

**From:** Bill Gardner  
**To:** Ashley, Scott; Somers, Yolanda  
**Date:** 11/7/2013 10:16 AM  
**Subject:** Fwd: RE: TowerCom/NE Deltona Proposed Telecommunication Facility -- RF Data  
**Attachments:** East Deltona Justification Letter\_091813 and Plots(Rev).pdf

New information from the applicant - S-04-011. Clarification of coverage.

>>> Gerald Muldowney <[gam@dynangroup.com](mailto:gam@dynangroup.com)> 11/7/2013 9:03 AM >>>  
Bill,

Good morning. Hope all is well.

Please find attached an updated Letter of Need from the AT&T RF Engineering Department.

The AT&T RF Engineer has stated that: "The reference to Lake Helen in the original letter was made in error. The need is in the City of Deltona."

Regarding the site recently approved in Lake Helen, the RF Engineer has stated: " We are collocating on the tower recently approved in Lake Helen as well. We need them both."

We are hopeful that the above listed information together with the attached documents will answer the County's questions.

Please contact me if we can provide additional information.

Best regards,

Jerry Muldowney, PE, PLS  
Dynan Group  
P.O. Box 1100  
Boone, NC 28607  
(M) 352.215.9100  
(O) 828.297.3333

-----Original Message-----

From: Bill Gardner [<mailto:bgardner@volusia.org>]

Sent: Monday, November 04, 2013 11:07 AM

To: Gerald Muldowney

Subject: Re: TowerCom/NE Deltona Proposed Telecommunication Facility -- RF Data

A general question came up in a staff meeting regarding the proposed location as meeting adequate capabilities between the surrounding sites and sufficient capacity areas of the area but there is a reference in Jim Graf's letter that capacity enhancement is needed within the city of Lake Helen which is approximately 7+ mile (to the center of the city) to the northwest of the proposed tower site. Any background information to support Mr. Graf's reference of a need for coverage in Lake Helen? A new tower location Lat. 28 degrees 58' 50.09" N / Long. 81 degrees 14' 55.90" W was recently approved adjacent to Lake Helen but in unincorporated Volusia County.

>>> Gerald Muldowney <[gam@dynangroup.com](mailto:gam@dynangroup.com)> 10/30/2013 8:40 PM >>>  
Bill,

Good evening. Hope you are doing well.

Per your request I have researched information regarding the AT&T's hand-off sites for the proposed facility. The two main hand-off sites as shown on the RF Propagation Maps submitted with our zoning application are FLDBU0225 and FLDBU0011.

FLDBU0225 is situated SW of Howland Blvd., near the baseball field just SE of Elkcam Blvd. The approximate coordinates of the site are: Lat.: 28° 55' 25.17" N; Long.: -081° 11' 22.11" W. The existing monopole tower at this location is approximately 2.39 miles NW of the proposed site.

FLDBU001 is located south of Collins Road just west of Riggs Ave. The approximate coordinates of the site are: Lat.: 28° 51' 24.88" N; Long.: -081° 10' 27.46" W. The existing monopole tower at this location is approximately 3.07 miles southwest of the proposed site.

I hope you find this information useful in your review of our application.

Please contact me if we can provide additional information.

Best regards,

Jerry Muldowney, PE, PSM  
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P.O. Box 1100  
Boone, North Carolina 28607  
(M) (352) 215-9100  
(O) (828) 297-3333  
(F) (828) 297-9696

From: Gerald Muldowney  
Sent: Friday, October 25, 2013 10:26 AM  
To: Bill Gardner  
Subject: Re: FAA Opinion Letter

Good morning Bill.

Sorry about the attachment.

Currently attached is our revised filing.

Thank you for your assistance.

