



DONOHUE & STEARNS, PLC

MEMORANDUM

To: Bill Fritz
From: Ed Donohue
Date: February 9, 2018
Re: SP 2017-27/Keswick/Tier III PSWF

This memo is a supplemental submission to the Planning Commission, and we ask that all information be forwarded to the members of the Commission. Some of the information submitted herein was developed after the hearing with the Architectural Review Board (ARB) and will be sent to the ARB staff as well.

Landscape Plan

At the ARB hearing, two things were suggested for consideration by the applicant. One, members of the ARB criticized the use of non-native species in the landscaping surrounding the compound. Two, the ARB and staff commented that views of the facility from the north could be mitigated by adding planting to the perimeter of the property, between the northern border and the right-of-way of I-64. Sheets L-1 and L-2 are submitted in response. Native species are planted in a dense pattern surrounding the compound. The applicant is proposing eighteen (18) evergreen shrubs (Arrow Wood (*viburnum dentatum* L) as well as twenty-nine (29) evergreen trees (Eastern Red Cedar (*juniperus virginiana* sarg.) as shown on page L-2. Sheet L-1 shows a long line of 29 evergreen trees at the northern edge of the property, just inside the fence between the landlord's property line and I-64 (Attachment 1).

Network Design/RF Issues

This application has become necessary to replace the existing tower located on the adjacent property owned by Karen Johnson and encumbered by a conservation easement with the Virginia Outdoors Foundation (VOF). AT&T, Verizon Wireless, Sprint, T-Mobile and U.S. Cellular have been providing wireless service to its subscribers in this area of Albemarle County for nearly two decades. In that time, they have upgraded their antennae and ancillary equipment to meet the increasing demand placed on the network by subscribers. Not only must the new location be found, but this location must be in close proximity to the existing site as the currently installed carriers work in conjunction with surrounding sites.

The proposed height is the minimum height necessary to replace the coverage provided by the Johnson tower, which of course makes this a Tier III review. Included herein are four (4) propagation

maps prepared at the applicant's request to demonstrate the need for the height, as well as the need for the antennas to project away from the monopole in order for these antennas to properly meet network needs. (Attachments 2-5). The applicant will have an RF expert at the hearing to explain the following:

- The coverage provided by the existing facility that needs to be replicated to the greatest degree possible and predicted coverage from the proposed facility.
- The coverage that results from the proposed facility on the Virginia Oil parcel at 90' with flush-mounted antennas (which yields ground-mounted equipment).

Platform Design

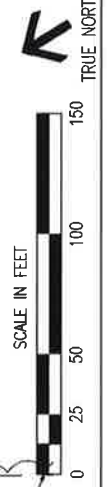
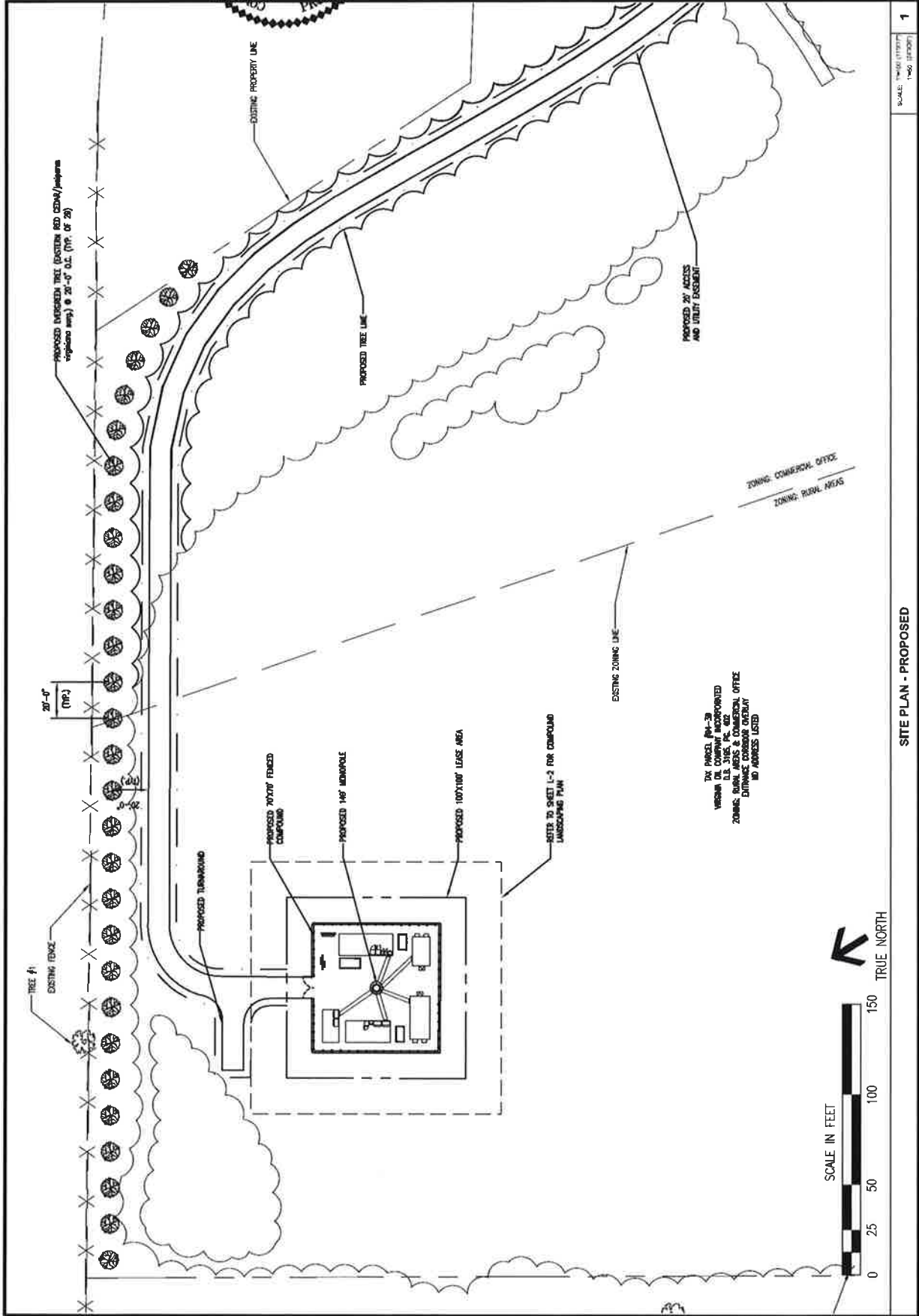
Attached as Attachment 6 are six (6) drawings prepared by BC Architects to show a comparison between the existing tower and proposed facility. The existing lattice structure has antenna mounts as much as fourteen feet (14') in width and approximately twelve feet (12') from the centerline of the tower, while the proposed monopole's design incorporates a significantly reduced offset from the pole (7'10") with a 12.5' wide mount.



NO.	DATE	DESCRIPTION
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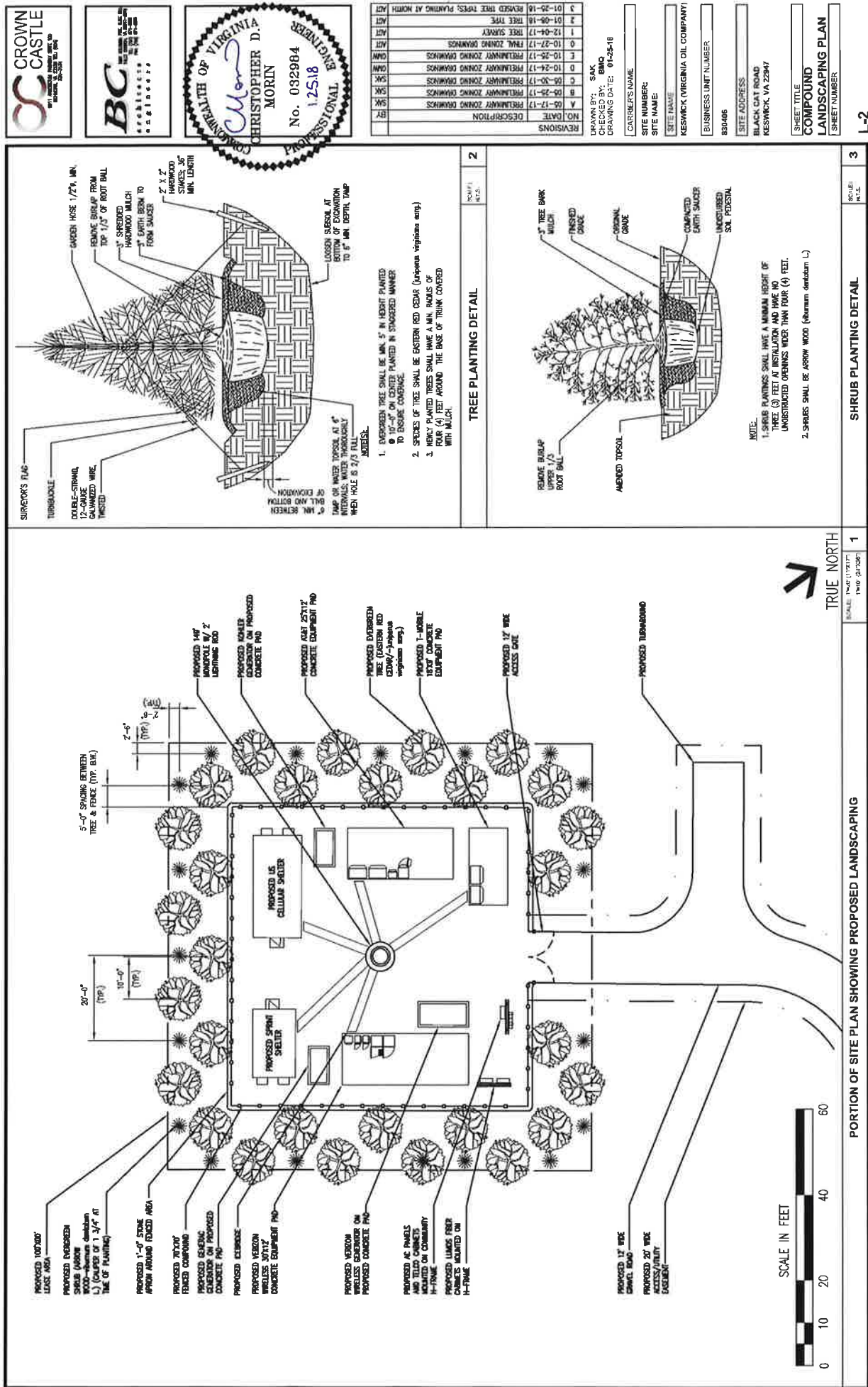
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CHECKED BY: BMQ
DRAWING DATE: 01-25-18

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SITE NAME
KESWICK (VIRGINIA OIL COMPANY)
BUSINESS UNIT NUMBER
330406
SITE ADDRESS
BLACK CAT ROAD
KESWICK, VA 22847
SHEET TITLE
LANDSCAPING PLAN
-STREETSIDE
SHEET NUMBER

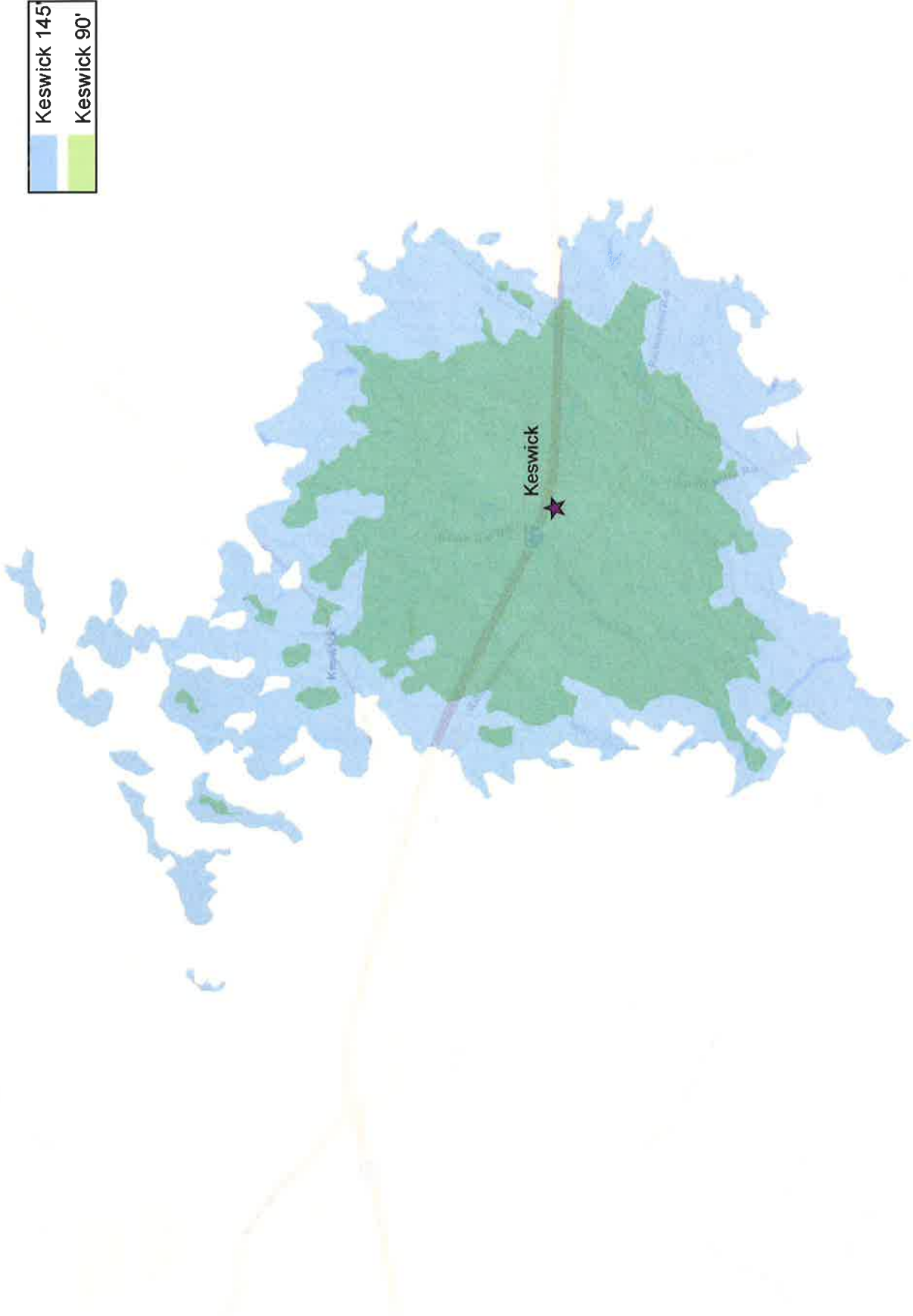


SITE PLAN - PROPOSED

SCALE: 1"=40' (TYP.)
1

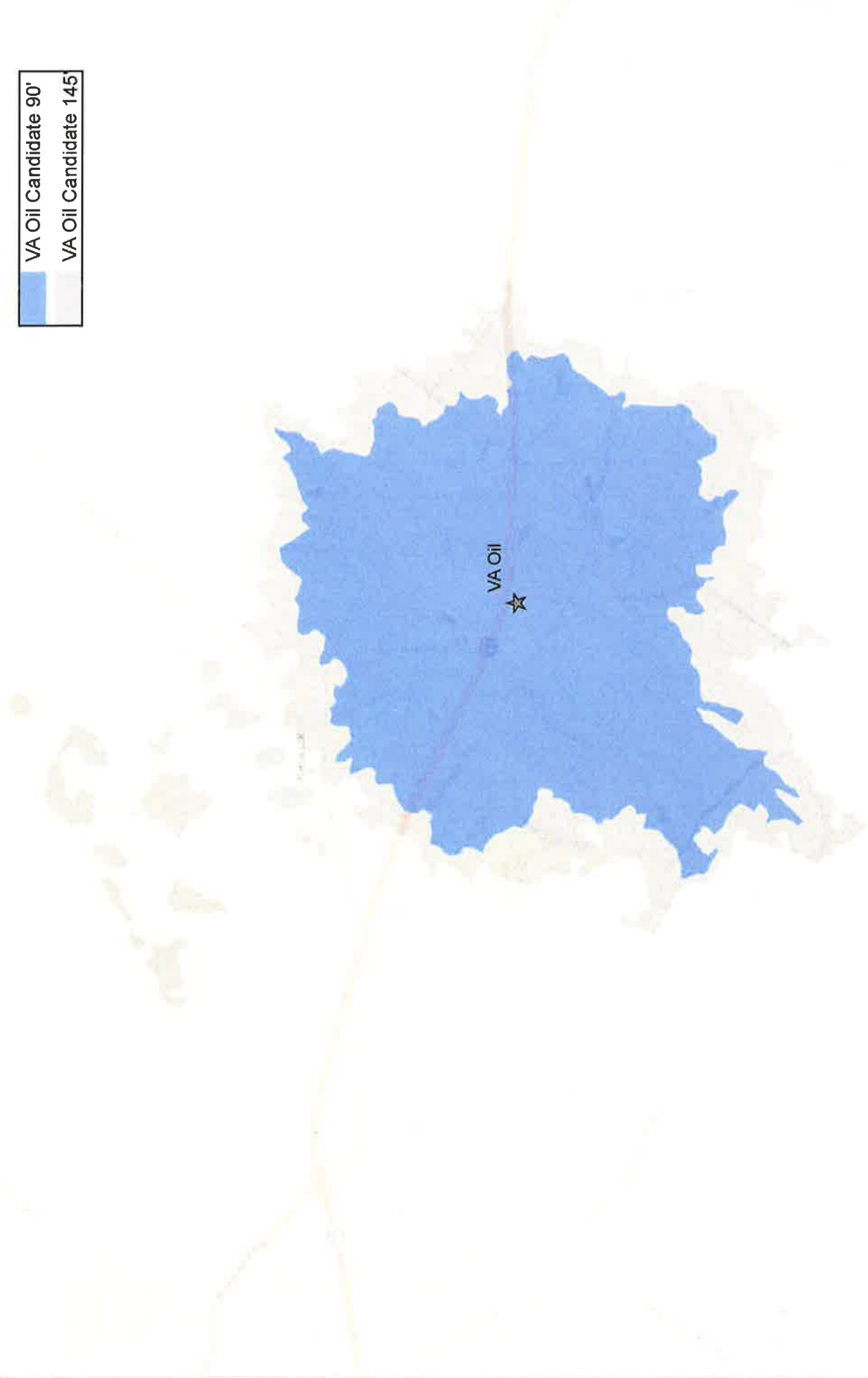
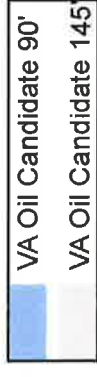


Keswick Tower @ 90' and 145' Centerlines



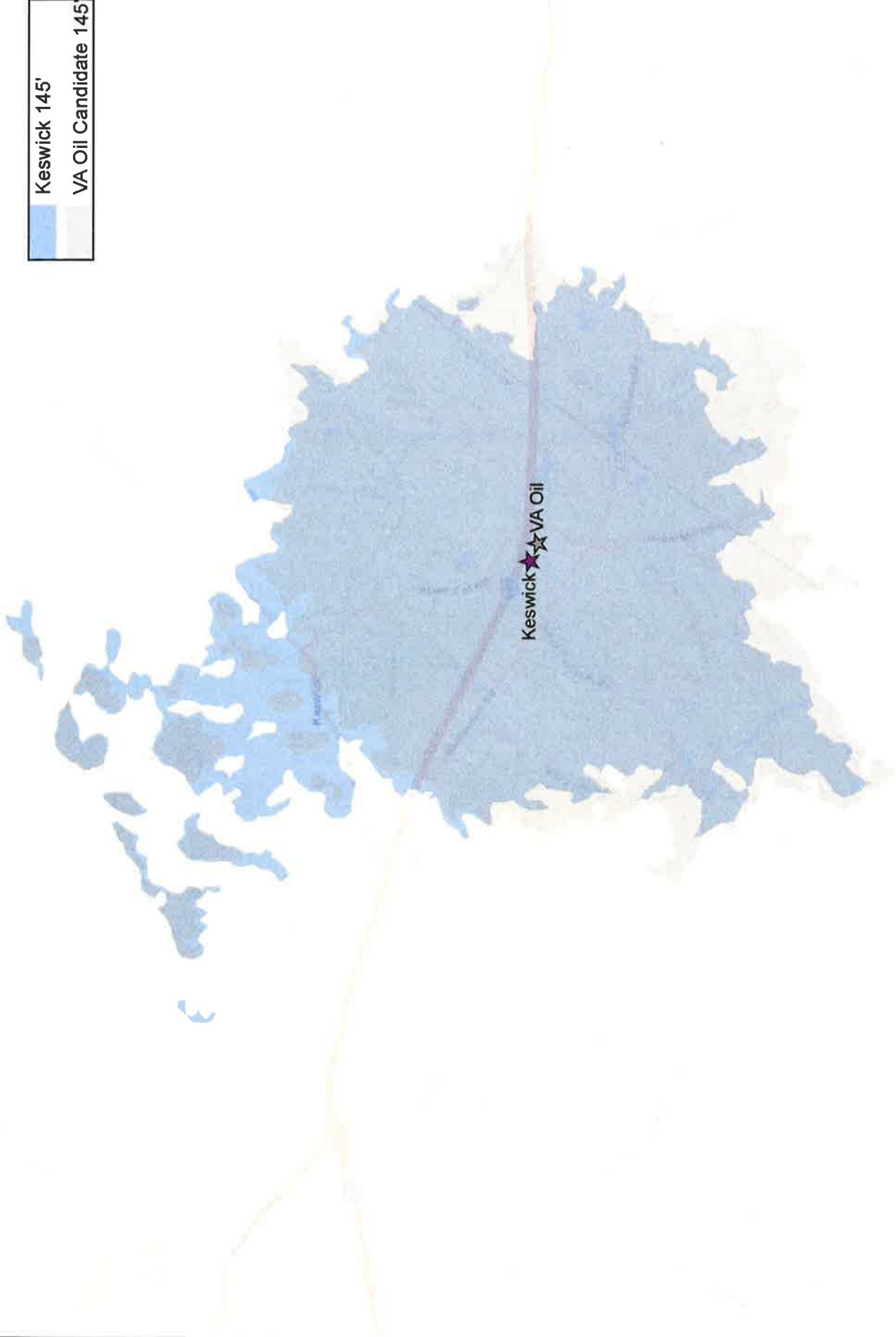
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

VA Oil Tower @ 90' and 145' Centerlines



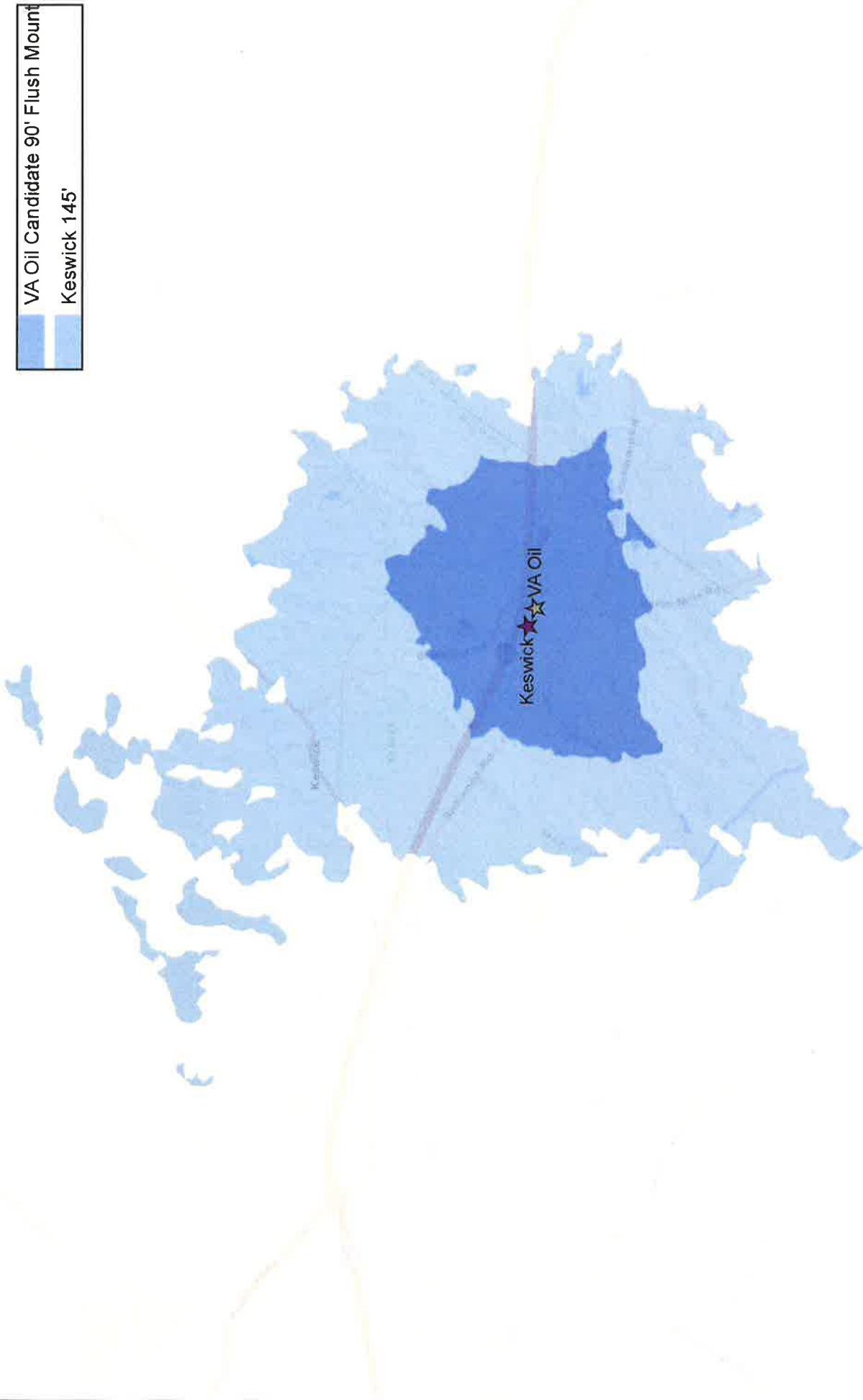
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Keswick Tower vs VA Oil @ 145' Centerlines



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Keswick @ 145' vs VA Oil @ 90' Flush Mount





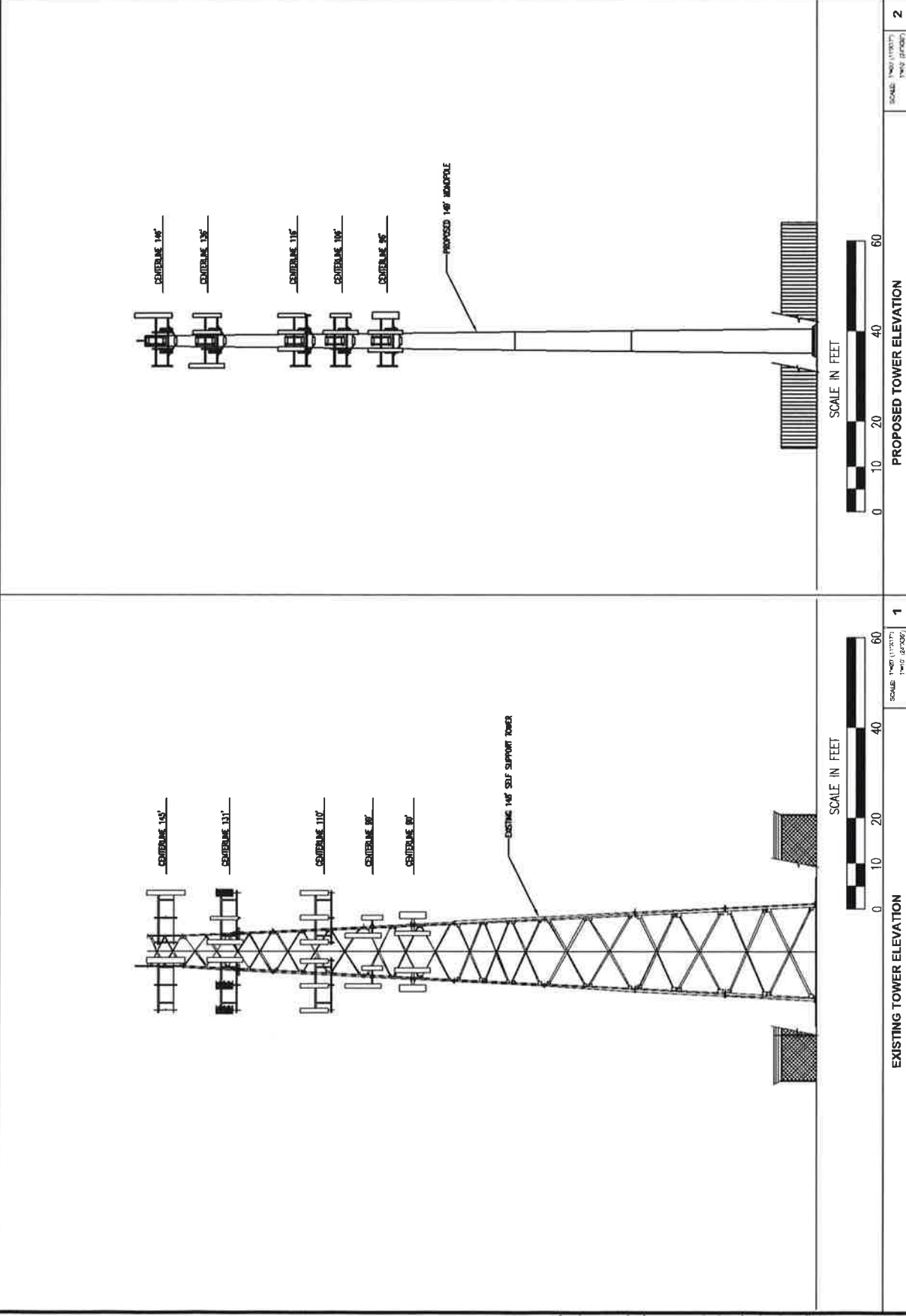
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CHECKED BY: BMQ
DRAWING DATE: 02-08-18

