

Zoning Board of Adjustment Meeting Minutes
January 2, 2006 through August 7, 2006
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**TOWN OF CORNISH, NH
ZONING BOARD OF ADJUSTMENT
CASE 06-01
AUGUST 14, 2006**

Members Present

Karim Chichakly, Chair, Bill Balch, Jason Bourne, Jim Brown, Caroline Storrs, and Bruce Tracy.

Representing Verizon: Linda Connell of McLane, Graf, Raulerson, & Middleton.

Also in attendance: Jan Timmons, Merilynn Bourne, Daniel Kebalka, John Gregg (*Valley News*), Joan Littlefield, Mara Sabinson, Leo Maslan, Dilly Gallagher, Bill Gallagher, Janice Orion, and Heidi Jaarsma (Recording Secretary).

The meeting was held at the Cornish Elementary School and was called to order by Karim Chichakly at 7:35 p.m.

Case 06-01: Verizon Wireless (applicant) has requested a Special Exception concerning Article IV Section 4.1 to the zoning ordinance regarding the applicant's request to construct a wireless communications facility including a 190' lattice type tower. Applicant also requests two variances concerning Articles V and VI-A, Section D.2 & C4a.1. Applicant is requesting a variance to the height regulations and a variance to the requirements of setback. Applicant proposes the construction of the tower at 880 Townhouse Road, Tax Map 2, Lot 20E.

voting members: Karim Chichakly, Jason Bourne, Jim Brown, Caroline Storrs, and Bill Balch.

Closed Discussion

Karim Chichakly announced Town Counsel's advice that no legal mechanism exists in the State of New Hampshire to allow for the type of approval – up to 150 feet - discussed at the 8/7/06 meeting.

Jim Brown made a motion to consider the draft decision and conditions for approval. Bill Balch seconded the motion, and the vote of the Board was in the affirmative.

The Board discussed the draft decision. Linda Connell noted that conditions number six and ten which reserve collocation spots for cell providers would be a violation of Verizon's master site agreement with other companies. Karim Chichakly said that the Town could require it although Town Counsel had suggested a bit more leniency. Ms. Connell said that Verizon might be forced to appeal that part of the decision. The Board discussed the possibility of passing the decision on to the Planning Board. Jim Brown said that he thought Verizon Wireless would have a hard time appealing the condition. He did not see a breach of contract since Verizon was being told what to do by the Town's regulations.

The Board turned from the draft list of conditions to the draft decision. Jason Bourne said that he did not feel that Route 12-A was a significant gap. He also said that Verizon had not made a good faith effort to show that alternative technologies were not feasible. He referenced Mark Hutchins' statements regarding distributive antennas and repeaters: the information had not been submitted by Verizon as was their obligation. Karim Chichakly said that Mark Hutchins testimony supported Verizon's assertion that alternative technologies would not work. Jim Brown said that it had been clear from the start of a long discussion he and Mr. Bourne had had with Mr. Hutchins that above alternative technologies would not work at this site.

Ms. Storrs addressed the residents of Mill Village and Sunset Strip. She asked if they still felt that the tower should be of a tree construction even though the height would be increased by 7 to 10 feet. No one present had changed their mind.

After further discussion of the requirement that a collocation be reserved for a cell provider, the Board decided to keep the requirement. Linda Connell asked the Board to clarify that the condition is an order of the Board.

Karim Chichakly called for a vote on the draft decision and conditions, below. The motion to accept carried 4-1 with Bill Balch, Jim Brown, Karim Chichakly, and Caroline Storrs voting in the affirmative; and Jason Bourne voting against. Linda Connell asked that Verizon's motion for rehearing be tabled until any other possible motions for rehearing were filed. Karim Chichakly said that the Board would discuss the motion at their September 11th meeting. The meeting was adjourned at 9 p.m.

Respectfully submitted,
Heidi M. Jaarsma

**Application of Verizon Wireless for
Special Exception and Variances
Case No. 06-01**

List of Conditions

1. Before commencing construction, Verizon must: (a) complete the Site Plan Review process before the Planning Board; and (b) complete reimbursement of all fees and expenses incurred by the Town's experts, as well as by the Board for its administrative and other costs in this matter.
2. Verizon must make substantial progress towards completing construction one year from the date of final Planning Board approval, or this grant of a special exception and variances will lapse.
3. With respect to the height variance, the tower may not exceed 150' in height; the initial antenna array may not extend more than 3' above the top of the tower; and the use of stealth technology may not add more than 10' to the 150' height, for a total of 160'.
4. After the date hereof, any proposed increase in the height of the tower above 150' will require approval by this Board of a separate variance application.
5. The tower shall be monopole-style. It shall be constructed using stealth technology so that it looks like a tree.

6. Verizon shall maintain on file with this Board an undertaking to supply available space on the tower to additional users for collocation at reasonable fees and costs, according to the tower's design. The Town hereby requires that one of the top three antenna locations on the tower be used by a cellular provider.
7. Collocation on the tower by additional provider(s) will require Site Plan Review before the Planning Board. Collocation will not require an appearance before this Board unless an increase in the height of the tower is involved (see no. 4).
8. The tower shall not be lighted, unless required by the Federal Aviation Authority ("FAA"). In the event lighting is required, Verizon shall appear before the Planning Board for prior design approval.
9. The tower must remain in compliance with all applicable standards and regulations of the FAA, the Federal Communications Commission ("FCC"), and all other agencies with the authority to regulate towers and antennas, including satisfaction of the requirements of the National Environmental Policy Act prior to construction of the facility. Failure to comply with any new standards or regulations within six months shall constitute grounds for removal, at Verizon's expense, on the grounds of abandonment (see no. 21).
10. Regarding the FCC's regulations on the Maximum Permissible Exposure limits for RF fields, Verizon shall submit a certificate that its antenna array is in compliance, as built, within 90 days of its first commercial use of the tower. Additionally, Verizon shall be responsible for submitting a similar certificate with regard to all additional users on the tower, within 90 days of commercial operation by each such user.
11. The tower shall be maintained in compliance with all applicable building codes and the applicable building and safety standards of the industry. Failure to comply shall constitute grounds for removal, at Verizon's expense, on the grounds of abandonment (see no. 21).
12. No microwave dishes (except for "pizza box" style microwave relay antennas) shall be mounted on the tower without the prior approval of this Board in a separate application for special exception.
13. There shall be no signage, or other graphic representation, of any kind on the tower.
14. All antennas and supporting equipment mounted on the tower must be of a neutral color that is compatible with the tower, so as to make all attachments as visually unobtrusive as possible.
15. With regard to the setback variance, the minimum boundaries shall be approximately 111' from the eastern boundary and approximately 120' from the northern boundary, and 200' from all other boundaries. As a condition hereto, Verizon shall, prior to construction, submit a letter from a competent structural engineer regarding the collapse characteristics of the tower, stating that the tower, as built, is designed to collapse upon itself and not impinge on neighboring properties in the event of a failure.
16. The tower shall be surrounded by security fencing in accordance with the initial plans filed with the Board.
17. Given the remote nature of the site, no special landscaping is required for the immediate site. However, neither Verizon nor the lessor/land owner shall remove any large trees that would cause a material change in the view of the tower in the local neighborhood for a distance of 100' from the boundary of the cleared area around the 75' x 75' fenced-in compound housing the tower and equipment shelter. This restriction on cutting trees does not extend to

- brush cutting, or the removal of understory trees (with a caliper of less than 5") or dead trees, or within the access right-of-way leased to Verizon.
18. The permit for special exception shall expire if the use of the tower ceases for more than one year for any reason.
 19. Verizon shall supply a bond to the Town's Zoning Administrator in the amount of \$20,000 for the cost of removal, and shall also submit proof of insurance covering accident or damage. The amount of the bond may be increased by the Administrator every five years to account for inflation.
 20. Verizon shall submit quarterly reports to the Town's Zoning Administrator on the structural integrity of the Tower. These reports shall be based on on-site inspections. Failure to submit a report for six months shall be grounds to initiate abandonment proceedings (see no. 21).
 21. If the tower is abandoned, a declaration of abandonment may be issued by the Town following a public hearing, with notice to the owner/operator and to all abutters. Upon receipt of a notice of abandonment, the owner shall remove the structure within 90 days. If the tower is not removed within 90 days, the Town may execute the bond required by no. 19 and have the tower removed. If there are two or more users of the tower, this provision shall not become effective until all cease using the tower. Verizon and/or its successors and assigns shall ensure that the bond referenced in no. 19 will remain in effect until the tower is demolished. The remaining users will assume responsibility for quarterly inspections and reports.

Town of Cornish, New Hampshire
Zoning Board of Adjustment
August 14, 2006

**Application of Verizon Wireless for Special Exception and Variances
Case No. 06-01**

On December 19, 2005, Cellco Partnership, d/b/a Verizon Wireless, ("Verizon"), filed with the Cornish Zoning Board of Adjustment ("ZBA") an application for a special exception and two area variances under the Cornish Zoning Ordinance that would permit it to construct a wireless communications facility in Cornish. As initially proposed, the facility would consist of a 190' high lattice-style telecommunications tower and a 12' x 30' equipment shelter, located within a 75' x 75' fenced-in compound, on a parcel of land situated at 880 Town House Road owned by Keith and Sherry Jones. The installation would include both panel and microwave antennas on the tower, which would be connected via co-axial cable to equipment housed in the shelter at the base of the tower. The entrance to the Jones' property on Town House Road is at an elevation of approximately 450' above sea level, and is at the base of Dingleton Hill. The facility would be located approximately 2,000 feet north of the entrance to the Jones' property, partway up Dingleton Hill, at an elevation of 818'. The facility would be accessed by an existing

logging road on the Jones' property, and would be connected to the local telephone and electric systems by dedicated lines brought to the site by Verizon.

The ZBA held nine public hearings on Verizon's application: January 2, April 3, May 1, May 23, June 5, June 20, July 5, August 7, and August 14, 2006. On April 11, 2006, at the request of the ZBA, Verizon conducted a balloon test, in which it flew an orange weather balloon, 5.5' in diameter, at 190' from the proposed location of the tower. A second balloon test, flying at 150', was conducted on June 28, 2006. During both tests, photographs were taken from multiple locations in the surrounding neighborhood to determine the visibility of the tower. On April 12, 2006, the ZBA toured the site.

In addition to the materials supplied with its original request, as well as the results of the balloon tests (including photo simulations of the tower with an antenna array), Verizon submitted numerous other exhibits in this proceeding, primarily at the request of the ZBA, including an analysis of the coverage that would be provided to the Town at six alternate locations, an analysis of the coverage that would be available from the site assuming the tower were at a different height (85', 100', 125', 150', and 175'), traffic studies, and a map showing the location of all towers within a 20 mile radius of the proposed new tower on Dingleton Hill. The ZBA retained two independent experts to advise it on Verizon's application: Mr. Mark Hutchins, a radio frequency engineer, and Mr. Robert Bramley, an independent real estate appraiser. Both experts submitted reports on Verizon's application. Finally, numerous members of the public spoke at the hearings before the ZBA, and nine made written submissions that included real estate appraisals, separate photos from the balloon tests, articles on the public health aspects of wireless towers, and a late-filed legal analysis prepared by a law firm representing an opponent of the proposal.

This is an extremely difficult and complex matter, involving the balancing of numerous interests, particularly those of the residents of Cornish. As evidenced by the number of hearings, as well as the extensive work of its experts, the Board has wrestled hard with Verizon's application, and worked diligently to balance those interests, which also include federal and state concerns. In the end, we have decided to grant Verizon a special exception and two area variances that allow it to build a 150' monopole-style telecommunications tower at the site, 40' shorter than originally sought. This order is subject to 21 conditions, which are contained in a separate appendix.

I. The Telecommunications Act of 1996

We look first to the Telecommunications Act of 1996. Several opponents of the proposal seem to feel that the Board believes that the Act somehow entitles Verizon to build a tower. We labor under no such assumption. The Act provides that "nothing in this Act shall limit or affect the authority of a State or local government or instrumentality thereof over decisions regarding the placement, construction, and modification of personal wireless service facilities." At the outset, this is a strong statement concerning our jurisdiction. However, there are two exceptions to this broad grant of authority that are pertinent here. First, a town such as Cornish may "not prohibit or have the effect of prohibiting the provision of personal wireless services." Second, a town may not "regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the [Federal Communication] Commission's regulations concerning such emissions."

Under the case law that has evolved regarding the Act's "prohibition" language, an applicant such as Verizon is entitled to place a wireless facility in a community if it can show that: (1) there is a "significant gap" in coverage in the Town, and (2) there are no "feasible alternatives" to the proposed facility to fill the coverage gap. This is a heavy burden of proof. *Second Generation Properties, L.P. v. Town of Pelham*, 313 F.3d 620 (1st Cir. 2002); *National Tower, LLC v. Plainville Zoning Board of Appeals*, 297 F.3d 14 (1st Cir., 2002); *Voicestream of Minneapolis v. St. Croix County*, 342 F.3d 818 (7th Cir., 2003). See also, *USCOC of New Hampshire v. Town Dunbarton*, 2005 U.S. Dist. (N.H.) LEXIS 6789; *USCOC of New Hampshire v. Town of Hopkinton*, 137 F. Supp. 2d 9 (D.N.H. 2001)

With regard to the "significant gap", Verizon provided propagation maps showing the coverage that would be provided from the proposed tower, as well from proposed additional tower locations to the north in Plainfield, New Hampshire and to the west in Windsor, Vermont. It is apparent from these maps that Cornish will receive the vast bulk of its new coverage from the Windsor and Plainfield towers, and that the primary beneficiaries of the Cornish tower will be the residents of the town of Windsor, directly across the Connecticut River from Cornish, as well as motorists on Interstate 91, which bisects Windsor. However, under the *Hopkinton* case cited above, it is clear that in order to determine whether there is a "significant gap" in wireless coverage, the ZBA need only look at the service in

Cornish that will be provided by the Cornish tower. Here, we find that the new tower in Cornish will provide service to only 66 additional homes that would not otherwise receive service from the Windsor and Plainfield towers. This hardly seems significant. On the other hand, Verizon points to the fact that the new tower will also fill two gaps in service that exist on Route 12A, the main north-south state highway that runs through Cornish along the Connecticut River. On this issue, traffic studies show that approximately 75,000 automobiles traverse that highway each month. According to Verizon, this is the "significant gap" in Cornish that it is intending to fill with the new tower. In this connection, we note that the 12A traffic constitutes only about 8% of the total traffic on the state and interstate highways in Vermont and New Hampshire that will be served by the new tower. The courts uniformly agree that motorists comprise a major market in wireless telecommunications and that a gap in service to them on a well-traveled state highway is sufficient to satisfy the "significant gap" requirement. *See, National Tower, supra*. While this is a close question, on balance, given the clear legal precedents, as well as the fact that 75,000 cars per month is a substantial amount of traffic (even though it is not a large percentage of all traffic in the service area), we find that there is a significant gap in coverage in Cornish and that the proposed tower will fill that gap.

We turn now to "feasible alternatives", an issue the Board studied carefully. In the end, regardless of whether we look at alternative sites or alternative technologies, there is no more to be done. Verizon studied six alternate sites, selected in consultation with the Board's expert, Mr. Hutchins, to determine whether a tower at any one of them would provide better coverage. Three of the alternates were south of the Jones property, and three were north. Of these, only one – Alternative Four – provided coverage that was close to that from the proposed site, although it suffered from interference from the Plainfield tower. Additionally, Alternative Four was unavailable, its owner being wholly uninterested in making a lease arrangement with Verizon. As for alternative technologies that would allow for wireless service without the need for a tower, Mr. Hutchins made an extensive study at the request of the Board of "repeaters" and Distributed Antenna Systems, which basically utilize utility poles to carry a small network of antennas that broadcast locally. The Board spent a good portion of the June 20th hearing analyzing the concepts of both methodologies. Mr. Hutchins noted technical drawbacks, as well as the need to obtain pole attachment rights, and the cost to

interconnect the entire system with fiber optic cable. Even if these obstacles could be overcome, given the existing technology and the particular circumstances of the Cornish site, the end result would likely be serious capacity issues, and very serious signal pollution/interference issues. As Mr. Hutchins made clear, and as Verizon's expert Ms. LuHanga confirmed,

while such technology may work well in flatter terrain, in enclosed places such as tunnels, and in thickly populated residential neighborhoods or college campuses, it would be very problematic in the hills and winding roads of Cornish particularly given the presence of interfering signals from the nearby towers in Plainfield and Windsor. In the final analysis, we find that there are no "feasible alternative sites" available in Cornish that would fill the coverage gap found to exist on Route 12A. We also find that neither a repeater nor a Distributed Antenna System would serve as a feasible alternative technology to the tower we are approving.

Finally, we come to environmental considerations. Verizon presented a study by Dr. Donald Haes, a consulting radiation safety specialist, demonstrating that, when built and fully loaded with Verizon and five other wireless providers, the tower is expected to increase ambient RF levels by less than 2/10s of one percent of the current Federal limits. Thus, under the Telecommunications Act, our inquiry is at an end, since we cannot otherwise regulate the placement of the facility on "environmental" grounds. However, in the interests of due diligence, we have reviewed the numerous articles on long-term health effects submitted by a Cornish resident who is also a physician. We note that the first article he submitted, and the most recent (May, 2006), was authored by the Institution of Engineering and Technology, Biological Effects Policy Advisory Group on Low-Level Electromagnetic Fields. That article concludes "that the balance of scientific evidence to date does not indicate that harmful effects occur in humans due to low-level exposure to electromagnetic fields." The other articles contained in his submission were, as he put it "ambiguous"; they deal with the risks associated with cell phones themselves (as opposed to cell phone towers), much more powerful TV towers and common appliances (such as electric blankets and toasters). Any further evaluation of the science is ruled out by the Act.

II. Special Exception

Under the Cornish Zoning Ordinance, a telecommunications facility is a permitted use in rural areas only, and then only upon the grant of a Special Exception by the ZBA. In order to allow a Special Exception, the ZBA is required to make numerous findings, which are set forth in detail in Article X, ¶F of the Ordinance. We begin with the general criteria for a Special Exception. Here, we must find that “the proposed use shall not adversely affect:

1. The capacity of existing or planned community facilities
2. The character of the area affected
3. Traffic on roads and highways in the immediate vicinity
4. Town services and facilities
5. Neighboring land uses present and prospective
6. Significant wildlife habitat, trails, natural, scenic or historic features.”

