SAN FRANCISCO
PLANNING DEPARTMENT

Discretionary Review
Abbreviated Analysis
HEARING DATE: OCTOBER 3, 2013

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

Date:	September 26, 2013
Case No.:	**2013.0703D**
Project Address:	**58 Digby Street**
Permit Application:	2008.0506.1388
Zoning:	RH-1 (Residential House, One-Family) 40-X Height and Bulk District
Block/Lot:	7540/009
Project Sponsor:	Kimberly Huagnfu, Buchalter Nemer 55 2nd Street, Suite 1700 San Francisco, CA 94105
Staff Contact:	Omar Masry – (415) 575-9116 Omar.Masry@sfgov.org
Recommendation:	**Do not take DR and approve as proposed**

PROJECT DESCRIPTION

The proposed Project would allow for the partial removal of a roof-mounted wireless microwave data antenna system, in order to comply with Notices of Violation (NOV) issued by the Planning Department and Department of Building Inspection. The NOVs would be abated through a building permit to demonstrate removal of a portion of the antenna system in order to comply with rules governing the use of such systems.

In August 2012, the homeowner had four (4) roof-mounted antennas installed at the residence by MonkeyBrains (Internet Service Provider), which provides wireless data service using line-of-sight antennas. In response to a complaint filed with the Planning Department (NOV No. 12101) and Department of Building Inspection (NOV No. 201281191), Notices of Violation were sent to the property owner in December 2012. Following the issuance of NOVs, two of the antennas were removed in April and May 2013.

The homeowner, and their installer (MonkeyBrains), were instructed by Code Enforcement Staff to obtain a building permit to document removal of the antennas not compliant with Federal rules exempting certain antenna systems from City permitting requirements.

The Federal Communication Commission's (FCC) Over the Air Receiving Device (OTARD) rules exempt antenna systems from typically requiring zoning (Planning) or building approvals from local jurisdictions for small systems that are intended to serve on-site users and includes equipment such as small satellite television dishes. Over time, the FCC has broadened such rules to allow up to two antennas per on-site user and allow two way wireless data links needed to provide internet service. However, in order to qualify for the OTARD exemption, the system may not be used as a hub, or repeater, intended to serve other end-users at off-site locations from the subject site. Absent such an exemption, the site would be

considered a Wireless Telecommunication Services Facility and subject to the City's Wireless Guidelines; typically requiring approval of a Conditional Use Authorization in a Disfavored Location Site (RH-1 Zoning District).

On February 8, 2014, the Discretionary Review requestor, representing the owners of the adjacent residence, at 62 Digby Street, filed a Block Book Notification (BBN) in order to be notified of any building permits associated with the Project site. While the BBN policy does provide for a 10-day hold by Planning Staff prior to the approval of a building permit application, a building permit (No. 2013.05.07.6233) was erroneously issued, but not finaled, by staff. Following the issuance of the building permit the Zoning Administrator requested on May 14, 2013 that the Department of Building Inspection suspend the building permit..

The Discretionary Review requestor contends, that the current facility does not comply with FCC OTARD eligibility requirements and requests the Planning Commission overturn any such building permit application, and that the City require the removal of all antennas not deemed by the Project Sponsor to comply with the FCC's OTARD requirements.

Based on the information provided by the installer, MonkeyBrains ISP, and a review of the equipment used, staff recommends, the Planning Commission not take Discretionary Review and direct the Zoning Administrator to remove the suspension order from the issued building permit. According to the installer, the second antenna serves as a backup antenna, instead of as a hub or repeater, and is therefore compliant with the FCC's OTARD exemption.

SITE DESCRIPTION AND PRESENT USE

The subject building is a single-family home that was developed in 1968, and is located on Assessor's Block 7540, Lot 009 along the east side of Digby Street, near the northernmost terminus of Everson Street. The Project site slopes down from the street and features a three-story building with the uppermost story meeting the attached garage and driveway at street level. The current installation features two dish shaped microwave antennas attached to a roof vent and approximately five feet above the roof.

SURROUNDING PROPERTIES AND NEIGHBORHOOD

The Project site is surrounded by similar single-family, within the Glen Park neighborhood and approximately 300 feet to the east of the Walter Haas Playground.

BUILDING PERMIT NOTIFICATION

No notification is required for building permit involving the removal of antenna systems in order to demonstrate compliance with Notices of Violation.

HEARING NOTIFICATION

TYPE	REQUIRED PERIOD	REQUIRED NOTICE DATE	ACTUAL NOTICE DATE	ACTUAL PERIOD
Posted Notice	10 days	September 23, 2013	September 22, 2013	11 days
Mailed Notice	10 days	September 23, 2013	September 23, 2013	10 days

PUBLIC COMMENT

As of September 26, 2013, the Planning Department received one call inquiring about the project.

DR REQUESTOR

Kimberly Huangfu, representing the homeowners, Valerie and Devron Char, of 62 Digby Street, adjacent to the subject building.

DR REQUESTOR'S CONCERNS AND PROPOSED ALTERNATIVES

See attached *Discretionary Review Application*, dated May 7, 2013.

PROJECT SPONSOR'S RESPONSE TO DR APPLICATION

See attached *Response to Discretionary Review,* dated September 13, 2013.

ENVIRONMENTAL REVIEW

The Department has determined that the proposed project is exempt/excluded from environmental review, pursuant to CEQA Guideline Section 15301 (Class Three – New Construction, Accessory Sturctures).

RESIDENTIAL DESIGN TEAM REVIEW

Installation of such antennas does not typically require a building permit and is therefore not subject to review by the Residential Design Team.

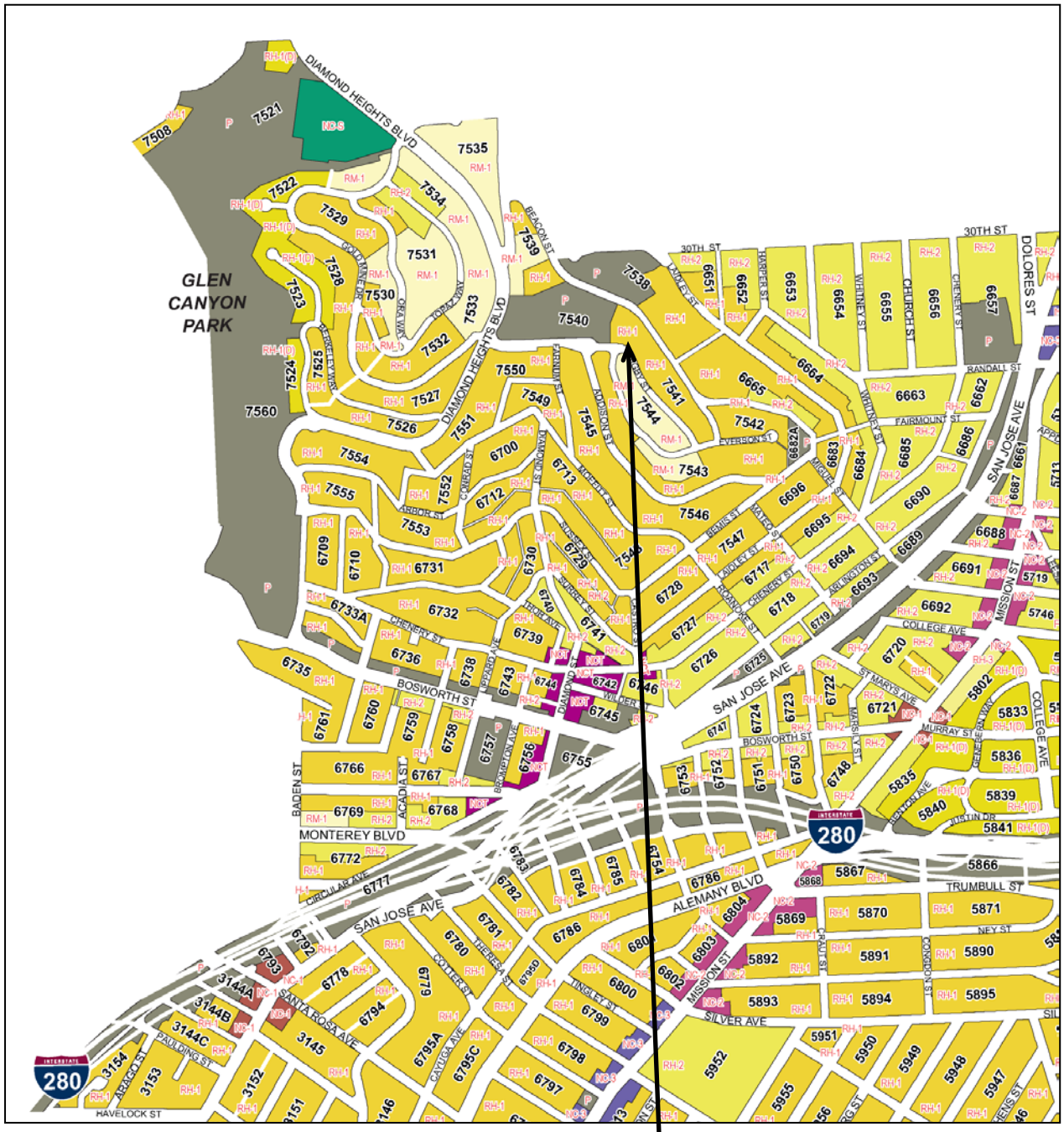
RECOMMENDATION:	**Do not take DR and Approve as proposed**

Attachments:
Block Book Map
Sanborn Map
Zoning Map
Aerial Photographs
Context Photographs
DR Application
Response to DR Application dated September 13, 2013

Context Photographs

Context Photographs

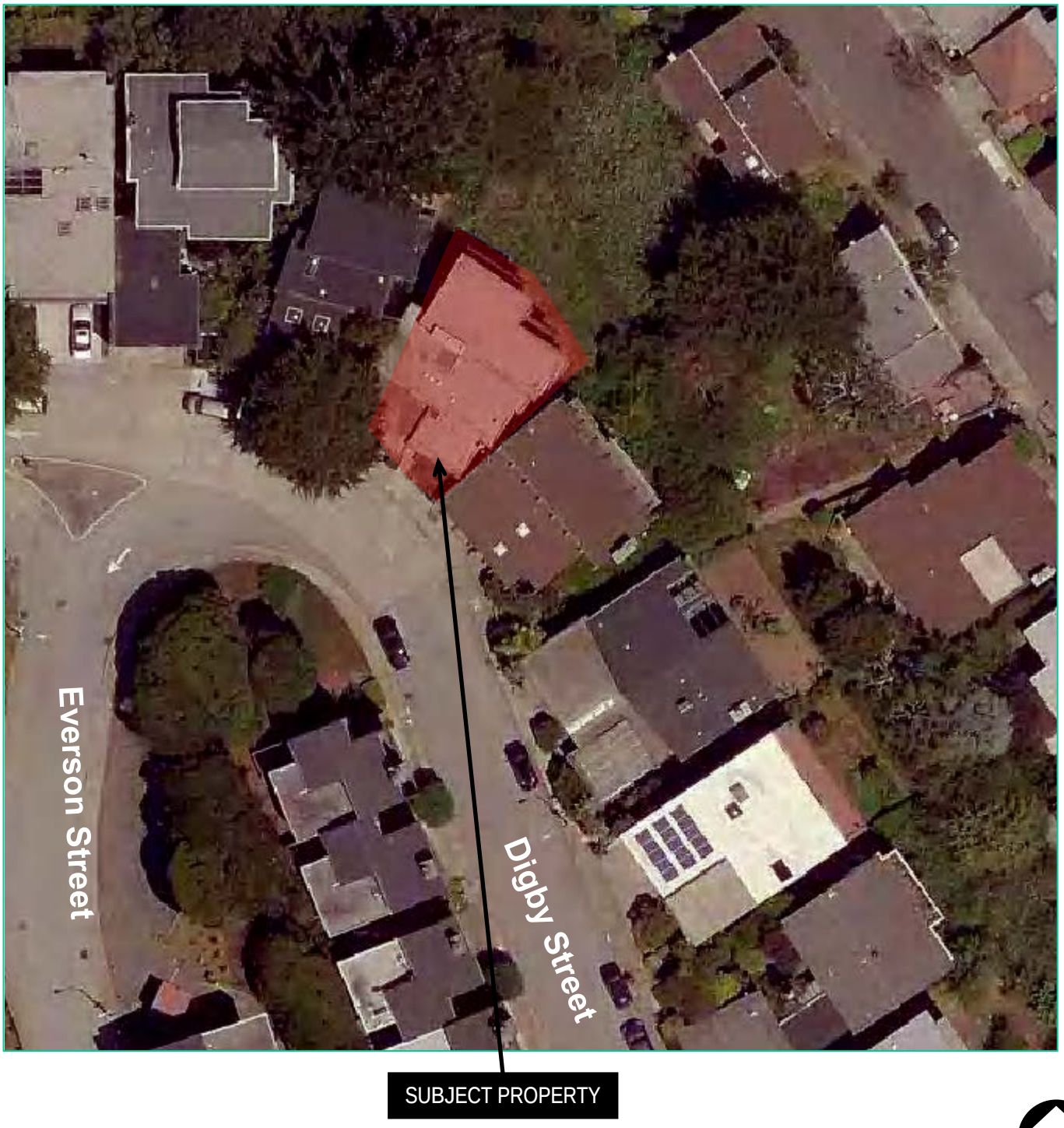
Zoning Map



Case Number 2013.0703D
Monkeybrains Wireless Antennas
58 Digby Street

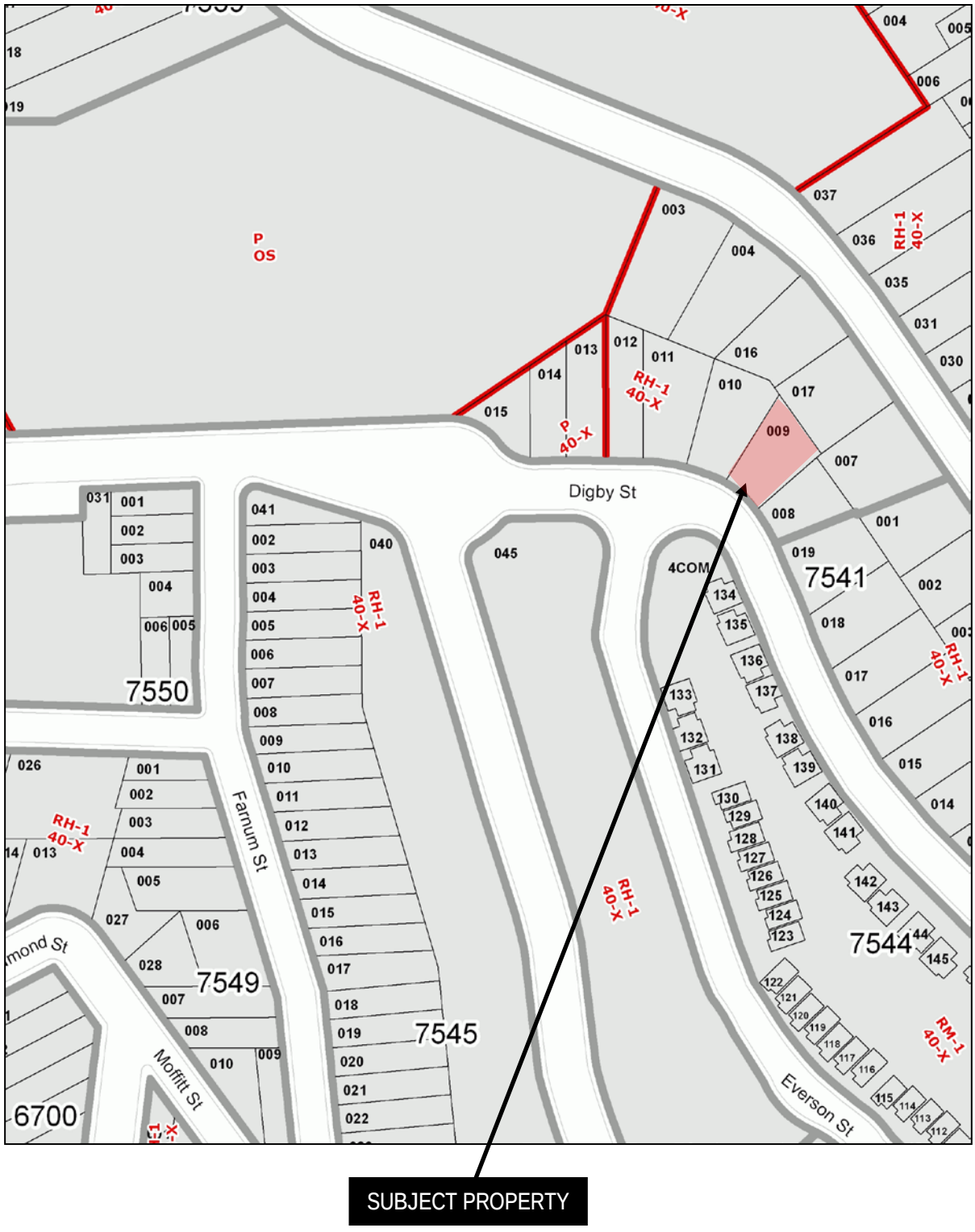
SAN FRANCISCO
PLANNING DEPARTMENT

Aerial Photo



Case Number 2013.0703D
Monkeybrains Wireless Antennas
58 Digby Street

Parcel Map



Case Number 2013.0703D
Monkeybrains Wireless Antennas
58 Digby Street

Sanborn Map*

**The Sanborn Maps in San Francisco have not been updated since 1998, and this map may not accurately reflect existing conditions.*

Case Number 2013.0703D
Monkeybrains Wireless Antennas
58 Digby Street

Application for **Discretionary Review**

CASE NUMBER: For Staff Use only

APPLICATION FOR
Discretionary Review

1. Owner/Applicant Information

DR APPLICANT'S NAME:		
Devron and Valerie Char		
DR APPLICANT'S ADDRESS:	**ZIP CODE:**	**TELEPHONE:**
62 Digby Street	94131	(415)587-2850

PROPERTY OWNER WHO IS DOING THE PROJECT ON WHICH YOU ARE REQUESTING DISCRETIONARY REVIEW NAME:		
Stephen Nash c/o MonkeyBrains (Permit Applicant)		
ADDRESS:	**ZIP CODE:**	**TELEPHONE:**
58 Digby Street	94131	(415) 200-8703

CONTACT FOR DR APPLICATION:		
Same as Above ☐ Kimberly A. Huangfu, Buchalter Nemer		
ADDRESS:	**ZIP CODE:**	**TELEPHONE:**
55 2nd Street, Suite 1700	94105	(415) 296-1696
E-MAIL ADDRESS:		
khuangfu@buchalter.com		

2. Location and Classification

STREET ADDRESS OF PROJECT:	ZIP CODE:
58 Digby Street	94131
CROSS STREETS:	
Digby Street and Everson Street	

ASSESSORS BLOCK/LOT:	LOT DIMENSIONS:	LOT AREA (SQ FT):	ZONING DISTRICT:	HEIGHT/BULK DISTRICT:
7540 /009	92'x63x36x76	4,029 SF	RH-1	40-X

3. Project Description

Please check all that apply

Change of Use ☐ Change of Hours ☐ New Construction ☐ Alterations ☐ Demolition ☐ Other ☒ Installation of WTS antennas initially without benefit of permit and currently without sufficient information as to whether the remaining antennas are OTARD compliant

Additions to Building: Rear ☐ Front ☐ Height ☐ Side Yard ☐

Present or Previous Use: Residential

Proposed Use: Residential

Building Permit Application No. 2013.01309123 & 2013.05076233 Date Filed: 1/30/13 & 5/7/13

Discretionary Review Application Submittal Checklist

Applications submitted to the Planning Department must be accompanied by this checklist and all required materials. The checklist is to be completed and **signed by the applicant or authorized agent.**

REQUIRED MATERIALS (please check correct column)	DR APPLICATION
Application, with all blanks completed	☐
Address labels (original), if applicable	○
Address labels (copy of the above), if applicable	○
Photocopy of this completed application	☐
Photographs that illustrate your concerns	■
Convenant or Deed Restrictions	■
Check payable to Planning Dept.	☐
Letter of authorization for agent	☐
Other: Section Plan, Detail drawings (i.e. windows, door entries, trim), Specifications (for cleaning, repair, etc.) and/or Product cut sheets for new elements (i.e. windows, doors)	■

NOTES:
☐ Required Material.
■ Optional Material.
○ Two sets of original labels and one copy of addresses of adjacent property owners and owners of property across street.

For Department Use Only
Application received by Planning Department:

By: OMAR MASRY Date: 6/3/13

4. Actions Prior to a Discretionary Review Request

Prior Action	YES	NO
Have you discussed this project with the permit applicant?	☒	☐
Did you discuss the project with the Planning Department permit review planner?	☒	☐
Did you participate in outside mediation on this case?	☐	☒

5. Changes Made to the Project as a Result of Mediation

If you have discussed the project with the applicant, planning staff or gone through mediation, please summarize the result, including any changes there were made to the proposed project.

Despite numerous attempts by Planning Staff and the DR Applicant to obtain even the most basic of information from MonkeyBrains, Permit Applicant has not provided any evidence to substantiate its claim that Permit Applicant is the "end-user" and, thus, exempt under OTARD. It is unclear whether the subject antennas are being used for commercial operations from a residential home. Further, in terms of health and safety assessments, MonkeyBrains has failed to provide data needed to evaluate minimum safe distance and average time exposure, such as the transmit power of the ODU (Out the Door Unit, the circular piece on the back of the antenna that carries the electronics that generate the microwave signal) for both the 24 and 60 GHz antennas, the maximum transmit power (radio), the maximum antenna gain (antenna), the maximum EIRP, and the maximum EIRP as compared to the FCC limit. See attached addendum.

Application for **Discretionary Review**

CASE NUMBER:
For Staff Use only

Discretionary Review Request

In the space below and on separate paper, if necessary, please present facts sufficient to answer each question.

1. What are the reasons for requesting Discretionary Review? The project meets the minimum standards of the Planning Code. What are the exceptional and extraordinary circumstances that justify Discretionary Review of the project? How does the project conflict with the City's General Plan or the Planning Code's Priority Policies or Residential Design Guidelines? Please be specific and site specific sections of the Residential Design Guidelines.

MonkeyBrains erected antennas that it now claims are exempt, under the FCC/OTARD regulations (see attached), from Planning Department purview and oversight. To date, the information provided indicates that these antennas may be used as a relay station and, thus, do not meet the claimed exemption standards. Moreover, the minimum safe distance and time exposure provided on the materials furnished by the manufacturer of one of the remaining antennas provides a minimum safe distance of 9 feet and an average

2. The Residential Design Guidelines assume some impacts to be reasonable and expected as part of construction. Please explain how this project would cause unreasonable impacts. If you believe your property, the property of others or the neighborhood would be adversely affected, please state who would be affected, and how:

30 minute exposure for the general public, yet the DR Applicant's home and primary living area is directly adjacent to and at the same level of the antennas. And finally, incomplete information has been provided on the 60GHz antenna as described in further detail in the attached addendum. Adverse impacts include diminished property values due to the uncertain magnitude of the antennas and the long-term health impacts on surrounding neighbors. See attached addendum

3. What alternatives or changes to the proposed project, beyond the changes (if any) already made would respond to the exceptional and extraordinary circumstances and reduce the adverse effects noted above in question #1?

DR Applicant asks that the Permit Applicant conduct a site specific survey to test the particular radio frequencies and radiation associated with the continuous use of the remaining antennas to establish an accurate baseline for the minimum safe distance and calculate the power density and duration of exposure. To date, no safety related assessment has been conducted to DR Applicant's knowledge.

DR Applicant further asks for confirmation from MonkeyBrains and the Owner that the subject antennas are not being used for commercial purposes, that no additional transmission signals are either being sent out or received by the remaining antennas, and that the remaining antennas are not being used as a relay station.

Applicant's Affidavit

Under penalty of perjury the following declarations are made:
a: The undersigned is the owner or authorized agent of the owner of this property.
b: The information presented is true and correct to the best of my knowledge.
c: The other information or applications may be required.

Signature: Kimberly A. Huangfu Date: 5/31/2013

Print name, and indicate whether owner, or authorized agent:

Kimberly A. Huangfu
Owner / Authorized Agent (circle one)

ADDENDUM TO DISCRETIONARY REVIEW APPLICATION

of

DEVRON AND VALERIE CHAR
62 DIGBY STREET, SAN FRANCISCO, CA 94131

With Respect To

THE INSTALLATION OF POINT-TO-POINT MICROWAVE ANTENNAS

by

ANOTHER CORPORATE ISP, LLC dba MONKEYBRAINS
58 DIGBY STREET, SAN FRANCISCO, CA 94131

(BUILDING PERMIT APPLICATION NOS. 2013.01309123 AND 2013.05076233)

I. INTRODUCTION.

Devron and Valerie Char ("DR Applicants") seek Discretionary Review of Building Permit No. 2013.05076233 pursuant to San Francisco Planning Code Section 311(d) on the following grounds:

(i) Building permit applications for the construction of a wireless telecommunications services ("WTS") facility as an accessory use in RH Districts are subject to the same notification requirements set forth in Planning Code Section 311 (Planning Code § 311(f));

(ii) The illegal and unsubstantiated erection of several antennas on the property located at 58 Digby Street ("Subject Property") poses potential health and safety impacts that have not been assessed by either the Permit Applicant ("MonkeyBrains") or Mr. Stephen Nash, the owner of the Subject Property ("Owner"); and,

(iii) It remains unclear whether MonkeyBrains or occupants of the Subject Property are operating a commercial relay-service operation from the Subject Property, as there have been conflicting and inconsistent statements made concerning the purported use. Furthermore, the sophistication and intensity of the transmission equipment at issue calls into question whether MonkeyBrains or the Owner are operating within relevant zoning requirements set forth in Planning Code Section 209.6.

II. DISCRETIONARY REVIEW CRITERIA.

By definition, discretionary review applies in cases where the proposed installation of a WTS facility otherwise complies with all planning constraints. It is a mechanism in the Planning Code expressly recognizing that strict application of the planning restrictions that the Planning Code contains can result in improvements or uses that are out of keeping with neighborhood character, as well as fundamental residential values. These values find their expression in

Section 101 of the Planning Code:

> Purposes.
>
> ...
>
> (b) To protect the character and stability of residential, commercial and industrial areas within the City, and to promote the orderly and beneficial development of such areas;
>
> (c) To provide adequate light, air, privacy and convenience of access to property, and to secure safety from fire and other dangers; . . .

Section 311 of the Planning Code states:

> (a) **Purpose**. The purpose of this Section is to establish procedures for reviewing building permit applications for lots in R Districts in order to determine compatibility of the proposal with the neighborhood and for providing notice to property owners ... so that concerns about a project may be identified and resolved during the review of the permit.

Antennas, also commonly referred to as WTS facilities, include equipment and structures used to receive and transmit telecommunications or radio signals. Applicable San Francisco Planning and Building Code requirements mandate that a party seeking to erect WTF antennas submit a building permit application that complies with the pre-application process and neighborhood notification requirements, accessory use determinations for WTF "micro-sites" by the San Francisco Zoning Administrator, the Federal Telecommunication Act of 1996 ("FTA"), the Federal Communications Commission ("FCC"), as well as compliance with the Residential Design Guidelines.

Pursuant to Subsection (c) of Section 311, the Planning Code states that permits are to be considered in light of applicable design guidelines approved by the Planning Commission. Section 311(c)(1) provides that the adopted Residential Design Guidelines shall be used to review plans for all WTS facilities. It confers upon the Planning Commission the authority to require revisions in order to secure conformity with the spirit of the guidelines, which generally emphasize and the preservation of privacy in cases where a proposed project will have "an unusual impact on privacy to neighboring interior living spaces." (*See* Residential Design Guidelines at pp. 7 and 17.)

