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Reserved for
Exhibit # 1

Statement of RF Need with Coverage Plots

Crown, the Town, wireless carriers and significant numbers of Madison residents readily acknowledge that the State Route 79 corridor between State Route 80 and I-95 suffers from a lack of reliable wireless coverage in the carriers' networks. That fact is what led Crown, the Town, and T-Mobile to independently evaluate siting solutions in the area which date back several years at this point in time. More recently, and as part of Crown's technical report prepared for the Town in 2007, Crown radiofrequency engineers supplied coverage evaluations and plots for the area, copies of which are included in the technical report materials that have been bulk filed with the Siting Council. Additionally, Crown coordinated with T-Mobile on a drive test from the Town Bulky Waste Site location earlier in 2008 and a copy of T-Mobile's February 2008 report is included in this Application. At this time, Crown anticipates that T-Mobile and possibly AT&T will intervene in this Application to support their own need for the Facility to provide services to the public. Regardless, the public need for a new tower Facility in this area of Madison is not seriously questioned.

CTHA332C – Madison, CT Drive Test Results

Test Date: February 6, 2008



Purpose

A drive test was performed at the proposed T-Mobile location at 258 Ridge Road in Madison, CT. The purpose of the drive test was to gather accurate signal strength measurements along the objective routes at various heights. The results allow for T-Mobile Radio Frequency (RF) Engineering to determine the minimum height required to achieve the coverage objective and further fine tune the propagation prediction model for this area. The coverage objective for the CTHA332 Ring is defined as Route 79 extending from existing coverage along Interstate 95 north to existing coverage along Route 80 with surrounding side roads including Warpas Road, Opening Hill Road, Green Hill Road and surrounding residential areas

Procedure

To gather the required data, a simulated test site was constructed at the location of the proposed facility. To construct the test site, a crane was used to lift an omni-directional antenna to the desired height. The omni-directional antenna was chosen for its ability to direct a signal equally in all directions along the horizontal plane extending away from the antenna, eliminating any nulls between antennas as typically seen with directional panel antennas. A test transmitter is then attached to feed the desired signal to the omni-directional antenna. A watt meter was installed in-line between the test transmitter and the antenna. The purpose of the watt meter is to measure the forward power sent from the transmitter to the antenna and to check for the presence of reflected power which would indicate either a faulty antenna or coax feedline system. Once the power levels were recorded, the watt meter was removed and the transmitter was attached directly to the test antenna. All values were entered into the attached T-Mobile drive test form (Addendum A)

With the transmitter attached to the antenna and the test channel broadcasting, the crane lifted both to the first desired height of 177 feet above ground level (AGL) to the center of the test antenna.

