BARBARA GAUGHEN-MULLER
C. DAVE GAUGHEN
7456 Evergreen Drive
Goleta, CA 93117
Telephone: (805) 275 – 6457
Email: cdg55@earthlink.net

July 30, 2021

Attn: City of Goleta Council Members
130 Cremona Drive, Suite B
Goleta, CA 93117

Subj: Request to Appeal the Decision to Approve Crown Castle's Encroachment Permit (EP-19-095) for a Small Cell Wireless Facility in the Public Rights-of-Way at 293 Forest Drive, Goleta, CA 93117 by the Director of Public Works

Encl. (1) Initial Email Request entitled "Please Deny Crown Castle's Encroachment Permit Application" dated June 14, 2021.
(2) Amendment to Initial Email Request entitled "Subj: Amendment to email Response from C. Dave Gaughen & Barbara Gaughen-Muller entitled Please Deny Crown Castle's Encroachment Permit Application" dated June 29, 2021
(3) Letter from Director of Public Works entitled "RE: Notice of Application Approval Crown Castle Small Cell Wireless Facility Encroachment Permit EP-19-095, 293 Forest Drive" dated July 28, 2021
(4) AT&T 4G and 5G Wireless Coverage at 493 Forest Drive

Ref. (1) City of Goleta, Notice of Proposed Project, "Crown Castle Small Cell Wireless Facility" at "293 Forest Drive, Goleta, CA 93117," mailed on May 28, 2021.
(2) Email from Melissa Angeles entitled RE: "Please Deny Crown Castle's Encroachment Permit Application" dated June 16, 2021.
(3) Crown Castle's Project Plans for Project #ATTSBW01m2 dated 12/04/2020.
(4) Dtech Communication's Report entitled "Radio Frequency Electromagnetic Exposure Report" prepared for Crown Castle dated 2/04/2021 (the "Exposure Report")
(5) City of Goleta Public Hearing for "Proposed Ordinance regarding Wireless Facilities in the Public Rights-of-Way, Fee Resolution and Master License Agreement" dated May 07, 2019 (the "Proposed Ordinance")
(6) Goleta Municipal Code (GMC) Chapter 12.20 Wireless Facilities in Public Road Rights-of-Way

Dear City of Goleta Council Members:

We collectively (i.e., the homeowners at 7456 Evergreen Dr. and the homeowners at 297 Forest Dr.) respectfully request to appeal the decision to approve Crown Castle's Encroachment Permit (EP-19-095) for a small cell wireless facility in the public rights-of-way at 293 Forest Drive, Goleta, CA 93117 by the Director of Public Works.

Per Reference 1, Enclosure 1 was submitted by the homeowners at 7456 Evergreen Dr. which highlighted the fact that we are devout gardeners, own multiple fruit trees in extremely close proximity to the proposed cell site, sleep in a bedroom that is a mere 42 feet from the proposed site, and maintain an opt-

out status regarding Southern California Edison's wireless transmission of electrical usage data. Our submittal was greeted with a Public Works response that included Section 332(c)(7) of the Telecommunications Act which preempts local decisions premised directly or indirectly on the environmental effects of radio frequency (RF) emissions, and appeals of the Director's decision premised on the environmental effects of radio frequency emissions will not be considered. (Ord. 19-09 § 3).

As such, References 2 – 6 were reviewed and Enclosure 2 was subsequently submitted which detailed that fact that: A) Crown Castle's Antenna submittal was discontinued on 12/30/2018, last time to repair date of 12/30/2019, and is FCC Certified exclusively for use with radio frequencies typically associated with 4G technology and Not the much anticipated mid-band 5G, B) Crown Castle's Radio submittal is also FCC Certified exclusively for use with radio frequencies typically associated with 4G technology and Not the much anticipated mid-band 5G, and C) Crown Castle's Exposure Report is based upon radio frequencies typically associated with 4G technology and not the soon to be rolled out mid-band 5G.

Nevertheless, on July 28, 2021 the Director of Public Works approved Crown Castle's Small Cell Wireless Facility Encroachment Permit EP-19-095 (see Enclosure 3) which employs a discontinued antenna with both a radio and the antenna FCC Certified for use with radio frequencies typically associated with 4G technology and Not mid-band 5G. Additionally, it is also unclear as to why the Director of Public Works would approve this permit on behalf of AT&T when AT&T most certainly appears to have sufficient 4G and 5G coverage according to their website at 493 Forest Drive (see Enclosure 4).

On July 29 at 1:53 pm the Appellant (i.e., the homeowners of 7456 Evergreen Dr.) requested a two week extension to properly identify additional reasons as to why the homeowners at 7456 Evergreen Dr. and the homeowners at 297 Forest Dr. are adversely affected by the decision of the Public Works Director. Unfortunately, this request was denied and our appeal is required to meet the deadline of July 30, 2021. As such, we plan to provide a more detailed explanation of the additional reasons that support our appeal at the hearing.

Respectfully,

Barbara Gaughen-Muller & C. Dave Gaughen

ENCLOSURE 1

ENCLOSURE 1

Please Deny Crown Castle's Encroachment Permit Application

From: "C. Dave G" <cdg55@earthlink.net>
To: <publicworkspermits@cityofgoleta.org>
Cc: <bgaughenmu@aol.com>
Subject: Please Deny Crown Castle's Encroachment Permit Application
Date: Jun 14, 2021 12:24 AM

Attachments: Exhibit 1.pdf, Exhibit 2 Bee Report.pdf

Hi again Melissa - the below that I sent to you for some reason didn't make it to Public works? Here it is again ~ thanks, Dave

Dear Melissa, City of Goleta, and Dept. of Public Works: My mother (Barbara Gaughen-Muller) and I (C. Dave Gaughen) humbly request that our Public Comment be accepted due in whole to my mother living at two separate locations in Santa Barbara County whereby she did not receive or review your letter for public comment until on or after June 03, 2021 which was addressed to her at 7456 Evergreen Dr, Goleta, CA 93117.

Nevertheless, we are strongly opposed to this project especially since the Cell Site/Streetlight is only 42 feet from the bedroom where I sleep (see Photos 1, 2, and 3 of Exhibit 1). Additionally, I am personally highly sensitive to wireless and cell phone irradiation : 1) When wireless routers first came out I purchased one for my desktop computer and could not use it due to the unknown fact that it actually caused my heart to palpitate, and 2) I continue to only use my cell phone in emergency situations due in whole to the risks associated with radio frequencies that are actually in the microwave range (regarding science, I do have a degree in Chemistry from UCSB). Additionally, my mother believes the same specifically when it comes to the effect of microwaves on bees and the subsequent pollination of her organic fruit trees and her organic garden (see Exhibit 1 Photos 4 & 5, and Exhibit 2 Bee Report). Furthermore, my mother has opted-out of Edison's automated wireless meter reading for approximately 12 years since she believes that our air waves are already maxed out with toxic irradiation from wireless/microwave technologies (i.e., cell sites: see Exhibit 1 Photo 6).

As such, please deny Crown Castle's encroachment permit application for 293 Forest Drive, Goleta, CA 93117 which in fact is located in the residential parkway at the property line of 7456 Evergreen Dr.*

Respectfully, Barbara Gaughen-Muller and C. Dave Gaughen, 7456 Evergreen Dr., Goleta, CA 93117

*If required, we will oppose this permit/project to the maximum extent of law.

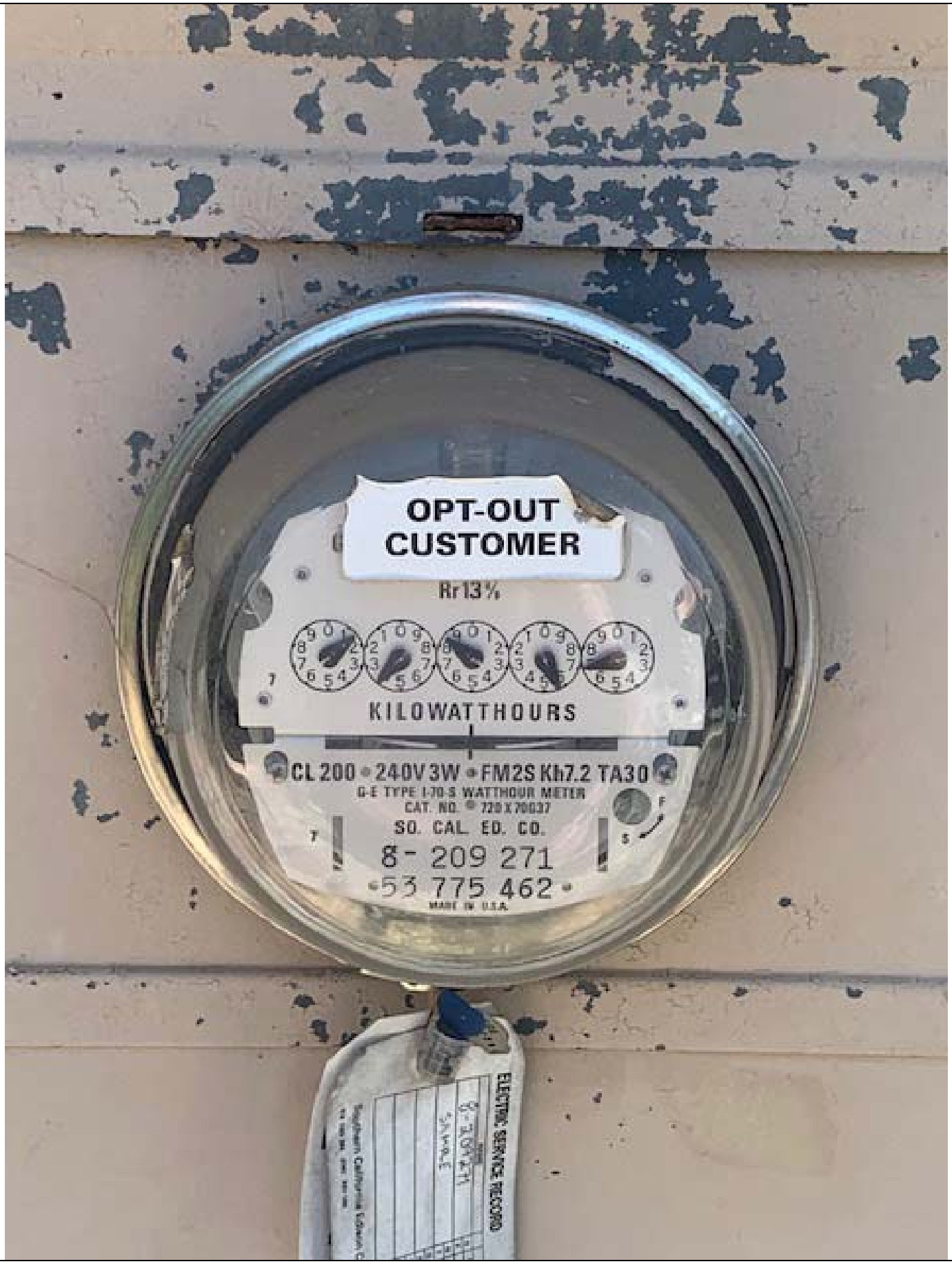
1. Photo of Streetlight at 7456 Evergreen Dr

2. Photo of Streetlight & Resident in front of Bedroom.

3. Residential Bedroom is 42 feet from Streetlight/Cell Site.

4. Photo of Organic Fruit Trees: Cherimoya, Plum, Peach, etc.

5. Photo of Organic Garden: Carrots & Citrus Trees to Left



6. Edison Opt-Out Customer for approximately 12 years.

Barrie Trower's Paper on the bees and microwave radiation. -
"Will the Communications Industry be the final straw for Our Planet's Ecosystems?" - Safe Land for Bees
Presented at the Glastonbury Symposium - July 24, 2010:
http://www.safelandforbees.org.uk/bees-and-microwave-radiation.html

Barrie Trower's Paper on the bees and microwave radiation.

"Will the Communications Industry be the final straw for Our Planet's Ecosystems?"

Presented at the Glastonbury Symposium, July 24th 2010

During a recent visit to Africa, a gentleman took me to a field full of plants and said *"What do you hear Barrie?"* I replied: *"Nothing"*. He said: *"Normally you and I would not be able to hear each other now, there would be so many bees buzzing, however, since that mobile phone transmitter went up, we haven't seen a single bee."* I received other similar reports concerning bees, birds, even ants during my stay in Africa. It was explained to me that the ants are very important for their symbiotic relationship with plants. The plants produce a sweet substance to feed the ants and in return the ants prevent insects landing on and eating the plant's leaves. Hence, ants guarantee plant crop safety and harvest.

It appeared that the common denominator in all cases was the proximity of mobile phone transmitters transmitting low-level continuous microwaves with added modulations (pulses) causing cellular distress to species within range. Residents who complained were told that such installations were within 'International Safety Guidelines'; other residents were either totally ignored, mocked or ridiculed.

Yet proof of such effects from low-level microwave irradiation has been known to Government(s) and published since 1932. (1)By 1971 the US Naval Medical Research institute referenced 2300 research articles listing in excess of 120 illnesses from low-level microwaves. (2) This was reinforced by confirmation from the US Defence Intelligence Agency Documents from 1972-76. (3)

So what does all this have to do with bees, birds and ants? Well, quite a lot really.

Biologically, apart from some specialist organelles within the cytoplasm or the amount of genetic material etc, all animal and plant cells are very similar; in fact at the atomic and nuclear level, they are identical. Thus, if you are going to affect human cellular activity, you will inevitably affect other animal and plant cells from the same source. In this case according to Government reports, low-level microwave irradiation. The reader does not have to look far to discover that many experimental trials, evaluating harmful microwave levels, are carried out on animal cells / tissue first; or even live animals. These reference levels are then applied to human beings. Arguably the World's foremost scientific journal, 'Nature', published an article explaining how oscillating magnetic fields disrupt the magnetic orientation behaviour of migratory birds. (4) The frequencies referred to within this article are well within the modulation frequencies used by the mobile phone industry.

Dr Andrew Goldsworthy, retired Lecturer from Imperial College, London; extends this mechanism to speeches in his written 'comment': 'Establishing Why Bees Die Off' dated 13th January 2010.

Prof Karl Richter also extends this explanation and references the plight of bees subjected to such irradiation. He notes that these insects' immune systems seem to have collapsed with many bees suffering five to six infections simultaneously. Interestingly, suppression of the immune system is also described by the US Government as a symptom for humans exposed to low-level microwave irradiation. (5)

Similarly, Prof Ferdinand Ruzicka, who is a bee keeper himself, says: *"The problem only appeared since several transmitters have been installed in the immediate proximity to my hives"*.

"Dragnose-Funk" continues: '*According to Ruzicka's observations, the bee colonies are so weakened by the mobile telecommunications radiation that they become more prone to various diseases.'* (6)In his two-part, 13 page document, Guy Cramer includes the military and its Worldwide use of similar telecommunications transmitters as partly complicit to this cause for the demise of the bee population. In particular he singles out the US multi-transmitting towers in Alaska which can focus anywhere on the Planet by reflecting their transmissions off of the ionosphere. This is otherwise known as HAARP. (7)

Researchers like Colin Buchanan have actually outlined time-lines plotting the demise of bees and its relation to human induced electromagnetic radiation. (8)

Within my presentation to the beekeepers' association at Glastonbury in 2008, I referenced 14 articles explaining why the bees are particularly susceptible to microwave irradiation. I stressed that bees could be exposed to magnetic fields roughly 640 times more powerful than they normally encounter with the Earth's field. The consequences of this can be two-fold: i) the ferromagnetic compounds within their heads, thorax and abdomen can produce hysteresis loops affecting proprioception (spatial awareness); and ii) the very size of the bee's antennas, brain and body render it susceptible to resonance (unwanted vibrations). (9) Put simply, I would argue that the bee is disorientated with a failing immune system and like AIDS in humans will become victim of any infection(s) or infestation(s) which came along.

The reader will not be surprised to learn that there is a plethora of research data documenting ill-effects on virtually all animal species from insects to cattle, listing long-term low-level microwave irradiation as the cause. I will reference just a few of the many thousands that exist.

The Research Institute for Nature and Forest clearly state in their publication that '....*long-term exposure to higher levels of radiation (GSM) negatively affects the abundance or behaviour of House Sparrows in the wild'* (10)

Twenty pages of Laboratory Studies citing suppression of the immune system by e.m. radiation upon cows, cats, dogs, hamsters, whales, birds, bees, bats and butterflies were published in Feb 2005. (11)

Prof. Denis Henshaw references in excess of 8000 research articles describing low-level radiation and its effects on animal navigation, plants and health of the animal kingdom.