CARRIER'S NAME
SITE NUMBER:
SITE NAME:
SITE ADDRESS:
BUSINESS UNIT NUMBER:
830406
BLACK CAT ROAD
KESWICK, VA 22947

SHEET TITLE
EXISTING & PROPOSED
TOWER ELEVATIONS
SHEET NUMBER

A-1



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DRAWING DATE: 02-08-18

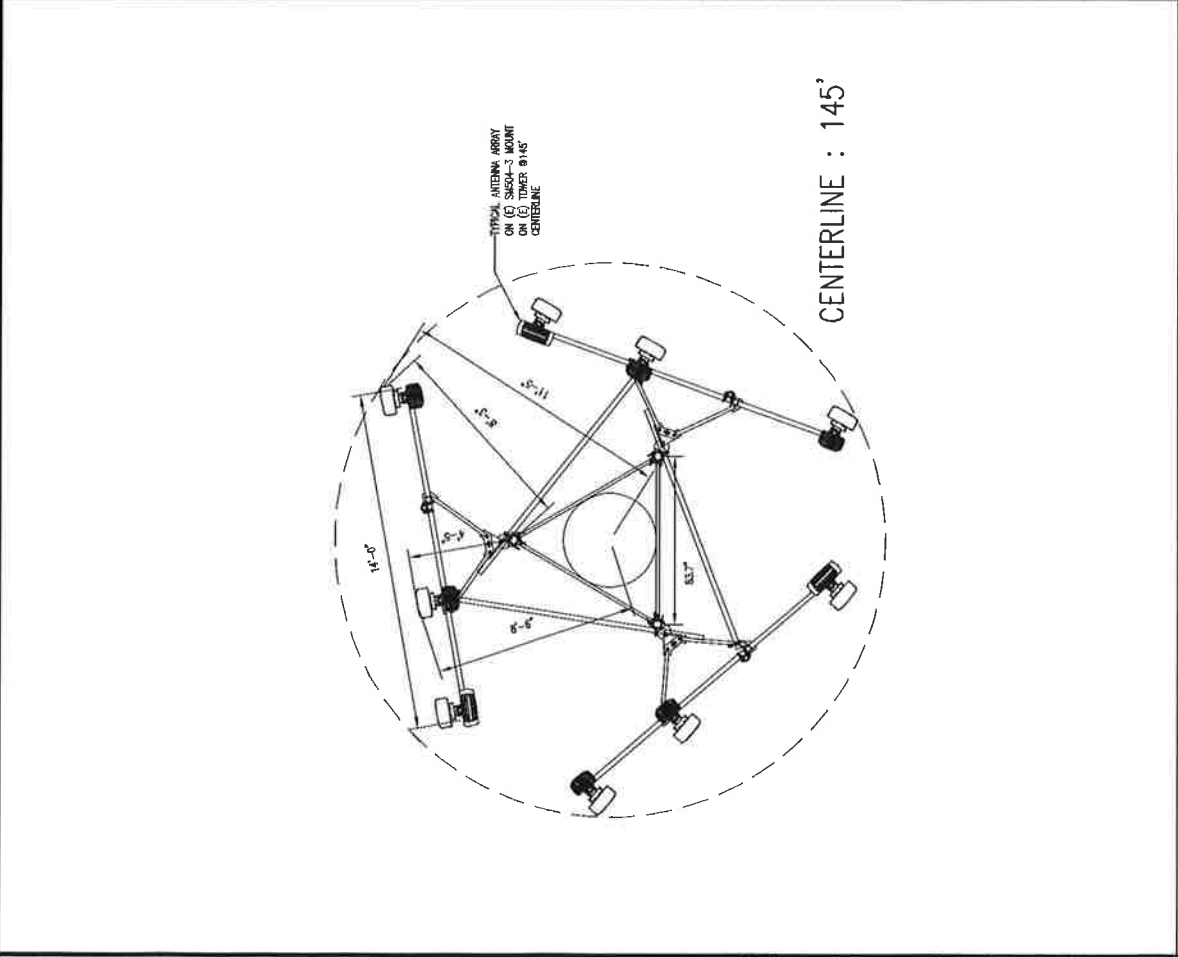
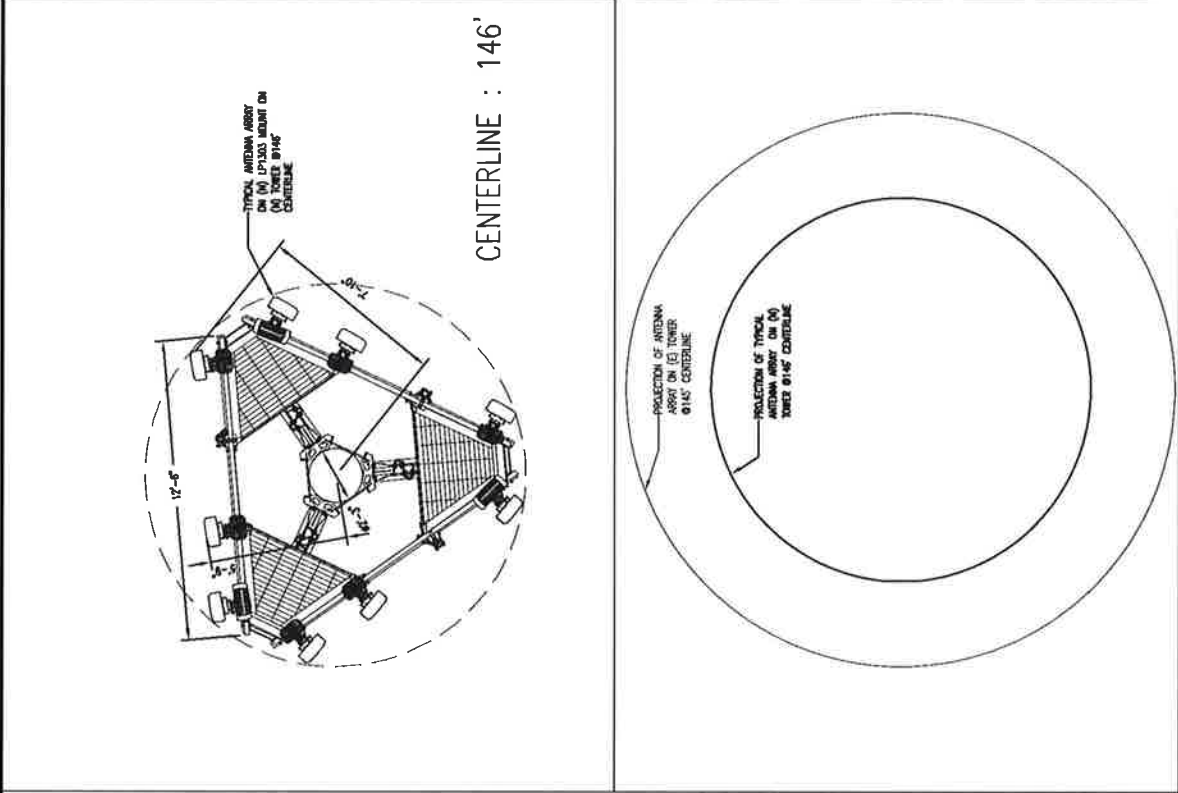
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CARRIER'S NAME
SITE NUMBER
SITE NAME
KESWICK (VIRGINIA OIL COMPANY)
BUSINESS UNIT NUMBER
839406
SITE ADDRESS
BLACK CAT ROAD
KESWICK, VA 22947

SHEET TITLE
EXISTING & PROPOSED
MOUNT PLAN VIEWS
SHEET NUMBER

A-2



SCALE	VIEW	FIG.
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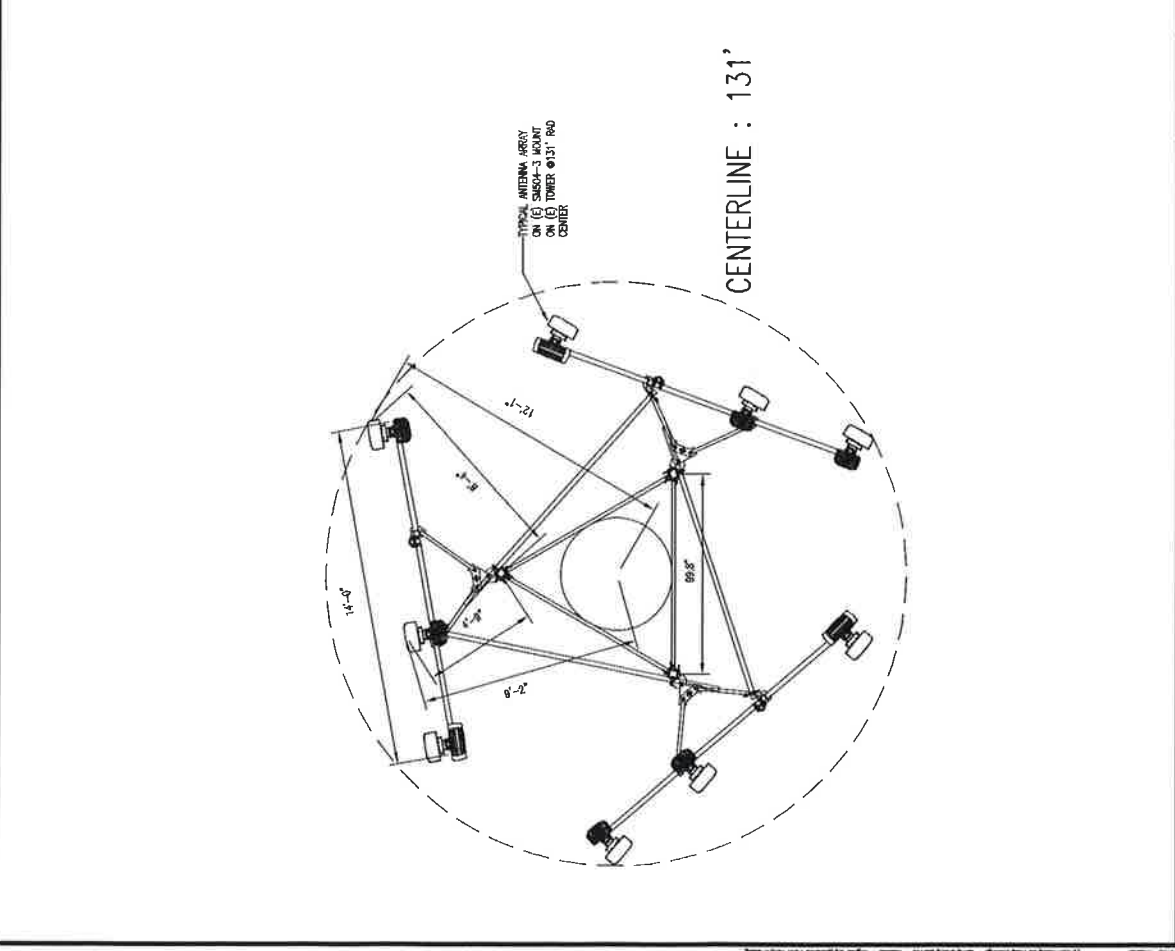
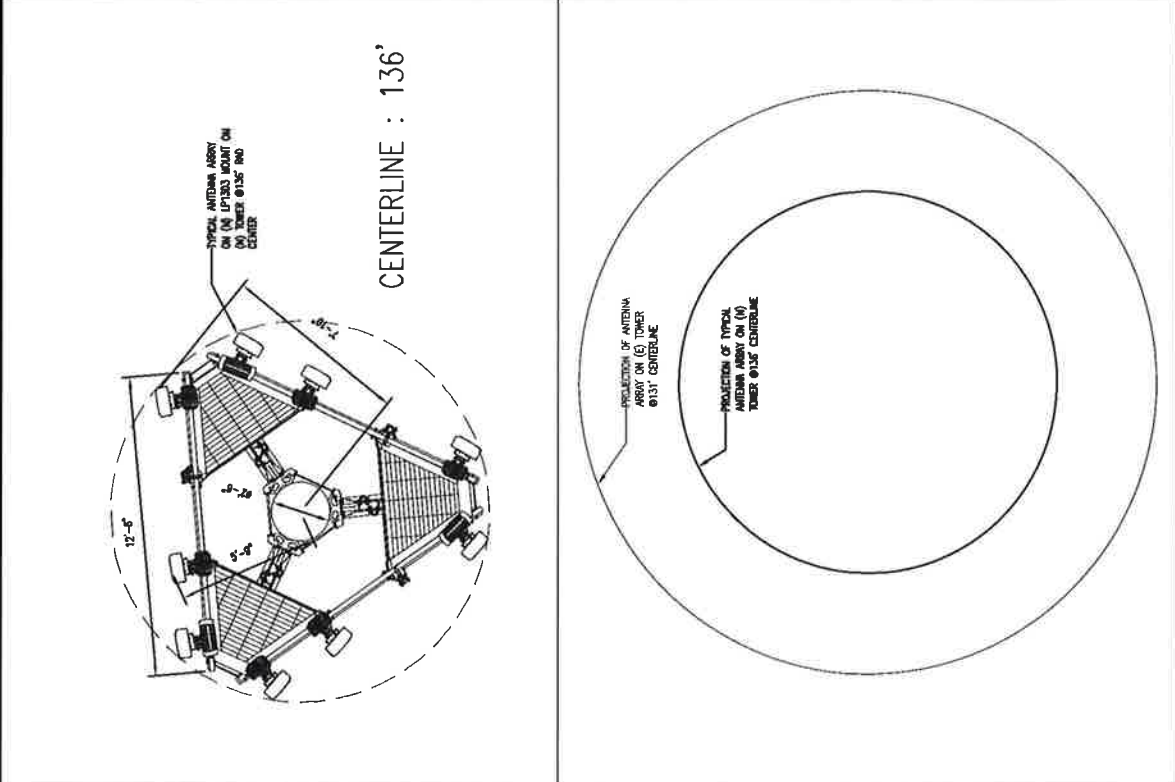
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DRAWN BY: NP
CHECKED BY: BMQ
DRAWING DATE: 02-08-18

CARRIER'S NAME
SITE NUMBER
SITE NAME
KESWICK (VIRGINIA OIL COMPANY)
BUSINESS UNIT NUMBER
30406
SITE ADDRESS
BLACK CAT ROAD
KESWICK, VA 22847

SHEET TITLE
EXISTING & PROPOSED
MOUNT PLAN VIEWS
SHEET NUMBER

A-3



EXISTING MOUNT PLAN VIEW	1	PROPOSED MOUNT PLAN VIEW	2
SCALE: 1"=10' (11/16")	SCALE: 1"=10' (11/16")	SCALE: 1"=10' (11/16")	SCALE: 1"=10' (11/16")



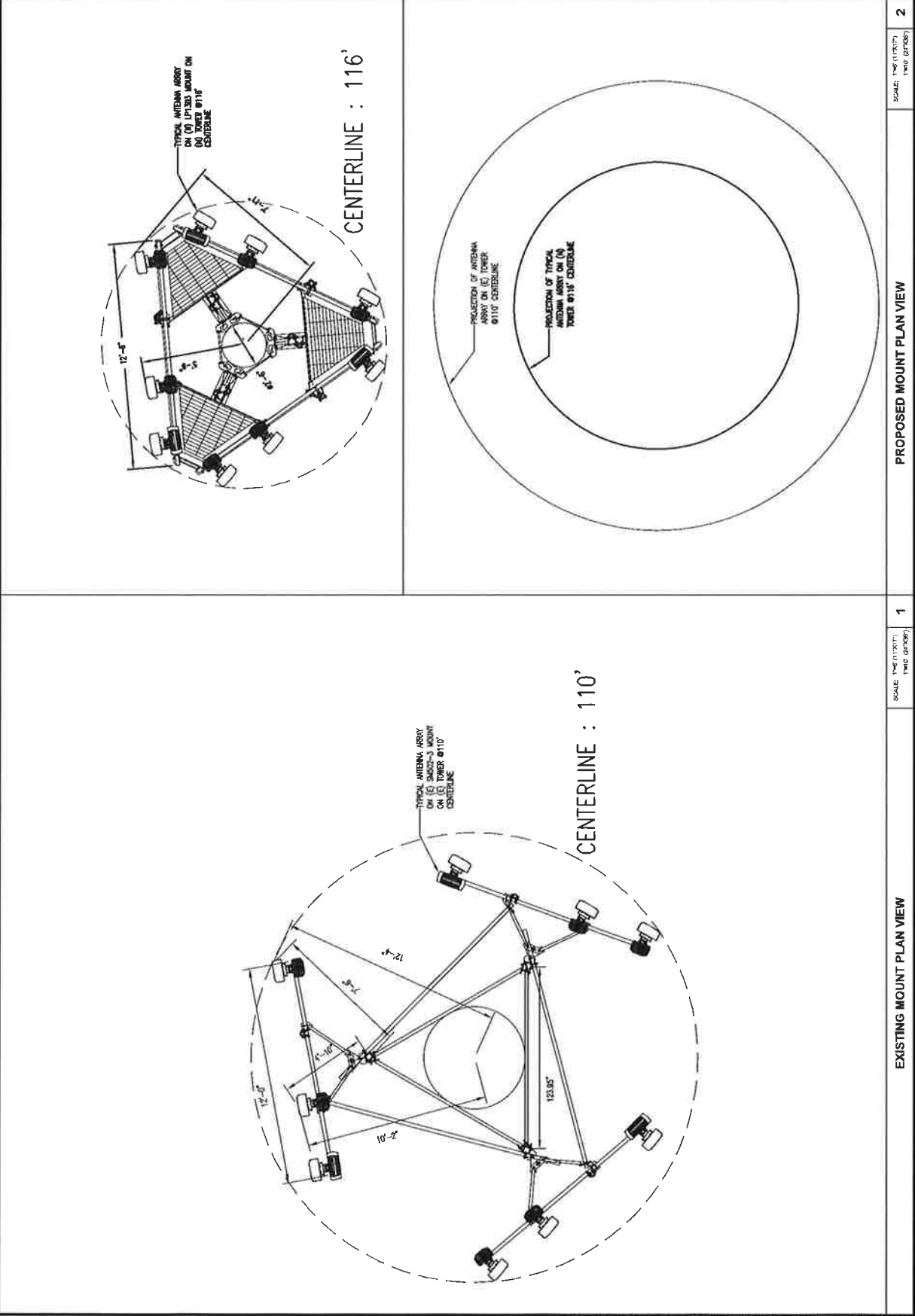
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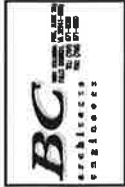
DRAWN BY: NP
CHECKED BY: BMQ
DRAWING DATE: 05-08-18

CUSTOMER'S NAME:
SITE NUMBER:
SITE NAME:
KESWICK (VIRGINIA OIL COMPANY)
BUSINESS UNIT NUMBER:
830465
SITE ADDRESS:
BLACK CAT ROAD
KESWICK, VA 22847

SHEET TITLE:
EXISTING & PROPOSED
MOUNT PLAN VIEWS
SHEET NUMBER

A-4





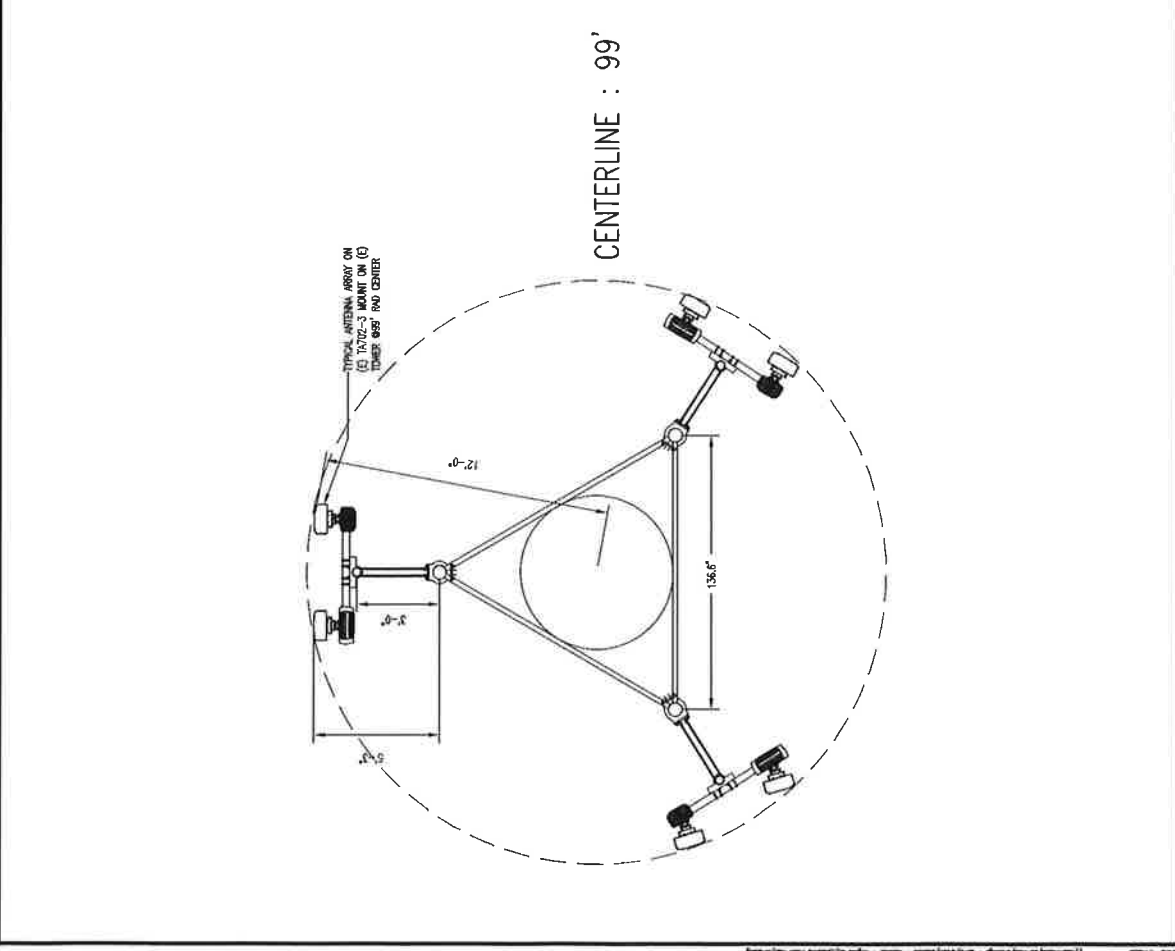
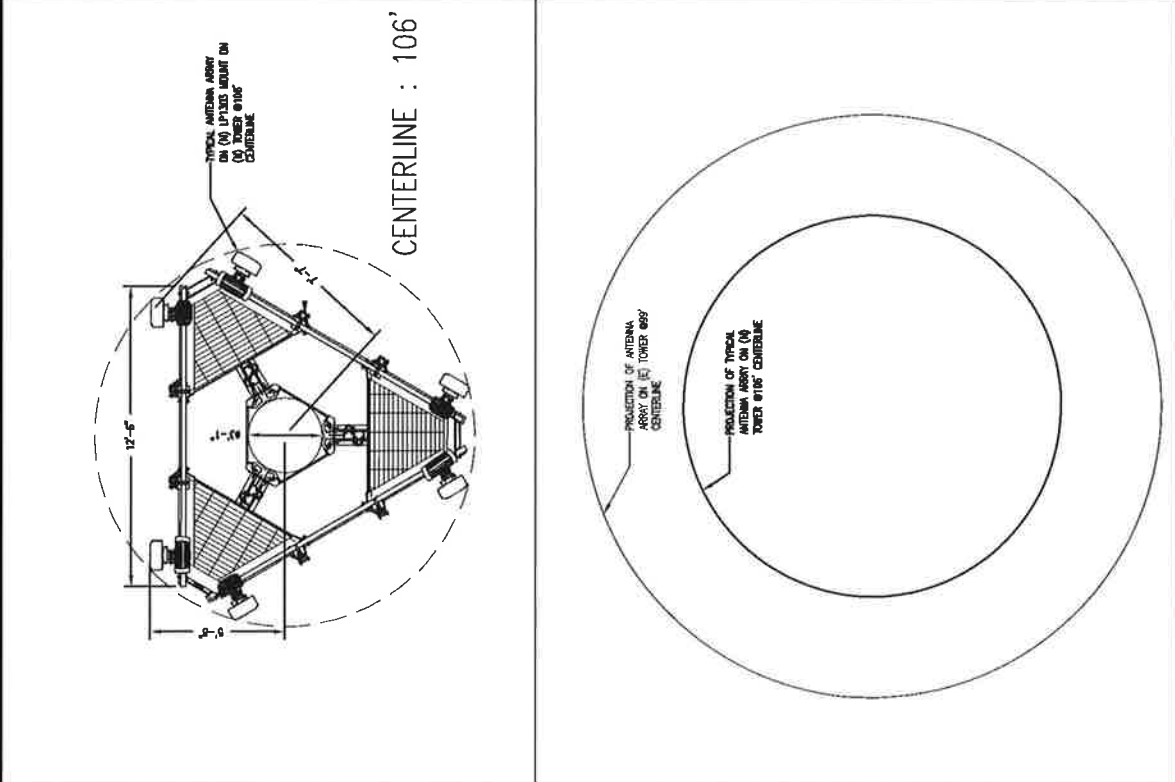
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DRAWN BY: NP
CHECKED BY: BWQ
DRAWING DATE: 02-08-18

CUSTOMER'S NAME:
SITE NUMBER:
SITE NAME:
KESWICK (VIRGINIA OIL COMPANY)
BUSINESS UNIT NUMBER:
830406
SITE ADDRESS:
BLACK CAT ROAD
KESWICK VA 22847