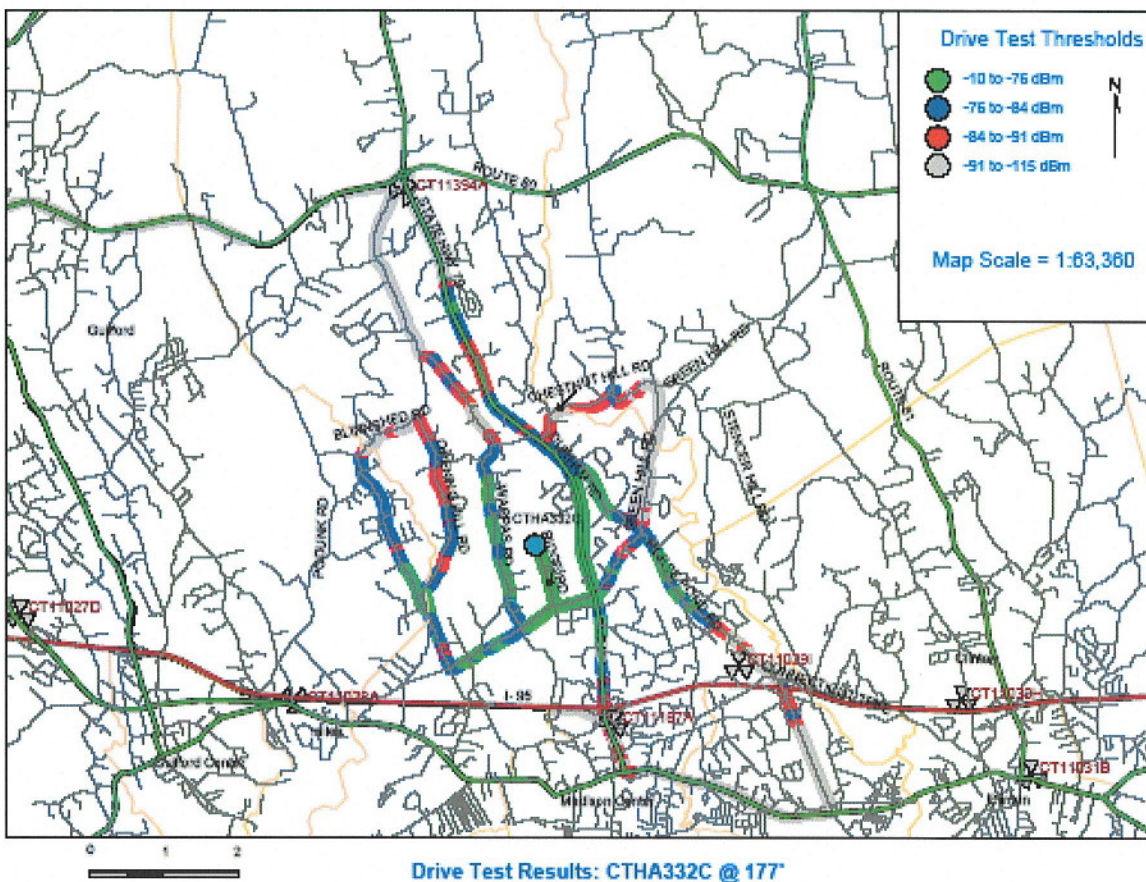
For the collection process, a Grayson scan receiver, Model# GMR 203, was used to sample the signal levels. The Grayson receiver was installed in a vehicle with the receive antenna and GPS antenna roof mounted. The purpose of roof mounting the receive antenna is to eliminate any additional attenuation in signal strength from the material composition of the vehicle (vehicle penetration loss) and the location of the receive antenna inside the vehicle. With the receiver scanning, a predetermined route was driven surrounding the proposed facility. The collected samples were stored in Grayson format log files to be exported and processed following the test. This process was repeated for antenna heights of 147, and 137 feet AGL.

Following the test, all log files were processed into text files using the Grayson log file converter and analyzed in MapInfo. These results are shown in the "Results" section.