Items 1, 3 and 4 are easily satisfied. The new facility will not require any additional community facilities; it will not affect local traffic (the site will be visited once a month for maintenance); and will not place any additional burden on Town services or facilities. Items 5 and 6 are also easily dealt with. The neighboring lands immediately adjacent to the site are wholly undeveloped, located on a steep hillside, and unlikely to be developed in the future in any way that would be impacted by the facility. And since the site is already cleared and accessed by a logging road, we do not find any adverse impact on wildlife habitat, or any natural, scenic or historic features.

The difficult question is presented by item 2: *i.e.*, whether there will be an adverse impact on the character of the area affected. Here, discussion has focused on the fact that a portion of the tower (as originally proposed at 190’) will be visible in a limited number of homes in Cornish, and also will be seen for a short distance (about a quarter of a mile) by traffic traveling west on Town House Road and, intermittently, by some traffic on Route 12A both north and south of the proposed site. Mill Village – a small group of about ten homes – is the nearest inhabited area from which the tower is visible. Residents of that area were also the most vociferous in opposition to the tower. According to the U.S.G.S. maps used by Verizon for the Line of Sight Analysis it prepared at the ZBA’s request, the nearest home in Mill Village is over 2,500 feet away from the tower, almost half a mile. Perhaps a quarter of a mile further up the Root Hill Road is an area known as Sunset Strip, which is equally affected.

Certainly there is an impact on what is called the Mill Village/Sunset Strip “viewshed”, as well as that of the other affected sections of town. But the question

is whether that impact is "adverse." We know that towers are a permitted use in rural areas, and we also know that they work primarily by means of "line of sight" (although they go beyond that limitation as the result of defraction). If they were ruled adverse anytime they were visible, there could never be a tower in the town. For no matter where it is located, a tower will be visible to someone, somewhere. Nor are towers anything new to the community viewshed. Mount Ascutney, immediately across the Connecticut River in Vermont, hosts three towers, including one that is almost 400' high, all of which are highly visible throughout the general area. Like it or not, they are part of our everyday lives.

Aesthetics are a difficult value judgment. Nevertheless, it is a judgment we are called upon to make. According to our own Ordinance, one of the Town's goals with respect to towers is to "reduce adverse impacts such facilities may create, including but not limited to, impacts on aesthetics, environmentally sensitive areas, [and] historically significant locations." Ordinance, Article VI-A, A.2. No one has alleged that the area is environmentally sensitive, and we find that it is not. With respect to aesthetics, the primary argument advanced against the tower is its impact on the local viewshed. The "character" of the area is undoubtedly "rural." And while not classified as "historic", it certainly is an important and old part of our heritage. However, "rural" no longer means (if it ever did) a totally bucolic countryside with small villages and farmhouses dotting the hills of the Upper Valley. Today, "rural" necessarily means telephone poles, electric lines, cable lines, telephone lines, convenience stores/deli's, automobile repair garages/used car dealers, home businesses involving light manufacturing, and bed and breakfasts – all of which are found in the immediately affected area. A low lying tower adds little. More significantly, the tower which we are approving is certainly not the intrusion on the neighborhood that the original 190' proposal was. The lower 150' tower is no longer visible on 12A north; on 12A south, it is now backstopped by Dingleton Hill, rather than peering over the top of a ridge; and at Mill Village and Sunset Strip only approximately 40' of the tower is visible. The shorter height has ameliorated much of the impact. In the end, we find that the lower tower is not adverse to either the rural or historical character of the area affected.

Two other findings we must make for a Special Exception under the Ordinance are: (1) that the site "is an appropriate location for the use"; and (2) that "the use will not involve uses, activities, processes, materials, equipment or conditions . . . that will be detrimental . . . by reason of excessive production of

traffic, noise, smoke, fumes, glare or odors.” Given the remote nature of the site and the immediately surrounding properties, which the ZBA has inspected, the topographical features of the site, and the fact that Verizon anticipates no more than one trip to the site per month for maintenance, we find that it is “an appropriate location.” We also find that the passive nature of the use will not generate detrimental traffic, noise, smoke, fumes, glare (the tower will not be lighted) or odors.

Additionally, paragraph F.3.a of Article X of the Ordinance mandates that the ZBA consider the following 11 factors in any petition involving telecommunications facilities:

1. “Height of proposed tower or other structure
2. Proximity of tower to residential development or zones
3. Nature of uses on adjacent and nearby properties
4. Surrounding topography
5. Surrounding tree coverage and foliage
6. Design of the tower, with particular reference to design characteristics that have the effect of reducing or eliminating visual obtrusiveness
7. Proposed ingress and egress to the site
8. Availability of suitable existing towers and other structures
9. Impact on ridges caused by tower location, tree and foliage clearing and placement of incidental structures
10. Availability of alternative tower structures and alternative siting locations
11. All special exception provisions listed in 1 and 2 above.”

Many of these factors have already been discussed. For example, the nearest residential development is Mill Village, about one half a mile away (item 2). The site is extremely remote, and the neighboring “use” is undeveloped land (item 3). The topography consists of the southern slope of Dingleton Hill, with the entrance to the site located at an elevation of 453’; the site itself located at an elevation of 818’; and the summit at approximately 1,300’ (item 4). The site is located in an area that will be cleared to allow a 75’ x 75’ square to accommodate the fence and equipment shelter; outside the cleared area, the surrounding foliage will remain (item 5). Ingress and egress will be via an existing logging road that will also carry power and telephone lines (item 7). There are no existing towers or other “structures” (such as silos, church steeples or tall buildings) in the area that could substitute for the proposed tower, nor are there any suitable alternative tower siting locations (items 8 and 10). Our decision specifically reviews the special

exception provisions referenced in the Ordinance (item 11). This leaves items 1 (height), 6 (design), and 9 (impact on ridges).

The height of the proposed tower is its most controversial aspect. Article V, D.2 of the Cornish Zoning Ordinance restricts the height of towers to “no more than 5’ above tallest natural feature or manmade structure measured from the highest point of that object.” The surrounding tree canopy is 80’; which means that, without a variance, the tallest that a tower can be in this area is 85’.¹ Verizon originally applied for a 190’ tower, and to support its case included a propagation study showing the coverage that a tower at that height would provide. The ZBA requested additional propagation studies showing the coverage from 85’ (*i.e.*, a tower that complied with the Ordinance), 100’, 125’, 150’, and 175’. Mr. Hutchins, the ZBA’s RF engineer, conducted his own studies, which largely agreed with those of Verizon, although they tended to show somewhat greater coverage. At the May 1 hearing, after reviewing Mr. Hutchins’ report, Verizon offered to reduce the height of the tower to 175’. At the June 5 hearing, after further reviewing coverage for the gap on Route 12A with Mr. Hutchins, Verizon offered a further reduction to 155’ (to the top of the antenna), although it pointed out that this would greatly reduce the possibility of collocation at the site to as few as three other providers, since the coverage at 125’ (the height of the third co-locator) would be marginal and would not fill the gap on Route 12A unless that provider were one of those (unlike Verizon) that operates at a lower frequency.

The ZBA finds that a 125’ tower would not provide sufficient coverage to fill the 12A gap, and that a 150’ tower – the next lowest tower for which we have substantial evidence – would fill the gap and have the additional benefit of offering some possibility of collocation. In this regard, we are heavily influenced by the testimony of Mr. Hutchins, who was clear that 150’ was the lowest tower he would recommend for the site. (By “a 150’ tower” we mean a tower having a height of 150’, above which the topmost antenna could rise no more than three additional feet; this is consistent with the assumptions underlying Verizon’s 150’ propagation study.)

¹ Verizon contends that a tall ridge behind the site of the tower is a “natural feature” that should set the starting point for the 5’ limitation. At the May 23rd hearing, the Board voted not to accept that interpretation. Verizon has filed a petition for rehearing of that issue. We hereby affirm our earlier ruling. The so-called ridge on which Verizon pins its hopes is not visible in any of the Mill Village pictures from the balloon tests. Moreover, in its original application Verizon admitted that “there are no 185’ tall natural features or manmade structures on the lot.” That very accurate admission, coupled with the clear evidence from the balloon test, puts an end to the matter.

Collocation is a related issue. Here, the Ordinance is clear: Article VI-A, A.5 states that one of the goals of siting telecommunication towers in Cornish is to “require cooperation and co-locations, to the highest extent possible . . . in order to reduce cumulative negative impacts upon Cornish.” Article X, F.3.iv requires an applicant proposing to build a new tower “to submit an agreement with the Town that maximizes the possibility of co-location upon the new structure.” For its part, Verizon has submitted such an undertaking. Given the fact that, due to its lower frequency, cellular coverage would be more extensive than PCS, even at a lower height on the tower, we are requiring as one of our conditions that Verizon use one of the top three locations on the tower for cellular service. At the hearings, Verizon observed that it might be desirable at some time in the future to increase the height of the tower to accommodate future collocators. This is not an issue insofar as this Board is concerned. We are approving a tower that is 150’ in height. Any proposed increase in that height in the future will require a completely new and separate variance application.

The design of the tower was also an issue at the hearing. Verizon originally proposed a lattice tower. On this issue, Mr. Hutchins recommended a monopole, as being less visually intrusive. Several townspeople questioned why “stealth” technology could not be used to hide or disguise the tower. One “stealth” solution that was discussed was to build the antenna into the monopole itself. However, Mr. Hutchins pointed out that this would inevitably mean a loss of power and a reduced range for the tower. Another was to disguise the tower as a Fire Warden’s Station, or a pine tree. While the experts seemed to believe that these solutions might draw more attention to the tower rather than less, the residents of Mill Village heavily favored the pine tree solution, even after it was explained that this will add 7’ – 10’ to the height of the tower in order to achieve a naturalistic shape for the “tree.” The ZBA concurs with them that a monopole, clad as a pine, will be the best means of minimizing the visual intrusiveness of the tower, and we so condition this order. If Verizon chooses, the monopole may be flanged for future expansion. Verizon does so, however, at its own risk, as any future increase in height will, as discussed above, require a new and completely separate variance application. The fact that the monopole may be flanged should not have any influence on the hearings on any such application.

The final factor to be reviewed is the impact on the ridge caused by the location of the tower. We find that by shortening the height of the tower from 190’

to 150', the visual impact on the ridge is greatly reduced. Moreover, we are adding a restriction on the ability of Verizon and the Jones family to clear the surrounding woods, thus ensuring that the reduced visual impact will continue. The incidental structures at the site are not an issue, given that they are only one story high, and considering the remote nature of the site and the surrounding foliage.

Article X, F.3.b requires that each applicant for a special exception for a telecommunications facility must submit a variety of materials prior to final action on its application, including a detailed set of plans; proof of compliance with FCC regulations; proof that a NEPA evaluation has been undertaken; an inventory of existing towers; proof that no existing structure can accommodate the applicant's proposed antenna; an agreement regarding collocation; and engineering information. We find that Verizon has satisfied all these requirements.

III. Variances

Verizon has applied for two area variances. The first is to increase the height of the tower from the 85' that would be allowed under the ordinance to 190'. The second would allow it to build a tower that does not meet the requirement of Article VI-A, C.4, which requires that towers be "setback a distance equal to 125% of the height of the tower from the boundary line of abutting land." The details of the height issue are discussed above. At a height of 160' (including the antenna and pine tree cladding), the 125% setback rule would require a setback of 200'. This is an issue because the particular site that has been selected for the tower is only 120' from the northern property line and 111' from the eastern property line. As mentioned, the ZBA toured the site and has a good knowledge of the area. The particular site for the tower is the best in the immediate locale. To begin, it is the only flat place in the immediate area. Moreover, the tower can go no higher up Dingleton Hill due to the steepness of the terrain. And if the tower were located at a lower elevation, it would have to be taller to provide the necessary coverage. The two boundaries in question are heavily wooded, inaccessible ravines, and are immune from development. Moreover, Verizon has undertaken to ensure that, in the event of a collapse, the design of the tower will be such that it should snap mid-way up its height and fall back on itself. As part of our accompanying conditions, we are specifically requiring submission of a structural engineer's letter certifying that, as built, the tower is so designed. In the end, we find that there is no public health threat given the inaccessible nature of the immediately surrounding properties and the structural nature of the tower itself.

In order to grant an area variance under the statutory laws of New Hampshire, we must make all of the following findings (Article X, G of the Ordinance):

1. "No diminution in the value of the surrounding properties would be suffered;
2. Granting the permit would be of benefit to the public interest;
3. Denial of the permit would result in unnecessary hardship;
4. By granting the permit substantial justice would be done; and
5. The use must not be contrary to the spirit of the Ordinance."

With respect to the issue of a possible diminution in the value of the surrounding properties (item 1), the basic question is whether the tower will have an adverse impact on the value of the homes that have a view of the tower. Here, the ZBA had ample evidence that there is no impact. At the request of the ZBA, Mr. Bramley visited the site of the tower as well as Mill Village. He also looked at comparable sites of existing towers in the neighboring communities of Enfield and West Lebanon. After viewing sale and resale records in those two communities, as well as in Nashua, he concluded that he knew of "no instance where local property values in rural locations such as the subject will diminish with the construction of said facilities, nor will the region be impacted, except in a positive way, from said facilities because of improved communication facilities."

Verizon submitted several appraisal studies that had been prepared for use in other proceedings that had nothing to do with Cornish. Moreover, the authors of those studies never examined the Cornish site. Accordingly, we disregard them. A member of the Selectmen's Office introduced two letters from Avitar Associates, the real estate firm that has conducted the property tax appraisals for Cornish, and several other New Hampshire municipalities, for the past several years. Avitar's first letter included no hard data, and reached no firm conclusions. Avitar's second letter is more specific and much more helpful. It contains two pages of photographs, labeled "Page 1 CLOSEUP", containing pictures of existing towers in other towns located in close proximity to the affected properties, and "Page 2 DISTANT", which had pictures of more distant towers. Avitar concludes its letter noting that "people with close up views . . . will have some varying impact, but whereas it appears most, if not all of the properties that can view the proposed tower will be similar to Page 2 and with lower towers, the view effect will be minimal, if non existing." In short, the appraisal firm most knowledgeable regarding local conditions has concluded the impact on value will be minimal to

non-existent. We concur that there will be no diminution in value of the surrounding homes. As for the two abutting properties (one of 769 acres, and the other of 52 acres), neither owner appeared at the hearings, nor voiced any concern whatsoever regarding any impact on value. Given this, given the fact that the smaller property is completely undeveloped and the larger one contains but a single house that is more than a mile away, and given further that any view of the tower from either of those properties will be "distant" due to the location of the existing roads and the inaccessible nature of the tower site, we also find that the proposed tower will not cause any diminution in value of either of these properties.

With respect to the public interest (item 2), the New Hampshire Supreme Court has made it clear that in determining whether a variance is "in the public interest" the basic test is whether there will be "harm to the public rights of others." *Chester Rod and Gun Club v. Chester*, 152 NH 577 (2005). We begin with the fact that the Telecommunications Act of 1996 constitutes a national policy encouraging wireless communications, and that the governors of both Vermont and New Hampshire are on record in support of universal wireless telephone service in their two states. In addition, the proposed tower will fill a significant gap in service on Route 12A. However, the acid test is whether the tower will be injurious to the public rights of others. The answer is no. In reaching this conclusion, we confirm our earlier finding that the variances will not adversely affect the character of the neighborhood, or otherwise have an adverse impact on the area. In addition, keeping in mind the fact that the tower is half a mile from the nearest neighbor on a site that is basically inaccessible, we find that the existence of the tower poses no threat to the public health, safety or welfare of the inhabitants of Cornish.

The question whether denial of the variances would result in "unnecessary hardship" (item 3) requires a two part analysis. First, we must determine whether the variances are needed to "enable the proposed use of the property given the special conditions of the property." Here, the answer is yes. We have already discussed the fact that the property is quite steep up to the site, and gets steeper beyond the site. Ideally, a shorter tower could be built higher up on Dingleton Hill, but the topography simply will not allow it. At a lower elevation, the tower would have to be even taller. While one advantage of the site that was chosen is that it is flat, the fact that it is also narrow necessitates a setback variance. In our opinion, these special conditions dictate the need for a variance. Our next inquiry is whether "the benefit sought to be achieved by the applicant can be achieved by some other

method reasonably feasible for the applicant to pursue, giving due consideration to whether the variance is necessary to avoid an undue financial burden on the applicant.” Here, the answer is no. There are no other means of achieving the benefit of the tower on the site that would comply with the height and setback rules, and there are no alternative sites available in the Town.

The question whether substantial justice will be done by granting the variance (item 4) must be determined on a case-by-case basis. Here, given the national and state-level policy encouraging wireless communications, a gain in cell service, and the fact that there is no monetary loss to or adverse effect on the local community, we find that substantial justice is done by granting the two variances.

The final issue we must address is whether the use is contrary to the spirit of the Ordinance (item 5). We find that it is not. Telecommunications facilities are specifically allowed as a permitted use under our Ordinance as long as we make the detailed findings we have in the Special Exception section above. We hereby affirm those findings, particularly that the lower 150’ tower will not adversely affect the character of the area,

will not have any impact on local property values, and will not pose a threat to the public rights of others.

Appended to and incorporated within this Order is a list of Conditions that must be met by Verizon in order for it to proceed with construction.

Signed,

Karim Chichakly, Chair
Zoning Board of Adjustment

Cornish, New Hampshire
August 14, 2006

**TOWN OF CORNISH, NH
ZONING BOARD OF ADJUSTMENT
CASE 06-01
JULY 5, 2006**

Members Present

voting: Karim Chichakly, Jason Bourne, Jim Brown, Caroline Storrs, and Bill Balch

non-voting: Bruce Tracy

Representing Verizon Wireless: Linda Connell of McLane, Graf, Raulerson & Middleton, Mercy LuHanga, Radio Frequency (RF) Engineer, and Todd White, Construction Manager, and Chuck Webberly, Site Acquisition Specialist.

Also in attendance: Bill Gallagher, Daniel Kebalka, Mara Sabinson, Merilynn Bourne, Dillon Gallagher, Keith Jones, Joan Littlefield, Gwyn & Heather Gallagher, Caroline Reed, Paul Toms, Rob & Mariet Jaarsma, Leo Maslan, Mark Hutchins (RF Engineer), and Heidi Jaarsma (recording secretary).

The meeting was held at the Cornish Elementary School and was called to order by Karim Chichakly at 7:40 p.m.

Case 06-01: Verizon Wireless (applicant) has requested a Special Exception concerning Article IV Section 4.1 to the zoning ordinance regarding the applicant's request to construct a wireless communications facility including a 190' lattice type tower. Applicant also requests two variances concerning Articles V and VI-A, Section D.2 & C4a.1. Applicant is requesting a variance to the height regulations and a variance to the requirements of setback. Applicant proposes the construction of the tower at 880 Townhouse Road, Tax Map 2, Lot 20E.

