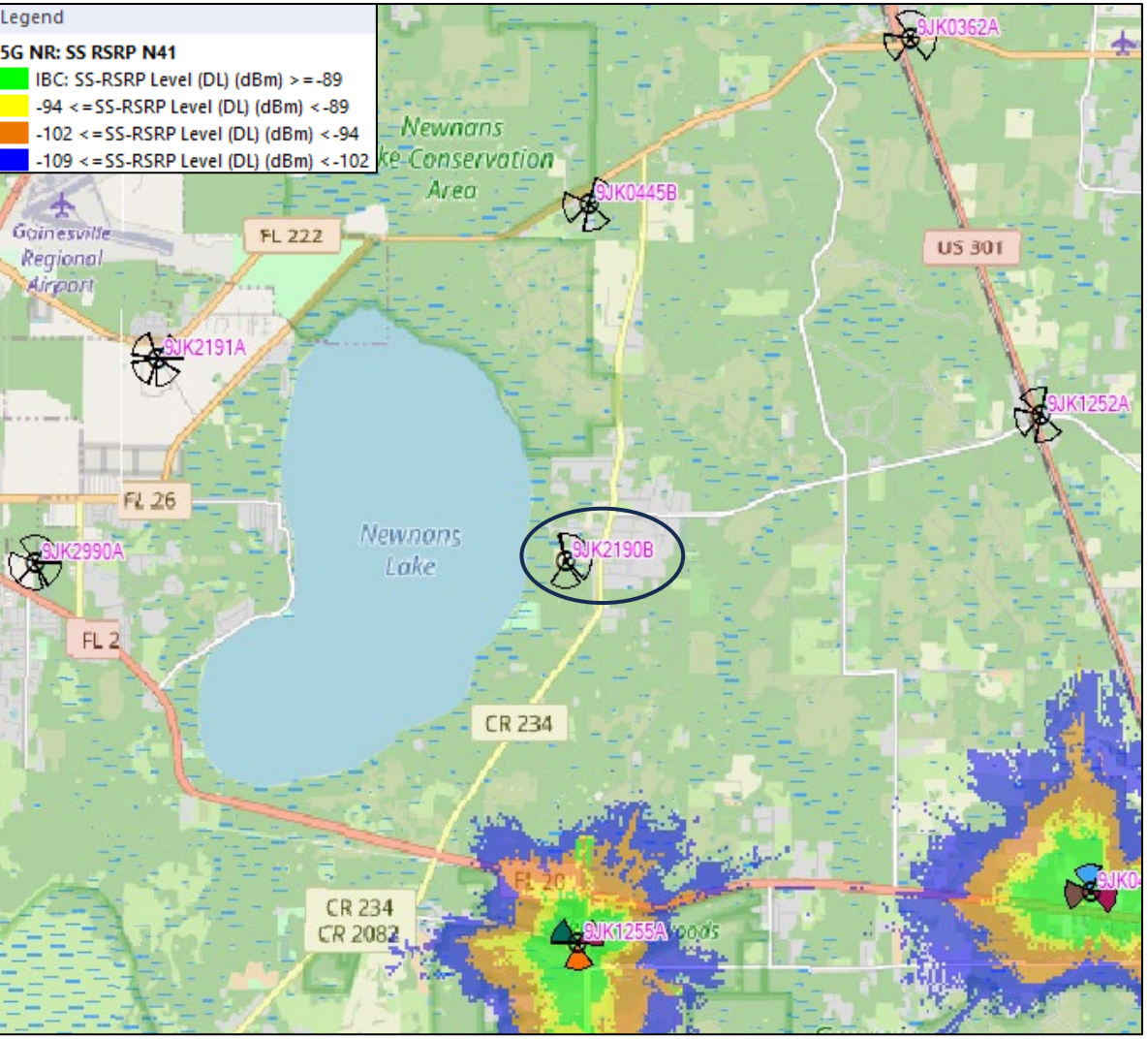
RF Package
Macro Site 9JK2190B

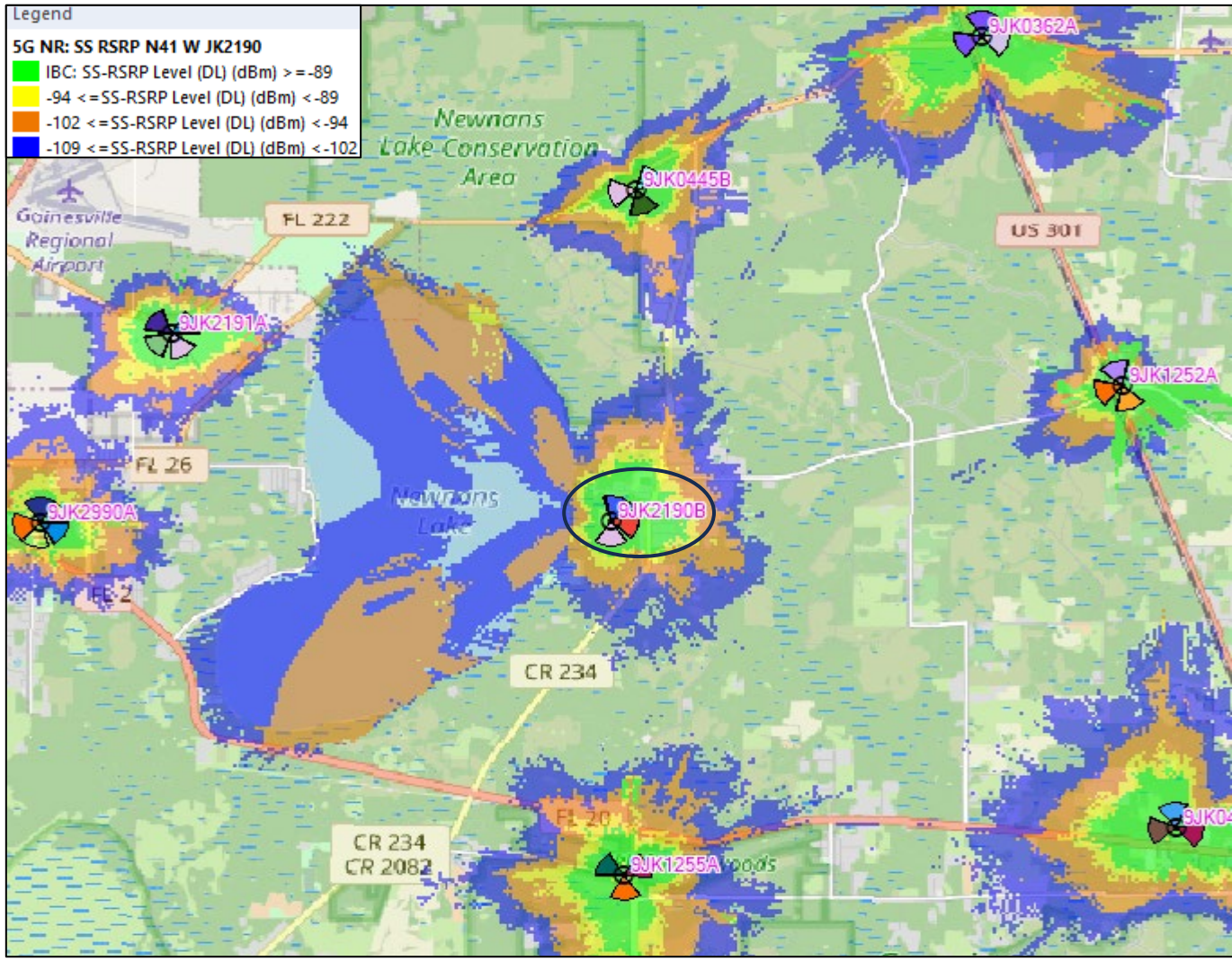
Objective

- Provide indoor coverage our customers in the Windsor area, In vehicle coverage on NE County Rd 234 and the surrounding areas.
- location: 29.64446, -82.192776
- In order to provide coverage to our customers in the Windsor area, In vehicle coverage on NE County Rd 234 and the surrounding areas, we propose the following.
  - Request to build a new tower within the search ring for 9JK2190.
  - Proposed site will allow us to deploy a full array that will include L21,L7,N6,N19,N25.
