent to you as required by the Spring Hill Unified Development Code. The purpose of this written notice is to inform you of an existing special use request to the City of Spring Hill for property located at 2826 Windy Way, Thompson’s Station, TN 37179; owned by James and Melody Hall. Special use requests require that a public notice be mailed to the owners of all property within five hundred (500) feet of said property.

The special use request is related to increasing the height of an amateur radio antenna on said property from 47 feet to 72 feet. Refer to section 9.3 of the Unified Development Code for additional information if necessary. This code can be found on the City of Spring Hill website.

There will be a meeting by the City of Spring Hill Board of Zoning Appeals on Tuesday May 19, 2020 at 5:30 PM. Due to the COVOD-19 virus, there is no way for the public to attend the meeting. If you would like the Board to receive your public comments regarding this item, please submit them to Austin Page by email no later than noon on Tuesday May 19, 2020.

If you have any questions or concerns, please contact:

Austin Page, Associate Planner
City of Spring Hill, TN
(931) 486-2252 ext. 232
apage@springhilltn.org

Thank you,

James Hall

James Hall
Amateur Radio Antenna Elevation Change Request

Aerial Photo Showing Boundaries of the 500 Foot Written Notice Area

560-foot circle indicating all property owners within 500 feet of the property lines of subject property.

For names and addresses of property owners within this circle, refer to Attachment 3 “Addresses of Property Owners within 500 Feet.txt”
Amateur Radio Antenna Elevation Change Request

Setback Variance Request for Distance of Tower to Primary Residence

9.3 B.2 – Tower Setback Requirements

B.2 All towers must be set back from any existing principal building on the lot and adjacent lots, measured at the nearest external wall or walls, and within the buildable area of any adjacent undeveloped lot, as defined by current setback requirements, no less than 100% of the tower height. The setback distance is measured from the nearest point on the outside edge of a tower to the nearest point on the foundation of the building.

As shown on the aerial map on Page 11, all homes on adjacent lots are located greater than 72 feet from the tower. The closest home is to south, an acceptable 110 feet from the tower. As shown on the site aerial photo on Page 10, the proposed distance from the new taller tower to the principal building is only 4.5 feet. This is the reason the setback variance is being requested.

The location of the tower was chosen because it is the furthest distance away from all the adjacent properties when taken as a whole. The average distance from the base of the tower to the 5 adjacent residences is approximately 135 feet. If the tower was located 72 feet from the principle building, then the antenna would partially extend over adjacent property lines.

Placing the tower very close to the principle building is the optimum location when taking the adjacent lots and homes into consideration. As the homeowners of the principal building, my wife Melody and I accept all liability in the unlikely event the tower or antenna should ever cause damage to the home.
**City of Spring Hill, TN**

**Variance Board of Zoning Appeals Submittal Checklist**

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</tr>
<tr>
<td>b) Written notice must be mailed by <strong>U.S.P.S. First Class</strong> at least ten days in advance of the first scheduled action to all adjoining property owners of the subject property. The notice must include the date, time, place, and purpose of such hearing/meeting, the name of the applicant, and the address of the subject property. Nothing in this section is intended to prevent the applicant or the City from giving additional notice as he/she may deem appropriate. The <strong>APPLICANT IS RESPONSIBLE</strong> for mailing notices and must provide the City with an <strong>affidavit</strong> stating that notice was mailed to every property owner as required and provide the City with a list of names, addresses, and property identification numbers (PIN) of all notice recipients, and a map indicating the boundaries of the notice area. The applicant must also provide the City an <strong>example</strong> of the notice sent.</td>
<td>JFH</td>
</tr>
<tr>
<td>c) Posted notice is required on the property and will be installed by the City of Spring Hill. This signage must be maintained until all action on the application has been completed. Please call the Planning Department if the sign is damaged or removed.</td>
<td>JFH</td>
</tr>
<tr>
<td>d) A pre-application conference with City staff is <strong>recommended</strong>, but not mandatory.</td>
<td>JFH</td>
</tr>
</tbody>
</table>

The following information is **recommended** to facilitate review of the application:

- Letter of request outlining the nature and reason for the request
- A written narrative explaining how the request is consistent with the comprehensive plan
- A concept or plot plan that shows the property and illustrates the variance(s) being sought.
- An explanation as to why the property may not be developed and reasonably used without the variance

| JFH |

*James Hall  Page 18  April 27, 2020*
A written statement from the applicant expanding how the request is consistent with the approval standards listed below.

<table>
<thead>
<tr>
<th>Approval Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;The Board of Zoning Appeals may authorize a variance from the strict application of this Code so as to relieve such difficulties or hardship only in accordance with the following criteria. The Board of Zoning Appeals must make findings of fact on all criteria. Please initial all that apply.&quot;</td>
</tr>
<tr>
<td>The application for a variance should provide the applicant’s evidence that the application meets or exceeds the criteria below.</td>
</tr>
<tr>
<td>&quot;Where, by reason of exceptional narrowness, shallowness, size or shape of a specific piece of property at the time of the enactment of this Code, or by reason of exceptional topographic conditions or other extraordinary and exceptional situation or condition of such piece of property it is not able to comply with the regulations as required under this Code.&quot;</td>
</tr>
<tr>
<td>This variance appeal pertains to the setback requirement from the antenna tower to the primary residence. The exceptional shallowness of the back yard does not allow placement of the tower 72 feet from the primary residence without placing it too near the adjacent property lines and residences. The proposed tower location, 4.5 feet from the primary residence, is the optimum location. James and Melody Hall, the homeowners, accept all liability should there ever be damage to the home because the tower is so near to it.</td>
</tr>
<tr>
<td>The strict application of any provision enacted under this Code would result in peculiar and exceptional practical difficulties to or exception or place undue hardship upon the owner of such property.</td>
</tr>
<tr>
<td>The strict application of the antenna setback requirement would require placing the antenna tower very close to property line to the rear of the primary residence. This would cause a portion of the antenna itself to extend over the adjacent homeowner’s property as well as the tower being too close to their residences.</td>
</tr>
<tr>
<td>&quot;Such relief may be granted without substantial detriment to the public good and without substantially impairing the intent and purpose of the zoning map and this Code.&quot;</td>
</tr>
</tbody>
</table>
This variance, allowing placement of the tower close to the rear of the primary residence, will then allow the antenna to be 25 feet higher in elevation. This higher elevation will significantly extend the range and quality of radio communication. It is my assertion that approval of this variance would be a substantial benefit to the public good in the case of a natural or man-made disaster. In my opinion, locating the tower in the back yard near the primary residence does not substantially impair the intent and purpose of the zoning map and this Code.
Amateur Radio Antenna Elevation Change Request