Closed Discussion:

Caroline Storrs introduced into the record a motion for rehearing submitted by the applicant. The Board discussed concerns regarding communication between Verizon representatives and Mark Hutchins, the Town's contracted expert. Ms. Connell also discussed her concern that Jim Brown's letter regarding the communication between Mr. Hutchins and Verizon referred to a non-public meeting. Mr. Chichakly said that there had been no meeting and that any reference to one had been inadvertent. Mark Hutchins, continued Mr. Chichakly, was the Town's expert and it was reasonable for anyone on the Board to speak with him. Ms. Connell repeated her assertion that 140' was too low for Verizon. Although collocations at that height had been discussed, Ms. Connell pointed out that any prospective collocater would be able to test at the site. Before the construction of the tower, coverage levels can only be predicted by modeling.

Jason Bourne asked why a tower in Vermont could not serve the coverage gap on Route 12-A. Mercy LuHanga said that no Vermont tower was planned. Ms. Connell said that one must look to the town where the coverage is proposed. Jason Bourne replied that Verizon needed Cornish to hit the areas of VT I-91 that cannot be hit from the Mt. Ascutney tower. He added that it was somewhat hypocritical not to build a tower in Vermont to serve New Hampshire. Mr. Connell said that she was somewhat concerned with the 122' height coverage in Vermont. Due to terrain

factors the entire coverage area would be less reliable. Mr. Bourne said that the modeling would take that into account.

Mark Hutchins said that he agreed with Ms. Connell: he would be nervous about the reliability of a 122' tower (125' total tower height). Verizon's goal, he said, was not just to close the gap but to achieve some reliability in overlap. He added that NH Route 12-A does have a lot of traffic and suggested that there could be a higher standard for that road. He also felt that a higher tower would better serve Townhouse Road. With a lessening of the tower height now, more and higher facilities would be needed in the future. The most problematic area for this tower was the intersection of NH Route 12-A and Platt Road. At 150' the coverage in that area, Mr. Hutchins said, was not bad. At 165' there was good coverage all the way up NH Route 12-A. At 125', or anything below 150', Frenell interference would diminish coverage. From a radio frequency engineering standpoint, Mr. Hutchins was more comfortable at a 150' tower height.

Jim Brown asked Mercy LuHanga for a clarification of the 150' height: was it the center line or the total tower height with antennas? Ms. LuHanga said that her modeling took 150' as the center line. The total tower height would be approximately 153'.

Jason Bourne said that he did not see, from the coverage maps, a significant decrease in coverage as the tower height went down. He asked Mr. Hutchins to explain. Mr. Hutchins said that the changes are modest, but the hill west of the proposed tower is a major obstruction and coverage of Townhouse Road will decrease as the height goes down. Mr. Hutchins discussed shadowing and grazing which diminish coverage. Only at 140' was the tower clear of shadowing. In the case of an accident, 12-A could suffer from loading with a shorter tower height. Ms. Storrs asked Mr. Hutchins what the Freeman Hill tower would do for NH Route 12-A. Mr. Hutchins said that that tower was not very high. He said he would rather have Verizon Wireless comment on the sector orientation of the Freeman Hill tower.

Mr. Chichakly asked Mr. Hutchins to speak more about the overlap on NH Route 12-A. Mr. Hutchins said that he was comfortable at the 150' level. The space where a signal drops off needs to overlap with a signal of increasing strength from a different source. The handoff between signals can be soft or abrupt, but a good signal will be needed in approaching the South Plainfield tower. Mr. Chichakly asked Mr. Hutchins if he was confident of overlap at 150', but not any lower. Mr. Hutchins responded in the affirmative. Ms. Storrs asked Mr. Hutchins how he felt about 140'. He said that he was more concerned about grazing and interference, especially in areas two miles or more out from the tower.

Jason Bourne said that he did not see a significant difference in the projected coverage maps between a 187' and a 122' tower. Mr. Chichakly said that he did see a difference in coverage and pointed to several areas. Mr. Bourne questioned whether those areas were significant. Mercy LuHanga said that the gaps can grow larger as the signal shrinks due to loading. Terrain difficulties at the proposed site made it impossible to do a drive test. Ms. LuHanga said that she could not go below 150' using modeling only.

Karim Chichakly asked Todd White about the towers in the photo simulation. He said that the width at the top of the monopole did not seem as wide as the top of the lattice. Mr. White said that was due to the simulation and that the lattice tower was a more accurate representation of the antenna width. The Board examined the set of photo simulations at 150'.

Caroline Storrs suggested the Board think about stealth, tree-construction specifically, as an option. Mark Hutchins said that he was not aware of a 150' tree-construction. The tallest he knew of was 120' in Grantham. He added that the total tower height would be 7'-10' higher than the proposed height to accommodate the 'foliage' at the top of the tree. Collocations would also need to be farther apart. Ms. Storrs said that she did not want to consider a tree-construction if the total height would have to be increased. Bill Balch said that he had seen several on the way down from St. Johnsbury and that the tree-constructions stick out.

Karim Chichakly asked the Board what he felt would be an acceptable height. Ms. Storrs said that she had been leaning toward 140', but after Mr. Hutchins' testimony, she would find a 150' center line acceptable. Mr. Chichakly and Jim Brown agreed. Jason Bourne discussed the coverage maps that showed the VT I-91 gap being hit by a tower as low as 100' and said that he did not believe the Verizon had to be provided with coverage of everything they want. Mr. Chichakly said that the argument fell apart with overlap and shrinkage. In the scheme of the entire town, especially Townhouse Road, Mr. Chichakly felt lowering tower height would be a mistake. Bill Balch said that allowing for some collocation could reduce the total number of towers built in the town in the long run.

Karim Chichakly asked Board members if, in their opinion, the benefit could be sought by some other reasonably feasible method. Jim Brown said that six other sites had been examined and did not pan out. Building higher up on the hill behind the proposed site was not feasible. He did not see any other way. Caroline Storrs said she still thought a Vermont tower could serve the 12-A gap better. Karim Chichakly said that the same interference that came into play with towers north of the site on the NH side might effect the VT side. The Board and Ms. Connell discussed the applicability of the Pelham case.

Mr. Chichakly asked what Verizon's obligations were as holders of a license. Ms. LuHanga said that Verizon had to provide service to keep its license and that the license area covered New Hampshire and Vermont. Mark Hutchins added that while one of the three sectors of the panel array is pointed at Vermont, two are clearly pointed at New Hampshire. Jason Bourne asked if coverage going down VT Route 5 and VT I-91 was from sector one or two. Mark Hutchins looked at the map and said that part of the second sector was directed to that area. Mercy LuHanga agreed saying that the second sector covered Cornish and Windsor. Mr. Bourne asked how the decision to aim the sectors was made. Ms. LuHanga said that the sectors were run through an optimization model. Mr. Bourne asked if the best coverage for Cornish was the basis for the model. Ms. LuHanga said that all coverage objectives were considered. Was VT Route 5 part of the coverage objective, Mr. Bourne asked. Ms. LuHanga said that it was. Mr. Bourne said that it was very frustrating to see that the majority of coverage was to Windsor and VT I-91. It was only fair, he felt, for Windsor to come back with coverage for Cornish. Mr. Chichakly pointed out the issue of interference. Mr. Bourne questioned interference when other location have four towers in very close proximity to one another. Mr. Chichakly

said that interference is very terrain-dependent. Caroline Storrs and Bill Balch both said that they agreed with Mr. Brown that there was no other reasonably feasible alternative.

Karim Chichakly asked the Board to consider the spirit of the Ordinance, in particular the competing objectives of collocation and low tower height. Ms. Storrs said that reducing the height and using a monopole reach that goal. Jim Brown said that a 150' tower would fairly adjudicate the competing values. Jason Bourne said that he was looking at the minimum impact on the Town. He thought the tower could be lower, 130' based on projected coverage maps provided by Verizon. He said that he would sacrifice the coverage provided to Cornish to lower the height; collocation at 100', he added, was still possible for cell signals. Mr. Brown said that that approach ignored the gap on NH 12-A and went against the recommendation of the Town's expert. Mr. Bourne said that Mr. Hutchins had given testimony from an RF engineering standpoint. The job of the Board was to find a balance. Mr. Chichakly and Mr. Bourne again discussed the difference in projected coverage at decreasing tower heights. Mr. Bourne felt there was not a significant decrease in coverage, Mr. Chichakly felt there was.

Mr. Chichakly asked for a straw vote on the applicant's request for a variance. The straw vote was 4-1 in favor with Jason Bourne voting against. Mr. Chichakly asked for a straw vote on the applicant's request for a special exception assuming that acceptable conditions were put on the special exception. The straw vote was 4-1 in favor with Jason Bourne voting against.

Jim Brown presented a draft copy of conditions to the granting of a special exception, attached. Ms. Connell questioned the quarterly inspections (draft condition #21): she said it was extremely out of the ordinary. Mr. Brown pointed to the section of the Zoning Ordinance requiring quarterly inspections. Ms. Connell said that she might need to ask for reconsideration, but not at this point.

Jim Brown suggested that the conditions be reviewed by Town Counsel. Jason Bourne asked how a decision could be written before a vote. Mr. Chichakly said that Mr. Brown had compiled the conditions from meeting minutes.

Bill Balch made a motion to table the hearing until 7:30 p.m., August 7, 2006, at the Cornish Elementary School. Jim Brown seconded the motion, and the vote of the Board was 5-0 in the affirmative.

Caroline Storrs made a motion to table the 6/22/06 motion for a rehearing. Jim Brown seconded the motion, and the vote of the Board was in the affirmative. Linda Connell said that the motion for rehearing might be a moot point. She asked if the Board had any objection to the submission of an application for Site Plan Review in the interim. The Board did not.

The meeting was adjourned at 10:48 p.m.

Respectfully submitted,
Heidi M. Jaarsma

DRAFT
Application of Verizon Wireless
for Special Exception and Variances
Case No. 06-01

List of Conditions

1. Before commencing construction, Verizon must : (a) complete the Site Plan Review process before the Planning Board; and (b) complete reimbursement of all fees and expenses incurred by the Town's experts, as well as by the Board for its administrative and other costs in this matter.
2. Verizon must make substantial progress towards completing construction one year from the date of final Planning Board approval, or this grant of a special exception and variances will lapse.
3. With respect to the height variance, the tower may not exceed 150' in height, and the initial antenna array may not extend more than 3' above the top of the tower.
4. After the date hereof, any proposed increase in the height of the tower above 150' will require approval of this Board of a separate variance application.
5. The tower shall be monopole-style.
6. Verizon shall maintain on file with this Board an undertaking to supply available space on the tower to additional users for collocation at reasonable fees and costs according to the tower's design.
7. Collocation on the tower by additional provider(s) will require Site Plan Review before the Planning Board. Collocation will not require an appearance before this Board unless an increase in the height of the tower is involved (see no. 4).
8. The tower shall not be lighted, unless required by the Federal Aviation Authority ("FAA"). In the event lighting is required, Verizon shall appear before the Planning Board for prior design approval.
9. The tower must remain in compliance with all applicable standards and regulations of the FAA, the Federal Communications Commission ("FCC"), and all other agencies with the authority to regulate towers and antennas. Failure to comply with any new standards or regulations within six months shall constitute grounds for removal, at Verizon's expense, on the grounds of abandonment (see no. 22).
10. Regarding the FCC's regulations on the Maximum Permissible Exposure limits for RF fields, Verizon shall submit a certificate that its antenna array is in compliance, as built, within 90 days of its first commercial use of the tower.
11. Additionally, Verizon shall be responsible for submitting a similar certificate with regard to all additional users on the tower, within 90 days of commercial operation by each user.
12. The tower shall be maintained in compliance with all applicable building codes and the applicable building and safety standards of the industry. Failure to comply shall constitute grounds for removal, at Verizon's expense, on the grounds of abandonment (see no. 22).
13. No microwave dishes (except for "pizza box" style microwave relay antennas) shall be mounted on the tower without the prior approval of this Board in a separate special exception application.
14. There shall be no signage, or other graphic representation, of any kind on the tower.

15. The tower shall be finished in galvanized steel, and allowed to weather. It shall not be painted or otherwise finished without prior approval of this Board.
 16. All antennas and supporting equipment mounted on the tower must be of a neutral color that is compatible with the tower, so as to make all attachments as visually unobtrusive as possible.
 17. With regard to the setback variance, the minimum boundaries shall be approximately 111' from the eastern boundary and approximately 120' from the northern boundary, and 187.5' from all other boundaries. As a condition hereto, Verizon shall, prior to construction, submit a letter from a competent structural engineer regarding the collapse characteristics of the tower, stating that the tower, as built, is designed to collapse upon itself and not impinge on neighboring properties in the event of a failure.
 18. The tower shall be surrounded by security fencing in accordance with the initial plans filed with the Board.
 19. Given the remote nature of the site, no special landscaping is required for the immediate site. However, neither Verizon (for the land it leases), nor the land owner (for a distance of 100' from the boundary of the land leased to Verizon) shall remove any large trees that would cause a material change in the view of the tower in the local neighborhood. This restriction on cutting trees does not extend to brush cutting, or the removal of understory trees (with a caliper of less than 5") or dead trees.
 20. The permit for special exception shall expire if the use of the tower ceases for more than one year for any reason.
 21. Verizon shall supply a bond to the Town's Zoning Administrator in the amount of \$20,000 for the cost of removal, and shall also submit proof of insurance covering accident or damage. The amount of the bond may be increased after five years to account for inflation by _____.
 22. If the tower is abandoned, a declaration of abandonment may be issued by the Town following a public hearing, with notice to the owner/operator and to all abutters. Upon receipt of a notice of abandonment, the owner shall remove the structure within 90 days. If the tower is not removed within 90 days, the Town may execute the bond required by no. 20 and have the tower removed. If there are two or more users of the tower, this provision shall not become effective until all cease using the tower. The remaining users will assume responsibility for quarterly inspections.
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**TOWN OF CORNISH, NH
ZONING BOARD OF ADJUSTMENT
CASE 06-01
JUNE 20, 2006**

Members Present

voting: Karim Chichakly, Jason Bourne, Jim Brown, Caroline Storrs, and Bill Balch

non-voting: Dale Rook and Bruce Tracy

Representing Verizon Wireless: Linda Connell of McLane, Graf, Raulerson & Middleton, Mercy LuHanga, Radio Frequency (RF) Engineer, and Todd White, Construction Manager, and Chuck Webberly, Site Acquisition Specialist.

Also in attendance: Mara Sabinson, Merilynn Bourne, Caroline Reed, Jan Timmons, Keith Jones, Daniel Kebalka, Bill Gallagher, Leo Maslan, John Gregg (*Valley News*), and Heidi Jaarsma (recording secretary).

The meeting was held at the Cornish Elementary School and was called to order by Karim Chichakly at 7:47 p.m.

Case 06-01: Verizon Wireless (applicant) has requested a Special Exception concerning Article IV Section 4.1 to the zoning ordinance regarding the applicant's request to construct a wireless communications facility including a 190' lattice type tower. Applicant also requests two variances concerning Articles V and VI-A, Section D.2 & C4a.1. Applicant is requesting a variance to the height regulations and a variance to the requirements of setback. Applicant proposes the construction of the tower at 880 Townhouse Road, Tax Map 2, Lot 20E.

Closed Discussion:

Caroline Storrs said that the Board had received letters from Mara Sabinson and Leo Maslan, and an email from Jan Timmons. Karim Chichakly asked if there was any new information. Jason Bourne relayed to the board a conversation with Mark Hutchins, RF engineer, regarding the use of a repeater to close the Route 12-A coverage gap and the option of concealing the antennas within a monopole. Mr. Hutchins had reiterated concerns he had expressed in a letter to the Board regarding potential interference with a repeater system and potential power loss of concealed antennas at 150'.

Mercy LuHanga responded for Verizon. She essentially agreed with Mr. Hutchins' analysis. She thought that the sector would be overloaded by using the Plainfield South tower as a donor site due to distance and topography. The forward link might be alright, but the reverse link would need a clearer signal. Mr. Bourne questioned the extra tower height needed to cover a quarter mile stretch of road on Route 12-A. He then asked Ms. LuHanga if fiber optic technology was practicable. Ms. LuHanga said that the issue was one of capacity when an existing sector was tapped. Ms. LuHanga added that without towers online an actual ground test of signal cannot be done. Once the Plainfield site was on air, a repeater would increase capacity and diminish the signal.

Karim Chichakly asked Ms. LuHanga about concealing the antennas in the monopole. She said that she agreed with Mr. Hutchins statement that power would be lost by such an arrangement.

Mr. Chichakly directed the Board to VI-A.C (Performance Requirements). The Board discussed aesthetics. The proposed tower would be galvanized steel in accordance with VI-A.C.1. The possibility of a 100 foot buffer zone where trees would not be cut was discussed. The Board had also received word that the tower would not be lighted.

Regarding Federal requirement (C.2) the Board suggested that Verizon test RFE levels when the proposed tower would go online and when carriers were added.

Jim Brown suggested that Verizon be required to inform the town of any changes to the Federal Telecommunications act. Ms. Connell suggested that the town request material changes to the FTA.

The Board also requested a letter regarding the collapse characteristics of the proposed tower.

Regarding additional requirements for telecommunications facilities, the Board made note that the setbacks were not met and that Verizon was asking for a variance. The Board then discussed the proposed 100 foot buffer zone around the compound. Mr. Jones said that he might have to clarify his lease with Verizon. Ms. Connell made a distinction between tall trees and understory trees.

Regarding the bonding of the tower, Mr. Brown suggested increasing the proposed \$16,000 bond to \$20,000 subject to a five-year review.

The Board turned to Article X. Ms. Connell said that an argument had been made to use the ridge behind the site as the tallest natural feature; she objected to the Board not using that ridge as the point from which to gauge the maximum height. Mr. Chichakly said that the Board had already voted. Ms. Storrs asked whether a straw poll should be taken from abutters regarding design characteristics. Mr. Chichakly said that the Board had already received a large amount of comment from the public. There followed a discussion regarding the possibility of disguising the tower as a fire watch tower. Todd White explained that at 150' wind would be an issue and that the tower would be supported by four monopoles. Mr. White felt that it would be visually obtrusive. The Board also discussed the potential power loss that would result from concealing the antennas within the monopole structure ('antennas in a can'). Such a design structure could be extended once. Jim Brown said that he came down on the side of a monopole. Caroline Storrs, Bill Balch, and Karim Chichakly agreed. Jason Bourne said he thought a fire tower might fit in, visually, better than a cell tower. Mr. White said that at 150' there would be significant wind load on the box of a fire tower. He added that collocators would be located below the 'box' or stealth area.