Results

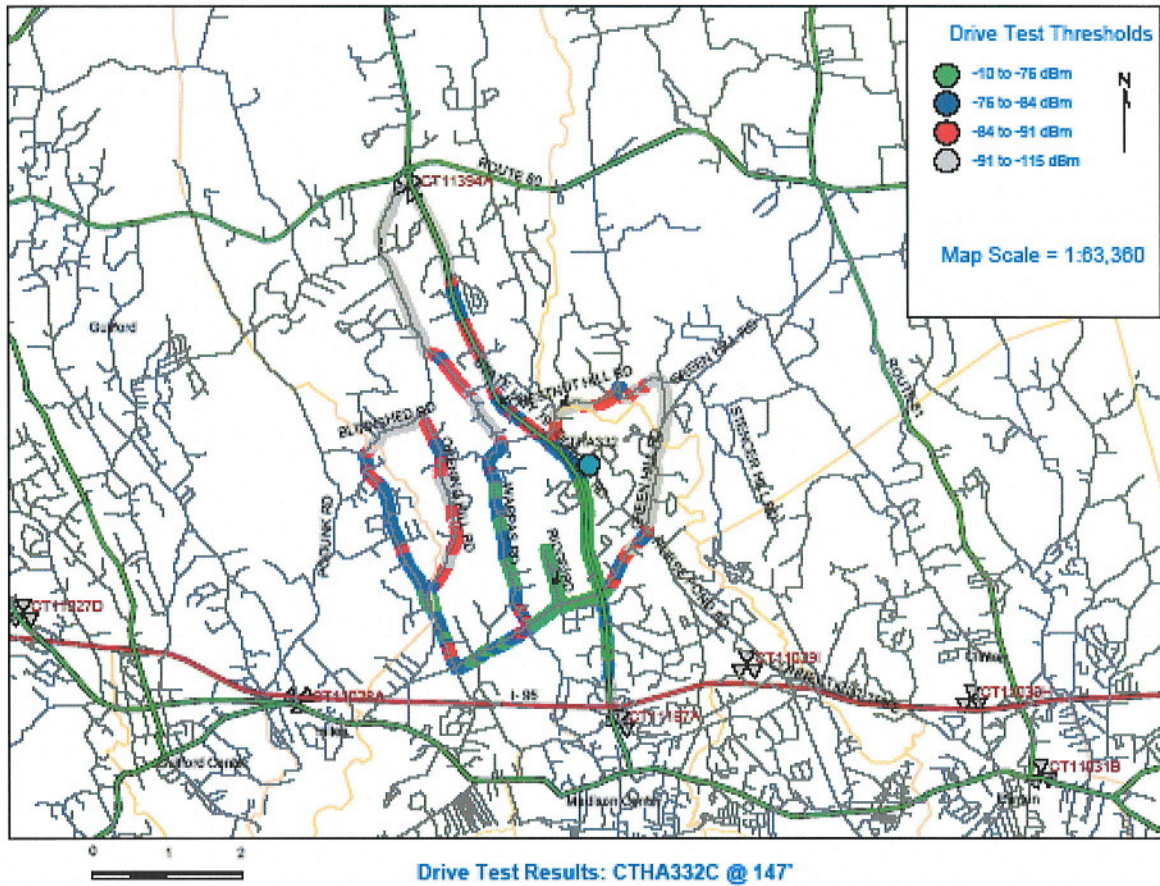
The following plots (1 to 3) show the result from the drive test at the T-Mobile proposed facility at Ridge Road in Madison, CT. For these, signal levels ranging from -10 dBm to -116 dBm are shown. T-Mobiles required lower limit threshold is -84 dBm, which is required for in vehicle coverage. The higher threshold level of -76 dBm is the minimum required to provide reliable in-building coverage. Levels below the -84 dBm threshold are shown to demonstrate routes driven and to show areas of unacceptable signal degradation

Plots 1



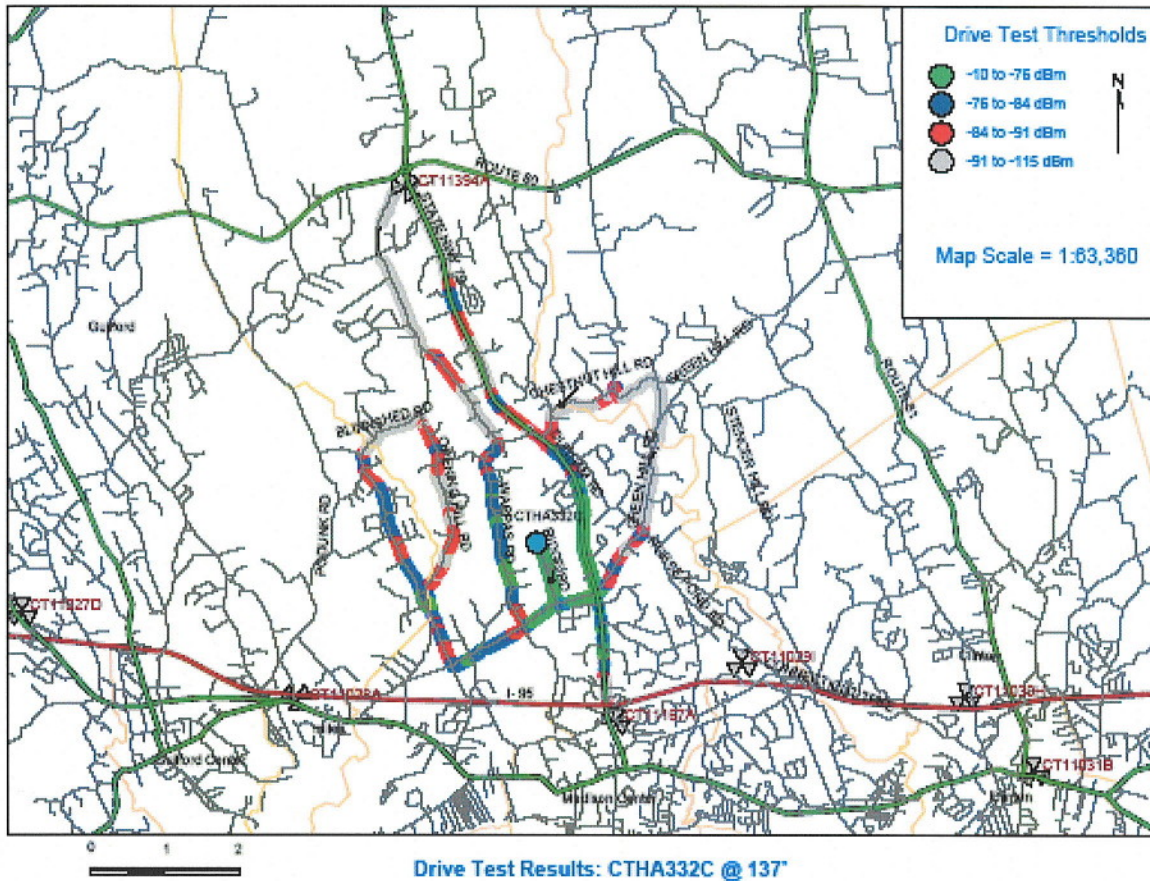
Plot 1 shows the results of the CTHA332C drive test at 177 feet AGL.