Outlined in further detail below, DR Applicants contend that certain health and safety guidelines have not been properly vetted and evaluated in this instance. To date, there has been insufficient information flow between the Permit Applicant and the DR Applicants, which has caused heightened concern because, as medical professionals, DR Applicants have firsthand knowledge of the damage that can ensue from prolonged exposure to radiation and radiofrequency waves.

MonkeyBrains has proceeded to change its original configuration, namely the location and number of antennas and panels, in response to questions posed by the DR Applicants and

Planning Staff. Previously lacking any transparency or dialogue, MonkeyBrains has only recently been more forthcoming with information. This, of course, occurred only after the Planning Department issued an Enforcement Notice on April 22, 2013. Despite diligent efforts by the DR Applicants, MonkeyBrains continues to provide incomplete information.[1]

As detailed below, the DR Applicants appreciate all that Planning Staff have done to investigate the use, scale, and purpose of the antennas that were installed without the benefit of permit. Given new information that has recently surfaced, however, there are considerable health and safety concerns that require further investigation. Thus, the purpose of this DR application is to prompt further investigation by the MonkeyBrains and the Owner to conduct site specific testing to ensure the safety of the occupants of the Subject Property, as well as surrounding neighbors.

III. INSTALLATION OF UNPERMITTED WTS FACILITY AND REMAINING HEALTH AND SAFETY AND ZONING ISSUES.

Issues concerning the health and safety of the subject antennas first arose about 10 months ago when the DR Applicants first noticed the installation of antennas that were recklessly held up by cinder blocks in clear violation of the Building Code. On December 7, 2012, the DR Applicants filed a complaint with the Department of Building Inspection ("DBI"), expressing concern with the illegal erection of five visually intrusive and commercial grade antennas in a residential zone, consisting of two point-to-point links, two wireless base stations, and one wireless bridge. (*See* Complaint No. 201281191.) Following a site visit by Inspector Donal Duffy of DBI, a Notice of Violation was immediately issued on December 20, 2012.

In response, MonkeyBrains filed Permit Application No. 2013-01309123 on January 30, 2013. Attached as Exhibits A and B are photographs of the initial WTS installation. Exhibit B, sent to Planning Staff by MonkeyBrains, details the various components of the antennas and confirms that MonkeyBrains was using a "repeated" and "backup antenna," which evidences commercial use of the transmission equipment as a relay station.

After nearly five months of stalling, MonkeyBrains conceded that it was in violation of the Planning Code WTS framework and removed portions of the unpermitted hub. Planning issued an "Enforcement Notification" regarding the Subject Property on April 22, 2013, stating that it has "determined that the . . . property is in violation of the Planning Code for not using the property in the manner it is authorized." Contrary to the conclusions made by DR Applicants' radiofrequency expert, Mr. Bob Kovach, MonkeyBrains has since changed its tune, admitting that it was acting as a relay hub, but now contends that the use of the WTS antennas is for residential application only. (*See* Exh. E, Correspondence from Superior Access Solutions to Planning, dated April 19, 2013 ["Providing this level of connectivity outward to other areas in San Francisco falls well outside the scope of 'residential use' and is consistent with a commercial application such of that of an internet service provider."].) DR Applicants stand by

[1] For example, MonkeyBrains provided a specification sheet for an 80 gigahertz (GHz) Bridgewave wireless link, which is not particularly helpful since MonkeyBrains contends that it is operating at a frequency of 60 GHz. Further, no specifications as to minimum safe distance or exposure time were provided for the 60 GHz device.

their expert's initial conclusions, however, that this type of configuration, even after the initial facility was scaled down to the two remaining antennas, is not typical for residential use.

Rather than continue to pursue is original permit application, MonkeyBrain now contends that it is exempt from Planning Department oversight because the remaining antennas qualify as Over the Air Reception Devices ("OTARD") under the FCC. Photographs of the current installation are attached as Exhibits C and D.

It is unclear, however, whether the current configuration is OTARD compliant since the FCC "requires that providers of fixed wireless *service exercise reasonable care to protect users and the public from RF [radiofrequency] exposure in excess of the Commissions limits*. In addition, as a condition of invoking protection under the rule from government, landlord and association restrictions, a provider of fixed wireless service must ensure that customer-end antennas are labeled to give notice of potential RF safety hazards posed by these antennas." (FCC OTARD Website - www.fcc.gov/guides/over-air-reception-devices-rule, emphasis added.) The OTARD exception applies to "customer-end antennas" – antennas placed at a customer location for the purpose of providing service to customers at that location. (*Ibid.*) Again, there is simply not enough evidence on the record to substantiate whether sufficient safety precautions or testing have been conducted to properly assess the remaining antennas.[2]

The exception, however, does not cover antennas used to transmit signals to or receive signals from multiple customer locations. Thus, is it uncertain whether the equipment is, in fact, OTARD compliant since the remaining antenna could be used as a relay hub, acting as a link to pick up and redistribute frequencies to other areas. In the alternative, the antennas contain a redundant configuration, which could be used to ensure internet accessibility with high bandwidth capacity. Absent additional information from MonkeyBrains, it is impossible to assess whether the most recent installation is an end-user application.

In response to numerous attempts by Planning Staff and the DR Applicants to clarify the scope, frequency, power density, and average exposure of the two remaining antennas, MonkeyBrains represented that the two remaining antennas are operating at a frequency of 24 and 60 GHz. This information alone, however, does not provide the underlying data needed to calculate the minimum safe distance, which is contingent on the power density and time of average exposure. The FCC Office of Engineering and Technology released OET Bulletin 56 to identify and respond to certain questions concerning the biological effects and potential of RF electromagnetic fields. This bulletin provides that "as an added margin of safety, micro tower sites are normally inaccessible to the general public[,]" which serves to highlight that such sites are typically located at a safe distance from human contact. (*Id.* at p. 19.)

Unfortunately, this is not the case here. DR Applicants' residence is directly adjacent to the Subject Property with a distance of approximately less than 10 feet between the two

[2] DR Applicant is aware that under the FTA and OTARD, local jurisdictions are not permitted to "disapprove" wireless facilities due to public health concerns without "substantial evidence" in a written record. This is operating under the assumption, however, that the subject facility complies with FTA and OTARD's safety-related regulations which has not been substantiated.

residents of the Subject Property. Furthermore, measurements and safety considerations generally operate under the presumption that ground-level power densities are below recommended safety limits due to an increased distance between the ground-level and towers on which such antennas are typically located. Given the close proximity of the antennas, the DR Applicants are understandably concerned about the adverse health impacts that such prolonged and continuous exposure to harmful RF emissions could cause in the long-term.

This concern was only further amplified by information provided by MonkeyBrains on May 30, 2013. The Installation Manual for the 24GHz Lumina link states that the minimum safe distance for general public exposure, as opposed to occupational exposure which is not at issue here, is *275 centimeters* (equivalent to about 9 feet). (Attach as Exhibit F are the relevant pages of the Installation Manual for CFIP Lumina Series 24 GHz Full Outdoor Unit, see figure on p. 5.) DR Applicants' primary living space, namely the living and dining room and office space, is on the cusp of the minimum safe distance. Exhibit D shows that the remaining dish is pointed in the general direction of the DR Applicants' residence. It is also imperative to note that the safety baseline provided in the Installation Manual assumes an average exposure time of 30 minutes, whereas MonkeyBrains' installation is presumably operating at a continuous rate to ensure the level of "reliable internet service" that the Owner purportedly needs.

And finally, the issue remains as to whether MonkeyBrains is using the installation as a relay station for commercial purposes. Certain inconsistent representations have been made, one of which was that MonkeyBrains was leasing and using the roof area and the antennas to transmit and receive signals across San Francisco to provide service to other clients. These representations are in direct contravention of recent statements that the transmission equipment is being used for the Owner's personal use.

IV. CONCLUSION.

For all the foregoing reasons, the suspended building permit should not be approved. The Planning Department has expressed a desire for MonkeyBrains to file a new permit to remove. It does not appear, however, that MonkeyBrains intends to file a revised permit as it believes it is exempt under OTARD. DR Applicants have engaged in ongoing discussions with counsel for MonkeyBrains in hopes of amicably resolving the remaining concerns set forth above and would be willing to participate in mediation efforts to resolve these issues if the Planning Commission so directs.

Dated: May 31, 2013

BUCHALTER NEMER
A Professional Corporation

By: Kimberly A. Huangfu
Kimberly A. Huangfu

Attorneys for DR Applicants,
Drs. Devron and Valerie Char

Permits, Complaints and Boiler PTO Inquiry

Permit Details Report

Report Date:	**2/12/2013 2:30:36 PM**
Application Number:	201301309123
Form Number:	8
Address(es):	7540 / 009 / 0 58 DIGBY ST
Description:	MECHANICALLY ATTACH 3 ANTENNAES FOR INTERNET VIA WIRELESS. RUN CONDUIT DOWN SIDE OF BLDG TO BASEMENT FOR ETHENET AND LOW VOLTAGE (24V AND /OR 48 V DC) COMPLY WITH NOV# 201281191. ANY ANTENNEA USED WILL NOT EXCEED 1'.
Cost:	$4,000.00
Occupancy Code:	R-3
Building Use:	27 - 1 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
1/30/2013	TRIAGE	
1/30/2013	FILING	
1/30/2013	FILED	

Contact Details:

Contractor Details:

Addenda Details:

Description:

Step	Station	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Phone	Hold Description
1	BID-INSP	1/30/13	1/30/13			1/30/13		415-558-6096	APPROVED BY KEVIN MCHUGH
2	INTAKE	1/30/13	1/30/13			1/30/13	YU ZHANG REN	415-999-9999	
3	CP-ZOC			1/30/13			STAHLHUT MICHELLE	415-558-6377	DO NOT ISSUE PERMIT - ROUTE TO PLANNING. This is a commercial facility and needs further planning review. 1/31/13
4	BLDG							415-558-6133	
5	MECH							415-558-6133	
6	CPB							415-558-6070	

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

For information, or to schedule an inspection, call 558-6570 between 8:30 am and 3:00 pm.

Station Code Descriptions and Phone Numbers

Permits, Complaints and Boiler PTO Inquiry

Permit Details Report

Report Date:	**6/3/2013 11:39:02 AM**
Application Number:	201305076233
Form Number:	8
Address(es):	7540 / 009 / 0 58 DIGBY ST
Description:	COMPLY W/NOV #201281191 - REMOVAL OF ANTENNA NOT COMPLIANT WITH OTARD RULE, REMOVAL OF METAL BASE & CINDER BLOCKS, & REMOVAL OF CONDUIT. OTARD COMPLIANT ANTENNAS WILL REMAIN & BE MECHANICALLY AFFIXED TO THE CHIMNEY CHASE.
Cost:	$200.00
Occupancy Code:	R-3
Building Use:	27 - 1 FAMILY DWELLING

Disposition / Stage:

Action Date	Stage	Comments
5/7/2013	TRIAGE	
5/7/2013	FILING	
5/7/2013	FILED	
5/7/2013	APPROVED	
5/7/2013	ISSUED	
5/21/2013	SUSPEND	requested by City Planning -- ltr dd 5/14/13

Contact Details:

Contractor Details:

License Number: OWN
Name: OWNER OWNER
Company Name: OWNER
Address: OWNER * OWNER CA 00000-0000
Phone:

Addenda Details:

Description:

Step	Station	Arrive	Start	In Hold	Out Hold	Finish	Checked By	Hold Description
1	INTAKE	5/7/13	5/7/13			5/7/13	YIP JANET	
2	CP-ZOC	5/7/13	5/7/13			5/7/13		COUNTER PERSONNEL
3	BLDG	5/7/13	5/7/13			5/7/13	CHUN ROBERT	
4	BID-INSP	5/7/13	5/7/13			5/7/13		DONAL DUFFY
5	CPB	5/7/13	5/7/13			5/7/13	PASION MAY	

This permit has been issued. For information pertaining to this permit, please call 415-558-6096.

Appointments:

Appointment Date	Appointment AM/PM	Appointment Code	Appointment Type	Description	Time Slots

Inspections:

Activity Date	Inspector	Inspection Description	Inspection Status

Special Inspections:

Addenda No.	Completed Date	Inspected By	Inspection Code	Description	Remarks

For information, or to schedule an inspection, call 558-6570 between 8:30 am and 3:00 pm.

Station Code Descriptions and Phone Numbers

Online Permit and Complaint Tracking home page.

Technical Support for Online Services

If you need help or have a question about this service, please visit our FAQ area.

BuchalterNemer
A Professional Law Corporation

55 Second Street, Suite 1700 San Francisco, California 94105-3493
Telephone (415) 227-0900 / Fax (415) 227-0770

File Number: C2402-0002
Direct Dial Number: (415) 227-1696
E-Mail Address: *khuangfu@buchalter.com*

LETTER OF AUTHORIZATION

May 31, 2013

TO: CITY OF SAN FRANCISCO PLANNING DEPARTMENT

Re: Agent Authorization to File Application for Discretionary Review on behalf of Applicant (Owner of 62 Digby Street) with the San Francisco Department of Planning

Drs. Devron and Valerie Char, property owners of 62 Digby Street, San Francisco, California ("Owners"), hereby appoint Kimberly Huangfu, Esq. of Buchalter Nemer, A Professional Corporation, and its employees, agents, and contractors, as agents for the purpose of filing Owners' application for Discretionary Review related to Building Permit Application No. 2013-01309123 for 58 Digby Street, San Francisco, California.

Dr. Devron Char
Property Owner – 62 Digby Street,
San Francisco, California

Kimberly A. Huangfu, Esq.
Buchalter Nemer, A Professional Corporation
Authorized Agent and Attorneys for Applicant
Devron and Valerie Char

SAN FRANCISCO
PLANNING
DEPARTMENT

FOR MORE INFORMATION:
Call or visit the San Francisco Planning Department

Central Reception
1650 Mission Street, Suite 400
San Francisco CA 94103-2479

TEL: **415.558.6378**
FAX: **415 558-6409**
WEB: **http://www.sfplanning.org**

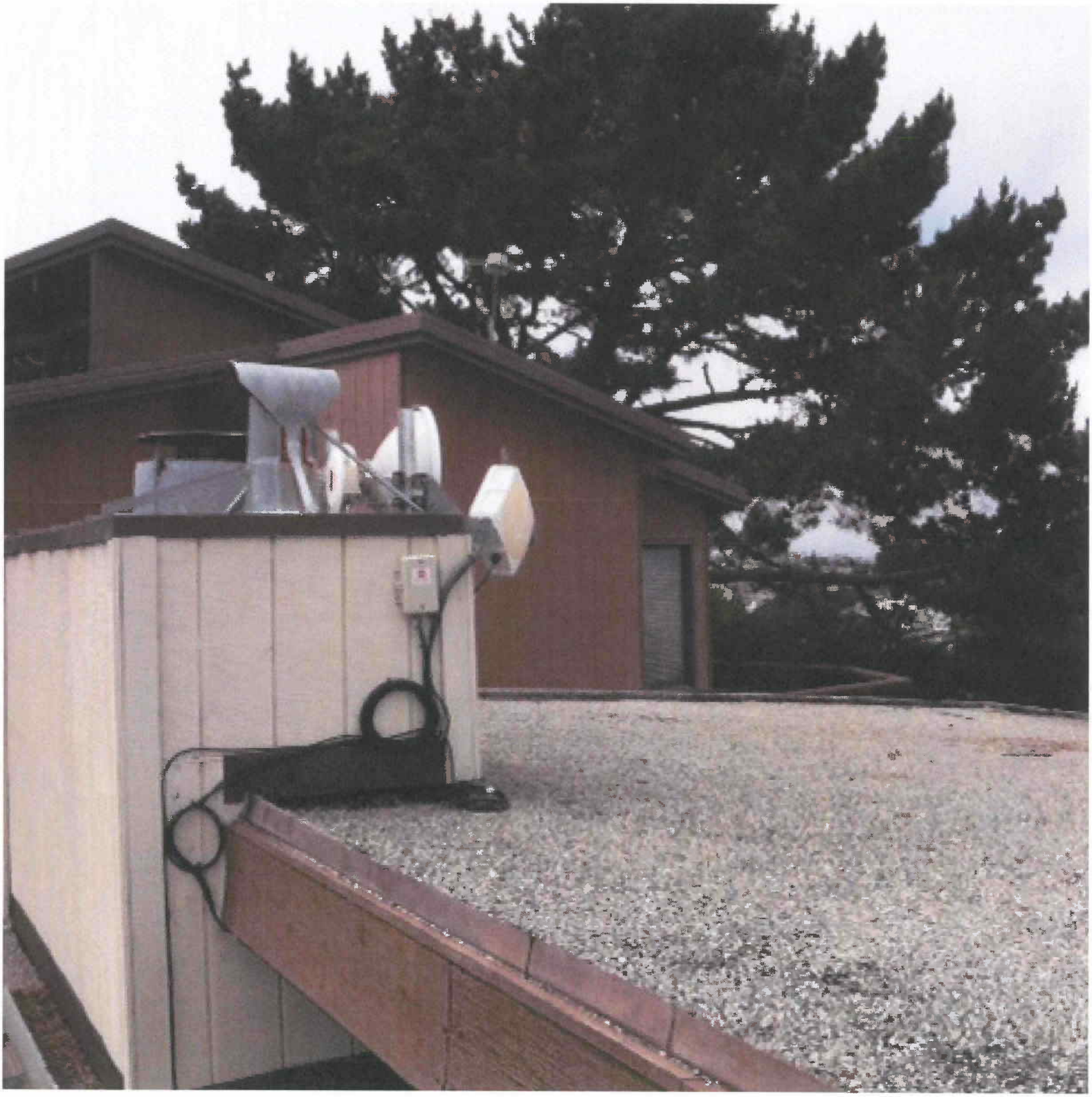
Planning Information Center (PIC)
1660 Mission Street, First Floor
San Francisco CA 94103-2479

TEL: **415.558.6377**
Planning staff are available by phone and at the PIC counter. No appointment is necessary.

DR APPLICATION RE: 58 DIGBY STREET
EXH. A – PHOTOGRAPH OF MONKEYBRAINS' INITIAL INSTALLATION FROM DR APPLICANT'S RESIDENCE

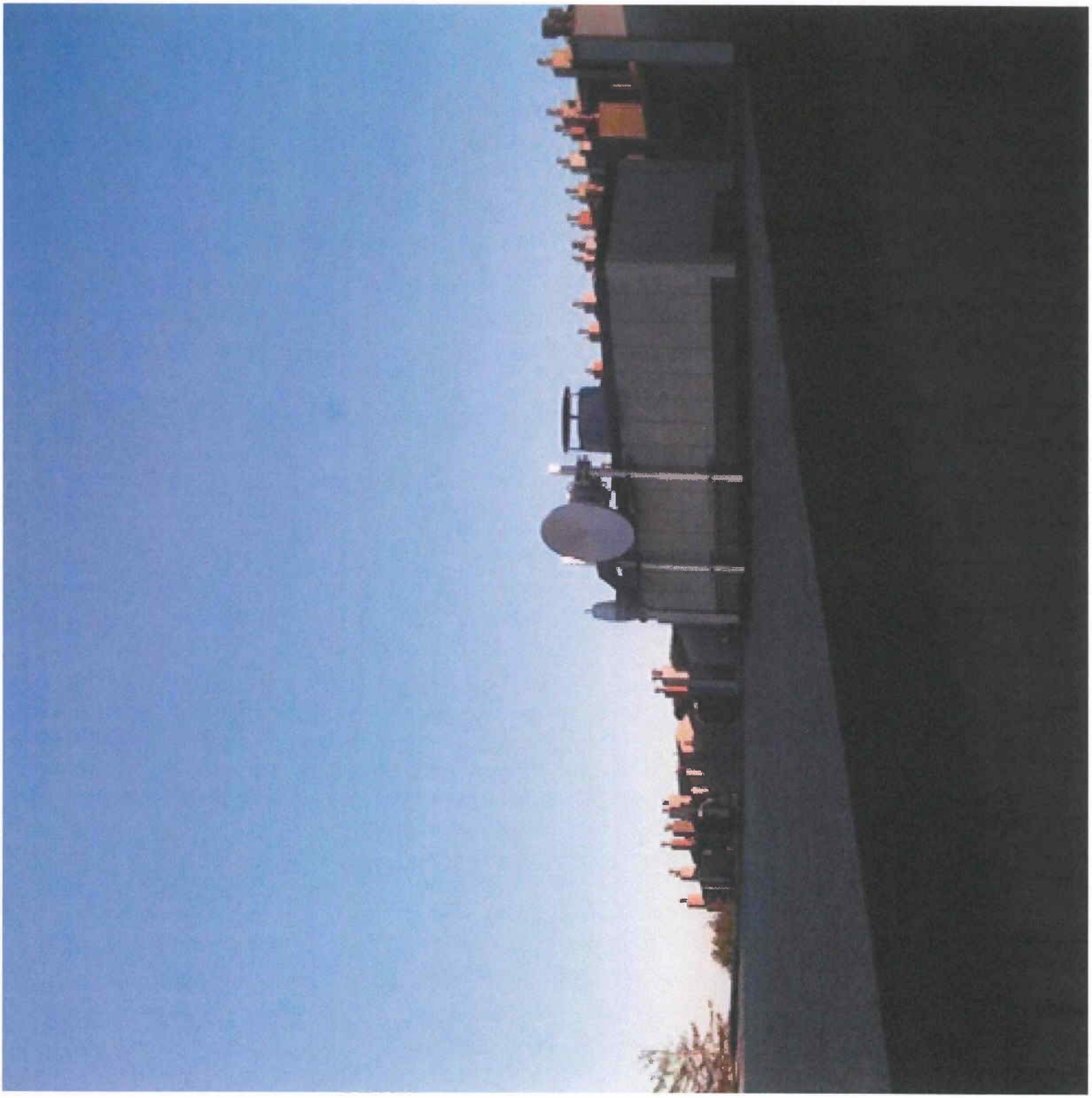
DR. APPLICATION RE: 58 DIGBY STREET
EXH. B – PHOTOGRAPH PROVIDED BY MONKEYBRAINS OF INSTALLATION
THAT CONFIRMS CONTINUED USE AS "REPEATER"

DR APPLICATION RE: 58 DIGBY STREET
EXH. C – PHOTOGRAPH OF MONKEYBRAINS' MODIFIED CONFIGURATION



DR APPLICATION RE: 58 DIGBY STREET
EXH. C – PHOTOGRAPH OF MONKEYBRAINS' MODIFIED CONFIGURATION

DR APPLICATION RE: 58 DIGBY STREET
EXH. D – PHOTOGRAPH OF MONKEYBRAINS' MODIFIED CONFIGURATION
FROM VANTAGE POINT OF DR APPLICANT'S RESIDENCE



Superior Access Solutions, Inc.
21037 Heron Way
Lakeville, MN 55044
Tel. 952.469.8874

Scott Sanchez, Zoning Administrator
City and County of San Francisco
Planning Department

VIA ELECTRONIC CORRESPONDENCE (SCOTT.SANCHEZ@SF.GOV.ORG)

Re: **Use of Commercial Grade Antennas and Wireless Equipment at 58 Digby Street**

April 19, 2013

Mr. Sanchez:

I am the Vice President of Engineering with Superior Access Solutions, a full service system integration and equipment reseller who specializes in complete networking and transmission solutions for the US Federal and commercial broadcast markets. I have over 23 years of experience in the area of telecommunications and evaluating transmission solutions nationwide, and 34 years of experience as a practicing engineer.

I was retained as an expert by Kimberly Huangfu of Buchalter Nemer, counsel for the Chars, for the purpose of evaluating and conducting a radio frequency ("RF") audit and assessing the use and scope of the transmissions emitting to and from the antennas located at 58 Digby Street ("Subject Property").

On March 13, 2013, I conducted a site survey of the Chars' residence located at 62 Digby Street, which is directly adjacent to the Subject Property. The vantage point from the Chars' home offers a clear line of sight to the antennas at issue.

Attached to this cover letter are my initial findings, which provide a complete list of the site equipment, along with the vendor, model, frequency of operation, and function of the various functional blocks. As noted in my initial report, "It is judged that the equipment at the site is being used to allow multiple users to gain access to network resources. This is typically the function of a service producer or in the case of a telecom provider a Point of Presence (POP) where access to a particular network (or the internet) is provided. Residential equipment used for internet access is typically only comprised of an access point, and does not contain multiple point-to-point links, as this site does." (Superior Access Solutions, RF Audit, Mar. 14, 2013 at p. 5, attached hereto as Exh. "A".)

Since my initial March 13, 2013 on-site inspection, I have also reviewed the attached photographs that were taken on April 18 and April 19, 2013 of the Subject Property (attached hereto as Exhs. "C" and "D"), and make the following observations:

1. In the original report, we identified the presence of two point-to-point links, two wireless base stations, and one wireless bridge. (See Exh. "B" taken Mar. 13, 2013.) The updated photographs shown in Exhibits C and D indicate that one of the wireless base stations and the wireless bridge has been removed.

2. Though the equipment identified above has been removed since my initial March 14, 2013 report, the remaining equipment (as of the time that the attached photograph was taken earlier this morning) undoubtedly suggest that the equipment continues to provide access to and distribute bandwidth serving the Mission District. *Providing this level of connectivity outward to other areas in San Francisco falls well outside the scope of "residential use" and is consistent with a commercial application such of that of an internet service provider.*

3. As noted previously, the Subject Property still has two point-to-point links installed. These types of links usually are deployed to enable bulk transport of data traffic from a single point to another. Additionally, the links in question also are aligned to terminate at different locations. *This is indicative of a redundant*

Superior Access Solutions, Inc.
21037 Heron Way
Lakeville, MN 55044
Tel. 952.469.8874

topology, one that is usually found in telecom applications that require high reliability – not in residential installations.

4. The Subject Property still has a single wireless base station. The function of the base station (to provide access to network resources over a broad geographic range) still exists, with service area decreased by the removal of one of the base stations. In comparison, if the equipment were to be used purely for residential purposes, it would receive wireless signals in a single link configuration, as opposed to distributing them via multiple backhaul links coupled with a wireless base station.

In summary, the Subject Property still contains two separate wireless links, one of which has a capacity of 1 Gbit/sec and one wireless base station. It is our judgment that the presence of two high capacity links in a redundant topology, coupled with the existence of a base station, whose function is to extend connectivity over a wide area, is consistent with a commercial application such as that of an internet service provider.

If you have additional questions regarding this site please do not hesitate to call at (925) 469-8874, extension 155.

Regards,

Bob Kovach
VP Engineering
Superior Access Solutions, Inc.

Superior Access Solutions, Inc
21037 Heron Way
Lakeville, MN 55044

RF Audit

62 Digby St.
San Francisco, CA

Prepared By:

Bob Kovach
VP Engineering

Superior Access Solutions, Inc.
bkovach@sa-solutions.com
952-469-8874 x 155

Submitted March 14, 2013

Overview

This document provides the results of the RF audit conducted at 62 Digby on March 13, 2013.

The goal of the audit was to identify the effects of equipment deployed at the location 58 Digby, (referred to "site") which is immediately adjacent to 62 Digby.