Prof. Henshaw states that in his estimation, less than 10% of the available scientific evidence is cited by official review bodies; also, in some areas, none of the literature has been cited. (12)

An article published in 'Microwave News' describes how low-level microwave radiation, when modulated, can cause nonthermal neurological effects in both humans and birds. Exactly what the US Government published thirty years earlier and seems to have been 'overlooked'. (13)

Internet researcher Sylvia Wright listed 27 peer reviewed studies showing effects, or possible effects, of low-level irradiation upon
seeds and plants. All of these papers had been published in scientific journals.(14)

Remembering that all planetary eco-environmental systems are interconnected, the monetary value of the World's ecosystems has
been estimated at 33 Trillion US Dollars annually. (15) With an understanding of the potential risk to nature; should the Global Telecommunications Industry cover our Planet with microwave transmitters, without further investigation or restriction? Could this potential financial loss be sustainable to many poorer countries?

The UK Government are advising populations to switch off all unnecessary lights, drive less, even restrict flying for holidays in order to reduce our carbon footprint. It has been estimated that the annual carbon footprint for the worldwide telecommunications industry is approximately 110.7 million tonnes of CO2 into our atmosphere. This is equivalent to the use of 29 million vehicles. Simultaneously all of our state schools are 'encouraged' to install wi-fi; virtually turning each school into a full-blown transmitter from the accumulative effect of microwaves. I find this a Governmental regulatory paradox. If for no other reason, than their total and absolute ambivalence on this matter! (16)

Are there solutions? Of course. In 2007 an international group of scientists studied 2000 peer reviews and published research papers. They recommended an acceptable level of radiation, based on the interaction between low-level microwaves and all known cellular processes. This became known as the bio-initiative level. (17)

The problem with this recommended level is that the telecommunications industry would suffer a reduction in profits. Consequently it is seldom adhered to.

There is a recent Legal Instrument. The European Parliament Guideline 2004/35/EG and advice from 21st April 2004, states that the 'causer pays the principle' for damage to animal, plants, natural habitats, water resources and soil. I must state here that I have no training in Law and should the reader wish to pursue this line of inquiry, expert international legal advice should be sought .

However, since September 1960, I have received several years of Governmental tuition on all aspects of microwave technology. At that time, microwave research was paramount Worldwide with many papers

published; including dangers of irradiation to living tissues from very low-level microwaves.

Knowing what we were all taught in the 60s, forces me to question the total ambivalence of today's Governmental Advisers. The microwaves haven't changed, only the colour and shape of the box emitting them.

Opinion

Could all of this potential damage to the Planet's eco-systems be a result of nothing more than Blind Corruption and Intentional Ignorance from our decision makers? Or is it planned? After all, if a country loses most of its pollinating insects (which tend to pollinate Vitamin C type plants), the health and financial status of such a country could be in jeopardy. The 'causer' could then offer a solution - at a price!

An interesting observation may be to look at the countries suffering the most; and those sweeping across such lands, installing a myriad of transmitters.

Barrie Trower
Scientific Advisor to several organisations

3 Flowers Meadow
Liverton
Devon TQ12 6UP
United Kingdom
01626 821014
Or ++1626 821014

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ENCLOSURE 2

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BARBARA GAUGHEN-MULLER
C. DAVE GAUGHEN
7456 Evergreen Drive
Goleta, CA 93117
Telephone: (805) 275 – 6457
Email: cdg55@earthlink.net

June 29, 2021

Attn: Department of Public Works and City Clerk
130 Cremona Drive, Suite B
Goleta, CA 93117

Subj: Amendment to email Response from C. Dave Gaughen & Barbara Gaughen-Muller entitled "Please Deny Crown Castle's Encroachment Permit Application" dated June 14, 2021

Ref. (1) City of Goleta, Notice of Proposed Project, "Crown Castle Small Cell Wireless Facility" at "293 Forest Drive, Goleta, CA 93117," mailed on May 28, 2021.
(2) Email from Melissa Angeles entitled RE: "Please Deny Crown Castle's Encroachment Permit Application" dated June 16, 2021.
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(4) Dtech Communication's Report entitled "Radio Frequency Electromagnetic Exposure Report" prepared for Crown Castle dated 2/04/2021 (the "Exposure Report")
(5) City of Goleta Public Hearing for "Proposed Ordinance regarding Wireless Facilities in the Public Rights-of-Way, Fee Resolution and Master License Agreement" dated May 07, 2019 (the "Proposed Ordinance")
(6) Goleta Municipal Code (GMC) Chapter 12.20 Wireless Facilities in Public Road Rights-of-Way

Dear City of Goleta, Dept. of Public Works, and City Clerk:

After review of References 1 – 6, we respectfully request to submit an amendment to our initial email response entitled "Please Deny Crown Castle's Encroachment Permit Application," dated June 14, 2021.

1. Crown Castle's Antenna: Discontinued on 12/30/2018, Not FCC Compliant to 5GHz UNII Band, & Last time to Repair date of 12/30/2019

Reference 5, the Proposed Ordinance, reads in relevant part as follows:

> "To accommodate the ever-growing demand for wireless broadband telecommunications, the industry is starting to look for small cell, 5G (fifth generation of cellular mobile communications) technology, which represents a 10x improvement in capacity over existing broadband. 5G technology is distinguished from the present 4G based wireless service by use of low power transmitters with a coverage radius of approximately 400 feet; thus, 5G requires close spacing of antennas and more of them. Street light poles and other poles are therefore ideally suited for 5G antenna placement due to their sheer numbers and widespread deployment throughout municipalities."

It most certainly appears that the City's public hearing (Ref. 5) and subsequent municipal code (Ref. 6) is specific for use in the rollout of 5G technology throughout the City of Goleta and Not for the continued

development of 4G technology. However, Reference 3 presents the proposed Antenna (i.e., Galtronics Extent P6480i) which received: A) Manufacture Discontinuance (MD) Date of December 30, 2018, B) Last time to Repair Date of December 30, 2019, and C) Reasons for End-of-Life (EOL) of this Product as, "An upgraded antenna model, GQ2410-06621, is being introduced with improved specifications and FCC compliance to the 5GHz UNII Band." Exhibit 3 contains Galtronic's Product Data Sheet for the Extent P6480i Antenna and Galtronic's End-of-Life (EOL) Notification for the P6480i Antenna.

Additionally,

> "Low-band 5G uses a similar frequency range to 4G cellphones, 600–850 MHz, giving download speeds a little higher than 4G: … Low-band cell towers have a range and coverage area similar to 4G towers. Mid-band 5G uses microwaves of 2.5–3.7 GHz, … with each cell tower providing service up to several kilometers in radius. This level of service is the most widely deployed, and was deployed in many metropolitan areas in 2020. Some regions are not implementing low-band, making this the minimum service level. High-band 5G uses frequencies of 25–39 GHz, near the bottom of the millimeter wave band, although higher frequencies may be used in the future … The above speeds are those achieved in actual tests in 2020, and speeds are expected to increase during rollout." [1]

Reference 4 (i.e., the Exposure Report) employs frequency values that are substantially lower than mid-band 5G. These values are more in line with 4G technology and are similar to the frequency values of low-band 5G. Further, as stated above, some regions are not implementing low-band making mid-band the minimal service level [see Reference 4, Page 5, Section 2.2 "Antenna Inventory" for P6480i at 1900 MHz – 2100 MHz (mid-band 5G is 2.5 – 3.7 GHz or 2500 – 3700 MHz: Not 1900 MHz – 2100 MHz)].

As such, Crown Castle's proposed antenna (see Ref. 3) and the submitted Exposure Report (see Ref. 4) may in fact be acceptable for the continued development of a 4G Wireless Communication Facilities (WCF); however, regarding the City's clearly defined intent of 5G over 4G, the Director of Public Works should classify Crown Castle's antenna submittal, including all related exposure data submitted per the Exposure Report, as a "misrepresentation of a material fact" and deny Crown Castle's permit application.[2]

The Goleta Municipal Code (GMC) §12.20.140 "Revocation and Appeal of Revocation" states in relevant part as follows:

> C. Required Findings. The Director may revoke or modify the permit if it makes any of the following findings:
>
> 1. The permittee obtained the approval by means of fraud or misrepresentation of a material fact;

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///

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[1] "5G," June 2021, https://en.wikipedia.org/wiki/5G, (accessed June 28, 2021).

[2] On a related side note, if Crown Castle's permit were to be approved by the Director of Public Works (i.e., as is, employing the submitted antenna) followed by the rollout of either mid-band and/or high-band 5G, the residents at 7456 Evergreen Dr., pursuant to Section 12.20.160 "Breach—Termination of Permit" of the GMC, would file a complaint for failure to comply with the conditions of the permit or applicable law.

2. Crown Castle's Radio: No FCC Certification for Mid-Band 5G

As previously stated, the City's plans are to participate in the rollout of 5G technology as compared to the continued development of 4G technology. However, Reference 3 presents the proposed Remote Radio Unit (i.e., Ericsson Radio 4402) which does not appear to be certified by the FCC for mid-band 5G frequencies between 2.5 – 3.7 GHz. Exhibit 3 presents: a) Screen shot of internet search identifying Ericsson Radio 4402 as FCC ID TA8AKRC161742-1 (see P. 7, search result titled as "Ericsson AB New Certification …"), b) FCC Certification, date of Grant 05/18/2020, for FCC ID TA8AKRC161742-1 (i.e., Ericsson Radio 4402) beginning on Page 8, and c) FCC Certification, date of Grant 08/08/2019, for FCC ID TA8AKRC161742-1 (i.e., Ericsson Radio 4402) beginning on Page 21. Furthermore, Exhibit 3 Page 19 identifies FCC certification for frequencies below 2179.8 MHz and Page 29 identifies FCC certification for frequencies below 2179.8 MHz:

In short, Crown Castle's proposed radio (see Ref. 3) may in fact be acceptable for the continued development of a 4G WCF but appears to remain uncertified by the FCC for the City's clearly defined intent of implementing 5G technology. As such, the Director of Public Works should classify Crown Castle's radio submittal as a "misrepresentation of a material fact" and deny Crown Castle's permit application

Respectfully,

Barbara Gaughen-Muller & C. Dave Gaughen

EXHIBIT 3

EXHIBIT 3

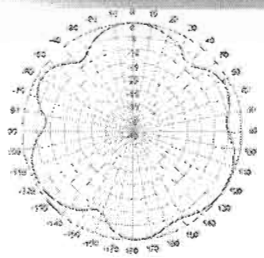
GALTRONICS
WE'RE MAKING WAVES™
A BAYLIN TECHNOLOGIES COMPANY

10" x 24" Outdoor Pseudo Omni Canister Antenna [1695-2400, 3550-3700 and 5150-5950 MHz]

EXTENT™ P6480i

Description:

- Pseudo Omni Canister Antenna for Outdoor DAS and Small Cells.
- 4x ports for AWS/WCS Band 1695-2400 MHz
- 4x ports for CBRS Band 3550-3700 MHz
- 2x ports for UNII Band 5150-5950 MHz



1695-2400, 3550-3700 and 5150-5950 MHz Pseudo Omni Canister Antenna

Electrical Specifications

Frequency Band [MHz]	1695-2180	2180-2400	3550-3700	5150-5950
Input Connector Type	4x 4.3-10 DIN(F)		4x 4.3-10 DIN(F)	2x 4.3-10 DIN(F)
Isolation (typ.)	-20 dB		-25 dB	-25 dB
Inter-band Isolation	-30 dB (typ)			
VSWR/Return Loss	1.5:1 / 14.0 dB (Typ.)			
Impedance	50 Ω			
Polarization	Dual slant 45° (±45°)			
Horizontal Beamwidth	Omni (360°)			
Vertical Beamwidth	15°	12°	15°	19°
Max. Gain	9 dBi	9.5 dBi	8.5 dBi	5.5 dBi(Max.)
Avg. Gain	7.5 dBi	8 dBi	8 dBi	3 dBi
Downtilt	0° Fixed			
Max Power / Port	100 Watts		50 Watts	1 Watts
PIM @ 2x43 dBm	<-153 dBc		N/A	N/A

Mechanical Specifications

Operating Temperature	-40° to 158°F (-40° to +70°C)
Antenna Weight	23 lbs (~10.5kg)
Antenna Diameter	10" (254 mm)
Antenna Height	24.9" (634 mm)
Radome Material	ASA
RoHS	Compliant
Radome Color	Gray, Brown, Black, 3M™ Conceal Film, Custom Colors Possible
Ingress Protection	Outdoor (IP65)
Wind Survival Rating	150 mph (241 km/h)
Shipping Dimensions - L x W x D	30"x19"x19" (762x483x483 mm)
Shipping Weight (Gross Weight)	30 lbs (12 kg)

Release Date: March 05, 2018; Revision: A ; RFD#6480

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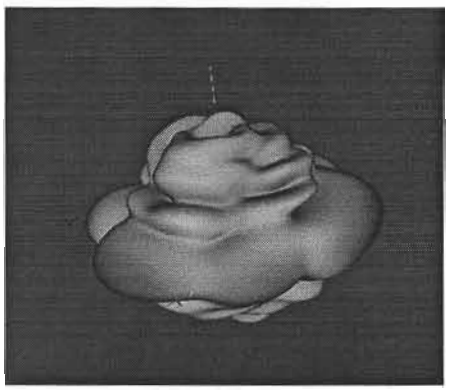
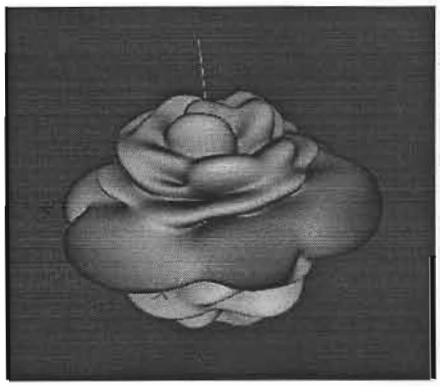
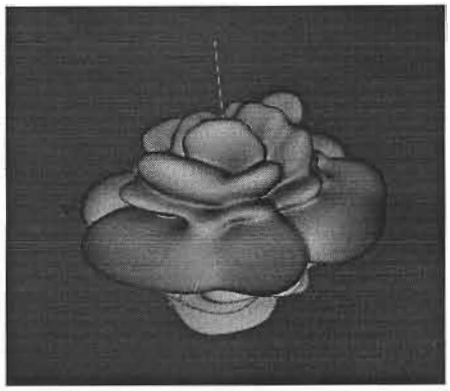
3D Antenna Patterns