Plot 2



Plot 2 shows the results of the CTHA332C drive test at 147 feet AGL

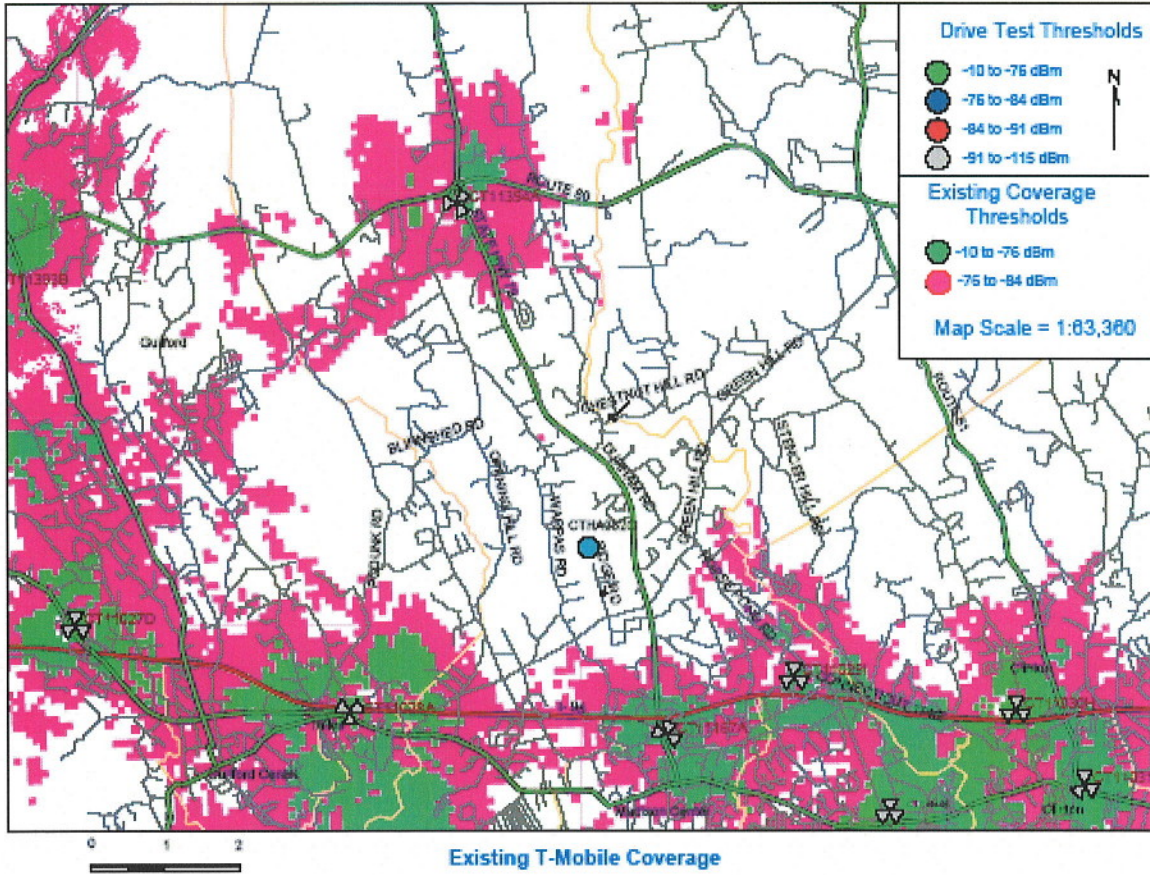
Plot 3



Plot 3 shows the results of the CTHA332C drive test at 137 feet AGL.