The site was scanned for RF emissions using the following equipment:

1. Aaronia 60105 model spectrum analyzer
2. Advantest U3751 model spectrum analyzer
3. Omnidirectional antenna, retractable, 10 – 800 MHz
4. Log periodic antenna, Aaronia model Hyperlog 60100, .68 – 10 GHz

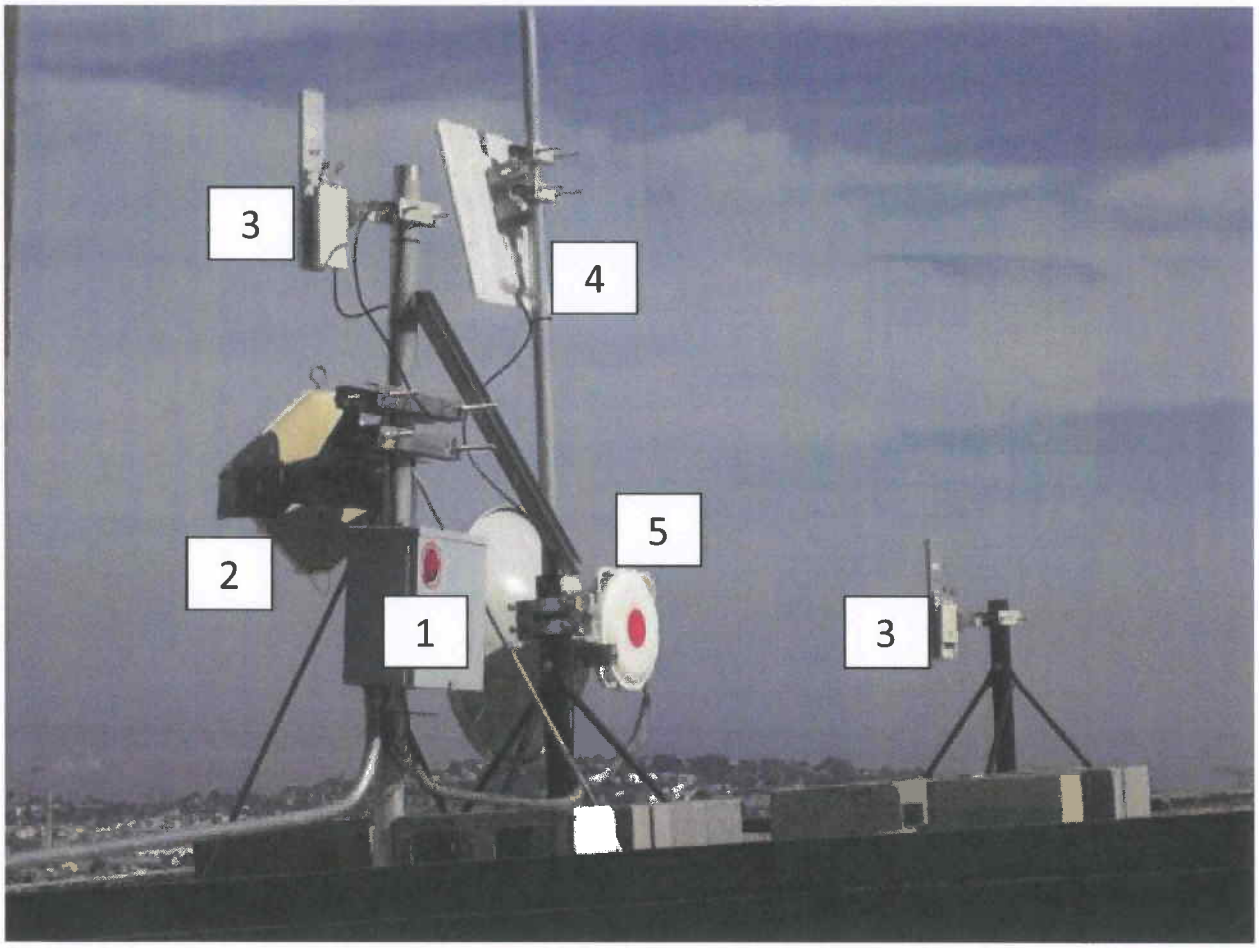
As limited by equipment and the majority of deployed products, testing was conducted from 80MHz to 8 Ghz.

The testing consisted of the following steps:

1. Perform sweep of all frequencies to measure emissions and identify any that exceeded limits for exposure to humans.
2. Identify any emissions likely to be generated by the site equipment, and perform additional tests to verify if in fact the site was the source of the emissions.
3. Survey the site equipment and where possible, identify vendor, model, frequency of operation, and function of the various functional blocks.

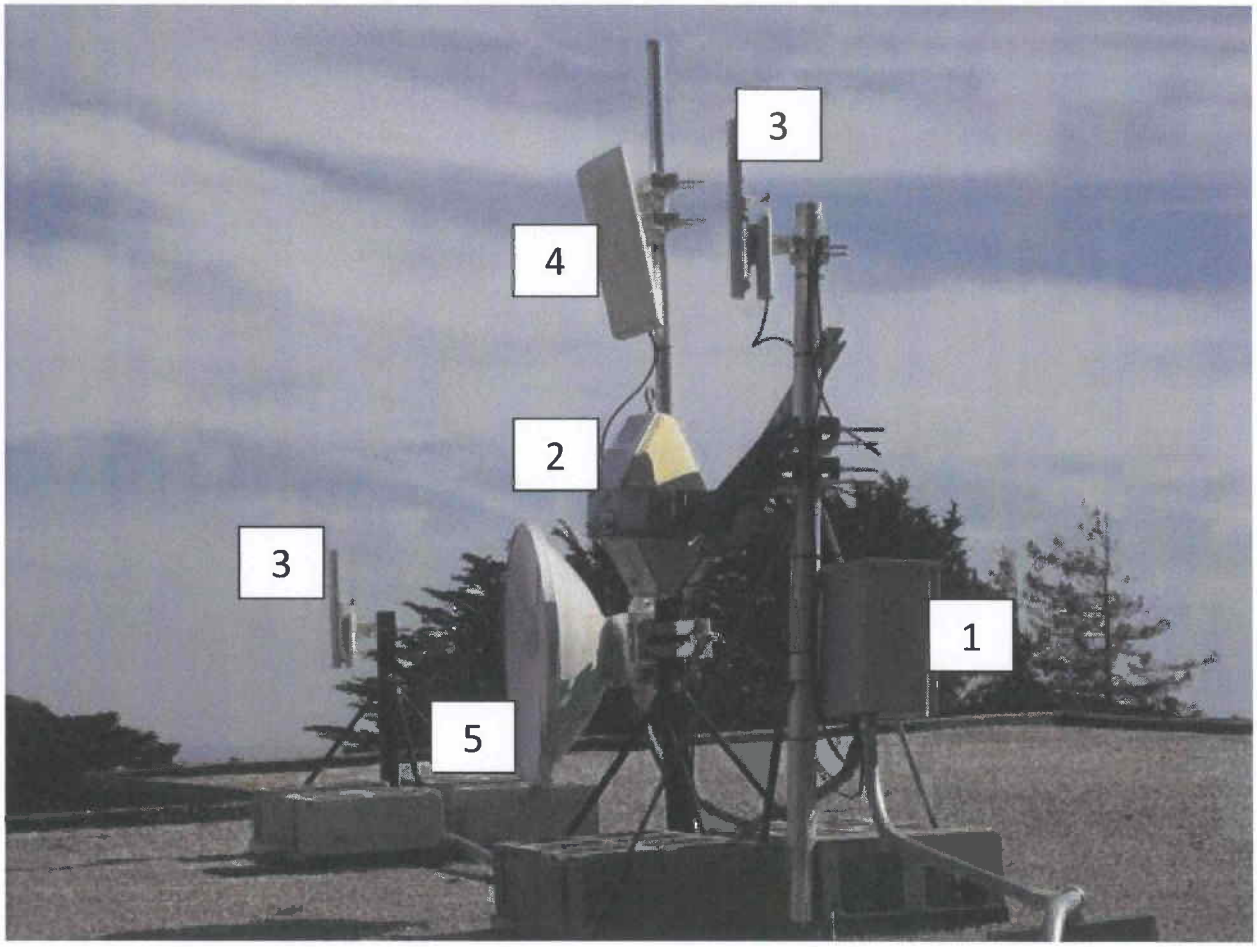
Site Description

The site equipment is shown in the photos below.



A summary of the site equipment is produced in the table below:

Item	Description
1	Utility Box. This box distributes power and connectivity from the interior to the rooftop equipment.
2	Broadband point-to-point link, Bridgewave, directed at Bernal Hts Tower. These links operate at 60/80 GHz. As this frequency exceeds the range of the test equipment, emissions could net be measured.
3	MIMO base station, Ubiquity Rocket M5. This equipment operates at 5 GHz.
4	MIMO bridge, Ubiquity Powerbridge. This equipment operates at frequencies of 900 Mhz, 2.4 GHz, 3.5 GHz and 5 GHz. It is believed that this equipment operates at 5 GHz.
5	Broadband point-to-point link, vendor not identified, directed at downtown San Francisco. The operational frequency could not be deduced for this equipment.



From the equipment identification and vendor information, three functional elements have been identified:

1. Point-to-point link, which is identified by the use of directional antennas and is equipment designators 2 and 5. A point-to-point link is used to connect two geographic locations to enable traffic transport between them. These links are typically high capacity, and carry 100 Mb/s to 1 Gb/s of payload. Unit 2 is specified to carry 1 Gb/s of payload. The most prevalent use of these types of links is to aggregate traffic at one location and to transport it to a remote location. This operation is also called backhauling. Two separate point-to-point links were identified at the site; one link is directed at the Bernal Heights tower, and one link is directed to downtown San Francisco.

2. Base Station, which is identified by non-directional antennas, and is equipment designator 3. Base Stations are used to provide access to a network between multiple users, or for a single user over a wide area. Non-directional antennas allow the

propagation of the RF signal over a wider range. In this case, it is believed that the Base Station is used to provide access to multiple users. Two separate Base Station units were identified at the site.

3. Wireless Bridge, equipment designator 4, which can be used in a number of ways. A Wireless Bridge can be used to connect two networks, or as a repeater to extend the range of a wireless network. In this mode of operation, the Wireless Bridge is used in a point-to-point topology. Alternatively, the Wireless Bridge can be used to connect from one to many networks, in which case this topology is called "point-to-mulitpoint". A typical example is interconnecting multiple buildings.

Summary

The site equipment as described above provides a number of different equipment types that serve different functions. These functions are:

1. Network Access -- This function allows a number of user to access a network, and is distinguished by the presence of multiple access points, provisioned with non-directional antennas.
2. Transport – This function allows traffic to be transported "in bulk" from one site to another. This function is characterized by the presence of point-to-point links, using directional antennas. The site in question supports two such links that terminate to different locations.

Based on this information, it is judged that the equipment at the site is being used to allow multiple users to gain access to network resources. This is typically the function of a service provider or in the case of a telecom provider a Point of Presence (POP) where access to a particular network (or the internet) is provided. Residential equipment used for internet access is typically only comprised of an access point, and does not contain multiple point-to-point links, as this site does.

SUPPLEMENTAL BRIEF FILED IN SUPPORT OF DISCRETIONARY REVIEW APPLICATION

of

DEVRON AND VALERIE CHAR
62 DIGBY STREET, SAN FRANCISCO, CA 94131

With Respect To

THE INSTALLATION OF POINT-TO-POINT MICROWAVE ANTENNAS

by

ANOTHER CORPORATE ISP, LLC dba MONKEYBRAINS
58 DIGBY STREET, SAN FRANCISCO, CA 94131

(BUILDING PERMIT APPLICATION NOS. 2013.01309123 AND 2013.05076233)

I. INTRODUCTION

On March 31, 2013, Devron and Valerie Char ("DR Applicants") filed a Discretionary Review Application ("DR Application") regarding Building Permit Nos. 2013-01309123 and 2013-05076233. The scope of the DR Application relates specifically to the Project Sponsor's ("MonkeyBrains") illegal erection of commercial antennas in a residential zoned district without the benefit of permit, in violation of San Francisco Planning Code provisions governing the permitted installation of wireless telecommunication service facilities ("WTS"), as well as general zoning and permitted use restrictions codified in Article 2 of the Planning Code.

Notwithstanding MonkeyBrains' most recent attempt to once again circumvent the Planning Department's purview by removing (for a second time) the "Ubiquiti Rocket M5" panel antenna just days before upcoming October 3, 2013 hearing[1], MonkeyBrains'

[1] It is worth mentioning that MonkeyBrains had previously represented to Planning Staff and the DR Applicants that only two antennas remained, the 60 GHz Bridgewave and 24 GHz Lumina link, as of the time this Application was filed on May 31, 2013. Shortly thereafter, the DR Applicants observed that the Ubiquiti Rocket M5, a *third* antenna, was repositioned on the side of the Subject Property from that area that was generally outside DR Applicant's line of sight. (See Exh. 2 attached hereto for photographs of the recent installation.)

MonkeyBrains, on the other hand, recently has taken the position that it never removed this third panel antenna, but simply repositioned it "to the back of house to [allegedly] transition customers off that antenna." (MonkeyBrains Sept. 18, 2013 Opp'n Brief at p. 1.) *It is unclear why a residential application would need an additional panel antenna for any other reason but*

chronic pattern of deceit and dishonesty in its representations both to the Chars and Planning Department Staff fails to instill the confidence needed should MonkeyBrains be given latitude to self-monitor its configuration under Over the Air Reception Devices ("OTARD") Exemption. (*See generally*, Exh. 6 attached hereto.)

MonkeyBrains is now contending that its goal is "to provide a robust service via wireless mesh networks." (DR Opp'n Brief at p. 1.) By definition, a "mesh" network inherently increases dependability to users in the network by relying on the transmission of signals from multiple users from multiple access points. As mesh networks increase their capacity and reliability by adding nodes, the nature of a reliable, high-capacity mesh network intrinsically requires multiple nodes and users. Thus, MonkeyBrains is essentially admitting that it is servicing other users in the vicinity of the subject property, not a single-end user, i.e., the resident of 58 Digby Street, as initially represented by MonkeyBrains.

To allow this type of blatant disregard for applicable Planning Code provisions and federal laws regulating the use and safety of WTS facilities, the Planning Commission would be setting a dangerous precedent that could result in the expansive use of commercial antennas in residential neighborhoods outside the scope of what was intended by OTARD and local planning regulations. To avoid this slippery slope, the DR Applicants respectively ask that the Planning Commission order Project Sponsor to remove all antennas being used for commercial purposes, including any and all "redundant" devices or relay stations, in accordance with local laws and regulatory standards.

II. MONKEYBRAINS HAS SHAMELESSLY ENGAGED IN UNDERHANDED TACTICS AND MADE NUMEROUS MISREPRESENTATIONS CONCERNING THE PURPORTED USE OF THE ANTENNAS AT ISSUE

MonkeyBrains' "timeline" of their alleged "work" at 58 Digby Street (the "Subject Property") barely scratches the surface of relevant facts that have a direct bearing on the legitimacy of this application. By conveniently failing to mention several critical points, MonkeyBrains has painted a wholly incomplete and inaccurate representation of what has transpired since August of 2012. The following provides additional commentary as it relates to the scope of this application:

a.) On August 2, 2012, MonkeyBrains installed five, *not four*, antennas on the roof of the Subject Property, including the BridgeWave FE60 GHz, SAF Lumina 24 GHz, two Ubiquity Rocket M5 5GHz antennas, and one unidentified panel antenna. (Hereinafter, generally referred to as the "Subject Antennas", which includes the

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to serve as a relay station to transmit bandwidth to other users in the area. (Kovach Decl. at p. 2, ¶6, attached hereto as Exh. 4.)

remaining two antennas - BridgeWave FE60 GHz, SAF Lumina 24 GHz; *see also*, Exh. E to DR Application, p. 3 of RF Audit Report.)

b.) On or around February 25, 2013, Planning Department staff met with MonkeyBrains to discuss the nature of MonkeyBrains' non-permitted use of the antennas on the Subject Property. *At that time, MonkeyBrains was told to remove the entire configuration*.

c.) On April 19, 2013, after months of no action by MonkeyBrains to remove the antennas, the Chars retained Mr. Bob Kovach, Vice President of Engineering, a radio frequency ("RF") expert with Superior Access Solutions, Inc., who conducted a site inspection of the Subject Property and provided a letter attesting to the commercial use of the Subject Antennas:

"As noted in my initial report, 'It is judged that the equipment at the site is being used to allow multiple users to gain access to network resources. This is typically the function of a service producer or in the case of a telecom provider a Point of Presence (POP) where access to a particular network (or the internet) is provided. Residential equipment used for internet access is typically only comprised of an access point, and does not contain multiple point-to-point links, as this site does.'" (*See* Exh. E to DR Application - Superior Access Solutions Letter at p. 1, *see also*, RF Audit, Mar. 14, 2013 at p. 5.)

"2. Though select equipment has been removed since my initial March 14, 2013 report, the point-to-point links that remain (as of the time that the attached photograph was taken earlier this morning) undoubtedly suggest that the equipment continues to transmit and distribute bandwidth pointing towards the Mission District. *Providing this level of connectivity outward to other areas in San Francisco falls well outside the scope of "residential use" and is consistent with a commercial application such of that of an internet service provider*. In comparison, if the equipment was to be used purely for residential purposes, it would pick up bandwidth signals as opposed to distribute them."

(*Id.*; see also, Exh. 4 - Declaration of B. Kovach ("Kovach Decl.") at pp. 1-2, ¶¶4-5.)

d.) Shortly thereafter, the Planning Department issued the attached Enforcement Notification on April 22, 2013, which provides in relevant part as follows:

"Planning Department has determined that the above referenced property is in violation of the Planning Code for not using the property in the manner it is authorized . . . The complaint alleges that an unpermitted Wireless Telecommunication Services (WTS) Facility has been installed at the subject property listed above, as part of MonkeyBrain's wireless telecommunications

network. The purpose of this notice is to inform you about the applicable Planning Code regulations in regards to the authorized use of the subject property so you can take appropriate action to bring your property in compliance with Planning Code. The subject property is located within an RH-1(Residential, Single-Family) Zoning District, where under Planning Code Section 209.6.1(b) Conditional Use Authorization is required for the installation of other public uses such as a WTS facility.

The Planning Department requires that you immediately proceed to abate the violation by either removing the unpermitted Wireless Telecommunication Services Facility installed at 58 Digby Street, or legalize the wireless facility by taking the following actions:

1. Immediately remove the unpermitted hub from 58 Digby Street, and

2. Submit a building permit application to document removal of the hub and legalize installation of antennas which provide residential service for 58 Digby Street."

(Apr. 22, 2013 Planning Department Enforcement Notification, attached hereto as Exh. 1.)

e.) In response to Planning's Enforcement Notice, MonkeyBrains admitted that it was using the antennas as a relay or "hub" station when it finally agreed to remove the "backup antenna" and "existing mast and repeater" though MonkeyBrains was initially adamant that its configuration was being used only for residential purposes. (Exh. B attached to DR Application.) Despite alleging non-commercial use for months prior, MonkeyBrains conceded in an e-mail to the Planning Department, sent on or around May 6, 2013, that "[a]fter receiving the Enforcement Notification on April 22, 2013 [,] we [MonkeyBrains] began the process of remotely terminating any point to multi-point radio activity at the site on question. (*See* E-mail from Masry to Huangfu, May 6, 2013 forwarding text of e-mail from A. Menendez of MonkeyBrains, attached hereto at Exh. 3.)

This was, of course, is only one of many misrepresentations made by MonkeyBrains. Thus, MonkeyBrains only "came clean" so to speak after Planning firmly took the position that the initial configuration fell outside the scope of what was permitted under the Planning Code.

When asked for "an explanation of the reason why [the Subject Property Owner], Mr. Nash, needs such high bandwidth equipment", MonkeyBrains provided the following cryptic statement (even though it had recently admitted to the use of multi-point radio activity from the Subject Property): "We can not [sic] answer this question. We provide the service not question why our customers want it."

f.) Sometime between May and September 2013, MonkeyBrains reattached a third panel antenna, the active Ubiquiti Rocket M5", "to the back of house to [allegedly] transition customers off that antenna", only to remove this antenna once DR Applicants informed Planning Staff of this new addition. (DR Opp'n Brief, Sept. 18, 2013 at p. 1; *see also*, E-mail from Counsel for Chars to O. Masry of Planning, dated August 19, 2013, with photographs of Ubiquiti Rocket M5 Antenna, attached hereto as Exh. 2.)

It is not clear which "customers" MonkeyBrains is referring to, but the Char's RF expert, Mr. Kovach, has confirmed that this server antenna serves to provide internet to other users (non-residents of 58 Digby Street) and provide a wide angle of coverage to serve bandwidth over a wide number of users. (*See* Kovach Decl. at p. 2, ¶6 attached hereto as Exh. 4.) The reattached (and relocated) Ubiquiti Rocket M5 antenna is the same type that was originally installed and removed in May 2013. The design and operation of these antennas provides RF coverage to wide areas, supporting the contention that said antennas are being used to serve multiple users.

III. MONKEYBRAINS HAS FAILED TO PROVIDE ANY SHRED OF EVIDENCE THAT THE ANTENNAS ARE INTENDED AND DESIGNED FOR RESIDENTIAL, NOT COMMERCIAL, USE

MonkeyBrains has consistently provided shifting information and technical data sheets concerning the Subject Antennas.[2] As for the 60 GHz antenna, MonkeyBrains, perhaps mistakenly, submitted a data sheet for an 80 GHz wireless link, which is also inconsistent with several representations that its current configuration includes a 60 GHz Bridgewave link. Regardless of whether the antenna is a 60 GHz or 80 GHz, the data sheet attached to MonkeyBrains' September 18, 2013 submittal substantially supports the conclusion that the links are used for *commercial uses, including but not limited to mobile backhaul, service provided, education, enterprise, government and municipalities, and healthcare*. (*See* Bridgeview Data Sheet attached as Exh. 5 [""Bridgewave is the leading supplier of gigabit RF connectivity solutions for service provider, government, military and enterprise applications . . . as well as extending enterprise LANS between buildings and sites."; *see also*, Bridgewave Data Sheet for 80 GHz antenna ["BridgeWave is the leading supplier of high capacity and gigabit millimeter wave *connectivity solutions for service provider, government, military, and enterprise applications* . . . wireless links extend network operator fiber . . . and sites at a fraction of the cost and time to implement fiber *between facilities*."].) There is not a single reference

[2] To confuse matters even further, MonkeyBrains recently submitted a "Technical Data" sheet for an Arkivator 24 GHz antenna, not a Lumina 24 GHz link, with its September 18, 2013 submittal to the Planning Department, which provides no information on the antenna's minimum safe distance requirements.

to residential use in any of the technical data or installation materials for the Subject Antennas.

In fact, as part of its attempt to amicably resolve this matter with MonkeyBrains, the Chars went to great lengths to find a RF expert, who specializes in antennas that operate at such high frequencies, with access to the equipment necessary to measure the 24 and 60 GHz antennas. After contacting about fifteen (15) RF experts and consulting firms, including the RF consultant that MonkeyBrains recommended and has used in the past, Hammett and Edison, most if not all of the RF experts confirmed the unusual nature of these antennas. Only one firm on the entire list, attached hereto as Exhibit 8, had the necessary equipment on hand to be able to measure the Subject Antennas. Even Hammett and Edison, MonkeyBrains' own recommended consultant, stated that they only have equipment to measure up to 40 GHz and would have to recalibrate the equipment to test the 60 GHz Bridgewave.

In sum, the sheer volume of RF consultants that the Chars reached out to, who were intrigued with the purported "residential" use of these commercial-grade antennas, confirms the unusual nature of the antennas at issue. At a minimum, the onerous should be on MonkeyBrains to prove that the antennas are not being used in a commercial capacity. Otherwise, such non-permitted uses are unequivocally precluded in accordance with Article 2 of the Planning Code.

IV. THE SUBJECT ANTENNAS ARE NOT OTARD COMPLIANT

MonkeyBrains' assertion that its antennas are subject to OTARD are misplaced. The Federal Communications Commission Guidelines expressly provide that the OTARD exemption rules do not apply to hub or relay antennas: "The rule does not cover antennas used to transmit signals to and/or receive signals from multiple customer locations." (Exh. 6 attached hereto at p. 2, which can also be accessed at http://www.fcc.gov/guides/over-air-reception-devices-rule.) To the contrary, the rule only applies to "customer-end antennas" "which are antennas placed at a customer location for the purpose of providing service to customers at that location." (*Id.*)

Based on the specification of the equipment described above, it appears that MonkeyBrains is using the Subject Antennas to implement an internet point of presence, which does not qualify as customer end-antenna and, thus, falls outside the scope of the OTARD exemption. (Kovach Decl. at p. 2, ¶5 and p. 3, ¶8.)This reading is also not consistent with the claimed "mesh" network goal that MonkeyBrains is purporting to achieve.

V. MONKEYBRAINS HAS FAILED TO PROVIDE ANY USEFUL INFORMATION TO RESPOND TO OR ALLEVIATE THE CHARS' HEALTH AND SAFETY CONCERNS

At DR Applicant's request, MonkeyBrains previously provided the DR Applicant with an installation manual for the 24 GHz Lumina antenna on May 30, 2013. As explained in the Chars' initial DR Application, the Installation Manual for the 24GHz Lumina link states that the *minimum safe distance for general public exposure, as opposed to occupational exposure which is not at issue here, is 275 centimeters (equivalent to about 9 feet)*. (*See* Exh. F attached to DR Application at p. 5.) DR Applicants' primary living space, namely the living and dining room and office space, is on the cusp of the minimum safe distance.

It is also imperative to note that the safety baseline provided in the Installation Manual assumes an average exposure time of 30 minutes, whereas MonkeyBrains' installation is presumably operating at a continuous rate to ensure the level of "reliable internet service" that the Owner purportedly needs.

To date, MonkeyBrains has not provided any response to the Chars' request for further information to address their health and safety concerns. Consequently, the Chars contacted the manufacturer of the BridgeWave antenna and obtained the attached "RF Safety of BridgeWave's Wireless Bridges." (Attached hereto as Exh. 7.) Similar to the 24 GHz Lumina link, the average time of exposure for general population is limited to 30 minutes. (*Id.* at p. 1.) Moreover, the "far field boundary" lists a distance of 9.51 meters, which is approximately 31.2 feet, for a 60GHz integrated antenna. (*Id.* at p. 4 (Slide 7).) And finally, the Bridgewave materials clearly state that "[t]hese wireless systems are typically installed in secure locations such as towers or rooftops, where access by the general population is strictly limited. Therefore it is highly unlikely for someone in the general population to stand directly in front of these systems." (*Id.* at p. 8 (Slide 15).)

As previously highlighted in DR's Application, this is unfortunately not the case here. DR Applicants' residence is directly adjacent to the Subject Property with a distance of approximately less than 10 feet between the two structures. Perhaps more alarming is that the two antennas are located only a few feet above the residents of the Subject Property. Furthermore, measurements and safety considerations generally operate under the presumption that ground-level power densities are below recommended safety limits due to an increased distance between the ground-level and towers on which such antennas are typically located. (Federal Communications Commission, Office of Engineering and Technology - OET Bulletin 56, Aug. 1999, at p. 19 [states that "as an added margin of safety, micro tower sites are normally inaccessible to the general public".], relevant pages attached hereto as Exh. 9.) Given the close proximity of the antennas, the DR Applicants are understandably concerned about the adverse health

impacts that such prolonged and continuous exposure to harmful RF emissions could cause in the long-term.

VI. CONCLUSION

For all the foregoing reasons, the suspended building permit cannot be approved and MonkeyBrains should be required to remove all commercial-grade equipment from the Subject Property. Though DR Applicants have engaged in ongoing discussions with counsel for MonkeyBrains in hopes of an amicable resolution, such efforts unfortunately been derailed given MonkeyBrains' underhanded tactics leaving the Chars with no recourse but to continue with the Discretionary Review process.