  - Full array will allow deployment of our entire Mid-Band, Low-Band and 5G spectrum portfolio and provide Ultra Capacity 5G to this area.
    - By utilizing the Full Array (Tower mounted integrated radios) will allow Ultra Capacity 5G.
    - Ultra Capacity 5G provides up to 35% increase in download speeds (depending on the traffic volume) vs the ground mounted radios.
    - Tower mounted radios provides increased coverage area and better in-building penetration.
    - Tower mounted radios greatly reduces intermodulation issues and noise issues caused by diplexing for ground radio solutions.

5G Mid-Band Coverage Analysis – Band 41_n41_TDD

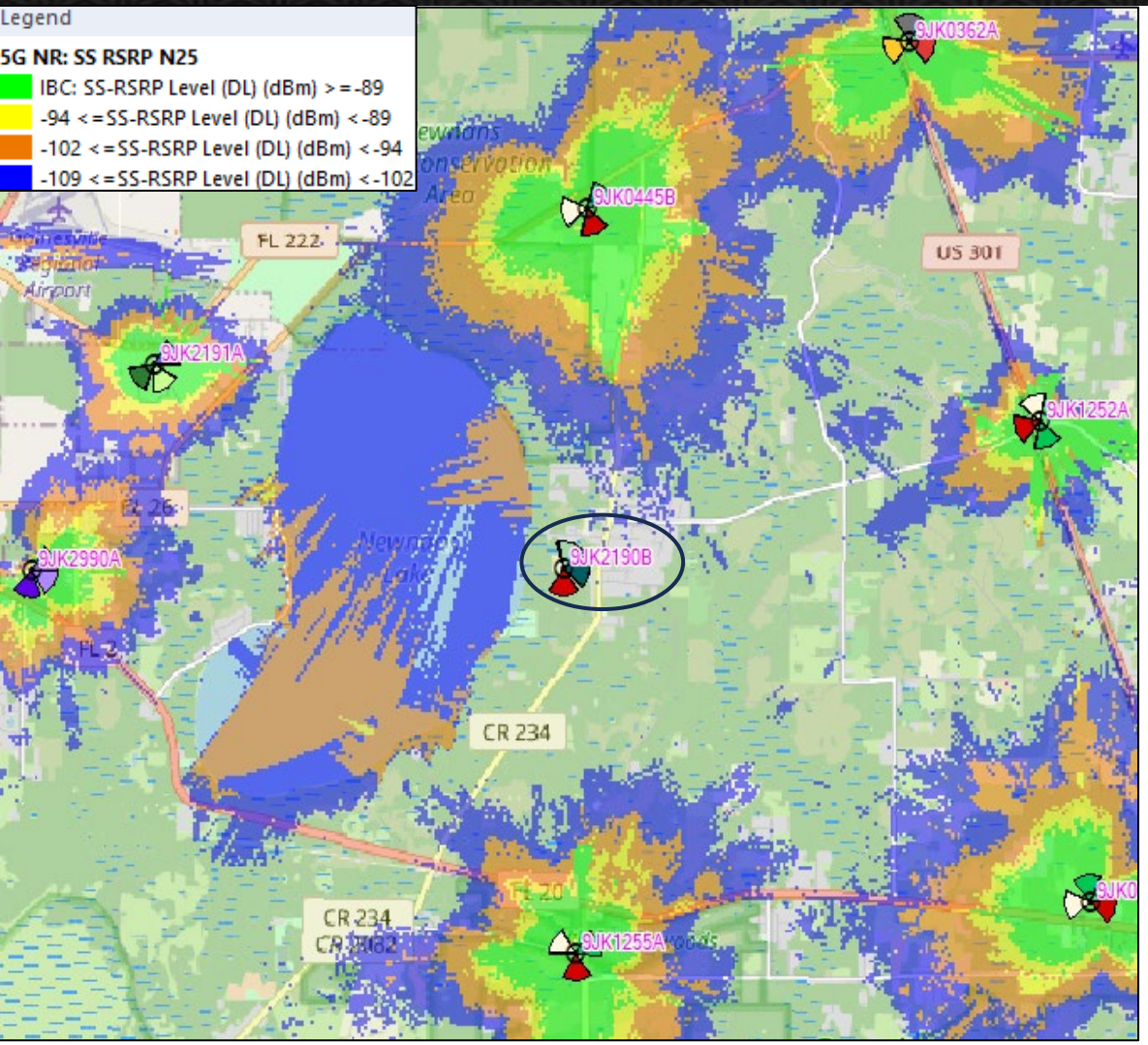


- Existing 5G Mid-Band Coverage.