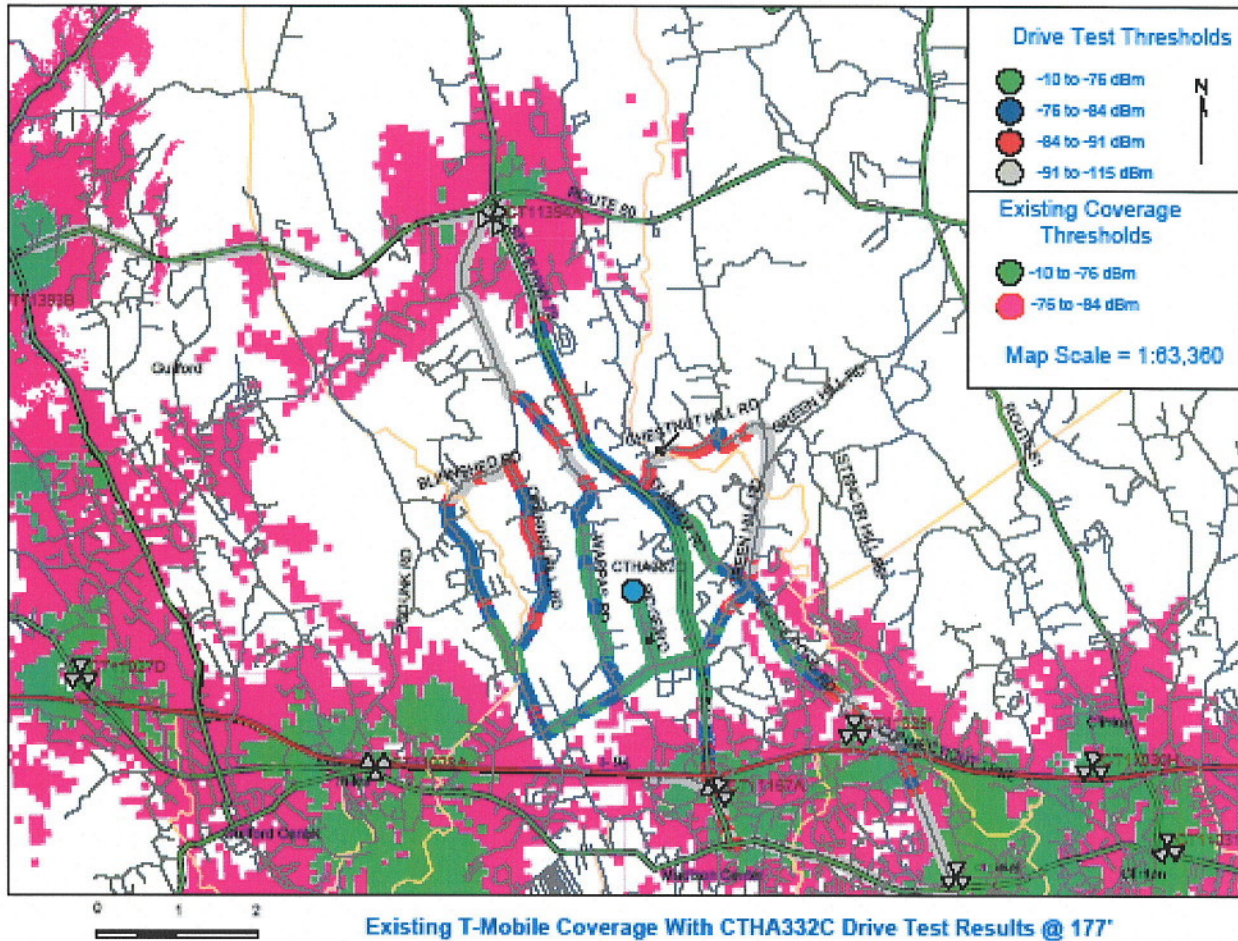
Plots 4 through 7 show existing coverage and existing coverage with drive test data overlaid at the three test heights.