Dated: September 23, 2013

By: Kimberly A. Huangfu
Kimberly A. Huangfu

Attorneys for DR Applicants,
Drs. Devron and Valerie Char

INDEX

INDEX OF EXHIBITS SUBMITTED IN SUPPORT OF DISCRETIONARY REVIEW APPLICANT'S SUPPLEMENTAL BRIEF 58 DIGBY STREET

Exhibit No.	Description
1	Planning Department, April 22, 2013 Enforcement Notice
2	August 19, 2013 E-mail from Counsel for DR Applicant to O. Masry of Planning with photographs of third panel antenna attached
3	May 6, 2013 E-mail from Masry to Huangfu, May 6, 2013 forwarded from A. Menendez of MonkeyBrains with outline of rooptop area and removal of "existing mast and repeated" and "cinder blocks"
4	Declaration of Bob Kovach, Vice President of Engineering of Superior Access Solutions, Inc. ("Kovach Decl.")
5	BridgeWave FE60U Data Sheet
6	FCC Guide to Over-the-Air Reception Devices ("OTARD") Rule
7	RF Safety of BridgeWave's Wireless Bridges
8	Summary of DR Applicant's Attempt to Secure a RF Consultant with Equipment for 24 and 60 GHz Antennas to Conduct Site Safety Test
9	Federal Communications Commission, Office of Engineering and Technology - OET Bulletin 56, Aug. 1999 (relevant pages only)

EXHIBIT 1

SAN FRANCISCO
PLANNING DEPARTMENT

ENFORCEMENT NOTIFICATION
Planning Code Section 176

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

April 22, 2013

Property Owner
Stephen and Karl Nash
58 Digby Street
San Francisco, CA 94131

Tenant
MonkeyBrains
Attn: Rudy Rucker or Alex Menendez
635 Potrero Avenue
San Francisco, CA 94110

Site Address:	**58 Diby Street**
Assessor's Block/Lot:	**7540/009**
Zoning District:	**RH-1 (Residential, Single-Family) Zoning District**
Complaint Number:	**12101**
Code Violation:	**209.6(b): Unpermitted Wireless Telecommunication Services Facility**
Administrative Penalty:	**Up to $250 Each Day of Violation**
Respond By:	**Within 15 days from the date of this notice**
Staff Contact:	**Adrian C. Putra, (415) 575-9079 or adrian.putra@sfgov.org**

The Planning Department has determined that the above referenced property is in violation of the Planning Code for not using the property in the manner it is authorized. As the owner or leaseholder of the subject property, you are a 'responsible' party to bring the above property into compliance with the Planning Code. The details of the violation are discussed below:

DESCRIPTION OF VIOLATION

The Planning Department has received a complaint that a violation of the Planning Code exists at the referenced property. The complaint alleges that an unpermitted Wireless Telecommunication Services (WTS) Facility has been installed at the subject property listed above, as part of MonkeyBrain's wireless telecommunications network. The purpose of this notice is to inform you about the applicable Planning Code regulations in regards to the authorized use of the subject property so you can take appropriate action to bring your property in compliance with Planning Code. The subject property is located within an RH-1(Residential, Single-Family) Zoning District, where under Planning Code Section 209.6.1(b) Conditional Use Authorization is required for the installation of other public uses such as a WTS facility.

Pursuant to Planning Code Section 174, every condition, stipulation, special restriction, and other limitation shall be complied with in the use of land and structures to the effect that the existing lawful use or proposed use of a structure or land conforms to the provisions of Planning Code. Failure to comply with any provisions of Planning Code constitutes a violation of Section 176.

HOW TO CORRECT THE VIOLATION

The Planning Department requires that you immediately proceed to abate the violation by either removing the unpermitted Wireless Telecommunication Services Facility installed at 58 Digby Street, or legalize the wireless facility by taking the following actions:

1. Immediately remove the unpermitted hub from 58 Digby Street, and
2. Submit a building permit application to document removal of the hub and legalize installation of antennas which provide residential service for 58 Digby Street.

Please contact our Wireless Planner, Omar Masry (415-575-9116 and omar.masry@sfgov.org) to review the building permit application.

TIMELINE TO RESPOND

The responsible party has **fifteen (15) days from the date of this notice** to contact the staff planner noted at the top of this notice and demonstrate that the subject property is in compliance with Planning Code. The abatement actions shall be taken as early as possible. Any unreasonable delays in abatement of violation may result in further enforcement action by the Planning Department.

PENALTIES AND APPEAL RIGHTS

Failure to respond to this notice by correcting the violation or demonstrating compliance with Planning Code **within fifteen (15) days from the date of this notice** will result in the issuance of a **Notice of Violation and Penalty** by the Zoning Administrator. Administrative penalties of up to **$250 per day** will be assessed to the responsible party for each day the violation continues thereafter. The Notice of Violation and Penalty provides appeals processes noted below.

1) Request for Zoning Administrator Hearing. The Zoning Administrator's decision is appealable to the Board of Appeals.

2) Appeal of the Notice of Violation and Penalty to the Board of Appeals. The Board of Appeals may not reduce the amount of penalty below $100 per day for each day the violation exists, excluding the period of time the matter has been pending either before the Zoning Administrator or before the Board of Appeals.

3) Request for alternative review by the Planning Director under the process set forth in Code Section 176.1

ENFORCEMENT TIME AND MATERIALS FEE

Pursuant to Planning Code Section 350(c)(1), the Planning Department shall charge for 'Time and Materials' to recover the cost of correcting Planning Code violations and violations of Planning Commission and Planning Department's Conditions of Approval. Accordingly, the responsible party may be subject to an amount of $1179 plus any additional accrued time and materials cost for Code Enforcement investigation and abatement of violation. This fee is separate from the administrative penalties as noted above and is not appealable.

OTHER APPLICATIONS UNDER CONSIDERATION

The Planning Department requires that any pending violations be resolved prior to the approval and issuance of any new applications that you may wish to pursue in the future. We want to assist you in ensuring that the subject property is in full compliance with Planning Code. Therefore, any applications not related to the abatement of violation on the subject property will be placed on hold until further notice.

cc:
Daniel Lowrey, Acting Deputy Director, Department of Building Inspection
Omar Masry, Planner, San Francisco Planning Department

EXHIBIT 2

Huangfu, Kimberly

From: Huangfu, Kimberly
Sent: Monday, August 19, 2013 10:46 AM
To: Masry, Omar (omar.masry@sfgov.org)
Cc: Castro, Georgina
Subject: 58 Digby Street - BPA No. 2013.05.007.6233 (Request for DR)
Attachments: IMG_1021.jpg; IMG_1022.jpg

Omar,

I am writing to follow up on our telephone conversation of last Friday, August 16, 2013. As I mentioned, new information has recently surfaced that either the owner or MonkeyBrains has reinstalled what looks like an panel antenna (that was previously removed from the initial roof installation at the Chars' prompting) to the side of the house. (Recent photographs are attached for your review).

That being said, the Chars would like to proceed with the September 12, 2013 DR hearing without further delay given the disingenuous nature of the Chars' dealings with MonkeyBrains thus far, which have been going about a year now. Thus, any discussions of settlement are now off the table since: (1) MonkeyBrains has since put back the configuration, which it admitted was being used as relay station without the benefit of permit (this confirms that the setup is being used for commercial purposes and, thus, MonkeyBrains' assertion that the setup for residential use is false, misleading, and subjects the antennas at issue to Planning's purview); and (2) after speaking with at least 10 RF experts, I have been unable to find an RF consultant who has the equipment needed to measure such high frequencies, given the unusual nature of the antenna frequencies at issue, and is willing to measure frequencies for a residential configuration. In fact, even MonkeyBrains' own suggested consultant, Hammett Edison, only has equipment to measure up to 40 GHz.

Please let me know if we have an opportunity to submit a supplemental filing in advance of the September 12, 2013 hearing to provide the Commission with an update concerning the third panel antenna. Thanks.

Kimberly A. Huangfu | Real Estate & Land Use Associate/LEED AP BD+C | **BuchalterNemer**, A Professional Corporation | 55 Second Street, Suite 1700 | San Francisco, CA 94105-3493 | Direct Dial: (415) 296-1696 | Cell Phone: (415) 867-9205 | Direct Fax: (415) 296-1766 | Switchboard: (415) 227-0900 | khuangfu@buchalter.com | www.buchalter.com | Bio

Castro, Georgina

From: Castro, Georgina
Sent: Monday, September 23, 2013 12:43 PM
To: Castro, Georgina
Subject: FW: VoiceMail from 4155031455

From: Masry, Omar [mailto:omar.masry@sfgov.org]
Sent: Monday, May 06, 2013 4:06 PM
To: Huangfu, Kimberly
Cc: Putra, Adrian; Sanchez, Scott
Subject: RE: VoiceMail from 4155031455

The information below is a response from MonkeyBrains (Alex Menendez) regarding the proposed course of action.

Hello, Omar

As you are aware, we are currently in the process of getting the appropriate permit for removing any non-OTARD compliant gear from the roof of 58 Digby. We are identifying such non-compliant gear as any point to multi-point antenna.

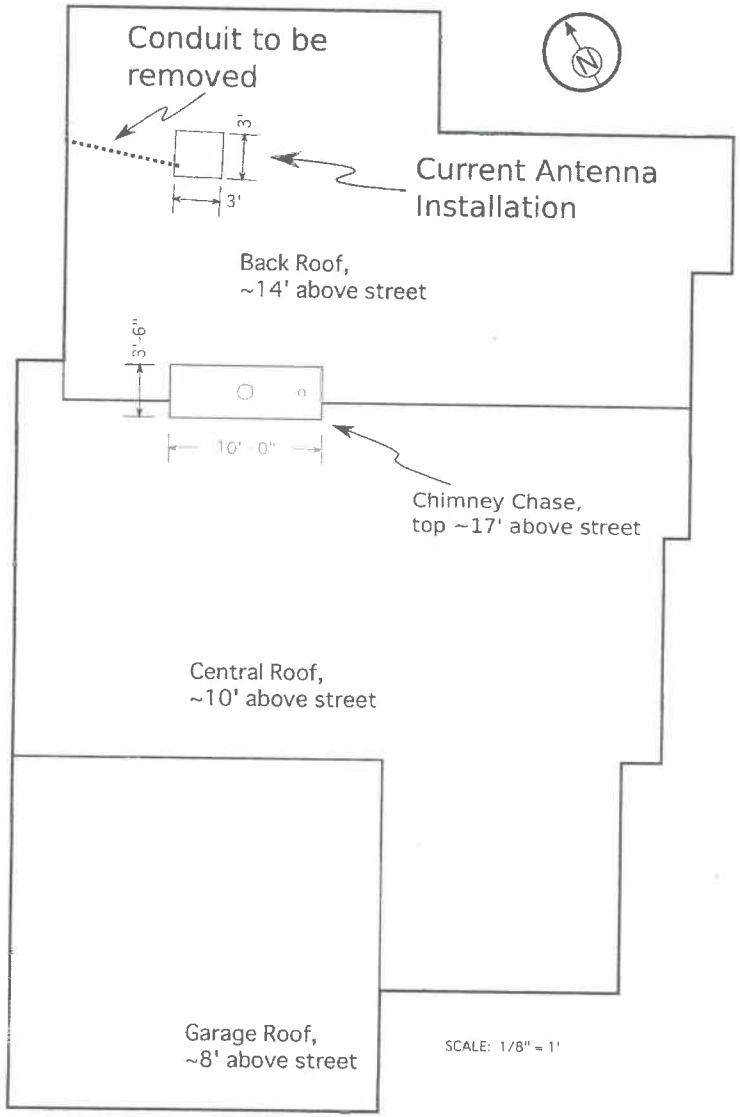
After receiving the Enforcement Notification on April 22, 2013 we began the process of remotely terminating any point to multi-point radio activity at the site in question. The next step is to obtain the appropriate permit to remove gear and properly affix OTARD compliant point to point antennas at the request of CBI.

We want to assure the SF planning department and concerned neighbors that we are very focused on this issue and want to be in compliance as well as provide the level of internet service that our client has requested for his residence.

OMAR MASRY, AICP | PLANNER
San Francisco Planning Department
omar.masry@sfgov.org
P. 415.575.9116 | F. 415.558.6409
1650 Mission Street | 4th Floor | San Francisco | CA 94103


58 Digby San Francisco, Ca 94131
Monkeybrains OTARD End User Facility
(end point residential customer site, non-hub/repeater)
Existing mast & repeater will be removed
X
Backup Antenna to move to South Mast affixed to chimney
4' wide
4' high
Primary Antenna to
X
Cinder blocks & weighed base will
X
All conduit will be removed

58 Digby St. San Francisco, CA 94131



<--- Digby St. --->

Permit for Removal of Equipment

Work to be performed:

Removal of antenna not compliant with OTARD rule, removal of metal base and cinder blocks, and removal of conduit. OTARD compliant antennas will remain and be mechanically affixed to the chimney chase.

DISCRETIONARY REVIEW APPLICATION
FOR 58 DIGBY STREET

EXHIBIT 4

DECLARATION OF BOB KOVACH
IN SUPPORT OF DISCRETIONARY REVIEW APPLICANTS' SUPPLEMENTAL BRIEF

I, the undersigned, Bob Kovach, declare as follows:

1. I was retained as an expert in radio frequency ("RF") and telecommunications matters by Kimberly A. Huangfu of Buchalter Nemer, counsel for the Discretionary Review Applicants, Drs. Devron and Valerie Char.

2. I am the Vice President of Engineering with Superior Access Solutions, Inc., a full service system integration and equipment reseller who specializes in complete networking and transmission solutions for national commercial broadcast markets. I have over 23 years of experience in the area of telecommunications and evaluating transmission solutions nationwide and 34 years of experience as a practicing engineer.

3. On March 13, 2013, I conducted a site survey of the Chars' residence located at 62 Digby Street, which is directly adjacent to the Subject Property located at 58 Digby Street. The vantage point from the Chars' home offers a clear line of sight to the antennas at issue, which, at that time, included five (5) antennas: BridgeWave FE60 GHz, SAF Lumina 24 GHz, two Ubiquity Rocket M5 5GHz antennas, and one unidentified panel antenna.

4. At Ms. Huangfu's request, I prepared a RF Audit on March 14, 2013 and provided the following conclusions:

> "It is judged that the equipment at the site is being used to allow multiple users to gain access to network resources. This is typically the function of a service producer or in the case of a telecom provider a Point of Presence (POP) where access to a particular network (or the internet) is provided. Residential equipment used for internet access is

typically only comprised of an access point, and does not contain multiple point-to-point links, as this site does."

5. It is my understanding that a few of the antennas were removed in April 2013, with two antennas remaining – the 24 and 60 GHz Lumina and Bridgewave antennas. In my professional opinion, the point-to-point links that remain undoubtedly suggest that the equipment continues to transmit and distribute bandwidth pointing towards the Mission District. Thus, this is not consistent with the "customer-end" use described per the Federal Communication Commission's Over the Air Reception Devices ("OTARD") regulations. Providing this level of connectivity outward to other areas in San Francisco falls well outside the scope of "residential use" and is consistent with a commercial application such of that of an internet service provider. In comparison, if the equipment were to be used purely for residential purposes, it would pick up bandwidth signals as opposed to distribute them.

Further, these types of point-to-point links usually are deployed to enable bulk transport of data traffic from a single point to another. The links in question also are aligned to terminate at different locations. This is indicative of a redundant topology, one that is usually found in telecom applications that require high reliability – not in residential installations.

6. MonkeyBrains has confirmed that the third server antenna that was repositioned to the back side of the Subject Property, the Ubiquity Rocket M5 5GHz antenna, is the same type of antenna that was originally installed in August 2012 and removed in April 2013 after the Planning Department issued its Enforcement Notification. I conclude that the purpose of this server antenna is to provide internet to other users (non-residents of 58 Digby Street) as the antenna allows for a wide angle of coverage to serve bandwidth over a wide number of users.

7. It is also my opinion that though the individual antennas, on a piece-by-piece basis, could conceivably be used for a residential application (at least in theory), however, the

two point-to-point links and any combination of the server antenna, as well as the quantity of traffic involved, indicate that the Subject Antennas are being used in a commercial capacity.

8. I have also reviewed MonkeyBrains' September 18, 2013 submittal to the Planning Department and conclude that a "mesh" network inherently increases dependability to users in the network by relying on the transmission of signals from other, multiple users from multiple access points. By its very definition, "mesh" networks increase the capacity and reliability by adding nodes, the nature of a reliable, high-capacity mesh network incurs a requirement for multiple nodes. This framework, again, is not consistent with a residential application.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed at Pleasanton, California this 23th day of September 2013.

/s/
Bob Kovach

BridgeWave
COMMUNICATIONS

FE60U

60 GHz Fast Ethernet Upgradeable Wireless Links

60 GHz WIRELESS LINKS FOR HIGH-BANDWIDTH APPLICATIONS

BridgeWave is the leading supplier of gigabit RF connectivity solutions for service provider, government, military and enterprise applications. BridgeWave Gigabit Ethernet links extend network operator fiber to provide high-capacity access and backhaul, as well as extending enterprise LANs between buildings and sites.

FEATURES

PERFORMANCE:

- License-free operation in the U.S. and Canada
- Full rate, full duplex, Fast Ethernet upgradeable to Gigabit Ethernet
- *Field upgradeable to full Gigabit Ethernet AR60 product using software key* (please refer to AR60 data sheet for upgrade product specifications)
- Interference-free operation enabling high-density deployments
- Low latency for fiber-equivalent performance
- Forward Error Correction provides maximum link range

WIRELESS VIRTUAL FIBER SOLUTIONS FOR:

Enterprise
Server centralization, remote data storage and backup, leased line replacement.

Healthcare
Secure, HIPAA-compliant connectivity, medical office, lab network access, real-time imaging & records, application connectivity.

Education
High-performance campus connectivity, Wi-Fi and security camera backbone.

Government/Municipalities
Video surveillance systems, traffic control and monitoring, Wi-Fi/4.9GHz backhaul.

Service Provider
High-capacity business services, fiber extensions, cellular/Wi-Fi/WiMAX backhaul, redundant fiber overlays, mesh.

Mobile Backhaul
Future-proof full-rate gigabit backhaul for next generation 4G/LTE/WiMAX backhaul.

SECURITY:

- Highly secure narrow beamwidth antennas
- Secure Management software option provides HTTPS management access and RADIUS authentication (see Advanced Security datasheet)

RELIABILITY:

- Rigorous HALT/HASS testing; 28-Year MTBF
- Up to 99.999%, carrier-grade availability

EASE-OF-USE:

- Connects directly to standard network equipment
- All-outdoor, compact design
- Low voltage power cabling
- Rapid & flexible deployment
- Embedded web and SNMP based network management agent

CONNECTIVITY RANGES

FE60U	Up to 1 Mile (1.6 km)

DATASHEET

BridgeWave
COMMUNICATIONS

Specifications

	FE60U Fast Ethernet Gigabit Upgradeable
Data Rate	100 Mbps full-duplex
Latency	< 220uSec
Link Budget	161.5 dB @ 10^{-12} BER
	163.5 dB @ 10^{-6} BER
RF Interface	58.1 GHz/62.9 GHz (FDD), digitally modulated (BFSK) with forward error correction RS(204,188)
	285 MHz bandwidth *
	Min. link distance 65 ft (20 m)
Antenna	Integrated 10 in (25 cm) directional cassegrain
	Linear polarized (H/V), 40 dBi gain, 1.4° beam
Ethernet Interfaces	1000base-SX with LC connectors - up to 270 m 62.5/125µm MMF, or 500 m 50/125µm MMF
	10/100base-TX with RJ-45 connector (with integral surge suppressor) - up to 100 m CAT5 cable
	Maximum Ethernet frame length: 1632 bytes
Management	Web-based (HTML) embedded management agent: setup, security, status, statistics, software update
	Secure Management Access (see Advanced Security datasheet for details)
	SNMP support: MIB-II and BridgeWave enterprise MIB
	Voltmeter test points: Receive Signal Level and Link Quality
	RADIUS Authentication, SysLog support
Power	Supplied 100 – 240 VAC input, +24 VDC output, indoor rated power supply (0°C to +40°C). 45 watts max. consumption
	Max. cable length: 650 ft (200 m) with 12AWG 400 ft (125 m) with 14AWG, stranded wires highly recommended (surge suppressor required)
Mount	Pole mount: 2-4.5 in (5-11 cm) OD
	Wall mount bracket
Size	Radio/antenna unit: 12 w * 12 h * 6 d (in) / 30 w * 30 h * 15 d (cm) (Not including pole mount hardware)
Weight	Radio: 11.9 lbs (5.4 kg)
	Mount: 6.6 lbs (3.0 kg)
Environmental	Operating temperature: -33°C to +55°C (-27°F to 131°F)
	Operating altitude: 14,764 ft maximum (4,500 m)
Wind Loading	50 lbs. force @ 100 MPH
Regulatory	Safety: UL Listed, CE Mark, EN60950, meets FCC 1.1310 general population RF MPE limits
	RF Certifications: U.S. FCC Part 15.255, Industry Canada RSS-210
Install Kit	Voltmeter test cable, power connectors, visual alignment tool

* = Refer to AR60 datasheet for upgradeable features

BridgeWave Communications, Inc.
3350 Thomas Road, Santa Clara, CA 95054 USA
Ph: +1 (866) 577-6908; +1 (408) 567-6908

www.bridgewave.com

ISO 9001:2008
FM 65304

BridgeWave strongly recommends that a link analysis be performed to ensure the system meets the individual application requirements. Please contact BridgeWave Sales.
BridgeWave reserves the right to change specifications and features listed herein without notice or obligation.

BridgeWave
COMMUNICATIONS

data sheet

FE80U/X GE80/X AR80/X BW80/X

80 GHz Fast Ethernet, Gigabit Ethernet, AdaptRate™ and Upgradeable Wireless Links

80 GHz WIRELESS LINKS FOR HIGH BANDWIDTH APPLICATIONS

BridgeWave is the leading supplier of high capacity and gigabit millimeter wave connectivity solutions for service provider, government, military, and enterprise applications. BridgeWave's wireless links extend network operator fiber to provide high capacity access and backhaul, as well as extending enterprise LANs between buildings and sites at a fraction of the cost and time to implement fiber between facilities.

GE80

AR80X

FEATURES

- Lightly-licensed operation in many countries
- Fast Ethernet full-duplex transmission (FE80U/X) upgradeable to Gigabit Ethernet & AR functionality with software upgrade key
- 125 Mbps full-duplex transmission upgradeable to 250/500/1000 Mbps (BW80/X)
- Gigabit Ethernet full-duplex transmission (GE60/X)
- AdaptRate™ & AdaptPath™ functionality (AR80/X) for rain fade mitigation
- Interference-free operation enabling high-density deployments
- Low latency – does not affect real time applications such as VoIP & video
- Forward Error Correction provides maximum link range

WIRELESS VIRTUAL FIBER SOLUTIONS FOR:

MOBILE BACKHAUL
Future-proof full-rate gigabit backhaul for next generation 4G/LTE/WiMAX networks.

SERVICE PROVIDER
High-capacity business services, fiber extensions, cellular/Wi-Fi/WiMAX backhaul, redundant fiber overlays, mesh.

EDUCATION
High-performance campus connectivity, Wi-Fi and security camera backbone.

ENTERPRISE
Server centralization, remote data storage and backup, leased line replacement.

GOVERNMENT/MUNICIPALITIES
Video surveillance systems, traffic control and monitoring, Wi-Fi/4.9GHz backhaul.

HEALTHCARE
Secure, HIPAA-compliant connectivity, medical office, lab network access, real-time imaging & records, application connectivity.

SECURITY:

- Highly secure narrow beamwidth antennas
- Secure Management software option provides HTTPS management access
- RADIUS authentication

AES ENCRYPTION (option on AR):

- 256-bit key length AES - provides the strongest level available
- Full FE or GE line-rate data protection under all traffic loads
- Ultra-low latency – adds only 2 µSec
- FIPS-197 Certified (NIST Cert #638)
- Cipher Block Chaining (128 bit blocks) conceals patterns in plain text
- Meets "Top Secret" security standards
- Built-in – NO external encryptor required

RELIABILITY:

- Rigorous HASS testing
- 28-year MTBF
- Up to 99.999% carrier-grade availability

EASE-OF-USE:

- Connects directly to standard network equipment
- All-outdoor, compact design
- Low voltage power cabling
- Rapid & flexible deployment
- Embedded web and SNMP based network management

CONNECTIVITY RANGES:

- FE80X, AR80X – up to 7 miles (11.5 km)
- AR80, FE80U – up to 5 miles (8 km)
- GE80X, BW80X – up to 5 miles (8 km)
- GE80, BW80 – up to 4 miles (6.5 km)

Distances are dependent on rain region and desired availability. Contact BridgeWave or an Authorized Reseller for path analysis for your specific application.

Backhaul Evolved®

BridgeWave COMMUNICATIONS

80 GHz SPECIFICATIONS

	FE80U/FE80XU	GE80/GE80X	AR80/AR80X	BW80/BW80X
DATA RATES				
Base Rate	100 Mbps	1000 Mbps	1000 Mbps	125 Mbps
Upgrade Rates	1000 Mbps AR mode	-	-	250 / 500 / 1000 Mbps w/software key
AdaptRate™ Operation	AR mode w/software key	-	100 Mbps	
LATENCY				
GE Mode	-	-	< 40 µSec	< 40 µSec
FE Mode	< 220 µSec	< 40 µSec	< 220 µSec	-
LINK BUDGET	12" (30cm) / 24" (60cm)	12" (30cm) / 24" (60cm)	12" (30cm) / 24" (60cm)	12" (30cm) / 24" (60cm)
GE Mode	-	172 dB / 186 dB @ 10^{-12} B.E.R.	172 dB / 186 dB @ 10^{-12} B.E.R.	172 dB / 186 dB @ 10^{-12} B.E.R.
	-	174 dB / 188 dB @ 10^{-6} B.E.R.	174 dB / 188 dB @ 10^{-6} B.E.R.	174 dB / 188 dB @ 10^{-6} B.E.R..
FE Mode	183 dB / 197 dB @ 10^{-12} B.E.R.	-	183 dB / 197 dB @ 10^{-12} B.E.R.	-
	185 dB / 199 dB @ 10^{-6} B.E.R.	-	185 dB / 199 dB @ 10^{-6} B.E.R.	-
RF INTERFACE	72.5 / 82.5 GHz (FDD) BFSK modulated with forward error correction RS (204,188)			
Bandwidth	285 MHz	1.4 GHz	1.4 GHz (GE mode) 285 MHz (FE mode)	1.4 GHz
MINIMUM DISTANCE	12" (30cm) antenna: 328 ft (100m); 24" (60cm) antenna: 1,312 ft (400m)			
ETHERNET INTERFACE	1000base-SX with LC connectors – up to 270m 62.5/125 µm MMF, or 500m 50/125µm MMF 10/100base-TX with RJ-45 connector (with integral surge suppressor) – up to 100m CAT5 cable Maximum Ethernet frame length: 1632 bytes			
MANAGEMENT	Web-based (HTML) embedded management agent: setup, security, statistics, software update, HTTPS Secure Management Access SNMP Support: MIB-II And BridgeWave enterprise MIB SysLog (RFC 3164, RFC 3195) event support RADIUS Authentication Voltmeter test points: Receive Signal Level and Link Quality			
POWER	Supplied 100 – 240 VAC input / +24 VDC output - Indoor rated power supply (0°C to +40°C); 45 watts max consumption -48 VDC input option with user supplied power supply. Proprietary PoE option for up to 100m CAT5e cable separation between PoE injector & extractor Max cable length: 650 ft (200m) with 12AWG; 400 ft (125m) with 14AWG, stranded wires highly recommended (surge suppressor required)			
ANTENNA	External, directional cassegrain, Linear polarized (V/H), includes fine adjust pole-mount for 3.5" – 4.5" (8.9 – 11.4 cm) OD – SCH40 or higher			
Standard Models	12" (30cm): 44 dBi gain, 0.9° beam			
"X" Models	24" (60cm): 51 dBi gain, 0.4° beam			
SIZE (h, w, d)				
Radio Unit	11.5 x 11.5 x 4 (in) / 29.2 x 29.2 x 10.2 (cm)			
Antenna	12" (30cm): 20 x 14 x 10 (in) / 50.8 x 35.6 x 25.4 (cm); 24" (60cm): 24 x 24 x 20 (in) / 60.9 x 60.9 x 50.8 (cm)			
WEIGHT				
Radio Unit	8 lbs (3.6 kg)			
Antenna Mount	12" (30cm): 14 lbs (6.4 kg); 24" (60cm): 30.5 lbs (13.9 kg)			
WIND LOADING	12" (30cm) antenna: 46 lbs force @ 125 MPH; 24" (60cm) antenna: 202 lbs force @ 125 MPH			
ENVIRONMENTAL	Operating Temperature: -33°C to +55°C (-27°F to +131°F); Humidity: 100% all-weather operation; Maximum Altitude: 14,764 ft (4,500 m)			
REGULATORY	RF Certifications: U.S. FCC Part 101; ETSI EN 302 217-3 V1.3.1 Safety: UL Listed; CE Mark; EN60950-1:2006 + A11:2009; EN 301 489-4 V1.4.1; meets FCC 1.1310 General Population and EN 62311:2008 RF MPE limits			
INSTALLATION KIT	Voltmeter test cable, Power connectors, AC/DC power supply (except -48 & PoE options)			

BridgeWave Communications, Inc. 3350 Thomas Road, Santa Clara, CA. 95054
Ph: +1 (408) 567-6900 | +1 (866) 577-6908 | Fax: +1 (408) 567-0775
www.bridgewave.com «BridgeWave

EXHIBIT 6

Federal Communications Commission

Guide

Print Email

Over-the-Air Reception Devices Rule

Preemption of Restrictions on Placement of Direct Broadcast Satellite, Broadband Radio Service, and Television Broadcast Antennas.