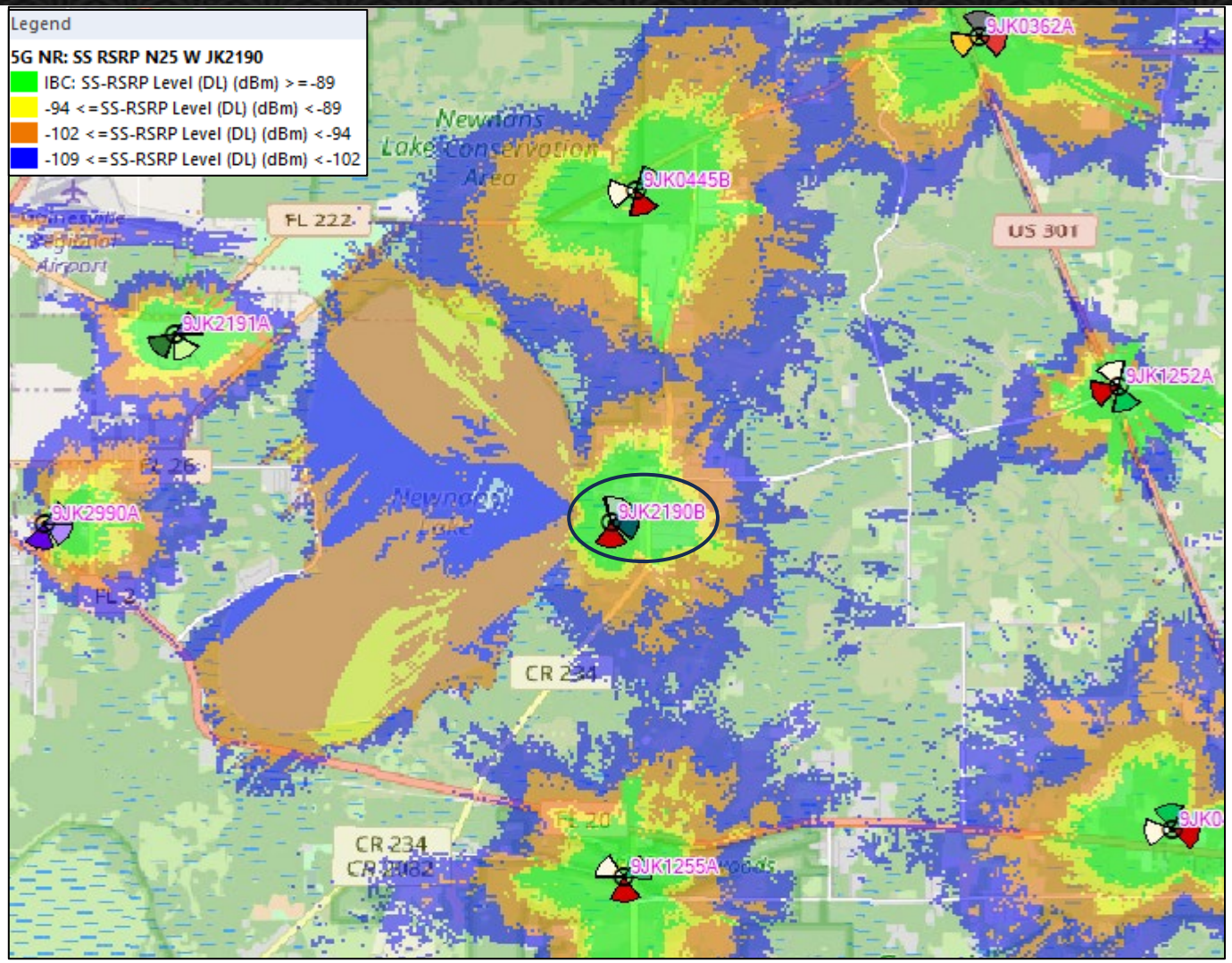


- Existing and planned 5G Mid-Band Coverage with proposed site (None of the sites except JK1255 and JK0440 have N41 on air).