Jerry Muldowney

Sent from my Verizon Wireless 4G LTE Smartphone

----- Reply message -----

From: "Bill Gardner"

<[bgardner@volusia.org](mailto:bgardner@volusia.org)<<mailto:bgardner@volusia.org>>>

To: "Gerald Muldowney" <[gam@dynangroup.com](mailto:gam@dynangroup.com)<<mailto:gam@dynangroup.com>>>

Subject: FAA Opinion Letter  
Date: Fri, Oct 25, 2013 8:37 AM

Attachment was not included.

William C. Gardner, ASLA  
Land Acquisition Manager  
County of Volusia Planning & Development Services Division  
123 W. Indiana Ave., Room 201  
[bgardner@co.volusia.fl.us](mailto:bgardner@co.volusia.fl.us)<<mailto:bgardner@co.volusia.fl.us>>  
DeLand, FL 32720  
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>>> Gerald Muldowney <[gam@dynangroup.com](mailto:gam@dynangroup.com)<<mailto:gam@dynangroup.com>>>  
10/25/2013 7:02 AM >>>

Bill,

Please find the attached.

Thank you.

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November 7<sup>th</sup>, 2013

City of Deltona  
Volusia County

Board Members,

I respectfully submit this letter as an explanation of our need for a new telecommunications site in Deltona. As the system design engineer for AT&T Mobility responsible for this area I have performed a thorough analysis of this area of Deltona and the interaction of the sites within that area. My study included field visits and computer analysis with sophisticated RF modeling that takes into account the following variables: (A) The physical characteristics of the frequencies allotted by the FCC to AT&T; (B) The allowable power outputs of those frequencies; (C) The AT&T Mobility equipment specifications; (D) The location of existing AT&T Mobility and other facilities; (E) The topography and building density of the area; (F) The optimum coverage using the minimum use of new tower sites. There was no existing structure within the area to meet AT&T Mobility's coverage objective and AT&T is pursuing a raw land candidate. These factors were quantified and values extrapolated using RF modeling software to arrive at a design objective or search area. The site identified as AT&T Mobility's East Deltona site would be located in the vicinity of 1399 Blackman Tail, Deltona, FL, 32738 to fit the capacity and coverage objective. The search area was based on the proposed site's location relative to the current surrounding sites and capacity enhancement needed within the City of Deltona. After running numerous propagation modules, the height of 195 feet was selected in order to provide adequate capabilities between the surrounding sites and sufficient capacity to meet the needs of the area.

The frequency plan for this site is also in accordance with FCC requirements and will not interfere with Public Safety bands assigned by the FCC. AT&T is licensed by the FCC to use the A and B bands in Volusia County. Specific frequencies are as follows:

- A band frequencies: RX - 824.2 MHz to 846.4 MHz and TX - 869.2 MHz to 891.4 MHz.
- B band frequencies: RX - 835 MHz to 849 MHz and TX - 880.0 MHz to 894 MHz.