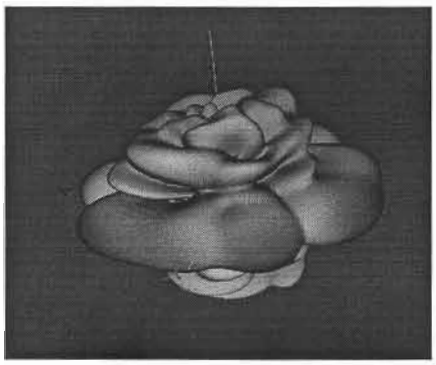
1730MHz



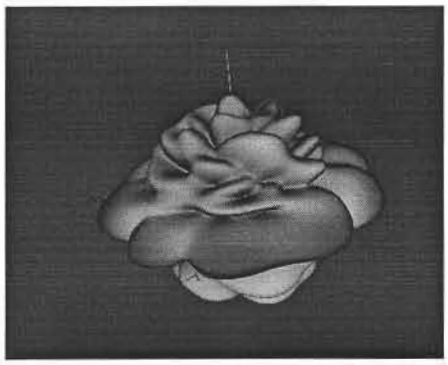
1930MHz



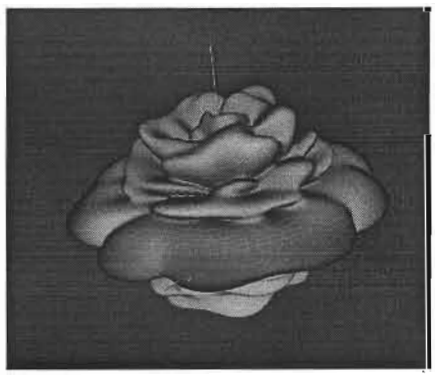
2130MHz



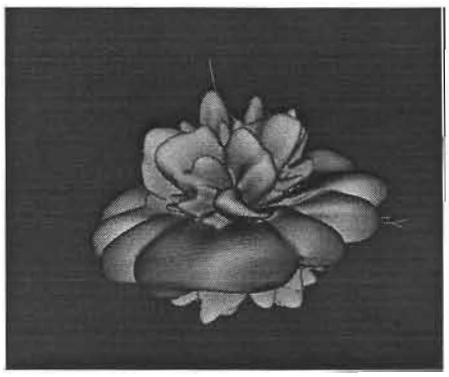
2170MHz



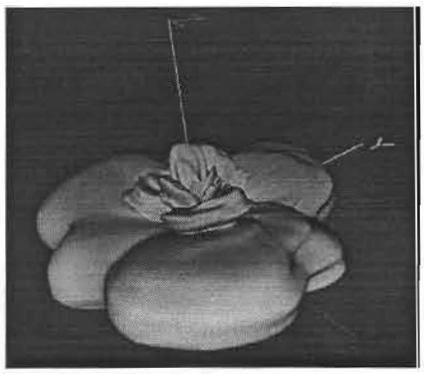
2320MHz



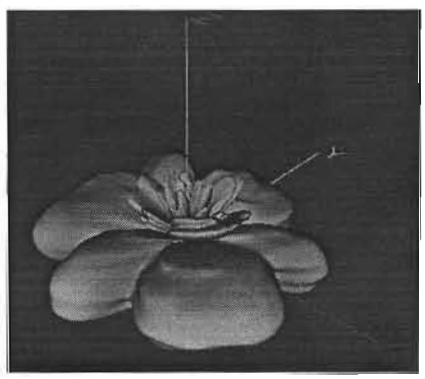
2355MHz



3650MHz



5200MHz



5850MHz

Release Date: March 05, 2018; Revision: A ; RFD#6480

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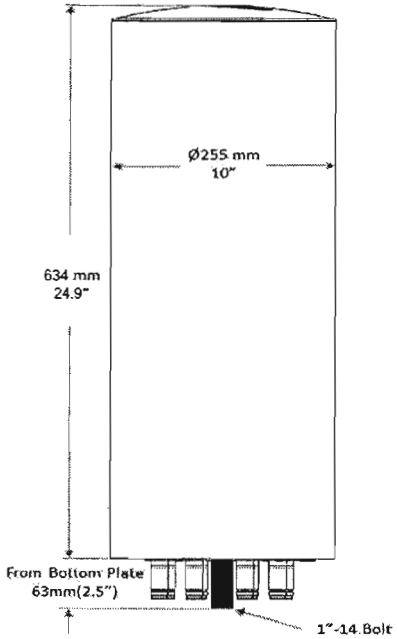
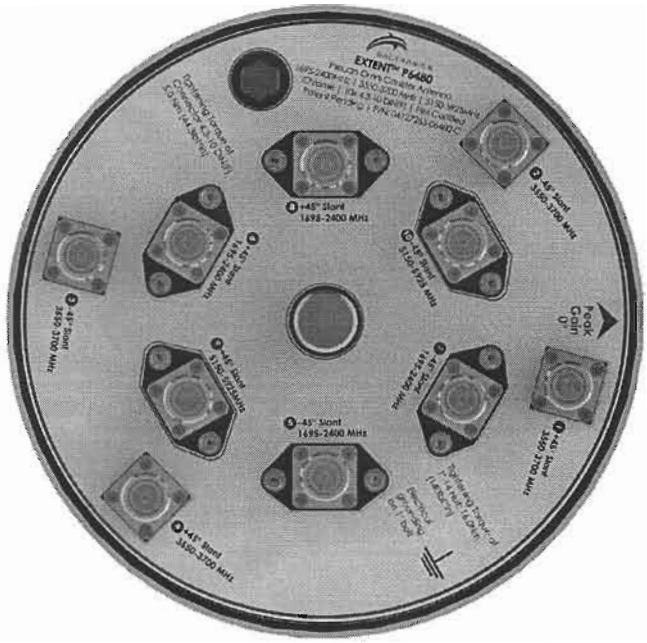
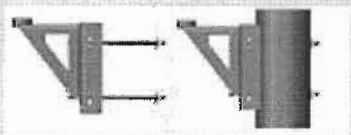
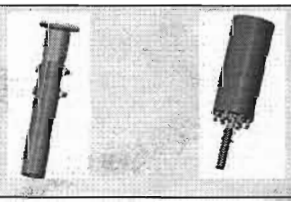
Additional Technical Information

Mechanical Dimensions





Part Numbers, Ordering Options and Accessories

Description:	Part Number:
Antenna with 10x 4.3-10 DIN (F) Connectors, Gray	04127265-06480-1
Antenna with 10x 4.3-10 DIN (F) Connectors, Brown	04127265-06480-6
Antenna with 10x 4.3-10 DIN (F) Connectors, Black	04127265-06480-B
Antenna with 10x 4.3-10 DIN (F) Connectors, Chrome (3M™ Conceal Film)	04127265-06480-C
Mounting Bracket(s):	**Part Number:**
Pole Side Mounting Bracket (wind speed of 150 mph) Offers easy pole side installation.* *Not recommended for placement parallel to a pole/structure due to insufficient spacing.	 62-50-09
Pole Top Mounting Bracket (wind speed of 150 mph) Bracket base attached directly to wood, metal and cement poles.	 62-20-09
1" Mount Rod Adapter (wind speed of 150 mph) Universal interface for pole top installation.	 62-57-09

Matting Male Connector Torque:
4.3-10: 3.7 ft-lb (5 Nm)

Release Date: March 05, 2018; Revision: A ; RFD#6480

End-of-Life (EOL) Notification

EOL Number: GT6480EOL

Galtronics 24"x10" Outdoor Pseudo Omni Canister Antenna:

EXTENT™ P6480i

Notification Date: March 31, 2018

Galtronics announces the end-of-sale and end-of-life dates for the Galtronics P6480i. The last time to buy the product is June 30, 2018.

Last Time Buy (LTB) Date*:	June 30, 2018
Manufacture Discontinuance (MD) Date:	December 30, 2018
End of Life (EOL) Date:	December 30, 2018
Last Time for Order Shipments:	December 30, 2018
Last Time to Repair:	December 30, 2019
Market Regions Affected:	All
**All orders placed after the date of this notice cannot be canceled or returned. Please check with your Galtronics Sales Representative for details and availability of inventory.*	

Reason for End of Life of this Product

An upgraded antenna model, GQ2410-06621, is being introduced with improved specifications and FCC compliance to the 5GHz UNII Band.

Product Repairs of EXTENT™ P6480i will be performed in accordance with existing contractual agreements or customer specific service plans as negotiated prior to EOL or within twelve (12) months of the original purchase date.

Manufacture Discontinuance and Last Time Buy Definition – As part of ending the life of hardware elements this notice serves as a formal communication of Galtronics intent to Manufacture Discontinuance (MD) and offer Last Time Buy (LTB) date for the product(s) noted.

Galtronics Corporation LTD
8930 S. Beck Avenue, Suite 103 Tempe, Arizona 85284 USA Phone: 1-480-496-5100

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Alternative/Replacement Solutions

Model Number	Suggested Replacement Model Number*	Specification Deltas	
		EXTENT™ P6480i (discontinued)	**GQ2410-06621 (new model)**
EXTENT™ P6480i Ordering Options: 04127265-06480-1 04127265-06480-6 04127265-06480-B 04127265-06480-C	**GQ2410-06621** Ordering Options: GQ2410-06621-111 GQ2410-06621-611 GQ2410-06621-B11 GQ2410-06621-C11 GQ2410-06621-112 GQ2410-06621-612 GQ2410-06621-B12 GQ2410-06621-C12	(1) P6480i is characterized over 1695-2700 MHz, 3550-3700 MHz and 5150-5950 MHz (no FCC compliance)	(1) M6319i is characterized over 695-2360 MHz, 3550-3700 MHz and 5150-5925 MHz with FCC compliance
		(2) Uses 10x 4.3-10 DIN connectors with 4 colors and 4 ordering options.	(2) Uses 10x 4.3-10 DIN connectors with 4 colors and 8 ordering options.
		(3) Max. Gain: 9.5/8.5/5.5 dBi	(3) Max. Gain: 8.9/8.0/5.5 dBi
		(4) Vertical BW: 15°/15°/19°	(4) Vertical BW: 19°/18.7°/23°
		(5) Dimension (HxD): 24.9" (634mm) x 10" (254mm)	(5) Dimension (HxD): 24.9" (634mm) x 10" (255mm)
		(6) Weight: 23 lbs. (10.5 Kg)	(6) Weight: 17.2 lbs. (7.8 Kg)

*Galtronics suggests all users verify equivalency for use. Specifications are available from www.galtronics.com

CUSTOMER ACKNOWLEDGEMENT OF RECEIPT:
Please complete the EOL acknowledgement receipt form below and email it to john.dobiesz@galtronics.com and the Galtronics Contact listed above.
Galtronics will deem this change accepted unless specific conditions of acceptance are provided in writing within 30 days from the date of this notice.

Attention Distributors: Product(s) identified in this notification will become obsolete and as such this EOL notification will act as the official written notification. All obsolete products will be listed in the next published quarterly distributor price book, following an EOL change, and listed on the obsolescence form which accompanies said price book. Within thirty (30) days from the published date of the price book, Distributor shall notify Galtronics in writing of Distributor's then current inventory of the obsolete product.

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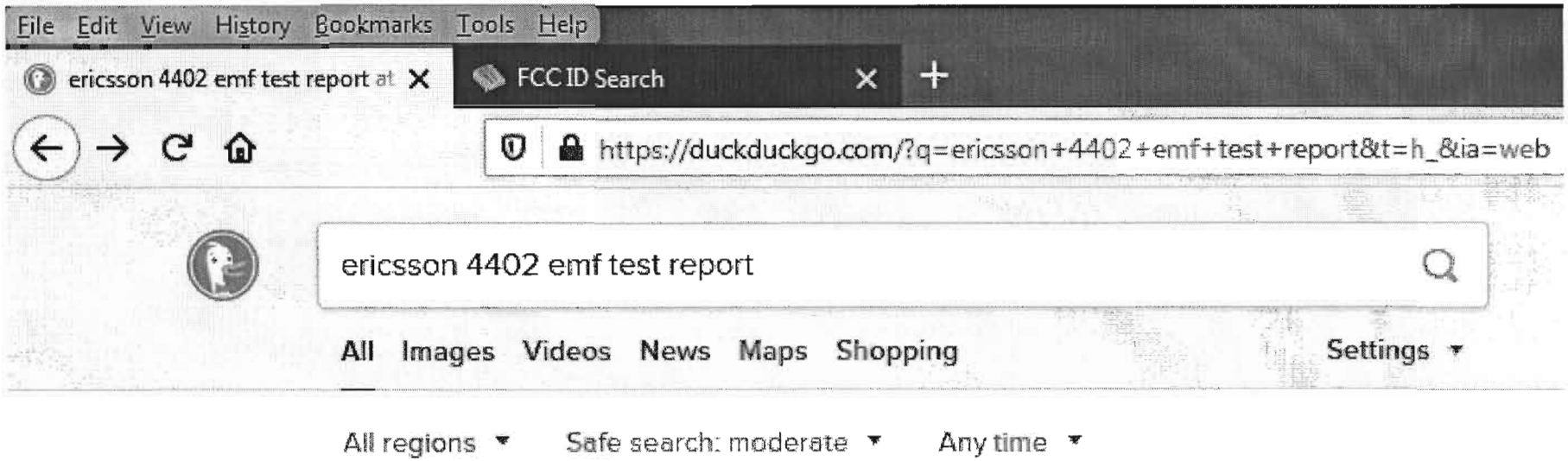
EOL ACKNOWLEDGEMENT RECEIPT FORM

Company: Contact Name: Title: Date: Email Address: Phone Number: Comments:	


File Edit View History Bookmarks Tools Help
ericsson 4402 emf test report at
FCC ID Search
https://duckduckgo.com/?q=ericsson+4402+emf+test+report&t=h_&ia=web
ericsson 4402 emf test report
All Images Videos News Maps Shopping
Settings
All regions
Safe search: moderate
Any time
PDF EMF Test Report: Ericsson RD 4442 B48 - FCC ID
https://fccid.io/TA8AKRY901385-1/RF-Exposure-Info/Exhibit-06-EMF-Test-Report-Erics...
EMF Test Report: Ericsson RD 4442 B48 Ackred. Nr 1761 Provning ISO/IEC 17025 Rapport utfärdad av ackrediterat provningslaboratorium Test report issued by an Accredited Testing Laboratory Document number: GFTB-17:001789 Uen, Rev B Date of report: 2017-11-04 Testing laboratory: Ericsson EMF Research Laboratory Ericsson AB SE-164 80 Stockholm Sweden
Ericsson AB Single New Certification ... - FCC ID Search
https://fccid.io/TA8AKRC161742-1/RF-Exposure-Info/RF-Exposure-Report-4389927
Single New Certification, Limited Modular Approval RF Exposure Report details for FCC ID TA8AKRC161742-1 made by Ericsson AB. Document Includes RF Exposure Info EMF Test Report: Ericsson Radio 4402 B66A (FCC).

FCC ID TA8AKRC161742-1

TA8-AKRC161742-1, TA8 AKRC1617421, TA8AKRC161742-1, TA8AKRCI6I742-I

Ericsson AB Single New Certification, Limited Modular Approval **AKRC161742-1**

An FCC ID is the product ID assigned by the FCC to identify wireless products in the market. The FCC chooses 3 or 5 character "Grantee" codes to identify the business that created the product. For example, the grantee code for **FCC ID: TA8AKRC161742-1** is **TA8 (https://fccid.io/TA8)**. The remaining characters of the FCC ID, **AKRC161742-1**, are often associated with the product model, but they can be random. These letters are chosen by the applicant. In addition to the application, the FCC also publishes ***internal images, external images, user manuals, and test results*** for wireless devices. They can be under the "exhibits" tab below.

Application: Single New Certification, Limited Modular Approval

Equipment Class: TNB - Licensed Non-Broadcast Station Transmitter

Alternate Sources: FCC.gov (https://gov.fccid.io/TA8AKRC161742-1) | FCC.report (https://fcc.report/FCC-ID/TA8AKRC161742-1)

Registered By: Ericsson AB - TA8 (Sweden) (https://fccid.io/TA8)

App #	Purpose	Date	Unique ID
1	Original Equipment	2019-08-08	+mUBThls6T0jfdW5WLGC0g==
2	Class II Permissive Change	2020-05-18	7QCbmYi18Xf0n337uq1PVQ==

Operating Frequencies

Device operates within approved frequencies overlapping with the following cellular bands: LTE 1,2100 DOWN | LTE 10,AWS-1+ DOWN | LTE 65,2100+ DOWN | LTE 66,AWS-3 DOWN | UMTS CH 1 DOWN | UMTS CH 10 DOWN |

Frequency Range	Power Output	Tolerance	Emission Designator	Rule Parts	Grant Notes	App #
2.1102-2.1798 GHz (/frequency-explorer.php?lower=2110.2&upper=2179.8)	2 Watts	0.05ppm	200KG7D (/Emissions-Designator/200KG7D)	27 (https://ecfr.io/Title-47/pt47.2.27)	(/Grant-Note/)	1.8
2.1102-2.1798 GHz (/frequency-explorer.php?lower=2110.2&upper=2179.8)	2 Watts	0.05ppm	200KG7D (/Emissions-Designator/200KG7D)	27 (https://ecfr.io/Title-47/pt47.2.27)	(/Grant-Note/)	2.8
2.1107-2.1793 GHz (/frequency-explorer.php?lower=2110.7&upper=2179.3)	5 Watts	0.05ppm	1M40F9W (/Emissions-Designator/1M40F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	1.2
2.1107-2.1793 GHz (/frequency-explorer.php?lower=2110.7&upper=2179.3)	5 Watts	0.05ppm	1M40F9W (/Emissions-Designator/1M40F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.2

Frequency Range	Power Output	Tolerance	Emission Designator	Rule Parts	Grant Notes	App #
2.1115-2.1785 GHz (/frequency-explorer.php?lower=2111.5&upper=2178.5)	5 Watts	0.05ppm	3M00F9W (/Emissions-Designator/3M00F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	1.3
2.1115-2.1785 GHz (/frequency-explorer.php?lower=2111.5&upper=2178.5)	5 Watts	0.05ppm	3M00F9W (/Emissions-Designator/3M00F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.3
2.1124-2.1526 GHz (/frequency-explorer.php?lower=2112.4&upper=2152.6)	5 Watts	0.05ppm	5M00F9W (/Emissions-Designator/5M00F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	(/Grant-Note/)	1.1
2.1125-2.1775 GHz (/frequency-explorer.php?lower=2112.5&upper=2177.5)	5 Watts	0.05ppm	5M00F9W (/Emissions-Designator/5M00F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	1.4
2.1125-2.1775 GHz (/frequency-explorer.php?lower=2112.5&upper=2177.5)	5 Watts	0.05ppm	5M00F9W (/Emissions-Designator/5M00F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.4
2.1125-2.1775 GHz (/frequency-explorer.php?lower=2112.5&upper=2177.5)	5 Watts	0.05ppm	4M48F9W (/Emissions-Designator/4M48F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.9
2.115-2.175 GHz (/frequency-explorer.php?lower=2115&upper=2175)	5 Watts	0.05ppm	10M0F9W (/Emissions-Designator/10M0F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	1.5
2.115-2.175 GHz (/frequency-explorer.php?lower=2115&upper=2175)	5 Watts	0.05ppm	9M31F9W (/Emissions-Designator/9M31F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.1
2.115-2.175 GHz (/frequency-explorer.php?lower=2115&upper=2175)	5 Watts	0.05ppm	10M0F9W (/Emissions-Designator/10M0F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.5