SHEET TITLE:
EXISTING & PROPOSED
MOUNT PLAN VIEWS
SHEET NUMBER

A-5

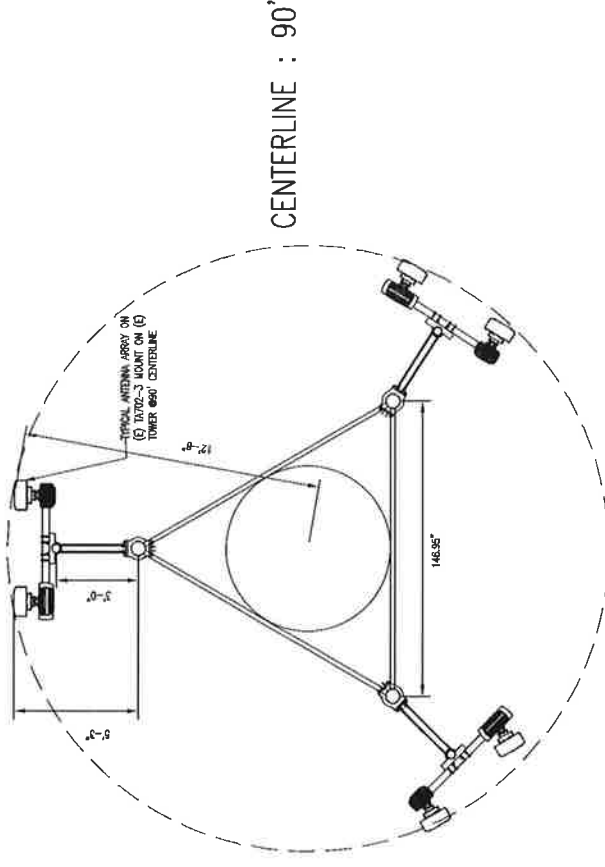
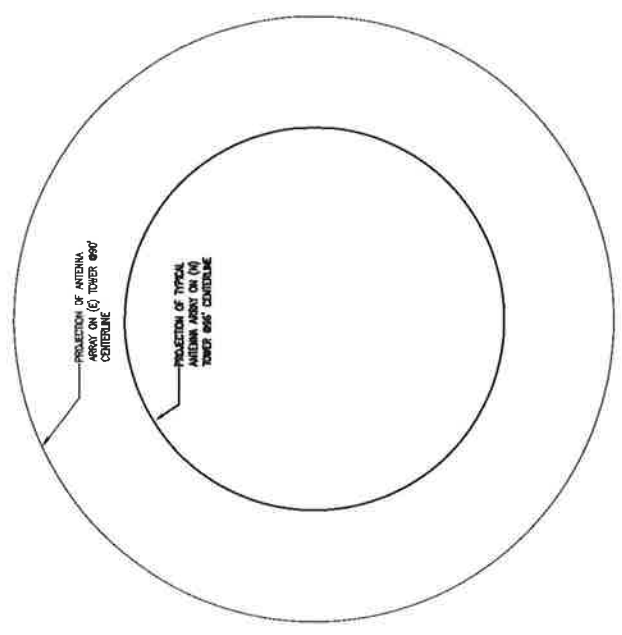
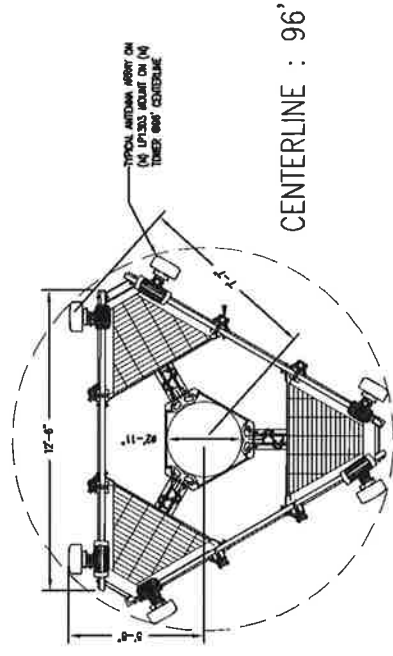


SCALE	1"=100'	1"=200'
2	1"=100'	1"=200'
1	1"=100'	1"=200'

[illegible]

DRAWN BY: NP	CARRIER'S NAME	EXISTING & PROPOSED MOUNT PLAN VIEWS SHEET NUMBER
DATE: 11/11/00	SITE NUMBER:	
DRAWING DATE: 12-08-18	SITE NAME:	
	KESWICK VIRGINIA OIL COMPANY	
	BUSINESS UNIT NUMBER	
	312-426	
	SITE ADDRESS	
	BLACK CAT ROAD	
	KESWICK, VA 22947	

A-6



DATE: 10/15/11	2
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PROPOSED MOUNT PLAN VIEW

SCALE: 1"=6' (11"X17")
1"=10' (24"X36")

EXISTING MOUNT PLAN VIEW

**BEFORE THE
BOARD OF SUPERVISORS AND PLANNING COMMISSOIN
OF
ALBEMARLE COUNTY, VIRGINIA**

Date: October 30, 2017

Re: Statement of Justification for Special Use Permit with Special Exception
Crown Castle – Keswick 816361 Replacement
Black Cat Road, Keswick, Virginia
Lot 94-39; Lot ID: 09400-00-00-03900

I. Summary

Crown Castle and Virginia Oil Co., Inc. (together, the “Applicant”), through undersigned counsel, seeks approval to construct a 150-foot-tall monopole in Keswick, Virginia that will replace an adjacent existing 140-foot-tall lattice tower that will be decommissioned in the first quarter of 2018. As the Project Site is in the Rural Area district, the Applicant requires a special use permit as required by Albemarle County Code Chapter 18 (the “Zoning Ordinance”), Section 10.2.2(48). Without approval, Albemarle County residents, workers, and visitors will suffer an unsafe and inconvenient interruption to the wireless coverage they have come to expect and rely upon. Applicant’s request for a special use permit is not inconsistent with the Comprehensive Plan of Albemarle County, including the Personal Wireless Service Facility Policy of 2000, and will not create any adverse impacts on the surrounding properties. Because the Applicant desires to co-locate five (5) carriers on the new monopole, the same number of carriers as is on the existing lattice tower, Applicant requests special exception approval to allow more than three (3) arrays. Applicant also requests special exception relief to exceed the projection limitation from the tower. Applicant requests the Planning Commission and Board of Supervisors **APPROVE** its application for a special use permit.

II. The Property and Surrounding Area

1. Location

The project site will be located on parcel 94-39 (Lot ID: 09400-00-00-03900) in the Keswick area of Albemarle County (the “Project Site”). The Project Site lot is approximately 12.49 acres in size, and located immediately south of Interstate 64. The Project Site is unimproved and located in the Scottsville Magisterial District. The eastern portion of the Project Site is heavily forested, while the western portion of the property is an open field.

Applicant’s personal wireless service facility will be sited along the northern edge of the open space, so that it is most proximate to Interstate 64, and well screened from the Interstate.

2. Zoning

The Project Site is located on a split-zoned parcel. The eastern, forested portion of the parcel is zoned C-1 Commercial. The balance of the property is zoned Rural Area. The Project Site will be located on the Rural Area portion of the parcel.

3. Surrounding Area

The Project Site is bordered by trees on all sides, which serve as a natural buffer between it and the public rights-of-way. The area surrounding the Project Site is primarily agricultural and forest. To the north of the Project Site is Interstate 64, which acts as a buffer for those parcels to the north. Areas to the east of the Project Site are typified by rural, low-density, single-family residential use. The area immediately south of the Project Site is undeveloped forested area, despite C-1 commercial zoning. To the west of the project site is the existing 140-foot-tall lattice tower, located on a multi-acre, single-family residential lot (the “Johnson Lot”).

The Project Site is roughly six miles east-south-east of Monticello and approximately eight miles south-east of Charlottesville.

III. Nature of the Applicant

The land is owned by Virginia Oil Company, Inc. ("Virginia Oil"). The owner's authorized agent is its lessee, Crown Castle Inc. ("Crown Castle"), a telecommunications tower and infrastructure owner.

IV. Standards for Granting a Special Use Permit for Tier III Telecommunications Use

The Applicant's proposal to construct a wireless service facility in an Rural Areas district is controlled by the Zoning Ordinance Section 10.2.2(48), which requires the Applicant to obtain a special use permit to construct its monopole in the Rural Areas district. Section 5.1.40 enumerates additional requirements and restrictions for wireless service facilities.

Special Use permits are controlled by Section 33.4 and 33.8. In compliance with Section 33.4(a), the Applicant participated in a pre-application meeting on July 24, 2017, with Mr. Bill Fritz, Mr. Chris Perez, and Mr. Brent Nelson in attendance. An application for a special use permit may also require a statement of justification, which shall discuss the need and/or benefit of the project, its consistency with the Comprehensive Plan, the project's impacts on public facilities and infrastructure, its impacts on environmental features, and other information. Section 33.4(c). Additionally, special use permit approval requires the Planning Commission and the Board of Supervisors to consider whether the project will create a substantial detriment to adjacent lots, whether the project will alter the character of the district, whether the project is in harmony with the purpose and intent of the Zoning Ordinance, and whether it is consistent with the Comprehensive Plan. Section 33.8(a).

For the reasons contained herein, the Applicant satisfies the standards required for approval of a special use permit.

V. PROJECT PROPOSAL

1. Public Need or Benefit

Crown Castle, has leased ground space for the existing 140-foot-tall lattice tower on the Johnson Lot since 1998. After the erection of the lattice tower, multiple telecommunications carriers have collocated their services on the tower, such that there are now five different wireless service providers on the tower. Each of the Federal Communications Commission (“FCC”) licensed wireless telecommunication service providers (AT&T, Sprint, T-Mobile, Verizon, and U.S. Cellular) has developed their own complex wireless networks around the lattice tower to work in a close, cohesive network. Wireless carriers must site their communication facilities carefully. If facilities are sited too distant from each other, gaps occur, which result in dropped continuing calls, blocked incoming and outgoing calls, and interrupted data service. If facilities are sited too close to each other, interference may occur, resulting in interruptions and inefficient “hand-offs” between one facility and the other. Over the last two decades, the carriers have worked to carefully site their other facilities so that interruptions do not occur. This means that a replacement for the existing lattice tower must be located near it, or else gaps or interference will occur.

In 2007, the existing owner of the land on which the lattice tower resides gave an easement to the Virginia Outdoors Foundation, and Crown Castle was informed its lease will not be renewed at the end of its term. Given the wireless subscribers’ reliance on this wireless facility for their wireless communications, which serves an overwhelming majority of Albemarle County residents, workers, and visitors, Applicant seeks to erect a new 150-foot-tall monopole to replace the existing lattice tower that will be decommissioned in 2018.

If no replacement is permitted and the site is forced to come off air, the resulting impact will result in a substantial gap in coverage and will pose a detriment to residents, workers, and visitors of Albemarle County. Wireless signal will no longer hand off between Site Nos. 801475, 5800112, and 861959, as are displayed on Exhibit X. The approximately 41,000 daily wireless customers who travel through the area

will experience dropped and blocked calls due to the resulting lack in coverage. This site provides critical coverage to those living, working, and traveling through this part of Albemarle County, and to emergency first responders who rely on the seamless coverage achieved by this site to provide rescue services.

2. No Substantial Detriment to Adjacent Lots

Section 33.8 of the Zoning Ordinance enumerates that one factor for the Planning Commission and the Board of Supervisors to consider is whether the proposal will have a detrimental impact on adjacent lots. The Applicant's proposal will not create a substantial detriment to adjacent lots.

First, the Project Site is obscured from the public rights-of-way by surrounding forest. The existing forest is such that the new tower will pose almost no impact on the public rights-of-way, at worst, being visible above the tallest trees from much farther away. Moreover, the trees' close proximity to the right-of-way serve to block most or all of the height of the tower, for the portion that will extend above the trees.

Second, the proposed monopole will be located approximately 1,000 feet east-south-east of the existing lattice tower. Having existed for nearly two decades already, much of the public is accustomed to seeing a wireless facility in this approximate location, such that it too blends into the background.

Finally, the replacement tower will be a monopole, instead of a lattice tower. The replacing monopole presents a visually less obtrusive alternative to a lattice tower, as it has a narrower form. The County's Wireless Policy states that monopoles are "acceptable" for personal wireless service facilities, whereas lattice towers "generally do not meet the County's policy". *Personal Wireless Service Facilities Policy*, 46 (Dec. 2000), http://www.albemarle.org/upload/images/Forms_Center/Departments/Community_Development/Forms/Comp_Plan_Round_4/ComprehensivePlanLinks/PersonalWirelessServiceFacilityPolicy.pdf.

Given the above, there will not be any substantial detriment to the surrounding properties.

3. Character of the District Will Remain Unchanged

The Zoning Ordinance requires that the character of the district will remain unchanged if the requested special use is approved. §33.8(a)(2). The character of the district will remain unchanged if the Applicant's personal wireless service facility is approved.

To begin, as aforementioned, there is already an existing 140-foot-tall lattice tower. that creates a greater impact. By allowing the *de facto* replacement of the existing lattice tower, the public will not notice any change in character.

Second, the wireless service facility will not change any traffic behavior for the neighborhood. The Project Site will not generate any regular travelers to or from the site. After initial construction is complete, the Project Site will require only occasional visits from the wireless carrier tenants and the tower owner for maintenance and repair; typically, carriers visit their sites only once or twice per month. As such, there will be no impact on traffic to or from the Project Site.

Third, the Project Site will be substantially obscured. As discussed above, the lush forest will buffer visual impact for those on the ground in close proximity. The occasional distant viewer, such as those traveling at high speed along the highway, may notice the top most portion that sticks above the tree line. To mitigate impact, Applicant's facility is only as tall as is absolutely required to properly allow the carriers' signal to effectively propagate. As the high trees can cause substantial interference, obviating the facility's efficacy, additional height is required to assure proper coverage. As can be seen in some of the photos attached, the existing tower, despite its greater bulk, is only negligibly visible through the trees that line I-64. As stated above, the replacement tower will be a monopole with even less impact. The rear of the project will not be visible from any public rights-of-way, and will only be visible to the owner's invitees who visit the interior of the property.

4. Special Use Will Be in Harmony with the Purpose and Intent of the Zoning Ordinance

The next consideration enumerated by the Zoning Ordinance requires the Planning Commission and the Board of Supervisors to consider the proposed special use's harmony with the purpose and intent of the Zoning Ordinance, and the public health, safety, and general welfare of Albemarle County. § 33.8(a)(3). Section 5.1.40 states that the purpose of the Ordinance is to "implement the personal wireless service facilities policy, adopted as part of the Comprehensive Plan, in a manner that complies with Section 704 of the Telecommunications Act of 1996 (47 U.S.C. § 332(c)(7)) for new personal wireless service facilities" The Applicant's project is in harmony with the purposes and intent of the Ordinance because it will not create any appreciable changes in the development pattern of the County, while continuing to provide wireless coverage to all County residents, employees, and visitors who possess a wireless device, including cell phone, connected car, GPS, or tablet.

In compliance with the development requirements enumerated in subsection (b), the proposed facility will not have guy wires, will have limited outdoor lighting to only during periods of active maintenance, and will be surrounded by fencing that will screen its ground equipment from view. §§ 5.1.40(b)(1), -(5)-(6). The antennas will comply with size requirements. § 5.1.40(b)(2). The Applicant for has submitted a proposed Tree Conservation Plan, attached as EXHIBIT X. § 5.1.40(b)(3) for the preservation of trees in the vicinity of the facility. The project will create no slopes. § 5.1.40(b)(4). In conformance with the Zoning Ordinance, the monopole will be painted a "dark brown[,] natural[,] or painted wood color that blends into the surrounding trees". § 5.1.40(b)(11). The project complies with required setbacks, namely the 1:1 setback and fall zone requirement of Section 5.1.40(c)(3).

5. Special Use Will Be in Harmony with Uses Permitted By-Right in the Zoning District.

The Rural Areas district allows many low-density uses by-right, including: single-family detached dwellings; agriculture, forestry, and fishery uses; game preserves; farm winery, brewery, and distillery

uses; farm stands; small wind turbines; water, sewer, energy, and communications distribution facilities; and Tier I and II personal wireless service facilities; among other uses. The Applicant's proposed Tier III use is harmony with many of these enumerated uses.

First, the Applicant's project will provide telecommunications and data service to its wireless carrier tenants' subscribers who live, work, recreate, and travel in Albemarle County, similar to the uses contemplated by Tier I and Tier II wireless service facilities. Second, the Applicant's project will be a single monopole, set 150-feet back from lot lines, similar to most of the requirements of a small wind turbine. Third, as landline phone usage continues to diminish, the provision of wireless phone coverage serves the utility-like need for communication services as those permitted by Section 10.2.1(6). Finally, , the Rural Areas district allows by-right low-density commercial activities such as winery/brewery/distillery uses, country stores, and other limited event hosting. Uses attracting the public also attract customers who will expect safe, reliable coverage. Customers will rely on wireless service to navigate them to the location, to allow them to advertise and post about the business on social media, and to facilitate their purchases through mobile payment services like Apple Pay and Android Pay.

Although wireless telecommunications services are legally private services, they function similarly to public utilities that are allowed by-right. Therefore, the Applicant's special use is in harmony with the uses allowed by right in the Rural Areas district.

VI. Consistency with the Comprehensive Plan

In addition to the above, the Zoning Ordinance requires the Planning Commission and the Board of Supervisors to reasonably consider the proposal's consistency with the Comprehensive Plan. By extension, applications for personal wireless service facilities must be consistent with the Albemarle County Personal Wireless Service Facilities Policy, originally adopted in December 2000 (the "Wireless

Policy”). The Applicant’s project is consistent with many of the policies contained in the Comprehensive Plan and the Wireless Policy of 2000.

a. Comprehensive Plan - Rural Areas Section

The Project Site is located within a Rural Areas district, which is discussed specifically within the Comprehensive Plan. The Comprehensive Plan encourages the County to assist Rural Area property owners to “diversify agricultural activities, including helping to connect local farms with local consumers.” Comprehensive Plan of Albemarle County, 7.12. Indeed, the Rural Area’s chapter states that Objective 1 is to support a strong agricultural economy. *Id.* at 7.9. One way the County seeks to support Albemarle’s rural farmers is by promoting agro-tourism through farm tours and the establishment of wineries and cideries. Strategies 1c and 1e, *Id.* at 7.12. Similarly, the Rural Areas chapter encourages the growth and cultivation of the local horse industry. Strategy 1f, *Id.* at 7.14. These investments in agricultural appreciation and development all require a certain amount of infrastructure development to support the enhanced uses. Just as electricity would be provided to a local winery or farm stand, wireless service is an expected – albeit non-public – part of our modern infrastructure that agro-tourists expect. Reliable wireless service will allow agro-tourists to find their destination via a GPS map service, share photos that promote the agricultural business, and even process their purchase of meats, produce, and other farm good products.

The Rural Areas section of the Comprehensive Plan focuses on preserving the agricultural and bucolic nature of areas not designated for development. Permitting a wireless service facility to install on an agricultural land furthers this goal. Due to setback and fall zone radius requirements for a telecommunications tower, landowners agree that they will not develop a portion of their land, which is inevitably much larger than the shelter or compound that will be at the base of the tower. As a result,

although a portion of land is improved by the compound space, the preponderance of leased space is restricted, preserving its undeveloped state.

The Rural Areas section also discusses improving rural interstate interchanges. *Id.* at 7.33-34 The Project Site is located along the Black Cat Road interchange with Interstate 64. The chapter states that “[d]evelopment adjacent to and dependent upon rural interstate interchanges is not served by public water and sewer nor is it intended to be served by public utilities.” *Id.* at 7.33. The chapter is intended to prevent the interchange from becoming a “tourist stop” along Interstate 64. *Id.* Allowing the wireless service facility in this area is not inconsistent with this policy. As discussed *infra*, the facility will not generate regular traffic, and will require only occasional visits for maintenance and repairs. In conformance with Strategy 6c, the traffic generated will be “typical of agricultural uses and not large frequent trucking activities on rural roads.” *Id.* at 7.34.

b. Comprehensive Plan - Transportation Section

The Comprehensive Plan Transportation section labels Interstate 64, also called the East-West Corridor, which the Applicant’s wireless service facility will support, as a Corridor of Statewide Significance. The Commonwealth of Virginia values the I-64 corridor because it “ensure[s] mobility and long-distance travel”. *Id.* at 10.9. The Comprehensive Plan continues that the Interstate 64 corridor “provides the only interstate access to the Port of Virginia, and it provides access to multiple airports with commercial service in the Hampton Roads, Richmond, and Charlottesville regions.” VTrans 2035 Update labels the corridor as a “Commerce and Mobility Corridor.” In sum, the Commonwealth and Albemarle County both value the connectivity that the East-West Corridor allows. It is travelers along this valued transportation corridor whom the Applicant and its wireless carrier tenants wish to serve.

Although much is made about the safety concerns of distracted driving, reliable wireless coverage plays a far more important role, too. As aforementioned, travelers, particularly those travelling a long

distance, rely on consistent coverage to help navigate them to their destination; navigation services require wireless service coverage. Many travelers use popular services, like Pandora and Apple Music, to play music in their cars; these music streaming requires wireless service coverage. Non-driving passengers regularly browse the internet, do homework, watch video, and do more as they travel to their destination; such activities require wireless service coverage. When travelers have vehicular troubles, they contact loved ones and auto repair services; this requires wireless service coverage. Last, and most importantly, travelers along the East-West corridor who are involved in a serious auto accident, or who suffer a medical emergency, rely on wireless service coverage to contact emergency medical services.

By supporting travelers along Interstate 64, the wireless service facility the Applicant will build will make the lives of Albemarle residents, employees, visitors, and travelers safer and more comfortable.

c. Comprehensive Plan - Historic Preservation Section

Although the proposed Project Site is in the Monticello Viewshed, the tower will have no significant impact on the valued historic landmark. First, the Applicant's proposal reduces the visual obtrusion that the current tower exudes, by its design and location. Second, by complying with appropriate siting and paint camouflage techniques encouraged by the County, the monopole will visually blend with the existing forestland. As a result, the proposed tower will pose no significant impact and will remain a net positive for the historic Monticello, as it will continue to provide its visitors who travel I-64 to visit it with safe, reliable coverage while mitigating visual impact from the decommissioning lattice tower. It should also be noted that any concerns for the landmark are being addressed through the Section 106 process. If the impact is deemed too burdensome on the landmark, the federal process will prohibit the project's construction.

d. Personal Wireless Service Facilities Policy of 2000

Objective 10 of the Community Facilities chapter of the Comprehensive Plan states that the County should support the provision of wireless service when it is in keeping with other aspects of the Comprehensive Plan. *Id.* at 12.35. Strategy 10e specifically states that the primary concern for the location of wireless facilities is visual impact. Applicant's design for the Keswick replacement tower is designed to create the minimal visual impact possible.

For many reasons already discussed, the Applicant's proposed wireless service facility is consistent with the intent and goals of the Wireless Policy. The facility is designed as a monopole, which will slim its visual appearance in comparison to the existing lattice tower. To further mitigate visual impact, the Wireless Policy specifies that wireless service facilities should be camouflaged and the Applicant will comply by painting the facility brown.

While the Project Site is located at the eastern most edge of the Monticello Viewshed, the Project Site's forested background, camouflage techniques, and collocation will mitigate the preexisting visual impact from the existing lattice tower, while continuing to serve the residents, employees, and visitors of Albemarle County with safe and reliable wireless service.

VII. Impacts on Public Facilities, Infrastructure

The personal wireless service facility will have no impact on public facilities or infrastructure. The area already has electricity that serves the existing lattice tower; redirecting the utility to the new tower location will have no impact. No other utilities or public infrastructure is required.

VIII. Impact on Environmental Features

The Rural Areas district was created to preserve the agricultural and forest lands, protect the County's water supply, limit service to rural areas, and conserve natural, scenic, and historic resources.

While many of these assets will not be impacted by the Applicant's proposal, those that are impacted will incur only a negligible disturbance.

Forest lands will be impacted minimally as the small square footage required for securing the ground-level compound and equipment are installed. For reference, the average wireless facility shelter is the size of a home shed. A minimum number of trees will be removed to allow access to the Project Site from Black Cat Road. However, while a telecommunications tower will require a fall zone radius that is equal to the height of the tower, those existing forest trees may remain within it, minimizing the amount of disturbance to the forest character of the area.

No water supply assets will be impacted by the installation of the wireless service facility.

While the Rural Areas district purposefully intends there to be "limited service" to those areas, the intent of the zoning district is to discourage permanent residential development; the zoning district was not intended to burden public services,¹ or burden travelers along a major transit corridor like Interstate 64. The majority of traffic that the existing Keswick lattice tower serves are travelers along the interstate as they travel to and from Charlottesville and Louisa County. Allowing the wireless service facility will not encourage more residential development outside of the development corridor, but will allow the wireless carriers to continue to provide safe, reliable wireless coverage to residents, workers, and travelers alike.

The wireless facility will not significantly impede on natural, scenic or historic resources. Scenic resources will be minimally impacted given the lush forest of trees that will buffer the area between the proposed monopole and the public rights-of-way. The Project Site is not located within a conservation easement space and therefore will not impede areas designated for preservation; even the easement space that is burdening the existing lattice tower will be visually buffered by the existing forest.

¹ Applicant is not a public utility, nor are its carrier antenna tenants. However, given the general public's reliance on wireless cellular service, the intent is indistinguishable from services such as electricity or landline telephone.

The Project Site will not disturb the forest nature of the environment. Indeed, it is the lush forest that will serve as a background to the occasional distant viewer which will further minimize the project's visual impact.

IX. Request for Special Exception Approval under Section 5.1.40(a)(12)

Section 5.1.40(a)(12) states that, "If the proposed facility does not comply with any provision of section 5.1.40, the applicant shall request a special exception in writing as part of the application." Section 5.1.40(b)(2)(a) limits the number of arrays on a monopole to three (3). The Applicant wishes to relocate all of its five (5) existing wireless carrier tenants from the soon-to-be-decommissioned lattice tower onto the proposed monopole; because this will require five (5) arrays to be constructed, Applicant requests special exception approval to exceed the three (3) array limitation.

Applicant believes that, notwithstanding certain statements in the Albemarle County Personal Wireless Service Facilities Policy in 2000, the number of collocations promotes the County's best interest and desire to minimize visibility. Each carrier requires its own array, in order to limit radio frequency interference; therefore, accommodating five (5) carriers require five (5) arrays. To begin, the height requested is substantially similar to the height of the existing lattice tower. Secondly, the additional arrays will continue to be the same width of the allowed three (3) arrays. Therefore, the addition of two (2) wireless carriers will not create a greater visual impact than the allowed three (3) arrays will.

Since the publication of the Albemarle County Personal Wireless Service Facilities Policy in 2000, the FCC has stated a clear policy encouraging collocation. In its 2016 First Amendment to NATIONWIDE PROGRAMMATIC AGREEMENT For the COLLOCATION OF WIRELESS ANTENNAS Executed by The FEDERAL COMMUNICATIONS COMMISSION, The NATIONAL CONFERENCE OF STATE HISTORIC PRESERVATION OFFICERS and The ADVISORY COUNCIL ON HISTORIC PRESERVATION, the FCC announced as a primary policy to "encourage[] collocation of antennas where technically and economically feasible, in order to

reduce the need for new tower construction. *Wireless Telecommunications Bureau Announces Execution of First Amendment to the Nationwide Programmatic Agreement for the Collocation of Wireless Antennas*, DA16-900, 2016 WL 4195718, at *8 (F.C.C. Aug. 8, 2016). The FCC rationalizes that collocations, “reduce both the need for new tower construction and the potential for adverse effects on historic properties.” *Id.* The County has previously acceded to this rationale, as it permitted five (5) carriers to collocate on the existing telecommunications tower.

By allowing the Applicant to accommodate the wireless carriers, it will obviate the need to construct two monopoles. The requirement of two monopoles would be particularly problematic since all carriers have developed their closely coordinated wireless coverage targets around the preexisting tower facilities. As discussed above, it is important that a replacement tower be located near the previous tower due to the fact that wireless carriers carefully develop their network to avoid gaps and interference with nearby facilities. If required to site two monopoles, the carriers would need double the ground coverage space and double or greater tree disturbance to accommodate two compound locations and two access roads. The wireless carriers may continue to need the request height in order to compensate for the greater displacement from their original location.

In summary, Applicant believes it can better minimize visual impact by collocating five (5) carriers on a single monopole than it can by constructing two (2) monopoles. The result is zero or nominal visual impact on one (1) monopole instead of greater impact from two (2) monopoles. This policy is encouraged by the FCC, the NC SHPO, and ACHP. Applicant therefore requests special exception approval under Section 5.1.40(a)(12) to allow it to exceed the array limitation under Section 5.1.40(b)(2)(a).

X. Request for Special Exception Approval under Section 5.1.40(b)(2)(c)

Applicant requests special exception relief, based on Section 5.1.40(a)(12), to allow three (3) arrays on the proposed monopole to exceed 18 inches in width. Section 5.1.40(b)(2)(c) states that, “[n]o

antenna shall project from the facility, structure or building beyond the minimum required by the mounting equipment, and in no case shall the closest point of the back of the antenna be more than twelve (12) inches from the facility, structure, or building, and in no case shall the farthest point of the back of the antenna be more than eighteen (18) inches from the facility, structure, or building.”

Three (3) arrays will exceed 18 inches of projection from the surface of the proposed monopole. collocation will project X inches. In each scenario, the requested projection is necessitated by the need to prevent radio frequency interference. Each carrier is required to achieve a different coverage goal, based on the design of its network around the existing lattice tower. To accommodate the change in coverage distance and need, each carrier is required to emit its signal at a certain power to allow it to minimize coverage gaps as the facility relocates. Due to those power requirements, the carriers must then maintain a certain distance between its antennas that will prevent lateral interference between its own antennas. In order to maintain structural balance, the widest minimum width for one azimuth must be uniform among all three (3) azimuths for the array.

Without relief, carriers will not be able to maintain their coverage area, which will result in gaps of coverage. With gaps in coverage, carriers may need to install multiple other personal wireless service facilities in the Keswick area to supplement the lost coverage. Additional facilities, if required, would result in a greater total impact to the surrounding area and create more visual impact than relief requested.