The Board turned to alternate locations. Jason Bourne asked if a Vermont site could give the 12-A coverage. Linda Connell said that the total coverage plan includes more than just Route 12-A. Mercy LuHanga said that she had to assume that Mr. Chizmar, the former RF engineer for Verizon, had practiced due diligence in the design of the search ring. Mr. Chichakly asked Ms. LuHanga if a site in Vermont would run into the same interference problems as the alternate site #4. Ms. LuHanga said that it probably would, but everything depended on terrain.

The Board asked whether the tower would have an adverse impact on the character of the surrounding area. Mr. Chichakly said that another balloon test would be necessary to accurately gauge the impact of a tower at 150'. Ms. Storrs agreed and said that she had looked at a 120' tower in Plainfield which had very little impact on the ridgeline.

Mr. Brown asked Ms. Connell regarding X.3.b.ii what proof Verizon would give regarding satisfaction of the National Environmental Policy Act (NEPA). Ms. Connell said that generally the Federal Requirement is provided to the Town. She said a condition that the requirements of the act are met could be a condition of approval.

The Board turned to the impact of the proposed tower on significant natural, scenic, or historic features or sites. Mr. Chichakly said that Mill Village was one of only a few historic villages in town. Jim Brown said that the ordinance directs that towers be placed in the rural zone. Caroline Storrs said that she looked at the word 'significant' to mean recognized importance such as a house on the National Register or a designated Historic District.

The Board then examined the request for dimensional variances. With regard to no diminution of surrounding property values, Caroline Storrs said that she still has grappling the idea that there would be no diminution of value on an existing building, but the facts that had been given to the Board said that there would be no diminution.

The Board looked at the issue of benefit to the public interest. Ms. Storrs said that the tower would be providing a public service. Bill Balch said that the Master Plan questionnaire showed that people were in favor of towers. Jason Bourne also pointed out that the survey indicated respondents were in favor of prohibiting ridgeline development 188-60. Caroline Storrs said that she saw the example of building something that might pollute a stream as being contrary to the public interest at large.

In looking at hardship the Board discussed the topography of the site. With regard to the setback, the Board saw no better locations, and there were no residences anywhere near the proposed site. Jim Brown said that everything would come down to the height variance: at what level would everyone's need be met?

The Board then discussed the spirit of the Ordinance. Caroline Storrs said that because the use is a permitted one, it is not contrary to the spirit of the Ordinance. For setback, the Board's only concern was safety, and members felt that that concern was met. Jason Bourne asked Mr. White how far wind could blow ice off a tower. He responded that there are hundreds of variables, but that ice could blow off outside the fenced area. The Board then discussed a 127' tower which would cover Vermont, but not the 12-A gap. Jim Brown said that a height lower than 150' would put the issue off for a year or two; eventually someone would want to increase the height of a tower. Jason Bourne presented research that he had done looking at DOT traffic counts in the area of the gap. He calculated that the 12-A gap represented 8% of the entire coverage area and asked whether it was worth thirty feet of height to cover that small a number. Jim Brown noted that it is 8% of a large number. Mr. Bourne said that from the beginning Verizon had set out to serve the I-91 corridor. A tower below 150' did not deny them that coverage. In order to meet the balance between the needs of the applicant and the town, other options should be examined to cover the quarter mile gap on 12-A. Mr. Bourne said that a repeater may work. Ms. Storrs said that a quarter mile was only 1,200 feet, and perhaps the balance was too much in Verizon's favor to have the extra height to cover that gap. Linda Connell pointed out Mark Hutchins' analysis of the deterioration of the signal from a 127' tower at the proposed site; 682 acres in Cornish would be lost. She objected to the fact that she had not been given this analysis of traffic counts prior to the meeting.

Jim Brown suggested another balloon test at 150'. Chuck Webberly agreed. The test will be done primarily to generate another series of photo simulations. No

notice will be put in the paper, but efforts will be made to put up posters. Jim Brown made a motion to ask Verizon Wireless Services to conduct a balloon test at 150' and to notify the Town of Cornish of the date of the test. Caroline Storrs seconded the motion, and the vote of the Board was 5-0 in the affirmative. Caroline Storrs made a motion to table the meeting until July 5th at 7:30 p.m. in the Cornish Elementary School. Bill Balch seconded the motion, and the vote of the Board was 5-0 in the affirmative.

The meeting was tabled at 11:19 p.m.

Respectfully submitted,
Heidi M. Jaarsma

**TOWN OF CORNISH, NH
ZONING BOARD OF ADJUSTMENT
CASE 06-01
JUNE 5, 2006**

Members Present

voting: Karim Chichakly, Jason Bourne, Jim Brown, Caroline Storrs, and Bill Balch

non-voting: Dale Rook and Bruce Tracy

Representing Verizon Wireless: Tom Hildreth and Jeremy Walker of McLane, Graf, Raulerson & Middleton, Mercy LuHanga, Radio Frequency (RF) Engineer, and Todd White, Construction Manager, and Chuck Webberly, Site Acquisition Specialist.

Also in attendance: Mark Hutchins (RF Engineer hired by Town of Cornish) Dillon Gallagher, Mara Sabinson, Merilynn Bourne, Paul Toms, Linda Connell, Dean Zoerheide, Sally Wellborn, Bill Gallagher, Bonnie Kebalka, Daniel Kebalka, James Liggett, Pariz & Susan Oroggi, Sen. Peter Burling, Joan & James Littlefield, Judd Gregg (*Valley News*), and Heidi Jaarsma (recording secretary).

The meeting was held at the Cornish Elementary School and was called to order by Karim Chichakly at 7:40 p.m.

Case 06-01: Verizon Wireless (applicant) has requested a Special Exception concerning Article IV Section 4.1 to the zoning ordinance regarding the applicant's request to construct a wireless communications facility including a 190' lattice type tower. Applicant also requests two variances concerning Articles V and VI-A, Section D.2 & C4a.1. Applicant is requesting a variance to the height regulations and a variance to the requirements of setback. Applicant proposes the construction of the tower at 880 Townhouse Road, Tax Map 2, Lot 20E.

Closed Discussion:

Caroline Storrs introduced into the record a letter from Jan Timmons, a letter from Avitar, and a letter from McLane, Graf & Raulerson. George Edson's support for the application was introduced into the record via phone request.

Tom Hildreth in response to comments made at the May 23rd meeting asked that the record reflect that Dean Zoerheide was contacted by Verizon Wireless during its Site Acquisition process regarding his Dingleton Hill property.

Mr. Hildreth said that after the last meeting, he, Mercy LuHanga, Jim Brown, and Mark Hutchins (by phone) had met for several hours in Concord to discuss alternatives at this location and at other possible locations. The bottom line height for a tower at the proposed location was 155'. Mr. Hildreth said that he would discuss monopole vs. lattice construction and the tradeoff between height and coverage.

Mr. Hildreth then took issue with the premise of Jim Brown's use of households in his proposed coverage analysis. Traffic counts on NH route 12-A, the most recent showing 91,200 vehicles per month, were introduced into the record. The network was being designed to cover the traffic corridors. Mr. Hildreth referred to a stated goal of the New Hampshire and Vermont governors to achieve 100% coverage on all roads. Route 12-A, Mr. Hildreth maintained, is the most important North - South road in Cornish.

In response to statements made at the May 23rd meeting that residents of Cornish do not want more coverage, Mr. Hildreth introduced into the record the results of the 2002 Master Plan Survey. Of the three hundred respondents, 82% travel outside of Cornish to work with 16% traveling to Vermont. The survey also showed that a majority of respondents would support better cell coverage and cell towers in Cornish.

Mr. Hildreth also took issue with the analyses that isolated coverage from the neighbor sites in an effort to look only at coverage from the proposed Cornish site. A cell phone will find the strongest signal and use that one when multiples coverages exist in an area. Mark Hutchins supported that statement; some, but not too much, overlap is necessary in building a network.

Every Verizon Wireless site will eventually provide wireless broadband internet service. To lower the tower from 175' to 155' could jeopardize that service along Townhouse Road. Mr. Towers could be required to cover that area at some point in the future. Mr. Hildreth then introduced a *Valley News* article regarding the growth of wireless internet service in the Upper Valley.

The Ordinance itself, Mr. Hildreth maintained, contains conflicting values creating a hardship with regard to telecommunications facilities. Collocation is encouraged in the Ordinance. At the same time the maximum height of a tower is five feet above the tallest natural feature or man-made structure. No place in the Town of Cornish provides a meaningful site at that height. With regard to the vote at the May 23rd meeting to not use the ridge as the tallest natural feature, Mr. Hildreth said that he was not sure what to do about it, but he was still within his 30-day appeal period.

Jim Brown asked Mr. Hutchins if the five-foot limit was reasonable. Mr. Hutchins said that considering the size of the antenna and collocation a minimum of ten to fifteen feet was more reasonable.

Mr. Hildreth said that a letter regarding the collapse characteristics from the engineer of the proposed tower could be included as a condition to approval. He added that the acquisition of the PCS license obliges VWS to provide service. Mr. Hildreth then presented a chart showing the increase in PWS users; in New Hampshire there are 65,000 more PWS subscribers than land-line subscribers.

With regard to potential collocators, Mr. Hildreth said that he did not know at this time what providers might occupy the tower. He did refer to Donald Haes' supposition that Cingular, Sprint, TMobil, or Nextel might want space on the proposed tower. If the height or the size of the complex facility will not be increased by the collocation, the Town could regulate collocations through only the building permit process, through requiring site plan review, or through requiring collocators to go before the ZBA.

He could not predict how many towers would eventually be built in Cornish. Mr. Hildreth's own town of Hollis, thirty square miles, with a larger population than Cornish, has two towers: one 170' tower in the center of the town, one 144' tower, built to look like a fire watch tower, on a ridge. Cornish's 42 square miles present a lot more terrain, so more than two towers probably would be necessary. He did not see the need for new sites to give increased capacity in the near future, but there could be a wave another wave of capacity sites farther down the road.

Mr. Hildreth reviewed the FCC press release regarding the use of historic sites for towers introduced by Jim Brown at the May 23rd meeting. He felt it could not be applied to the Saint Gaudens site.

Mr. Hildreth restated RSA 362:6, passed in 1988, which he had included in his opening arguments: "The General Court declares it in the best interest of the people of NH to encourage the rapid development of the broadest range of quality telecommunications services to the public in an environment of free and open competition to further such interest in recognizing the State's fundamental preference for free competition for trade and industry the General Court establishes the policy of exempting the wireless communications industry from the PUC." the Federal Telecommunications Act (FTCA) echoes these statements, Mr. Hildreth continued, and he referred to US Cellular v. Dunbarton where the US Supreme court found that the FTCA promotes competition and higher quality of service.

VWS had come into the application process with a proposal for a 190' lattice style tower, Mr. Hildreth said. At the subsequent meetings, VWS had indicated that it could live with a 175' monopole. The proposed height of 155', Mr. Hildreth stated, was the lowest the tower could possible go. there will be an impact on Townhouse Road, and more towers could be needed in the future. Saying that side-by-side towers is bad planning, Mr. Hildreth suggested that the tower could be built with the possibility to expand as collocation would not be possible at 155' Mr. Hutchins had said that a collocation or two could be made a 145', but Mr. Hildreth doubted that a PCS provider could do so. Arguing that a lattice tower is a better option for this site, Mr. Hildreth said that lattice towers give more options for internet and e-services and can be expanded more easily. A monopole can only be expanded once with a phalange. He said that there are two sides to the visual impact argument between monopole and lattice construction.

Mr. Hildreth reread sections of Mark Hutchins report: 1) data proves that there is a reasonable need for this site; 2) at 175' collocation is reasonable; 3) visual impact is mitigated by the ridge behind the tower; 4) continuous service along major roads today is taken for granted – inbuilding service is a newer expectation; the town should look to providing better coverage on its principle roads.

As for the impact on property values, Mr. Hildreth said that if there is now impact at 190', it follows that there would be no impact at 155'.

VWS had looked at three sites north and three sites south of the proposed site per the request of the Zoning Board. Those reports had been provided by Mercy LuHanga to Mark Hutchins. The site in the Town Forest is covered by a conservation easement, the owners of the other sites south are not interested. Mr. Hildreth said that he would like Ms. LuHanga to present the sites north of the proposed sites.

Mr. Hildreth said that he planned to leave his arguments to written submissions barring any questions from the Board. The case, Mr. Hildreth said was ready for approval in its modified fashion.

Mr. Hutchins said that he felt VWS' analysis of the sites was good and that the sites to the south did not provide the desired coverage. The Dingleton Hill ridge becomes an issue with the signal from the southern sites even at 175'. Mr. Hutchins said that once the signal clears the adjacent ridge, the proposed site was a good one because Townhouse road runs in a way favorable to the signal running down Townhouse Road. Caroline Storrs mentioned that there is coverage at the school on Townhouse Road. Mr. Hildreth noted that there was no Verizon Wireless coverage.

Mr. Hutchins continued to discuss the alternate sites as requested by the Board. The Platt Road site, number six, did not provide good coverage on Townhouse Road, and interference from the South Plainfield tower would be difficult to control. Of the three alternate locations to the north, site number four, on Dingleton Hill Road, looked the most promising; however, that interference from the South Plainfield tower would also be a problem at that site. Mr. Hutchins also did not know if that site was available or accessible. Site number five was northeast of the proposed location and gave no coverage to the west. Other analyses of the proposed site gave the following results: at eighty-five feet, there is essentially no coverage; at 150' coverage in Cornish, on 12-A and Townhouse, road would be acceptable, but more sites may be needed to cover the eastern section of Townhouse Road and beyond. Mr. Hutchins explained his analysis of how the signal is degraded as the height went down.

Mr. Chichakly asked Mr. Hutchins what the impact of lowering the height of the proposed tower to 150' would be on eventually covering NH Route 120. Mr. Hutchins said that it would be tougher to cover Route 120 with towers. He surmised that a site would be needed at the intersection of Route 120 and Townhouse Road.

Mercy LuHanga reviewed her analysis of the alternate sites. The most promising site, site number four, did give the problem of interference from the Plainfield South tower. At the proposed site, in order to compensate for future coverage, Ms. LuHanga suggested that a 150' monopole be built with a phalange. A lattice style construction does allow for more flexibility in adding height and/or users.

Jim Brown asked how much of the view from Mill Village of the tower at 190' would disappear at 150'. Both representatives of Verizon Wireless and Mr. Hutchins said that it would be very difficult to say. Mr. Chichakly asked Mr. Hildreth how wide

that top of the tower would be with antennas. Mr. Hildreth said that the panel array would be twelve feet wide and five feet tall.

Mr. Chichakly looked to the Board for any questions. As there were none, the hearing was opened to the public.

Public Discussion

Merilynn Bourne suggested that the Board examine the cover page of the photo simulations to get a better idea of the impact lowering the height of the tower to 150' would give. She also wanted the Board to see what three collocations on a lattice-style tower would look like two thousand feet away.

Joan Littlefield asked where the location number four was. Mr. Chichakly told her that it was at the top of Dingleton Hill.

Mara Sabinson said that Mill Village contained four to six 18th century houses and two mid 19th century houses. The proposed tower would give ramifications to the historical area. At the first meeting regarding this application the only coverage discussed had been for Interstate 91 in Vermont, Ms. Sabinson continued, and NH Route 120 would not be helped at all. Mr. Sabinson said that it seemed the height could be increased at a later date, whatever height might be approved for this application. Karim Chichakly said that an applicant could ask to increase the height of an existing tower, but there was no guarantee of approval. An applicant could come in with a height increase as an alternative to the construction of a new tower. Ms. Sabinson asked if there would be interference with covered houses. Karim Chichakly said that the frequency was different, and Mr. Hutchins agreed.

Dillon Gallagher pointed out that Mr. Hutchins had stated at the previous meeting that the proposed site would not contain microwave antennas. The application submitted by Verizon Wireless included microwave antennas. Mr. Gallagher asked how the Board could approve the application without knowing how many collocations or whether the tower would have a light. Caroline Storrs said that the FAA had said that there would be no light. Mr. Hildreth replied that he had noticed that the application included microwave antennas. He deferred to Chuck Webberly, who said that a pizza box sized microwave antenna was a possibility to serve as back up. Todd White explained the difference between dish microwaves and 'pizza box' microwaves, which are smaller.

Mr. Hildreth said that at this point he did not know how many collocations might be located on the tower.

Jim Liggett asked about the difference in diameter between a lattice and monopole construction. Todd White said that a monopole had a fifty-four inch base while a lattice tower's legs were eighteen feet apart. For a 150' tower, at the top a monopole would be 36"-40" in diameter, and a lattice would be four to five feet across. The panel arrays, which are the same size for both types of construction, are closer to the face of the tower on a lattice.

Bill Gallagher said that although Mr. Hildreth had cited Governor Lynch's goal of one hundred percent coverage, he did not think that governor Lynch would want the Town's Ordinance violated. This tower, Mr. Gallagher added would not give one hundred percent coverage. Regarding the discussion of motorists and roads, Mr. Gallagher cited a questionnaire given by Senator Doyle in Vermont where 85% of

respondents said that no one should have a cell phone in their car. In Massachusetts, Mr. Gallagher said, it is illegal to drive and use a cell phone. In addition, one hundred scientists and doctors affiliated with BU and Harvard medical schools have said that telecommunications facilities do create a health risk, and Mr. Gallagher wished that one of those people could have been an expert for the Board. The pictures from the balloon test did not give an actual representation of the actual scene. The proposal violated the Cornish Art Colony; Mr. Gallagher said that Augustus Saint-Gaudens and Maxfield Parrish would be rolling over in their graves right now. Mr. Gallagher hoped that Board would take the concerns expressed at these meeting into consideration and deny the application.

Dr. Littlefield asked if a monopole needed guy wires. Mr. Hildreth said that guy wires were not necessary in a monopole construction.

Dr. Haseman asked if abutters did not have a right to have the tower fall on their property and wondered what the collapse characteristics of a monopole would be. Mr. Hildreth said that if a monopole construction was required, a letter regarding collapse characteristics would be submitted to the Board. He was not aware of any historical numbers that could speak to failure rates.

Bill Gallagher asked if there had been a private meeting. Mr. Brown said that he had met with Mr. Hildreth, Ms. LuHanga, and Mr. Hutchins (by phone) to look at alternate sites. Dillon Gallagher said that there were no minutes to that meeting. Jim Brown said that the sole purpose of the meeting had been to discuss alternate sites. Ms. Storrs said that the meeting had been discussed at the May 23rd meeting.