Frequency Range	Power Output	Tolerance	Emission Designator	Rule Parts	Grant Notes	App #
2.1175-2.1725 GHz (/frequency-explorer.php?lower=2117.5&upper=2172.5)	5 Watts	0.05ppm	15M0F9W (/Emissions-Designator/15M0F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	1.6
2.1175-2.1725 GHz (/frequency-explorer.php?lower=2117.5&upper=2172.5)	5 Watts	0.05ppm	15M0F9W (/Emissions-Designator/15M0F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.6
2.1175-2.1725 GHz (/frequency-explorer.php?lower=2117.5&upper=2172.5)	5 Watts	0.05ppm	14M1F9W (/Emissions-Designator/14M1F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.11
2.12-2.17 GHz (/frequency-explorer.php?lower=2120&upper=2170)	5 Watts	0.05ppm	20M0F9W (/Emissions-Designator/20M0F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	1.7
2.12-2.17 GHz (/frequency-explorer.php?lower=2120&upper=2170)	5 Watts	0.05ppm	20M0F9W (/Emissions-Designator/20M0F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.7
2.12-2.17 GHz (/frequency-explorer.php?lower=2120&upper=2170)	5 Watts	0.05ppm	18M9F9W (/Emissions-Designator/18M9F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.12

Exhibits

All | 1 (2019-08-08) | 2 (2020-05-18)

Available Exhibits

App #	Document	Type	Submitted Available
2	Test Report Part 11 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-11-4727598)	Test Report Adobe Acrobat PDF (550 kB)	2020-05-17 2020-05-18
2	Test Report Part 10 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-10-4727597)	Test Report Adobe Acrobat PDF (5615 kB)	2020-05-17 2020-05-18
2	Test Report Part 9 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-9-4727596)	Test Report Adobe Acrobat PDF (5502 kB)	2020-05-17 2020-05-18
2	Test Report Part 8 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-8-4727595)	Test Report Adobe Acrobat PDF (5585 kB)	2020-05-17 2020-05-18
2	Test Report Part 7 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-7-4727594)	Test Report Adobe Acrobat PDF (5565 kB)	2020-05-17 2020-05-18
2	Test Report Part 6 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-6-4727573)	Test Report Adobe Acrobat PDF (5532 kB)	2020-05-17 2020-05-18
2	Test Report Part 5 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-5-4727572)	Test Report Adobe Acrobat PDF (5519 kB)	2020-05-17 2020-05-18
2	Test Report Part 4 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-4-4727571)	Test Report Adobe Acrobat PDF (5583 kB)	2020-05-17 2020-05-18
2	Test Report Part 3 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-3-4727570)	Test Report Adobe Acrobat PDF (5524 kB)	2020-05-17 2020-05-18

App #	Document	Type	Submitted Available
2	Test Report Part 2 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-2-4727569)	Test Report Adobe Acrobat PDF (5554 kB)	2020-05-17 2020-05-18
2	Test Report Part 1 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-1-4727568)	Test Report Adobe Acrobat PDF (739 kB)	2020-05-17 2020-05-18
2	Agents Letter (https://fccid.io/TA8AKRC161742-1/Letter/Agents-Letter-4727567)	Cover Letter(s) Adobe Acrobat PDF (313 kB)	2020-05-17 2020-05-18
2	FCC C2PC Letter (https://fccid.io/TA8AKRC161742-1/Letter/FCC-C2PC-Letter-4727566)	Cover Letter(s) Adobe Acrobat PDF (96 kB)	2020-05-17 2020-05-18
2	Confidentiality Letter (https://fccid.io/TA8AKRC161742-1/Letter/Confidentiality-Letter-4727565)	Cover Letter(s) Adobe Acrobat PDF (115 kB)	2020-05-17 2020-05-18
2	Test Setup Photos (https://fccid.io/TA8AKRC161742-1/Test-Setup-Photos/Test-Setup-Photos-4727564)	Test Setup Photos Adobe Acrobat PDF (385 kB)	2020-05-17 2020-05-18
1	Confidentiality Letter (https://fccid.io/TA8AKRC161742-1/Letter/Confidentiality-Letter-4389931)	Cover Letter(s) Adobe Acrobat PDF (82 kB)	2019-08-07 2019-08-08
1	FCC Cover Letter (https://fccid.io/TA8AKRC161742-1/Letter/FCC-Cover-Letter-4389930)	Cover Letter(s) Adobe Acrobat PDF (72 kB)	2019-08-07 2019-08-08
1	Limited Modular Approval Letter (https://fccid.io/TA8AKRC161742-1/Letter/Limited-Modular-Approval-Letter-4389929)	Cover Letter(s) Adobe Acrobat PDF (80 kB)	2019-08-07 2019-08-08
1	Agents Letter (https://fccid.io/TA8AKRC161742-1/Letter/Agents-Letter-4389928)	Cover Letter(s) Adobe Acrobat PDF (313 kB)	2019-08-07 2019-08-08
1	RF Exposure Report (https://fccid.io/TA8AKRC161742-1/RF-Exposure-Info/RF-Exposure-Report-4389927)	RF Exposure Info Adobe Acrobat PDF (616 kB)	2019-08-07 2019-08-08

App #	Document	Type	Submitted Available
1	Test Setup Photos (https://fccid.io/TA8AKRC161742-1/Test-Setup-Photos/Test-Setup-Photos-4389926)	Test Setup Photos Adobe Acrobat PDF (415 kB)	2019-08-07 2019-08-08
1	External Photos (https://fccid.io/TA8AKRC161742-1/External-Photos/External-Photos-4389925)	External Photos Adobe Acrobat PDF (298 kB)	2019-08-07 2019-08-08
1	ID Label and Location (https://fccid.io/TA8AKRC161742-1/Label/ID-Label-and-Location-4389924)	ID Label/Location Info Adobe Acrobat PDF (119 kB)	2019-08-07 2019-08-08
1	Test Report I Part 8 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-8-4389923)	Test Report Adobe Acrobat PDF (1531 kB)	2019-08-07 2019-08-08
1	Test Report I Part 7 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-7-4389922)	Test Report Adobe Acrobat PDF (4933 kB)	2019-08-07 2019-08-08
1	Test Report I Part 6 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-6-4389921)	Test Report Adobe Acrobat PDF (4972 kB)	2019-08-07 2019-08-08
1	Test Report I Part 5 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-5-4389920)	Test Report Adobe Acrobat PDF (5004 kB)	2019-08-07 2019-08-08
1	Test Report I Part 4 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-4-4389919)	Test Report Adobe Acrobat PDF (4620 kB)	2019-08-07 2019-08-08
1	Test Report I Part 3 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-3-4389918)	Test Report Adobe Acrobat PDF (4763 kB)	2019-08-07 2019-08-08
1	Test Report I Part 2 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-2-4389917)	Test Report Adobe Acrobat PDF (4969 kB)	2019-08-07 2019-08-08
1	Test Report I Part 1 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-1-4389916)	Test Report Adobe Acrobat PDF (4710 kB)	2019-08-07 2019-08-08

Application Forms

1 (2019-08-08) | 2 (2020-05-18)

Application for Equipment Authorization FCC Form 731 TCB Version

Applicant Information

Applicant's complete, legal business name:	Ericsson AB (https://fccid.io/TA8)
FCC Registration Number (FRN):	0013476155 (https://fccid.io/TA8)
Alphanumeric FCC ID:	TA8AKRC1617421
Unique Application Identifier:	7QCbmYi18Xf0n337uq1PVQ==
Line one:	PDU Radio
Line two:	Torshamnsgatan 23
City:	Stockholm
State:	N/A
Country:	Sweden
Zip Code:	164 80

TCB Information

TCB Application Email Address:	andy.zhang@tuvsud.com
TCB Scope:	B1: Commercial mobile radio services equipment in the following 47 CFR Parts 20, 22 (cellular), 24,25 (below 3 GHz) & 27

FCC ID

Grantee Code:TA8
Product Code: AKRC161742-1

Person at the applicant's address to receive grant or for contact

Name:Igor Tasevski
Title: Head of PDU Radio
Telephone Number:+46 10 719 00 00Extension:
Fax Number:+46 10 716 00 28
Email: igor.tasevski@ericsson.com

Long-Term Confidentiality

Does this application include a request for confidentiality for any portion(s) of the data contained in this application pursuant to 47 CFR § 0.459 of the Commission Rules?: Yes

Short-Term Confidentiality

Does short-term confidentiality apply to this application?: No
If so, specify the short-term confidentiality release date (MM/DD/YYYY format):
Note: If no date is supplied, the release date will be set to 45 calendar days past the date of grant.

Software Defined/Cognitive Radio

Is this application for software defined/cognitive radio authorization? No

Equipment Class

Equipment Class: TNB - Licensed Non-Broadcast Station Transmitter
Description of product as it is marketed: (NOTE: This text will appear below the equipment class on the grant): Remote Radio Unit which supports WCDMA, LTE, NB-IoT and NR

Related OET KnowledgeDataBase Inquiry

Is there a KDB inquiry associated with this application? No

Modular Equipment

Modular Type: Limited Single Modular Approval

Application Purpose

Application is for: Class II permissive change or modification of presently authorized equipment

Composite/Related Equipment

Is the equipment in this application a composite device subject to an additional equipment authorization? No
Is the equipment in this application part of a system that operates with, or is marketed with, another device that requires an equipment authorization? No

Test Firm Information

Name of test firm and contact person on file with the FCC:
Firm Name: Intertek Testing Services Limited, Shanghai (/Test-Firm/Intertek-Testing-Services-Limited-Shanghai)
First Name: Leah
Last Name: Xu
Telephone Number:+86 21 61278200Extension:
E-mail: leah.xu@intertek.com

Grant Comments

Enter any text that you would like to appear at the bottom of the Grant of Equipment Authorization:
Class II Permissive change as described in this filing. Limited Modular Approval. The power output listed is rated conducted per output port. This transmitter must only be operated in the grantee's RBS systems. RF exposure is addressed at the time of licensing, as required by the responsible FCC Bureau(s), including antenna co-locating requirements of 1.1307 (b)(3).
Set the grant of this application to be deferred to a specified date:
No

Equipment Authorization Waiver

Is there an equipment authorization waiver associated with this application? No
If there is an equipment authorization waiver associated with this application, has the associated waiver been approved and all information uploaded?: No

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

SECTION 5301 (ANTI-DRUG ABUSE) CERTIFICATION:

The applicant must certify that neither the applicant nor any party to the application is subject to a denial of Federal benefits, that include FCC benefits, pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862 because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the definition of a "party" for these purposes.

Does the applicant or authorized agent so certify? Yes

Applicant/Agent Certification:

I certify that I am authorized to sign this application. All of the statements herein and the exhibits attached hereto, are true and correct to the best of my knowledge and belief. In accepting a Grant of Equipment Authorization as a result of the representations made in this application, the applicant is responsible for (1) labeling the equipment with the exact FCC ID specified in this application, (2) compliance statement labeling pursuant to the applicable rules, and (3) compliance of the equipment with the applicable technical rules. If the applicant is not the actual manufacturer of the equipment, appropriate arrangements have been made with the manufacturer to ensure that production units of this equipment will continue to comply with the FCC's technical requirements.

Authorizing an agent to sign this application, is done solely at the applicant's discretion; however, the applicant remains responsible for all statements in this application.

If an agent has signed this application on behalf of the applicant, a written letter of authorization which includes information to enable the agent to respond to the above section 5301 (Anti-Drug Abuse) Certification statement has been provided by the applicant. It is understood that the letter of authorization must be submitted to the FCC upon request, and that the FCC reserves the right to contact the applicant directly at any time.

Signature of Authorized Person Filing: Igor Tasevski
Title of authorized signature:

Applications are submitted for FCC ID and Grant requests. Click an above application to view details

Grants

1 TCB (2019-08-08) | 1 EAS (2019-08-08) | 2 TCB (2020-05-18) | 2 EAS (2020-05-18)

COPY

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

COPY

GRANT OF EQUIPMENT AUTHORIZATION
Certification

Ericsson AB
PDU Radio Torshamnsgatan 23
Stockholm, 164 80
Sweden

Date of Grant: 05/18/2020

Application Dated: 05/17/2020

Attention: Igor Tasevski , Head of PDU Radio

NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.

FCC IDENTIFIER: TA8AKRC161742-1
Name of Grantee: Ericsson AB
Equipment Class: **Licensed Non-Broadcast Station Transmitter**
Notes: **Remote Radio Unit which supports WCDMA, LTE, NB-IoT and NR**
Modular Type: **Limited Single Modular**

Grant Notes	FCC Rule Parts	Frequency Range (MHZ)	Output Watts	Frequency Tolerance	Emission Designator
MO	**27**	**2112.4 - 2152.6**	**5.0**	**0.05 PM**	**5M00F9W**
MO	**27**	**2110.7 - 2179.3**	**5.0**	**0.05 PM**	**1M40F9W**
MO	**27**	**2111.5 - 2178.5**	**5.0**	**0.05 PM**	**3M00F9W**
MO	**27**	**2112.5 - 2177.5**	**5.0**	**0.05 PM**	**5M00F9W**
MO	**27**	**2115.0 - 2175.0**	**5.0**	**0.05 PM**	**10M0F9W**
MO	**27**	**2117.5 - 2172.5**	**5.0**	**0.05 PM**	**15M0F9W**
MO	**27**	**2120.0 - 2170.0**	**5.0**	**0.05 PM**	**20M0F9W**
	27	**2110.2 - 2179.8**	**2.0**	**0.05 PM**	**200KG7D**
MO	**27**	**2112.5 - 2177.5**	**5.0**	**0.05 PM**	**4M48F9W**
MO	**27**	**2115.0 - 2175.0**	**5.0**	**0.05 PM**	**9M31F9W**
MO	**27**	**2117.5 - 2172.5**	**5.0**	**0.05 PM**	**14M1F9W**
MO	**27**	**2120.0 - 2170.0**	**5.0**	**0.05 PM**	**18M9F9W**

Class II Permissive change as described in this filing.
Limited Modular Approval. The power output listed is rated conducted per output port. This transmitter must only be operated in the grantee's RBS systems. RF exposure is addressed at the time of licensing, as required by the responsible FCC Bureau(s), including antenna co-locating requirements of 1.1307 (b)(3).

MO: This Multiple Input Multiple Output (MIMO) device was evaluated for multiple transmitted signals as indicated in the filing.

Mail To:

EA280112

Grants authorize equipment for operation at approved frequencies and sale within the USA.
Click an above grant to view details

FCC ID TA8AKRC161742-1

TA8-AKRC161742-1, TA8 AKRC1617421, TA8AKRC161742-1, TA8AKRCI6I742-I

Ericsson AB Single New Certification, Limited Modular Approval **AKRC161742-1**

An FCC ID is the product ID assigned by the FCC to identify wireless products in the market. The FCC chooses 3 or 5 character "Grantee" codes to identify the business that created the product. For example, the grantee code for **FCC ID: TA8AKRC161742-1** is **TA8 (https://fccid.io/TA8)**. The remaining characters of the FCC ID, **AKRC161742-1**, are often associated with the product model, but they can be random. These letters are chosen by the applicant. In addition to the application, the FCC also publishes ***internal images, external images, user manuals, and test results*** for wireless devices. They can be under the "exhibits" tab below.