Quick Links to Document Sections Below

As directed by Congress in Section 207 of the Telecommunications Act of 1996, the Federal Communications Commission adopted the Over-the-Air Reception Devices ("OTARD") rule concerning governmental and nongovernmental restrictions on viewers' ability to receive video programming signals from direct broadcast satellites ("DBS"), broadband radio service providers (formerly multichannel multipoint distribution service or MMDS), and television broadcast stations ("TVBS").

The rule (47 C.F.R. Section 1.4000) has been in effect since October 1996, and it prohibits restrictions that impair the installation, maintenance or use of antennas used to receive video programming. The rule applies to video antennas including direct-to-home satellite dishes that are less than one meter (39.37") in diameter (or of any size in Alaska), TV antennas, and wireless cable antennas. The rule prohibits most restrictions that: (1) unreasonably delay or prevent installation, maintenance or use; (2) unreasonably increase the cost of installation, maintenance or use; or (3) preclude reception of an acceptable quality signal.

Effective January 22, 1999, the Commission amended the rule so that it also applies to rental property where the renter has an exclusive use area, such as a balcony or patio.

On October 25, 2000, the Commission further amended the rule so that it applies to customer-end antennas that receive and transmit fixed wireless signals. This amendment became effective on May 25, 2001.

The rule applies to individuals who place antennas that meet size limitations on property that they own or rent and that is within their exclusive use or control, including condominium owners and cooperative owners, and tenants who have an area where they have exclusive use, such as a balcony or patio, in which to install the antenna. The rule applies to townhomes and manufactured homes, as well as to single family homes.

The rule allows local governments, community associations and landlords to enforce restrictions that do not impair the installation, maintenance or use of the types of antennas described above, as well as restrictions needed for safety or historic preservation. Under some circumstances where a central or common antenna is available, a community association or landlord may restrict the installation of individual antennas. The rule does not apply to common areas that are owned by a landlord, a community association, or jointly by condominium or cooperative owners where the antenna user does not have an exclusive use area. Such common areas may include the roof or exterior wall of a multiple dwelling unit. Therefore, restrictions on antennas installed in or on such common areas are enforceable.

This Information Sheet provides general answers to questions concerning implementation of the rule, but is not a substitute for the actual rule. This document is for consumer education purposes only and is not intended to affect any proceedings or cases involving this subject matter or related issues. For further information or a copy of the rule, contact the Federal Communications Commission at 1-888-CALL FCC (1-888-225-5322), which is a toll-free number, or 202-418-2120. The rule and Commission decisions interpreting the rule are available via the Internet by going to links to relevant Orders and the rule at the end of this Information Sheet.

Q: What types of antennas are covered by the rule?

A: The rule applies to the following types of antennas:

(1) A "dish" antenna that is one meter (39.37") or less in diameter (or any size dish if located in Alaska) and is designed to receive direct broadcast satellite service, including direct-to-home satellite service, or to receive or transmit fixed wireless signals via satellite.

(2) An antenna that is one meter or less in diameter or diagonal measurement and is designed to receive video programming services via broadband radio service (wireless cable) or to receive or transmit fixed wireless signals other than via satellite.

(3) An antenna that is designed to receive local television broadcast signals.

In addition, antennas covered by the rule may be mounted on "masts" to reach the height needed to receive or transmit an acceptable quality signal (e.g. maintain line-of-sight contact with the transmitter or view the satellite). Masts higher than 12 feet above the roofline may be subject to local permitting requirements for safety purposes. Further, masts that extend beyond an exclusive use area may not be covered by this rule.

Q: What are "fixed wireless signals"?

A: "Fixed wireless signals" are any commercial non-broadcast communications signals transmitted via wireless technology to and/or from a fixed customer location. Examples include wireless signals used to provide telephone service or high-speed Internet access to a fixed location. This definition does **not** include, among other things, AM/FM radio, amateur ("HAM") radio (but see 47 C.F.R. §97.15), Citizens Band ("CB") radio, and Digital Audio Radio Services ("DARS") signals.

Q: Does the rule apply to hub or relay antennas?

A: The rule applies to "customer-end antennas" which are antennas placed at a customer location for the purpose of providing service to customers at that location. The rule does not cover antennas used to transmit signals to and/or receive signals from multiple customer locations.

Q: What types of restrictions are prohibited?

A: The rule prohibits restrictions that impair a person's ability to install, maintain, or use an antenna covered by the rule. The rule applies to state or local laws or regulations, including zoning, land-use or building regulations, private covenants, homeowners' association rules, condominium or cooperative association restrictions, lease restrictions, or similar restrictions on property within the exclusive use or control of the antenna user where the user has an ownership or leasehold interest in the property. A restriction impairs if it: (1) unreasonably delays or prevents use of; (2) unreasonably increases the cost of; or (3) precludes a person from receiving or transmitting an acceptable quality signal from an antenna covered under the rule. The rule does not prohibit legitimate safety restrictions or restrictions designed to preserve designated or eligible historic or prehistoric properties, provided the restriction is no more burdensome than necessary to accomplish the safety or preservation purpose.

Q: What types of restrictions unreasonably delay or prevent viewers from using an antenna? Can an antenna user be required to obtain prior approval before installing his antenna?

A: A local restriction that prohibits all antennas would prevent viewers from receiving signals, and is prohibited by the Commission's rule. Procedural requirements can also unreasonably delay installation, maintenance or use of an antenna covered by this rule. For example, local rules or regulations that require a person to obtain a permit or approval prior to installation create unreasonable delay and are generally prohibited. Permits or prior approval necessary to serve a legitimate written safety or historic preservation purpose may be permissible. Although a simple notification process (e.g. post installation) might be permissible, such a process cannot be used as a prior approval requirement and may not delay or increase the cost of installation. The burden is on the association to show that a notification process does not violate our rule.

Q: What is an unreasonable expense?

A: Any requirement to pay a fee to the local authority for a permit to be allowed to install an antenna would be unreasonable because such permits are generally prohibited. It may also be unreasonable for a local government, community association or landlord to require a viewer to incur additional costs associated with installation. Things to consider in determining the reasonableness of any costs imposed include: (1) the cost of the equipment and services, and (2) whether there are similar requirements for comparable objects, such as air conditioning units or trash receptacles. For example, restrictions cannot require that expensive landscaping screen relatively unobtrusive DBS antennas. A requirement to paint an antenna so that it blends into the background against which it is mounted might be acceptable, provided it will not interfere with reception or impose unreasonable costs.

Q: What restrictions prevent a viewer from receiving an acceptable quality signal? Can a homeowners association or other

restricting entity establish enforceable preferences for antenna locations?

A: Enforceable placement preferences must be clearly articulated in writing and made available to all residents of the community in question. A requirement that an antenna be located where reception would be impossible or substantially degraded is prohibited by the rule. However, a regulation requiring that antennas be placed in a particular location on a house such as the side or the rear, might be permissible if this placement does not prevent reception of an acceptable quality signal or impose unreasonable expense or delay. For example, if installing an antenna in the rear of the house costs significantly more than installation on the side of the house, then such a requirement would be prohibited. If, however, installation in the rear of the house does not impose unreasonable expense or delay or preclude reception of an acceptable quality signal, then the restriction is permissible and the viewer must comply.

For DBS antennas, and digital fixed wireless antennas or other digital antennas to receive or transmit an acceptable quality signal, the antenna must be installed where it has an unobstructed, direct view of the satellite or other device from which signals are received or to which signals are to be transmitted. Unlike analog antennas, digital antennas, even in the presence of sufficient over-the-air signal strength, will at times provide no picture or sound unless they are placed and oriented properly.

Q: Can a restriction limit the number of antennas that may be installed at a particular location?

The Commission's rule covers the antennas necessary to receive service. Therefore, a local rule may not, for example, allow only one antenna if more than one antenna is necessary to receive the desired service.

Q: Are all restrictions prohibited?

A: No. Clearly-defined, legitimate safety restrictions are permitted even if they impair installation, maintenance or use provided they are necessary to protect public safety and are no more burdensome than necessary to ensure safety. The safety reason for the restriction must be written in the text, preamble or legislative history of the restriction, or in a document that is readily available to antenna users, so that a person who wishes to install an antenna knows what restrictions apply. Safety restrictions cannot discriminate between objects that are comparable in size and weight and pose the same or a similar safety risk as the antenna that is being restricted. Examples of valid safety restrictions include fire codes preventing people from installing antennas on fire escapes; restrictions requiring that a person not place an antenna within a certain distance from a power line; and installation requirements that describe the proper method to secure an antenna.

Restrictions necessary for historic preservation also may be permitted even if they impair installation, maintenance or use of the antenna. To qualify for this exemption, the property may be any prehistoric or historic district, site, building, structure or object included in, or eligible for inclusion on, the National Register of Historic Places. In addition, restrictions necessary for historic preservation must be no more burdensome than necessary to accomplish the historic preservation goal. They also must be imposed and enforced in a non-discriminatory manner, as compared to other modern structures that are comparable in size and weight and to which local regulation would normally apply.

Q: How does the rule apply to restrictions on radiofrequency (RF) exposure from antennas that have the capability to transmit signals? Can a local restriction require professional installation of receive-only antennas?

A: All transmitters regulated by the Commission, including the customer-end fixed wireless antennas (either satellite or terrestrial) covered under the amended rule, are required to meet the applicable Commission guidelines regarding RF exposure limits. The limits established in the guidelines are designed to protect the public health with a large margin of safety. These limits have been endorsed by federal health and safety agencies, such as the Environmental Protection Agency and the Food and Drug Administration. The Commission requires that providers of fixed wireless service exercise reasonable care to protect users and the public from RF exposure in excess of the Commission's limits. In addition, as a condition of invoking protection under the rule from government, landlord, and association restrictions, a provider of fixed wireless service must ensure that customer-end antennas are labeled to give notice of potential RF safety hazards posed by these antennas.

It is recommended that antennas that both receive and transmit signals be installed by professional installers to maximize effectiveness and minimize the possibility that the antenna will be placed in a location that is likely to expose subscribers, their families, or others in the area to radiation from the transmit signal at close proximity and for an extended period of time. In general, associations, landlords, local governments and other restricting entities may not require professional installation for receive-only antennas, such as one-way DBS satellite dishes. However, local governments, associations, and property owners may require professional installation for **transmitting** antennas based on the safety exception to the rule. Such safety requirements must be: (1) clearly defined; (2) based on a legitimate safety objective (such as bona fide concerns about RF radiation) which is articulated in the restriction or readily available to antenna users; (3) applied in a non-discriminatory manner; and (4) no more burdensome than necessary to achieve the articulated objectives.

For additional information about the Commission's RF exposure limits, please visit http://www.fcc.gov/oet/rfsafety or call the RF Safety Information Line at 202-418-2464.

Q: Whose antenna restrictions are prohibited?

A: The rule applies to restrictions imposed by local governments, including zoning, land-use or building regulations; by homeowner, townhome, condominium or cooperative association rules, including deed restrictions, covenants, by-laws and similar restrictions; and by manufactured housing (mobile home) park owners and landlords, including lease restrictions. The rule only applies to restrictions on property where the viewer has an ownership or leasehold interest and exclusive use or control.

Q: If I live in a condominium or an apartment building, does this rule apply to me?

A: The rule applies to antenna users who live in a multiple dwelling unit building, such as a condominium or apartment building, if the antenna user has an exclusive use area in which to install the antenna. "Exclusive use" means an area of the property that only you, and persons you permit, may enter and use to the exclusion of other residents. For example, your condominium or apartment may include a balcony, terrace, deck or patio that only you can use, and the rule applies to these areas. The rule does not apply to common areas, such as the roof, the hallways, the walkways or the exterior walls of a condominium or apartment building. Restrictions on antennas installed in these common areas are not covered by the Commission's rule. For example, the rule would **not** apply to restrictions that prevent drilling through the exterior wall of a condominium or rental unit and thus restrictions may prohibit installation that requires such drilling.

Q: Does the rule apply to condominiums or apartment buildings if the antenna is installed so that it hangs over or protrudes beyond the balcony railing or patio wall?

A: No. The rule does not prohibit restrictions on antennas installed beyond the balcony or patio of a condominium or apartment unit if such installation is in, on, or over a common area. An antenna that extends out beyond the balcony or patio is usually considered to be in a common area that is not within the scope of the rule. Therefore, the rule does not apply to a condominium or rental apartment unit unless the antenna is installed wholly within the exclusive use area, such as the balcony or patio.

Q: Does the fact that management or the association has the right to enter these areas mean that the resident does not have exclusive use?

A: No. The fact that the building management or the association may enter an area for the purpose of inspection and/or repair does not mean that the resident does not have exclusive use of that area. Likewise, if the landlord or association regulates other uses of the exclusive use area (e.g., banning grills on balconies), that does not affect the viewer's rights under the Commission's rule. This rule permits persons to install antennas on property over which the person has *either* exclusive use *or* exclusive control. Note, too, that nothing in this rule changes the landlord's or association's right to regulate use of exclusive use areas for other purposes. For example, if the lease prohibits antennas and flags on balconies, only the prohibition of antennas is eliminated by this rule; flags would still be prohibited.

Q: Does the rule apply to residents of rental property?

A: Yes. Effective January 22, 1999, renters may install antennas within their leasehold, which means inside the dwelling or on outdoor areas that are part of the tenant's leased space and which are under the exclusive use or control of the tenant. Typically, for apartments, these areas include balconies, balcony railings, and terraces. For rented single family homes or manufactured homes which sit on rented property, these areas include the home itself and patios, yards, gardens or other similar areas. If renters do not have access to these outside areas, the tenant may install the antenna inside the rental unit. Renters are not required to obtain the consent of the landlord prior to installing an antenna in these areas. The rule does not apply to common areas, such as the roof or the exterior walls of an apartment building. Generally, balconies or patios that are shared with other people or are accessible from other units are not considered to be exclusive use areas.

Q: Are there restrictions that can be placed on residents of rental property?

A: Yes. A restriction necessary to prevent damage to leased property may be reasonable. For example, tenants could be prohibited from drilling holes through exterior walls or through the roof. However, a restriction designed to prevent ordinary wear and tear (*e.g.*, marks, scratches, and minor damage to carpets, walls and draperies) would likely not be reasonable provided the antenna is installed wholly within the antenna user's own exclusive use area. In addition, rental property is subject to the same protection and exceptions to the rule as owned property. Thus, a landlord may impose other types of restrictions that do not impair installation, maintenance or use under the rule. The landlord may also impose restrictions necessary for safety or historic preservation.

Q: If I live in a condominium, cooperative, or other type of residence where certain areas have been designated as "common," do these rules apply to me?

A: The rules apply to residents of these types of buildings, but the rules do not permit you to install an antenna on a common area, such as a walkway, hallway, community garden, exterior wall or the roof. However, you may install the antenna wholly within a balcony, deck, patio, or

other area where you have exclusive use.

Drilling through an exterior wall, *e.g.* to run the cable from the patio into the unit, is generally not within the protection of the rule because the exterior wall is generally a common element. You may wish to check with your retailer or installer for advice on how to install the antenna without drilling a hole. Alternatively, your landlord or association may grant permission for you to drill such a hole. The Commission's rules generally do not cover installations if you drill through a common element.

Q: If my association, building management, landlord, or property owner provides a central antenna, may I install an individual antenna?

A: Generally, the availability of a central antenna may allow the association, landlord, property owner, or other management entity to restrict the installation by individuals of antennas otherwise protected by the rule. Restrictions based on the availability of a central antenna will generally be permissible provided that: (1) the person receives the particular video programming or fixed wireless service that the person desires and could receive with an individual antenna covered under the rule (*e.g.*, the person would be entitled to receive service from a specific provider, not simply a provider selected by the association); (2) the signal quality of transmission to and from the person's home using the central antenna is as good as, or better than, the quality the person could receive or transmit with an individual antenna covered by the rule; (3) the costs associated with the use of the central antenna are not greater than the costs of installation, maintenance and use of an individual antenna covered under the rule; and (4) the requirement to use the central antenna instead of an individual antenna does not unreasonably delay the viewer's ability to receive video programming or fixed wireless services.

Q: May the association, landlord, building management or property owner restrict the installation of an individual antenna because a central antenna will be available in the future?

A: It is not the intent of the Commission to deter or unreasonably delay the installation of individual antennas because a central antenna may become available. However, persons could be required to remove individual antennas once a central antenna is available if the cost of removal is paid by the landlord or association and the user is reimbursed for the value of the antenna. Further, an individual who wants video programming or fixed wireless services other than what is available through the central antenna should not be unreasonably delayed in obtaining the desired programming or services either through modifications to the central antenna, installation of an additional central antenna, or by using an individual antenna.

Q: I live in a townhome community. Am I covered by the FCC rule?

A: Yes. If you own the whole townhouse, including the walls and the roof and the land under the building, then the rule applies just as it does for a single family home, and you may be able to put the antenna on the roof, the exterior wall, the backyard or any other place that is part of what you own. If the townhouse is a condominium, then the rule applies as it does for any other type of condominium, which means it applies only where you have an exclusive use area. If it is a condominium townhouse, you probably cannot use the roof, the chimney, or the exterior walls unless the condominium association gives you permission. You may want to check your ownership documents to determine what areas are owned by you or are reserved for your exclusive use.

Q: I live in a condominium with a balcony, but I cannot receive a signal from the satellite because my balcony faces north. Can I use the roof?

A: No. The roof of a condominium is generally a common area, not an area reserved for an individual's exclusive use. If the roof is a common area, you may not use it unless the condominium association gives you permission. The condominium is not obligated to provide a place for you to install an antenna if you do not have an exclusive use area.

Q: I live in a mobile home that I own but it is located in a park where I rent the lot. Am I covered by the FCC rule?

A: Yes. The rule applies if you install the antenna anywhere on the mobile or manufactured home that is owned by you. The rule also applies to antennas installed on the lot or pad that you rent, as well as to other areas that are under your exclusive use and control. However, the rule does not apply if you want to install the antenna in a common area or other area outside of what you rent.

Q: I want a conventional "stick" antenna to receive a distant over-the air television signal. Does the rule apply to me?

A: No. The rule does not apply to television antennas used to receive a distant signal.

Q: I want to install an antenna for broadcast radio or amateur radio. Does the rule apply to me?

A: No. The rule does not apply to antennas used for AM/FM radio, amateur ("ham") radio (see 47 C.F.R. §97.15), Citizen's Band ("CB") radio or

Digital Audio Radio Services ("DARS").

Q: I want to install an antenna to access the Internet. Does the rule apply to me?

A: Yes. Antennas designed to receive and/or transmit data services, including Internet access, are included in the rule.

Q: Does this mean that I can install an antenna that will be used for voice and data services even though it does not provide video transmissions?

A: Yes. The most recent amendment expands the rule and permits you to install an antenna that will be used to transmit and/or receive voice and data services, except as noted above. The rule will also continue to cover antennas used to receive video programming.

Q: I'm a board member of a homeowners' association and we want to revise our restrictions so that they will comply with the FCC rule. Do you have guidelines you can send me?

A: The Commission does not have sample guidelines because every community is different. We can provide you the rule and the relevant orders, which will give you general guidance. (See list of documents at the end of this Information Sheet. Some communities have written restrictions that provide a prioritized list of placement preferences so that residents can see where the association wants them to install the antenna. The residents should comply with the placement preferences provided the preferred placement does not impose unreasonable delay or expense or preclude reception of an acceptable quality signal.

Q: What restrictions are permitted if the antenna must be on a very tall mast to get a signal?

A: If you have an exclusive use area that is covered by the rule and need to put your antenna on a mast, the local government, community association or landlord may require you to apply for a permit for safety reasons if the mast extends more than 12 feet above the roofline. If you meet the safety requirements, the permit should be granted. Note that the Commission's rule only applies to antennas and masts installed wholly within the antenna user's exclusive use area. Masts that extend beyond the exclusive use area are outside the scope of the rule. For installations on single family homes, the "exclusive use area" generally would be anywhere on the home or lot and the mast height provision is usually most relevant in these situations. For example, if a homeowner needs to install an antenna on a mast that is more than 12 feet taller than the roof of the home, the homeowners' association or local zoning authority may require a permit to ensure the safety of such an installation, but may not prohibit the installation unless there is no way to install it safely. On the other hand, if the owner of a condominium in a building with multiple dwelling units needs to put the antenna on a mast that extends beyond the balcony boundaries, such installation would generally be outside the scope and protection of the rule, and the condominium association may impose any restrictions it wishes (including an outright prohibition) because the Commission rule does not apply in this situation.

Q: Does the rule apply to commercial property or only residential property?

A: Nothing in the rule excludes antennas installed on commercial property. The rule applies to property used for commercial purposes in the same way it applies to residential property.

Q: What can a local government, association, or consumer do if there is a dispute over whether a particular restriction is valid?

A: Restrictions that impair installation, maintenance or use of the antennas covered by the rule are preempted (unenforceable) unless they are needed for safety or historic preservation and are no more burdensome than necessary to accomplish the articulated legitimate safety purpose or for preservation of a designated or eligible historic site or district. If a person believes a restriction is preempted, but the local government, community association, or landlord disagrees, either the person or the restricting entity may file a Petition for Declaratory Ruling with the FCC or a court of competent jurisdiction. We encourage parties to attempt to resolve disputes prior to filing a petition. Often contacting the FCC for information about how the rule works and applies in a particular situation can help to resolve the dispute. If a local government, community association, or landlord acknowledges that its restriction impairs installation, maintenance, or use and is preempted under the rule but believes it can demonstrate "highly specialized or unusual" concerns, the restricting entity may apply to the Commission for a waiver of the rule.

Q: How do I file a petition or request a waiver at the Commission?

A: There is no special form for a petition. You may simply describe the facts, including the specific restriction(s) that you wish to challenge. If possible, include contact information such as telephone numbers for all parties involved, if available, and attach a copy of the restriction(s) and any relevant correspondence. If this is not possible, be sure to include the exact language of the restriction in question with the petition. General or hypothetical questions about the application or interpretation of the rule cannot be accepted as petitions. To file a Petition for Waiver, follow the requirements in Section 1.4000(c) of the rule. The local government, community association or landlord requesting the waiver must demonstrate "local concerns of a highly specialized or unusual nature."

Petitions for declaratory rulings and waivers must be served on all interested parties. For example, if a homeowners' association files a petition seeking a declaratory ruling that its restriction is not preempted and is seeking to enforce the restriction against a specific resident, service must be made on that specific resident. The homeowners' association will not be required to serve all other members of the association, but must provide reasonable, constructive notice of the proceeding to other residents whose interests foreseeably may be affected. This may be accomplished, for example, by placing notices in residents' mailboxes, by placing a notice on a community bulletin board, or by placing the notice in an association newsletter. If a local government seeks a declaratory ruling or a waiver from the Commission, the local government must take steps to afford reasonable, constructive notice to residents in its jurisdiction (*e.g.*, by placing a notice in a local newspaper of general circulation). Proof of constructive notice must be provided with a petition. In this regard, the petitioner should provide a copy of the notice and an explanation of where the notice was placed and how many people the notice reasonably might have reached.

Finally, if a person files a petition or lawsuit challenging a local government's ordinance, an association's restriction, or a landlord's lease, the person must serve the local government, association or landlord, as appropriate. You must include a "proof of service" with your petition. Generally, the "proof of service" is a statement indicating that on the same day that your petition was sent to the Commission, you provided a copy of your petition (and any attachments) to the person or entity that is seeking to enforce the antenna restriction. The proof of service should give the name and address of the parties served, the date served, and the method of service used (*e.g.*, regular mail, personal service, certified mail).

All allegations of fact contained in petitions and related pleadings before the Commission must be supported by an affidavit signed by one or more persons who have actual knowledge of such facts. You must send an original and two copies of the petition and all attachments to:

Secretary, Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554
Attention: Media Bureau

Q: Can I continue to use my antenna while the petition or waiver request is pending?

A: Yes, unless the restriction being challenged or for which a waiver is sought is necessary for reasons of safety or historic preservation. Otherwise, the restriction cannot be enforced while the petition is pending.

Q: Who is responsible for showing that a restriction is enforceable?

A: When a conflict arises about whether a restriction is valid, the local government, community association, property owner, or management entity that is trying to enforce the restriction has the burden of proving that the restriction is valid. This means that no matter who questions the validity of the restriction, the burden will always be on the entity seeking to enforce the restriction to prove that the restriction is permitted under the rule or that it qualifies for a waiver.

Q: Can I be fined and required to remove my antenna immediately if the Commission determines that a restriction is valid?

A: If the Commission determines that the restriction is valid, you will have a minimum of 21 days to comply with this ruling. If you remove your antenna during this period, in most cases you cannot be fined. However, this 21-day grace period does not apply if the FCC rule does not apply to your installation (for example, if the antenna is installed on a condominium general common element or hanging outside beyond an apartment balcony). If the FCC rule does not apply at all in your case, the 21-day grace period does not apply.

Q: Who do I call if my town, community association or landlord is enforcing an invalid restriction?

A: Call the Federal Communications Commission at 1-888-CALL FCC (1-888-225-5322), which is a toll-free number, or 202-418-2120. Some assistance may also be available from the direct broadcast satellite company, broadband radio service provider, television broadcast station, or fixed wireless company whose service is desired.