In order to minimize the need for additional facilities, and to maintain current coverage and avoid disruption to the wireless carriers’ subscribers who live, work, and travel in and around the Keswick region, Applicant requests special exception relief to exceed the 18-inch maximum projection limitation of Section 5.1.40(b)(2)(c).

XI. Conclusion

Applicant, because of decisions outside of its control, will be decommissioning a nearly-two-decades-old lattice tower in early 2018. In response, Applicant has designed a replacement monopole that, although seven percent taller, will be less visually obtrusive than the lattice tower that has existed for the last two decades. The resulting personal wireless facility is a reasonable, sensitively designed facility that will continue to provide reliable wireless service to the residents, workers, and visitors of Albemarle County. As such, Applicant humbly requests that the Planning Commission and Board of Supervisors **APPROVE** this request for this special use permit and special exception relief.

Respectfully Submitted,

Donohue & Stearns, PLC

A handwritten signature in blue ink, appearing to read "E. L. Donohue", is written over a horizontal line.

Edward L. Donohue, Esq.

117 Oronoco St

Alexandria, VA 22314



BARTLETT TREE EXPERTS

1185 Five Springs Road, Charlottesville, VA 22902 • Telephone 434-971-3020 • Fax 434-971-1331

10/25/17

Christopher D. Morin
Brian M. Quinn
BC Architects Engineers, PLC
5661 Columbla Pike, Suite 200
Falls Church, VA 22041-2868

Dear Mr. Morin and Mr. Quinn,

Enclosed you will find a Tree Conservation Plan for the proposed project entitled "830406 - Keswick - Virginia Oil." The plan is designed to specify the necessary tree protection methods and procedures required to minimize construction stress on the trees that will be impacted by this project, as well as to identify existing hazardous trees that are recommended for removal.

Trees are recommended for removal when they are located within 1.5 times their height from the proposed structure and meet the following criteria:

- The tree is dead or in irreversible decline.
- The tree is an unreasonable risk due to a structural defect that cannot be reduced to a reasonable risk level through the implementation of standard arboricultural practices.

The site is an open pasture area with a narrow forested edge between the pasture and interstate 64. There are several large trees in this forested strip. Access to the site through the pasture is good and no trees in the forested strip should be disturbed. The proposed access road from Black Cat Road cuts through a forest. Several trees will have to be removed along the sides of the access road to allow equipment access to the site. The 2 large trees near the tower are an 80' Hickory and a 73' Oak which are predominant large and long lived trees in this area. These are trees #1 and 2 on the attached map and table.

I have developed a table that describes each tree species, specific recommendations for their care, and any relative comments. The required tree protection procedures are broken up into 3 categories, pre-construction, during construction, and post-construction.

Sincerely,

Michael Abbott
Arborist and Local Manager - Bartlett Tree Experts
ISA Board Certified Master Arborist
MS in Forestry

THE F.A. BARTLETT TREE EXPERT COMPANY

SCIENTIFIC TREE CARE SINCE 1907

CORPORATE OFFICE: P.O. BOX 3067, STAMFORD, CONNECTICUT 06905-0067 • (203) 323-1131, FAX (203) 323-1129
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BARTLETT TREE EXPERTS

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Tree Conservation Plan 830406 - Keswick - Virginia Oil

Tree Table

See attached tree table and map (sheet A-0 and A-3 in the BC Architects site plans). Below is a brief summary of removals and/or treatments required to trees in that list:

Several small sapling and pole sized trees are to be removed along sides of current access road as they prevent the needed expansion of the road. These trees are not near the tower site, nor do they provide screening value to the tower.

All remaining trees (#1 and 2) are to be fertilized as detailed below.

THE F.A. BARTLETT TREE EXPERT COMPANY
SCIENTIFIC TREE CARE SINCE 1907

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Tree Conservation Plan 830406 - Keswick - Virginia Oil

Tree Protection Procedures

Pre-construction

- A composite soil sample shall be taken from the site for analysis of soil pH, organic content, nutrient levels of nitrogen, potassium, phosphorus, iron, magnesium, and manganese, and to establish cation exchange capacities.
- The following trees/shrubs shall be removed without damage to surrounding trees
Several small sapling and pole sized trees are to be removed along sides of current access road
- A tree protection zone shall be established to minimize soil compaction, and root, stem and branch damage during construction. The zone will be defined as an area that is 9 inches times the diameter at breast height (DBH) away from any tree to be protected.
- A 4 foot high, orange, UV-resistant, high-tensile strength, barricade fabric fence shall be installed to define the Tree Protection Zone and limit access.

During Construction

- The Tree Protection Zone will be inspected and maintained on a daily basis when work is occurring on the property.
- Trees shall be inspected on a regular basis by a certified Arborist to evaluate for construction trauma, as well as for secondary pest and disease concerns, and irrigation needs.
- No construction equipment, supplies or debris will be allowed in the Tree Protection Zone.



- Trenching or excavation within the Tree Protection Zone will not be allowed without consultation with certified Arborist and will require specialized equipment to perform proper root pruning.
- Root pruning will be performed under the supervision of a certified Arborist and will be performed in such a manner, and with equipment designed to cut through roots cleanly, so as not to tear roots. If roots greater than 2 inches in diameter are encountered during root pruning, they shall be traced back towards the tree using an air-spade and pruned by hand at a point specified by the Arborist.
- Grade changes around trees shall be avoided. Excess soil and debris must be removed from site.

Post-construction

- Tree protection fencing shall be removed.
- The following trees shall be fertilized based on specific needs as determined by soil analysis. Fertilization should include Mycorrhizae inoculation for mature trees, and should be applied using the sub-surface soil injection method.
Trees #1 and 2 in lease area and access road as shown in tree table and map
- Trees that have been affected by construction shall be pruned to remove any dead or damaged limbs. Any bark wounds shall be traced to promote wound closure.
- Trees shall be inspected during the growing season following construction by a certified Arborist to evaluate for construction trauma, as well as for secondary pest and disease concerns, and irrigation needs. The inspection period will extend for up to 18 months following completion of construction.



Office of the Sheriff

Sheriff

Eric Hess

ehess@fluvannasheriff.com

Executive Assistant

Martha Gatlin

mgatlin@fluvannasheriff.com

Admin/Judicial/ Civil Bureau

Captain Von Hill

vhill@fluvannasheriff.com

Investigations/Operations Bureau

Captain David Wells

dwells@fluvannasheriff.com

Training/Crime Prevention Specialist

Lt. Jesse Ellis

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Judicial/Civil Division

Lt. Thomas Rensch

trensch@fluvannasheriff.com

Patrol Div. – Shift Commander

Lt. Sean Peterson

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Patrol Div. – Shift Commander

Lt. Forrest Lawhorne

flawhorne@fluvannasheriff.com

Investigations Division

Sgt. Aaron Hurd

ahurd@fluvannasheriff.com

Emergency Communications Center

Director Michael Grandstaff

mgrandstaff@fluvannasheriff.com

October 16, 2017

Virginia Outdoors Foundation

ATTN: Brian Fuller

Assistant Director of Stewardship

600 East Main St., Suite 402

Richmond, VA 23219

To The Board of Trustees,

Re: 1704 Conversion Request on behalf of Karen S. Johnson -Easement # ALB-02399

The primary mission of the Fluvanna County Sheriff's Office is Law Enforcement and Emergency Communications (E911) for Fluvanna County. In 2016 we received 6483 emergency calls for service, 3463 were from wireless communication devices and 186 of those calls were dropped due to poor wireless communication's coverage.

Our current CAD system does not have the capability to generate a report that would reflect the number of E911 calls from wireless devices - that may have originated from the Keswick Tower and were rerouted to either Louisa or Albemarle Counties. We routinely work with Albemarle and Louisa Law Enforcement agencies in the Troy and Keswick communities where the Counties connect, geographically. Our Deputies are issued or use personal smart phones for communications with all E911 centers and numerous Law Enforcement Personnel.

We have reviewed the details of the 1704 Application filed on behalf of Mrs. Johnson. We are very concerned about the possibility of losing this tower location and its potential for a catastrophic impact on the safety of neighboring communities.

In conclusion we submit our support for Mrs. Johnson's Application to avoid removal of the Keswick Tower under Section 1704. We respectfully ask the Board to exercise discretion in allowing the tower to remain in place as an aid to provide wireless communication for public health and safety of our neighboring counties.

Respectfully submitted,

Sheriff Eric B. Hess

Fluvanna County Sheriff's Office

Fluvanna County Sheriff's Office

160 Commons Boulevard

Post Office Box 113; Palmyra, Virginia 22963

Emergency: 911

Non-Emergency: (ph) 434-589-8211; (fax) 434-589-6594

Administration: (ph) 434-591-2013; (fax) 434-591-2012



AT&T Mobility
Virginia/West Virginia Market Office
4801 Cox Road, Suite 300
Glen Allen, VA 23060

October 10, 2017

Mr. Brian Fuller
Assistant Director of Stewardship
Virginia Outdoors Foundation
1010 Harris St. Suite 4
Charlottesville, VA 22903

Re: Sec. 1704 Application for Conversion/Diversion at 4464 Richmond Road, Keswick, Virginia; Crown Castle Telecommunications Tower #816361 / AT&T Cell Site: CV335; FA: 10069168

Dear Mr. Fuller:

I am writing in support of the Johnson Trust's Section 1704 application for conversion/diversion of open-space related to the 150' telecommunications tower owned by Crown Castle at 4464 Richmond Road, Keswick VA (Parcel Number 94-41A).

As you may be aware, AT&T is one of several carriers who lease space on the tower for operation of wireless facilities. It is my understanding that (i) in 2007 the property owner granted a conservation easement to the Virginia Outdoors Foundation and that according to the terms of that easement, the tower must be removed when the lease term expires in 2018; (ii) if the Application for Conversion/Diversion is approved, the tower may be allowed to remain.

Please be advised that the wireless facility operated by AT&T at this location is a critical part of the AT&T network. The site provides coverage to those living, working and traveling in the surrounding area, including along a large section of Interstate 64. If the tower is not allowed to remain, AT&T customers on Interstate 64 and in the surrounding rural area will experience wide-scale degradation of service including inability to make calls, dropped calls, and loss of text and data services.

In an attempt to minimize such loss of service, AT&T will begin pursuing a replacement facility immediately, but replacement of the existing facility will be tremendously difficult. Identifying suitable locations for new wireless facilities in Albemarle County is generally challenging and in this instance it will be even more so. The pool of candidates will be quite small because any potential replacement site will need to fit precisely into the existing network. It will need to be very close to the existing tower and at the same elevation in order to "hand off" properly to the surrounding sites. It is likely that any replacement site, no matter how carefully chosen, will provide inferior coverage when compared to the existing site.

AT&T therefore offers its wholehearted support of the Johnson Foundation's application for Section 1704 conversion/diversion of open-space and awaits the ruling anxiously. Please let me know if you require any additional information.

Sincerely,

Carol A. Murphy
Sr. Manager, Real Estate and Construction
cm9506@att.com
804-201-2245



DONOHUE & STEARNS, PLC

October 30, 2017

Mark Graham, Director of Community Development
Albemarle County Community Development
401 McIntire Road, North Wing
Charlottesville, Virginia 22902

Re: Crown Castle – Relocated Telecommunications Facility
Keswick Site

Mr. Graham:

Enclosed is an Application for Personal Wireless Service Facility and a number of attachments in support of our client, Crown Castle submission for a wireless support structure, antennas and ancillary equipment located at Black Cat Road. More specifically, Crown Castle is seeking Special Exception and Special Use approval to allow construction of a 150' tower to replace a tower on the Johnson property. In addition, subsequent to this filing, we will be submitting an ARB application.

The subject property is owned by the Virginia Oil Company, is zoned Rural Areas and Commercial and is 12.49 acres. In support of this application, we submit the following:

1. Wireless Application (Tier III)/ Special Use Application(SE)
2. Statement of Justification (17 copies)
3. Zoning Drawings (17 sets), including survey
4. Tree Conservation Plan (17 copies)
5. Letter of Authorization signed by the Property Owner
6. Photographs/ Sims
7. Pre-Application Meeting Request Form
8. Letters of Support – AT&T and Office of the Sheriff
9. Paint Sample

The Applicant is providing photographs of the subject site from Black Cat/ Mechuck Roads and I-64 East. Also included are photographs of the entrance to the parcel looking towards the tower and photographs from the proposed location looking north, south, east and west. The Applicant will be holding a community meeting and balloon fly. Photographs in accordance with the County requirements will be taken at the balloon fly and submitted to staff with the photosimulations developed therefrom.

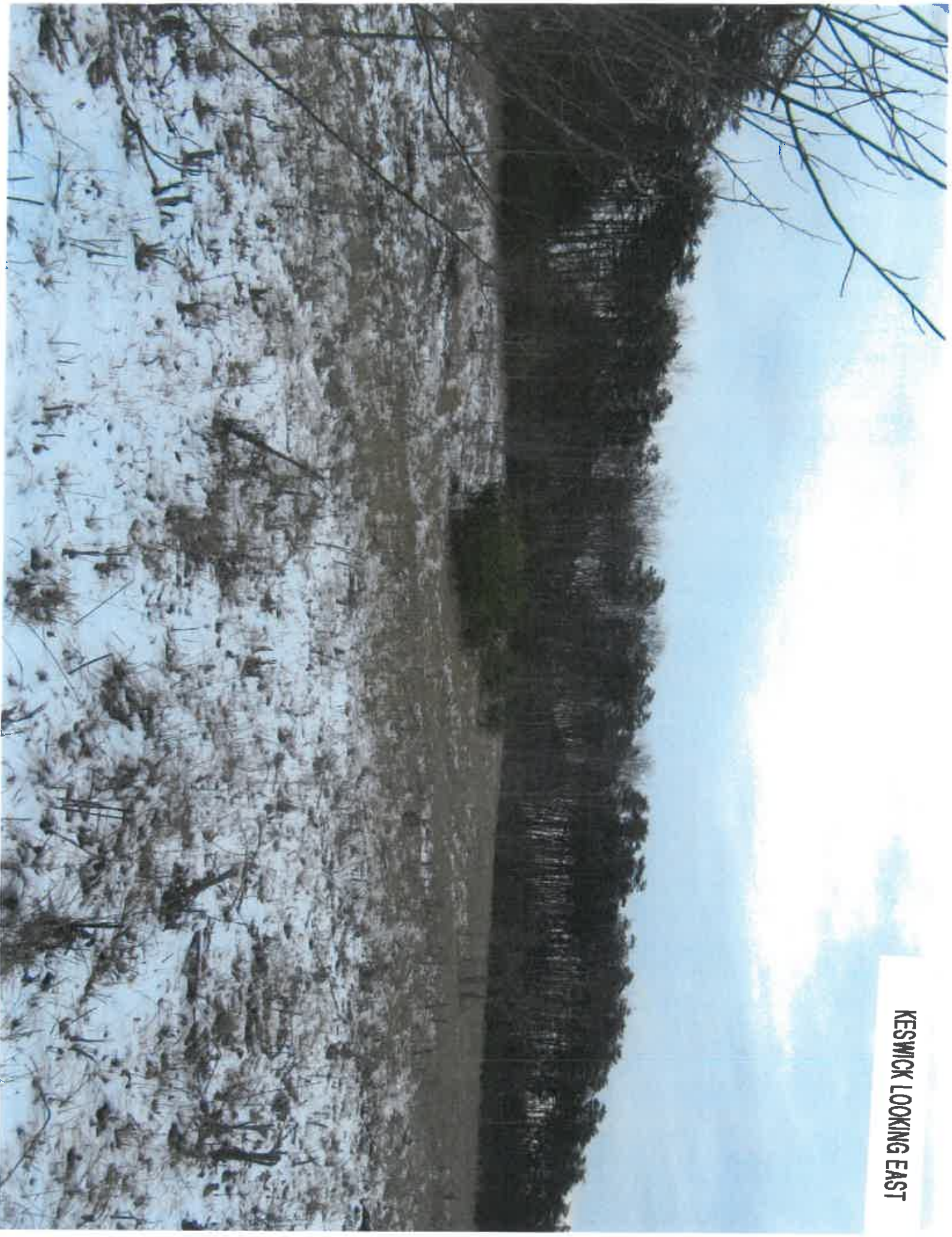
Sincerely,

Ed Donohue

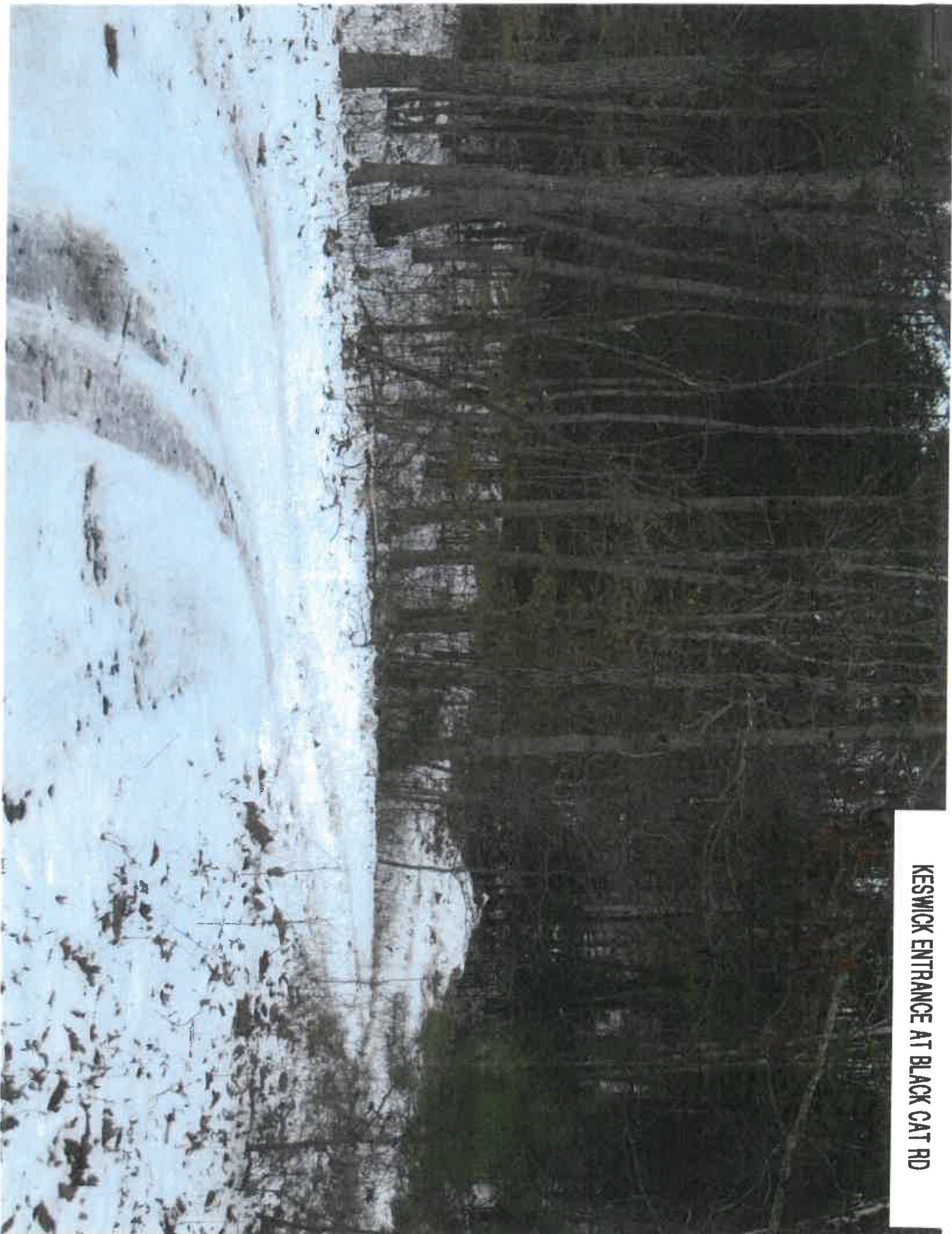
KESWICK LOOKING WEST



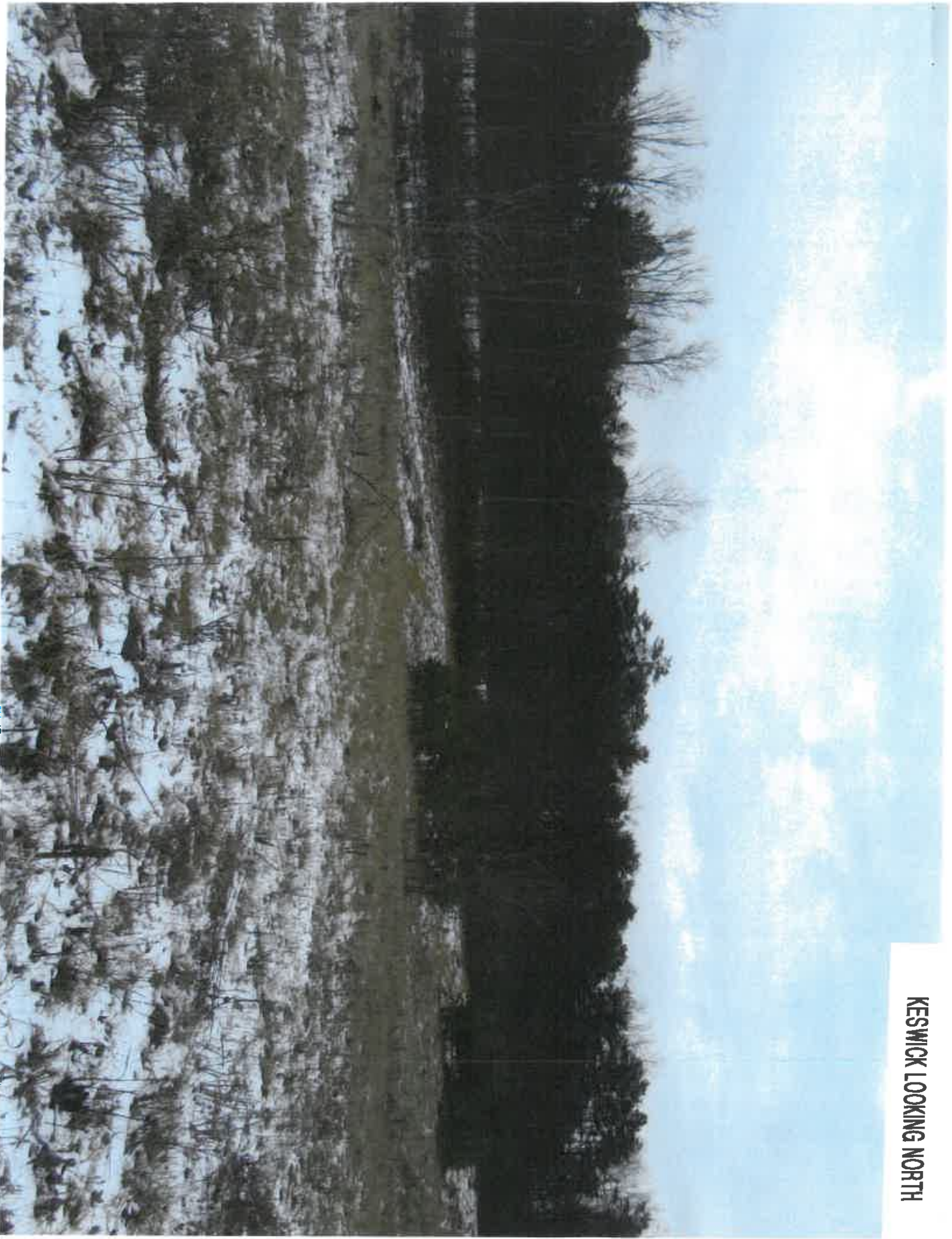
KESWICK LOOKING EAST



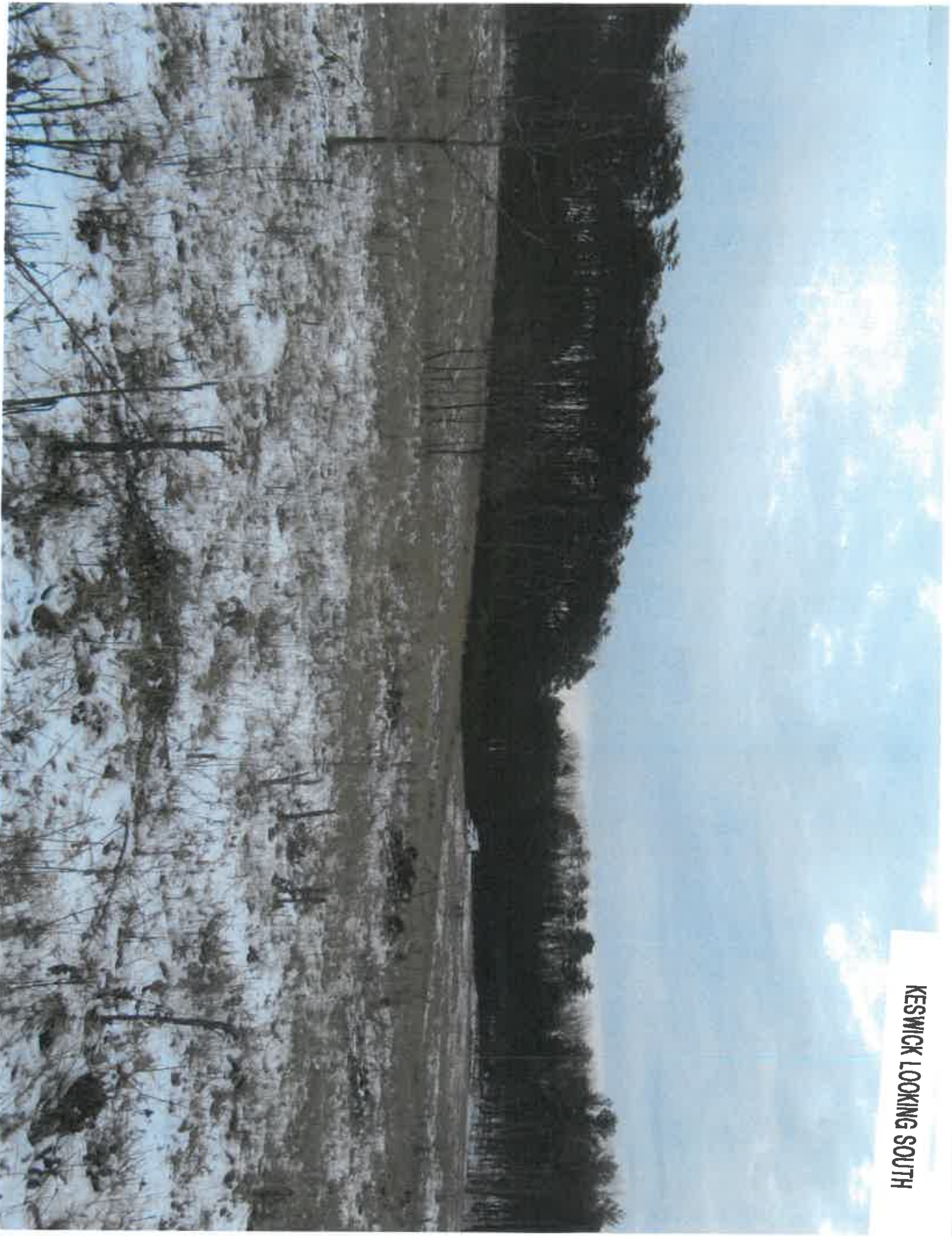
KESWICK ENTRANCE AT BLACK CAT RD



KESWICK LOOKING NORTH



KESWICK LOOKING SOUTH



10/19/2017 23:05

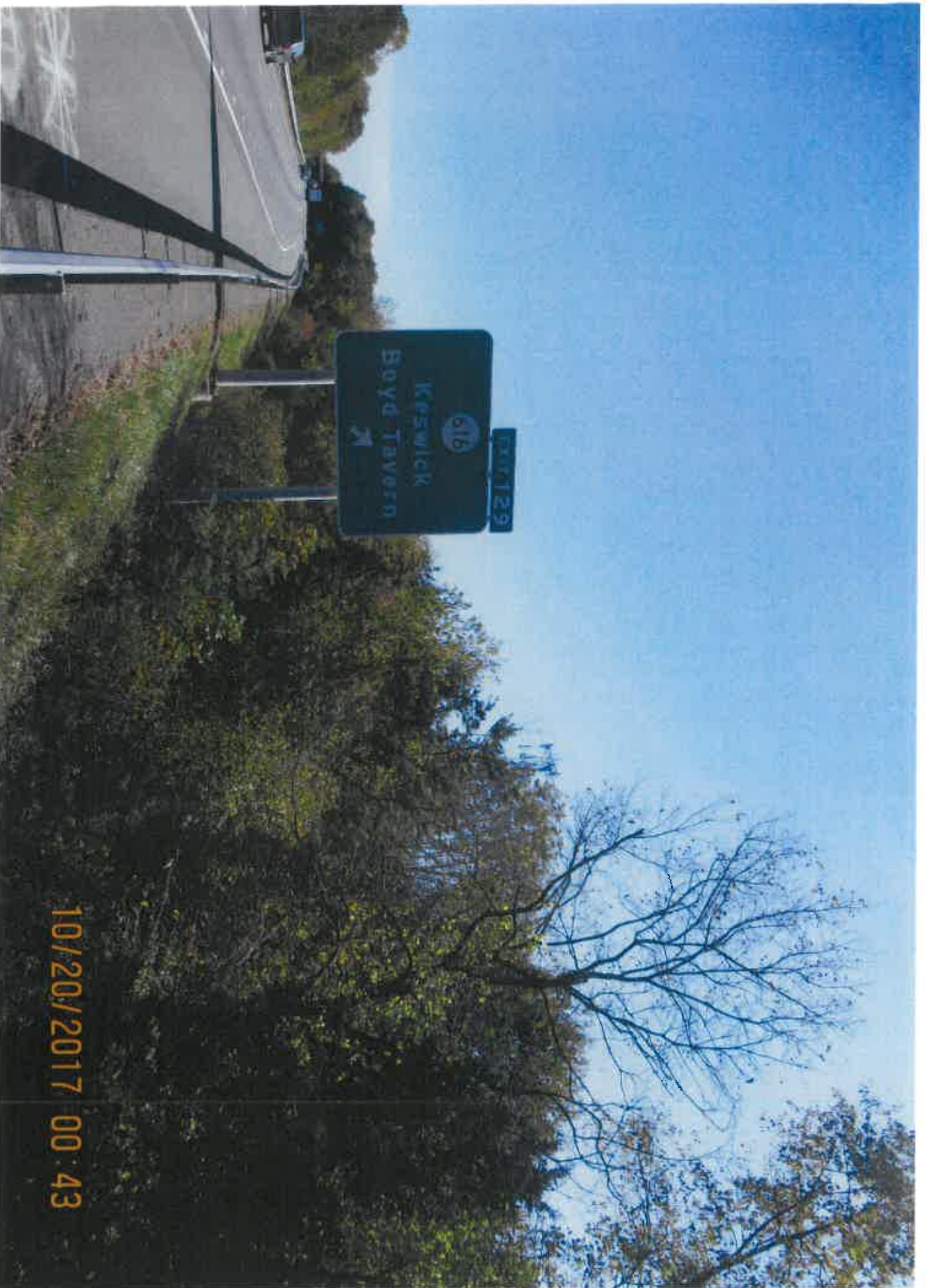
150'-0" Monopole Tower - Not Visible

View from Black Cat Rd. & Mechuck Rd. approx. 715' East of site

830406 - Keswick (Virginia Oil Company)