5G Mid-Band Coverage Analysis – Band 25_n25_TDD

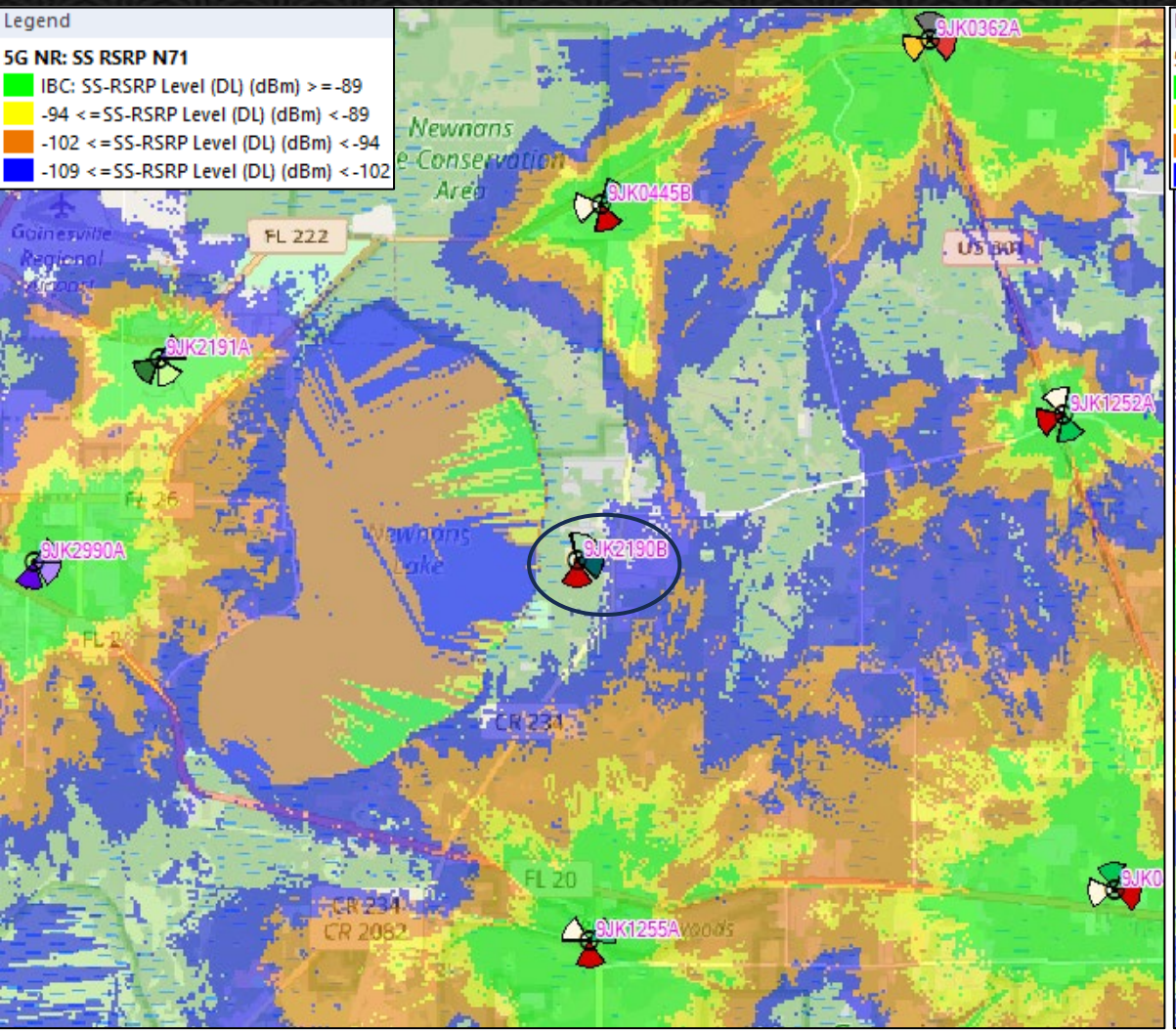


- Existing 5G Mid-Band Coverage.

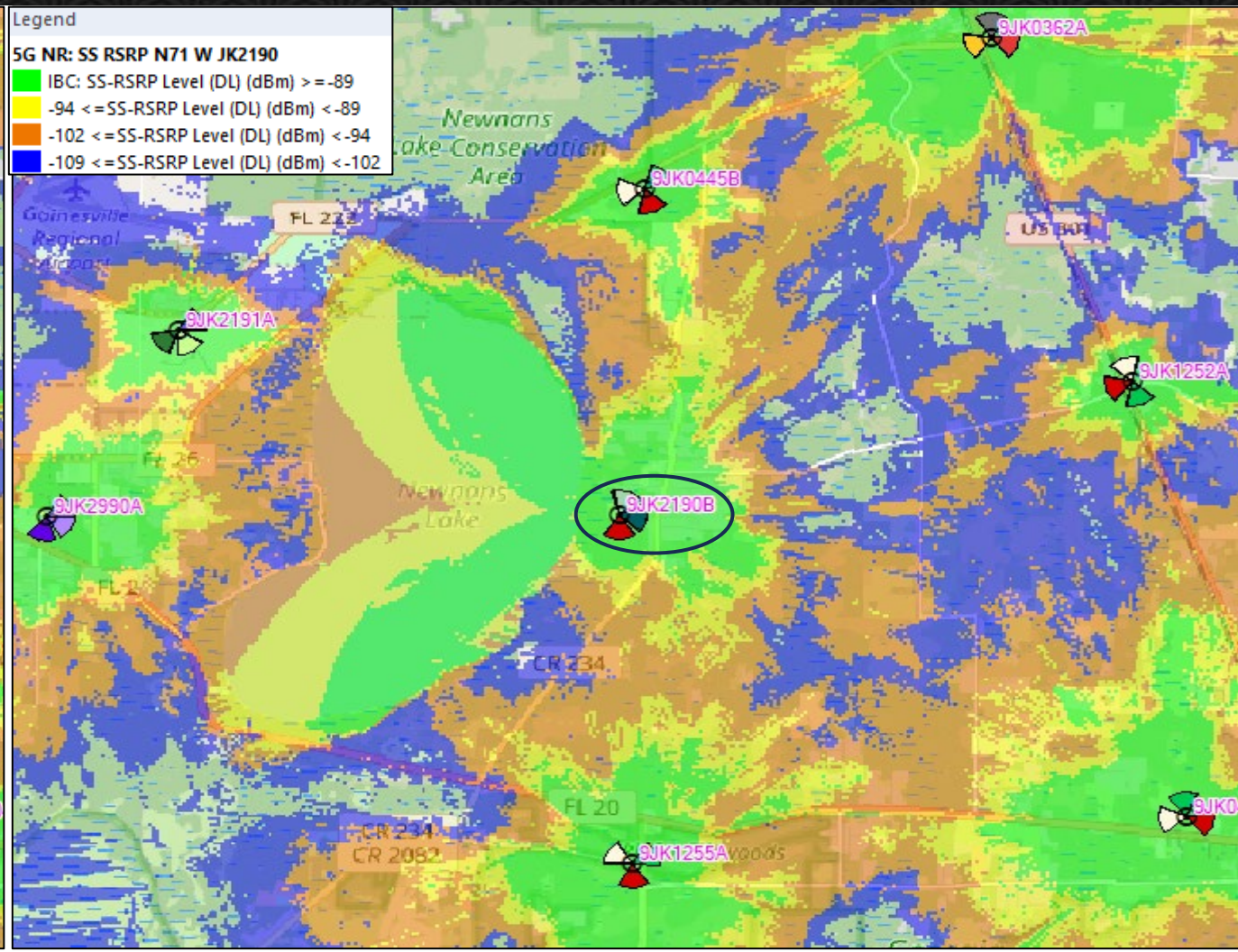


- Existing and planned 5G Mid-Band Coverage with proposed site.