Plot 4



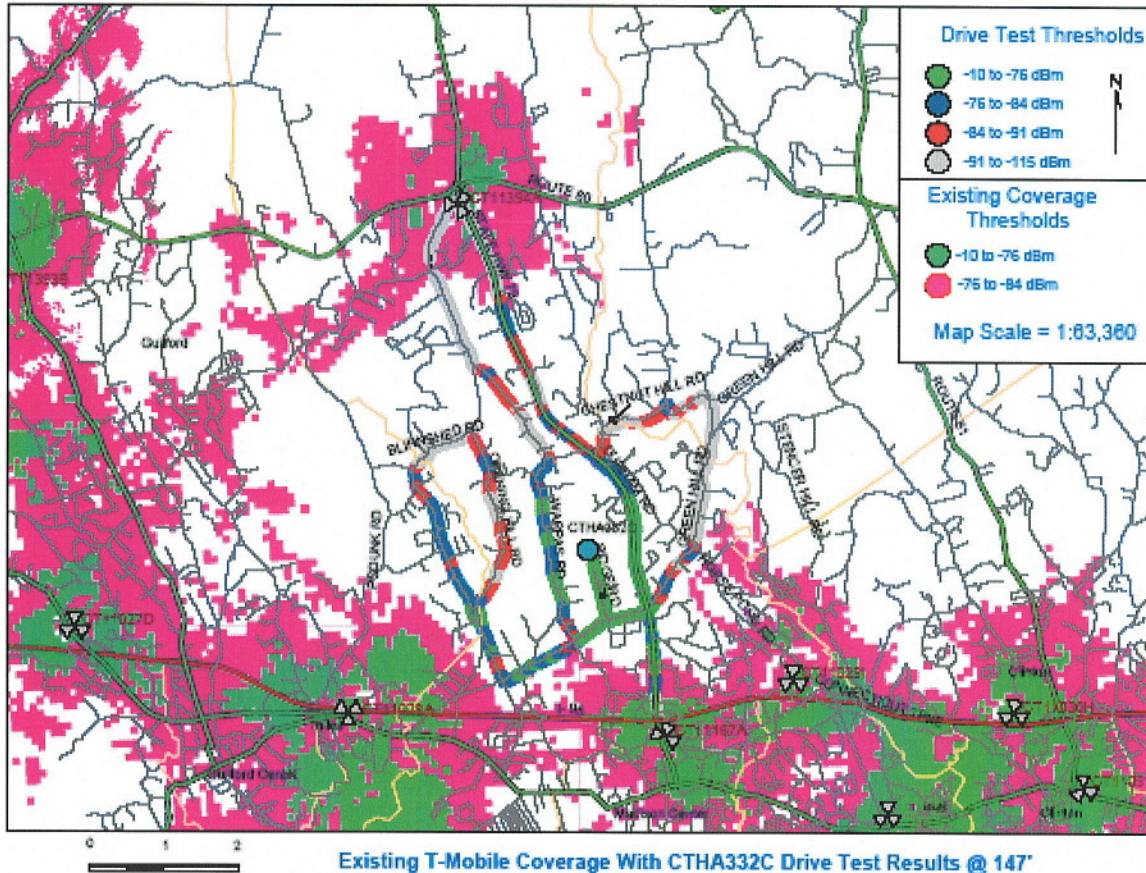
Plot 4 shows existing T-mobile on air coverage