Black Cat Road, Keswick, VA 22947





150'-0" Monopole Tower - Not Visible

View from I-64 E approx. 1360' NE of site

830406 - Keswick (Virginia Oil Company)

Black Cat Road, Keswick, VA 22947

Existing View



150'-0" Monopole Tower - Visible

View from Black Cat Road approx. 575' NE of site

830406 - Keswick (Virginia Oil Company)

Black Cat Road, Keswick, VA 22947



DONOHUE & STEARNS, PLC

January 4, 2018

Chair Wardell
Albemarle County Architectural Review Board
401 McIntire Road, North Wing
Charlottesville, Virginia 22902

Cc: Heather McMahon; Bill Fritz

Re: Crown Castle – Relocated Telecommunications Facility
Keswick Site

Chair Wardell:

In anticipation of the upcoming Architectural Review Board meeting on January 8th, I wanted to write and provide the following additional materials for the Board's consideration:

1. NEPA/ SHPO

The most salient points from that report are below:

- a. The subject site is not located within an identified wilderness area.
- b. The Virginia Department of Conservation and Recreation confirmed that (1) there are no designated wildlife preserves in the vicinity of the proposed facility; (2) there are no natural heritage resources within two miles of the project area; and (3) the proposed activity will not affect any state listed plants or insects.
- c. The U.S. Fish and Wildlife Service noted a time of year restriction for tree clearing to avoid any impact to the Northern Long-eared Bat and confirmed no effect on critical habitat or Bald Eagles. Crown will coordinate tree clearing accordingly.
- d. The Virginia Department of Historic Resources confirmed that there are no historic properties listed on or eligible to be listed on the National Register of Historic Properties in the area of potential effect.
- e. All identified and federally-recognized tribes with a geographical interest in the area were consulted and confirmed that there were no religious sites potentially affected.
- f. The facility is not proposed to be located with a 100-year or 500-year floodplain.
- g. There are no wetlands on or within 300 feet of the subject site.

2. Virginia Outdoors Foundation (VOF) Application for Conversion or Diversion of Open Space and Justification

This application describes the current status of the existing facility, the VOF's requirement that it be removed and the justification for why it should be allowed to remain in place.

3. Carrier Support Letters

Attached hereto are letters from U.S. Cellular, Shentel, AT&T, T-Mobile and Verizon Wireless that underscore the importance of the existing site and the need for a replacement that will mirror the current coverage should the existing site be removed.

4. Emergency Response Personnel Support

The Fluvanna County Sheriff's Office also submitted a letter of support to the VOF in support of allowing the existing site to remain in place. The letter describes law enforcement's reliance on sufficient wireless coverage to adequately and efficiently respond to the needs of its citizens. Wireless devices (1) allow citizens to contact emergency personnel and (2) connect individual emergency response team members.

I am available to answer any questions regarding these materials. We appreciate the Board's time and consideration of this proposal.

Sincerely,



Ed Donohue

Attachments:

1. NEPA/ SHPO Summary
2. Virginia Outdoors Foundation (VOF) Application for Conversion or Diversion of Open Space
3. Carrier Support Letters – U.S. Cellular, Shentel, AT&T, T-Mobile and Verizon Wireless
4. Letter in support from Fluvanna County Sheriff's Office

GEO-TECHNOLOGY ASSOCIATES, INC.

GEOTECHNICAL AND
ENVIRONMENTAL CONSULTANTS

A Practicing ASCE Member Firm



October 17, 2017

Crown Castle International, CCTMO LLC
2000 Corporate Drive
Canonsburg, PA 15317

Attn: Ms. Margaret Leister

Re: National Environmental Policy Act Evaluation
Keswick – Virginia Oil Cell Site (BU #816361B)
Black Cat Rd.
Keswick, VA 22947

Dear Ms. Leister:

In accordance with our agreement, Geo-Technology Associates, Inc. (GTA) has performed an evaluation of the above referenced Crown Castle International CCTMO LLC (Crown Castle) site, a Delaware limited liability company, with regard to the Federal Communications Commission (FCC) guidelines of the National Environmental Policy Act (NEPA). These NEPA guidelines are specified in Title 47 of the Code of Federal Regulations (CFR) Sections 1.1301 through 1.1319. The results of the NEPA Evaluation are contained herein.

The NEPA Evaluation consisted of a site visit; review of the National Wilderness Preservation System (NWPS) website; a review of the electronic National Atlas of the United States® (NAUS); written requests to the Commonwealth of Virginia Department of Conservation and Recreation (VDCR); a review of United States Fish and Wildlife Service's (USFWS) IPaC database, tribal consultation using the FCC Tower Construction Notification System (TCNS) and a review of the Native American Consultation Database (NACD); a review by the Virginia Department of Historic Resources (VDHR) and potential impacts to historic properties in the site vicinity; a review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map; and a review of the USFWS National Wetlands Inventory (NWI) website. A copy of the completed Crown Castle NEPA Checklist is included in this report as *Table 1*.

Crown Castle is proposing to construct a 159-foot tall monopole tower at an unspecified address on the western side of Black Cat Road, Keswick, VA 22947. The proposed Crown Castle

43760 Trade Center Place, Suite 110, Sterling, Virginia 20166

Phone: (703) 478-0055 Fax: (703) 478-0137

♦ Abingdon, MD ♦ Laurel, MD ♦ Frederick, MD ♦ Waldorf, MD ♦ Sterling, VA ♦ Somerset, NJ
♦ New Castle, DE ♦ Georgetown, DE ♦ York, PA ♦ Quakertown, PA ♦ Charlotte, NC

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site will be located on a larger parcel owned by Virginia Oil Company Incorporated and identified by Tax Parcel #94-39. The site will be located at North 37° 59' 45.79" and West 78° 20' 20.70". GTA understands that Crown Castle proposes to lease a 100-foot x 100-foot area to construct a telecommunications compound containing a monopole tower and associated equipment. In addition, GTA understands that Crown Castle will establish a 20-foot wide access and utility easement extending generally northwest to the proposed lease area from Black Cat Road. While the project was initiated in April, 2017, in July 2017, the eastern portion of the proposed access road was relocated south of an existing gravel drive. This required additional archeological assessment. A *Site Location Map* and a *Site Exhibit* are included in *Appendix A*.

The following table summarizes the results of this NEPA Evaluation.

Section	Question	Response	Basis
47 CFR 1.1307(a)(1)	Will the facility be located in an officially designated wilderness area?	No	47 CFR 1.1306 ¹
47 CFR 1.1307(a)(2)	Will the facility be located in an officially designated wildlife preserve?	No	VDCR ²
47 CFR 1.1307(a)(3)	Will the facility affect listed threatened or endangered species or designated critical habitats?	No	VDCR, USFWS ³
47 CFR 1.1307(a)(4)	Will the facility affect a district, site, building, structure, or object that is listed or eligible for listing in the National Register of Historic Places?	No	VDHR ⁴
47 CFR 1.1307(a)(5)	Will the facility affect an Indian religious site?	No	TCNS, NACD ⁵
47 CFR 1.1307(a)(6)	Will the facility be located in a floodplain?	No	47 CFR 1.1306 ⁶
47 CFR 1.1307(a)(7)	Will the facility significantly alter surface features (wetland fill, deforestation, or water diversion)?	No	47 CFR 1.1306 ⁷
47 CFR 1.1307(a)(8)	Will the facility be equipped with high intensity white lights located in a residential neighborhood?	No	High intensity white lights not proposed
47 CFR 1.1307(b)	Will the facility generate excessive radio frequency radiation?	Not addressed	As directed by Crown Castle International ⁸

NOTES:

- 1 According to the wilderness data obtained from the NPS website <http://wilderness.nps.gov/maplocator.cfm> and the National Wilderness Preservation Society (NWPS) website www.wilderness.net/nwps, the subject site is not included within an identified wilderness area. GTA's search indicated that the proposed Crown Castle telecommunications facility is not located within

a wilderness area. A map of the wilderness areas in the vicinity of the subject site, based on the NWPS website, is included in *Appendix B*.

- 2 On June 7, 2017, GTA submitted a written request to the VDCR to inquire if the proposed facility is located within an officially designated wildlife preserve. In a letter dated July 6, 2017, the VDCR indicated that "There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity." A copy of the VDCR letter is included in *Appendix C*.
- 3 On June 7, 2017, GTA submitted a written request to the VDCR to determine if the proposed development would impact state listed threatened or endangered species or designated critical habitat in the project area. In a letter dated July 6, 2017, VDCR indicated that no natural heritage resources are located within two miles of the project area and the proposed activity will not affect any documented state listed plants or insects. GTA had a phone conversation with the VDCR on July 20, 2017 informing them regarding relocation of the access road. VDCR confirmed that their original response dated July 6, 2017 remains valid since the access road has not moved significantly. On October 11, 2017, GTA conducted an online review for the proposed project using U.S. Fish and Wildlife Service (USFWS) information database, resulting in an Online Project Review Certification Letter from the USFWS. The review determined implementation of time-of-year restriction for tree clearing during April 15-September 15 to avoid any adverse effect on the Northern Long-eared Bat (*Myotis septentrionalis*). Following the submittal to USFWS on October 11, 2017, GTA received an email response stating that the certification letter is their official response. The self-certification letter indicates that the USFWS concurs with the 'no effect' determinations for the critical habitat, and 'no Eagle Act permit required' determination for Bald Eagles. Consistent with recent inquiries, the Virginia Department of Game and Inland Fisheries (VDGIF) website indicates that it declines to review and comment on proposed cell tower projects due to "staffing limitations." A copy of the VDCR letter, USFWS consultation, and above referenced VDGIF website information is included in *Appendix C*.
- 4 On May 8, 2017, GTA provided the VDHR, which is the State Historic Preservation Office (SHPO), with a *Section 106 Submission Packet* report, submitted electronically through the FCC website. The report summarized the project site's potential impact to historic resources and concluded that there are no historic sites listed in or eligible for listing in the NRHP within the project's APE. Following the relocation of access road on July 6, 2017, GTA submitted revised reports to the SHPO on September 5, 2017. In an email dated October 5, 2017, VDHR concurred that there are no historic properties listed in or eligible for the NRHP within the project's visual and direct effects APE. A copy of the Section 106 Submission Packet and VDHR concurrence correspondence are included in *Appendix D*.
- 5 On April 10, 2017, GTA registered the proposed tower site through the FCC TCNS website. The FCC assigned the proposed tower site the Notification ID # 155197. On April 14, 2017, GTA obtained through TCNS a document entitled, "Notice of Organization(s) Which Were Sent Proposed Tower Construction Notification Information," which identified federally-recognized tribes and Native Hawaiian Organizations (NHOs) that have a geographical interest in the project area. GTA contacted the identified tribes and/or NHO's and they did not identify religious sites that will be affected by the proposed undertaking. GTA contacted the identified tribes via phone on July 20, 2017 and informed them of the access road relocation. All identified tribes confirmed that they do not need to review the project again and their original response remains valid for the access road relocation. Copies of the tribal

correspondence are included in *Appendix E*. The following table summarizes the results of the tribal coordination.

Indian tribes or NHOs	Follow-up Date	Concurrence Date
Delaware Nation	6/2/2017 via mail	7/12/2017 via email
Tuscarora Nation	N/A	30-Day response agreement expired on 5/10/2017
Bad River Band of Lake Superior Tribe of Chippewa Indians	6/2/2017 via email	10/16/2017 via email
Cherokee Nation	6/2/2017 via mail	7/14/2017 via email
Eastern Shawnee Tribe of Oklahoma	6/2/2017 via mail	6/28/2017 via email
Shawnee Tribe	6/2/2017 via mail	7/7/2017 via email
Catawba Indian Nation	6/2/2017 via mail	6/28/2017 via email

- 6 A review of the FEMA Flood Insurance Rate Map # 51003C0475D for Albemarle County, Virginia, effective date February 4, 2005 on the FEMA website (<http://hazards.fema.gov>), indicated that the proposed Crown Castle telecommunications facility is not located within a 100- or 500-year floodplain area. The proposed project site is located in Zone X which includes areas outside the 0.2 percent annual chance of flood. A copy of the FEMA map for the proposed telecommunications facility location is included in *Appendix F*.
- 7 Based on a review of wetland data obtained from the USFWS NWI website (www.fws.gov/wetlands) on October 10, 2017, there are no wetlands on or within 300 feet of the subject site. Therefore, the proposed facility appears unlikely to directly affect the jurisdictional wetlands. In addition, GTA did not identify potential concerns associated with significant water diversion or deforestation. A *Wetlands Map* for the site vicinity obtained from the NWI website is included in *Appendix F*.
- 8 It is GTA's understanding that Crown Castle International assesses the NEPA criterion regarding excessive radio frequency; therefore, this issue was not addressed by GTA.

We appreciate the opportunity to provide these services. Should you have any questions regarding this information, or should you require additional information, please do not hesitate to contact our office.

Sincerely,
GEO-TECHNOLOGY ASSOCIATES, INC.



Kirti Rajpurohit
NEPA Specialist



Andrew S. Hendricks, P.G., L.R.S.
Vice President

GTA: 31170731
KR/ASH

Table 1:
Crown Castle NEPA Checklist

Appendices:

- Appendix A: Site Location Map / Site Exhibit*
- Appendix B: Wilderness Areas Map*
- Appendix C: VDCR, VDGIF and USFWS Correspondence*
- Appendix D: VDHR Correspondence*
- Appendix E: TCNS/Tribal Correspondence*
- Appendix F: FEMA Map, Wetlands Map and Soil Report*

L:\Docs\Report\2017\31170731_Virginia Oil\NEPA



APPLICATION FOR CONVERSION OR DIVERSION OF OPEN SPACE

APPLICANT VOF will direct its communication regarding this application to the person, address, phone and email listed here.				SECONDARY CONTACT (OPTIONAL) VOF will send copies of all important communications regarding this application to the person listed here.							
Applicant Name		Michael Winget-Hernandez		Secondary Contact Name		Paul E. Peckens, Program Mgr. – Strategic Reloc.					
Applicant's Title and/or Business Name		Attorney		Contact's Title and/or Business Name		Crown Castle					
Mailing Address		5570 Richmond Rd., Suite 201		Mailing Address		9011 Arboretum Parkway, Suite 280					
City	Troy	State	VA	Zip	22974	City	Richmond	State	VA	Zip	23236
Phone Number (with area code)		Home			Phone Number (with area code)		Home				
		Office	(434) 589-2958				Office	(804) 523-8309			
		Mobile	(434) 249-8251				Mobile	(804) 833-4015			
Email		michael@winget-hernandez.com		Email		Paul.Peckens@crowncastle.com					

TAX PARCEL NUMBERS FOR OPEN SPACE PARCELS INVOLVED IN THE CONVERSION / DIVERSION			
Tax Map # or PIN	Tax record acreage	Landowner Name	Notes (If explanation is needed)
09400-00-00-041A0	79.149 ac.	Karen S. Johnson, Trustee	Currently under open space easement.
09400-00-00-04000	12.61 ac.	Karen S. Johnson, Trustee	Proposed additional open space.
Continue list on an additional sheet of paper if necessary.			

SUMMARY OF PROPOSED CONVERSION / DIVERSION OF OPEN SPACE	
<p>Use this area to summarize the project that necessitates the conversion / diversion of open space land. What is the nature of the project (e.g. utility, safety or transportation), who is involved in carrying out the project, and what changes will take place upon the open space property? What alternatives were considered that would avoid impacts to open space land?</p> <p>This is a summary. Please use only the space provided here.</p>	<p>Applicant seeks to convey to VOF 12.61 acres of adjacent open land in exchange for the conversion or diversion of a 0.0573921 ac. (2500 sq. ft.) tract of land within the original 79.149 ac. easement for use as a telecommunications tower with supporting infrastructure. A telecom tower and dependencies currently exist on the conversion/diversion site which are a vital element of the current emergency services communications network in a part of Albemarle County. The conversion/diversion contemplated by this application is only necessary because the terms of the open-space easement to which the site is currently subject require the removal of the existing tower "by 2018." In anticipation of the destruction of this existing telecom site, an alternative site on an adjacent tract has been preparing to receive a new tower, but the danger inherent in the disruption of emergency communications, the economic waste entailed, and the inevitability of a similar, more conspicuous tower within feet of the existing one, obviating the objectives of its removal, bring this application squarely within VOF guidelines. Furthermore, the location of the open space land offered in mitigation will, if accepted, reduce the prospect of further adjacent development.</p>

AUTHORIZATION Read all of the following carefully before signing.	
Applicant is a local or state government entity, or other public agency? <input type="checkbox"/> YES (no fees apply) <input checked="" type="checkbox"/> NO (fees do apply, see below)	
Due with this application is a \$5,000 flat fee to cover VOF review. Additional fees may apply, with staff hours billed at hourly rates for each hour after the initial 30 hours. Please note that reviews of this type can take much more than 30 hours of VOF staff time. Payment of fees does not guarantee approval of a conversion / diversion request by VOF Staff or the VOF Board of Trustees.	
Please make checks payable to "Virginia Outdoors Foundation" and mail with this signed application to: VOF Finance Office, 900 South Main Street, Blacksburg, VA 24060	
The review process is explained step by step in a procedure document attached to this application for easy reference.	
I hereby authorize Virginia Outdoors Foundation to begin review of the information or activities I have described herein.	
Applicant Signature	Date 9/7/2017



COVER PAGE FOR VOF STEWARDSHIP FEE PROCESSING

APPLICANT The applicant may be a property owner, the owner's representative or the organization that intends to undertake the activity. VOF will direct its communication to the person, address, phone and email listed here. If multiple contact persons are essential, attach a page with names/info.					
Applicant Name		Michael Winget-Hernandez			
Applicant's Title and/or Business Name		Attorney			
Mailing Address		5570 Richmond Rd., Suite 201			
City	Troy	State	VA	Zip	22974
Phone Number (with area code)	Home				
	Office	(434) 589-2958			
	Mobile	(434) 249-8251			
Email	michael@winget-hernandez.com				

PROPERTY INFORMATION Describe where the property is located and its size.			
Property Address (or road, if no address)		4460 Richmond Road	
Locality (County/City)	Albemarle/Keswick	Acreage in the VOF easement	79.149 ac.

PROPERTY OWNER(S) • List all owners and part-owners. Include any parties who have an interest in the eased property (e.g. registered agent or trustee, banks/lenders, lien holders, and/or neighbors whose land is under the same deed of open-space easement, if applicable). • Include title or descriptor of owner as pertains to their ownership (e.g. trustee, LLC member, lien holder, managing partner, spouse) • A current means of contact, phone and/or email, is required.	
Name Karen S. Johnson	Title Trustee
Phone and/or Email	
Name Branch Banking & Trust Co.	Title Lien Holder
Phone and/or Email (800) 213-4314	
Name	Title
Phone and/or Email	
Name	Title
Phone and/or Email	
Name	Title
Phone and/or Email	
Name	Title
Phone and/or Email	
Continue list on an additional sheet of paper if necessary.	

AUTHORIZATION Read all of the following carefully before signing.	
A fee is due with this application to cover VOF review. See the instruction block on page one of each application form for the particular dollar amount and explanation of the cost recovery fee.	
Please make checks payable to "Virginia Outdoors Foundation" and mail with this signed application to: VOF Finance Office 900 South Main Street Blacksburg, VA 24060	
Applications will be reviewed promptly upon receipt. To avoid delays in processing, complete and sign this cover page AND an application form, one or more of the forms numbered 1-6 as listed at the bottom of this page and available online at: www.virginiaoutdoorsfoundation.org	
I hereby authorize Virginia Outdoors Foundation to begin review of the information or activities I have described herein. I certify that this document and all attachments were prepared under my direction or supervision. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete.	
Applicant Signature	Date 9/7/2017

OPTIONAL AUTHORIZATION • Complete this section only if applicant is NOT the landowner. • This section is <u>not</u> required for Form 3 (Access/Utility Easement) or Form 5 (Present Condition Report).	
Certification of authorization to allow applicant to act on landowner's behalf: I, <u>Karen S. Johnson, Trustee</u> , hereby certify that I have (LANDOWNER NAME) authorized <u>Michael Winget-Hernandez, P.C.</u> to act on my behalf (APPLICANT NAME) and take all actions necessary to the processing, issuance, and acceptance of this cover page and any attached application form(s). As landowner, I acknowledge that I am ultimately responsible for adherence to any and all special conditions attached to approvals that are granted.	
Landowner Signature	Date 9/7/2017
Applicant Signature	Date
This section is optional. Sign here only if applicant is not the landowner.	

VOF OFFICE USE ONLY			DATE RECEIVED
Form	1 <input type="checkbox"/> Boundary Line Adjustment	VOF Control Number(s)	
	2 <input type="checkbox"/> Commercial Ecosystem Service Project Access/	Comments	
	3 <input type="checkbox"/> Utility Easement		
	4 <input type="checkbox"/> Easement Amendment		
	5 <input type="checkbox"/> Present Condition Report for Property Sale		
	6 <input type="checkbox"/> Oil and Gas Drilling Plan Review		
	7 <input type="checkbox"/> 1704 Conversion/Diversion		

Application for Conversion or Diversion of Open Space

Executive Summary

Keswick Tower (Crown Castle Site No. 816361) was erected on Limestone Springs Farm (Parcel Number 94-41A) in 1998 pursuant to a 20-year lease between PCS Virginia and Karen Johnson. In 2007, the farm was conveyed into an open-space easement in perpetuity in favor of the Virginia Outdoors Foundation. The easement contains a provision, originally proposed by the Johnsons, requiring the tower to be removed in 2018 after the expiration of the original term of the lease. This provision would cause a 0.057 acre tract (a square, 50 feet on each side) to revert to open space within the 79.149 acres of open space in which it lies. This provision is neither a function of the conservation values of the Virginia Outdoors Foundation, nor of state law. It was the result of an assessment by the landowners, who, having moved on to the farm in their retirement some years after the tower's construction, that the burdens of the tower's maintenance and continued presence on the farm outweighed its benefits.

The original lease has since been extended by successors, including Mrs. Johnson, as Trustee, and Crown Castle, who seek to keep the tower in its current location. Toward this end, the Johnson Trust wishes to compensate the Virginia Outdoors Foundation for the "conversion or diversion" of the 50-foot square by conveying an adjacent 12.48 acre tract of undeveloped land into open-space conservation.

During the last twenty years, Keswick Tower has become a foundational node in the cellular voice and data network serving Interstate 64 and the surrounding community, near Exit 129 at Black Cat Road. All five national carriers, as well as state and local police, fire and rescue, and related dispatch services rely on Keswick Tower, not to mention all of the cellular telephone traffic entering and leaving Albemarle County via Interstate 64 and State Highway 250.

Removal of the tower will create a void in the network which will trigger the need to erect another tower in the same vicinity, which must provide contiguous coverage, at least the same capacity, and be sited on suitable terrain. One alternative site is currently being pursued by Crown Castle on the tract immediately adjacent to Limestone Springs Farm. The resulting structure would necessarily be similar, very close by, and just as visible if not more obvious than Keswick Tower. This is problematic because since Keswick Tower was built, the standards for telecommunication towers within Albemarle County have been radically altered such that suitable alternatives meeting the radio frequency engineering standards required by the carriers cannot be met without specific variances being granted. In any event, the transition to a new tower will necessarily entail public comment and will likely meet resistance from a community already accustomed, over the last two decades, to Keswick Tower and the service it provides. Consequently, the potential exists for unintended consequences, including disruption in service which will implicate the health and safety of the community.

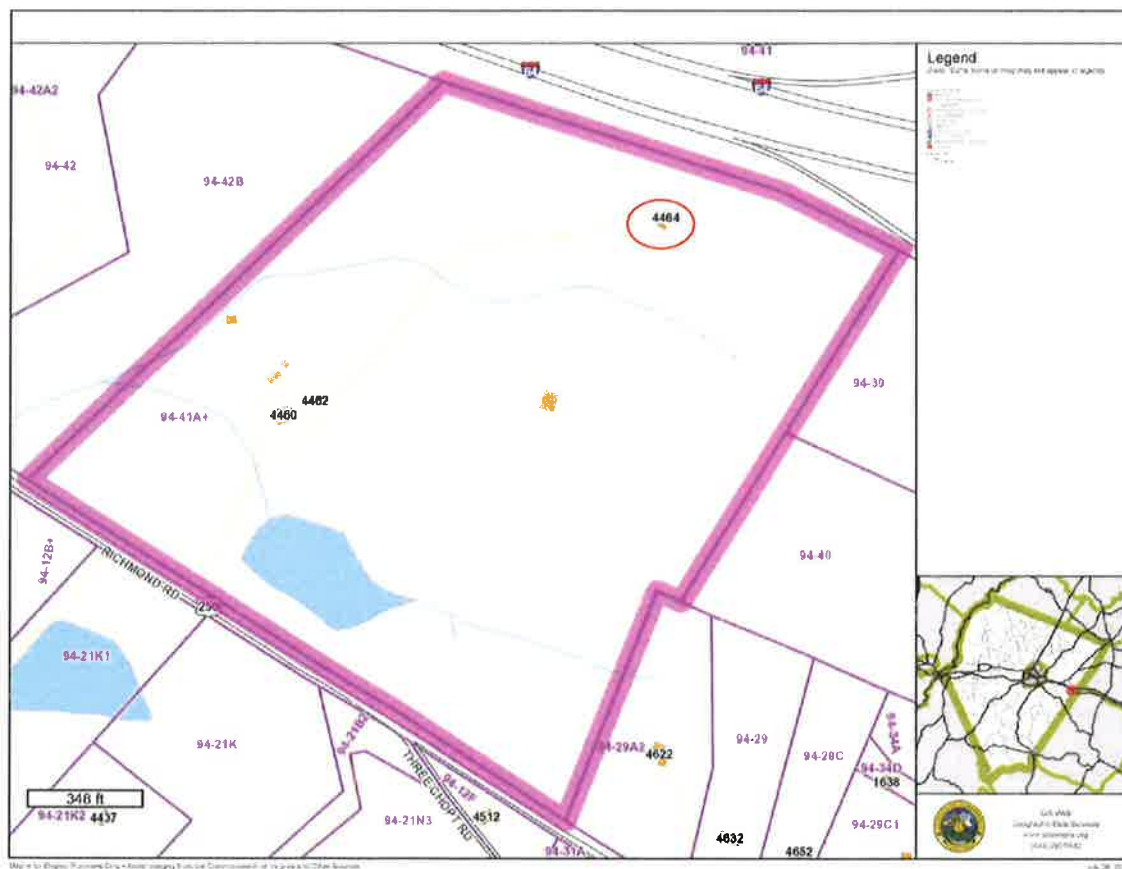
This application proposes to conserve Keswick Tower and its vital network infrastructure which exists today, which are known, understood, and relied upon by the local community. This honors the core conservation value of avoiding waste, since a substitute structure and its requisite ancillary services will need to be built nearly in the same place if it is removed. Finally, this

application significantly increases the open space under conservation easement by offering a 12.48 acre adjacent tract (a tract over 200 times the size) in compensation for the 2500 square foot space which contains the existing structure. Additionally, the tract which Mrs. Johnson is offering in mitigation is located in a way which will result, if accepted, in conserving the rural nature of the neighborhood adjacent and immediately east of Limestone Springs Farm, on Black Cat Road, south of Interstate 64.