5G Low-Band Coverage Analysis – Band 71_n71_FDD

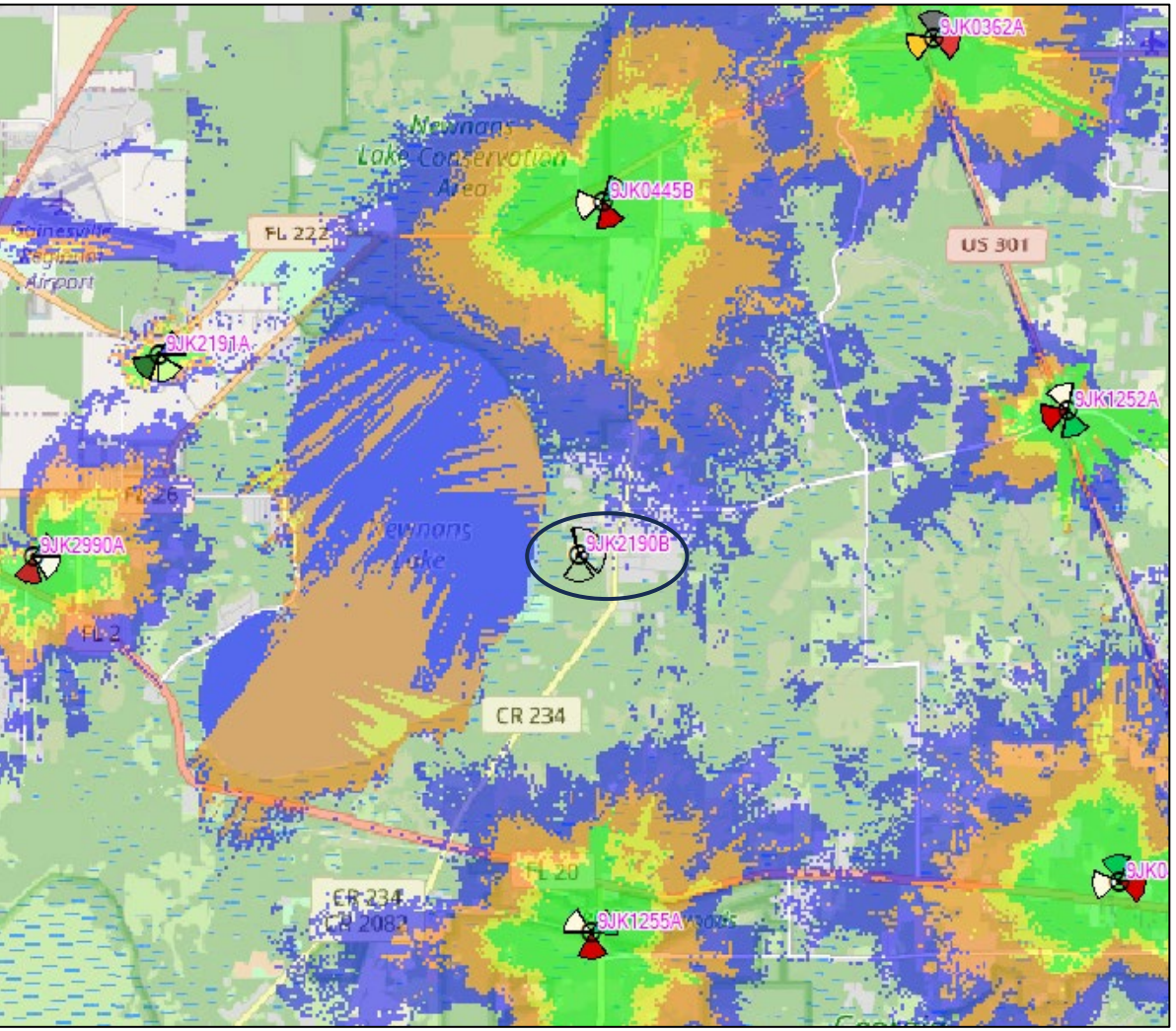


- Existing 5G Low-Band Coverage.