Links to Relevant Orders and the Rule

- Order, Request for Stay of Public Comment Period - OTARD SBCA Petition, DA 12-756, Released May 14, 2012: [Word | Acrobat]
- Public Notice, Media Bureau Seeks Comment on Petition for Rulemaking Requesting Amendment of the OTARD Rule, DA 12-728, released May 8, 2012: [Word | Acrobat]
- Public Notice, Media Bureau Seeks Comment on Petition for Declaratory Ruling That an Ordinance of the City of Chicago, Illinois is Preempted by the Commission's Over-The-Air Reception Devices Rule, DA 12-663, released April 26, 2012: [Word | Acrobat]
- Public Notice, Media Bureau Seeks Comment on Petition for Declaratory Ruling, DA 11-1932, released November 22, 2011: [Word | Acrobat]

- Declaratory Ruling, Corey & Juanita Walker, DA 11-1271, released July 27, 2011: [Word | Acrobat]
- Public Notice, Carleen Schreder and Ralph Musicant, DA 11-1265, released July 26, 2011: [Word | Acrobat]
- Public Notice, Mark and Cindy Key, DA 11-1264, released July 26, 2011: [Word | Acrobat]
- MO&O, Policarpio & Lourdes Medios, DA 10-2153, released November 8, 2010: [Word | Acrobat]
- Declaratory Ruling, Craig Wirth, DA 10-2150, released November 5, 2010: [Word | Acrobat]
- Public Notice, Policarpio Medios, DA 10-394, released March 9, 2010: [Word | Acrobat]
- Public Notice, Craig Wirth, DA 10-157, released January 28, 2010: Responses Due: 3/1/10, Replies Due: 3/16/10. [Word | Acrobat]
- Public Notice, Antenna Star Satellites, Inc., and Johnson TV & Satellite, DA 09-2273, released October 22, 2009: [Word | Acrobat]
- Declaratory Ruling, Richard Rhoad, DA 09-1675, released July 29, 2009: [Word | Acrobat]
- Declaratory Ruling, William Culver, DA 09-1674, released July 29, 2009: [Word | Acrobat]
- Declaratory Ruling, James S. Bannister, DA 09-1673, released July 29, 2009: [Word | Acrobat]
- Public Notice, William Culver, DA 08-1253, released June 2, 2008: [Word | Acrobat]
- Public Notice, James Bannister and Richard Rhoad, DA 08-957, released April 25, 2008: [Word | Acrobat]
- MO&O, Philip Wojcikewicz, FCC 07-98, released May 25, 2007: [Word | Acrobat]
- MO&O, Continental Airlines, FCC 06-157, released November 1, 2006: [Order: Word | Acrobat; Copps Statement: Word | Acrobat; Adelstein Statement: Word | Acrobat]
- MO&O, Shadow Wood Condominium Association, DA 06-100, released January 23, 2006: [Word | Acrobat]
- OTARD Rule, 47 C.F.R. Section 1.4000.
- Declaratory Ruling, Michael and Alexandra Pinter, DA 04-2839, released September 1, 2004: [Word | Acrobat]
- MO&O, Philip Wojcikewicz, DA 03-2971, released September 29, 2003: [Word | Acrobat]
- MO&O, Victor Frankfurt, FCC 03-210, released August 27, 2003 : [Word | Acrobat]
- Building Owners and Managers Association International, et al., Court Ruling, decided July 6, 2001: [Word | Acrobat]
- Declaratory Ruling, Corey Roberts, DA 01-1276, released May 24, 2001: [Word | Acrobat]
- Declaratory Ruling, Victor Frankfurt, DA 01-0153, released February 7, 2001: [Word | Acrobat]
- Report and Order, Competitive Networks, FCC 00-366, released October 25, 2000: [Word | Acrobat | News Release and Statements]
- Declaratory Ruling, Bell Atlantic Video, DA 00-927, released April 26, 2000: [Word | Acrobat]
- Second Order on Reconsideration, FCC 99-360, released November 24, 1999: [Word | Text]
- Declaratory Ruling, Stanley and Vera Holliday, DA 99-2132, released October 8, 1999: [Word | Acrobat]
- Second Report and Order, FCC 98-273, released November 20, 1998: [WordPerfect | Acrobat | Text | News Release and Statements]
- Order on Reconsideration, FCC 98-214, released September 25, 1998: [WordPerfect | Text]
- MO&O, Jay Lubliner, FCC 98-201, released August 21, 1998: [WordPerfect | Text]
- Declaratory Ruling, James Sadler, DA 98-1284, released July 1, 1998: [WordPerfect | Text]
- Declaratory Ruling, Jordan Lourie, DA 98-1170, released June 17, 1998: [WordPerfect | Text]
- Declaratory Ruling, Jason Peterson, DA 98-0188, released February 4, 1998: [Text]
- Declaratory Ruling, Victor Frankfurt, DA 97-2305, released December 31, 1997: [Text]
- Declaratory Ruling, Wireless Broadcasting Systems (WBSS), DA 97-2506, released November 28, 1997: [WordPerfect | Text]
- Declaratory Ruling, Omnivision, DA 97-2187, released October 14, 1997: [Text]
- Declaratory Ruling, Michael MacDonald, DA 97-2189, released October 14, 1997: [Text]
- Declaratory Ruling, Jay Lubliner, DA 97-2188, released October 14, 1997: [Text]
- Declaratory Ruling, Star Lambert, DA 97-1554, released July 27, 1997: [Text]
- Report and Order, FCC 96-328, released August 6, 1996: [WordPerfect | Text]

last reviewed/updated 8/14/13

For more information pertaining to the Media Bureau, please call: (202) 418-7200.

FCC > Media Bureau

Federal Communications Commission

Contact Us

Privacy Policy
Moderation Policy
Website Policies & Notices
Required Browser & Plug-Ins
FOIA
No Fear Act Data

FCC Digital Strategy
Open Government Directive
Plain Writing Act
2009 Recovery and Reinvestment Act
RSS Feeds & Email Updates
Disability Rights

EXHIBIT 7

RF Safety of BridgeWave's Wireless Bridges

18 December 2008

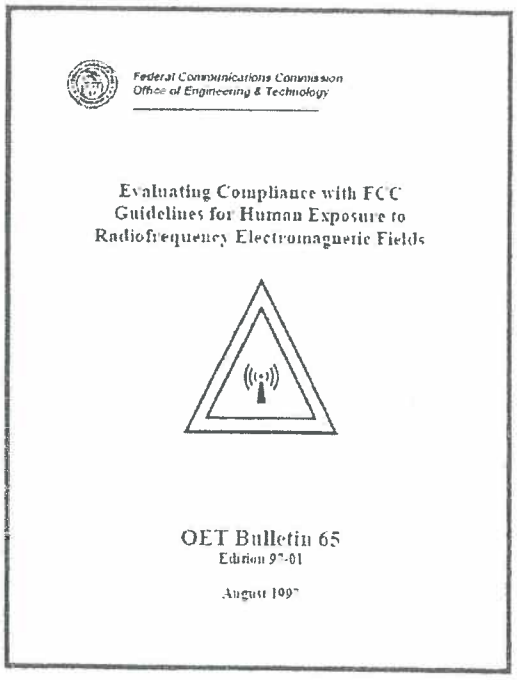
BridgeWave

Gigabit Point-To-Point Wireless Bridges

BridgeWave

Guidelines

- **Based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), IEEE, and adopted by ANSI**
- **Averaging time:**
  - 6 minutes for occupational/controlled exposure
  - 30 minutes for general population/uncontrolled exposure
- **FCC OET Bulletin 65 – Evaluating Compliance with FCC Guidelines for Human Exposure to RF Electromagnetic Fields**



Federal Communications Commission
Office of Engineering & Technology

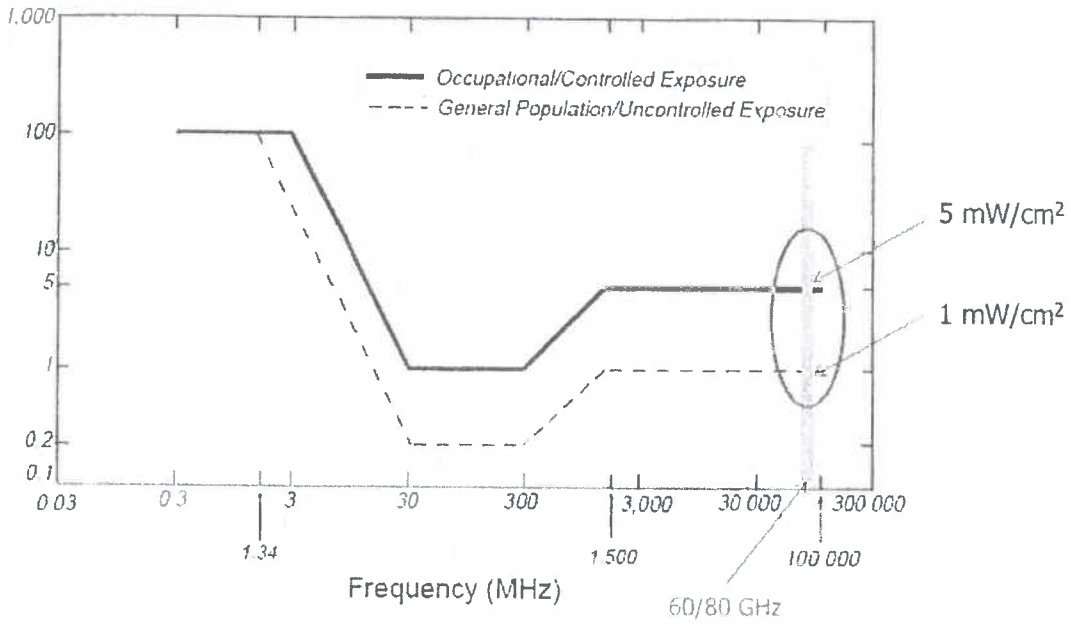
Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields

OET Bulletin 65
Edition 97-01

August 1997

Limits

Figure 1. *FCC Limits for Maximum Permissible Exposure (MPE)*



Power Density at the Antenna Surface

- **The maximum power density directly in front of the antenna can be approximated by the equation** (*Eq #11*)**:**
- **S = 4P / A**
  - where:
    - S = power density in mW/cm²
    - P = power fed to the antenna in mW
    - A = area of aperture antenna in cm²

	60 GHz, Integrated antenna	60 GHz, 2' external antenna	80 GHz, 1' external antenna	80 GHz, 2' external antenna
Power Density (S)	0.007 mW/cm²	0.001 mW/cm²	0.566 mW/cm²	0.141 mW/cm²

BridgeWave's products comply with the General Population exposure limits of 1 mW/cm² at the antenna surface.

Near-Field Region

- **In the near-field region, or Fresnel region of the main beam, the power density can reach a maximum before it begins to decrease with distance. The extent of the near field can be found by the equation** (*Eq#12*)**:**

- **$R_{nf} = D^2 / 4\lambda$**
  - Where:
    - R_{nf} = extent of near field
    - D = antenna diameter in cm^2
    - λ = wavelength

	60 GHz, Integrated antenna	60 GHz, 2' external antenna	80 GHz, 1' external antenna	80 GHz, 2' external antenna
Near Field Boundary, R_{nf}	3.96m	18.87m	6.19m	24.75m

Power Density in the Near Field

- **The magnitude of the on-axis (main beam) power density varies according to the location in the near field. However, the *maximum* value of the near-field, on-axis power density can be expressed by the following equation** (*Eq #13*)**:**

- **$S_{nf} = 16\eta P / \pi D^2$**
  - Where:
    - S_{nf} = maximum near-field power density in mW/cm^2
    - η = aperture efficiency of the antenna
    - D = antenna diameter in cm^2

	60 GHz, Integrated antenna	60 GHz, 2' external antenna	80 GHz, 1' external antenna	80 GHz, 2' external antenna
Power Density, S_{nf}	0.002 mW/cm^2	0.001 mW/cm^2	0.218 mW/cm^2	0.068 mW/cm^2

BridgeWave's products comply with the General Population exposure limits of 1 mW/cm^2 in the near field.

Transition Region

- **The power density in the transition region decreases inversely with distance from the antenna, while power density in the far field region (Fraunhofer region) of the antenna decreases inversely with the square of the distance. For the purposes of evaluating RF exposure, the distance to the beginning of the far-field region (farthest extent of the transition region) can be approximated by the following equation** (*Eq #16*)**:**

- **$R_{ff} = 0.6D^2 / \lambda$**
  - Where:
    - R_{ff} = distance to beginning of far-field
    - D = antenna diameter in cm^2
    - λ = wavelength

	60 GHz, Integrated antenna	60 GHz, 2′ external antenna	80 GHz, 1′ external antenna	80 GHz, 2′ external antenna
Far Field Boundary, R_{ff}	9.51m	45.29m	14.85m	59.40m

Power Density in the Transition Region

- **The transition region is defined by the boundaries of the near-field (R_{nf}) and far-field regions (R_{ff}). Power density in the transition region can be determined by the following equation** (*Eq #17*)**:**

- **$S_t = (S_{nf} * R_{nf}) / R$**
  - Where:
    - S_t = power density in the transition region in mW/cm^2
    - S_{nf} = power density for the near field region (slide 5) in mW/cm^2
    - R_{nf} = extent of the near field region (slide 4) in meters
    - R = distance to point of interest in meters
- **Assume near-field boundary distance** (closest to antenna)**:**

	60 GHz, Integrated antenna	60 GHz, 2′ external antenna	80 GHz, 1′ external antenna	80 GHz, 2′ external antenna
Power Density, S_t	0.002 mW/cm^2	0.001 mW/cm^2	0.218 mW/cm^2	0.068 mW/cm^2

BridgeWave's products comply with the General Population exposure limits of 1 mW/cm^2 in the transition region.

Power Density in the Far Field

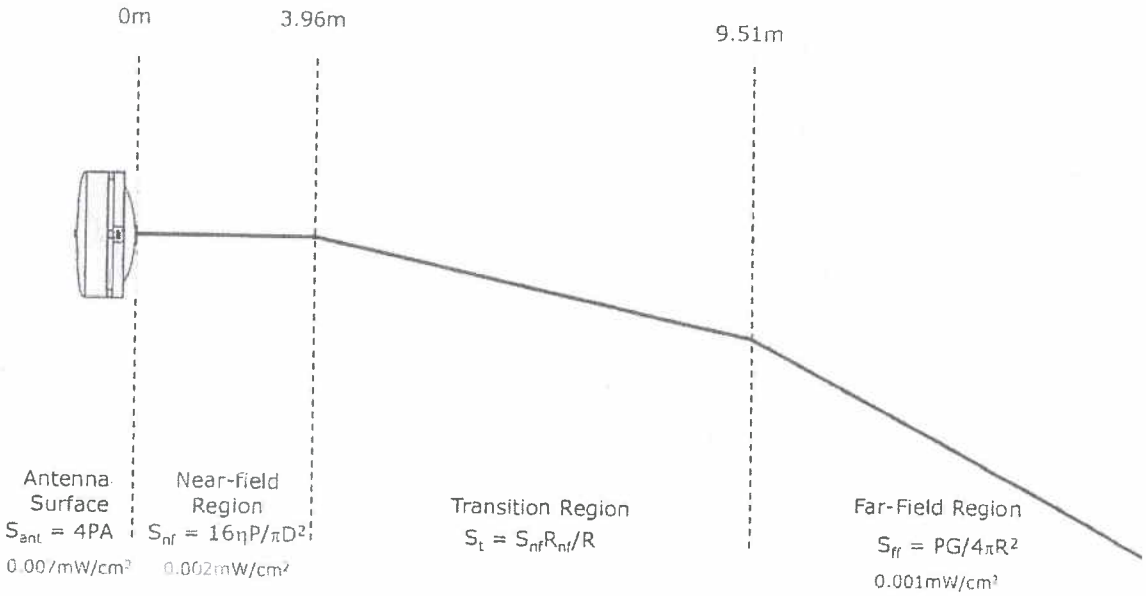
- **The power density in the far-field or Fraunhofer region of the antenna pattern decreases inversely as the square of the distance. The power density in the far-field region of the antenna radiation pattern can be estimated by the equation** *(Eq #18)*:

- **$S_{ff} = PG / 4\pi R^2$**
  - Where:
    - S_{ff} = power density (on-axis)
    - P = power fed to the antenna in mW
    - G = power gain of the antenna in the direction of interest
    - R = distance to the point of interest in meters

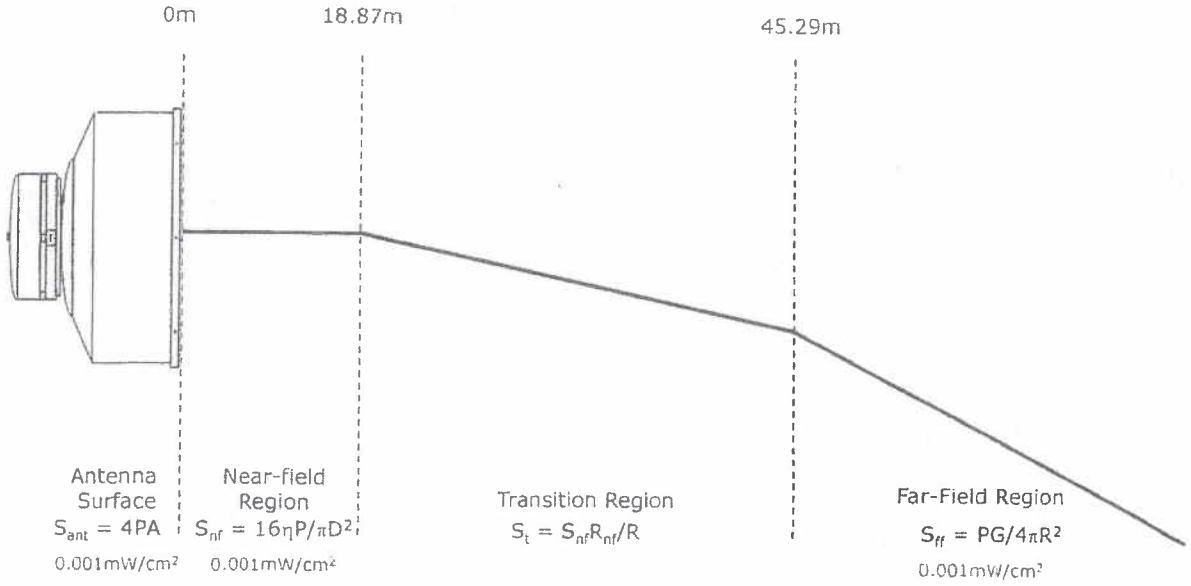
	60 GHz, Integrated antenna	60 GHz, 2' external antenna	80 GHz, 1' external antenna	80 GHz, 2' external antenna
Power Density, S_{ff}	0.001 mW/cm²	0.001 mW/cm²	0.093 mW/cm²	0.029 mW/cm²

BridgeWave's products comply with the General Population exposure limits of 1 mW/cm² in the far-field.

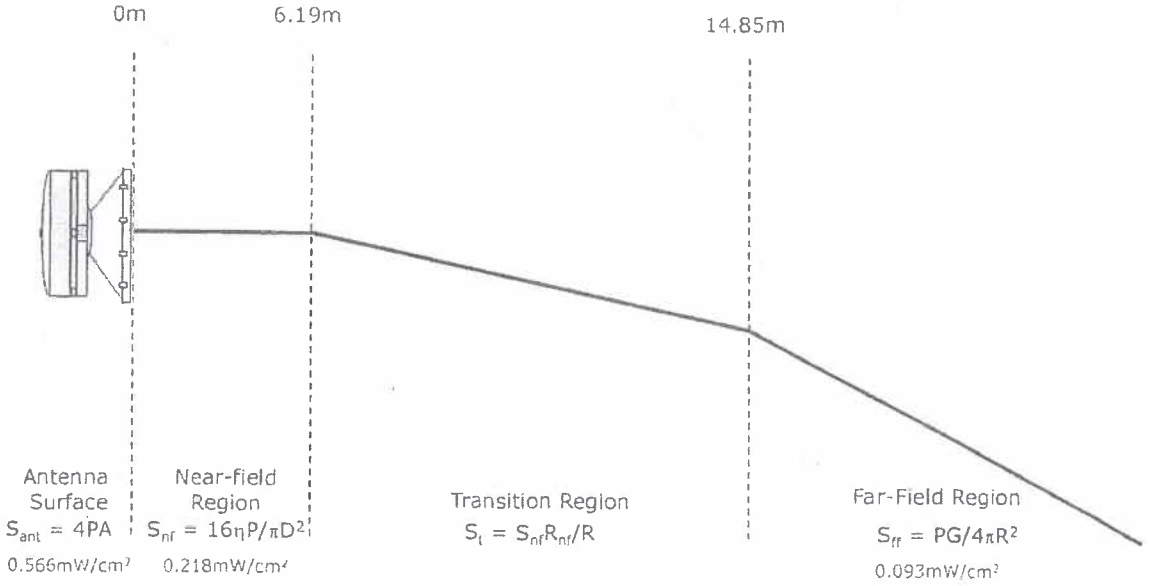
MPE Regions – 60 GHz integrated antenna



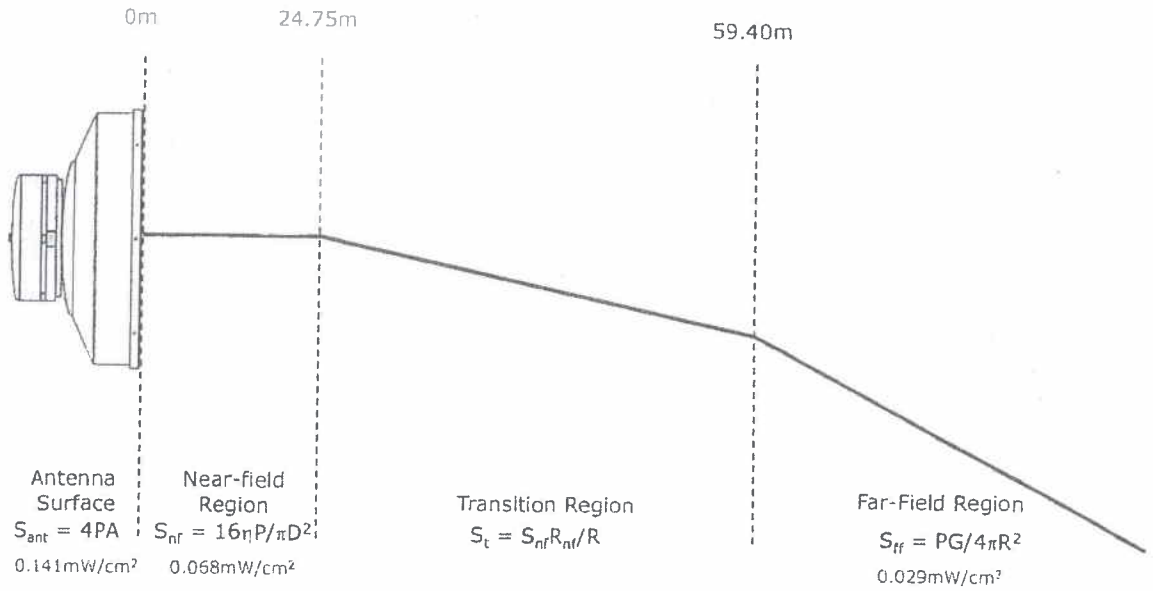
MPE Regions – 60 GHz 2' external antenna



MPE Regions – 80 GHz 1' external antenna



MPE Regions – 80 GHz 2' external antenna



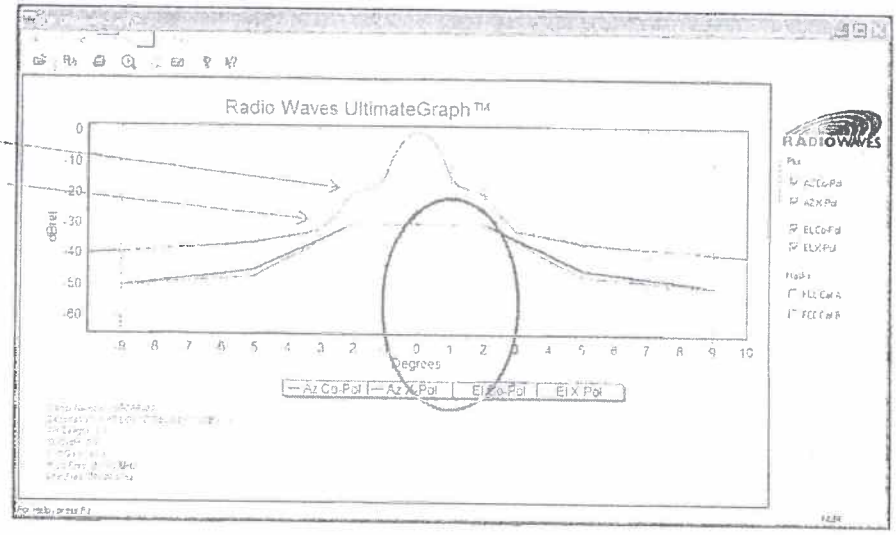
Antenna Directivity

- **Due to the highly directive nature of these antennas, off-axis power densities are several hundred times (<20 dB) below their on-axis densities, further decreasing the odds of exposure.**

12" (30cm) antenna pattern:

2° off-axis – 20 dB (100x) lower

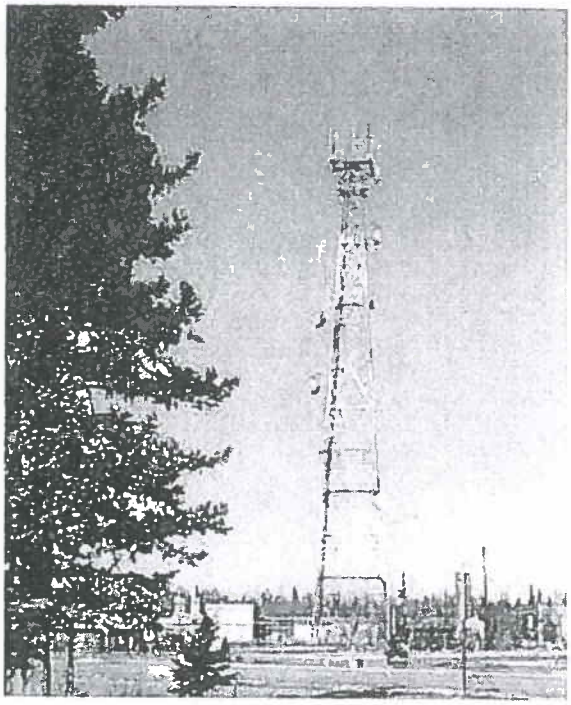
3° off-axis – 30 dB (1000x) lower



Buildings and Towers

- **These wireless systems are typically installed in secure locations such as towers or rooftops, where access by the general population is strictly limited. Therefore, it is highly unlikely for someone in the general population to stand directly in front of these systems.**

- **Building attenuation can be expected to reduce RF fields inside the building by approximately 10 – 20 dB (10x to 100x lower).**
  FCC OET65, page 37



Conclusion

Pursuant to the methodology given by FCC OET Bulletin 65 for calculating power density, BridgeWave's millimeter wave wireless bridges comply with the both the Occupational/Controlled exposure limit of 5 mW/cm^2 and the Uncontrolled/General Population exposure limit of 1 mW/cm^2.