Closed Discussion

Karim Chichakly stated that the Board was considering a Special Exception and a Variance. A Special Exception is a permitted use that is turned down by the Selectmen. If all the conditions are met, the Special Exception will be permitted by the Zoning Board. The Variance is an exception to the Ordinance, and Mr. Chichakly asked the Board to review the applicable sections in the Ordinance.

The Conditions and Criteria for granting a Special Exception were read aloud (Article X.F.1-3). Jason Bourne noted X.F.1.d)2: the character of the area shall not be adversely affected. He was concerned with the impact of the tower on the uninterrupted ridgeline of the tower. This would change the rural character of the surrounding area. Jim Brown asked the question, can you have a cell tower anywhere in Cornish that won't affect the rural nature of the Town. Since he didn't think you could, just given what a cell tower was, he did not think that that could be the test. Jason Bourne said that there are degrees of impact and suggested stealth construction. The proposed tower, Mr. Bourne continued, would significantly change the view from that stretch of Townhouse Road.

Bill Balch asked what height the Board was discussing – 150' or 190'. Mr. Brown said that he thought the difference from 190' to 150' would make significant difference in the visibility of the tower. Caroline Storrs said that the use is permitted; it is part of the ordinance and, like an auto repair garage, for example, must be permitted if the conditions are met even if it might not fit in with the character of the area.

Karim Chichakly asked Mark Hutchins if the five feet above the tree line height limit is reasonable. Mr. Hutchins said that he did not think the limit was realistic; he

knew of only two towers in Vermont that were within the trees, and those towers covered a small area. As a general rule, Mr. Hutchins said, ten to fifteen feet above the tree line is a minimum.

Jim Brown said that it was necessary to take into account the fact that cell towers are everywhere. The question to be asked, Mr. Brown continued, was what area was adversely affected: Cornish, Mill Village, or something in between. Mr. Bourne said that he read the Ordinance to mean the area surrounding the site. Karim Chichakly agreed. Mr. Bourne continued, and said that Mill Village was a particularly quaint and rural setting, and that the proposed tower would jump out from the ridge. The areas from which the proposed facility might be seen were discussed: Mill Village, Sunset Strip, Route 12-A to the Chase House. Bill Balch said that the tower at 155' would be less noticeable at these sites.

Karim Chichakly asked the Board regarding the offer to bring the height down to 155'. Bill Balch pointed out that at that height collocation would be difficult. He added that it was to the Town's advantage to have more collocation and fewer towers. Jason Bourne replied that while that was true for PCS, Cell band could go down to 100'. Jim Brown said that the question was how soon collocations would come. If it would be a few years before any, then for five to ten years the Town could have a shorter tower. Caroline Storrs added that the technology could change.

Karim Chichakly asked the Board about the proposed location. Jim Brown asked if 150' was the total height or the center line. Mercy LuHanga said that the total height would be 155'. Jason Bourne said that the alternate sites did not seem suitable. Bill Balch asked if any of the alternate sites in the analysis were available. Karim Chichakly said that the one promising site had been turned down. Caroline Storrs said that she had seen at the site visit that there was no way to go up the hill while accessing the site through the Jones property.

The Board discussed the possibility of future towers. Jim Brown suggested that the proposed site, if approved, could only be expanded in the event plans were received to put in more service on Route 120. The Board was not in accord regarding the suggestion. Jason Bourne said that he was in favor of more and smaller, hidden towers. Jim Brown said that due to the nature of Cornish's topography, towers will still be high: someone will see it somewhere. Bill Balch said that without seeing the tower, there is no service. Jason Bourne said that the Board had to strike a balance between collocation and rural quality.

The Board discussed the possible design of the proposed tower. Mr. Brown said that he agreed that a tree-style of tower at 155' would draw more attention rather than less. He asked Mr. Hutchins what he thought about paint. Mr. Hutchins said that paint reflects. Galvanized steel reflects at first, but will eventually dull. Mr. White (construction manager) said that the rate at which galvanized steel will dull is site specific to each tower. Mr. Brown asked what color the antennas would be. Mr. White said that the antennas would be flat gray plastic.

Caroline Storrs said that an abutter had been concerned that any clearcutting on the hill would increase the visual impact of the tower. Jason Bourne questioned whether a condition could be put on the land not leased by Verizon Wireless.

Bruce Tracy asked by how many feet a monopole could be increased. Mr. White said that a monopole could be increased once by twenty feet. The Board discussed the visual impact of a lattice versus a monopole construction. Mr. Hutchins said that he could see Mr. Hildreth's side of the argument; he also added that much depends on what goes on the tower. Bill Balch said that he preferred the flexibility in a lattice tower. Caroline Storrs said that she was more worried about the impact on the neighborhood than about flexibility.

The Board discussed possible conditions to a special exception:

1. No tree clearing within a 100' buffer around the compound.
2. No lighting unless ordered by the FAA
3. No dish microwaves without coming back to the Zoning Board.
4. Site Plan Review would be sufficient for collocation below the height of the tower.
5. Posting of a bond, subject to review, for removal.
6. A letter re: collapse characteristics.

The Board then discussed whether there was a significant coverage gap and the possibility of a smaller tower to cover Route 12-A. Mercy LuHanga said that there would be a problem with interference from the Plainfield South tower. Mr. Hutchins referred to this as pilot pollution. Jason Bourne said that he did not think that Route 12-A presented a large enough area to create a significant gap. Mark Hutchins said that unlike an AM radio, which will pick up a signal after it is dropped, once a call is dropped, it's off. Existing towers, including those in Plainfield and on Whaleback, and their coverage was discussed. Ms. LuHanga said that interference was terrain dependent, and sometimes towers that are closer together will not interfere with one another if the terrain is amenable.

Jim Brown said that the Board had received enough data, input, and studies to make its decision. Bill Balch pointed out that meetings where public comment is not taken are still open to the public. Caroline Storrs made a motion to table the meeting until June 20th at 7:30 p.m. at the Cornish Elementary School. Bill Balch seconded the motion, and the vote of the Board was in the affirmative, 5-0. The meeting was adjourned at 10:50 p.m.

Respectfully submitted,
Heidi M. Jaarsma

TOWN OF CORNISH, NH
ZONING BOARD OF ADJUSTMENT
CASE 06-01
MAY 23, 2006

Members Present

voting: Karim Chichakly, Jason Bourne, Jim Brown, Caroline Storrs, and Bill Balch
non-voting: Dale Rook and Bruce Tracy

Representing Verizon Wireless: Tom Hildreth and Jeremy Walker of McLane, Graf, Raulerson & Middleton, Mercy LuHanga, Radio Frequency (RF) Engineer, and Todd White, Construction Manager.

Also in attendance: Robert & Mariet Jaarsma, Maureen Walsh, Karen Gillock, Helen Lovell, Jan Timmons, Caroline Reed, John Gregg (*Valley News*), Janice Orion, Jan Johnson, Don Snowden, Patrick & Bernadette Clancy, Mara Sabinson, Paul Toms, Dean Zoerheide, James Liggett, Diane Miller-Liggett, Tom & Jayne Caselli, Suzanne & David Haseman, Parviz Orogi, Leo Maslan, John Hammond, Richard Proulx, Brent Edgerton, Len Rudolf, Joan & Jim Littlefield, Sally Wellborn, Bill Gallagher, John Scott, Doug & Kate Freeland, Steve Peters, Grace Peters, Bonnie & Daniel Kebalka, Larry Dingee, Marie DeRushia, Dillon Gallagher, Merilynn Bourne, Joanna Sharf, Mariann Thompson, Morgan Thompson, William Palmer, and Heidi Jaarsma (recording secretary).

The meeting was held at the Cornish Elementary School and was called to order by Karim Chichakly at 7:45 p.m.

Case 06-01: Verizon Wireless (applicant) has requested a Special Exception concerning Article IV Section 4.1 to the zoning ordinance regarding the applicant's request to construct a wireless communications facility including a 190' lattice type tower. Applicant also requests two variances concerning Articles V and VI-A, Section D.2 & C4a.1. Applicant is requesting a variance to the height regulations and a variance to the requirements of setback. Applicant proposes the construction of the tower at 880 Townhouse Road, Tax Map 2, Lot 20E.

Closed Discussion:

Caroline Storrs introduced into the record letters from David and Susan Haseman; a letter and photos from Jan Timmons; and a letter from James & Diane Liggett. Karim Chichakly asked that Linda Hammond's opposition to the application be put into the record per her phone request. Merilynn Bourne presented to the Board a letter from Gary Roberge, the CEO of Avitar, regarding the impact of a tower on view assessments. Mr. Chichakly read the letter, on file, aloud. In short, the letter stated that each case must be treated individually. In cases where the tower is the focal point of a pristine or mountain view, there could be some degree of impact on the view assessment.

Tom Hildreth introduced into the record a flier that had been circulated in Cornish. The pictures of towers shown on the flier were inaccurate: no microwave dishes were to be on the tower. He responded to the text by saying that it was an over the top overstatement. He addressed several issues raised in the flier. He spoke against character assassination, deception, and the use of fear as a motivator. He objected strongly to any efforts to impugn or malign the character of Mr. Jones or any of the other participants in this process.

Mr. Hildreth introduced into the record property records of homes with potential views of the proposed tower and property records of homes that do have a view as part of their assessment.

As he was required to raise the issue, Mr. Hildreth said, he suggested that Jason Bourne recuse himself from the hearing. Merilynn Bourne, Jason Bourne's mother, had made her opposition to the proposal clear through a letter to the Board. As a Selectwoman, Ms. Bourne's contact with Avitar had been clearly improper, according to Mr. Hildreth. While he had no desire to impugn Mr. Bourne's objectivity, he felt that because of Ms. Bourne's role in Town and opposition to the project he had to raise his opposition. The decision was up to the Board.

Karim Chichakly asked Jason Bourne if he was impartial. Mr. Bourne said that, yes, he was impartial.

Mr. Hildreth continued that he was applying for a Special Exception and a dimensional Variance. His argument, stated earlier, that the 300' ridge behind the proposed location could be used as the tallest natural feature by which the height requirement was gauged, was not as far-fetched or outlandish as some in the audience may have thought. No language regarding proximity exists within the Ordinance. Regarding setback, Mr. Hildreth introduced into the record a letter from a tower manufacturer regarding the collapse characteristics of the proposed tower-type. This tower would have a pivot point half-way up its height. Since each tower is individually designed, Mr. Hildreth offered to have a letter from the manufacturer of this proposed tower submit a similar letter to the Board if that were to be a condition put upon approval of the proposal.

Addressing the letter from Gary Roberge of Avitar, Mr. Hildreth expressed his frustration with its equivocation. Without a chance to question Mr. Roberge, Mr. Hildreth referenced studies re: property values already submitted to the Board. He underscored that no sales data prove impact. Mr. Roberge, he added, was the first person he knew of who had stated that property assessments could be impacted. Mr. Hildreth added that there is no such thing as a view tax. He also introduced a study by ATC Realty. He referenced the tax cards he had introduced into the record. In particular one card showed a view of Mt. Ascutney, which Mr. Hildreth said has a 'tower farm' on its ridge.

Jim Brown had asked Mr. Hildreth to discuss US Cellular v. the Town of Hopkinton. Mr. Hildreth summarized the case. Hopkinton had an overlay district where towers were authorized on any town-owned land of an elevation of over 750' unless that land possessed historical significance. Outside that district towers could be authorized with extra showings. The proposed US Cellular tower was outside the Hopkinton overlay district, and the proposed coverage was for Concord, not Hopkinton. When a tower was outside the overlay district, it must be shown that the tower is in the public interest. The District Court upheld Hopkinton's denial. Mr. Hildreth pointed out differences he saw between the Hopkinton case and the proposal before this Board. The proposed Cornish tower is within a permissible district. US Cellular had found two adequate locations within the overlay district. Mr. Hildreth referred to a study introduced into the record on May 1st which showed a strong Cornish/Windsor connection. To say that Windsor coverage does not benefit Cornish, Mr. Hildreth continued, ignores the reality of daily life in Cornish. Mr. Hildreth added that the proposed Ascutney site provides coverage and vice versa. A map showing coverage of Cornish from the Ascutney tower was shown. Mr. Hildreth added that Mark Hutchins (RF engineer hired by the Town of Cornish) reported only on Cornish coverage.

Jim Brown asked Mr. Hildreth if the alternative sites suggested by the Board had been examined. Mr. Hildreth said that that information may not be available tonight.

Jason Bourne asked the Zoning Board to take a vote to decide if he should remain a voting member in the case. Jim Brown made a motion finding that Mr. Bourne had

no conflict of interest. Bill Balch seconded the motion, and the vote of the Board was 5-0 in the affirmative.

Karim Chichakly asked Mr. Hildreth if a site further north met the coverage requirements. Mr. Hildreth said that the search ring was north of the site. Mr. Chichakly said that he had meant further north than the search ring itself.

One issue that had come up, Jim Brown began, was the benefit to Cornish. The Courts are clear that towns cannot prohibit towers; however, there was some leeway. The Master Plan's expressed desire to maintain the rural character of Cornish does not hold water, Mr. Brown said as he made reference to a Massachusetts case. Mr. Brown continued by listing options available: 1) require Verizon to demonstrate whether other less obtrusive potential sites exist, such as one in the Town Forest; 2) explore other sites north of the proposed one; 3) define a 'significant coverage gap;' 4) find a site with a greater benefit to Cornish. Mr. Brown quoted from the Hopkinton case: 'Nothing in the telecommunications act requires a local Zoning Board to permit the construction of a tower in its community in order to serve neighboring jurisdictions.' Mr. Brown asked that Verizon show what is not covered by Windsor and Plainfield tower sites that will be covered by the proposed Cornish tower. An analysis done by Mr. Brown using coverage maps provided by Verizon and the 911 maps showed that sixty-five households would be served. He asked if sixty-five out of eight hundred households, 8-9%, covered a significant gap. Mr. Brown added that Mr. Chizmar's Route 12-A coverage gap covered twelve homes. The benefit received by Cornish from across the river is undeniable, Mr. Brown stated, and the 1996 Telecommunications act will not allow the Town of Cornish to keep Verizon out. In regard to the Hopkinton case, Mr. Brown said that he was thinking about two things:

1. The Board would have their RF engineer, Mark Hutchins, speak with Verizon's engineer, Mercy Luhonga, to see if there are other areas north of the search ring. Mr. Brown handed out a document outlining an FCC plan to co-locate towers on existing historic buildings and said that perhaps St. Gaudens could provide a site. He felt that there must be a site in this area that would improve coverage of gaps in Cornish.
2. The Board would ask Verizon to substantially reduce the size of the proposed tower. The height is not needed to get across the Connecticut River to cover I-91. The remaining coverage in Cornish would be provided by the second tower north of the search ring.

Mr. Brown said that he liked Mark Hutchins' idea of a monopole and that a tower at 100' at the Townhouse road location would provide the I-91 coverage. An extra thirty feet would provide opportunity for collocation, bringing the height of the Townhouse Road tower to 130'. Bruce Tracy said that he also liked the idea of a monopole, and Caroline Storrs said that reducing the height was worthwhile. Jason Bourne asked Mr. Brown if his proposal included looking at sites west of the Connecticut in Vermont. Mr. Brown said that the Hopkinton case could be used to argue against looking outside of Cornish for coverage in Cornish.

Karim Chichakly thanked Jim Brown for all the work he had done in his analysis. He hoped that the proposal responded to concerns that were mainly aesthetic. Regarding health concerns, Mr. Brown, reading from the 1996 telecommunications act, said that health concerns were not open for inquiry. Caroline Storrs said that

two issues had been addressed: 1) the need to explore the unique setting of the site; and, 2) is it reasonable to double the height allowed in the Ordinance.

Karim Chichakly asked that the Board make a finding as to whether the ridge behind the proposed site was the natural feature by which the height limit of the tower be measured. Caroline Storrs said that it was common sense to use a building or tree. If the mountainside is used, the point of reference is lost. Jim Brown said that photographs taken of the balloon test clearly show that the tower is not hidden by a 330' ridge. Jason Bourne made a motion that the ridgeline is not the standard by which the height is to be measured. Tom Hildreth said that he preferred to leave the ruling to the final decision so that he would not have to appeal an intermediate decision. Mr. Chichakly said that the Board had the power to make rulings on interpretations of the Zoning Ordinance. Tom Hildreth maintained that was only the case in an appeal of administrative decision; no agent had made a determination of that appeal. Mr. Hildreth said that he was afraid he would be forced to file a motion of rehearing. Caroline Storrs asked if the motion should be tabled. Jim Brown said that he did not think an interim appeal would be needed, that Mr. Hildreth could file an appeal if he wanted, and that it would not interrupt the process. Mr. Brown seconded the motion. Jason Bourne restated the motion as follows: In this case the tallest natural feature or manmade structure in the vicinity of the proposed tower is the surrounding tree canopy. Karim Chichakly said that he was looking for a procedural interpretation that was more general. Mr. Brown said that it would be hard to do other than to repeat the ordinance. Mr. Hildreth said that the ordinance should be changed to add proximal language. The vote of the Board was 5-0 in the affirmative.

Jason Bourne asked if any documentation supporting the claim of a coverage gap ruled out roaming coverage. Jim Brown said that the First Circuit Federal Court of Appeals had ruled in the Pelham Case that a carrier is entitled to cover its own gap and not have it filled by another carrier. The provision is for Personal Wireless Services, so competition is encouraged. Karim Chichakly added that there is no PCS coverage in that area, only cellular. Jim Brown added that Michael Fuerst, Town Counsel, had been very helpful.

Public Discussion:

Mara Sabinson said that citizens had taken pictures of the balloon test which showed the tower looking higher than Verizon's pictures. She wanted the Board to look at other photographs. She said that the locations chosen for the Line of Site studies brought Verizon's credibility into question for her. Mr. Chichakly said that the Board had requested the Line of Site locations. He added that the Board had pictures that had been sent by citizens and that most Board members had seen the balloon test.

David Haseman commented on the integrity of properties vis a vis abutters. He said that the statement regarding the fall zone was meaningless. If the engineer is wrong, abutters will suffer damage.

Joanna Sharf questioned whether Cornish actually wanted more coverage with regard to the Board's request for alternative sites. Mr. Chichakly said that a town cannot stop a tower, but can ask for improved benefit to the Town or for reduced visual impact. He added that covering more of Cornish with this tower would result in fewer towers later. Caroline Storrs referenced the Master Plan Survey where a

majority of respondents said that they would like more cellular phone coverage in Cornish. Jason Bourne added that Verizon did possess PCS license to provide service in this area.