Application: Single New Certification, Limited Modular Approval

Equipment Class: TNB - Licensed Non-Broadcast Station Transmitter

Alternate Sources: FCC.gov (https://gov.fccid.io/TA8AKRC161742-1) | FCC.report (https://fcc.report/FCC-ID/TA8AKRC161742-1)

Registered By: Ericsson AB - TA8 (Sweden) (https://fccid.io/TA8)

you@youremail.com Subscribe

App #	Purpose	Date	Unique ID
1	Original Equipment	2019-08-08	+mUBThls6T0jfdW5WLGC0g==
2	Class II Permissive Change	2020-05-18	7QCbmYi18Xf0n337uq1PVQ==

Operating Frequencies

Device operates within approved frequencies overlapping with the following cellular bands: LTE 1,2100 DOWN | LTE 10,AWS-1+ DOWN | LTE 65,2100+ DOWN | LTE 66,AWS-3 DOWN | UMTS CH 1 DOWN | UMTS CH 10 DOWN |

Frequency Range	Power Output	Tolerance	Emission Designator	Rule Parts	Grant Notes	App #
2.1102-2.1798 GHz (/frequency-explorer.php?lower=2110.2&upper=2179.8)	2 Watts	0.05ppm	200KG7D (/Emissions-Designator/200KG7D)	27 (https://ecfr.io/Title-47/pt47.2.27)	(/Grant-Note/)	1.8
2.1102-2.1798 GHz (/frequency-explorer.php?lower=2110.2&upper=2179.8)	2 Watts	0.05ppm	200KG7D (/Emissions-Designator/200KG7D)	27 (https://ecfr.io/Title-47/pt47.2.27)	(/Grant-Note/)	2.8
2.1107-2.1793 GHz (/frequency-explorer.php?lower=2110.7&upper=2179.3)	5 Watts	0.05ppm	1M40F9W (/Emissions-Designator/1M40F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	1.2
2.1107-2.1793 GHz (/frequency-explorer.php?lower=2110.7&upper=2179.3)	5 Watts	0.05ppm	1M40F9W (/Emissions-Designator/1M40F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.2
2.1115-2.1785 GHz (/frequency-explorer.php?lower=2111.5&upper=2178.5)	5 Watts	0.05ppm	3M00F9W (/Emissions-Designator/3M00F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	1.3
2.1115-2.1785 GHz (/frequency-explorer.php?lower=2111.5&upper=2178.5)	5 Watts	0.05ppm	3M00F9W (/Emissions-Designator/3M00F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.3
2.1124-2.1526 GHz (/frequency-explorer.php?lower=2112.4&upper=2152.6)	5 Watts	0.05ppm	5M00F9W (/Emissions-Designator/5M00F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	(/Grant-Note/)	1.1
2.1125-2.1775 GHz (/frequency-explorer.php?lower=2112.5&upper=2177.5)	5 Watts	0.05ppm	5M00F9W (/Emissions-Designator/5M00F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	1.4
2.1125-2.1775 GHz (/frequency-explorer.php?lower=2112.5&upper=2177.5)	5 Watts	0.05ppm	5M00F9W (/Emissions-Designator/5M00F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.4
2.1125-2.1775 GHz (/frequency-explorer.php?lower=2112.5&upper=2177.5)	5 Watts	0.05ppm	4M48F9W (/Emissions-Designator/4M48F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.9
2.115-2.175 GHz (/frequency-explorer.php?lower=2115&upper=2175)	5 Watts	0.05ppm	10M0F9W (/Emissions-Designator/10M0F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	1.5
2.115-2.175 GHz (/frequency-explorer.php?lower=2115&upper=2175)	5 Watts	0.05ppm	9M31F9W (/Emissions-Designator/9M31F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.1
2.115-2.175 GHz (/frequency-explorer.php?lower=2115&upper=2175)	5 Watts	0.05ppm	10M0F9W (/Emissions-Designator/10M0F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.5
2.1175-2.1725 GHz (/frequency-explorer.php?lower=2117.5&upper=2172.5)	5 Watts	0.05ppm	15M0F9W (/Emissions-Designator/15M0F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	1.6
2.1175-2.1725 GHz (/frequency-explorer.php?lower=2117.5&upper=2172.5)	5 Watts	0.05ppm	15M0F9W (/Emissions-Designator/15M0F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.6
2.1175-2.1725 GHz (/frequency-explorer.php?lower=2117.5&upper=2172.5)	5 Watts	0.05ppm	14M1F9W (/Emissions-Designator/14M1F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.11
2.12-2.17 GHz (/frequency-explorer.php?lower=2120&upper=2170)	5 Watts	0.05ppm	20M0F9W (/Emissions-Designator/20M0F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	1.7
2.12-2.17 GHz (/frequency-explorer.php?lower=2120&upper=2170)	5 Watts	0.05ppm	20M0F9W (/Emissions-Designator/20M0F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.7
2.12-2.17 GHz (/frequency-explorer.php?lower=2120&upper=2170)	5 Watts	0.05ppm	18M9F9W (/Emissions-Designator/18M9F9W)	27 (https://ecfr.io/Title-47/pt47.2.27)	MO (/Grant-Note/MO)	2.12

Exhibits

All | 1 (2019-08-08) | 2 (2020-05-18)

Available Exhibits

App #	Document	Type	Submitted Available
2	Test Report Part 11 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-11-4727598)	Test Report Adobe Acrobat PDF (550 kB)	2020-05-17 **2020-05-18**
2	Test Report Part 10 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-10-4727597)	Test Report Adobe Acrobat PDF (5615 kB)	2020-05-17 **2020-05-18**
2	Test Report Part 9 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-9-4727596)	Test Report Adobe Acrobat PDF (5502 kB)	2020-05-17 **2020-05-18**
2	Test Report Part 8 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-8-4727595)	Test Report Adobe Acrobat PDF (5585 kB)	2020-05-17 **2020-05-18**
2	Test Report Part 7 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-7-4727594)	Test Report Adobe Acrobat PDF (5565 kB)	2020-05-17 **2020-05-18**
2	Test Report Part 6 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-6-4727573)	Test Report Adobe Acrobat PDF (5532 kB)	2020-05-17 **2020-05-18**
2	Test Report Part 5 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-5-4727572)	Test Report Adobe Acrobat PDF (5519 kB)	2020-05-17 **2020-05-18**
2	Test Report Part 4 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-4-4727571)	Test Report Adobe Acrobat PDF (5583 kB)	2020-05-17 **2020-05-18**
2	Test Report Part 3 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-3-4727570)	Test Report Adobe Acrobat PDF (5524 kB)	2020-05-17 **2020-05-18**
2	Test Report Part 2 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-2-4727569)	Test Report Adobe Acrobat PDF (5554 kB)	2020-05-17 **2020-05-18**

App #	Document	Type	Submitted Available
2	Test Report Part 1 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-Part-1-4727568)	Test Report Adobe Acrobat PDF (739 kB)	2020-05-17 2020-05-18
2	Agents Letter (https://fccid.io/TA8AKRC161742-1/Letter/Agents-Letter-4727567)	Cover Letter(s) Adobe Acrobat PDF (313 kB)	2020-05-17 2020-05-18
2	FCC C2PC Letter (https://fccid.io/TA8AKRC161742-1/Letter/FCC-C2PC-Letter-4727566)	Cover Letter(s) Adobe Acrobat PDF (96 kB)	2020-05-17 2020-05-18
2	Confidentiality Letter (https://fccid.io/TA8AKRC161742-1/Letter/Confidentiality-Letter-4727565)	Cover Letter(s) Adobe Acrobat PDF (115 kB)	2020-05-17 2020-05-18
2	Test Setup Photos (https://fccid.io/TA8AKRC161742-1/Test-Setup-Photos/Test-Setup-Photos-4727564)	Test Setup Photos Adobe Acrobat PDF (385 kB)	2020-05-17 2020-05-18
1	Confidentiality Letter (https://fccid.io/TA8AKRC161742-1/Letter/Confidentiality-Letter-4389931)	Cover Letter(s) Adobe Acrobat PDF (82 kB)	2019-08-07 2019-08-08
1	FCC Cover Letter (https://fccid.io/TA8AKRC161742-1/Letter/FCC-Cover-Letter-4389930)	Cover Letter(s) Adobe Acrobat PDF (72 kB)	2019-08-07 2019-08-08
1	Limited Modular Approval Letter (https://fccid.io/TA8AKRC161742-1/Letter/Limited-Modular-Approval-Letter-4389929)	Cover Letter(s) Adobe Acrobat PDF (80 kB)	2019-08-07 2019-08-08
1	Agents Letter (https://fccid.io/TA8AKRC161742-1/Letter/Agents-Letter-4389928)	Cover Letter(s) Adobe Acrobat PDF (313 kB)	2019-08-07 2019-08-08
1	RF Exposure Report (https://fccid.io/TA8AKRC161742-1/RF-Exposure-Info/RF-Exposure-Report-4389927)	RF Exposure Info Adobe Acrobat PDF (616 kB)	2019-08-07 2019-08-08
1	Test Setup Photos (https://fccid.io/TA8AKRC161742-1/Test-Setup-Photos/Test-Setup-Photos-4389926)	Test Setup Photos Adobe Acrobat PDF (415 kB)	2019-08-07 2019-08-08
1	External Photos (https://fccid.io/TA8AKRC161742-1/External-Photos/External-Photos-4389925)	External Photos Adobe Acrobat PDF (298 kB)	2019-08-07 2019-08-08
1	ID Label and Location (https://fccid.io/TA8AKRC161742-1/Label/ID-Label-and-Location-4389924)	ID Label/Location Info Adobe Acrobat PDF (119 kB)	2019-08-07 2019-08-08
1	Test Report I Part 8 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-8-4389923)	Test Report Adobe Acrobat PDF (1531 kB)	2019-08-07 2019-08-08
1	Test Report I Part 7 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-7-4389922)	Test Report Adobe Acrobat PDF (4933 kB)	2019-08-07 2019-08-08
1	Test Report I Part 6 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-6-4389921)	Test Report Adobe Acrobat PDF (4972 kB)	2019-08-07 2019-08-08
1	Test Report I Part 5 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-5-4389920)	Test Report Adobe Acrobat PDF (5004 kB)	2019-08-07 2019-08-08

App #	Document	Type	Submitted Available
1	Test Report I Part 4 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-4-4389919)	Test Report Adobe Acrobat PDF (4620 kB)	2019-08-07 2019-08-08
1	Test Report I Part 3 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-3-4389918)	Test Report Adobe Acrobat PDF (4763 kB)	2019-08-07 2019-08-08
1	Test Report I Part 2 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-2-4389917)	Test Report Adobe Acrobat PDF (4969 kB)	2019-08-07 2019-08-08
1	Test Report I Part 1 (https://fccid.io/TA8AKRC161742-1/Test-Report/Test-Report-I-Part-1-4389916)	Test Report Adobe Acrobat PDF (4710 kB)	2019-08-07 2019-08-08

Application Forms

1 (2019-08-08) 2 (2020-05-18)

Application for Equipment Authorization FCC Form 731 TCB Version

Applicant Information

Applicant's complete, legal business name:	Ericsson AB (https://fccid.io/TA8)
FCC Registration Number (FRN):	0013476155 (https://fccid.io/TA8)
Alphanumeric FCC ID:	TA8AKRC1617421
Unique Application Identifier:	+mUBThls6T0jfdW5WLGC0g==
Line one:	PDU Radio
Line two:	Torshamnsgatan 23
City:	Stockholm
State:	N/A
Country:	Sweden
Zip Code:	164 80

TCB Information

TCB Application Email Address:	andy.zhang@tuvsud.com
TCB Scope:	B1: Commercial mobile radio services equipment in the following 47 CFR Parts 20, 22 (cellular), 24,25 (below 3 GHz) & 27

FCC ID

Grantee Code:TA8
Product Code: AKRC161742-1

Person at the applicant's address to receive grant or for contact

Name:Igor Tasevski
Title: Head of PDU Radio
Telephone Number:+46 10 719 00 00Extension:
Fax Number:+46 10 716 00 28
Email: igor.tasevski@ericsson.com

Long-Term Confidentiality

Does this application include a request for confidentiality for any portion(s) of the data contained in this application pursuant to 47 CFR § 0.459 of the Commission Rules?: Yes

Short-Term Confidentiality

Does short-term confidentiality apply to this application?: No
If so, specify the short-term confidentiality release date (MM/DD/YYYY format):
Note: If no date is supplied, the release date will be set to 45 calendar days past the date of grant.

Software Defined/Cognitive Radio

Is this application for software defined/cognitive radio authorization? No

Equipment Class

Equipment Class: TNB - Licensed Non-Broadcast Station Transmitter
Description of product as it is marketed: (NOTE: This text will appear below the equipment class on the grant): Single New Certification, Limited Modular Approval

Related OET KnowledgeDataBase Inquiry

Is there a KDB inquiry associated with this application? No

Modular Equipment

Modular Type: Limited Single Modular Approval

Application Purpose

Application is for: Original Equipment

Composite/Related Equipment

Is the equipment in this application a composite device subject to an additional equipment authorization? No
Is the equipment in this application part of a system that operates with, or is marketed with, another device that requires an equipment authorization? No

Test Firm Information

Name of test firm and contact person on file with the FCC:
Firm Name: Telecommunications Technology Labs, CAICT (/Test-Firm/Telecommunications-Technology-Labs-CAICT)
First Name: Yaqin
Last Name: Shen
Telephone Number:8610-62304633Extension:2583
Fax Number: 8610-62300586

E-mail: shenyaqin@caict.ac.cn

Grant Comments

Enter any text that you would like to appear at the bottom of the Grant of Equipment Authorization:
Limited Modular Approval. The power output listed is rated conducted per output port. This transmitter must only be operated in the grantees RBS systems. RF exposure is addressed at the time of licensing, as required by the responsible FCC Bureau(s), including antenna co-locating requirements of 1.1307 (b)(3).
Set the grant of this application to be deferred to a specified date:
No

Equipment Authorization Waiver

Is there an equipment authorization waiver associated with this application? No
If there is an equipment authorization waiver associated with this application, has the associated waiver been approved and all information uploaded?: No

WILLFUL FALSE STATEMENTS MADE ON THIS FORM ARE PUNISHABLE BY FINE AND IMPRISONMENT (U.S. CODE, TITLE 18, SECTION 1001), AND/OR REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. CODE, TITLE 47, SECTION 312(a)(1)), AND/OR FORFEITURE (U.S. CODE, TITLE 47, SECTION 503).

SECTION 5301 (ANTI-DRUG ABUSE) CERTIFICATION:

The applicant must certify that neither the applicant nor any party to the application is subject to a denial of Federal benefits, that include FCC benefits, pursuant to Section 5301 of the Anti-Drug Abuse Act of 1988, 21 U.S.C. § 862 because of a conviction for possession or distribution of a controlled substance. See 47 CFR 1.2002(b) for the definition of a "party" for these purposes.

Does the applicant or authorized agent so certify? Yes

Applicant/Agent Certification:

I certify that I am authorized to sign this application. All of the statements herein and the exhibits attached hereto, are true and correct to the best of my knowledge and belief. In accepting a Grant of Equipment Authorization as a result of the representations made in this application, the applicant is responsible for (1) labeling the equipment with the exact FCC ID specified in this application, (2) compliance statement labeling pursuant to the applicable rules, and (3) compliance of the equipment with the applicable technical rules. If the applicant is not the actual manufacturer of the equipment, appropriate arrangements have been made with the manufacturer to ensure that production units of this equipment will continue to comply with the FCC's technical requirements.

Authorizing an agent to sign this application, is done solely at the applicant's discretion; however, the applicant remains responsible for all statements in this application.

If an agent has signed this application on behalf of the applicant, a written letter of authorization which includes information to enable the agent to respond to the above section 5301 (Anti-Drug Abuse) Certification statement has been provided by the applicant. It is understood that the letter of authorization must be submitted to the FCC upon request, and that the FCC reserves the right to contact the applicant directly at any time.

Signature of Authorized Person Filing: Preeti Nagarajan
Title of authorized signature:

Applications are submitted for FCC ID and Grant requests. Click an above application to view details

Grants

1 TCB (2019-08-08) 1 EAS (2019-08-08) 2 TCB (2020-05-18) 2 EAS (2020-05-18)

TCB

GRANT OF EQUIPMENT
AUTHORIZATION
Certification
Issued Under the Authority of the
Federal Communications Commission
By:

TCB

TUV SUD BABT
Octagon House, Concorde Way, Segensworth North,
Fareham, PO15 5RL
United Kingdom

Date of Grant: 08/08/2019

Application Dated: 08/07/2019

Ericsson AB
PDU Radio
Torshamnsgatan 23
Stockholm, 164 80
Sweden

Attention: Igor Tasevski , Head of PDU Radio

NOT TRANSFERABLE

EQUIPMENT AUTHORIZATION is hereby issued to the named GRANTEE, and is VALID ONLY for the equipment identified hereon for use under the Commission's Rules and Regulations listed below.

FCC IDENTIFIER: TA8AKRC161742-1
Name of Grantee: Ericsson AB
Equipment Class: **Licensed Non-Broadcast Station Transmitter**
Notes: **Single New Certification, Limited Modular Approval**
Modular Type: **Limited Single Modular**

Grant Notes	FCC Rule Parts	Frequency Range (MHZ)	Output Watts	Frequency Tolerance	Emission Designator
	27	**2112.4 - 2152.6**	**5.0**	**0.05 PM**	**5M00F9W**
MO	**27**	**2110.7 - 2179.3**	**5.0**	**0.05 PM**	**1M40F9W**
MO	**27**	**2111.5 - 2178.5**	**5.0**	**0.05 PM**	**3M00F9W**
MO	**27**	**2112.5 - 2177.5**	**5.0**	**0.05 PM**	**5M00F9W**
MO	**27**	**2115.0 - 2175.0**	**5.0**	**0.05 PM**	**10M0F9W**
MO	**27**	**2117.5 - 2172.5**	**5.0**	**0.05 PM**	**15M0F9W**
MO	**27**	**2120.0 - 2170.0**	**5.0**	**0.05 PM**	**20M0F9W**
	27	**2110.2 - 2179.8**	**2.0**	**0.05 PM**	**200KG7D**

Limited Modular Approval. The power output listed is rated conducted per output port. This transmitter must only be operated in the grantees RBS systems. RF exposure is addressed at the time of licensing, as required by the responsible FCC Bureau(s), including antenna co-locating requirements of 1.1307 (b)(3).

MO: This Multiple Input Multiple Output (MIMO) device was evaluated for multiple transmitted signals as indicated in the filing.

Grants authorize equipment for operation at approved frequencies and sale within the USA. Click an above grant to view details

ENCLOSURE 3

ENCLOSURE 3

VIA ELECTRONIC AND REGULAR MAIL

July 28, 2021

Crown Castle NG West, LLC
Attn: Tricia Knight
123 Seacliff Drive
Pismo Beach, CA 93449

RE: Notice of Application Approval
Crown Castle Small Cell Wireless Facility
Encroachment Permit EP-19-095, 293 Forest Drive

Dear Ms. Knight:

City staff has reviewed the materials submitted for the above referenced project and determined the application to be approved pending the execution of a supplement agreement and payment of license and permit fees.