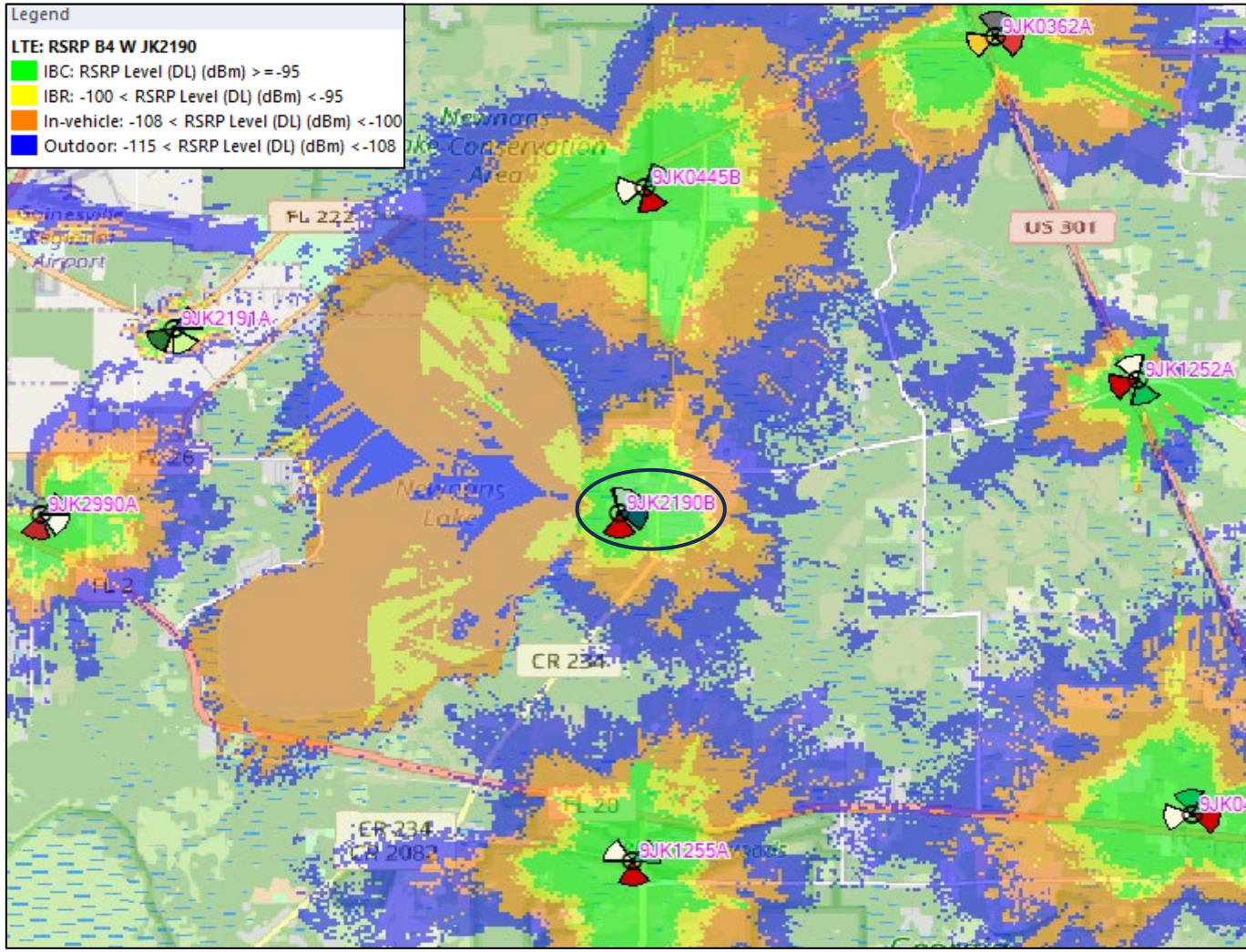


- Existing and planned 5G Low-Band Coverage with proposed site.

LTE Mid-Band Coverage Analysis – Band 4_E-UTRA band 4

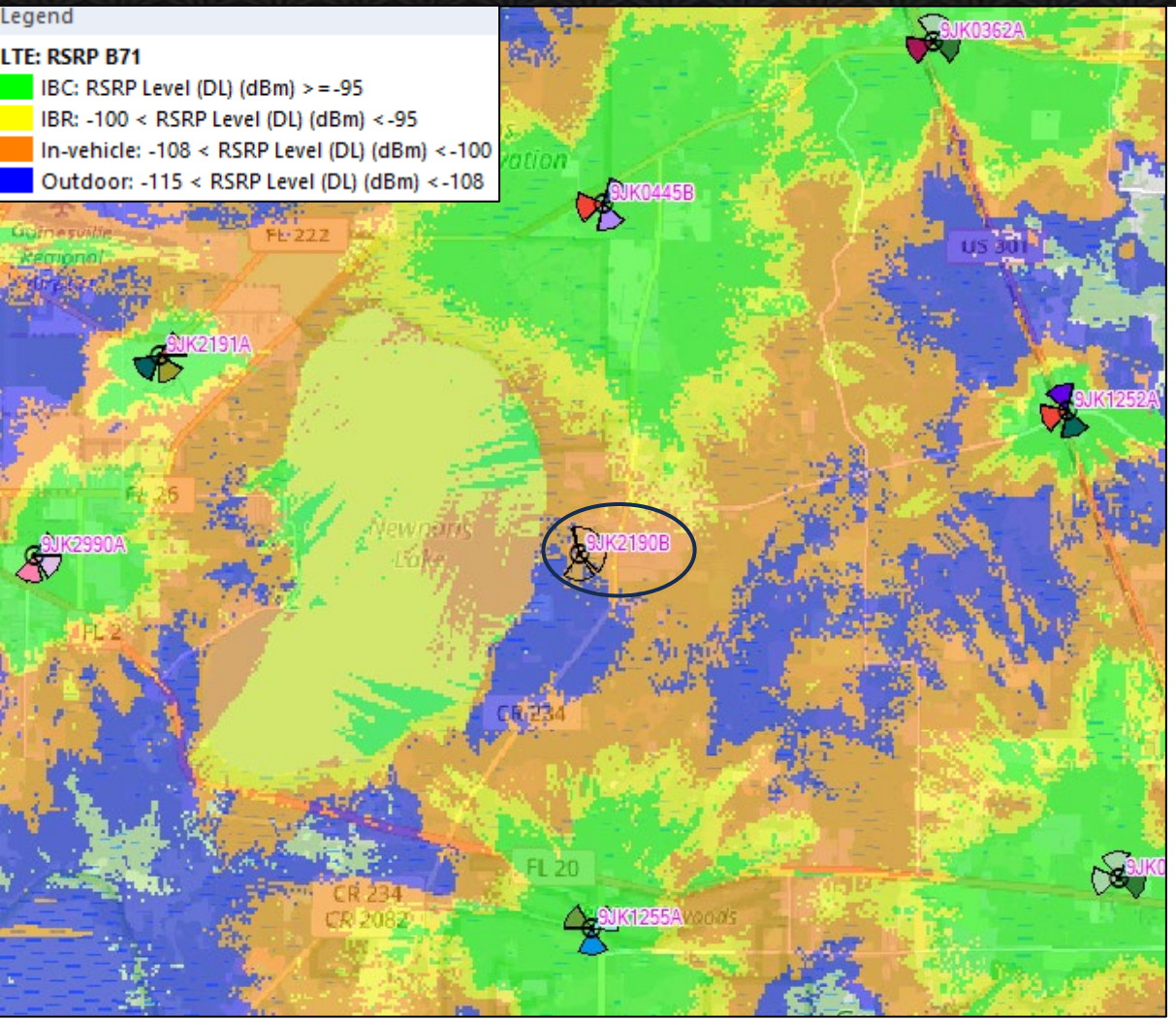


- Existing Mid-Band Coverage.