Tom Caselli felt there were points for negotiation and suggested VWS provide DSL for everyone who had Verizon as a provider. Mr. Chichakly did say that towers are a permitted use; even if they were no, the tower could still go in. Bill Balch said that Verizon Wireless is not the same company the Verizon Telephone Company.

James Liggett said that he would like to see a list of a dozen potential co-lesers for the site.

Bonnie Kebalka asked about other proposed locations where there were fewer surrounding houses. Jim Brown said that the Town Forest and two locations on Root Hill Road, one belonging to Paul and Teresa Toms, the other to John Mahar, had been identified by Mark Hutchins. Mr. Brown underscored that he had not spoken to any of the owners, but had relayed the information to Mr. Hildreth.

Joan Littlefield asked what controls were placed on collocators. Mr. Chichakly said that the total output for all providers on a tower could not exceed Federal limits. Mrs. Littlefield then spoke to morality and ethics in regard to Mr. Hildreth's opening words. The call for morality and ethics went both ways. Mrs. Littlefield said that there has been an effort to disparage Dean Zoerheide. She said that she wanted to know whom on Dingleton Hill Verizon had visited. Karim Chichakly said that no testimony had been given which disparaged Mr. Zoerheide. Mrs. Littlefield said that someone with an interest in the project was doing this privately and that those with an interest should play the game fairly too.

Sally Wellborn asked the Board why it has decided that it cannot say no to Verizon and referred to the requirements for a Special Exception and Variance. Mrs. Storrs said that the Board was still fact finding and had not gotten to that discussion yet.

Brian Edgerton asked whether a tower could go up if no one was willing to put one on their property. Karim Chichakly said that a property owner had to be willing to do it. Mr. Edgerton wondered if Cornish could make payment to a prospective lessor in lieu of construction of a tower.

Robert Jaarsma said that it could be beneficial to have the tower in the Town Forest so that the money could go to the town. Mr. Jaarsma also asked if the height could go down to 130' given the higher frequency required for PCS. Mr. Brown said that coverage across the river would be sufficient at 130'.

Joanna Sharf asked if the Town needed to take the FCC requirement of a specific coverage gap into consideration when considering the granting of a Special Exception and a Variance. Jim Brown said that the answer was yes, but the Federal law is very preemptive of local zoning laws when it comes to cell towers. He referred to a First Circuit case involving Plainville, Massachusetts, where zoning prohibited towers, and the court essentially said that the tower must go in. Mr. Chichakly said that the Board was looking at other alternative sites that would meet the requirements.

Reigh Sweetser asked if the Town was obliged to have one tower or would more be coming. Karim Chichakly said that the issue was one of coverage. A plan was needed for covering the whole town, the question was how many and how to mitigate their impact.

David Haseman said that lower towers within the appropriate setback would be more appropriate. He referred to a bridge, the Galloping Gurney, guaranteed not to fall down, which did collapse. Caroline Storrs said that the Zoning Ordinance does encourage consolidation of towers.

Paul Toms said that he had moved to Cornish because it was a beautiful place. He said he had thought that there was a nice place to put a cell tower on his property, but that he couldn't bear to do it unless it was totally inconspicuous. He added that the Verizon should cover as many homes as possible while impacting a community as little as possible. His Verizon Wireless phone works fine until he gets to Plainfield. He said that the Board had the power in the case that the application was accepted to place conditions to make the tower fit in as well as possible.

Tom Caselli said that the real coverage gap was on NH Route 120.

Karen Gillock said that Verizon did not seem concerned whether households really wanted more coverage. She stated that she and her neighbor, Helen Lovell, both within the proposed coverage zone, did not need it. Caroline Storrs said that the coverage maps had to look at potential households. Jason Bourne said that the licenses were granted geographically.

Leo Maslan said that he had purchased property on Sunset Strip because of the view. Ascutney with its towers was already there. Regardless of what Avitar said, he stated that there absolutely would be a negative impact on his property. He then asked Jim Brown if the preemptive rule applied to collocation. If not, Mr. Maslan said the height could be shortened. Jim Brown said that without the collocation space, there would be a right to build another tower. The Zoning Ordinance encourages collocation.

Jim Littlefield asked if a Variance were granted for a 190' tower, would each collocater have to apply for the variance. Karim Chichakly said that another variance would not be needed once the tower itself was constructed.

Robert Jaarsma asked if the granting of a 190' tower would create a precedent for more towers of similar height. Mr. Chichakly said that each application is treated on a case by case basis.

Bill Gallagher said that when he was a Selectman, the proposal had been rejected by the Selectboard because it was in violation of the Zoning Ordinance. He hoped that the Zoning Board would do the same. The language regarding towers in the Zoning Ordinance had been approved by the voters of the Town and the Board should reflect what the voters had asked the Town to do. He encouraged the Board to reject the proposal and let Verizon take it to court. He asked the Board to use the Ordinance given to them by the voters to protect the voters. Mr. Chichakly pointed out that the Board of Selectmen is required to reject an application for any use which requires a Special Exception in order to send it to the Zoning Board.

David Haseman asked if a collocation could increase the height of a tower. Mr. Chichakly said that another variance would be needed to increase the height.

Paul Toms suggested that the Board put a limit on the number of collocations allowed on the proposed tower.

Joan Littlefield asked if an emergency meeting could be called to raise standards for saying no to these applications. She asked if this was a form of eminent domain for a corporation to come into a town and override the will of that town. Karim Chichakly said that special meetings are possible, but that it would be a long process that would not stop this proposal. He added that this was not eminent domain. Jason Bourne said that the property owner needed to give permission.

Maureen Walsh asked if the Town would be required to put the tower on Town land if no private property owner was willing to lease land to Verizon. Mr. Chichakly said that the Town would not have to do so.

Merilynn Bourne spoke regarding Mr. Hildreth's assertion that her communication with Avitar had been inappropriate. She said that Selectboard members are the assessors in the Town and had a duty to ask for the letter. Ultimately, it is the Board of Selectmen who will receive requests for abatements. She was working within the purview of her position.

Paul Toms said that adequate information had to be supplied to the Zoning Board by the application in a timely manner. Mr. Chichakly said that Verizon Wireless had been very cooperative.

Mr. Chichakly asked Mr. Hildreth if he would respond to comments made tonight at the next meeting. He said that he would. Caroline Storrs made a motion to table the discussion until June 5th , 7:30 p.m., at the Cornish Elementary School. Jason Bourne seconded the motion, and the vote of the Board was in the affirmative, 5-0. The meeting was adjourned at 10:00 p.m.

Respectfully submitted,
Heidi Jaarsma

**TOWN OF CORNISH, NH
ZONING BOARD OF ADJUSTMENT
CASE 06-01
MAY 1, 2006**

Members Present

voting: Karim Chichakly, Jason Bourne, Jim Brown, Caroline Storrs, and Bill Balch
note: Bruce Tracy was unable to attend. Bill Balch will be a voting member for the remainder of the case.

Representing Verizon Wireless: Tom Hildreth and Robert Pierce of McLane, Graf, Raulerson & Middleton; Chuck Webberly, Site Acquisition Specialist; and, John Chizmar, Radio Frequency (RF) Engineer, Donald Haes, Health Physicist.

Also in attendance: Bill Gallagher, Sally Wellborn, Bob Bulkeley, Grace Bulkeley, Dean Zoerheide, Allie Hodgedon, Sally Mitchell, Bob Michal, Betty & Doug Miller, Joan & James Littlefield, Jeff McGlone, Jim Fitch, Don Snowden, John Hammond, Troy Simino, Dillon Gallagher, Keith Jones, Rob & Mariet Jaarsma; Robert Bramley, Real Estate Appraiser; and Michael Hutchins, Radio Frequency Engineer

The meeting was held at the Cornish Elementary School and was called to order by Karim Chichakly at 7:41 p.m.

Case 06-01: Verizon Wireless (applicant) has requested a Special Exception concerning Article IV Section 4.1 to the zoning ordinance regarding the applicant's request to construct a wireless communications facility including a 190' lattice type tower. Applicant also requests two variances concerning Articles V and VI-A, Section D.2 & C4a.1. Applicant is requesting a variance to the height regulations and a variance to the requirements of setback. Applicant proposes the construction of the tower at 880 Townhouse Road, Tax Map 2, Lot 20E.

Presentations by Independent Consultants to the Board

Karim Chichakly announced that testimony would be heard from experts hired by the Board and that Verizon would present new information.

Robert Bramley, a Certified General Appraiser in the state of New Hampshire, was retained by the Town of Cornish to research the impact of the proposed cellular tower on real estate values in Cornish. Jim Brown introduced Mr. Bramley and asked him if he was a qualified appraiser and if he had ever done any work for Verizon. Mr. Bramley replied that he was a qualified appraiser and that he had never done any work for Verizon.

Mr. Bramley summarized his report. He viewed two comparable tower sites in Enfield on Follensbee Road and Snow Mountain, traveled to Cornish, and looked at the photo simulations provided by Verizon from the 4/6 balloon test. At the Enfield locations, there had been no sales or resales close to the tower; however, new development in close proximity to the tower was larger and more expensive than the existing homes in the area. He had found one sale and resale of land in Candia, New Hampshire, near a large FAA tower which had sold and resold at the going rate of profit at the time of sale. Mr. Bramley concluded that there would be no diminution in surrounding property values because of the construction of a tower on Townhill (sic) Road in Cornish, NH.

Jim Brown asked Mr. Bramley why, in his opinion, was there no impact on property values. Market data, Mr. Bramley stated, suggests that people become used to towers. Existing towers are technological advances of society, and people become used to them the same way that people have become used to telephone poles. Mr. Bramley continued that towers provide tax revenue without adding to the tax burden of towns. In rural areas, the existence of a tower does not diminish property values. In urban areas, towers can add to property values.

Jim Brown asked Mr. Bramley if he was familiar with the view tax and if he felt a tower would impact an assessment for a view. Mr. Bramley was familiar with the general concept of a view tax; he felt that a tower would not have an impact on a view tax.

Mark Hutchins, a radio frequency engineer based out of Brattleboro, Vermont, retained by the town, summarized his report on the proposed tower. Mr. Hutchins gave an overview of various services and their wavelengths, PWS, CELL, and PCS. The last service in his list, PCS, 1900 dBm with a six-inch wave length is impacted tremendously - even pine needles can get in the way of PCS. This wavelength needs to be located high enough for visual site to receive a signal and above the trees to avoid spreading. However, a direct line of site is not needed due to defraction. The coverage given does take defraction into consideration. Mr. Hutchins referenced the 12-A corridor near Saint Gaudens as problematic since it is too far from the towers on Mt. Ascutney. Service to that area from the proposed tower would become a problem if that tower were much lower. Mr. Hutchins felt that it was realistic to expect collocations of between three and six, with at least three to four in a year or two. He added that wireless internet providers often lease space on towers.

If the tower were built on the ridge directly above the proposed site, Mr. Hutchins continued, its height could be cut in half. However, building on the ridge was not realistic, and the tower would be much more visible, albeit shorter, without the ridge behind it. Mr. Hutchins felt that there was a good expectation of coverage from the proposed tower on Townhouse Road to its junction with NH Route 120. Mr. Hutchins presented to the Board maps at three different coverage levels, including a lower level (-95dbm) not shown by Verizon where coverage could not be completely counted on but was there. To receive coverage in Southeast Cornish another tower would be necessary.

In conclusion, Mr. Hutchins said that a 190-foot tower was not necessary (he pointed out that he did his calculations at 187 feet since the center of radiation is halfway down a six-foot antenna). Mr. Hutchins said that a 175-foot tower would work almost as well and would allow for collocators taking up ten feet for each provider. At 122 feet the coverage began to fall apart. A monopole would also be possible at this location. Mr. Hutchins said that a lattice structure allowed for more mounting flexibility; however, a monopole is less obtrusive. As for stealth, Mr. Hutchins said that a tree construction would be more visually obtrusive at 175 feet. Trees work better at 97 to 100 feet. Mr. Hutchins closed by saying that the RF radiation would be well below FCC guidelines.

Jim Brown asked Mr. Hutchins if he had looked at alternative sites such as Root Hill Road, one mile south. Mr. Hutchins said that the current site was unique in the 'look' it had down Townhouse Road. Since radio waves vary inversely with the distance squared. Root Hill would not provide the coverage. Jason Bourne asked if other areas would be covered by a Root Hill Road location that would not be covered by the proposed location. No matter where the tower was put there would be coverage somewhere. Mr. Hutchins responded that area would be lost to the north and there would still be a problem in the southwest corner of town. The Dingleton Hill location did give good ground elevation.

Caroline Storrs questioned Robert Bramley. She said that she had a hard time seeing how property values would not be affected on an established house in a rural town like Cornish where the pastoral scenes are cherished. Robert Bramley referenced four \$500,000 houses in Enfield. Jim Brown pointed out that these houses had been built after construction of a tower; there is no data on sales of

existing homes. Mrs. Storrs said that five houses on Skyline Drive would have a dramatic view of the proposed tower and that she thought the values would change. Mr. Bramley said that no diminution is shown in market data. The view does change, but people become accustomed to it. He added that towers have no noise or movement. Jim Brown asked if there had been any abatements on properties with a view of the recently constructed tower in West Lebanon. Mr. Bramley said that there had been none.

Public Discussion

Karim Chichakly asked members of the public to direct questions to the Board.

Sally Wellborn said that Mr. Bramley had spoken of no abatements. She wanted to know if there was a view tax on any of the properties Mr. Bramley had examined. Dean Zoerheide said that the view tax is new to Cornish. An appraiser at Avitar had said that if a cell tower was in view, directly, the view tax would be eliminated. A property appraisal was different from a tax evaluation. He wanted to know if the Town would lose tax revenue because of the proposed tower. Karim Chichakly asked Mr. Bramley if he had any evidence regarding appraisals. Mr. Bramley could only attest to the Enfield Board of assessors who had not given any abatements. Tom Hildreth, for Verizon Wireless, gave an offer of proof said that he had spoken with the principle of Avitar and that no abatements have been made in the state because of a view of a cell tower. Mr. Zoerheide, he continued, had spoken with Shelby, a receptionist. At this point, Bill Gallagher asked if a lawyer were going to rebut every time a citizen spoke. Mr. Chichakly said that the meeting was open to everyone.

Robert Jaarsma asked why Verizon couldn't build the tower at 125 feet and give up space for collocations. Mr. Hutchins said that each time the tower came down in height, not as much acreage would be covered. His conclusions had been based on collocations with several providers and wireless internet services. He said that while Verizon will take up the top space on the tower, making space for collocations was in the financial interest of the company. Mr. Hutchins said that it was an important point for the Board to minimize tower proliferation.

Dillon Gallagher said that Michael Hutchins had referred to the ground level RF exposure as almost certainly to meet the FCC guidelines. He asked Mr. Hutchins why he was almost certain. Mr. Hutchins said that he did not know exactly what the providers would collocate on the proposed tower. The issue of exposure, he continued, was an occupational one, not an incidental one. Dillon Gallagher reiterated that Mr. Hutchins did not know for certain if the ground level exposure would be within FCC guidelines. Mr. Hutchins said that he could not be certain until Verizon had decided the channel locations. Mr. Chichakly asked Mr. Hutchins what authority controls these levels. Mr. Hutchins said that the FCC and Verizon Wireless must ensure that levels are within FCC guidelines. The FCC does measurements, but not often. Mr. Hutchins referenced the Vermont Public Radio tower on Mt. Mansfield which was out of compliance. A typical cell site, fully loaded, would be very low compared to what is allowed. Radio and television towers, Mr. Hutchins continued, tend to have much higher levels of microwave emissions. Jim Brown asked if Verizon was capable of measuring these levels. Mr. Hutchins said that they would be.

Dean Zoerheide said that for the record, he had spoken with Shelby, the receptionist, and had been put on the line with an appraiser. If a cell tower doesn't detract from a taxed view, Mr. Zoerheide asked, what does? He felt that the Town was not being served at this meeting.

Joan Littlefield asked, hypothetically, what would happen if the tower were allowed provided that radiation levels were constantly monitored under penalty of shutting the site down. Mr. Chichakly asked Mr. Hutchins if the site would be shut down if levels were above FCC limits. Mr. Hutchins said that the FCC would shut the site down. Bob Michael asked if the Town had the authority to require bi-annual recordings. Mr. Hutchins said that a town could make that request,; however, the FCC has an established process for declaratory ruling on such requirements and would likely say that the request was unreasonable. He recommended the Local Officials Guide on the FCC website as a resource. Mr. Hutchins felt that the applicant could certainly be asked to do measurements with each added location. Rooftop sites, he added, are of much greater concern for exposure.

Don Snowden asked if the proposed tower were compatible with GSM, a global telecommunications system. Mr. Hutchins said that yes, GSM and PCS are in the same frequency spectrum. Mr. Snowden asked if there was a provision to take the tower down if it became obsolete. Mr. Chichakly said that there was. This proposal, Mr. Snowden said, did not help the town at all; only two entities, the property owner and the company, stood to profit.

Bill Gallagher asked if the record would be kept open for thirty days. Mr. Chichakly said that that decision would be premature at this point.

John Hammond submitted a letter to the Board from a concerned citizen.

Dillon Gallagher said that satellite phones will be here soon. It wouldn't be long, Mr. Gallagher stated, before this process would be a waste of time. Mr. Hutchins said that Onstar, for example, uses GPS to locate cars, but communications are a cell system provided by Verizon. Regarding satellite systems, Mr. Hutchins continued, no model exists to show feasibility. More importantly, he continued, the FCC will not allow the consideration of the possibility of satellite service in these cases.

Mrs. Littlefield commended the Board for gathering this group of experts. She asked how the FCC regulates radio emissions from the tower and about putting restrictions on any passage of this application. She said that, regarding towers, she was more concerned with what she couldn't see than with what she could see. Mr. Chichakly reviewed the FCC procedure in such cases. Tom Hildreth said that no such measurement condition had been attached in the 300 cases he had been involved with. He stated that the levels would be a fraction of a percentage of permissible levels. Verizon wanted to work with host communities to find a way to live with the tower together. In field measurements taken in Hudson, NH, levels were lower than predicted. Mr. Hildreth was concerned with biannual measurements: Verizon has 24,000 sites and growing. They are constructed to the highest professional standards. When measurements have been done, this has been born out. Nothing prevents an independent party from making measurements, and the FCC would take action on that report. Mr. Hildreth stated that Chuck Webberly, the site acquisition specialist, had said that every time a

carrier was added, a measurement report could be made to the community. Verizon, Mr. Hildreth closed, has a huge self-interest in making sure that their sites pose a risk to no one. Workers on site are provided with protective gear and measurement devices to on-site workers, and a concrete shelter with a work desk inside for field technicians is also provided. The company does not take human health lightly. Mr. Hildreth deferred to Don Haes.