Example of Variance Written Notice to Adjacent Property Owners

April, 27 2020

Re: Proposed Variance Request

Dear Property Owner,

This written notice is being sent to you as required by the Spring Hill Unified Development Code. The purpose of this written notice is to inform you of an existing variance request to the City of Spring Hill for property located at 2826 Windy Way, Thompson's Station, TN 37179; owned by James and Melody Hall. Variance requests require that a public notice be mailed to the owners of all property adjacent to said property.

The variance request is to allow an amateur radio tower on said property to be located closer to the said property owner’s residence than specified in the Code. Refer to section 9.3 of the Unified Development Code for additional information if necessary. This code can be found on the City of Spring Hill website.

There will be a meeting by the City of Spring Hill Board of Zoning Appeals on Tuesday May 19, 2020 at 5:30 PM. Due to the COVOD-19 virus, there is no way for the public to attend the meeting. If you would like the Board to receive your public comments regarding this item, please submit them to Austin Page by email no later than noon on Tuesday May 19, 2020.

If you have any questions or concerns, please contact:

Austin Page, Associate Planner
City of Spring Hill, TN
(931) 486-2252 ext. 232
apage@springhilltn.org

Thank you,

James Hall
James Hall
Amateur Radio Antenna Elevation Change Request

Map Showing the 5 Adjacent Properties for Written Notices

Note: For names and addresses of adjacent property owners refer the Attachment 4, “Addresses of Adjacent Property Owners.txt”.
April, 21 2020

Jim Hall
2826 Windy Way
Thompson’s Station, TN 37179

Dear Neighbor,

I would like to increase the height of my amateur radio antenna tower by 25’, and want to ensure that your family is agreeable to my doing so. The reason for increasing the height is to improve communication capability during emergencies and general use. This capability has been impacted by the 5 tall trees in my back yard, which have grown significantly since the tower was installed 20 years ago.

The existing crank up tower has a maximum height of 47’, and I wish to replace it with one in the same location but with a maximum height of 72’. According to the current City of Spring Hill Unified Development Code (August 20, 2018), there are two conditions with raising this antenna that will require approval from the Spring Hill Board of Zoning Appeals. These conditions are:

1) The antenna tower will exceed the maximum allowable height allowed for this residential area, which will require me to obtain a special use waiver for height.

2) Antenna towers are to be set back from the principal and adjacent buildings by at least the height of the tower, in this case 72’. The set back requirements are met for all adjacent houses, by not my house. This condition will require me to obtain a set back variance.

I am in the process of submitting my request for the waiver and variance to the Board of Zoning Appeals.

If you and your family are agreeable to me increasing the height of my antenna to 72’, and have no issue with me obtaining the special use waiver for height and the setback variance, please fill out and sign below.

Many thanks for your assistance with this matter.

Name: Robert C. Walker
Address: 2826 Windy Way
City, State: Thompson’s Sta., TN
Zip Code: 37179

Signature: Robert C. Walker Date: 4-21-20
April, 21 2020

Jim Hall
2826 Windy Way
Thompson’s Station, TN 37179

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Many thanks for your assistance with this matter.

Name: Nancy Saltzman
Address: 2841 Sutherland Dr.
City, State: Thompson’s Station, TN
Zip Code: 37179

Signature: N Saltzman Date: 4.27.20
April, 21 2020

Jim Hall
2826 Windy Way
Thompson’s Station, TN 37179

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Many thanks for your assistance with this matter.

Name: Nolan Williams
Address: 2830 Windy Way
City, State: Thompson's Station, TN
Zip Code: 37179

Signature: [Signature] Date: 04/21/2020
April, 21 2020

Jim Hall
2826 Windy Way
Thompson’s Station, TN 37179

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Many thanks for your assistance with this matter.

Name: Aubin Fowler
Address: 2800 Predito Place
City, State: Thompson’s Station, TN
Zip Code: 37179

Signature: Aubin Fowler Date: 4·22·20
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Many thanks for your assistance with this matter.

Name: Charles Harris
Address: 2826 Windy Way
City, State: Thompson Station, TN 37179
Zip Code: 37179

Signature: __________________________ Date: 4/21/20
April, 21 2020

Jim Hall
2826 Windy Way
Thompson’s Station, TN 37179

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Many thanks for your assistance with this matter.

Name: Carlos Cordero
Address: 2815 Windy Way
City, State: Thompson’s Station, TN.
Zip Code: 37179

Signature: [Signature] Date: 04-21-2020