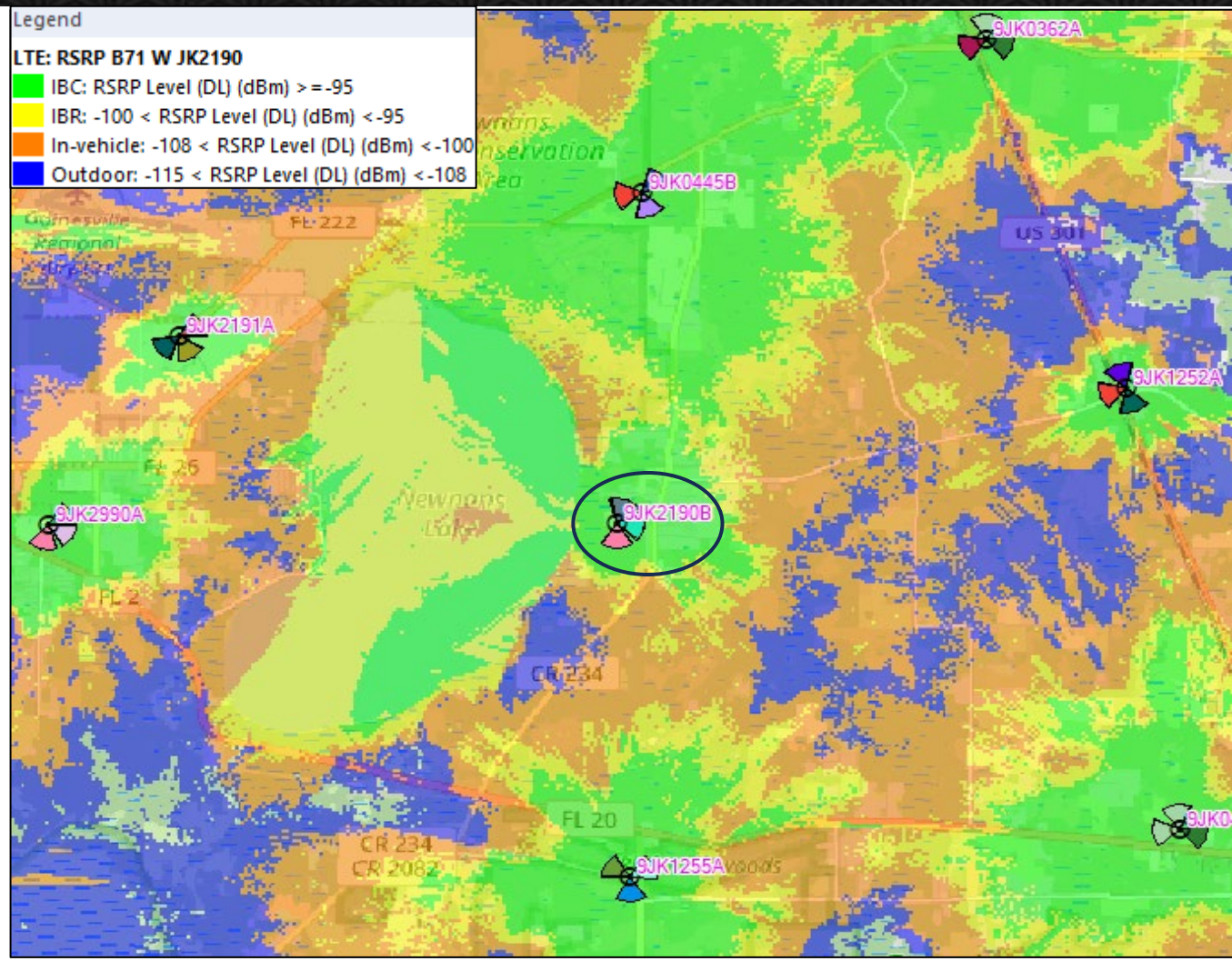


- Existing and planned Mid-Band Coverage with proposed site.