Mr. Haes explained that he is a certified health physicist with thirty years of experience in the field. Without an existing tower, Mr. Haes performs theoretical analyses of potential exposure. These analyses assume 100% capacity and assume that all providers are pointed in the same directions, and that the ground perfectly reflects the waves back up. His conclusion was that levels are less than two-tenths of one-percent of FCC guidelines. He did not look at any height other than 190 feet (a 187-foot center line). Providers, Mr. Haes continued, guard their licenses as a life or death matter. If a site is out of compliance the following could happen: 1) issuance of a cease and desist order; 2) imposing of very substantial fines; 3) removal of license (Sprint paid 14.5 billion for a license); 4) garnishment of profits; 5) confiscation of equipment. Usually his analyses are conservative. Mr. Haes asserted that only one out of every thousand of his calculations is lower than actual levels.

Karim Chichakly asked Mr. Haes if an FM station could broadcast from the proposed tower. Mr. Haes said that the station would have to get a license and file with the FCC.

Jason Bourne asked if there were a difference in emissions between PCS and Cell service. Mr. Haes replied that different frequencies interact with the body differently so the limits are different. For PCS the limit is 1,000 microwatts per centimeter squared; for Cell the limit is 600 microwatts per centimeter squared.. Panel antennas, as are proposed for this tower, are so directional that there is little downward projection.

John Hammond asked Mr. Haes if there were cellular towers where he lived. Mr. Haes said that the nearest cell tower from his home in Hudson is 3,796 feet away and has six carriers. Mr. Hammond asked Mr. Haes if he would be comfortable living within a quarter-mile of a cell tower. He said that he absolutely would.

Karen Gillock asked if it was true that other countries had much stricter limits. Mr. Haes said that FCC limits are fairly compatible with European standards. He added that at five hundred times below the limit, this site complied with the strictest standards world-wide. Ms. Gillock asked if it was illegal to oppose a tower if limits were found to be too high. Mr. Haes said that the 1996 Telecommunications Act only covers providers in compliance with the FCC,

James Littlefield why concrete bunkers were necessary if the exposure was five hundred times below the FCC limit. Mr. Haes said he did not think a bunker necessary. There is an umbrella effect that gives the base of the tower a much lower signal. Mr. Hutchins said that a concrete bunker can protect workers from ice falling off the tower.

Dean Zoerheide asked that the issue of lights be addressed. Bill Gallagher asked if there would be additional time to comment, and Sally Wellborn asked if the record

could be left open. Karim Chichakly said that the Board would consider it. Dillon Gallagher said that the public should have easy access to the record.

Tom Hildreth said that he had no objection to one more meeting cycle. He said that the results of the balloon test with photo simulations had been submitted. He also submitted a preliminary lighting report from a consulting firm. The FAA will not give an official analysis until the action has been approved. As a predictive analysis and as a general rule, structures under 200' do not require lighting, especially with a ridge behind the tower. Bill Gallagher said that there was really no answer. Karim Chichakly said that it looked like there wasn't. Mr. Hildreth also submitted documents referencing a substantial Cornish-Windsor connection for high school, health care, and work. Several studies regarding real estate appraisals were also submitted. Bill Gallagher said that he would like to see communication in writing from Avitar regarding the impact of the tower on the view tax.

Mr. Hildreth said that Verizon could live with a 175-foot monopole. The trade-offs with a monopole are less flexibility and mounting options. There are not as many places to attach wireless internet and mutual aid. Ms. Storrs asked if wireless internet and emergency services could not be placed on a monopole. Mr. Hildreth replied that before the pole is built those spaces must be planned for.

Jason Bourne asked how long it would take for full collocation capacity to be reached on the tower. Mr. Hildreth said four to six years in some cases. In New Hampshire there has not been that high a level of activity. Mr. Bourne asked if collocators could be lined up prior to the construction of the tower. Tom Hildreth said that a standard template could be used. Mr. Hutchins said that their was a concern of pinning down what the emergency service equipment would look like due to recent changes adding interoperability- their collocation structure would be hard to pin down on a monopole.

Mr. Hildreth responded to the comment that only Verizon Wireless and the property owner stood to gain. He said that any customer who takes advantage of Verizon Wireless Service, currently with over 200 million subscribers, stands to gain. As for the 125-foot height, Mr. Hildreth said that John Chizmar felt that was unacceptable. Verizon also does not use a -95 dBm strength because it cannot be counted on all the time: a life can depend on the quality and reliability of a network. Mr. Hildreth emphasized that the snapshots available from the balloon test and photo simulations only give a part of a larger vista in which the tower will become part of the landscape. He also underscored Mr. Bramley's conclusion that market data does not show a diminution of property values.

John Chizmar went over the search ring procedure where a tower could have been built at approximately 100 feet. The ridge, in the search ring, above the proposed site is not buildable. He concluded that Mr. Hutchins report was very thorough. This network, Mr. Chizmar said, is built for Verizon, not for other carriers.

Jason Bourne asked why Verizon was using PCS instead of Cell Service. Mr. Chizmar said that the PCS license was what was available. He defended the exclusion of the -95 dBm range because it was not reliable enough for Verizon's standards.

Mr. Chizmar said that Mr. Hutchins 10-meter terrain data shows more coverage on Townhouse road than Mr. Chizmar's own 30-meter terrain data. Mr. Chizmar stated that Mr. Hutchins data did show that a 175-foot height would work although there would be some signal loss on Route 12-A North. He showed the coverage maps at different tower heights. At 150 feet he stated that the coverage really was lost along 12-A and 91. Mr. Chichakly asked if the Plainfield tower would cover the northern part of 12-A. Mr. Chizmar said that terrain gets in the way. Jason Bourne did not see a significant improvement from 150 feet to 175 feet. Mr. Chizmar pointed out two places on the map where coverage was improved, 243 acres overall. Mrs. Storrs asked if Verizon did look south of Townhouse Road during the search process. She felt there would be less residential impact on homes. Mr. Chizmar said that the terrain gets in the way. Mr. Hutchins looked at a map and agreed that the terrain was much lower farther south.

Dean Zoerheide questioned Mr. Hildreth's earlier argument that the ridge behind the proposed tower site could be interpreted as the nearest manmade or natural feature. Mr. Hildreth said that was not a primary argument. Don Snowden asked if fencing would run along the road. He was concerned about wildlife corridors. Todd White said that the entry would be gated, but no fence would run along the road.

Caroline Storrs made a motion to table meeting until May 23rd, 2006, at 7 p.m. at the Cornish Elementary School. Jason Bourne seconded the motion, and the vote of the Board was 5-0 in the affirmative.

Respectfully submitted,
Heidi M. Jaarsma

TOWN OF CORNISH, NH
ZONING BOARD OF ADJUSTMENTS
April 3, 2006

Members Present

voting: Karim Chichakly, Jason Bourne, Jim Brown, Caroline Storrs, and Bruce Tracy

non-voting: Bill Balch and Dale Rook

Representing Verizon Wireless: Tom Hildreth and Robert Pierce of McLane, Graf, Raulerson & Middleton; Todd White, Construction Manager; Chuck Webberly, Site Acquisition Specialist; and, John Chizmar, Radio Frequency (RF) Engineer.

Also in attendance: Orville Fitch, Helen Lovell, Dean Zoerheide, Doug Miller, Jan Timmons, Mara Sabinson, Denis Demers, Judith Kaufman, Joan Littlefield, James Littlefield, Robert Bladen, Lorraine Wright, Paul Perkins, Beverly Duval, Bill Gallagher, Sally Wellborn, Jim Fitch, Judy Rook, Christine Heins, Larry Dingee, Keith Jones, Merilynn Bourne, John Hammond, Karen Gilleck, Gwyn Gallagher, Heather Gallagher, and Heidi Jaarsma (recording secretary).

The meeting was held at the Cornish Elementary School and was called to order at 7:37 p.m.

Case 06-01: Verizon Wireless (applicant) has requested a Special Exception concerning Article IV Section 4.1 to the zoning ordinance regarding the applicant's request to construct a wireless communications facility including a 190' lattice type tower. Applicant also requests two variances concerning Articles V and VI-A, Section D.2 & C4a.1. Applicant is requesting a variance to the height regulations and a variance to the requirements of setback. Applicant proposes the construction of the tower at 880 Townhouse Road, Tax Map 2, Lot 20E.

Background: Tom Hildreth, an attorney from Pierce of MacLane, Graf, Raulerson & Middleton, asked Mr. Chichakly to leave the discussion open after his presentation in order to answer questions from abutters and other members of the public. Mr. Chichakly agreed.

Mr. Hildreth began his presentation of the proposal. In opening, Mr. Hildreth spoke of a 170 foot lattice tower in the historic district of his home in Hollis, NH: this project had been an upgrade of an existing tower/antenna in Hollis. The Cornish Zoning Ordinance, he went on, does have a provision which requires the use of existing structures where available; however, Mr. Hildreth said that Verizon Wireless had conducted a search of existing facilities. No substantial built environment was found, i.e. no existing structures were found to accommodate a cellular facility. Mr. Hildreth spoke of his experience representing the wireless communications industry throughout the State of New Hampshire. He listed several towns having cellular facilities which he felt to be similar in character to Cornish – Peterborough, Jackson. As of late, Verizon Wireless has been expanding service in towns surrounding Cornish: a co-location on a steeple in Hanover, some on existing towers, some have been new towers. Upon looking at the network in the area, Verizon found the location at 880 Townhouse Road to fill in gaps in the network.

Mr. Hildreth gave a brief overview of Verizon Wireless, the second largest provider of cellular service in the country with over fifty million subscribers. Subscribers to wireless services have skyrocketed from zero in 1985 to 45 million in 1995 to 80 million in 2000 to 180 million in 2005. More person to person communications were made via wireless networks than on land lines in 2005. Verizon has over 24,000 installations nationwide – Mr. Hildreth said that Verizon has locations in topographies not dissimilar to the proposed Cornish location.

For the Cornish proposal, specifically, the application is for a 190 foot lattice style tower located within a 75x75 foot leased area within the 80-acres owned by Keith Jones. The facility will have a base elevation of 818 feet. The highest point on the Jones property is 1,168 feet, and the tower will be West and South facing. A hill rises 358' to the Northeast of the tower, so coverage will not be improved east of the facility. Mr. Hildreth referred to the Cornish Zoning Ordinance which allows for the height of a tower to be up to five feet above the tallest manmade or natural structure in the immediate area and suggested that the natural structure of the land itself rising about 350 feet above the tower could fit that requirement. The compound would be secured by a chain link fence topped by three strands of barbed wire with secured access to the site. A 12x30 foot equipment shelter covered with a pebbled aggregate exterior would contain the radios and back-up power sources – the 'brains' of the site.

Under the Cornish Zoning Ordinance, Mr. Hildreth continued, telecommunications towers are allowed by special exception. The ordinance mandates that a tower be set back from the property lines 125% of the height of the structure, which in this case is 237.5 feet. This proposed facility is 111' and 120' from two boundary lines. He said that the topographic information will show that the land naturally plateaus at the proposed site. The access will be from an existing woods road, minimizing the need for tree cutting. Internal discussions had taken place about building a shorter structure at a higher altitude, but the terrain proved effectively impractical. He stated that the overall impact between a shorter tower at a higher altitude and the proposal before the board was not substantially different. The proposed compound was at the most topographically logical site, Mr. Hildreth continued, even though that site did not meet the setback requirements. The property could accommodate the facility elsewhere where the setbacks were met, but Mr. Hildreth argued that this site would create the least disruption of terrain.

Mr. Hildreth made reference to an affidavit given by John Chizmar, radio frequency engineer, which included an inventory and description of other tower structures within a twenty mile radius. Of the forty-eight listed, fourteen were taller than 180 feet. Mr. Hildreth summarized the proposal. The facility would be unmanned, with maintenance checks generating the only traffic. There would be no water to the facility, and it would be tied into the local grid and telephone network. He displayed several plans showing the location of the compound and a site plan of the compound which rises 430' from the elevation at the entrance point along the existing woods road on Townhouse Road. A plan was shown giving a horizontal perspective of the tower. It was estimated that the tree canopy would be eighty feet. The antenna will have a twelve panel array providing a 360 degree arc.

Dean Zoerheide asked if there would be lights on the tower. Mr. Hildreth replied that the decision was yet to be made and that the FAA had the final say. Gauging from his experience in similar settings, he thought no lights would be necessary.

Several more drawings showing technical details of the foundation and grounding of the tower, building, and fence were also displayed. The site would not be lit except for a motion detector bulb outside the equipment door.

Mr. Hildreth then displayed four line of site projections from (1) the bottom of Dingleton Hill (2) the Cornish Town Office (3) Mill Village (4) the Cornish Windsor Bridge. The projections showed that the tower would not be visible from those four vantage points. A balloon test will be done in the coming weeks.

The facility itself would cost between \$750,000 and \$1,000,000. Mr. Hildreth said these facilities are never built with the intention of harming the host community. He encouraged those present to look at various facilities and to view the balloon test. The towers on Mt. Ascutney, Mr. Hildreth maintained, have become part of the landscape and have not detracted from the viewshed. He cited four studies that found these facilities do not impact property values when appropriately located. In addition reference was made to RSA 362:6, passed in 1988, which exempts wireless communications facilities from the jurisdiction of the Public Utilities Committee, "The General Court declares it in the best interest of the people of NH to encourage the rapid development of the broadest range of quality telecommunications services to the public in an environment of free and open competition to further such interest in recognizing the State's fundamental

preference for free competition for trade and industry the General Court establishes the policy of exempting the wireless communications industry from the PUC.”

In closing his preliminary presentation, Mr. Hildreth said that in doing research on Cornish, he discovered that it was known as ‘Mast Camp’ because of the role that the Town played in shipbuilding. Tall trees were sent down the river for use in constructing boats. Mr. Hildreth made a connection between the Town’s history of tall structures serving utility functions then and today.

Mr. Hildreth deferred to John Chizmar, radio frequency engineer. Mr. Chizmar explained cell frequencies operate at 855 megahertz, a fourteen-inch band. In 1996 PCS licenses had been auctioned at 1900 megahertz, a six-inch band. He described the licenses as puzzle pieces of the United States. Verizon did not have any license to operate in Sullivan County until it acquired a PCS license from Devon. The buildout began along the I-89 corridor from Georges Mills to Lebanon/Hanover. The next stage of the buildout is up the I-91 corridor in Vermont. There are existing towers up and available, but none in the area that will provide the desired coverage. Verizon also plans to collocate on several towers in the area. The coverage for the PCS band is very terrain dependent.

Mr. Chizmar then presented a maps showing existing coverage and expected coverage in Southwest Cornish and I-91 in Vermont. The tower on Ascutney cannot cover directly below the mountain. This tower will fill that coverage gap. He said that the next stage would be to go from the Claremont site up NH Route 120. This proposal expands the overall footprint in the southern and western portion of the town. Mr. Chizmar said that the tower would probably not be visible within the Town but up the I-91 corridor.

Mr. Hildreth underscored several points. PCS/digital service needs more facilities closer together because of the six-inch bandwidth. He directed those present to the coverage locator on the Verizon Wireless website. He showed his results from the website – Cornish showed a wide gap in coverage. Mr. Hildreth also added that 100,000 miles of terrain were covered every month to ensure that projected coverage matched the coverage on the ground. A balloon test was proposed for Tuesday April 11th or Saturday April 15th. The balloon would be red, five and a half feet wide and would be flown at a height of 190 feet. Photo simulations could be done after the test. Merilynn Bourne asked if two balloon tests were possible. She was told that balloon tests were not perfect; the dates were still up for discussion. A site visit was also suggested to the ZBA. Mr. Jones said that he did not mind people visiting the site but asked that he be contacted beforehand.

Public Discussion: Mr. Chichakly opened the discussion to the public.

Merilynn Bourne asked that the ZBA be in Mill Village during the balloon test. She also stated that she believed Verizon would like to allow other providers to collocate on the tower which would provide a revenue stream for the company and that her understanding was that each carrier took ten feet of space on a tower. She felt that the added height for four to six extra carriers had a significant impact on the viewshed in a rural community. She also asked if there was a way – stealth- to hide the tower. Mr. Hildreth answered that the tower would be galvanized steel and gray. He added that they have done some pine tress, but that in his opinion tree-shaped towers actually draw attention. With the minimal built environment that

exists in Cornish, a collocation was not possible. Ms. Bourne asked why a monopole was not an option. Mr. Hildreth said that although a lattice may be a more industrial construction, it provided greater mounting flexibility and with three legs, a lattice tower could have less visual impact than a thicker monopole.

Mara Sabinson said that it seemed the advantage in coverage was on the Vermont side and asked why the tower was in New Hampshire. Mr. Hildreth said that there is some coverage from this tower in New Hampshire, and the majority of New Hampshire coverage comes from the tower in Ascutney. Mr. Chizmar said that the majority of terrain this tower hits is in Vermont, but it does expand into Western Cornish. Ms. Sabinson maintained that most of the expanded coverage seemed to be in Vermont.

Bill Gallagher asked how many more towers were planned in Cornish. Mr. Chizmar said that through 2007 no more towers were planned in Cornish.

Judy Rook asked what percentage of Cornish would benefit from the proposed tower. Mr. Hildreth said that it was a difficult question because Cornish was not a stationary item: Cornish was all the people here and all of their friends and neighbors. Cornish is the people moving about the terrain and where there is traffic they are served by it. Verizon is trying to cover the major traffic corridors.

Sally Wellborn pointed out that even though the company will fill coverage gaps for police, fire, and rescue, the argument is useless without coverage for the Eastern side of town. Covering Interstates 89 and 91 does not cover this gap.

Dean Zoerheide spoke of the 1996 telecommunications act. He stated that corporations had lobbied Congress and that the right to use potential health problems and microwave pollution as a reason for turning a tower down had been taken away. He asked Mr. Hildreth to speak to the 1996 law. Mr. Hildreth said that the rights were not entirely taken away. Telecommunications companies are required to comply with regulations set by the FCC. He made reference to an affidavit submitted with the application stating that the typical twelve-panel array operated at a fraction of one percent of the permissible levels of exposure. Mr. Zoerheide asked where the liability would lie if the emissions exceeded the FCC regulations. Mr. Hildreth said that the offending carrier would be shut down.