Background

Keswick Tower is among the first three telecommunications towers built in the county. Through the years, the wireless network serving eastern Albemarle County has been built around it. It is located on Limestone Springs Farm, Parcel 94-41A at 4460 Richmond Road, in Keswick. Figure 1 illustrates the location of the parcel at the eastern edge of Albemarle County.

Figure 1



aerial image of the farm and tower. Exhibit B is a plat of the property, showing the tower and related access easements.

Ten years ago, Mrs. Johnson conveyed this open-space easement to the Virginia Outdoors Foundation over the whole of Limestone Springs Farm. Then in 2009, Dr. and Mrs. Johnson built a new home and outbuildings on the property, and moved there from their former home in Pennsylvania, their longstanding plan and hope having been to live on the farm for the remainder of their lives.

Figure 2



The Johnsons lived happily on the property until Dr. Johnson 's tragic, untimely, and accidental death on the farm last year. Mrs. Johnson has since resolved to remain there, and continues to live on the property and maintain it on her own. Her real estate holdings now include only Limestone Springs Farm and an adjacent unimproved tract of 12.61 acres (Parcel 94-040). As more specifically discussed below, it is this adjacent tract that Mrs. Johnson wishes to convey into a conservation easement as consideration for the granting of this application. A plat of Parcel 94-040 (including typical setbacks for a replacement tower) is attached as Exhibit C.

Keswick Tower was already on the property when the Johnsons sold off their remaining properties and decided to make the farm their home in 2009. The Johnsons moved to the farm to pursue their dream of working the farm, caring for their horses, and enjoying their retirement peacefully on their only remaining property. However, the disruptions caused by the technical and infrastructural maintenance of the tower and its dependencies operated against their desire for simplicity and privacy. As a result, the relationship between the Johnsons and Virginia, PCS, and its successor Crown Castle, became strained.

Since then, both parties have come to better understand the role that the tower plays in supporting the telecommunications needs of the community and the apparent (and to some extent unforeseen) longevity of land-based cellular networks as the state-of-the-art technology. For her part, Mrs. Johnson now accepts the practical burdens the tower imposes on her peaceful enjoyment of her land. Crown Castle likewise has sought, for some time, to reduce those burdens upon her. As a result, the reasons for Mrs. Johnson's request to include the clause in the open-space easement which provides for the tower's removal by 2018 no longer exist. Mrs. Johnson and Crown Castle seek to perpetuate their existing relationship, and maintain the tower in its current location, for as long as it continues to serve a vital role in the telecommunications needs of the community.

Key Player

Keswick Tower has been operating for nearly twenty years and serves all five major national carriers. Its strongest footprint covers at least nine square miles in two magisterial districts and serves as the cellular communications gateway to Albemarle County entering and leaving on Interstate 64 and Route 250. It also serves Louisa and Fluvanna County consumers on their respective borders with Albemarle County. Figure 3 illustrates Keswick Tower's (816361) footprint in relation to the surrounding facilities in the network.

Figure 3

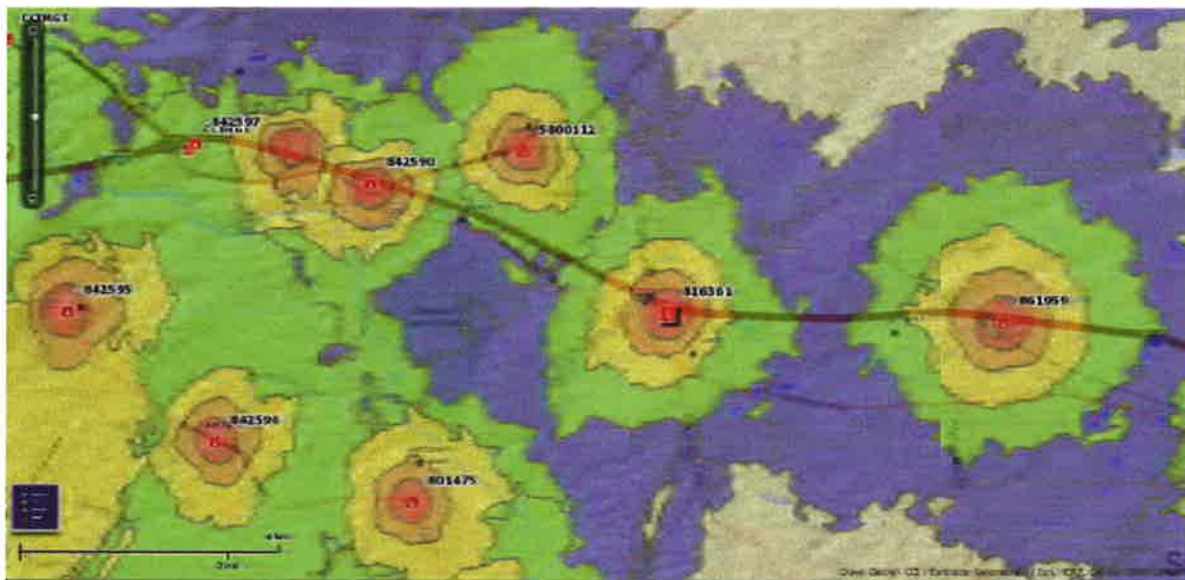


Figure 4 takes a closer look at Keswick Tower's footprint in isolation from the network. As this figure illustrates, Keswick Tower serves a two-mile stretch of I64, a similar span of Route 250, and all of the local cellular traffic within an approximately nine square mile area on all five major

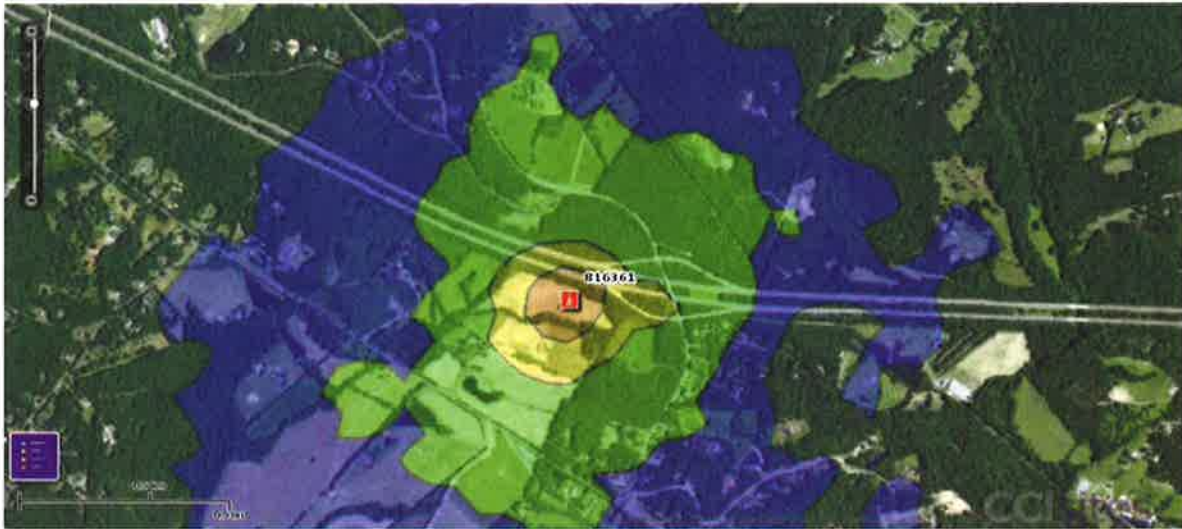


Figure 4. Keswick Tower footprint, isolated.

carriers. Some estimates of the reach of towers in Keswick's class suggest that it can handle signals from cellular telephones which are as far as eight miles away, placing possible users well into Fluvanna and Louisa Counties.

Figure 5 is a graphic representation of the cellular telecommunications infrastructure of most of Albemarle County. This illustration shows the proliferation of sites and the relative number of carriers they host. It is not an indication of reach or carrying capacity. But it does show that as the network has grown, there has been a proliferation of much smaller sites which cannot host multiple carriers, as Keswick does.

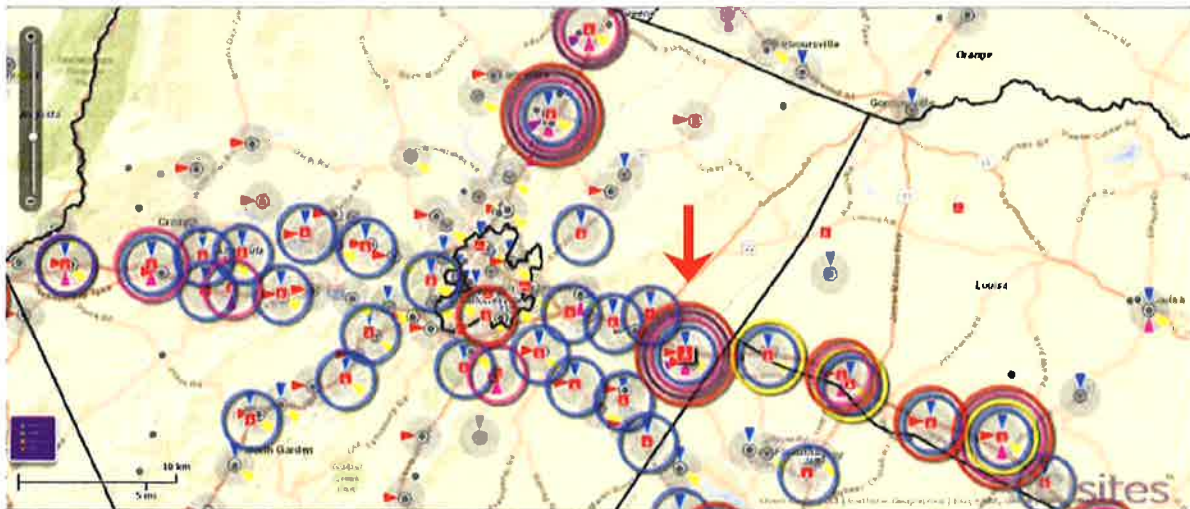


Figure 5. Present-day towers in Albemarle Co., denoting carriers.

This is a function of changes in the County's telecommunications development plan and standards for the development of new telecommunications towers, particularly within the entrance corridors and in the Monticello viewshed, the easternmost periphery of which actually includes Keswick Tower.

This means that the removal of Keswick Tower would represent significant injury to the network as a whole, but particularly to consumers within Keswick Tower's strongest footprint. The following illustration depicts the remaining local Sprint network (in yellow) in the event that Keswick Tower is removed or its service is disrupted. Comparing this image (Figure 6.) to the image at Figure 4., it is easy to see the significant void which Keswick's removal or disruption would cause. But it should be noted that this image merely indicates actual loss of coverage and does nothing to simulate the necessary eventuality of loss of service quality to consumers who find themselves in the periphery of the remaining Sprint coverage area. Similar illustrations of the effects on other carriers appear as Exhibit D.

Difficult to Replicate

While there are no regulatory impediments to the perpetuation of Keswick Tower in its present location, and no ordinance which would require its removal, its replacement would be challenging for both practical and legal reasons.

First of all, the fact that the telecommunications network has literally grown up around Keswick Tower means, as a practical matter, that other towers have been located around it in a manner which takes advantage of its particular electromagnetic footprint. That footprint is a function both of its specific structure (a free-standing steel lattice 149 feet tall) and the topography of its placement. The structural element translates into the amount of equipment the tower will sustain, which in turn, translates into the number of carriers which may be accommodated.

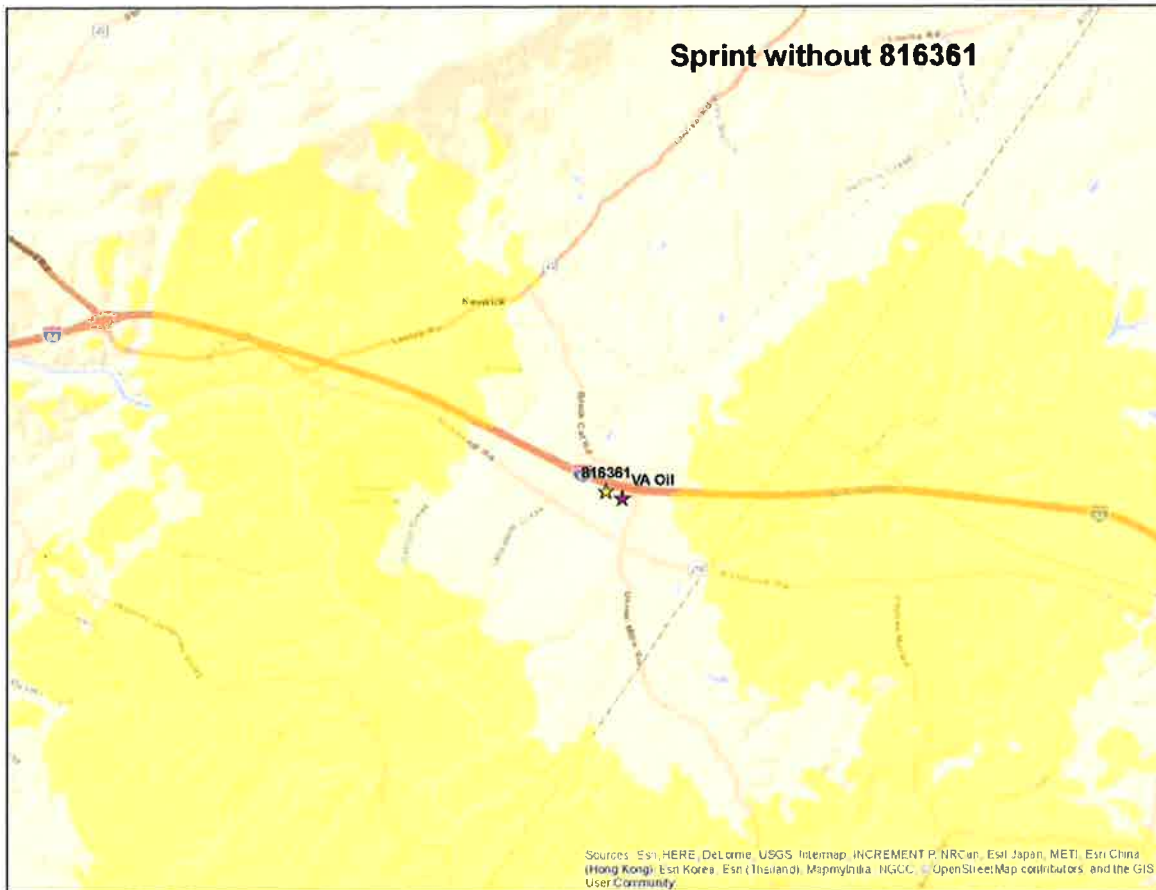


Figure 6. Void in Sprint's coverage in the event of disruption or removal of Keswick Tower (816361).

As can be seen at Figure 5., Keswick Tower is host to all five national carriers (Sprint, AT&T, T-Mobile, Verizon, and U.S. Cellular) because it is a robust, steel lattice structure which can carry the weight of the necessary equipment, and withstand the pressure of foreseeable weather events. Current towers which comport to the standards for new structures are typically of the "treetop monopole" variety, which while less apparent in the landscape generally, are also not comparably strong. Consequently, they typically host a single carrier with a much smaller footprint, as can be seen again at Figure 5.

In order to achieve a satisfactory "hand-off" of a mobile cellular signal moving through the area from one cell to the next, it is vital that the footprints of adjacent structures overlap one another. This is because the way the technology works is that each cell phone sends out its signal omnidirectionally, roughly in a hemispherical pattern, emanating from the phone and reaching out to cell antennae on towers up to several miles away. The network continually monitors the strength of the phone's signal and determines, among those towers in communication with it. Then, at the moment that the signal strength in the next tower exceeds a threshold level, the signal is handed off to that tower from the one before.

This need for overlapping footprints means that a replacement facility would need to be very close to the existing one. Because the ground in the vicinity of the existing tower falls off toward the west, any replacement in that direction would need to be taller than Keswick Tower in order to fill the void its absence would leave in the network service area. The prospect of building a replacement tower that is taller (larger) than the existing one in the current regulatory climate seems remote. This means that the viable alternatives are limited and as a practical matter, all to the east of the existing tower.

There are two viable alternatives which contemplate a tower of similar size and construction, only one of which is currently being formally pursued. This alternative is located on the tract of land directly adjacent to Limestone Springs Farm, at Parcel 94-39, which is owned by Virginia Oil. This proposed location is shown in the aerial view of the two properties at Figure 8.

This proposed tower would sit approximately 100 feet outside the property line of Limestone Springs Farm to the east, and as shown in Figure 7., some thirty or more feet higher in elevation than Keswick Tower.

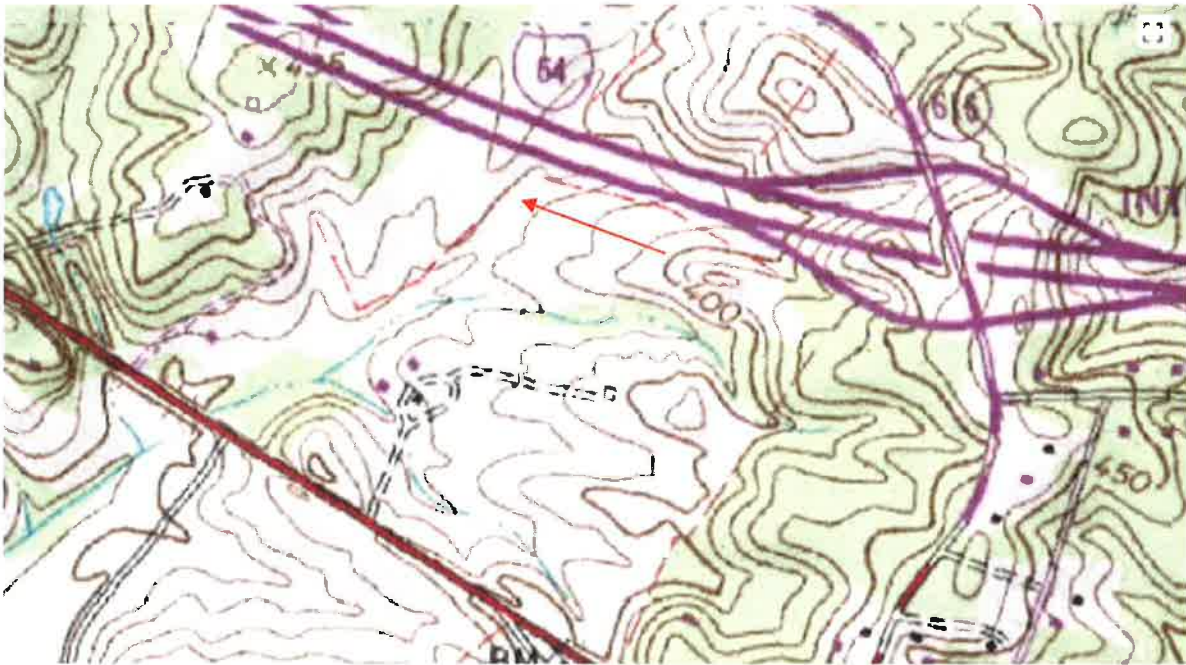


Figure 7. Topographical information at Keswick Tower location. The red arrow shows that area west of Keswick Tower slopes downward, to lower elevations.



Figure 8. Aerial view of proposed alternate tower location.

Ramifications

The history of Keswick Tower, around which the local cellular network infrastructure has been built, has crystallized a particular space around it. This is its service area, which varies only slightly by carrier. If Keswick Tower is removed, according to the current provisions of the open-space easement affecting it, that space will be left unserved unless a facility of similar character and capacity can be erected to replace it. Such a replacement would, if approved, of necessity be very close to the spot where Keswick Tower now stands. Further, replacing Keswick Tower's capacity and reach necessarily means erecting a tower of similar size and conspicuousness, but necessarily new and unknown to the local community. The current proposal for an alternative is just such a proposition: essentially a clone of Keswick Tower, a hundred or so feet from the property line and on higher, more visible terrain.

This creates two significant ramifications: first, the health and safety of cellular consumers within the affected area, whether their existing service is eliminated or simply interrupted, will be diminished, because they will either cease to have access, or have more limited access to emergency services for fire, police, or emergency rescue by cellular telephone; second, to the extent that open space conservation values are implicated by the removal of Keswick Tower, such values will be compromised by its replacement, which necessarily must be of similar character and position in the landscape in order to adequately address the need which will be created by Keswick Tower's removal.

In support of Mrs. Johnson's application, and consonant with her concerns about the health and safety ramifications of the impending removal of Keswick Tower, formal communications from local law enforcement and emergency services agencies, including but not limited to the Albemarle County Emergency Communications Center (Tom Hanson, Director) and the

emergency communications officials of the neighboring counties are forthcoming and will be received separately.

Allowing Keswick Tower to remain would avoid the waste which is would necessarily attend the demolition of a robust, reliable facility only to have it reiterated a few feet away. But the additional positive ramification of receiving the land in mitigation into open-space would slow further development already underway in this historically sleepy rural community. The adjacent parcel, which has commercial zoning, is currently under development as a matter of right into a service station and convenience store. The property being offered in mitigation is located in such a way that it blocks prospects for additional, more intense development. This represents a legitimate open-space conservation value which is separate and apart from, and in addition to the significant variance in the value of the 12.61 acre tract of land offered in mitigation over the 2500 square feet of land involved in the conversion/diversion of open space supporting Keswick Tower.

Conclusion

Mrs. Johnson is a private person who has shouldered the responsibility of managing the property she has left on her own, while still making time and expending considerable energy in community service. Due to circumstances beyond her control, she has been left to do this by herself, which is not what she had hoped. But in spite of her personal loss, or perhaps due to it, she has realized that the value of Keswick Tower to the community at large, particularly in respect to its utility as a means of reaching emergency services, is vital to the community and worthy of being perpetuated, even at the expense of the eventual development of the last piece of real estate in her portfolio. This application is calculated to uphold the core conservation value of avoiding economic waste, preserving the working status quo, preventing unnecessary risk to the health and safety of her neighbors, and promoting the specific conservation values of the Virginia Outdoors Foundation. She offers her remaining property to VOF in mitigation for the tower, not only for herself, but because it is the right thing to do. For all the reasons stated herein, Mrs. Johnson respectfully requests that the Board of Trustees approve this application.

Google Maps



Imagery ©2017 Google, Map data ©2017 Google United States 200 ft

Exhibit A

BOUNDARY SURVEY

PROFESSIONAL



2000 CORPORATE DR. CANONSBURG, PA 15117

SITE: KESWICK

BUNK: 816081

ADDRESS: 4424 RICHMOND RD

KESWICK, VA 22947

ALLEGANY COUNTY

NATIONAL SURVEY SERVICES CORPORATION, INC.

GEO LINE
SURVEYING, INC.

6400 NW 10th Terrace, Suite A-100, Ft. Myers, FL 33905
Tel: 813-939-4000
Fax: 813-939-4001
WWW.GEOLINE.COM

BOUNDARY WORK PERFORMED BY:

JONATHAN MURPHY

Professional Land Surveying

1000 Lakeside Plaza
Suite 200
Ft. Myers, FL 33905
Tel: 813-939-4000
Fax: 813-939-4001
WWW.GEOLINE.COM

SURVEYOR'S NOTES

1. BASES OF READING:
VA AND SOUTH ZONE NAD83
2. NO SUBSURFACE INVESTIGATION WAS PERFORMED TO LOCATE UNDERGROUND UTILITIES. ANY UTILITIES ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.
3. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARENT PARCEL.
4. ALL VISIBLE REASON EQUIPMENT AND MEASUREMENTS ARE CONFINED WITHIN THE DESCRIBED AREA.
5. ALL STAKES SHOWN HEREON NOT DEPICTED TO SCALE.

SURVEYOR'S CERTIFICATION
I HEREBY CERTIFY TO:
JONATHAN MURPHY
NATIONAL TITLE INSURANCE COMPANY

MURPHY GEOMATICS

JONATHAN MURPHY
LAND SURVEYOR

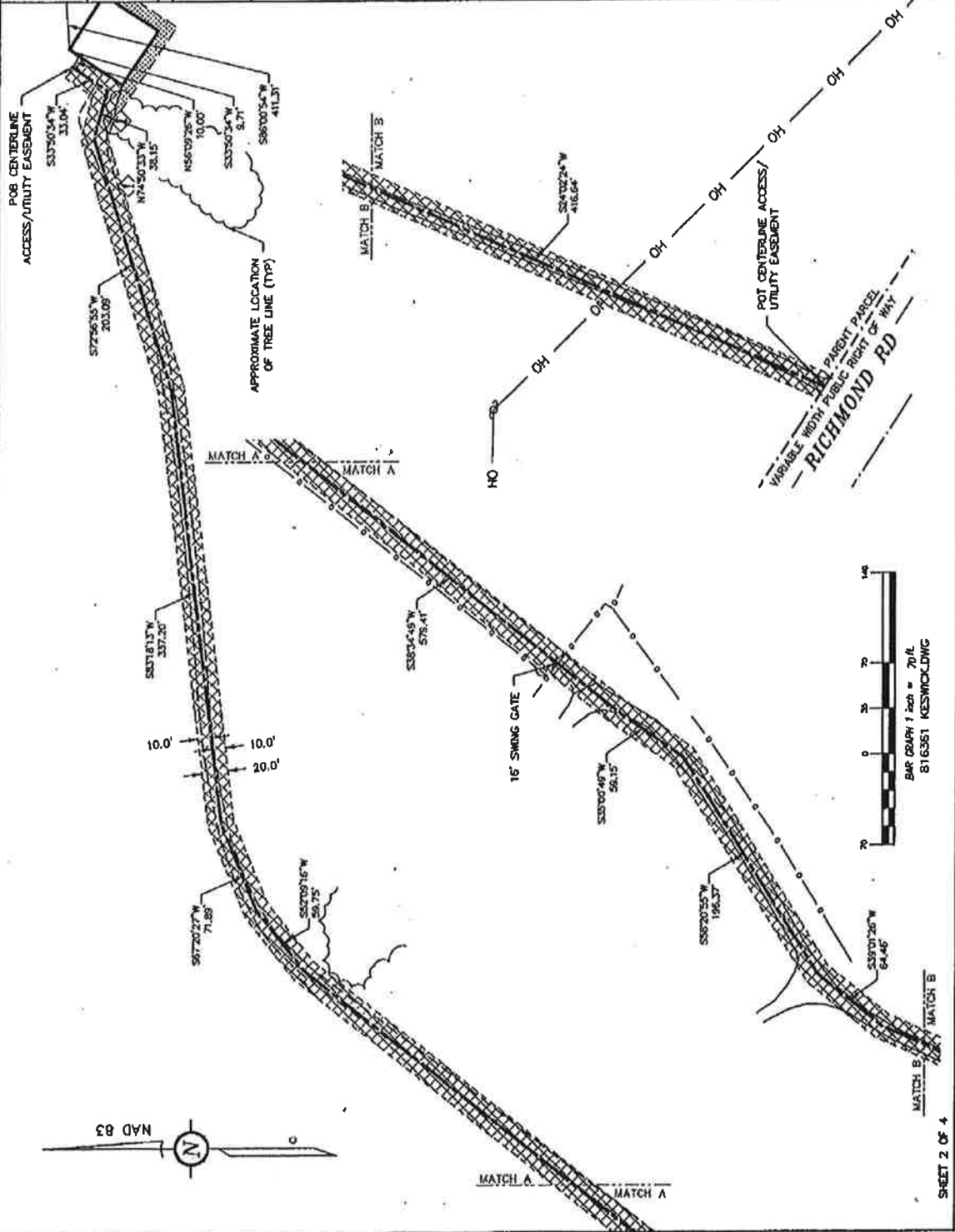
DATE: 3/6/2014

COMMONWEALTH OF VIRGINIA

JONATHAN F. MURPHY, JR.