LTE Low-Band Coverage Analysis - Band 71_E-UTRA band 71

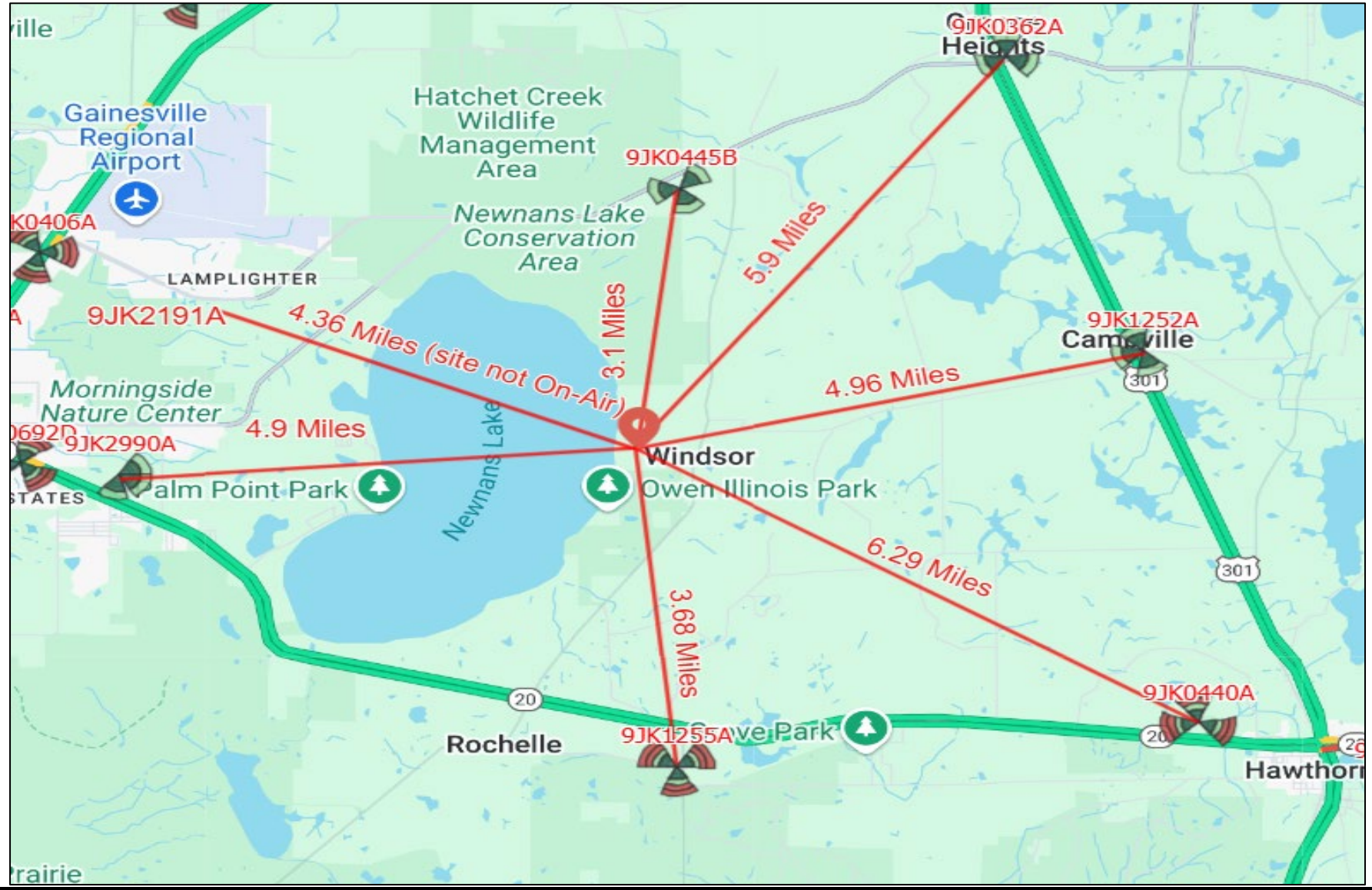


- Existing Low-Band Coverage.



- Existing and planned Low-Band Coverage with proposed site.

First Tier Handoff Sites



Antenna Data of Existing and Proposed site

Site	Transmitter	Latitude	Longitude	Antenna	Height (m)	Azimuth (°)	Mechanical Downtilt (°)
9JK0445B	9JK0445B_11	29.69297062	-82.1893924	FFVV-65C-R3-V1	44.8056	45	0
9JK0445B	9JK0445B_21	29.69297062	-82.1893924	FFVV-65C-R3-V1	44.8056	160	0
9JK0445B	9JK0445B_31	29.69297062	-82.1893924	FFVV-65C-R3-V1	44.8056	260	0
9JK0362A	9JK0362A_11	29.71566926	-82.137176	FFVV-65C-R3-V1	62.7888	0	0
9JK0362A	9JK0362A_21	29.71566926	-82.137176	FFVV-65C-R3-V1	62.7888	110	0
9JK0362A	9JK0362A_31	29.71566926	-82.137176	FFVV-65C-R3-V1	62.7888	245	0
9JK1252A	9JK1252A_11	29.664777	-82.115324	FFV4-65C-R3-V1	49.9872	340	0
9JK1252A	9JK1252A_21	29.664777	-82.115324	FFV4-65C-R3-V1	49.9872	160	0
9JK1252A	9JK1252A_31	29.664777	-82.115324	FFV4-65C-R3-V1	49.9872	250	0
9JK0440A	9JK0440A_11	29.600194	-82.10642	FFVV-65C-R3-V1/AIR6449	79.5528	350	0
9JK0440A	9JK0440A_21	29.600194	-82.10642	FFVV-65C-R3-V1/AIR6449	79.5528	110	0
9JK0440A	9JK0440A_31	29.600194	-82.10642	FFVV-65C-R3-V1/AIR6449	79.5528	260	0
9JK1255A	9JK1255A_11	29.592679	-82.190057	FFVV-65C-R3-V1/AIR6419	64.008	65	0
9JK1255A	9JK1255A_21	29.592679	-82.190057	FFVV-65C-R3-V1/AIR6419	64.008	175	0
9JK1255A	9JK1255A_31	29.592679	-82.190057	FFVV-65C-R3-V1/AIR6419	64.008	300	0
9JK2990A	9JK2990A_11	29.643231	-82.279231	FFVV-65C-R3-V1	79.248	60	0
9JK2990A	9JK2990A_21	29.643231	-82.279231	FFVV-65C-R3-V1	79.248	120	0
9JK2990A	9JK2990A_31	29.643231	-82.279231	FFVV-65C-R3-V1	79.248	195	0
9JK2191A	9JK2191A_11	29.671309	-82.259721	FFVV-65C-R2N23/AIR6419	36.576	60	0
9JK2191A	9JK2191A_21	29.671309	-82.259721	FFVV-65C-R2N23/AIR6419	36.576	150	0
9JK2191A	9JK2191A_31	29.671309	-82.259721	FFVV-65C-R2N23/AIR6419	36.576	230	0
9JK2190B	9JK2190B_11	29.64446	-82.192776	FFVV-65C-R2N23/AIR6419	57.912	20	0
9JK2190B	9JK2190B_21	29.64446	-82.192776	FFVV-65C-R2N23/AIR6419	57.912	100	0
9JK2190B	9JK2190B_31	29.64446	-82.192776	FFVV-65C-R2N23/AIR6419	57.912	180	0

EiRP

Technology Layer	Tx composite pwr (dBm)	minus system loss (dBm)	plus antenna gain (dBi)	Total EiRP (dBm)	Total EiRP (W)
L2100	52.04119983	0.5	18.5	70.04119983	10095.31751
L1900	52.04119983	0.5	18.6	70.14119983	10330.46766
L600	50.79181246	0.5	16	66.29181246	4257.760671
L700	52.04119983	0.5	16.3	67.84119983	6083.030341
N600	50.79181246	0.5	16	66.29181246	4257.760671
N2500	55.05149978	0.5	18.5	73.05149978	20190.63502
N1900	49.03089987	0.5	18.6	67.13089987	5165.233832