Karen Gilleck said that she had research that indicated a plethora of health problems. She said that studies showed cell sites were causing problems. She said that standards have been tightened. Mr. Hildreth said that the tower was within the FCC prescribed limits, and that testing in the field supports those limits. Mr. Chizmar said that the transmitter is powered at sixteen watts. He said that the limiting factor was the phone by the person's ear; every phone made had to meet a strict environmental standard.

Mara Sabinson asked if the addition of carriers would increase the height of the tower. Mr. Chizmar said that the power would be increased, but not the height. Mr. Hildreth said that an applicant for co-location would need to go through the Zoning Board.

Larry Dingee asked if the Town could collocate on the proposed tower. Mr. Hildreth said the Town could do that.

Heather Gallagher asked how this tower could benefit Cornish. Mr. Hildreth said that the town would receive tax dollars from the facility. He added that the Town would be offered free space on the facility, and that Cornish's citizens travel: nationwide, between 200,00 and 300,00 calls are made to 911 weekly. Ms. Gallagher replied that Cornish really would not get improved coverage from this tower. Mr. Chizmar said that portions of Cornish would be covered. Mr. Hildreth said that New Hampshire receives coverage from towers in Vermont, Vermont receives coverage from towers in New Hampshire.

Gwyn Gallagher asked how many property owners had been contacted and whether multiple towers of a shorter height would be possible. Mr. Webberly said that twenty-five property owners had been contacted, and his directive had been for one tower. Mr. Chizmar explained the search process. He was given a search area, but no property owners were interested so the search area was expanded. Mr. Hildreth questioned whether any tower in Cornish could be compliant. He pointed out that Cornish had a 35' height requirement and questioned which applied: the thirty-five foot requirement or five feet above the nearest natural or manmade feature. He said that no tower could meet the thirty-five foot requirement.

Dean Zoerheide said that he was offered \$1500 a month to put a tower on his property. He refused because he could not do that to his neighbors.

Heather Gallagher asked what the coverage would be at 85 feet. Mr. Chizmar said that there would be no coverage to the North or in Vermont.

There followed a discussion between several members of the Zoning Board and Keith Jones about the topography of the site. Keith Jones said that the area chosen for the site was open and somewhat flat. The hill behind it is very steep, like a cliff.

John Hammond asked what the coverage was like with forty-eight towers in the area. He asked if an area like Manchester had more towers than Cornish and the surrounding area. Mr. Chizmar said that the more people, the more towers. Mr. Hammond asked what would be necessary to get reception in Eastern Cornish. Mr. Chizmar said that at least two towers would be necessary.

Joan Littlefield asked why the highest point in Cornish had not been used. John Chizmar said that a search ring was designed to meet the ordinance. No landowners in the ring were interested, so the search had to go outside the ring. Mr. Chizmar explained the computer simulation that he uses to find his search area.

Judith Kaufman asked about the lifespan of a tower. Mr. Hildreth said that the land is leased for a finite term of years. The Zoning Ordinance requires that if the tower is not used for a certain number of days, it must come down. A bond would be posted to that effect.

Mara Sabinson said that the current switch of utility poles had not yet been cleaned up. Mr. Hildreth said that Verizon Wireless had nothing to do with the poles. Dale Rook said that the poles would be cleaned up.

Gwyn Gallagher asked what would happen if Verizon pulled out of the tower but a collocated carrier remained. Mr. Hildreth said that the remaining carrier would need to work out an agreement with the property owner.

Jan Timmons asked what the tax evaluation would be on the facility. Mr. Hildreth replied that the facility is usually assessed at the value of a typical home. Most of the money is in the equipment, which is not taxable.

Bill Gallagher asked when all of the planned collocated facilities and this tower, if it went through, would be turned on. Mr. Chizmar said that all would be turned on at the same time. Mr. Gallagher also stated that it seemed from the projected lines of site that the tower was obscured by trees. There was no easement on those trees, and if cut the tower would be visible. Mr. Hildreth said that the line of site projections reflected what was there today.

Heather Gallagher said that she found service to be sufficient on I-91.

Mara Sabinson said that she was not comfortable with Verizon's assertion that property values would not be impacted. Caroline Storrs said that the Town had a right to an independent review at the cost of the applicant. Ms. Sabinson urged the Board not to accept their data. Dean Zoerheide said that he had spoken to Avitar and was told that he could get an abatement on his view tax if the tower were visible. Mr. Hildreth said he did not know of any abatement in the two hundred towns he had worked in because of a visible tower. Judith Kaufman said that abatements could zero out any tax revenue from the facility.

Jim Fitch said that he would like an answer about lights on the tower at the next meeting.

Doug Miller said that he accepted cell towers as part of the landscape, but he was concerned that the primary benefit was to I-91. He encouraged studies to lessen the impact on the viewshed.

Joan Littlefield asked if Reed Hill in Plainfield had been considered. She also said she would like to hear about health concerns. Mr. Hildreth said that he would bring the author of the health report to the next meeting.

Mara Sabinson said that she would like to request that an independent party discuss health concerns. Mr. Chichakly said that the Board must bow to the FCC regulations.

There followed a discussion regarding the balloon test. Tuesday, April 11th, from 2:30 to 6:30 p.m. with the following day at the same time as a rain date was scheduled. Joan Littlefield asked that the notice be put in the paper for several days in a row. Caroline Storrs suggested a back-page transaction ad instead of the legals section. The Board asked that notice be put in the *Eagle Times* and *Valley News*.

Mr. Hildreth said that if the Board were to retain an independent radio frequency expert, he could suggest a Mr. Ivan Pjasik.

Bill Gallagher asked about coverage offered by other companies in the same location. Mr. Hildreth said that competition was legal. Mr. Chizmar said that a minimum footprint was required in the purchase of a license.

Mr. Chichakly closed the public discussion.

Closed Discussion: The Caroline Storrs said that she would like to hire independent experts in RF and property assessment. Jim Brown asked if an independent RF expert would be able to duplicate based on the data given. Mr. Chizmar said that he would have a model. Jim Brown said that he would like to see the coverage broken down decrementally. He would also like to see a map of coverage in just Cornish and a composite map of current coverage and expected coverage. Dale Rook said that the real problem in coverage was East Cornish. Mr. Chizmar said that if this application did not go through, they would be less inclined to do more towers in town. Ms. Storrs asked if Act 250 impacted the decision to have a tower here. Mr. Hildreth said that there is a fair representation of towers in Vermont.

Caroline Storrs made a motion to seek independent consultants for RF and property assessments. Jim Brown seconded the motion, and the vote of the Board was in the affirmative, 5-0. Jim Brown will serve as a contact person.

A site visit was scheduled for April 12th at 4:30 p.m. Caroline Storrs made a motion to table the discussion to May 1st, 2006, 7:30 p.m. at the Cornish Elementary School. Jim Brown seconded the motion, and the vote of the Board was in the affirmative, 5-0.

Other Business: The application for a Special Exception by Straightaway Auto was scheduled for the first Monday in June.

The meeting was adjourned at 10:30 p.m.

Respectfully submitted,
Heidi Jaarsma

**TOWN OF CORNISH, NH
ZONING BOARD OF ADJUSTMENTS
CASE 06-02
MARCH 6, 2006**

Members Present Karim Chichakly, Bill Balch, Jason Bourne, Caroline Storrs, and Bruce Tracy

Also in Attendance Charles Sullivan, Fred & Shirley Sullivan, and Wayne McCutcheon; Mary Decatur, Leo Maslan, Jon Mather, Jesse Tyler; and Heidi Jaarsma, Recording Secretary

The meeting was called to order at 7:45 p.m.

Note: The meeting had been noticed as 06-01 due to the cancellation of a meeting by an earlier applicant. Upon discussion, the Board retained case number 06-01 for the earlier applicant and gave the Sullivan case number 06-02.

Case 06-02 Charles Sullivan has applied for a variance under Article X, Section G of the Cornish Zoning Ordinance. Specifically, Mr. Sullivan has applied for a

variance of Article V, Section C,1: minimum distance between sewage disposal systems and water bodies, watercourses and wetlands.

Background Fred and Charles Sullivan, with Wayne McCutcheon, presented the case. Fred Sullivan explained that Charles Sullivan had applied for a 5-acre subdivision of the Sullivan property on Stage Road. The Planning Board had been concerned about fitting a septic system on the lot and had asked to see an approved septic design. The Sullivans had received an approval from the State on a septic system designed by Wayne McCutcheon. Prior to approval, the Planning Board found that the design did not meet the 100-foot setback from the Regulatory Flood Plain in the Cornish Zoning Ordinance. The lot was approved with language regarding the suitability of the land for building removed.

Karim Chichakly asked Mr. McCutcheon what the State standards were for systems near the Regulatory Flood Plain. Mr. McCutcheon said that the State would allow a system to be built in the Flood Plain. He noted that this system went up to the edge of the Flood Plain but was not in the Flood Plain. Mr. McCutcheon also noted the brook running through the land remaining after subdivision and showed that it was several hundred feet from the septic system. Mr. McCutcheon added that he thought the Cornish Zoning Ordinance was too restrictive with the 100-foot setback.

Fred Sullivan discussed the 100-year flood of 1973: the land in question remained dry during that flood. Mr. Sullivan said that he is trying to keep as much of the land as possible in agriculture. Mr. McCutcheon added that the only land suitable for building on the 41-acre parcel before subdivision was the land in question tonight. Karim Chichakly asked to see the septic design and asked Mr. McCutcheon about the setback from the proposed house site to the edge of the State right of way along NH Route 120. Mr. McCutcheon said that the house would be thirty feet from the edge of the right of way as documented by the State Highway Department.

The Board examined Article V, Section C re: setbacks.

Public Discussion Leo Maslan stated that the purpose of the Zoning Ordinance was to clearly define what was and was not allowed. There is an expectation, he continued, that flood events will increase due to changes in climatic patterns. He questioned the acceptability of Rumney soil for a septic system. Mr. McCutcheon disagreed and said that Rumney was not considered hydric.

Jesse Tyler, abutter across the street, said that his house was in the flood plain. He understood that the lot in question had never flooded. Since the lot met all other criteria for residential development, he fully supported the granting of the application tonight.

Mary Decatur, also an abutter across the street, said that she had no objection to the application.

Wayne McCutcheon said that the location of the 100-year Flood Plain is a best guess, and that the drainage ditches surrounding the lot had never been up over their banks. Leo Maslan noted that this flood plain is in zone AE, which means that

the elevations had been determined. Mr. McCutcheon said that the 100-year line on the Federal Insurance Rate Maps (FIRM) crossed contours.

Jon Mather said that he lives on the edge of the flood plain in the same area. He felt that being on the edge, but out, of the flood plain should mean something.

There followed a brief discussion of the path of the flood of 1973. Bruce Tracy asked what kind of system had been designed. Mr. McCutcheon said that he had designed a raised system with enviroseptic pipe.

Leo Maslan asked what precedent would be set if the application passed tonight. Mr. Chichakly answered that variances are on a case by case basis and are not precedent-setting.

Closed Discussion Mr. Chichakly discussed with the Board the applicability of the Simplex test to variances concerning use only and reviewed conditions that must be found to apply in order to grant a variance to this application.

1. No diminution in the value of the surrounding properties would be suffered;
2. Granting the permit would not harm the public interest;
3. Denial of the permit would result in unnecessary hardship;
4. By granting the permit substantial justice would be done; and
5. The use must not be contrary to the spirit of the Ordinance.

The Board discussed the spirit of the Ordinance regarding the 100-foot setback of a sewerage system from the flood plain. Caroline Storrs said that the Regulatory Flood Plain was a setback in itself. Karim Chichakly said that this section of the Ordinance had been added in the early 1990's presumably to protect water quality. Bill Balch asked how far water had to leach from a septic system before it was considered pure. Wayne McCutcheon answered seventy-five feet. Jason Bourne said that the setback could provided a buffer if the line of the 100-year Flood were to change.

The Board discussed hardship: is this lot unique in some way from other lots in the same situation? The FIRM covering Cornish Flat was examined. Mr. Chichakly said that there were two other lots in Cornish with similar characteristics. Wayne McCutcheon, representing the Sullivans, said that he felt the land was unique since other lots were entirely within the Regulatory Flood Plain or had enough land out to build.

The Board went through the criteria for a variance.

No Diminution of Value The Board was unanimous in its agreement that property values would not be diminished by the granting of the permit.

No Harm to the Public Interest Caroline Storrs said that she felt there would be no harm because of the State septic approval and because the system was outside the flood plain. The Board was unanimous in its agreement that the condition was met.

Unnecessary Hardship Karim Chichakly said he was undecided as to whether to the property was unique. Bruce Tracy said that the drainage ditches around the

property alleviated the concerns behind the 100-foot setback. Leo Maslan said that the drainage ditches did not surround the entire property. The ditches were found to go around three sides on the plan. The maintenance of the ditches was also discussed. Fred Sullivan said that the ditches do not have to be cleaned: the natural water flow kept them open.

Jason Bourne asked if everything below the property was farmland. He also asked where the water would go in the case of a flood. Fred Sullivan said that the water would go through farmland and end up in Plainfield. Mr. Bourne said that the fact that there were no residences - nor could there be because of the flood plain - downstream of the proposed sewerage system made this lot unique. He added that of equal or greater concern that septic in a flood would be the fertilizers on the fields. Taking this point into consideration, Mr. Chichakly said that he felt the property was unique since there were no residences downstream from it. Bill Balch and Bruce Tracy also agreed.

Caroline Storrs said that this condition was difficult because there were two sides to the argument. She could see the hardship as described, above; however, she also thought that perhaps the lot was too marginal to support residential development at all. In the end, she said, she would go with the group.

Substantial Justice The Board was in unanimous agreement that this condition was met.

Not Contrary to the Spirit of the Ordinance Mr. Chichakly stated that the restriction in the ordinance seemed to protect water quality and the boundary of the Regulatory Flood Plain. Bill Balch considered the fact that there were no residences below the lot and did not see where the Ordinance would be upset. Caroline Storrs said that she also felt the restriction protected water quality, and the ditches remediated that concern. Bruce Tracy agreed and added that it should be a requirement that the ditches could never be filled in. Jason Bourne said that since the setback was just for the septic system and not the residence, he did not feel the intent of the restriction was to protect a residence from a catastrophic event. All Board members agreed that this condition was met.

Bill Balch made a motion to accept the application for a variance on the condition that the drainage ditches be kept open and maintained. Bruce Tracy seconded the motion, and the vote of the Board was unanimous to accept, 5-0.

Other Business – Approval of Minutes

Case 05-01, 2/7/05: Bill Balch made a motion to approve as presented. Jason Bourne seconded the motion, and the vote of the Board was in the affirmative.

Case 05-02, 4/4/05: Caroline Storrs made a motion to approve as presented. Bruce Tracy seconded the motion, and the vote of the Board was in the affirmative.

Case 05-03, 6/6/05: Bill Balch made a motion to approve as presented. Jason Bourne seconded the motion, and the vote of the Board was in the affirmative.

Case 06-01, 1/2/06: Jim Brown's name was added to the list of members present at the meeting. Bill Balch made a motion to approve as presented. Jason Bourne seconded the motion, and the vote of the Board was in the affirmative.

Adjournment The meeting was adjourned at 10:23.

Respectfully submitted,
Heidi M. Jaarsma

**TOWN OF CORNISH, NH
ZONING BOARD OF ADJUSTMENTS
JANUARY 2, 2006**

Members Present Karim Chichakly, Bill Balch, Jason Bourne, Jim Brown, Caroline Storrs, and Bruce Tracy.

Also in Attendance Merrilyn Bourne and Bill Gallagher, Selectboard members; Heidi Jaarsma, Recording Secretary.

The meeting was called to order at 7:45 p.m.

Case 06-01 Representatives from Verizon Communications were not able to attend so the hearing was not held. The new hearing date will be re-noticed.

Other Business Merilynn Bourne pointed out to the Zoning Board that Verizon had not applied for a building permit to construct a tower. Without a denial from the Selectboard, Verizon could not apply to the Zoning Board. Caroline Storrs will get in touch with Verizon's representative and inform them of the process.

Jim Brown reviewed his research on State and Federal regulations regarding the construction of telecommunications towers. He presented a data request, attached, to the Board. The Board suggested a few minor wording changes and to require Verizon to bear administrative expenses of noticing and other paperwork at \$15/hour. The Board asked Heidi Jaarsma if she would do the certified notice; she said she would. Jim Brown made a motion to accept the amended data request and forward it to Verizon. Caroline Storrs seconded the motion, and the vote of the Board was in the affirmative, 6-0.

The Board discussed a new hearing date, which would depend on the response to the data request, and a change of venue to the Cornish Elementary School in order to ensure handicapped access.

The meeting was adjourned at 8:45 p.m.

Respectfully submitted,
Heidi Jaarsma

Cornish Zoning Board of Adjustment

Data Request

Verizon Wireless: Case No. 06-01

1. Detailed maps showing all current externally visible tower and monopole PWSF locations (both active and inactive) within a 20 mile radius of the

proposed tower. List owners. Include facilities in Vermont as well as New Hampshire. RSA 12-K:3.

2. Site descriptions for each of the above locations, showing antenna height and diameter, as well as all externally visible structures. RSA 12-K:3.
 3. Discussion of why less visually intrusive alternatives for the proposed facility were not proposed. Include discussion of artificial tree poles, monopole, etc. RSA 12-K:1.
 4. Description of co-location options and siting options other than the proposed site. Cornish Zoning Ordinance, Art. VI-A, A.3.
 5. Estimate of the cost of removal, with supporting documentation. Proposed bonding and surety provisions for removal costs. Evidence of adequate insurance for accident or damage. Ordinance, Art. VI-A, D.
 6. Proposed undertaking for quarterly inspections. Ordinance, Art. VI-A, E.
 7. Scaled elevation views, showing the site, the proposed tower, and the surrounding area (including Route 12A, Dingleton Hill, the Town Offices, and Mill Village), with sufficient sectional analyses to determine the extent to which the proposed tower will be visible from various points. Ordinance, Art. X, F.3.b.
 8. Evidence that no existing structure can accommodate the proposed antenna. Ordinance, Art. X, F.3.iii. Include discussion of each of the factors listed in subparagraphs a-f.
 9. Undertaking for a "balloon" test, whereby neighbors can observe the extent to which the proposed tower will be visible. Include proposed details (size of balloon, duration of test, publicity details, etc.) Ordinance, Art. X, H ("special investigative studies").
 10. Undertaking to bear all consultant costs, as well as all administrative expenses, and costs of special investigative studies, document review and other matters, borne by the ZBA in reviewing this application. Ordinance, Art. X, H.
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