License No. 2713

LAND SURVEYOR



BOUNDARY SURVEY



2000 CORPORATE DR. CANONSBURG, PA 15117

SITE: KESWICK

FROM: SUCCOR

ADDRESS: 4464 BUCKHORN RD

KESWICK, VA 22091

ALLEGANY COUNTY

NATURAL SERVICE COMPANY INC.

GEOLINE SURVEYING, INC.

13400 NW 10TH TERRACE, SUITE A, MIAMI, FL 33155

CONTACT: 305-450-7700 FAX: 305-450-7700

DATE: 3/8/2011

PROJECT: KESWICK

DATE: 3/8/2011

PROJECT: KESWICK

DATE: 3/8/2011

PROJECT: KESWICK

DATE: 3/8/2011

PROJECT: KESWICK

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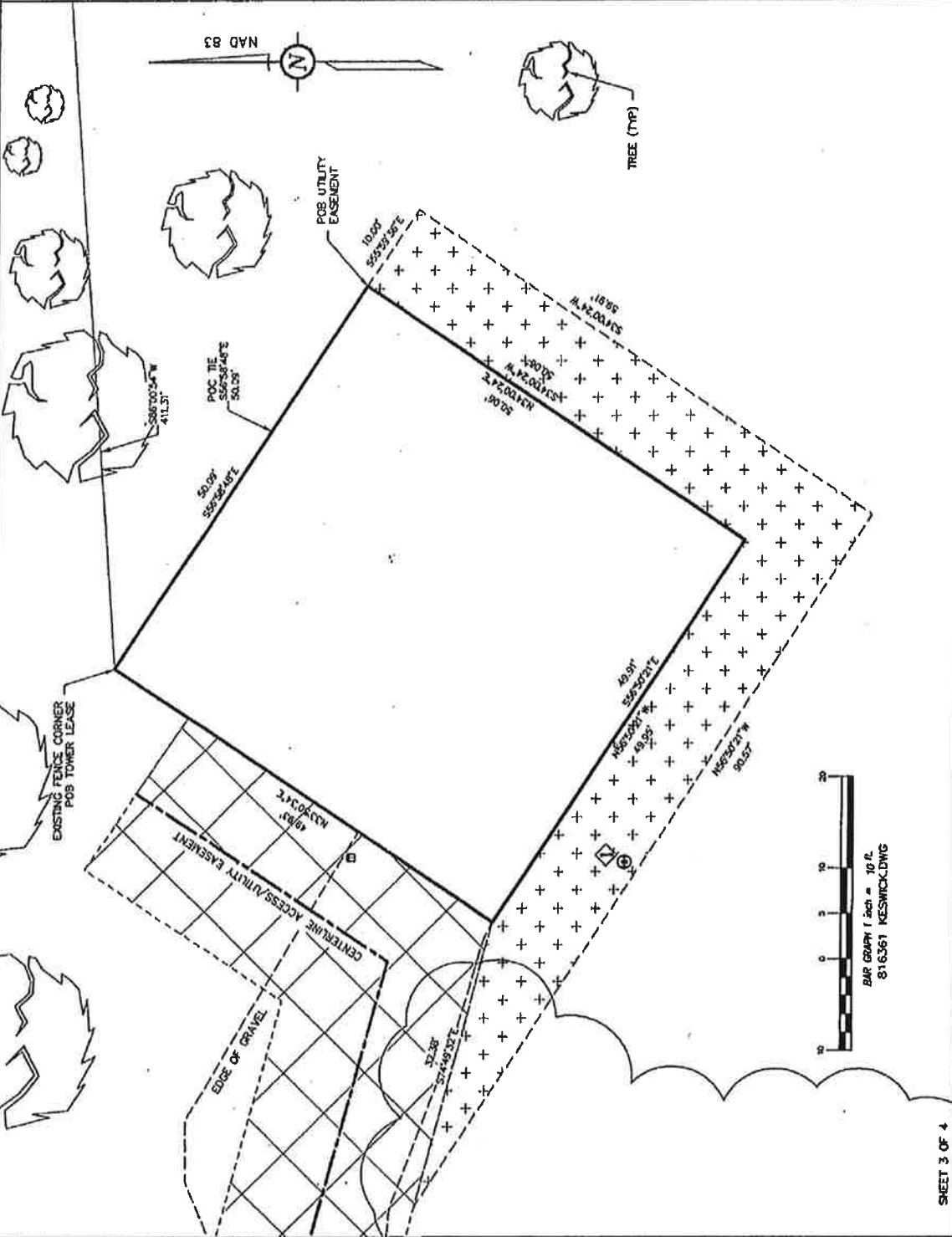
DATE: 3/8/2011

PROJECT: KESWICK

DATE: 3/8/2011

PROJECT: KESWICK

DATE: 3/8/2011



SURVEYOR'S CERTIFICATION
I HEREBY CERTIFY TO:
CROWN CASTLE AND OLD REPUBLIC
NATIONAL TITLE INSURANCE COMPANY

SURVEYOR'S NOTES
1. BASES OF BEARING
2. NO SUBSURFACE INVESTIGATION WAS
PERFORMED TO LOCATE UNDERGROUND
UTILITIES. UTILITIES SHOWN ARE
LIMITED TO AND ARE FOR OBSERVED
EVIDENCE ONLY.
3. THIS SURVEY DOES NOT REPRESENT A
BOUNDARY SURVEY OF THE PARENT PARCEL.
4. ALL MOBILE TELECOM EQUIPMENT AND
STRUCTURES SHOWN ARE CONTAINED WITHIN THE
DESCRIBED AREA.
5. ALL STAKES SHOWN HEREON NOT
DEPENDED TO SCALE

JONATHAN MURPHY
Professional Land Surveyor
License No. 2713
State of Virginia
Date: 3/8/2011

GEOLINE SURVEYING, INC.
13400 NW 10TH TERRACE, SUITE A, MIAMI, FL 33155
CONTACT: 305-450-7700 FAX: 305-450-7700
DATE: 3/8/2011

BOUNDARY SURVEY
CROWN CASTLE
2000 CORPORATE DR. CANONSBURG, PA 15117
SITE: KESWICK
FROM: SUCCOR
ADDRESS: 4464 BUCKHORN RD
KESWICK, VA 22091
ALLEGANY COUNTY
NATURAL SERVICE COMPANY INC.

BOUNDARY SURVEY

PREPARED FOR
CROWN CASTLE

2000 CORPORATE DR. CANONSBURG, PA 15717

SITE: KESWICK

BOXE 815281

ADDRESS: 4424 ROCKMOUND RD

KESWICK, VA 22947

ALLEGANY COUNTY

NORMAL SURVEY SERVICE CORPORATION, INC.

GEOLINE
SURVEYING, INC.
1000 LINDSEY DR. SUITE 100
KESWICK, VA 22947
TEL: 540-466-1111
FAX: 540-466-1112
WWW.GEOLINEVA.COM

SURVEY DONE PERFORMED BY:

JONATHAN
MURPHY
Professional Land Surveyor
1000 LINDSEY DR. SUITE 100
KESWICK, VA 22947
TEL: 540-466-1111
FAX: 540-466-1112
WWW.GEOLINEVA.COM

SURVEYOR'S NOTES

1. BASES OF BEARING: N. AND SOUTH ZONE MAGN.
2. NO SUBSURFACE INVESTIGATION WAS CONDUCTED TO LOCATE UNDERGROUND UTILITIES. UTILITIES, IF ANY, ARE LIMITED TO AND ARE PER OBSERVED EVIDENCE ONLY.
3. THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY OF THE PARCEL PARCELED.
4. ALL VISIBLE TELECOM EQUIPMENT AND IMPROVEMENTS ARE CONTAINED WITHIN THE DESCRIBED AREA.
5. ALL SYMBOLS SHOWN HEREON NOT DEPICTED TO SCALE.

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY TO:
CROWN CASTLE AND OLD REPUBLIC
NATIONAL TITLE INSURANCE COMPANY

MURPHY GEOMATICS

JONATHAN MURPHY
LAND SURVEYOR

DATE: 3/6/2018



LEGAL DESCRIPTION: TOWER LEASE (CREATED BY THIS OFFICE)

A PORTION OF ALL THAT CERTAIN PARCEL OF LAND LYING IN THE UNINCORPORATED COMMUNITY OF KESWICK, COUNTY OF ALLEGANY, STATE OF VIRGINIA, DESCRIBED AS PARCEL IDENTIFICATION NUMBER 09400-00-00-041A0, FURTHER DESCRIBED AS:
COMMENCING FROM AN EXISTING VDOT CONCRETE MONUMENT FOUND ON A NORTHERN PROPERTY CORNER OF SAID PROPERTY, ALSO LYING ON THE SOUTHERN RIGHT OF WAY OF INTERSTATE 64, AND HAVING VIRGINIA SOUTH ZONE STATE PLANE COORDINATES E11528869' -AND- N3386691';
THENCE, S 86° 00' 54" W FOR A DISTANCE OF 411.31 FEET TO THE POINT OF BEGINNING;
THENCE, S 56° 58' 48" E FOR A DISTANCE OF 50.09 FEET TO A POINT;
THENCE, S 34° 00' 24" W FOR A DISTANCE OF 50.06 FEET TO A POINT;
THENCE, N 56° 50' 21" W FOR A DISTANCE OF 49.95 FEET TO A POINT;
THENCE, N 33° 50' 34" E FOR A DISTANCE OF 49.93 FEET TO THE POINT OF BEGINNING CONTAINING 2500 SQFT -AND- 0.06 ACRES.

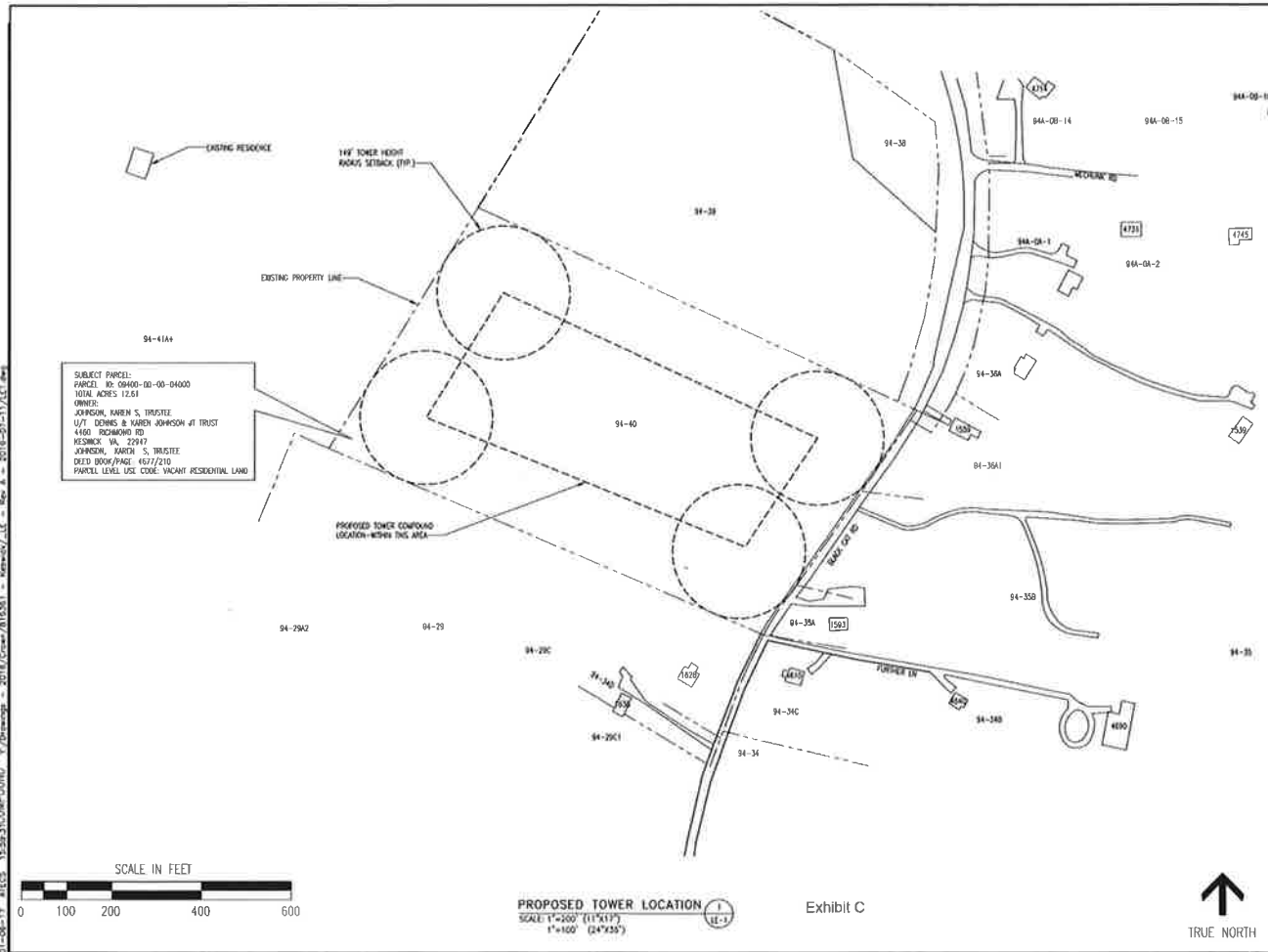
LEGAL DESCRIPTION: ACCESS/UTILITY EASEMENT (CREATED BY THIS OFFICE)

A PORTION OF ALL THAT CERTAIN PARCEL OF LAND LYING IN THE UNINCORPORATED COMMUNITY OF KESWICK, COUNTY OF ALLEGANY, STATE OF VIRGINIA, DESCRIBED AS PARCEL IDENTIFICATION NUMBER 09400-00-00-041A0, FURTHER DESCRIBED AS:
COMMENCING FROM AN EXISTING VDOT CONCRETE MONUMENT FOUND ON A NORTHERN PROPERTY CORNER OF SAID PROPERTY, ALSO LYING ON THE SOUTHERN RIGHT OF WAY OF INTERSTATE 64, AND HAVING VIRGINIA SOUTH ZONE STATE PLANE COORDINATES E11528869' -AND- N3386691';
THENCE, S 86° 00' 54" W FOR A DISTANCE OF 411.31 FEET TO A POINT ON AN EXISTING 2500 SQFT TOWER LEASE
THENCE, ALONG SAID TOWER LEASE, S 33° 50' 34" W FOR A DISTANCE OF 9.71 FEET TO A POINT;
THENCE, DEPARTING SAID LEASE, N 56° 08' 26" W FOR A DISTANCE OF 10.00 FEET TO THE BEGINNING OF A CENTERLINE FOR A 20-FOOT-WIDE ACCESS/UTILITY EASEMENT LYING 10 FEET OFF OF EITHER SIDE OF THE FOLLOWING DESCRIPTION:
THENCE, S 33° 50' 34" W FOR A DISTANCE OF 33.04 FEET TO A POINT;
THENCE, N 74° 50' 33" W FOR A DISTANCE OF 38.15 FEET TO A POINT;
THENCE, S 72° 56' 55" W FOR A DISTANCE OF 203.09 FEET TO A POINT;
THENCE, S 83° 18' 13" W FOR A DISTANCE OF 337.20 FEET TO A POINT;
THENCE, S 67° 20' 27" W FOR A DISTANCE OF 71.88 FEET TO A POINT;
THENCE, S 52° 09' 16" W FOR A DISTANCE OF 59.75 FEET TO A POINT;
THENCE, S 38° 34' 49" W FOR A DISTANCE OF 579.41 FEET TO A POINT;
THENCE, S 35° 00' 49" W FOR A DISTANCE OF 59.15 FEET TO A POINT;
THENCE, S 58° 20' 55" W FOR A DISTANCE OF 196.37 FEET TO A POINT;
THENCE, S 39° 01' 26" W FOR A DISTANCE OF 64.46 FEET TO A POINT;
THENCE, S 24° 02' 24" W FOR A DISTANCE OF 416.64 FEET TO A POINT ON THE NORTHERN RIGHT OF WAY OF ROCKMOUND RD. A DEDICATED PUBLIC RIGHT OF WAY. SAID POINT ALSO BEING THE POINT OF TERMINUS CONTAINING 41183 SQFT -AND- 0.95 ACRES.

LEGAL DESCRIPTION: UTILITY EASEMENT (CREATED BY THIS OFFICE)

A PORTION OF ALL THAT CERTAIN PARCEL OF LAND LYING IN THE UNINCORPORATED COMMUNITY OF KESWICK, COUNTY OF ALLEGANY, STATE OF VIRGINIA, DESCRIBED AS PARCEL IDENTIFICATION NUMBER 09400-00-00-041A0, FURTHER DESCRIBED AS:
COMMENCING FROM AN EXISTING VDOT CONCRETE MONUMENT FOUND ON A NORTHERN PROPERTY CORNER OF SAID PROPERTY, ALSO LYING ON THE SOUTHERN RIGHT OF WAY OF INTERSTATE 64, AND HAVING VIRGINIA SOUTH ZONE STATE PLANE COORDINATES E11528869' -AND- N3386691';
THENCE, S 86° 00' 54" W FOR A DISTANCE OF 411.31 FEET TO A POINT ON AN EXISTING 2500 SQFT TOWER LEASE
THENCE, ALONG SAID TOWER LEASE, S 56° 58' 48" E FOR A DISTANCE OF 50.09 FEET TO THE POINT OF BEGINNING;
THENCE, DEPARTING SAID EASEMENT, S 55° 59' 36" E FOR A DISTANCE OF 10.00 FEET TO A POINT;
THENCE, S 34° 00' 24" W FOR A DISTANCE OF 50.91 FEET TO A POINT;
THENCE, N 56° 50' 21" W FOR A DISTANCE OF 90.57 FEET TO A POINT;
THENCE, S 74° 49' 32" E FOR A DISTANCE OF 32.38 FEET TO A POINT ON THE PREVIOUSLY MENTIONED EASEMENT;
THENCE, ALONG SAID EASEMENT, S 56° 50' 21" E FOR A DISTANCE OF 49.91 FEET TO A POINT;
THENCE, N 34° 00' 24" E A DISTANCE OF 50.06 FEET TO THE POINT OF BEGINNING CONTAINING 1252 SQFT -AND- 0.03 ACRES.

01-08-17 ATCS 155831/COMPOUND Y:\Drawings - 2016\Crow/816361 - Keswick\07_LC - Rev A - 2016-07-17.dwg



BC
architects
engineers

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SHEET REVISION

NO.	DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
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7			
8			
9			
10			

SITE NAME:
KESWICK

SITE NUMBER:
816361

SITE ADDRESS:
**BLACK CAT ROAD
KESWICK, VA 22947**

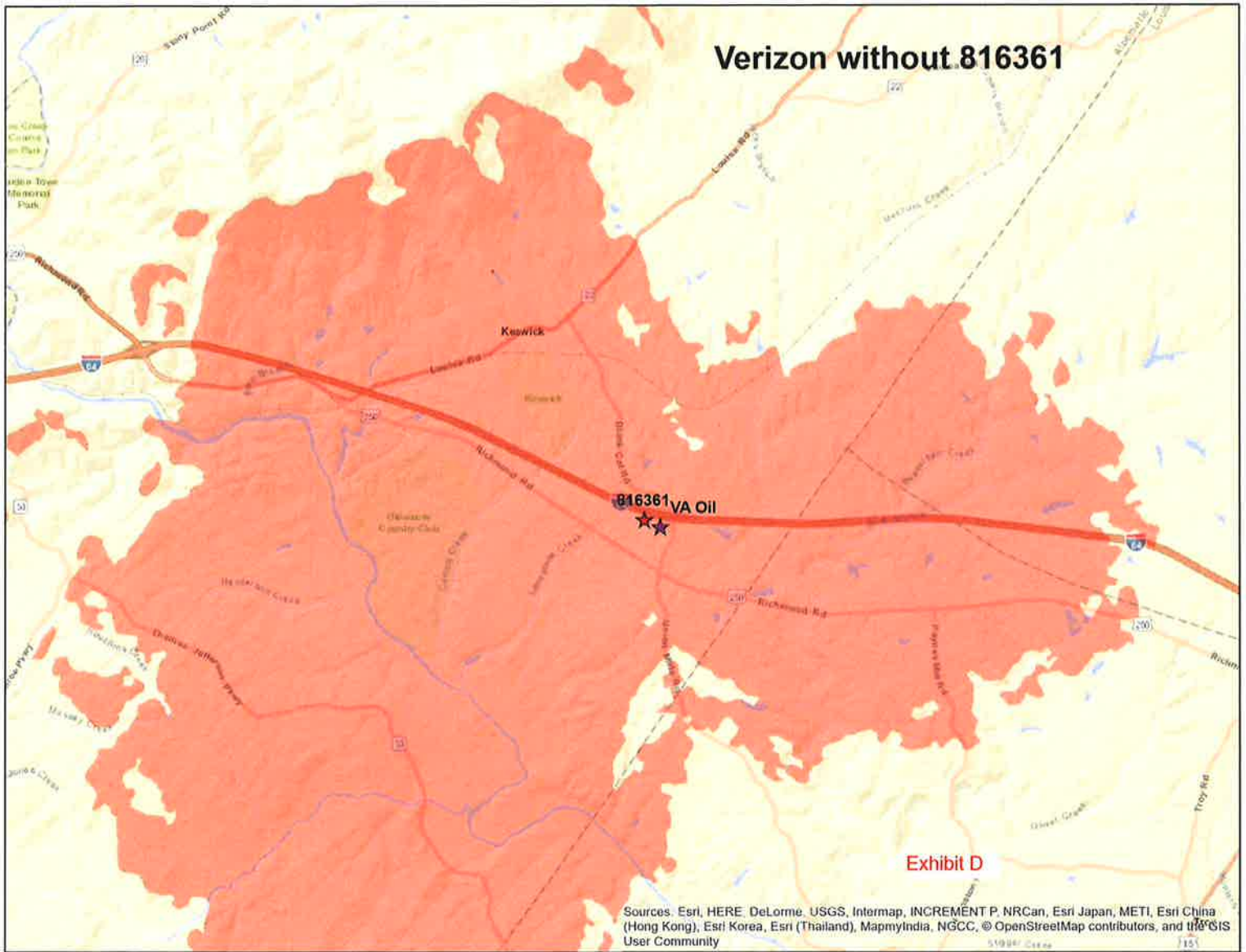
STAMP HERE:

DRAWN BY:	NOT
CHECKED BY:	ENG
DATE DRAWN:	01-08-17
SUBMISSION:	LEADS EXHIBIT

SHEET TITLE:
POSSIBLE TOWER LOCATION

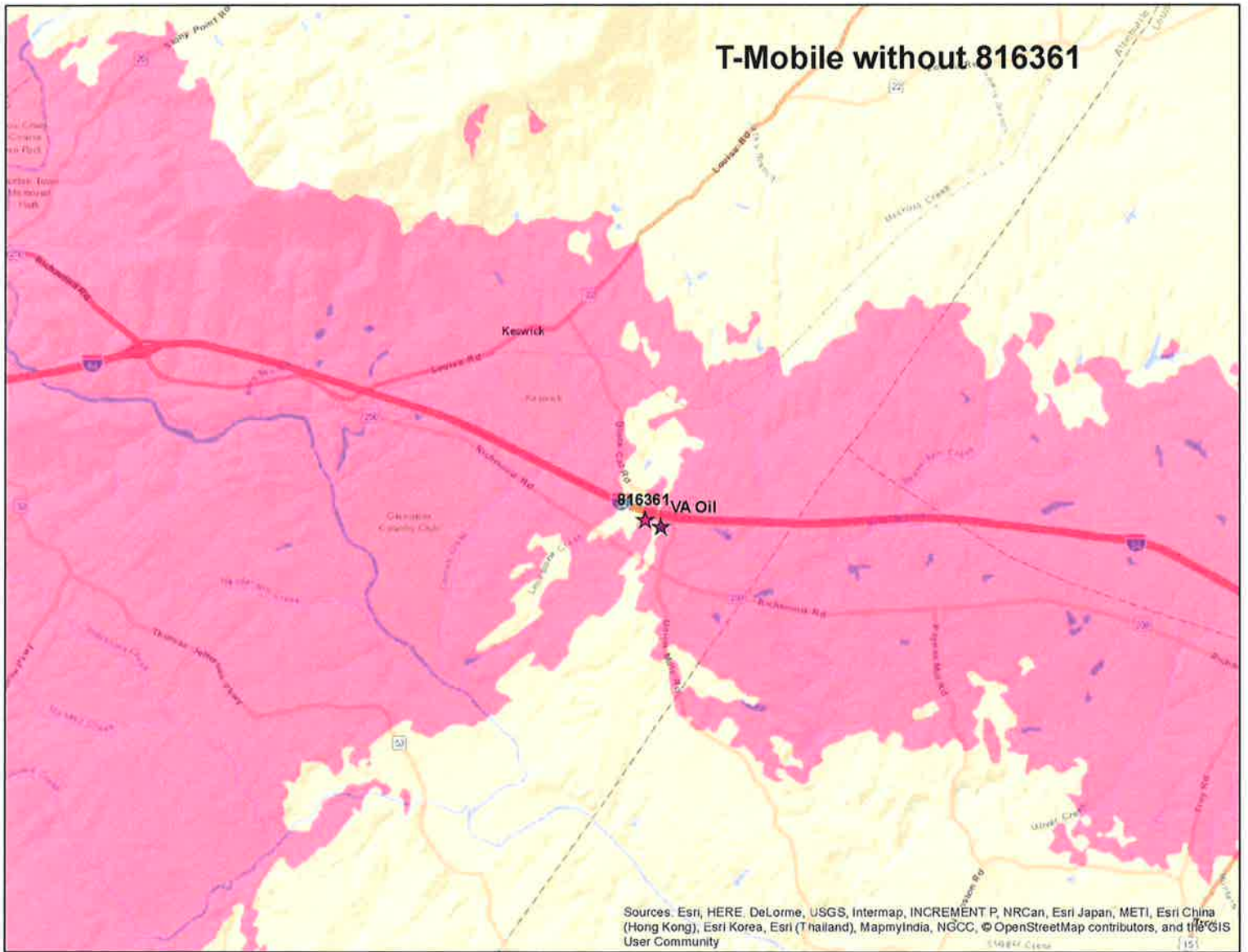
SHEET NUMBER:	REV. #
LE-1	A

Verizon without 816361



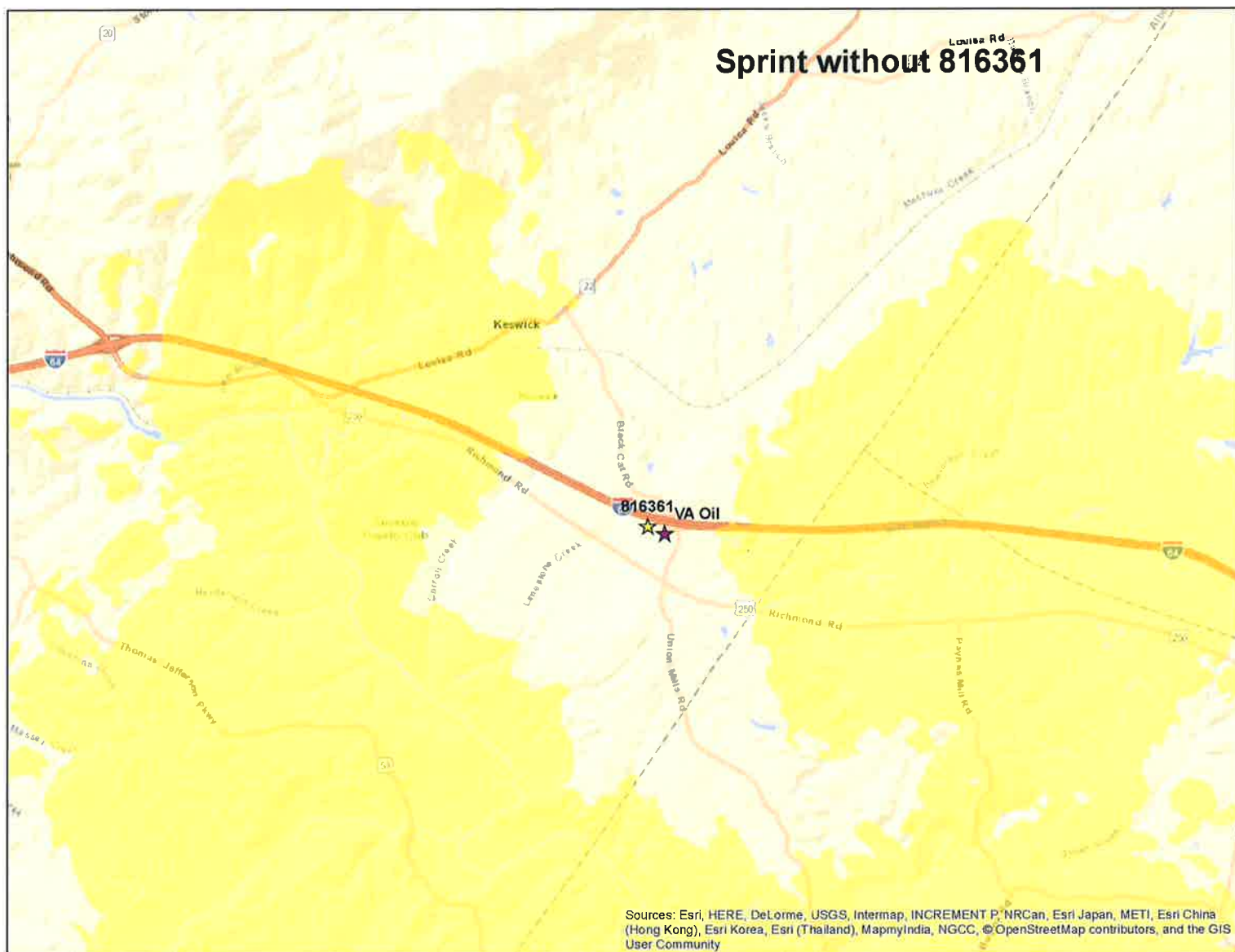
Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

T-Mobile without 816361



Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, OpenStreetMap contributors, and the GIS User Community

Sprint without 816361



AT&T without 816361

816361 VA Oil

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

October 20, 2017

Brian Fuller
Assistant Director of Stewardship
Virginia Outdoors Foundation
1010 Harris St. Suite 4
Charlottesville, VA 22903

Re: Sec. 1704 Application for Conversion/Diversion at 4464 Richmond Road, Albemarle County, Virginia; Crown Castle Telecommunications Tower #816361

Assistant Director Fuller:

US Cellular relies on a 150' telecommunications tower ("Keswick Tower") at 4464 Richmond Road (Parcel Number 94-41A). The reason for this letter is to provide support to the Johnson Trust's Section 1704 application for conversion/diversion of open-space, so that the importance of conserving the existing tower at its present location is clear.