Thank You

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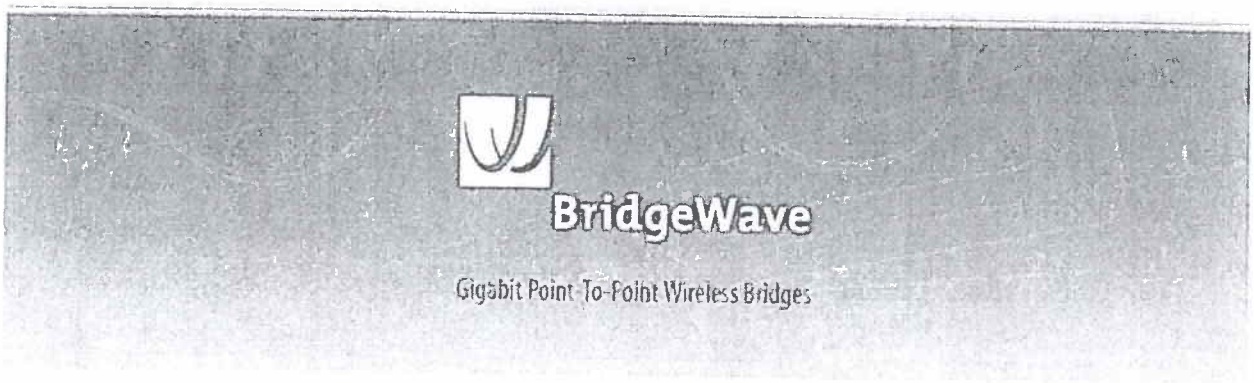
www.bridgewave.com



DISCRETIONARY REVIEW APPLICATION
FOR 58 DIGBY STREET

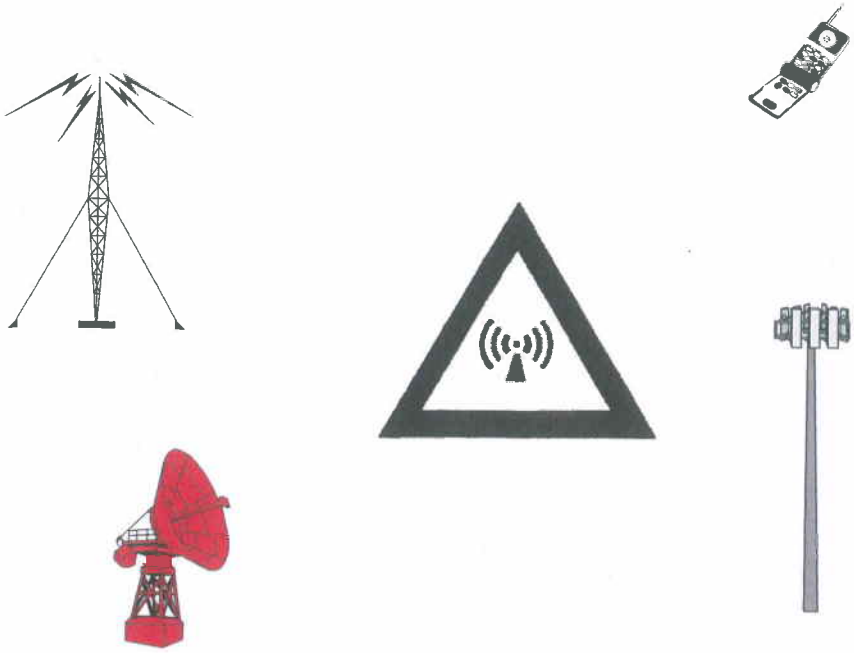
EXHIBIT 8

SUMMARY OF DR APPLICANT'S ATTEMPT TO RETAIN A RF CONSULTANT WITH PROPER EQUIPMENT TO MEASURE ANTENNAS OPERATING AT 24 AND 60 GHZ

RF Consultants **Contacted By DR Applicant**
1. Michael Neuert Electromagnetic Services
2. SIEMIC, Inc.
3. Rob States, M.S., P.E. (Chief Engineer, PC Engineering)
4. Dan Mattson, EMF and Electronics Technician
5. Environmental Scientist and Green Building Consultant
6. EM Test
7. Agilent Technologies
8. Progent
9. Hammett & Edison
10. EBI Consulting
11. Wilner & Associates – RF Measurements and Electric Power Quality Assessments
12. Stephen Scott – EMF Services
13. Advanced Test Equipment Rentals
14. A.H. Systems
15. Reliant EMC

Federal Communications Commission
Office of Engineering & Technology

Questions and Answers about Biological Effects and Potential Hazards of Radiofrequency Electromagnetic Fields



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August 1999

radiating antenna (e.g., see Reference 42, 43, 45, and 51). Therefore, precautions should be taken to ensure that maintenance personnel are not exposed to unsafe RF fields. Such precautions could include temporarily lowering power levels while work is being performed, having work performed only when the station is not broadcasting, using auxiliary antennas while work is performed on the main antenna, and establishing work procedures that would specify the minimum distance that a worker should maintain from an energized antenna.

HOW SAFE ARE MICROWAVE AND SATELLITE ANTENNAS?

Point-to-Point Microwave Antennas

Point-to-point microwave antennas transmit and receive microwave signals across relatively short distances (from a few tenths of a mile to 30 miles or more). These antennas are usually rectangular or circular in shape and are normally found mounted on a supporting tower, on rooftops, sides of buildings or on similar structures that provide clear and unobstructed line-of-sight paths between both ends of a transmission path or link. These antennas have a variety of uses such as transmitting voice and data messages and serving as links between broadcast or cable-TV studios and transmitting antennas.

The RF signals from these antennas travel in a directed beam from a transmitting antenna to a receiving antenna, and dispersion of microwave energy outside of the relatively narrow beam is minimal or insignificant. In addition, these antennas transmit using very low power levels, usually on the order of a few watts or less. Measurements have shown that ground-level power densities due to microwave directional antennas are normally a thousand times or more below recommended safety limits. (e.g., *see* Reference 38) Moreover, as an added margin of safety, microwave tower sites are normally inaccessible to the general public. Significant exposures from these antennas could only occur in the unlikely event that an individual were to stand directly in front of and very close to an antenna for a period of time.

Satellite-Earth Stations

Ground-based antennas used for satellite-earth communications typically are parabolic "dish" antennas, some as large as 10 to 30 meters in diameter, that are used to transmit ("uplinks") or receive ("downlinks") microwave signals to or from satellites in orbit around the earth. The satellites receive the signals beamed up to them and, in turn, retransmit the signals back down to an earthbound receiving station. These signals allow delivery of a variety of communications services, including long distance telephone service. Some satellite-earth station antennas are used only to ***receive*** RF signals (i.e., just like a rooftop television antenna used at a residence), and, since they do not transmit, RF exposure is not an issue.

Since satellite-earth station antennas are directed toward satellites above the earth, transmitted beams point skyward at various angles of inclination, depending on the particular satellite being used. Because of the longer distances involved, power levels used to transmit these signals are relatively large when compared, for example, to those used by the microwave point-to-point antennas discussed above. However, as with microwave antennas, the beams used for transmitting earth-to-satellite signals are concentrated and highly directional, similar to the beam from a flashlight. In addition, public access would normally be restricted at station sites where exposure levels could approach or exceed safe limits.

Although many satellite-earth stations are "fixed" sites, portable uplink antennas are also used, e.g., for electronic news gathering. These antennas can be deployed in various locations. Therefore, precautions may be necessary, such as temporarily restricting access in the vicinity of the antenna, to avoid exposure to the main transmitted beam. In general, however, it is unlikely that a transmitting earth station antenna would routinely expose members of the public to potentially harmful levels of microwaves.

ARE CELLULAR AND PCS TOWERS AND ANTENNAS SAFE? WHAT ABOUT CAR PHONES AND HAND-HELD PHONES?

Base Stations

Cellular radio systems use frequencies between 800 and 900 megahertz (MHz). Transmitters in the Personal Communications Service (PCS) use frequencies in the range of 1850-1990 MHz. The antennas for cellular and PCS transmissions are typically located on towers, water tanks or other elevated structures including rooftops and the sides of buildings. The combination of antennas and associated electronic equipment is referred to as a cellular or PCS "base station" or "cell site." Typical heights for free-standing base station towers or structures are 50-200 feet. A cellular base station may utilize several "omni-directional" antennas that look like poles, 10 to 15 feet in length, although these types of antennas are becoming less common in urban areas.

In urban and suburban areas, cellular and PCS service providers now more commonly use "sector" antennas for their base stations. These antennas are rectangular panels, e.g., about 1 by 4 feet in dimension, typically mounted on a rooftop or other structure, but they are also mounted on towers or poles. The antennas are usually arranged in three groups of three each. One antenna in each group is used to transmit signals to mobile units (car phones or hand-held phones), and the other two antennas in each group are used to receive signals from mobile units.

The FCC authorizes cellular and PCS carriers in various service areas around the country. At a cell site, the total RF power that could be transmitted from each transmitting antenna at a cell site depends on the number of radio channels (transmitters) that have been

SUPPLEMENTAL SUBMISSION BY ANOTHER CORPORATE ISP, LLC DBA MONKEYBRAINS

Re: 58 Digby Street - BPA No. 2013.05.007.6233 (Request for DR)

Department of Planning
Attn: Mr. Omar Masry
1650 Mission Street, 4th Floor
San Francisco, CA 94103
omar.masry@sfgov.org

Dear Mr. Masry:

This submission supplements the prior submission of Another Corporate ISP, LLC dba MonkeyBrains (MonkeyBrains) regarding the above referenced Request for Discretionary Review. We'd like to emphasize several main points discussed further below: (1) the subject premises at 58 Digby Street (the "Subject Premise") currently has only two antennae; (2) both antennae are FCC and OTARD compliant in their use and the Applicant has failed to submit any evidence which establishes otherwise; (3) the antennae each emit a fraction of a Watt of RF power, and this fractional wattage is directed away from the Applicant's residence; and (4) the antennae installations do not affect the character of the neighborhood visually, and has the visual impact comparable to a Direct TV Dish.

HISTORY:

8/2/2012 – MonkeyBrains performs initial installation for Mr. Nash at Subject Property.

12/07/12 – MonkeyBrains provided information affirming the RF safety and the FCC certifications of the antennae installations at the Subject Property for use by owner of Subject Property to provide to his neighbors, the Applicants.

12/20/12 – MonkeyBrains receives a copy of the Notice of Violation # 201281191 (the "NOV") from Mr. Nash.

1/3/2013 – MonkeyBrains spoke to Building Inspector Duffy regarding the NOV.

4/16/2013 – MonkeyBrains removed one Ubiquiti Rocket M5, and mounted poles mechanically to the chimney chase of the Subject Property.

5/13/2013 – MonkeyBrains Moved the BridgeWave and SAF to the poles mounted to the chimney chase, and removed the weighted base from the roof, and moved the remaining Ubiquiti Rocket M5 devices to the back of house to transition customers off that antenna.

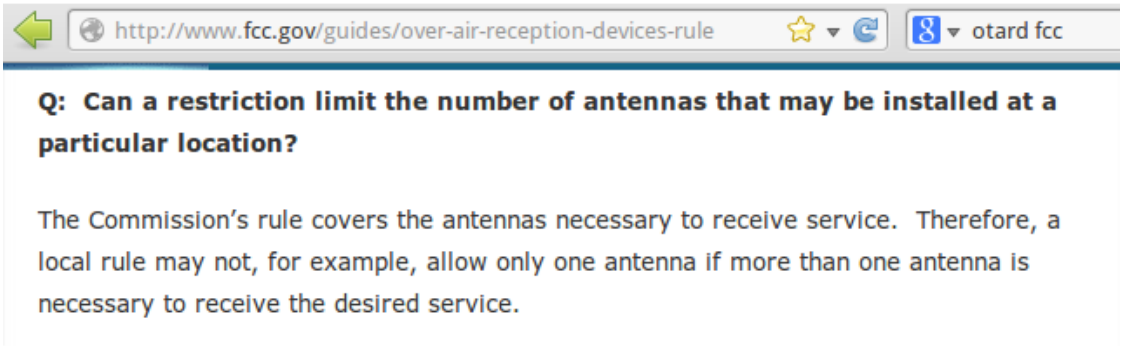
9/12/2013 – MonkeyBrains removed the transitional Ubiquiti Rocket M5 from the back of the house. (See photo attached as Exhibit D).

1. Currently Installed Devices. There are currently 2 antennae Installed, each FCC and OTARD compliant: BridgeWave FE60U, which operates in 60GHz unlicensed band (BridgeWave), and SAF Lumina, which operates in 24GHz unlicensed band (SAF).

2. FCC and OTARD Compliance. The specifications for the BridgeWave and the SAF, with FCC certifications, are attached as Exhibits A and B respectively. The BridgeWave is used solely for redundancy in the event that the primary SAF antennae loses signal from the network. For customers who do not have landlines and rely on their Internet service to enable their phone service, the redundancy is highly recommended to ensure that a customer can access things such as emergency services without fail.

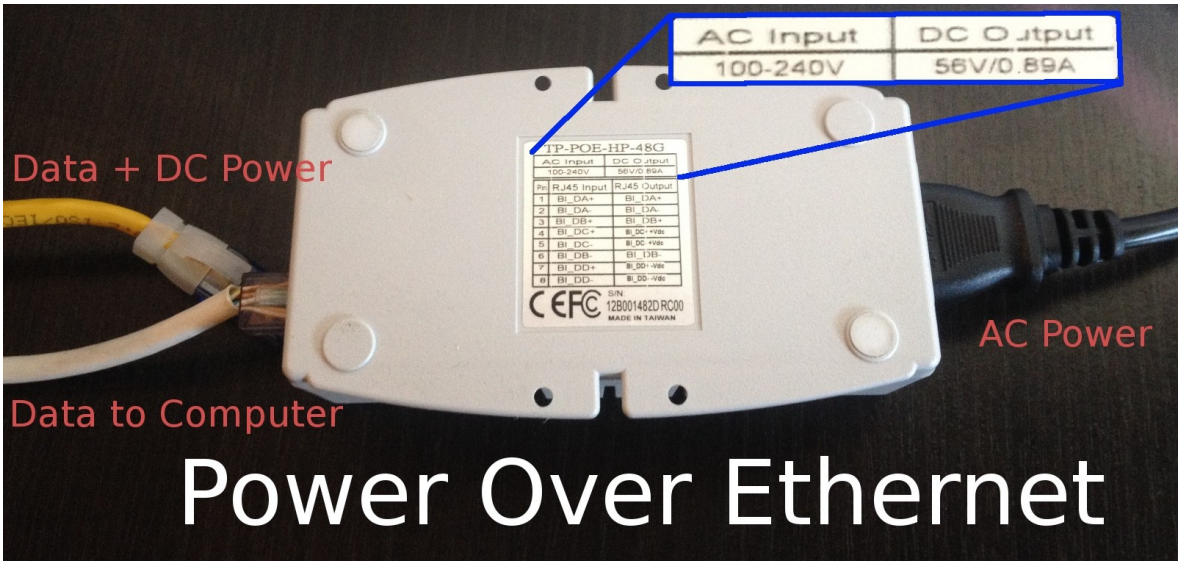
It is important to note that Applicants' purported RF expert never conducted a site inspection at the Subject Property. All of the conclusions contained in Applicant's supplemental brief were entirely speculative.[1]

Per the FCC's guidelines, a municipality may not allow only one antenna if more than one antenna is necessary to receive the desired service. Here, the desired service creates a redundancy which makes it highly unlikely that the end user will lose Internet service, and, therefore, will not lose the ability to contact emergency services.



3. Low Power Usage. The electrical power consumed by each the BridgeWave and the SAF are extremely low. They are each powered through one standard computer Ethernet cable. Below is a photograph of the power source for an SAF antenna. Note it has a standard black computer cable on the right and two ethernet cables on the left – one goes to the customer, and the other to the antenna. The low voltage that powers the antenna rides on the same Ethernet Cable as the data.

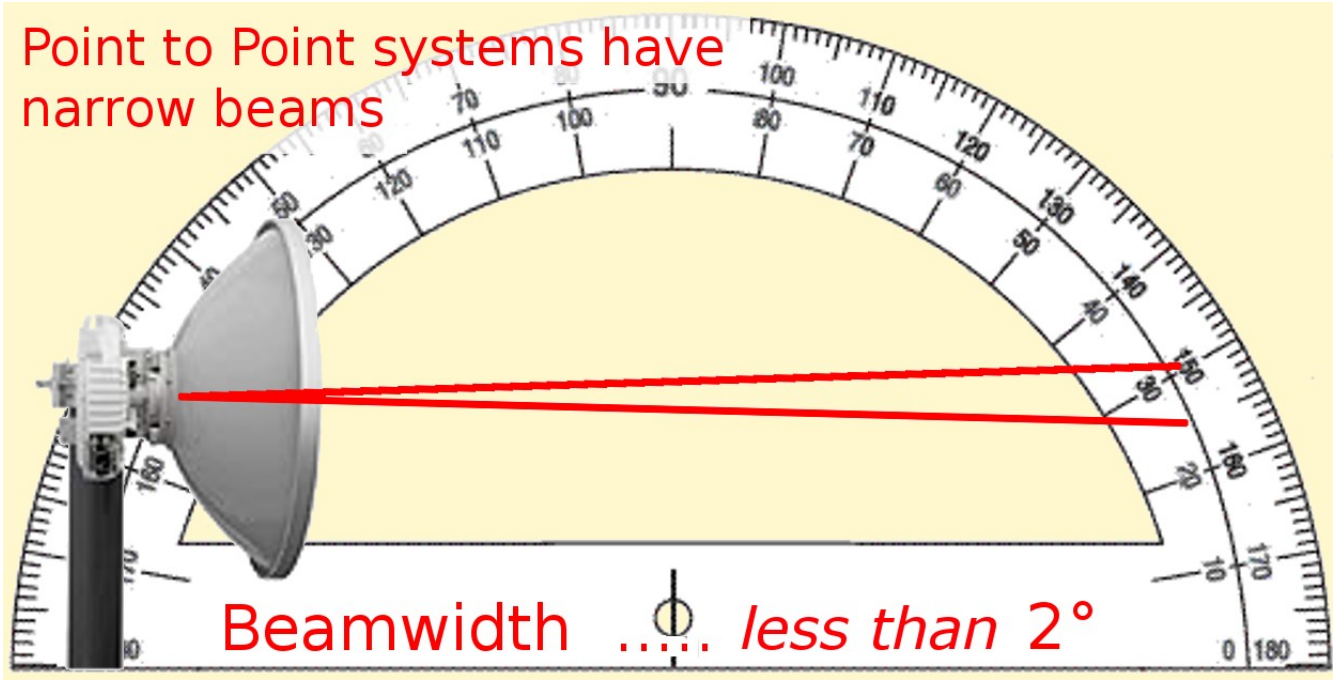
1MonkeyBrains offered to pay for an RF Engineer of Applicants' choosing to conduct a site survey on the condition that if the RF Engineer found the equipment to be FCC compliant for public exposure, Applicants would drop this application and improper use of this Commission's time and energy. Despite counsel for Applicants agreeing to such a proposal, Applicants stone walled MonkeyBrains and chose instead to have this matter brought to this Commission without any prior site inspection. (See Exhibit C, email correspondence trail between Ms. Huangfu and Mr. Ridless).



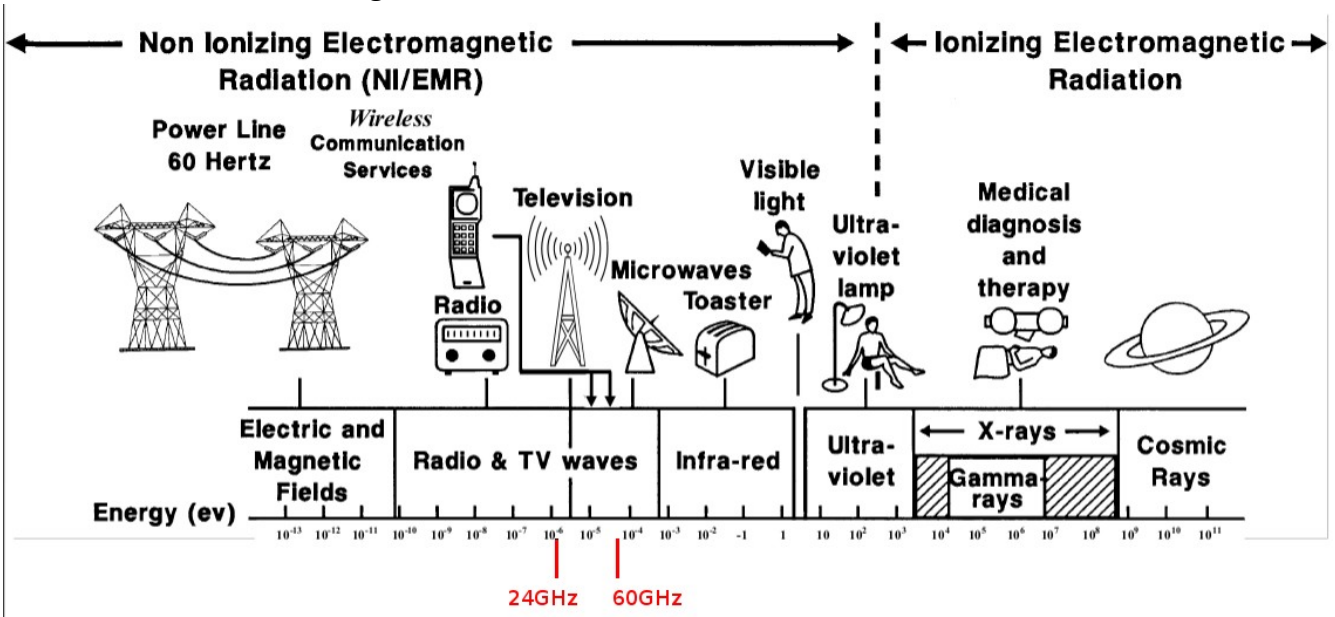
We can remotely monitor the antenna and measure its power consumption. Here is a screenshot of the device reporting 21 Watts of electrical power in use on 9/25/2013.

Diagnostics	
Diagnostics data status	Ok
System temperature	+31.5 °C / +88.7 °F
Modem temperature	+36.5 °C / +97.7 °F
Input voltage	46.82 V
Input current	0.455 A
Power consumption	21.30 W

The Radio Frequency (RF) power emitted is a fraction of the electrical power consumed. The BridgeWave and SAF are manufactured to emit less than 1 Watt of RF power and the power is sent in a beam away from any neighboring homes (see Exhibits A, at page 6 of BridgeWave-FCC-Test-Results.pdf, and Exhibit B, Lumina antenna spec sheet, at p. 21). Our system works on this extremely low RF power by using a dish to focus that beam to the other end of the link. These devices are so low in power that the FCC has granted use of these devices without a license. Licensed links (such as is common with cell phone towers) operate with much higher RF levels. Also, cell towers typically install Omnidirectional or Sector antennas that emit stronger frequency signal in every direction – the goal being that cell phones will pick up service through walls. The beam width of the SAF with a 2 foot dish is **1.7 degrees** while the 10 inch BridgWave has a beam width of **1.4 degrees**. Our millimeter wavelength signals do not have penetrating capabilities and do not pass through walls, therefore, they are installed on rooftops with very directional parabolic dishes that require unobstructed line of site.



In reviewing a chart of the Electromagnetic Spectrum, one can verify that both the BridgeWave and SAF are far from the Ionizing Radiation.



The Electromagnetic Spectrum

Figure 2

Here is a summary comparing levels of power for different devices from http://en.wikipedia.org/wiki/DBm:

dBm level	Power	Notes
80 dBm	100 kW	Typical transmission power of FM radio station
62 dBm	1.588 kW	Ham radio station
60 dBm	1 kW	RF power inside a Microwave oven
33 dBm	2 W	**Maximum output from a 3G mobile phone**
30 dBm	1 W	Typical RF leakage from a microwave oven **Home WiFi router** using 802.11n 5.8Ghz band
27 dBm	500 mW	Typical **3G mobile phone** output.
20 dBm	100 mW	Home wireless router using 802.11b/g 2.4Ghz band.
15 dBm	32 mW	Typical **WiFi** in laptops / smartphones.
4 dBm	2.5 mW	**Bluetooth** Class 2
0 dBm	1.0 mW	Bluetooth Class 3
−4 dBm	0.4mW	**Maximum output from an SAF Lumina 24GHz**
−60 dBm	1 nanoW	Typical received signal power from the remote side of an SAF link
−127.5 dBm	0.178 femtoW	Typical received signal power from a GPS satellite

4. Neighborhood Character is Preserved. The installations of the BridgeWave and SAF do not affect the character of the neighborhood visually, and both have the visual impact comparable to a Direct TV Dish.

These installations do not alter the use of the Subject Premises nor traffic in the neighborhood. The purpose of the installations is to provide Mr. Nash with fast, high availability Internet access for his home use.

Conclusion. Both the BridgeWave and SAF are approved by the FCC and are within the FCC size limits. Their use is OTARD compliant and the second antenna is only in place as a redundant device. Both devices are low voltage and powered via ethernet cables. Since these facts are verifiable through review of the specifications for the respective devices , a survey by an RF engineer is not necessary (see Exhibits A and B)."

Sincerely,

Rudy Rucker

Managing Member

Another Corporate ISP, LLC dba MonkeyBrains

EXHIBIT A

BridgeWave Spec Sheet & BridgeWave-FCC-Test-Results.pdf

Note: Transmitter in Test Results is attached to an external 24” antenna in some photos; however, the 10” integrated antenna with a 1.4 degrees beam (spec from sheet below) is installed. The data of interest on Page 6 of the FCC Test Results refers to the transmitter alone having a maximum output power of 0.155 mW.

Remainder of page blank; exhibit merged into document.

BridgeWave
COMMUNICATIONS

Specifications

	FE60U Fast Ethernet Gigabit Upgradeable
Data Rate	100 Mbps full-duplex
Latency	< 220uSec
Link Budget	161.5 dB @ 10^{-12} BER
	163.5 dB @ 10^{-6} BER
RF Interface	58.1 GHz/62.9 GHz (FDD), digitally modulated (BFSK) with forward error correction RS(204,188)
	285 MHz bandwidth *
	Min. link distance 65 ft (20 m)
Antenna	Integrated 10 in (25 cm) directional cassegrain
	Linear polarized (H/V), 40 dBi gain, 1.4° beam
Ethernet Interfaces	1000base-SX with LC connectors - up to 270 m 62.5/125µm MMF, or 500 m 50/125µm MMF
	10/100base-TX with RJ-45 connector (with integral surge suppressor) - up to 100 m CAT5 cable
	Maximum Ethernet frame length: 1632 bytes
Management	Web-based (HTML) embedded management agent: setup, security, status, statistics, software update
	Secure Management Access (see Advanced Security datasheet for details)
	SNMP support: MIB-II and BridgeWave enterprise MIB
	Voltmeter test points: Receive Signal Level and Link Quality
	RADIUS Authentication, SysLog support
Power	Supplied 100 – 240 VAC input, +24 VDC output, indoor rated power supply (0°C to +40°C). 45 watts max. consumption
	Max. cable length: 650 ft (200 m) with 12AWG 400 ft (125 m) with 14AWG, stranded wires highly recommended (surge suppressor required)
Mount	Pole mount: 2-4.5 in (5-11 cm) OD
	Wall mount bracket
Size	Radio/antenna unit: 12 w * 12 h * 6 d (in) / 30 w * 30 h * 15 d (cm) (Not including pole mount hardware)
Weight	Radio: 11.9 lbs (5.4 kg)
	Mount: 6.6 lbs (3.0 kg)
Environmental	Operating temperature: -33°C to +55°C (-27°F to 131°F)
	Operating altitude: 14,764 ft maximum (4,500 m)
Wind Loading	50 lbs. force @ 100 MPH
Regulatory	Safety: UL Listed, CE Mark, EN60950, meets FCC 1.1310 general population RF MPE limits
	RF Certifications: U.S. FCC Part 15.255, Industry Canada RSS-210
Install Kit	Voltmeter test cable, power connectors, visual alignment tool

* = Refer to AR60 datasheet for upgradeable features

BridgeWave Communications, Inc.
3350 Thomas Road, Santa Clara, CA 95054 USA
Ph: +1 (866) 577-6908; +1 (408) 567-6908

www.bridgewave.com

ISO 9001:2008
FM 59394

BridgeWave strongly recommends that a link analysis be performed to ensure the system meets the individual application requirements. Please contact BridgeWave Sales. BridgeWave reserves the right to change specifications and features listed herein without notice or obligation.

FCC CFR47 PART 15 SUBPART C CERTIFICATION

TEST REPORT

FOR

MICROWAVE LINK

MODEL NUMBER: GE60X, FE60X, AR60X*

FCC ID: RWM-GE60X

REPORT NUMBER: 05U3616-1B

ISSUE DATE: JULY 21, 2005

Prepared for
BRIDGEWAVE COMMUNICATIONS
3350 THOMAS ROAD
SANTA CLARA, CALIFORNIA 95054

Prepared by
COMPLIANCE ENGINEERING SERVICES, INC.
d.b.a.
COMPLIANCE CERTIFICATION SERVICES
561F MONTEREY ROAD,
MORGAN HILL, CA 95037, USA
TEL: (408) 463-0885
FAX: (408) 463-0888

*Details of specific model(s) tested and model differences shall be identified in body of report

LAB CODE:200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
A	7/25/05	Initial Issue	MH
B	8/11/05	Corrected typos for antenna diameter and subsequent calculations. Corrected typos for measurement distance and field strength limit above 40 GHz, for both system noise floor and test results.	MH

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: BRIDGEWAVE COMMUNICATIONS
3350 THOMAS ROAD
SANTA CLARA, CA 95054

EUT DESCRIPTION: MICROWAVE LINK TRANSCEIVER

MODEL TESTED: AR60X, AR60

DATE TESTED: JULY 18-20, 2005

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 15 SUBPART C	NO NON-COMPLIANCE NOTED

Compliance Certification Services, Inc. tested the above equipment in accordance with the requirements set forth in the above standards. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document. No part of this report may be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any government agency.