Our review is based on the following project description:

Installation of a new small cell site facility on an existing streetlight in the public right-of-way with an Omni directional antenna, (2) remote radio units with shroud, (2) quad-diplexers and vault.

Supporting Reasons:

1. The proposed facility complies with all applicable provisions of the Goleta Municipal Code (GMC) Chapter 12.20.
2. The proposed facility will not incommode the public use of the public right-of-way.
3. The proposed construction plan and schedule will not unduly interfere with the public's use of the public right-of-way.
4. The proposed facility complies with any standards adopted by the Director under GMC Section 12.20.040(A).
5. The proposed facility complies with all Federal and State standards and laws.

If you have any questions or would like to schedule a meeting to discuss this letter, please contact Assistant Engineer, Melissa Angeles at (805) 690-5122

or at mangeles@cityofgoleta.org.

Sincerely,

DocuSigned by:
Charles Ebeling
EB910DDE6B3F483...

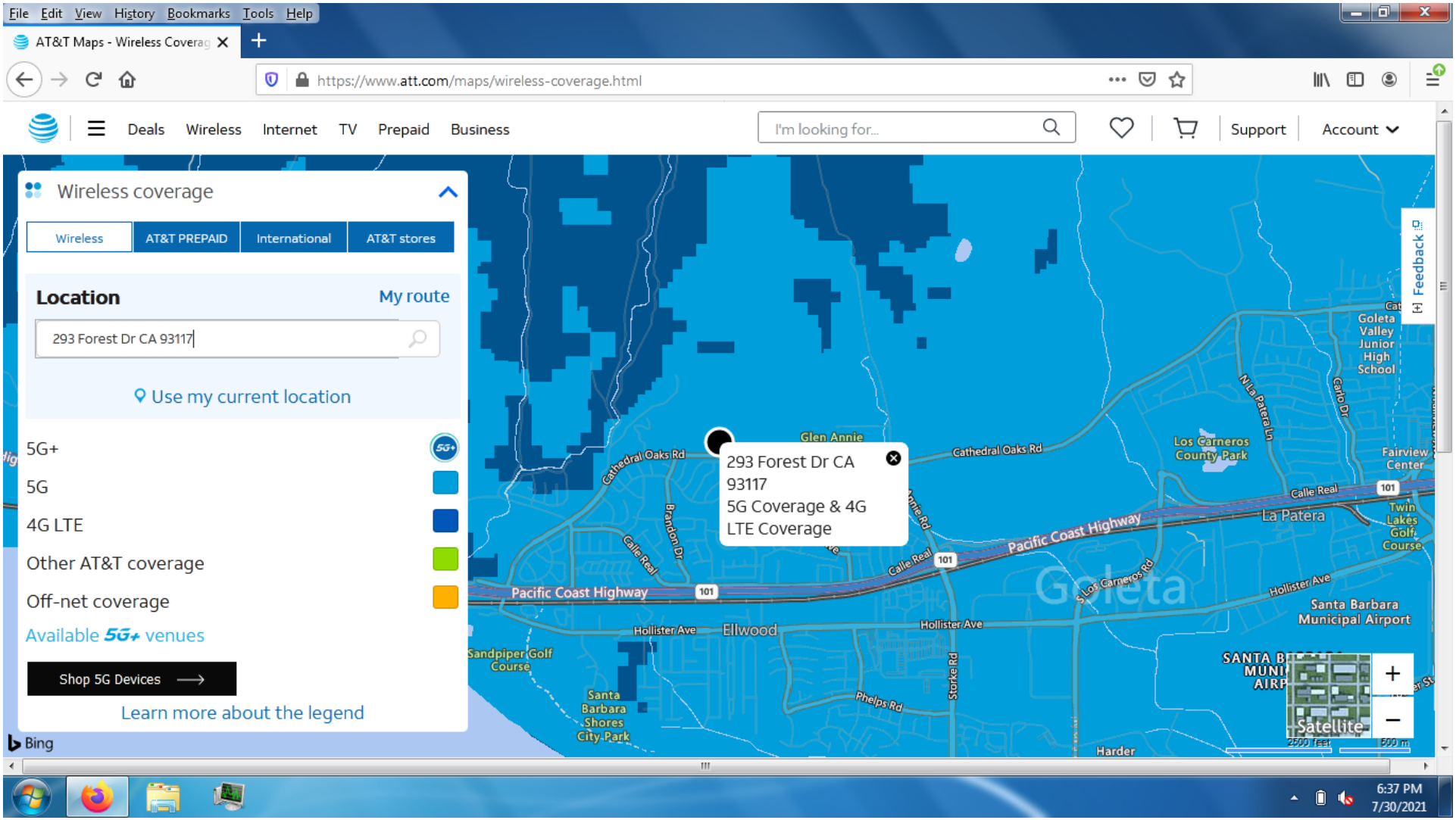
Charles W. Ebeling, P.E., T.E.
Director of Public Works/City Engineer

cc: Melissa Angeles, Assistant Engineer
Other Interested Parties (via email)

ENCLOSURE 4

ENCLOSURE 4

see https://www.att.com/maps/wireless-coverage.html accessed on 7/30/21



David Cutaia

From: Melanie Rogers <melbeemusic@yahoo.com>
Sent: Friday, August 13, 2021 8:50 AM
To: City Clerk Group
Subject: Public Comment - small cell wireless facility
Attachments: Bio-WG-FCC-16421-comment.pdf

Dear Deborah Lopez,

I hereby submit my public comment to officially oppose the installation of a small cell wireless facility at 293 Forest Drive in Goleta. It is my strong belief that this cell station is not needed, as we currently have adequate cell service in our area. Furthermore, as a home owner and resident of this neighborhood, I believe it would be an eye sore to have a cell station on top of a light post. And, my greatest concern is the many yet-to-be discovered negative health impacts of having such a cell station in such close proximity to a residential neighborhood.

Even if this cell installation is "FCC approved," that is ***not*** good enough, as the FCC has clearly been remiss in granting permission for the roll-out of small cell networks without first confirming the health safety of such cell networks on people or animals (see attached). The truth is, even if the FCC claims that this technology is safe, they don't really know that it is actually safe and we will become human test subjects in a large experiment that puts our health and our children's health at risk, without informed consent.

I therefore urge the Goleta City Council members to respect the wishes of the residents of Goleta and the Brandon School neighborhood and deny the application for this small cell station installation.

Thank you for your consideration,

Melanie Rogers
239 Hillview Drive

FCC 16-421

Before the Federal Communications Commission

Washington, D.C. 20554

In the Matter of

STREAMLINING DEPLOYMENT OF SMALL CELL INFRASTRUCTURE BY IMPROVING WIRELESS FACILITIES SITING POLICIES	)))	FCC Docket 16-421

To: Office of the Secretary
Federal Communications Commission, Washington, DC 20554

Date: 6 February 2017

Comment filed by: Cindy Sage, MA, Lennart Hardell, MD, PhD and David O. Carpenter on behalf of the BioInitative Working Group.

Cindy Sage, MA, Sage Associates, 1396 Danielson Road, Santa Barbara, CA 93108 USA
Email: sage@silcom.com
Prof. Lennart Hardell, MD, PhD. Department of Oncology Orebro University Hospital Orebro, Sweden. E-mail: lennart.hardell@regionorebrolan.se
David O. Carpenter, MD, 5 University Place, Room A-217, University at Albany, Rensselauer, NY 12144. Email: dcarpenter@albany.edu

The BioInitiative Working Group Comment on
FCC Docket 16-421 - STREAMLINING DEPLOYMENT OF SMALL CELL INFRASTRUCTURE BY IMPROVING WIRELESS FACILITIES SITING POLICIES

The FCC is proposing to streamline the process for small wireless facility permitting, without completing its investigation of RF health effects of low-intensity radiofrequency radiation (Docket No. 13-39, Docket No 13-84 - In the Matter of Reassessment of Federal Communications Commission Radiofrequency Exposure Limits and Policies and Docket No. 03-137 Regarding Human Exposure to Radiofrequency Electromagnetic Fields). This fact alone argues against the FCC speeding and easing the approval of millions of new 'small cell' wireless antenna sites under **Docket 16-421**. It also argues against permitting thousands of new satellite RF sources (Boeing **Docket No. 16-1244,** SAT-LOA-20160622-00058).

Health consequences have not been identified nor been factored into public safety limits. This is particularly true for the new 5G wireless technologies using millimeter wave frequencies (~28 GHz to ~71 GHz) that will be transmitted by small cells in the future. Adey (1993) warns:

> "*Biomolecular and cell research in this spectral region has been meager. There may be special significance to biomolecular interactions with millimeter wave EM fields. At frequencies within the range 10-1,000 GHz, resonant vibrational or rotational interactions, not seen at lower frequencies, may occur with molecules or portions of molecules.*"
>
> "*Grundler and Kaiser (1992) have shown that growth appears finely "tuned" to applied field frequencies around 42 GHz, with successive peaks and troughs at intervals of about 10 MHz. In recent studies, they noted that the sharpness of the tuning increases as the intensity of the imposed field decreases; but the tuning peak occurs at the same frequency when the field intensity is progressively reduced. Moreover, clear responses occur with* ***incident fields as weak as 5 picowatts/cm2.*** *" **(emphasis added)***

New public safety limits taking into account non-thermal, low-intensity effects of chronic exposure to 900 MHz to the low GHz frequencies are vitally needed but the FCC has failed to complete this step. There is no basis for the FCC to make a positive assertion of safety of existing RF levels to which the public is perpetually exposed. Certainly unaddressed health concerns should stop the FCC from expediting new wireless technologies facilitating new small cell siting and satellite RF sources. The existing FCC public safety limits are grossly inadequate

to protect public health from the body burden of the existing proliferation of RF-emitting devices and the wireless infrastructure supporting them, let alone from new RF sources that will make the situation worse for public health. There is a broad consensus that new, biologically-based public safety limits for chronic exposure are warranted, given the scientific and public health evidence for health risks from low-intensity radiofrequency radiation exposures from wireless technology applications (BioInitiative 2007 and 2012 Reports, accessed at www.bioinitiative.org).

The 2008 NAS Report on Research Needs for Wireless Device summarizes deficiencies for wireless effects on children, adolescents and pregnant women; wireless personal computers and base station antennas; multiple element base station antennas under highest radiated power conditions; hand-held cell phone compliance testing; and better dosimetric absorbed power calculations using realistic anatomic models for both men, women and children of different height and ages. Realistic assessments of cumulative RF exposures need to be addressed, taking into account the high variability in environmental situations; and safety buffers below 'effects levels' need to be built into new FCC public safety limits. The FCC has failed to do so. Instead the agency has sold off new spectrum, fails to complete its open reviews on RF health effects, and now proposes to fast-track application procedures for new RF sources.

The FCC ignores studies establishing human health harm at currently permissible exposure levels. The National Toxicology Program under the National Institutes of Health has completed the largest-ever animal study on cell phone radiation and cancer. The relationship between radiofrequency radiation and cancer is clearly established. Dr. John Bucher, Associate Director of the NTP and the lead researcher on this study confirmes that the exposure of 1.5 W/Kg is lower than currently allowed for the public, including children, under FCC public safety limits. Testing on rats is standard in predicting human cancers.

The NTP results confirm that cell phone radiation exposure levels within the currently allowable safety limits are the "likely cause" of brain and heart cancers in these animals. Tumors called schwannomas were induced in the heart. Hyperplastic lesions and glial cell neoplasms of the heart and brain observed in male rats are considered likely the result of whole-body exposures to GSM- or CDMA-modulated RFR. One in twelve (12) male rats developed either malignant cancer (glioma) and rare heart tumors. Pre-cancerous lesions were observed that can lead to cancer. The NTP says it is important to release these completed findings now given the implications to global health. No cancers occurred in the control group. The animal study confirms prior findings in epidemiological studies of an increased risk for glioma and acoustic

neuroma among people that use wireless phones, both cell phones and cordless phones (DECT). Acoustic neuroma is a type of Schwannoma, so interestingly this study confirms findings in humans of increased risk for glioma and acoustic neuroma. This supports upgrading the risk in humans to Group 1, the agent is carcinogenic to humans. The NTP evidence has filled the gap on animal toxicity of RF, and has greatly strengthening the evidence of risk for humans. It is sufficient to reclassify cell phone radiation as a known cancer-causing agent, and confirms the inadequacy of existing public safety limits.

The FCC needs to consider mounting evidence that even Wi-Fi level exposures are reported to cause DNA damage, brain damage and heat-shock protein (Dushmukh et al, 2017). The authors report statistically significant effects of subchronic low level microwave radiation (MWR) on cognitive function, heat shock protein 70 (HSP70) level and DNA damage in brain of Fischer rats. Experiments performed on male Fischer rats exposed to microwave radiation for 90 days at three different frequencies: 900, 1800, and 2450 MHz. Animals were exposed to microwave radiation at 900 MHz and specific absorption rate (SAR) 0.0005953 W/kg; animals exposed to 1800 MHz at SAR 0.0005835 W/kg and animals exposed to 2450 MHz at SAR 0.0006672 W/kg. These exposures are roughly equivalent to 1.5 to 2 uW/cm2. All the animals were tested for cognitive function using elevated plus maze and Morris water maze at the end of the exposure period and subsequently sacrificed to collect brain tissues. HSP70 levels were estimated by ELISA and DNA damage was assessed using alkaline comet assay. Results showed microwave exposure at 900-2450 MHz with SAR values as mentioned above lead to decline in cognitive function, increase in HSP70 level and DNA damage in brain. They conclude that low level microwave exposure at frequencies 900, 1800, and 2450 MHz may lead to hazardous effects on brain.

Evidence from microRNA studies at Wi-Fi intensities report damage, i.e., modulation of microRNA is presented by Dasdag et al. (2015a, 2015b) in new studies on 900 MHz cell phone radiation and 2450 MHz Wi-Fi levels of exposure. Dasdag et al. (2015b) report that very low intensity Wi-Fi exposures over a year-long period (24 hrs per day) at 141.4 uW/Kg (whole body SAR) and a maximum SAR of 7127 uW/Kg lowered activity of microRNAs in the brain of adult rats. Van den Hove et al. (2014) previously reported miR-107 as epigenetically-regulated miRNA linked to Alzheimer's disease and correlated with changes in neuronal development and neuronal activity.

The scientific evidence is more than sufficient in 2007, and certainly in 2012 (www.bioinitiative.org) that the Commission has not struck the right balance between uncontrolled wireless rollout and health impacts resulting for Americans, particularly for children. The increased risk for cancers, neurological diseases, memory and learning impairment in children, and other serious medical problems associated with wireless technologies and chronic exposure to low-intensity RF are now clearly available to the Commission.

The FCC should not approve streamlining the process for small wireless cell rollout, nor expedite any other approval process for siting of wireless facilities, nor grant exemptions for any RF source or low-power device or enabling network. The incremental increase in daily RF exposure already exceeds human health tolerance. Cumulative effects of RF exposures from multiple wireless devices and environmental exposures are not addressed at all; nor measured or tested under current or proposed FCC rules.

Respectfully submitted:

Cindy Sage, MA, Lennart Hardell, MD, PhD and David O. Carpenter, MD

References

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3. BioInitiative Working Group, Cindy Sage and David O. Carpenter, Editors. BioInitiative Report: A Rationale for Biologically-based Public Exposure Standards for Electromagnetic Radiation at www.bioinitiative.org, December 31, 2012.
4. Dasdag, S., Akdag, M.Z., Erdal, M.E., Erdal, N., Ay, O.I., Ay, M.E., Yilmaz S.G., … Yegin, K. (2015a). Long- term and excessive use of 900 MHz radiofrequency radiation alter microRNA expression in brain. International Journal of Radiation Biology, 91(4), 306–11. doi:10.3109/09553002.2015.997896
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Editors

Cindy Sage, MA
David O. Carpenter, MD
BioInitiative 2007 and 2012 Reports

Contributing Authors of the the 2007 and 2012 BioInitiative Working Groups

Jitendra Behari, PhD, India
Carlo V. Bellieni, MD, Italy
Igor Belyaev, Dr.Sc., Slovak Republic
Carl F. Blackman, PhD, USA
Martin Blank, PhD, USA
Michael Carlberg, MSc, Sweden
David O Carpenter, MD, USA
Zoreh Davanipour, DVM, PhD USA
Adamantia F. Fragopoulou, PhD, Greece
David Gee, Denmark
Yuri Grigoriev, MD, Russia
Kjell Hansson Mild, PhD, Sweden
Lennart Hardell, MD, PhD, Sweden
Martha Herbert, PhD, MD, USA
Paul Héroux, PhD, Canada
Olle Johansson, PhD, Sweden
Michael Kundi, PhD, Austria
Henry Lai, PhD, USA
Ying Li, PhD, Canada
Abraham R. Liboff, PhD, USA
Lukas H. Margaritis, PhD, Greece
Henrietta Nittby, MD, PhD, Sweden
Gerd Oberfeld, MD, Austria
Bertil R. Persson, PhD, MD, Sweden
Iole Pinto, PhD, Italy
Paulraj Rajamani, PhD, India
Cindy Sage, MA, USA
Leif Salford, MD, PhD, Sweden
Eugene Sobel, PhD, USA
Amy Thomsen, MPH, MSPAS, USA

David Cutaia

From: mike-christina@cox.net mike-christina@cox.net <mike-christina@cox.net>
Sent: Friday, August 13, 2021 3:59 PM
To: City Clerk Group
Subject: Aug 17, 2021 City Council Meeting

Re: Appeal of public works approval of cell Wireless Facility to be installed in front of 293 Forest Dr. Goleta.