Background

Keswick Tower was built in 1998 and now houses five (5) wireless carriers. The wireless carriers lease space on the tower from its owner, Crown Castle, who in turn leases the space where the tower resides from the owner of the farm, which is the Johnson Trust. In 2007, the property owner granted a perpetual conservation easement to the Virginia Outdoors Foundation ("VOF") for the farm.

According to a term of that easement, the tower must be removed during 2018, after the original term of the lease expires. If the parties to the lease are unable to reach an understanding with the VOF so that the facility may remain in place, they must have a replacement facility in place to which **US Cellular** and the other four (4) installed wireless carriers can migrate to prevent any interruption in service.

Keswick Tower -- A Key Position

US Cellular has been providing wireless service to its subscribers in this area of Albemarle County, periodically upgrading its installations to meet the increasing subscriber demand for nearly two decades. With customers talking less, but texting, emailing and using data much more, the importance of this facility cannot be overstated. This site provides critical coverage to those living, working and traveling through this part of the County and emergency first responders rely on the seamless coverage achieved by this site to provide rescue services. About 41,000 vehicles travel through the tower's coverage area every day, not to mention the

local stationary subscribers. If Keswick Tower is not allowed to stay, a replacement facility or replacement facilities must be built. Not only must new locations be found, but these locations must be close to the existing site to work in conjunction with the surrounding sites (discussed in more detail below).

Building a replacement tower (or towers) too far from the existing site would hamper the effective hand off of signal from this site to neighboring sites. This concept is best illustrated by the attached propagation maps. These maps show the distribution of low-band signal from the Keswick Tower for **US Cellular**. Clearly, if this site is forced off air, the resulting gap in coverage would be substantial. Wireless signal would no longer be handed off between adjacent sites. Customers traveling in the area would experience dropped and blocked calls due to the resulting lack in coverage. Some customers might have trouble getting the emergency services they need in a crisis.

Specific Replacement Site Considerations

When the search ring for a possible replacement tower was originally designed, three significant considerations became apparent. First, the site's main coverage area is an interstate and the rural area surrounding it. It is very important that the replacement site keep contiguous coverage along the interstate and work well with the neighboring sites as noted above. The second consideration is the capacity of the site. A replacement would need to serve the same number of users that are currently served in their homes and as they travel through the site's footprint. The third consideration is the elevation. There is a significant area of lower terrain to the west of the existing site, but the replacement site needs to remain on a higher elevation, in order to avoid having to increase the size of the structure.

Contiguous Coverage

The relocation site and its surrounding neighbors must have overlapping coverage to prevent lost service and dropped calls when subscribers are moving east and west on Interstate 64. The overlapping coverage areas allow the system to measure a mobile phone's signal as it moves through the area. The network constantly calculates which cell site is best suited to process the call while the mobile device is within that overlap area. When the signal strength measured by the cell site being approached reaches a set threshold, an instruction is given to the system telling the new site to take over the call. This is how the system "hands-off" a cellular call from one telecommunications site to another, and it requires the sites or towers to be placed within a particular distance and at a particular elevation with respect to one another.

Capacity

The capacity concern has to do with the site's ability to process a certain number of calls and provide the bandwidth requested by each user within the site's coverage area. As wireless devices have become more prevalent and are used for more data-driven tasks, such as streaming music and video, greater demand for bandwidth and capacity is placed on the

networks. Because the licensed bandwidth is limited, only so many mobile sessions can occur at a given time through a particular tower. When that number is reached, the next potential call is rejected due to a lack of capacity. In this instance, the subscriber would get a "System is busy" error, or a call which would otherwise be handed-off to a new tower would be dropped. This means that sites with overlapping service areas are necessary in order to share demand and reduce call rejection during periods of high demand. Keswick Tower is a robust site which is properly placed in the developed network, in fact, the network has grown up around it. This would make it very difficult to adequately replaced if it were removed.

Terrain

The terrain also has implications for the coverage of the replacement site. Currently there are five (5) carrier operators on Keswick Tower. The elevation to the west of the falls approximately 30' below the existing elevation. A replacement tower work best if it were on the same or higher elevation. This would allow the replacement site to 'see' the surrounding area as well as the existing site without having to build a replacement tower 30 to 40 feet taller to match Keswick's current coverage.

Conclusion

If Keswick Tower is removed, a replacement site (or sites) that will minimize the impact or changes to the surrounding sites will be needed so that when the carriers move to it (or them) the impact on the public is minimized and subscribers do not have a significant change or disruption in services. If the existing structure cannot be replaced, then problems in either capacity or contiguous coverage will necessarily result.

Capacity and coverage deficiencies will result in dropped calls, blocked access to the network, or poor quality and reliability. It could also mean no coverage at all for some current subscribers. This not only affects every day personal and business communications within the area, but also endangers lives as access to emergency services is negatively impacted. Given these considerations, it is understandable that the potential loss of a cell tower is viewed as a critical event for our network and our customers.

On the other hand, the existing facility has served the surrounding community, traffic into and out of Albemarle County on the interstate highway as well as on Virginia highway 250, and the area's emergency services needs for almost twenty years. With responsible maintenance and timely upgrades, there is no reason it cannot continue to serve reliably into the foreseeable future, perhaps as long as land-based wireless networks remain technologically relevant.

For the foregoing reasons, we respectfully offer our enthusiastic support to the Johnson Foundation's application for Section 1704 conversion or diversion of open-space land, in the hope that the existing facility will be conserved, and not removed.

Sincerely,

Venables,
Kurt

Digitally signed by Venables, Kurt
DN: cn=Venables, Kurt
Date: 2017.10.20 15:53:11 -04'00'

Signature

Sr RF Engineer, US Cellular

Title

Enclosures



Verizon Wireless
1831 Rady Court
Richmond, VA 23222

October 17, 2017

Brian Fuller
Assistant Director of Stewardship
Virginia Outdoors Foundation
1010 Harris St. Suite 4
Charlottesville, VA 22903

Re: Sec. 1704 Application for Conversion/Diversion at 4464 Richmond Road, Albemarle County, Virginia; Crown Castle Telecommunications Tower #816361

Assistant Director Fuller:

Verizon relies on a 150' telecommunications tower ("Keswick Tower") at 4464 Richmond Road (Parcel Number 94-41A). The reason for this letter is to provide support to the Johnson Trust's Section 1704 application for conversion/diversion of open-space, so that the importance of conserving the existing tower at its present location is clear.

Background

Keswick Tower was built in 1998 and now houses five (5) wireless carriers. The wireless carriers lease space on the tower from its owner, Crown Castle, who in turn leases the space where the tower resides from the owner of the farm, which is the Johnson Trust. In 2007, the property owner granted a perpetual conservation easement to the Virginia Outdoors Foundation ("VOF") for the farm.

According to a term of that easement, the tower must be removed during 2018, after the original term of the lease expires. If the parties to the lease are unable to reach an understanding with the VOF so that the facility may remain in place, they must have a replacement facility in place to which **Verizon** and the other four (4) installed wireless carriers can migrate to prevent any interruption in service.

Keswick Tower -- A Key Position

Verizon has been providing wireless service to its subscribers in this area of Albemarle County, periodically upgrading its installations to meet the increasing subscriber demand for nearly two decades. With customers talking less, but texting, emailing and using data much more, the importance of this facility cannot be overstated. This site provides critical coverage to those living, working and travelling through this part of the County and emergency first responders

rely on the seamless coverage achieved by this site to provide rescue services. About 41,000 vehicles travel through the tower's coverage area every day, not to mention the local stationary subscribers. If Keswick Tower is not allowed to stay, a replacement facility or replacement facilities must be built. Not only must new locations be found, but these locations must be close to the existing site to work in conjunction with the surrounding sites (discussed in more detail below).

Building a replacement tower (or towers) too far from the existing site would hamper the effective hand off of signal from this site to neighboring sites. This concept is best illustrated by the attached propagation maps. These maps show the distribution of low- and mid-band signal from the Keswick Tower for Verizon. Clearly, if this site is forced off air, the resulting gap in coverage would be substantial. Wireless signal would no longer be handed off between Site Nos. 801475, 5800112 and 861959. Customers traveling in the area would experience dropped and blocked calls due to the resulting lack in coverage. Some customers might have trouble getting the emergency services they need in a crisis.

Specific Replacement Site Considerations

When the search ring for a possible replacement tower was originally designed, three significant considerations became apparent. First, the site's main coverage area is an interstate and the rural area surrounding it. It is very important that the replacement site keep contiguous coverage along the interstate and work well with the neighboring sites as noted above. The second consideration is the capacity of the site. A replacement would need to serve the same number of users that are currently served in their homes and as they travel through the site's footprint. The third consideration is the elevation. There is a significant area of lower terrain to the west of the existing site, but the replacement site needs to remain on a higher elevation, in order to avoid having to increase the size of the structure.

Contiguous Coverage

The relocation site and its surrounding neighbors must have overlapping coverage to prevent lost service and dropped calls when subscribers are moving east and west on Interstate 64. The overlapping coverage areas allow the system to measure a mobile phone's signal as it moves through the area. The network constantly calculates which cell site is best suited to process the call while the mobile device is within that overlap area. When the signal strength measured by the cell site being approached reaches a set threshold, an instruction is given to the system telling the new site to take over the call. This is how the system "hands-off" a cellular call from one telecommunications site to another, and it requires the sites or towers to be placed within a particular distance and at a particular elevation with respect to one another.

Capacity

The capacity concern has to do with the site's ability to process a certain number of calls and provide the bandwidth requested by each user within the site's coverage area. As wireless

devices have become more prevalent and are used for more data-driven tasks, such as streaming music and video, greater demand for bandwidth and capacity is placed on the networks. Because the licensed bandwidth is limited, only so many mobile sessions can occur at a given time through a particular tower. When that number is reached, the next potential call is rejected due to a lack of capacity. In this instance, the subscriber would get a "System is busy" error, or a call which would otherwise be handed-off to a new tower would be dropped. This means that sites with overlapping service areas are necessary in order to share demand and reduce call rejection during periods of high demand. Keswick Tower is a robust site which is properly placed in the developed network, in fact, the network has grown up around it. This would make it very difficult to adequately replaced if it were removed.

Terrain

The terrain also has implications for the coverage of the replacement site. Currently there are five (5) carrier operators on Keswick Tower. The elevation to the west of the falls approximately 30' below the existing elevation. A replacement tower work best if it were on the same or higher elevation. This would allow the replacement site to 'see' the surrounding area as well as the existing site without having to build a replacement tower 30 to 40 feet taller to match Keswick's current coverage.

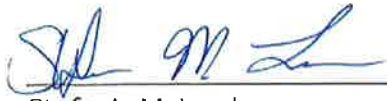
Conclusion

If Keswick Tower is removed, a replacement site (or sites) that will minimize the impact or changes to the surrounding sites will be needed so that when the carriers move to the it (or them) the impact on the public is minimized and subscribers do not have a significant change or disruption in services. If the existing structure cannot be replaced, then problems in either capacity or contiguous coverage will necessarily result.

Capacity and coverage deficiencies will result in dropped calls, blocked access to the network, or poor quality and reliability. It could also mean no coverage at all for some current subscribers. This not only affects every day personal and business communications within the area, but also endangers lives as access to emergency services is negatively impacted. Given these considerations, it is understandable that the potential loss of a cell tower is viewed as a critical event for our network and our customers.

On the other hand, the existing facility has served the surrounding community, traffic into and out of Albemarle County on the interstate highway as well as on Virginia highway 250, and the area's emergency services needs for almost twenty years. With responsible maintenance and timely upgrades, there is no reason it cannot continue to serve reliably into the foreseeable future, perhaps as long as land-based wireless networks remain technologically relevant.

For the foregoing reasons, we respectfully offer our enthusiastic support to the Johnson Foundation's application for Section 1704 conversion or diversion of open-space land, in the hope that the existing facility will be conserved, and not removed.



Stefanie M. Lewis

Verizon

Engineer IV, Regulatory/RE

Enclosures



October 10, 2017

Mr. Brian Fuller
Assistant Director of Stewardship
Virginia Outdoors Foundation
1010 Harris St. Suite 4
Charlottesville, VA 22903

Re: Sec. 1704 Application for Conversion/Diversion at 4464 Richmond Road, Keswick, Virginia; Crown Castle Telecommunications Tower #816361 / AT&T Cell Site: CV335; FA: 10069168

Dear Mr. Fuller:

I am writing in support of the Johnson Trust's Section 1704 application for conversion/diversion of open-space related to the 150' telecommunications tower owned by Crown Castle at 4464 Richmond Road, Keswick VA (Parcel Number 94-41A).

As you may be aware, AT&T is one of several carriers who lease space on the tower for operation of wireless facilities. It is my understanding that (i) in 2007 the property owner granted a conservation easement to the Virginia Outdoors Foundation and that according to the terms of that easement, the tower must be removed when the lease term expires in 2018; (ii) if the Application for Conversion/Diversion is approved, the tower may be allowed to remain.

Please be advised that the wireless facility operated by AT&T at this location is a critical part of the AT&T network. The site provides coverage to those living, working and traveling in the surrounding area, including along a large section of Interstate 64. If the tower is not allowed to remain, AT&T customers on Interstate 64 and in the surrounding rural area will experience wide-scale degradation of service including inability to make calls, dropped calls, and loss of text and data services.

In an attempt to minimize such loss of service, AT&T will begin pursuing a replacement facility immediately, but replacement of the existing facility will be tremendously difficult. Identifying suitable locations for new wireless facilities in Albemarle County is generally challenging and in this instance it will be even more so. The pool of candidates will be quite small because any potential replacement site will need to fit precisely into the existing network. It will need to be very close to the existing tower and at the same elevation in order to "hand off" properly to the surrounding sites. It is likely that any replacement site, no matter how carefully chosen, will provide inferior coverage when compared to the existing site.

AT&T therefore offers its wholehearted support of the Johnson Foundation's application for Section 1704 conversion/diversion of open-space and awaits the ruling anxiously. Please let me know if you require any additional information.

Sincerely,

Carol A. Murphy
Sr. Manager, Real Estate and Construction
cm9506@att.com
804-201-2245



November 17, 2017

Brian Fuller
Assistant Director of Stewardship
Virginia Outdoors Foundation
1010 Harris St. Suite 4
Charlottesville, VA 22903

Re: Sec. 1704 Application for Conversion/Diversion at 4464 Richmond Road, Albemarle County, Virginia;
Crown Castle Telecommunications Tower #816361, Shentel Site ID 68328/CV117 Keswick

Assistant Director Fuller:

Shenandoah Personal Communications, LLC ("Shentel"), successor in interest to Virginia PCS Alliance, L.C. ("NTELOS") relies on a 150' telecommunications tower ("Keswick Tower") at 4464 Richmond Road (Parcel Number 94-41A). The reason for this letter is to provide support to the Johnson Trust's Section 1704 application for conversion/diversion of open-space, so that the importance of conserving the existing tower at its present location is clear.

Background

Keswick Tower was built in 1998 and now houses five (5) wireless carriers. The wireless carriers lease space on the tower from its owner, Crown Castle, who in turn leases the space where the tower resides from the owner of the farm, which is the Johnson Trust. In 2007, the property owner granted a perpetual conservation easement to the Virginia Outdoors Foundation ("VOF") for the farm.

According to a term of that easement, the tower must be removed during 2018, after the original term of the lease expires. If the parties to the lease are unable to reach an understanding with the VOF so that the facility may remain in place, they must have a replacement facility in place to which **Shentel** and the other four (4) installed wireless carriers can migrate to prevent any interruption in service.

Keswick Tower -- A Key Position

Shentel has been providing wireless service to its subscribers in this area of Albemarle County, periodically upgrading its installations to meet the increasing subscriber demand for nearly two decades. With customers talking less, but texting, emailing and using data much more, the importance of this facility cannot be overstated. This site provides critical coverage to those living, working and traveling through this part of the County and emergency first responders rely on the seamless coverage achieved by this site to provide rescue services. About 41,000 vehicles travel through the tower's coverage area every day, not to mention the local

stationary subscribers. If Keswick Tower is not allowed to stay, a replacement facility or replacement facilities must be built. Not only must new locations be found, but these locations must be close to the existing site to work in conjunction with the surrounding sites (discussed in more detail below).

Building a replacement tower (or towers) too far from the existing site would hamper the effective hand off of signal from this site to neighboring sites. This concept is best illustrated by the attached propagation maps. These maps show the distribution of low- and mid-band signal from the Keswick Tower for **Shentel**. Clearly, if this site is forced off air, the resulting gap in coverage would be substantial. Wireless signal would no longer be handed off between Site Nos. 801475, 5800112 and 861959. Customers traveling in the area would experience dropped and blocked calls due to the resulting lack in coverage. Some customers might have trouble getting the emergency services they need in a crisis.

Specific Replacement Site Considerations

When the search ring for a possible replacement tower was originally designed, three significant considerations became apparent. First, the site's main coverage area is an interstate and the rural area surrounding it. It is very important that the replacement site keep contiguous coverage along the interstate and work well with the neighboring sites as noted above. The second consideration is the capacity of the site. A replacement would need to serve the same number of users that are currently served in their homes and as they travel through the site's footprint. The third consideration is the elevation. There is a significant area of lower terrain to the west of the existing site, but the replacement site needs to remain on a higher elevation, in order to avoid having to increase the size of the structure.

Contiguous Coverage

The relocation site and its surrounding neighbors must have overlapping coverage to prevent lost service and dropped calls when subscribers are moving east and west on Interstate 64. The overlapping coverage areas allow the system to measure a mobile phone's signal as it moves through the area. The network constantly calculates which cell site is best suited to process the call while the mobile device is within that overlap area. When the signal strength measured by the cell site being approached reaches a set threshold, an instruction is given to the system telling the new site to take over the call. This is how the system "hands-off" a cellular call from one telecommunications site to another, and it requires the sites or towers to be placed within a particular distance and at a particular elevation with respect to one another.

Capacity

The capacity concern has to do with the site's ability to process a certain number of calls and provide the bandwidth requested by each user within the site's coverage area. As wireless devices have become more prevalent and are used for more data-driven tasks, such as streaming music and video, greater demand for bandwidth and capacity is placed on the networks. Because the licensed bandwidth is limited, only so many mobile sessions can occur at a given time through a particular tower. When that number is reached, the next

potential call is rejected due to a lack of capacity. In this instance, the subscriber would get a "System is busy" error, or a call which would otherwise be handed-off to a new tower would be dropped. This means that sites with overlapping service areas are necessary in order to share demand and reduce call rejection during periods of high demand. Keswick Tower is a robust site which is properly placed in the developed network, in fact, the network has grown up around it. This would make it very difficult to adequately replace if it were removed.

Terrain

The terrain also has implications for the coverage of the replacement site. Currently there are five (5) carrier operators on Keswick Tower. The elevation to the west of the falls approximately 30' below the existing elevation. A replacement tower work best if it were on the same or higher elevation. This would allow the replacement site to 'see' the surrounding area as well as the existing site without having to build a replacement tower 30 to 40 feet taller to match Keswick's current coverage.

Conclusion

If Keswick Tower is removed, a replacement site (or sites) that will minimize the impact or changes to the surrounding sites will be needed so that when the carriers move to it (or them) the impact on the public is minimized and subscribers do not have a significant change or disruption in services. If the existing structure cannot be replaced, then problems in either capacity or contiguous coverage will necessarily result.

Capacity and coverage deficiencies will result in dropped calls, blocked access to the network, or poor quality and reliability. It could also mean no coverage at all for some current subscribers. This not only affects every day personal and business communications within the area, but also endangers lives as access to emergency services is negatively impacted. Given these considerations, it is understandable that the potential loss of a cell tower is viewed as a critical event for our network and our customers.

On the other hand, the existing facility has served the surrounding community, traffic into and out of Albemarle County on the interstate highway as well as on Virginia highway 250, and the area's emergency services needs for almost twenty years. With responsible maintenance and timely upgrades, there is no reason it cannot continue to serve reliably into the foreseeable future, perhaps as long as land-based wireless networks remain technologically relevant.

For the foregoing reasons, we respectfully offer our enthusiastic support to the Johnson Foundation's application for Section 1704 conversion or diversion of open-space land, in the hope that the existing facility will be conserved, and not removed.

Sincerely,

A handwritten signature in blue ink, appearing to read 'DM', is written over a horizontal line.

Signature

Daniel J. Meenan

Name

Vice President, Wireless Network Development

Title



September 7, 2017

Brian Fuller
Assistant Director of Stewardship
Virginia Outdoors Foundation
1010 Harris St. Suite 4
Charlottesville, VA 22903

Re: Sec. 1704 Application for Conversion/Diversion at 4464 Richmond Road,
Albemarle County, Virginia; Crown Castle Telecommunications Tower #816361

Assistant Director Fuller:

T-Mobile relies on a 150' telecommunications tower ("Keswick Tower") at 4464 Richmond Road (Parcel Number 94-41A). The reason for this letter is to provide support to the Johnson Trust's Section 1704 application for conversion/diversion of open-space, so that the importance of conserving the existing tower at its present location is clear.

Background

Keswick Tower was built in 1998 and now houses five (5) wireless carriers. The wireless carriers lease space on the tower from its owner, Crown Castle, who in turn leases the space where the tower resides from the owner of the farm, which is the Johnson Trust. In 2007, the property owner granted a perpetual conservation easement to the Virginia Outdoors Foundation ("VOF") for the farm.

According to a term of that easement, the tower must be removed during 2018, after the original term of the lease expires. If the parties to the lease are unable to reach an understanding with the VOF so that the facility may remain in place, they must have a replacement facility in place to which T-Mobile and the other four (4) installed wireless carriers can migrate to prevent any interruption in service.

Keswick Tower -- A Key Position

T-Mobile has been providing wireless service to its subscribers in this area of Albemarle County, periodically upgrading its installations to meet the increasing subscriber demand for nearly two decades. With customers talking less, but texting, emailing and

using data much more, the importance of this facility cannot be overstated. This site provides critical coverage to those living, working and traveling through this part of the County and emergency first responders rely on the seamless coverage achieved by this site to provide rescue services. About 41,000 vehicles travel through the tower's coverage area every day, not to mention the local stationary subscribers. If Keswick Tower is not allowed to stay, a replacement facility or replacement facilities must be built. Not only must new locations be found, but these locations must be close to the existing site to work in conjunction with the surrounding sites (discussed in more detail below).

Building a replacement tower (or towers) too far from the existing site would hamper the effective hand off of signal from this site to neighboring sites. This concept is best illustrated by the attached propagation maps. These maps show the distribution of low- and mid-band signal from the Keswick Tower for T-Mobile. Clearly, if this site is forced off air, the resulting gap in coverage would be substantial. Wireless signal would no longer be handed off between Site Nos. 801475, 5800112 and 861959. Customers traveling in the area would experience dropped and blocked calls due to the resulting lack in coverage. Some customers might have trouble getting the emergency services they need in a crisis.

Specific Replacement Site Considerations

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to another, and it requires the sites or towers to be placed within a particular distance and at a particular elevation with respect to one another.

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Terrain

The terrain also has implications for the coverage of the replacement site. Currently there are five (5) carrier operators on Keswick Tower. The elevation to the west of the falls approximately 30' below the existing elevation. A replacement tower work best if it were on the same or higher elevation. This would allow the replacement site to 'see' the surrounding area as well as the existing site without having to build a replacement tower 30 to 40 feet taller to match Keswick's current coverage.

Conclusion

If Keswick Tower is removed, a replacement site (or sites) that will minimize the impact or changes to the surrounding sites will be needed so that when the carriers move to the it (or them) the impact on the public is minimized and subscribers do not have a significant change or disruption in services. If the existing structure cannot be replaced, then problems in either capacity or contiguous coverage will necessarily result.

Capacity and coverage deficiencies will result in dropped calls, blocked access to the network, or poor quality and reliability. It could also mean no coverage at all for some current subscribers. This not only affects every day personal and business communications within the area, but also endangers lives as access to emergency services is negatively impacted. Given these considerations, it is understandable that the potential loss of a cell tower is viewed as a critical event for our network and our customers.

On the other hand, the existing facility has served the surrounding community, traffic into and out of Albemarle County on the interstate highway as well as on Virginia highway 250, and the area's emergency services needs for almost twenty years. With responsible maintenance and timely upgrades, there is no reason it cannot continue to serve reliably into the foreseeable future, perhaps as long as land-based wireless networks remain technologically relevant.

For the foregoing reasons, we respectfully offer our enthusiastic support to the Johnson Foundation's application for Section 1704 conversion or diversion of open-space land, in the hope that the existing facility will be conserved, and not removed.

Sincerely,

A handwritten signature in black ink, reading "John Louissaint". The signature is written in a cursive, flowing style.

John L. Louissaint

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Virginia Engineering and Operations
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October 16, 2017

Virginia Outdoors Foundation

ATTN: Brian Fuller

Assistant Director of Stewardship

600 East Main St., Suite 402

Richmond, VA 23219

To The Board of Trustees,

Re: 1704 Conversion Request on behalf of Karen S. Johnson -Easement # ALB-02399

The primary mission of the Fluvanna County Sheriff's Office is Law Enforcement and Emergency Communications (E911) for Fluvanna County. In 2016 we received 6483 emergency calls for service, 3463 were from wireless communication devices and 186 of those calls were dropped due to poor wireless communication's coverage.

Our current CAD system does not have the capability to generate a report that would reflect the number of E911 calls from wireless devices - that may have originated from the Keswick Tower and were rerouted to either Louisa or Albemarle Counties. We routinely work with Albemarle and Louisa Law Enforcement agencies in the Troy and Keswick communities where the Counties connect, geographically. Our Deputies are issued or use personal smart phones for communications with all E911 centers and numerous Law Enforcement Personnel.

We have reviewed the details of the 1704 Application filed on behalf of Mrs. Johnson. We are very concerned about the possibility of losing this tower location and its potential for a catastrophic impact on the safety of neighboring communities.

In conclusion we submit our support for Mrs. Johnson's Application to avoid removal of the Keswick Tower under Section 1704. We respectfully ask the Board to exercise discretion in allowing the tower to remain in place as an aid to provide wireless communication for public health and safety of our neighboring counties.

Respectfully submitted,

Sheriff Eric B. Hess
Fluvanna County Sheriff's Office

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