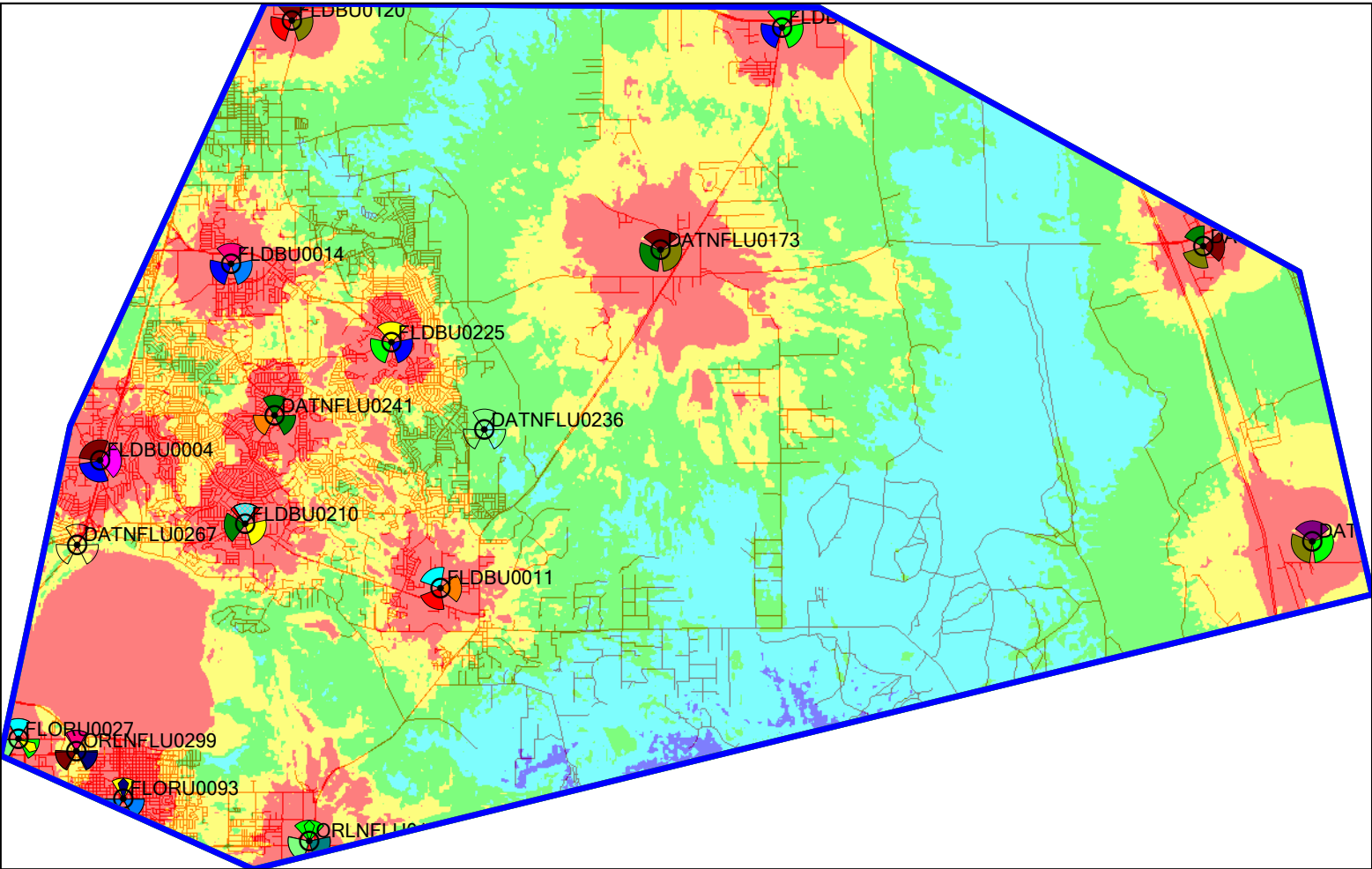
Based on FCC licensing of spectrum there is sufficient frequency separation between the licensed AT&T spectrum and the licensed county and city Public Safety spectrum to ensure they will not be interferers with one another. In my professional opinion as a radio frequency design engineer there are no other facilities, in the proper location and at the required height, which will provide the coverage to meet our requirement of providing excellent service to your citizens in this area.

Sincerely,

A handwritten signature in black ink, appearing to read "JG" or "Jim Graf", written in a cursive style.