I am writing today to indicate that I do not support the placement of a cell wireless facility being proposed for my neighborhood. I am concerned about the health and safety of our residential neighborhood. Many researchers believe that there is a risk of adverse health effects from electric and magnetic fields (EMF). This facility is being proposed is in the middle of a residential neighborhood. It seems that this facility could be placed in an area that would not have such an impact on residents.

Christina Contreras-Pfau

268 Forest Dr.

Goleta, Ca 93117

David Cutaia

From: dollygrace@juno.com
Sent: Tuesday, August 17, 2021 9:23 AM
To: City Clerk Group
Subject: 5G

I live on Hillview Drive in Goleta, a few houses from where a 5G box is proposed to be installed. After researching the matter, I am opposed to this installation. (I was already curious because a friend said she had to move after such installation because of health effects.)
This a journal article on the NIH website confirms the theory that EMF radiation opens the calcium-channels within the body's
cells. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3780531/

Other researchers wondered if giving the calcium-channel blocker medication (used for high blood pressure) would treat those symptoms caused by the EMF. They did.
So it does look as if EMF can cause the calcium channels in the cells to open up unnecessarily. Apparently that increases the nitric oxide in the body which isn't good in excess "It may **cause headache in migraine**. It may damage brain cells leading to neurodegenerative diseases like Parkinson disease, Alzheimer disease, Huntington disease and amyotrophic lateral sclerosis." (This latter is general info not a journal article.)

In my research I also found a local interview with
Monika Krajewska on this very topic:
https://spaces.hightail.com/receive/7MoLYxUZgJ/fi-581f4468-518d-4d94-8122-4a066106152d/fv- e27d6d9b-2b59-42f6-ae1c-28596dad37f7/072821voices.mp3
For some reason this interview was removed from the internet since I heard it last month. Her business does testing for EMF radiation. You can reach her at elegantliving27@gmail.com (ElegantHealthyHomes.com) Most people might not make the connection with 5G and health to even ask the right questions.

This not to deny the technological benefits of 5G but to suggest it is inviting downstream health costs, in terms of dollars and quality of life.

Thank you,
Dolly Dickinson
.

David Cutaia

From: Heike Hyson <heikehyson@gmail.com>
Sent: Tuesday, August 17, 2021 10:32 AM
To: City Clerk Group
Subject: Appeal to the City Council of the Public Works Director's decison

Dear Deborah Lopez:

I live on Hillview, just one block from the installation of the cell station proposed for 293 Forest Drive. I am not in agreement with choosing this location for a cell station and oppose continued work towards the installation. My primary reason is that this is a residential neighborhood and just two blocks from Brandon Elementary School. As the occurrence of adverse health effects depends on a combination of the intensity of radiofrequency EMF exposure, how long you are exposed to radiofrequency EMF and the distance of your body from the source of radiofrequency EMF, I believe this is an awful choice for a location and am proposing a non-residential alternate site be selected. Our children's health needs to be everyone's priority!

Sincerely,
Heike Hyson

David Cutaia

From: Charu Chaubal <charu.chaubal@gmail.com>
Sent: Thursday, August 19, 2021 8:30 AM
To: City Clerk Group
Subject: Support for cell wireless facility on Forest Drive

Dear City Clerk:

I am writing to indicate my strong support for the planned installation of a cellular wireless facility on Forest Drive. This part of the neighborhood has terrible cell service, at least for me. When driving up Evergreen turning right onto Cathedral Oaks, inevitably the data signal on my cellular devices becomes unusable until I've driven past Glen Annie. This is a gap in coverage that should be addressed, and will (hopefully) benefit many people.

I also would ask you to please not succumb to disinformation about the supposed dangers of EMF radiation from these facilities. People can find support on the internet for just about any view they have, but the quality and accuracy of it is not questioned enough. Not only have I seen credible scientific reports that demonstrate there is no evidence of harm from them, but I've also spoken with experts who have actual education and expertise in this area, and they agree.

Thank you for your consideration.

Regards,
Charu

David Cutaia

From: Ronald Buckley <ronald.buckley@gmail.com>
Sent: Monday, September 06, 2021 3:08 PM
To: City Clerk Group
Cc: K T; Anne-Odile Thomas
Subject: 9-7-2021 Agenda Item B.2 21-379
Attachments: Ron Buckleys Public Comment - Goleta - 9-7-2021.docx

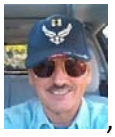
Dear Goleta City Council Clerk,

I wish to provide both written and verbal comment via webinar on agenda item B.2 21-379.

Thank you!

Ronald Buckley
1201 W Valerio St, Santa Barbara, CA 93101
(805) 682-0114

Madam Mayor and Council Members **Ref. 9-7-2021 agenda item B.2 21-379**

I'm **Ron Buckley**  , a county resident since 1971. I currently live in Santa Barbara.

I'd like to make 3 points.

1. The telcos and Crown Castle in particular do not care about the aesthetics or potential harm caused by new so called "small" tell towers.
2. A recent court decision in Washington DC cast a huge shadow over the supposed safety of these towers.
3. 5G is a marketing scheme by the telcos and has nothing to do with the FCC rules.

1) Last July a cell tower was erected across the street from 1731 Hillside Rd, about 700 feet from my home. None of my neighbors close to this tower were notified of its installation.

Across the street from this new tower is a newborn child,  another home has 2 children under 3 years old, another home has 2 children under 7, and a home right under the tower is an 11-year-old.

Children's skulls are much thinner than adults and thus have less protection from microwave radiation. Their precious brains are just developing. **Who** is going to protect these young brains? AT&T who now owns the tower and Crown Castle who installed it have no social conscious. They are for profit copromotions serving their executives and stockholders, not the residents of any community.

2) A 9th District Court in Washington DC recently instructed the FCC to re-evaluate the their outdated (1996) safety studies concerning microwave radiation. This is a stunning reversal to the entire industry and no new towers should be installed until the FCC complies with the ruling.

3) Finally, 5G is an entirely different technology in bandwidth and frequency than 4G. 4G can travel many miles and provide 5 bars on your cell phone. 5G travels only blocks and requires a huge amount of energy. These so-called small towers are all 5G capable. Once they are up, Crown Castle, like Judas, walks away with their bag of silver and the telco owns the tower to do with what they please. The FCC does not monitor the power output, nor does the City of Goleta. The fancy engineering data provided with the application is all computer generated and hypothetical.

For these 3 reasons, and many more we lack the time to discuss, please deny this cell tower application.

Thank you!

Ron Buckley

Between COX and Telcos, an **aesthetic eyesore**.

View of new tower from the neighbor's **bedroom** patio!

David Cutaia

From: K T <ktamazon@yahoo.com>
Sent: Monday, September 06, 2021 4:54 PM
To: City Clerk Group
Subject: 9-7-2021 Agenda Item B.2 21-379
Attachments: Goleta 09-07--21.docx

Dear Goleta City Council Clerk,

I wish to provide both written and verbal comment via webinar on agenda item B.2 21-379.

Thank you!

Katie Mickey
1201 W Valerio St, Santa Barbara, CA 93101
(805) 682-0114

Dear Goleta Council Members,

I appreciate the difficult decision you face straddling the legal requirements of the Telecommunications Act, Goleta's Municipal code and the appeal of your residents asking for protection from the assault of this technology on their environment and safety. The legal teeth to appeal this application, begins with Goleta's Municipal code.

Under **Definition**s item 6 states: "the small cell facility must meet the following conditions:" does not result in human exposure to radiofrequency radiation in excess of the applicable safety standards specified in 47 CFR Section 1.1307(b)" By its own admission, the FCC does not "have the resources" to test the radiation emissions from wireless facilities, wireless companies are free to cause their facilities to emit any levels of radiation they choose. When monitored, these cell towers can exceed the FCC limits by several hundred percent. Is the applicant offering to monitor the energy output of the facility? What proof do you have that they will be compliant?

Under **Purpose,** it states "the placement of wireless facilities within the PROW of the City consistent with the City's obligation to promote the public health, safety, and welfare, to manage the PROW, and to ensure that the public is not inconvenienced by the use of the PROW for the placement of wireless facilities."

On August 13, 2021, the United States Court of Appeals for the District of Columbia Circuit ruled in the case EHT et al.v. the FCC that the December 2019 decision by the Federal Communications Commussion to retain its 1996 safety limits for human exposure to wireless radiation was "arbitrary and capricious."

The court held that the FCC failed to respond to "record evidence that exposure to RF radiation at levels may cause negative health effects.." Further the agency demonstrated " a complete failure to respond to comments concerning environmental harm caused by RF radiation.

https://ehtrust.org/in-historic-decision-federal-court-finds-fcc-failed-to-explain-why-it-ignored-scientific-evidence-showing-harm-from-wireless-radiation/

https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFDF7/$file/20-1025-1910111.pdf

https://ehtrust.org/in-historic-decision-federal-court-finds-fcc-failed-to-explain-why-it-ignored-scientific-evidence-showing-harm-from-wireless-radiation/

Additional acceptable grounds for denial include: adverse aesthetic impacts, reductions in property values (average drop is 20%), and potential dangers (these facilities are combustible) .
My request is you uphold your obligation to promote the public health, safety, and welfare by denying this small cell application.

Katie Mickey

Vice President of Safe Technology for Santa Barbara County

31 year Director of the Santa Barbara Body Therapy Institute,

40 year resident in Santa Barbara County.

David Cutaia

From: Linda K. Kwon <Linda.Kwon@ndlf.com>
Sent: Tuesday, September 07, 2021 12:39 PM
To: Paula Perotte; City Clerk Group
Cc: stephen.garcia@crowncastle.com; lizbeth.wincele@crowncastle.com; triciaknight@charter.net; jon.cowell.vendor@crowncastle.com; Michael W. Shonafelt; Gregory D. Tross; Ruby Williams
Subject: Agenda Item B.2: Appeal of Encroachment Permit No. EP-19-095 - 293 Forest Drive
Attachments: Ltr to City Council re Appeal of PW Director Approval of Encroachment Permit 293 Forest Dr.PDF

Dear Mayor and City Council,

On behalf of Mr. Shonafelt, please find attached correspondence regarding the above-referenced matter.

Best regards,

NEWMEYER DILLION

Linda K. Kwon
Legal Administrative Assistant
949.271.7389 | Linda.Kwon@ndlf.com

Newmeyer & Dillion LLP
895 Dove Street, 5th Floor
Newport Beach, CA 92660
newmeyerdillion.com

Newmeyer & Dillion LLP
895 Dove Street
Fifth Floor
Newport Beach, CA 92660
949 854 7000

September 7, 2021

Michael W. Shonafelt
michael.shonafelt@ndlf.com

VIA E-MAIL
Mayor Paula Perotte, Mayor
and Members of the City Council
City of Goleta
130 Cremona Drive Suite B
Goleta, CA 93117
pperotte@cityofgoleta.org
cityclerkgroup@cityofgoleta.org

Re: Agenda Item B.2: Appeal of Encroachment Permit No. EP-19-095 - 293 Forest Drive

Dear Mayor and City Council,

This office represents Crown Castle Fiber LLC, successor to Crown Castle NG West LLC ("Crown Castle") in connection with the above-referenced appeal ("Appeal") of Encroachment Permit Application EP-19-095 (Crown Castle file reference ATTSBW01) ("Project").

At the outset, we thank the Staff for its report and register our concurrence with its analysis and conclusions. As noted in the Staff Report, the Project utilizes existing infrastructure (a streetlight pole) already located in the public right-of-way ("ROW") and otherwise complies in all respects with the City's Design and Development Standards for Wireless Facilities in the Public Rights-of-Way, adopted by the City Council on May 7, 2019. This letter presents a further explanation of the legal issues that serve as the backdrop to the Project and the Appeal.

1. APPLICABLE LEGAL STANDARDS.

Projects like this arise in the context of a unique confluence of federal, state and local law. The federal and state statutory regimes are intended to foster rapid deployment of a seamless network on a nationwide and statewide basis. Those laws therefore impose restrictions on local land use.

A. Telecommunications Act of 1996.

The Project is governed by the federal Telecommunications Act of 1996, Pub. L. No 104-104, 110 Stat. 56 (codified as amended in scattered sections of U.S.C., Tabs 15, 18, 47) ("Telecom Act"). When enacting the Telecom Act, Congress expressed its

intent to "promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies." (110 Stat. at 56; see also *T-Mobile Central, LLC v. Unified Government of Wyandotte,* 528 F.Supp.2d 1128, 1146-47 (D. Kan. 2007). As part of achieving that overall goal, the Telecom Act is intended to reduce impediments imposed by local governments upon the installation of wireless communications facilities. (47 U.S.C. § 332(c)(7)(A).) Section 332(c)(7)(B) provides the limitations on the general authority reserved to state and local governments. Those limitations are set forth as follows:

(1) State and local governments may not unreasonably discriminate among providers of functionally equivalent services (§ 332 (c)(7)(B)(i)(I)).

(2) State and local governments may not regulate the placement, construction or modification of wireless service facilities in a manner that prohibits, or has the effect of prohibiting, the provision of personal wireless services (the "effective prohibition clause") (§ 332 (c)(7)(B)(i)(II)).

(3) State and local governments must act on requests for authorization to construct or modify wireless service facilities within a reasonable period of time (§ 332 (c)(7)(B)(ii)).

(4) Any decision by a state or local government to deny a request for construction or modification of personal wireless service facilities must be in writing and supported by substantial evidence contained in a written record (§ 332 (c)(7)(B)(iii)).

(5) No state or local government or instrumentality thereof may regulate the placement, construction or modification of personal wireless service facilities on the basis of the perceived environmental effects of radio frequency emissions to the extent that such facilities comply with Federal Communications Commission ("FCC") regulations concerning such emissions (§ 332 (c)(7)(B)(iv)).

Section 253(a) of the Telecom Act is similar to section 332, but applies to state and local regulations. It states, in relevant part:

> [n]o State or local statute or regulation, or other State or local legal requirement, may prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service."

Section 253(a) preempts local ordinances and regulations that prohibit or have the effect of prohibiting the provision of wireless telecommunications services. (*Sprint Telephony PCS, L.P. v. County of San Diego* (9th Cir. 2008) 543 F.3d 571, 578.)

B. Shot Clock Rule.

In 2009, the FCC issued the "Shot Clock Rule" to provide a specific timeline for what constitutes a "reasonable period of time" to act on a wireless telecommunications

permit application under section 332(c)(7)(B)(ii) of the Telecom Act. (Petition for Declaratory Ruling, 24 F.C.C. Rcd. 13994 (FCC, 2009) ("Shot Clock Rule".) It did so in light of significant delays caused by local governments in issuing permits for telecommunications facilities:

> Personal wireless service providers have often faced lengthy and unreasonable delays in the consideration of their facility siting applications, and [ ] the persistence of such delays is impeding the deployment of advanced and emergency services.

(*Id*. at 14004-14005; see also *id*. at 14006 ["[t]his record evidence demonstrates that unreasonable delays in the personal wireless service facility siting applications process have obstructed the provision of wireless services."].) Under the Shot Clock Rule, therefore, a municipality's failure to allow the construction of a new wireless service facility within 150 days of submission of the application (or 90 days for a collocation site) is presumptively unreasonable and constitutes a "failure to act" that triggers the right to seek judicial relief ("Shot Clock").

C. FCC Small Cell Order.

In 2018, the FCC issued a follow-up to the Shot Clock Rule, which further clarified the contours of the Telecom Act's restrictions on local governments in relation to wireless telecommunications facilities, including those in the ROW. (See Fed. Commc'n Comm'n, FCC No. FCC 18-133, WT Docket Nos. 17-79, 17-84, Declaratory Ruling and Third Report and Order p. 10, fn. 49 (FCC, Sept. 27, 2018) (hereinafter "Small Cell Order") [emphasis added], *available at* https://www.fcc.gov/document/fcc-facilitates-wireless-infrastructure-deployment-5g.) The FCC noted that telecommunication interests are not just local and state issues, but have a national and international concern. (Small Cell Order, ¶ 42.) The Small Cell Order clarifies the Telecom Act's limitations on the County's ability to deny a wireless telecommunications facility application. The Small Cell Order establishes the following principles, among others:

(1) The FCC adopted the "materially inhibit standard" articulated by the FCC's earlier *California Payphone* decision (cited below) as an appropriate standard for determining whether a state or local law operates as a prohibition or effective prohibition within the meaning of section 253, subdivision (a) and section 332. (Small Cell Order, ¶ 35.)