Approved & Released For CCS By:

MIKE HECKROTTE
ENGINEERING MANAGER
COMPLIANCE CERTIFICATION SERVICES

Tested By:

JOSEPH CHUNG
EMC ENGINEER
COMPLIANCE CERTIFICATION SERVICES

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2003, FCC CFR 47 Part 2 and FCC CFR 47 Part 15.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 561F Monterey Road, Morgan Hill, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.4, ANSI C63.7 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://www.ccsemc.com.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Radiated Emission, 30 to 200 MHz	+/- 3.3 dB
Radiated Emission, 200 to 1000 MHz	+4.5 / -2.9 dB
Radiated Emission, 1000 to 2000 MHz	+4.5 / -2.9 dB
Power Line Conducted Emission	+/- 2.9 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EUT DESCRIPTION

5.1. DESCRIPTION OF EUT

The EUT is a 60 GHz transceiver intended for microwave link applications.

The transmitter has a maximum peak conducted output power as follows:

Frequency of Operation (GHz)	Maximum output power, dBm	Maximum output power, mW
58.1 - 62.9	-8.1	0.155

The radio utilizes an Integral Directional Cassegrain Antenna with a gain of 46 dBi.

5.2. DESCRIPTION OF MODEL DIFFERENCES

The GE60X operates at a data rate of 1 Gbit/sec, the FE60X operates at a data rate of 100 Mbits/sec, and the AR60X is a dual rate 100 Mbit/sec or 1 Gbit/sec.

The hardware for all three models is identical; changes are made via firmware.

All testing was performed with the dual rate version.

The frequency stability tests were performed using a model AR60. The AR60 uses the identical circuitry as the AR60X; the only difference is that the AR60 has a smaller, lower gain antenna that fits inside the environmental chamber.

All other tests were performed using a model AR60X.

EXHIBIT B

Lumina Antenna Spec Sheet

Last page shows dBm range upto -4 dBm (0.0005 Watts) for 24GHz unlicensed transmitters. For comparison, a licensed link can be has powerful as +27dBm (0.5 Watts).

Remainder of page blank; exhibit merged into document.

CFIP Lumina FCC series

High capacity - Full Outdoor - Microwave Radio Systems

III CFIP Lumina FODU technical specification						
Frequency range (GHz)	**6**	**11**	**18**	**23**	**24 UL**	**38**
Channel Bandwidths (MHz)*	20, 28, 30, 40, 50, 56					
Modulation	QPSK / 16APSK / 32APSK / 128QAM / 256QAM					
Capacity (Mbps)	25 - 367					
III Performance						
Configuration	1+0, Ring/Mesh (with STP), 2+0 (built-in Ethernet aggregation)					
Frequency stability (ppm)	+/-7					
Traffic Interfaces	1 or 2 Gigabit Ethernet (electrical or optical)					
III Ports						
	N-Type	UBR 100	UBR 220	UBR 220	Circular 10mm	UBR 320
Ethernet	Optical 1 or 2 ODC ports Electrical 1 or 2 RJ-45 Hybrid 1 ODC and 1 RJ-45					
RSL port, RSSI, BNC connector	Output voltage vs RSL: 0 to 1.4V vs -90 to -20dBm					
Serial port for configuration	RS-232, Twin BNC connector					
III Management features						
Management port	Ethernet VLAN or Separate Ethernet (RJ-45 or optical)					
SNMP	Yes, SNMP traps, MIB, SNMP v1/v2c					
EMS	Web based, HTTP					
ATPC feature	Yes					
ACM feature	Hitless 0ms					
Loopbacks	Yes, modem, IF loopback					
III Ethernet						
Switch type	Managed Gigabit Ethernet Layer 2					
Max frame size	9728 bytes					
MAC table	4K entries; automatic learning and aging					
Packet buffer	128KB; non-blocking store&forward					
Flow Control	802.3x					
VLAN support	802.1Q (up to 4K VLAN entries)					
QinQ (Double Tagging)	Yes					
QoS	64 level DiffServ (DSCP) or 8 level 802.1p mapped in 4 prioritization queues with VLAN support					
QoS queuing	Fixed or weighted (configurable ratio)					
Spanning Tree Protocol	802.1D-2004 RSTP					
III Mechanical & Electrical						
Temperature Range	-27.4°F to 131°F					
Dimensions: HxWxD, inches	11.2x11.2x3.1					
Weight, lbs	8.5					
Input DC voltage	-48 V DC ±10%					
Max. power consumption	SP: 25-42 W; HP: 29-50 W					

CFIP Lumina FCC series

High capacity - Full Outdoor - Microwave Radio Systems

III CFIP Lumina Tx power

Modulation	Standard/High Tx Power, dBm				
	6 GHz	11 GHz	18, 23 GHz	24*** GHz	38 GHz
QPSK	+19 / +27	+19 / +25	+19	-20…0	+12
16APSK	+18 / +26	+18 / +24	+18	-20…-1	+11
32APSK	+17 / +25	+17 / +23	+17	-20…-2	+10
64QAM	+15 / +23	+15 / +21	+15	-20…-4	+8
128QAM	+15 / +23	+15 / +21	+15	-20…-4	+8
256QAM	+12 / +20	+12 / +17	+12	-20…-7	+5

* According to FCC channel plan
** Forward Error Correction (FEC) can be optimized either for sensitivity (Strong FEC) or for capacity (Weak FEC)
*** Output Tx range may differ for previous hardware and software versions

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www.saftehnika.com

EXHIBIT C

Email Trail Between Ms. Huangfu and Mr. Ridless

(Page Blank, Emails start on next page)

Joshua A. Ridless

From: Joshua A. Ridless <jr@ridlesslaw.com>
Sent: Tuesday, July 09, 2013 10:44 AM
To: 'Huangfu, Kimberly'
Cc: 'Castro, Georgina'
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Hi Kimberly,
In the interim, can you respond to my questions from July 1?

Josh

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http://www.ridlesslaw.com

From: Huangfu, Kimberly [mailto:khuangfu@buchalter.com]
Sent: Tuesday, July 02, 2013 5:32 PM
To: jr@ridlesslaw.com
Cc: Castro, Georgina
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Josh,

Thank you again for your patience. My client and I are still in the process of locating a qualified RF expert with access to the equipment necessary to measure frequencies at such high levels. Apparently, this is not an easy task. I would like to get the testing squared away well before the continued DR hearing and will let you know as things progress.

Kimberly A. Huangfu | Real Estate & Land Use Associate/LEED AP BD+C | **BuchalterNemer**, A Professional Corporation | 55 Second Street, Suite 1700 | San Francisco, CA 94105-3493 | Direct Dial: (415) 296-1696 | Cell Phone: (415) 867-9205 | Direct Fax: (415) 296-1766 | Switchboard: (415) 227-0900 | khuangfu@buchalter.com | www.buchalter.com I Bio

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From: Joshua A. Ridless [mailto:jr@ridlesslaw.com]
Sent: Monday, July 01, 2013 10:01 AM
To: Huangfu, Kimberly
Cc: Castro, Georgina
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Hi Kimberly,
Thank you for your emails.

I want to make sure I understand the new proposal.

Are we still agreeing that so long as the both engineers' findings are consistent with item 4 below, that the Chars will dismiss?

Are you proposing that MonkeyBrains have the right to accept or reject the Chars' proposed RF Engineer?

If MonkeyBrains finds the Chars' proposed RF Engineer, can they waive their right to use their own engineer and just rely on the Chars' engineer?

1. That the Chars have an opportunity to review and reasonably reject any proposed RF engineers in advance of the site inspection to ensure that the Chars feel comfortable with the credentials of the proposed RF engineer;
2. That the RF engineer also assess the RF emissions on the Char's residence, including the deck, dining room, living room and office areas, and any other areas within the directional range of the antennas. The Chars will, of course, grant access and coordinate with the RF engineer to schedule an on-site inspection of their home;
3. That MonkeyBrains attests under penalty of perjury that there are only two antennas remaining on site and that these two antennas: (a) are not being used in any commercial capacity other than to provide the residents of 58 Digby Street with a reliable internet connection, (b) are not being used as a relay station or hub to service other MonkeyBrains' customers or clients, and (c) comply with the OTARD exemption and constitute an end-user application as defined by the FCC; and,
4. That the RF Engineer finds that the RF emissions and field strengths fall within the FCC Limits for Maximum Permissible Exposure (MPE) for General Population/Uncontrolled Exposure for a continuous period of time (24 hours a day/7 days a week/52 weeks a year for an indefinite period).

Regards,

Josh

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From: Huangfu, Kimberly [mailto:khuangfu@buchalter.com]
Sent: Friday, June 28, 2013 4:49 PM
To: jr@ridlesslaw.com
Cc: Castro, Georgina
Subject: FW: 58 Digby Street - BPA No. 2013.05.007.6233

Josh,

Sorry to bombard you with emails. I have completed a draft copy of the Stipulated Agreement and am waiting for final approval by my client.

Please let me know your thoughts on the points raised below.

Thanks,
Kim

Kimberly A. Huangfu | Real Estate & Land Use Associate/LEED AP BD+C | **BuchalterNemer**, A Professional Corporation | 55 Second Street, Suite 1700 | San Francisco, CA 94105-3493 | Direct Dial: (415) 296-1696 | Cell Phone: (415) 867-9205 | Direct Fax: (415) 296-1766 | Switchboard: (415) 227-0900 | khuangfu@buchalter.com | www.buchalter.com I Bio

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From: Huangfu, Kimberly
Sent: Friday, June 28, 2013 10:18 AM

To: 'jr@ridlesslaw.com'
Cc: Castro, Georgina
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Josh,

Thank you for your patience. I have discussed with the Chars how we would like to proceed and propose the following:

1. MonkeyBrains will retain the proposed RF expert, Hammett & Edison, at MonkeyBrains' expense.

2. The Chars will retain their own RF expert (at their expense) to serve as a consultant to verify the accuracy of the measurement methodology, as well as Hammett & Edison's analysis and preparation of the site inspection report.

3. Both experts will conduct the site inspection at the same time and will have access to the residence located at 58 Digby Street, as well as the Chars' residence at 62 Digby Street.

4. Should there be any discrepancy between the results or interpretation of the measurements involved between the two RF experts, the Chars reserve the right not to withdraw the pending discretionary review application.

We are in the process of securing a RF expert. I have left a few voicemails with potential experts and will let you know once we have formalized a retainer agreement. If you are agreeable to the above, I will finalize the terms into a draft agreement for your review this afternoon.

Thanks,
Kimberly

Kimberly A. Huangfu | Real Estate & Land Use Associate/LEED AP BD+C | **BuchalterNemer**, A Professional Corporation | 55 Second Street, Suite 1700 | San Francisco, CA 94105-3493 | Direct Dial: (415) 296-1696 | Cell Phone: (415) 867-9205 | Direct Fax: (415) 296-1766 | Switchboard: (415) 227-0900 | khuangfu@buchalter.com | www.buchalter.com I Bio

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From: Joshua A. Ridless [mailto:jr@ridlesslaw.com]
Sent: Tuesday, June 25, 2013 10:14 AM
To: Huangfu, Kimberly
Cc: Castro, Georgina
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Kimberly,
Any update?

Regards,

Josh

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http://www.ridlesslaw.com

From: Huangfu, Kimberly [mailto:khuangfu@buchalter.com]
Sent: Thursday, June 13, 2013 11:39 AM

To: jr@ridlesslaw.com
Cc: Castro, Georgina
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Many thanks. I appreciate your continued cooperation.

I will follow up with the Chars and let you know if Hammett & Edison is an acceptable engineer. In the meantime, I will prepare a stipulated agreement for your review and comment.

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From: Joshua A. Ridless [mailto:jr@ridlesslaw.com]
Sent: Thursday, June 13, 2013 11:35 AM
To: Huangfu, Kimberly
Cc: Castro, Georgina
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Kimberly,
Those terms are acceptable. My client suggests using Hammett & Edison. They've been a local leader in wireless for the past 25 years and have been in business for over 60 years.
http://www.h-e.com/

I believe I've given you everything I have regarding the Bridgewave, but will ask the client if there is any additional documentation in their possession.

Josh

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From: Huangfu, Kimberly [mailto:khuangfu@buchalter.com]
Sent: Thursday, June 13, 2013 10:07 AM
To: jr@ridlesslaw.com
Cc: Castro, Georgina
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Yes, the threshold we discussed is acceptable, however, the Chars would like to ensure that they have an opportunity to vet the RF engineer to confirm the accuracy of the data collected and, thus, agree to withdraw their DR application on the following conditions:

1. That the Chars have an opportunity to review and reasonably reject any proposed RF engineers in advance of the site inspection to ensure that the Chars feel comfortable with the credentials of the proposed RF engineer;
2. That the RF engineer also assess the RF emissions on the Char's residence, including the deck, dining room, living room and office areas, and any other areas within the directional range of the antennas. The Chars will, of course, grant access and coordinate with the RF engineer to schedule an on-site inspection of their home;

3. That MonkeyBrains attests under penalty of perjury that there are only two antennas remaining on site and that these two antennas: (a) are not being used in any commercial capacity other than to provide the residents of 58 Digby Street with a reliable internet connection, (b) are not being used as a relay station or hub to service other MonkeyBrains' customers or clients, and (c) comply with the OTARD exemption and constitute an end-user application as defined by the FCC; and,
4. That the RF Engineer finds that the RF emissions and field strengths fall within the FCC Limits for Maximum Permissible Exposure (MPE) for General Population/Uncontrolled Exposure for a continuous period of time (24 hours a day/7 days a week/52 weeks a year for an indefinite period).

If your client is agreeable to the above-referenced terms, I can prepare a stipulated agreement to that effect for all parties to sign. I have a filing to get out and am buried for the rest of the day but am available tomorrow.

My client has also asked whether you have an instructional manual or datasheet for the Bridgewave (similar to the Lumina link) that discusses minimum safe distance measurements. I looked on the manufacturer's website but was not able to find anything to that effect.

In the interim, could you please send of a list of RF engineers that MonkeyBrains is considering? Thanks again!

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From: Joshua A. Ridless [mailto:jr@ridlesslaw.com]
Sent: Thursday, June 13, 2013 9:55 AM
To: Huangfu, Kimberly
Cc: Castro, Georgina
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Thanks Kimberly. Last we corresponded you were going to confirm that the threshold we proposed was acceptable to your clients so that we could reduce something to writing.

Josh

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From: Huangfu, Kimberly [mailto:khuangfu@buchalter.com]
Sent: Thursday, June 13, 2013 9:51 AM
To: jr@ridlesslaw.com
Cc: Castro, Georgina
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Josh,

Thanks for the follow up. Yes, my client is still interested in having a site inspection done to measure the RF signal strength and RF emissions. My apologies for the delay. My client has been out of town and I am waiting to as to whether they have a RF engineer that they would be interested in using.

In the interim, could you please provide a list of the RF engineers that MonkeyBrains would consider retaining? That will help speed up the process. Thanks.

Kimberly A. Huangfu | Real Estate & Land Use Associate/LEED AP BD+C | **BuchalterNemer**, A Professional Corporation | 55 Second Street, Suite 1700 | San Francisco, CA 94105-3493 | Direct Dial: (415) 296-1696 | Cell Phone: (415) 867-9205 | Direct Fax: (415) 296-1766 | Switchboard: (415) 227-0900 | khuangfu@buchalter.com | www.buchalter.com I Bio

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From: Joshua A. Ridless [mailto:jr@ridlesslaw.com]
Sent: Thursday, June 13, 2013 9:48 AM
To: Huangfu, Kimberly
Cc: Castro, Georgina
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Hi Kimberly,
I'm following up on our exchange. I believe you were going to firm up our agreement by this past Monday.

Does your client still wish to have MonkeyBrains retain an RF Engineer?

best,

Josh

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http://www.ridlesslaw.com

From: Joshua A. Ridless [mailto:jr@ridlesslaw.com]
Sent: Monday, June 10, 2013 1:43 PM
To: 'Huangfu, Kimberly'
Cc: 'Castro, Georgina'
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Hi Kimberly,
The only customer being serviced by the equipment on the roof of 58 Digby Street is the resident(s) at 58 Digby Street.

I believe the client has a list of several well qualified RF Engineers. We are happy to discuss the selection of the engineer subject to agreeing on a threshold for the report.

Regarding your items 1-5, I will defer to the specification sheets produced and the final report of the RF Engineer.

We look forward to your response.

best,

Josh

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From: Huangfu, Kimberly [mailto:khuangfu@buchalter.com]
Sent: Friday, June 07, 2013 4:54 PM
To: jr@ridlesslaw.com
Cc: Castro, Georgina
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Josh,

Thank you for providing the supplemental materials with the specs for the 60 GHz BridgeView antenna. I am waiting for final approval from my client as to the specific terms and conditions of our agreement. Please note, however, that the Chars have continuing reservations about the use of the antennas and would like confirmation from MonkeyBrains that the site is not being used for commercial purposes to service any users other than the occupants of 58 Digby Street.

For my own clarification, do you know whether MonkeyBrains intends to retain Greg DesBrisay as the RF safety expert?

I'll have a better laid out response for you on Monday. In the interim, it would greatly allay some of the Chars' outstanding concerns if MonkeyBrians could provide the following technical information for the 24 GHz and 60 GHz radios:

1. Radio – maximum transmit power
2. Antenna – maximum antenna gain
3. Safety – Maximum EIRP
4. Safety Margin – Maximum EIRP as compared to FCC limit
5. If the transmit power and antenna gain cannot be specified separately, we request that MonkeyBrains provide the EIRP.

Thanks again for your time and have a wonderful weekend!

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From: Joshua A. Ridless [mailto:jr@ridlesslaw.com]
Sent: Thursday, June 06, 2013 10:51 AM
To: Huangfu, Kimberly
Cc: Castro, Georgina
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Hi Kim,
I've attached the correct datasheet for the 60 GHZ BridgeWave which provides "Safety: UL Listed, CE Mark, EN60950, meets FCC 1.1310 general population RF MPE limits".

My client is interested in your proposal, and would be willing to absorb the cost of retaining an RF Engineer to conduct a safety report, so long as we can agree on the threshold in advance.

If the RF Engineer concludes that the side falls within the FCC Limits for Maximum Permissible Exposure (MPE) for General Population/Uncontrolled Exposure, for a continuous period of time (24 hours a day), then we expect your client to withdraw their current request for Discretionary Review.

I've attached additional guidelines from the FCC on this subject.

If this is acceptable, let's reduce to writing and my client will arrange for the RF Engineer to do a site inspection and prepare a report.

best,

Josh

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FAX (415) 480-1398
http://www.ridlesslaw.com

From: Huangfu, Kimberly [mailto:khuangfu@buchalter.com]
Sent: Wednesday, June 05, 2013 11:01 AM
To: jr@ridlesslaw.com
Cc: Castro, Georgina
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Josh,

As I mentioned during our conversation of last Thursday, I filed an application requesting discretionary review on behalf of my clients, Drs. Devron and Valerie Char. To my knowledge, no hearing date has been set yet. In the interim, if MonkeyBrains agrees to hire a RF safety expert, at its own expense, to conduct a site inspection to measure the on-site RF emissions at 58 Digby Street, as well as the area close to the property line separating 58 and 62 Digby Street, my client will withdraw the pending DR application so long as the information provided sufficiently assesses and responds to my client's outstanding safety concerns.

As I mentioned on Thursday, the specification sheet that you sent over for the Bridgewave link is for a 80 GHz link, not the 60 GHz link that MonkeyBrains has represented that it is using. Please send the relevant spec sheet for the specific model at issue. To assist in our safety calculations, we request that MonkeyBrains provide the following technical information for the 24 GHz and 60 GHz radios:

1. Radio – maximum transmit power
2. Antenna – maximum antenna gain
3. Safety – Maximum EIRP
4. Safety Margin – Maximum EIRP as compared to FCC limit
5. If the transmit power and antenna gain cannot be specified separately, we request that MonkeyBrains provide the EIRP.

Thank you in advance for your time and attention to this matter. Let me know if you have any questions or concerns.

Best,
Kimberly

Kimberly A. Huangfu | Real Estate & Land Use Associate/LEED AP BD+C | **BuchalterNemer**, A Professional Corporation | 55 Second Street, Suite 1700 | San Francisco, CA 94105-3493 | Direct Dial: (415) 296-1696 | Cell Phone: (415) 867-9205 | Direct Fax: (415) 296-1766 | Switchboard: (415) 227-0900 | khuangfu@buchalter.com | www.buchalter.com I Bio

From: Joshua A. Ridless [mailto:jr@ridlesslaw.com]
Sent: Thursday, May 30, 2013 9:59 AM
To: Huangfu, Kimberly
Subject: RE: 58 Digby Street - BPA No. 2013.05.007.6233

Ms. Huangfu,
Thank you for your email of May 24. As you are aware, this office represents Another Corporate ISP, LLC dba MonkeyBrains (MonkeyBrains).

We appreciate your clients concerns and recognize that there is a lot of anxiety and speculation in the public discourse regarding electromagnetic fields (EMFs) and their alleged effects on public health. We want to assure you that the equipment on the roof of 58 Digby Street (the "Subject Property") has lower EMF's than an ordinary light bulb.

Currently, there are two devices located at the Subject Property, Lumina model number W9Z-LUMINA-24 (the "Lumina 24") and a BridgeWave model no. FE60X (the "BridgeWave"). Both of these devices are OTARD compliant for residential use.

We've attached documentation regarding the specs for each device.

The Lumina 24 is a 24Ghz antenna which has a transmit power of -7dB or 0.0002 Watts, which gives off a lower EMF than an ordinary light bulb:
http://en.wikipedia.org/wiki/Wireless_electronic_devices_and_health#Other_devices

The Lumina 24's 0.0002 Watts is well below the 10 Watt per square meter general exposure limit proscribed by the FCC (see CFIP Lumina Series 24GHz Full Outdoor Unit, at pp. 4 – 5, discussing FCC exposure limits). For comparison purposes, cell phone towers run at approximately 100 Watts per square met:
http://en.wikipedia.org/wiki/Mobile_phone_radiation_and_health
Further, please let your clients know that their home is not in the beam pathway which is directed via a dish. That said, even if one was to place a hand on the surface of Lumina 24 (which has a front surface of 0.3 square meters) one does not approach the exposure limit.

The dish, which is aimed away from your clients' home, has a beamwidth of 1.7 degrees. (see Lumina antenna spec sheet).

Below please find a link to Lumina 24 Test Data:
https://apps.fcc.gov/oetcf/eas/reports/ViewExhibitReport.cfm?mode=Exhibits&RequestTimeout=500&calledFromFrame=N&application_id=672999&fcc_id=W9Z-LUMINA-24

We've also provided the specs for the BridgeWave. The Maximum Output Power (MOP) of the BridgeWave is 0.000155 Watts (see page 6 of BridgeWave-FCC-Test-Results.pdf). The BridgeWave's Limit Output is 0.5 Watts (Id. at p. 21).

If you have further questions regarding the specs we highly recommend Mr. Greg DesBrisay, an expert in RF Safety (Greg DesBrisay, 253 Highland Ave., San Carlos, CA 94070, (650) 281-8396, g.desbrisay@ieee.org).

Both the Lumina 24 and the BridgeWave are FCC certified. This can be confirmed at the link below:
http://transition.fcc.gov/oet/ea/fccid/

You should also be aware that like Buchalter, MonkeyBrains puts a great deal of energy into supporting San Francisco's underserved communities, including the BayView, Hunters' point, the Mission and the Excelsior, by providing higher speed Internet services than are available through the larger carriers, with rates based on a sliding scale. In some parts of the Mission, MonkeyBrains has even installed open and completely free access points to serve the general community.

MonkeyBrains' ability to support the city's underserved communities is made possible by the support of premium customers like the one located at the Subject Property.

Finally, please let your clients know that due to the services provided at the Subject Property, MonkeyBrains can service their residence with extremely high speed Internet, should they desire.

Once you've had an opportunity to review these materials with your client, please contact me to discuss any questions or concerns.

Regards,

Josh

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http://www.ridlesslaw.com

From: Huangfu, Kimberly [mailto:khuangfu@buchalter.com]
Sent: Friday, May 24, 2013 3:27 PM
To: jridless@ridlesslaw.com
Subject: 58 Digby Street - BPA No. 2013.05.007.6233

Mr. Ridless,

I received your contact information from Planning Staff. I represent Drs. Devron Char and Valerie Charlton, the owners of 62 Digby Street – the property located directly adjacent to 58 Digby Street. I would like to take this opportunity to introduce myself in hopes of scheduling a mutually agreeable time to talk early next week. It is my understanding that a 10 day hold has been placed on Building Permit Application No. 2013.05.07.6233 per my clients' prior Block Book Notation Request, with an end date of next Friday, May 31, 2013, before which time the Chars would have the opportunity to file a request for discretionary review.

The purpose of this correspondence is to assure you that we would like to resolve this matter amicably without further involvement by Planning Staff or a formal discretionary review hearing before the Planning Commission. As medical professionals, the Chars are deeply concerned about possible adverse health impacts caused by the antennas and, as a result, have attempted to assess the existence of any potential health and safety risks at their own expense but are limited due to lack of access and information.

Per the FCC Guidelines, similar antennas are typically deployed on isolated towers that are a considerable distance from neighbors and surrounding residences. Unfortunately, that is not the case here. Given the specific frequency levels at issue (60 and 24 GHz), the Chars have remaining questions concerning the width of the subject radiation beam, specifically what a RF expert would consider to be a safe distance. Ideally, this information would be substantiated through proper testing and supporting documents outlining whether there are any health and safety risks for this particular site.

Please let me know your availability for early next week, or feel free to contact me at the number provided below.

Thanks,
Kimberly

Kimberly A. Huangfu | Real Estate & Land Use Associate/LEED AP BD+C | **BuchalterNemer**, A Professional Corporation | 55 Second Street, Suite 1700 | San Francisco, CA 94105-3493 | Direct Dial: (415) 296-1696 | Cell Phone: (415) 867-9205 | Direct Fax: (415) 296-1766 | Switchboard: (415) 227-0900 | khuangfu@buchalter.com | www.buchalter.com I Bio

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EXHIBIT D

Antenna removed on 9/12/13, photo of 58 Digby back wall

Contact Information

Service Address Stephen Nash 58 Digby St. San Francisco, CA 94131 **Wireless ISP** MonkeyBrains 635 Potrero Ave. San Francisco, CA 94110 (415) 974-1313 (office) **Wireless ISP Contact** Rudy Rucker (415) 425-9825 rudy@monkeybrains.net **Wireless ISP Counsel** Josh Ridless Ridless Law Office 244 California Street, Suite 300 San Francisco, CA 94111 Tel (415) 614-2600 Fax (415) 480-1398	**Complainant Address** 62 Digby St. San Francisco, CA 94131 **Complainant Counsel** Kimberly Huangfu (415) 296-1696 khuangfu@buchalter.com **San Francisco Planning Department** Omar Masry AICP | PLANNER 1650 Mission Street 4th Floor San Francisco, CA 94103 Tel (415) 575-9116 Fax (415) 558-6409 omar.masry@sfgov.org