Jim Graf  
RF Design & Performance Engineer  
AT&T Mobility

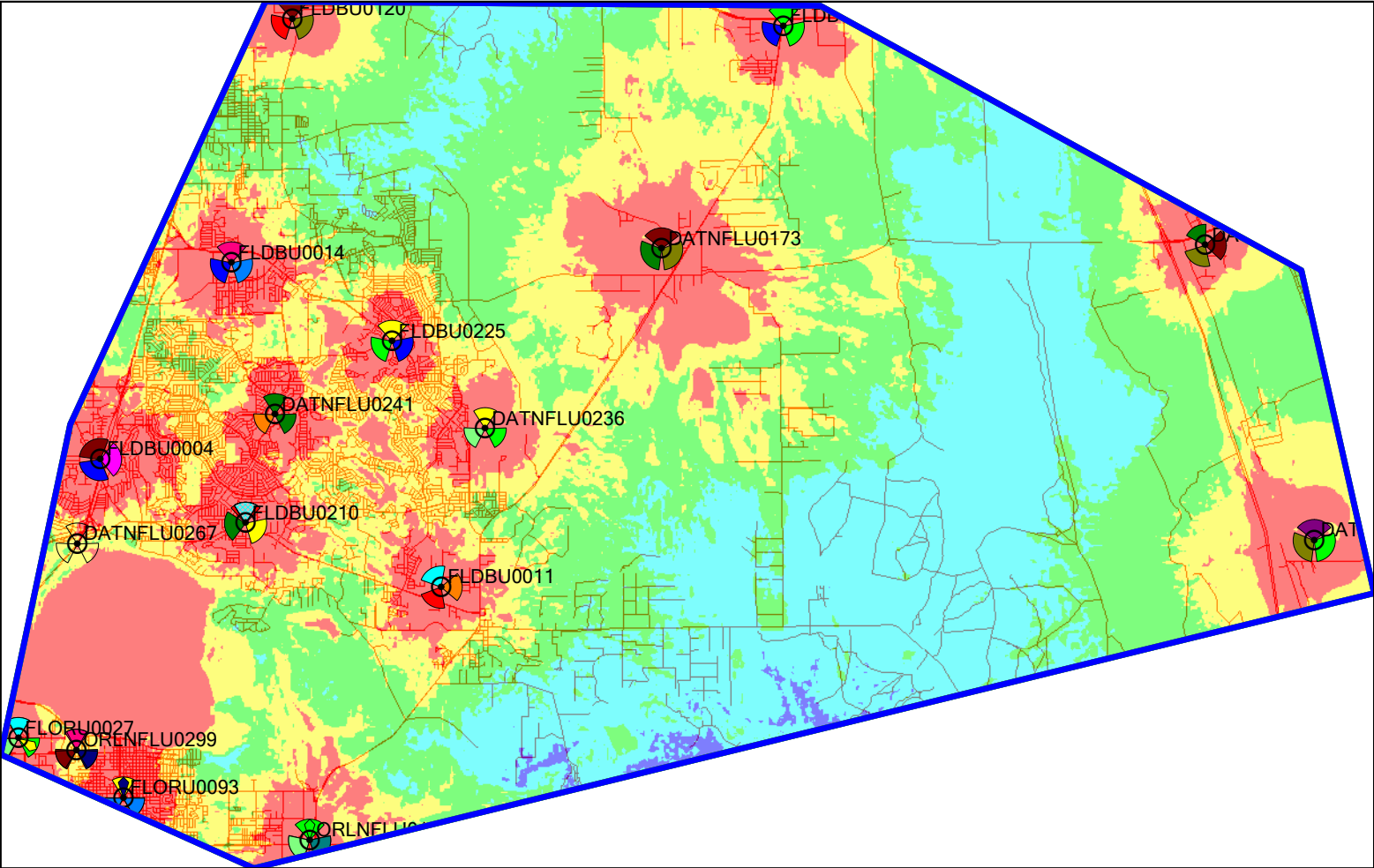
Before AT&T's East Deltona Site



East Deltona Before

- Best Signal Level (dBm) >=-70
- Best Signal Level (dBm) >=-80
- Best Signal Level (dBm) >=-90
- Best Signal Level (dBm) >=-100
- Best Signal Level (dBm) >=-110
- Best Signal Level (dBm) >=-120

After AT&T's East Deltona Site



East Deltona After - Candiate 2 190'

- Best Signal Level (dBm) >=-70
- Best Signal Level (dBm) >=-80
- Best Signal Level (dBm) >=-90
- Best Signal Level (dBm) >=-100
- Best Signal Level (dBm) >=-110
- Best Signal Level (dBm) >=-120