(2) The FCC determined that state and local fees and other charges associated with the deployment of wireless infrastructure can result in an unlawful prohibition of service as they can materially inhibit deployment of networks. (*Id.*, ¶ 32.)

(3) The FCC shortened the applicable Shot Clock timeframes, determining that sections 253 and 332 of the Telecom Act allow only ***60 days*** for reviewing and issuing a decision on an application for a small wireless

facility collocation on an existing structure and ***90 days*** for the review of an application for attachment of a small wireless facility using a new structure. (*Id.*, ¶ ¶ 13, 105.)

(4) The FCC further clarified that failing to issue a decision during that time period is not simply a "failure to act" within the meaning of applicable law; it also constitutes a presumptive prohibition. As the FCC observed, "[w]e would thus expect any locality that misses the deadline to issue any necessary permits or authorizations without further delay. We also anticipate that a provider would have a strong case for quickly obtaining an injunction from a court that compels the issuance of all permits in these types of cases." (*Ibid*.)

The FCC's interpretation of the Telecom Act, as presented in the Small Cell Order, reaffirmed the ruling *In the Matter of California Payphone* (12 FCC Rcd 14191) (FCC, July 16, 1997) ("*California Payphone*") that a state or local regulation constitutes an effective prohibition of service if it "materially limits or inhibits the ability of any competitor or potential competitor to compete in a fair and a balanced legal and regulatory environment." (Small Cell Order, ¶ 35.) Under this regulation, a municipal policy can materially inhibit the provision of service even if it does not present an insurmountable barrier or complete prohibition of service. (*Id.*, ¶¶ 35 and 41.) The provisions apply to both telecommunication services (including small wireless facilities) as well as commingled services (such as broadband) and facilities. (*Ibid.*)

Importantly, an effective prohibition of service occurs where a state or local legal requirement materially inhibits a provider's ability to engage in any of a variety of activities related to its provision of a covered service. (Small Cell Order, ¶ 37.) This test is met either when filling a coverage gap or when "densifying a wireless network, introducing new services or otherwise improving service capabilities." (*Ibid.*) Thus, an effective prohibition of service can arise where the local legal requirement materially inhibits additional services or improving existing services. (*Ibid.*) To limit the effective of section 253(a) and 332(c)(7)(B)(i)(II) to merely filling coverage gaps ignores Congress's goals to promote competition and securing higher quality services and encouraging rapid deployment of new telecommunications technologies. (*Id.,* ¶ 38.) Indeed the vast majority of new wireless builds are designed to add network capacity and take advantage of new technologies, rather than "plug gaps" in network coverage. (*Id.,* ¶ 40.) A state or local legal requirement can also function as an effective prohibition of service either because of the resulting financial burden or the resulting competitive disparity caused. As such, a local legal requirement or an unduly burdensome applications process can qualify as an effective prohibition of service. (*Id.*, ¶ 39.)

Recently, the Ninth Circuit affirmed the Small Cell Order's restrictions on state and local governmental entity's ability to deny deployment of small cell wireless telecommunication facilities within the ROW. (See, *City of Portland v. United States,* 969 F.3d 1020, 1039-1043 (9th Cir. 2020), *cert. den.* 2021 WL 2637868 ("*City of Portland*").) *City of Portland* affirmed all aspects of the 2018 Small Cell Order save for

those portions related to the aesthetic regulation "no more burdensome" standard and the objectivity standards. (*Id.*, at pp. 1041-1042.) Still, a local government's review of a project's aesthetic principles must be "reasonable," that is, "technically feasible and reasonably directed" at remedying aesthetic harms. Anything else is preempted as prohibitory. (*Ibid.*; Small Cell Order, ¶ 86, emphasis added.)

Under the current interpretation of the above laws, therefore, as confirmed by the Ninth Circuit Court of Appeals in *City of Portland*, "local policies" that "materially inhibit" the ability of providers "to compete in a fair and balanced legal and regulatory environment" may violate section 253 and 332 of the Telecom Act. (See Small Cell Order ¶ 35 [quoting *California Payphone*, 14191, 14206].) This standard does not require a "complete or insurmountable" barrier to service, but merely a showing that the standards materially inhibit deployments. (*Id*.)

D. Public Utilities Code Section 7901 and 7901.1.

Crown Castle is a "competitive local exchange carrier" ("CLEC"). CLECs qualify as a "public utility" and therefore have a special status under state law. By virtue of the CPUC's issuances of a "certificate of public convenience and necessity" ("CPCN"), CLECs have authority under state law to "erect poles, posts, piers, and abutments" in the ROW subject only to local municipal control over the "time, place and manner" of access to the ROW. (Pub. Util. Code, §§ 1001, 7901; 7901.1; see *Williams Communication v. City of Riverside* (2003) 114 Cal.App.4th 642, 648 [upon obtaining a CPCN, a telephone corporation has "the right to use the public highways to install [its] facilities."].)

The CPUC has issued Crown Castle a CPCN authorizing Crown Castle to construct the Project pursuant to its regulatory status under state law. Crown Castle's special regulatory status as a CLEC gives rise to a vested right under Public Utilities Code section 7901 to use the ROW in the County to "construct … telephone lines along and upon any public road or highway, along or across any of the waters or lands within this State" and to "erect poles, posts, piers, or abutments for supporting the insulators, wires, and other necessary fixtures of their lines, in such manner and at such points as not to incommode the public use of the road or highway[.]" (Pub. Util. Code, § 7901.) The nature of the vested right was described by one court as follows:

> … "[I]t has been uniformly held that [section 7901] is a continuing offer extended to telephone and telegraph companies to use the highways, which offer when accepted by the construction and maintenance of lines constitutes a binding contract based on adequate consideration, and that the vested right established thereby cannot be impaired by subsequent acts of the Legislature. [Citations.]" … Thus, telephone companies have the right to use the public highways to install their facilities.

(*Williams Communications v. City of Riverside*, *supra*, 114 Cal.App.4th at p. 648 quoting

County of L. A. v. Southern Cal. Tel. Co. (1948) 32 Cal.2d 378, 384 [196 P.2d 773].)

Public Utility Code section 7901.1 -- a sister statute to section 7901 -- grants local municipalities the limited "right to exercise reasonable control as to the time, place, and manner in which roads, highways, and waterways are accessed[,]." Nevertheless, such controls cannot have the effect of foreclosing use of the ROW or otherwise prevent the company from exercising its right under state law to "erect poles" in the ROW. That is because "the construction and maintenance of telephone lines in the streets and other public places within the County today is a matter of state concern and not a municipal affair." (*Williams Communication v. City of Riverside*, *supra*, 114 Cal.App.4th at p. 653.) Moreover, section 7901.1 specifies that such controls, "to be reasonable, shall, at a minimum, be applied to all entities in an equivalent manner." (*Ibid*., emphasis added.)

Based on Crown Castle's status as a CLEC, and its rights to the ROW, the Project is designed as part of an ROW telecommunications system. With respect to the siting and configuration of the Project, the rights afforded under Public Utilities Code section 7901 and 7901.1 apply. Crown Castle reserves its rights under section 7901 and 7901.1, including, but not limited to, its right to challenge any approval process, that impedes or infringes on Crown Castle's rights as a CLEC.

E. Government Code Section 65964.1.

Recently, the California Legislature echoed the courts' oft-repeated declaration that the construction and maintenance of telephone lines in the streets and other public places within the County is today a matter of state concern and not a municipal affair. (*Williams Communication v. City of Riverside*, *supra*, 114 Cal.App.4th at p. 653.) It did so in the context of enacting AB 57 in October 2015. AB 57 is codified as Government Code section 65964.1. Under section 65964.1, if a local government fails to act on an application for a permit to construct a wireless telecommunications facility within the prescribed Shot Clock timeframes (150 days for a stand-alone site and 90 days for a collocation site), the application is deemed approved by operation of law. When it enacted section 65964.1, the Legislature observed that:

> The Legislature finds and declares that a wireless telecommunications facility has a significant economic impact in California and is not a municipal affair as that term is used in Section 5 of Article XI of the California Constitution, but is a matter of statewide concern.

(Gov. Code, § 65964.1, subd. (c).)

2. REQUIRING RELOCATION OF THE PROJECT MAY RESULT IN A VIOLATION OF THE TELECOM ACT'S PROHIBITION OF SERVICE PROVISION.

The "materially inhibit" standard therefore now applies to determine whether a prohibition of service has occurred under this section. (*City of Portland*, *supra*, 969 F.3d

at 1035.) The Ninth Circuit's earlier (and more stringent) "significant gap/least intrusive means" test has thus been supplanted by the materially inhibit standard, which does not require a "prove-up" of significant gap ***or*** "least intrusive means." (See Small Cell Order, ¶ 40.) Under the current standard, any a state or local legal requirement would violate Section 253 and 332 if it "'materially limits or inhibits' an entity's ability to compete in a 'balanced' legal environment for a covered service." (Small Cell Order, ¶ 57.) As the FCC observed:

> … an effective prohibition occurs where a state or local legal requirement materially inhibits a provider's ability to engage in any of a variety of activities related to its provision of a covered service. ***This test is met not only when filling a coverage gap but also when densifying a wireless network, introducing new services or otherwise improving service capabilities***. Under the *California Payphone* standard, a state or local legal requirement could materially inhibit service in numerous ways—not only by rendering a service provider unable to provide an existing service in a new geographic area or by restricting the entry of a new provider in providing service in a particular area, ***but also by materially inhibiting the introduction of new services or the improvement of existing services***. Thus, an effective prohibition includes materially inhibiting additional services or improving existing services.

(*Id.*, ¶ 37, emphasis added.)

Because Crown Castle is a CLEC entitled to construct its facilities in the ROW under Public Utilities Code section 7901, its small-cell networks are inherently ROW systems. On that basis, Crown Castle carefully examines those alternatives available to it in the ROW. The analysis below demonstrates why the Project qualifies as the "least intrusive means" of filling the significant gap in service. The location of each node is chiefly driven by radio frequency ("RF") propagation needs. Each node must be located within its relatively small RF objective polygon (search ring) in order to achieve its propagation objective. Because this is a small cell network with small-scale, low-power equipment, each RF propagation polygon is relatively small, covering only a few blocks in any one direction. Accordingly, a node cannot be moved too far from its primary site location, otherwise the RF coverage objective will not be addressed. Moreover, each node is dependent -- location-wise -- on the other to relay signal from one node to the other and thereby create a viable network on a citywide basis.

Accordingly, the antenna heights and location of the Project nodes were chosen to provide the minimum signal level needed to meet critical coverage and capacity needs in the service area. The node at the center of the Appeal, ATTSBW01, was no exception. Despite the technical limitations of a low-profile, small-cell system, Crown Castle seeks to maximize the coverage of each node location, since maximization of the

node performance equates to a lower overall number of facilities and a less intrusive system. At the same time, Crown Castle seeks to present a design that complies with the City's Municipal Code and design policies. Accordingly, the Project location was chosen to utilize an existing streetlight pole, while at the same time providing an effective relay of signal from adjacent sites, so that ubiquitous coverage of the minimum signal level is provided throughout the service area with the minimum number of facilities and ROW intrusions. The selected location maximizes the RF coverage of the Project and minimize interference/overlap with the other facilities, resulting in a lower overall number of facilities and a less intrusive system. The ROW is ideal for the Project from an aesthetic standpoint because the ROW is an area already impacted with utilities and similar features typical of developed roadways.

The proposed site therefore was selected based on a balance between minimizing visual intrusion to the extent feasible and achieving the required RF service objective. The currently proposed location for ATTSBW01 provides critical telephone service to the residents and mobile users along Forest Drive and Evergreen Drive. It cannot be moved as any such move -- especially a relocation out of the residential area where it is proposed -- would defeat the objective of providing service to the RF search ring. Even apart from the careful siting of the facilities that are part of a small cell system, the technological configuration of small cells is inherently minimally intrusive by design. Small cells were developed as a smaller-scale solution to the larger macro-site or cell tower. It therefore represents a significant technological advance in the development of reduced- profile wireless transmission devices. The nodes are designed to be smaller scale and lower power to allow them to integrate more easily into their surroundings and thereby render them less aesthetically intrusive. While it is impossible to make the facilities invisible, each facility has been designed to blend with existing features in the road to the extent feasible.

Crown Castle's small cell network qualifies as the "least intrusive means" of filling the identified significant gap for the following reasons, among others:

(a) Crown Castle small cells utilize the latest in wireless infrastructure technology, incorporating smaller, low-power facilities instead of using larger -- and sometimes more obtrusive -- cell towers;

(b) Crown Castle small cells utilize the ROW, thereby avoiding intrusions into private property or undeveloped sensitive resource areas;

(c) Crown Castle small cells allow for collocation by multiple carriers, thereby avoiding proliferation of nodes;

(d) Crown Castle small cells strike a balance between antenna height and coverage in order to minimize visual impacts;

(e) Crown Castle small cells are carefully spaced to effectively relay signal with a minimum of facilities; and

(f) Crown Castle small cells utilize existing vertical elements in the ROW, such as utility poles, or slim-profile new poles, thereby minimizing intrusions into the ROW.

3. THE FCC HAS EXCLUSIVE JURISDICTION OVER ISSUES RELATED TO RADIO FREQUENCY AND TECHNOLOGY.

The grounds for the Appeal largely center on concerns related to the perceived health effects of RF emissions. It bears noting that the Project is a low-power, low-profile system that would provide a limited broadcasting reach in a tight RF signal radius. With regard to health standards for any wireless facility, the FCC has preempted the field of compliance with RF emission standards. (*City of Rancho Palos Verdes v. Abrams* (2002) 101 Cal.App.4th 367, 376 [124 Cal.Rptr. 2d 80].) Moreover, as noted above, section 332(c)(7)(B)(iv) of the Telecom Act preempts local and state governments from regulating the siting of wireless telecommunications facilities on the basis of the perceived health effects of RF emissions. The City Council therefore must set aside any testimony and concerns that arise from perceived health effects of RF emissions. Nevertheless, the Project, and all equipment associated with the Project, complies with all applicable FCC RF safety emission standards and falls within a fraction of the maximum public exposure standards, which themselves are conservatively established.

With regard to any grounds for the Appeal based on Crown Castle's proposed equipment or technologies, issues related to technology and such issues as whether the facility would utilize 4-G or 5-G frequencies, those areas also are preempted by federal law. (See, e.g., *City of Rancho Palos Verdes v. Abrams*, *supra*, 101 Cal.App.4th at p. 376.) The United States Supreme Court has stated that "the [FCC's] jurisdiction over technical matters such as frequency allocation ... is clearly exclusive." (*Head v. New Mexico Board* (1963) 374 U.S. 424, 430, fn. 6 [83 S.Ct. 1759, 1763, 10 L.Ed.2d 983], italics added; accord, *Southwestern Bell v. Board of County Com'rs* (D.Kan. 1998) 17 F.Supp.2d 1221, 1225, affd. (10th Cir. 1999) 199 F.3d 1185.) "The[] statutory provisions make it clear that Congress intended the FCC to possess exclusive authority over technical matters related to radio broadcasting." (*Freeman v. Burlington Broadcasters, Inc.* (2d Cir. 2000) 204 F.3d 311, 320.) The same preemption applies to attempts to regulate telecommunications equipment. (*New York SMSA L.P. v. Town of Clarkstown*, 612 F.3d 97 (2d Cir. 2010).) The *Clarkstown* case involved a challenge to a city ordinance that sought to regulate wireless telecommunications facilities equipment. Specifically, the law sought to implement a preference for certain "alternate technologies." The *Clarkstown* court held that the city's preference for certain wireless technologies was preempted because federal law occupies the field when it comes to technical and operational aspects of wireless service. These principles apply to contentions that the Project application should be denied based on its equipment or whether it will provide 4G versus 5G frequencies.

4. CONCLUSION.

For the foregoing reasons, we respectfully request that the City Council deny the Appeal. Crown Castle representatives are available to answer any questions about the Project and this letter.

Very truly yours,

Newmeyer & Dillion LLP

Michael W. Shonafelt

cc

Winnie Cai, Assistant City Attorney, City of Goleta
Melissa Angeles, Public Works, City of Goleta
Sandra Rodriguez, Management Assistant, City of Goleta
Stephen Garcia, Senior Manager, Government Relations, Crown Castle (Stephen.Garcia@crowncastle.com)
Lizbeth Wincele, Government Relations Counsel, Crown Castle (Lizbeth.Wincele@crowncastle.com)
Tricia Knight, Government Relations Consultant to Crown Castle (triciaknight@charter.net)
Jon Cowell, Vendor to Crown Castle (Jon.Cowell.Vendor@crowncastle.com)