Plot 5



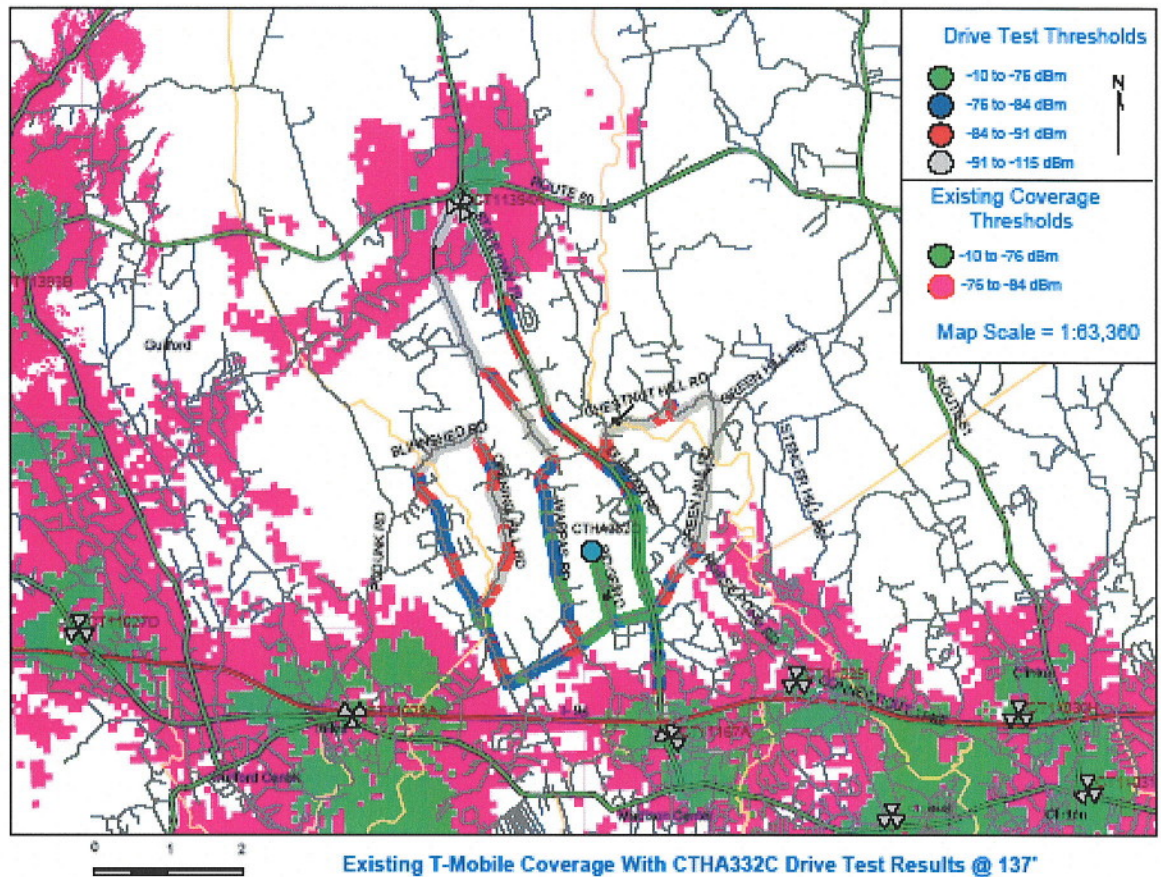
Plot 5 shows Existing T-Mobile on-air coverage with the results of the CTHA332C Drive Test at 177' AGL. At this height, coverage begins to fall below the T-Mobile minimum receive signal level threshold of -84 dBm just north of Chestnut Hill Road north along Route 79. This includes a continuous median section of roughly 1 mile which is below the T-Mobile minimum receive signal level threshold of -84 dBm. In these areas, mobile and stationary system users will most likely experience coverage degradation resulting in poor voice and data quality and potential dropped calls. Additionally, E-911 emergency calls placed in this area may not be successfully connected due to poor signal quality.

Plot 6



Plot 6 shows Existing T-Mobile on-air coverage with the results of CTHA332C Drive Test at 147' AGL. As with the 177' test height, terrain becomes a problem around Chestnut Hill traveling north along Route 79. However, unlike the 177' test height, coverage at 147' continues to fall below the -91 dBm level as well. This identifies Chestnut Street as the breakpoint in terrain heading north along Route 79 which is the upper bound of reliable coverage from the CTHA332C candidate. North of this point, mobile and stationary system users will most likely experience coverage degradation resulting in poor voice and data quality and potential dropped calls. Additionally, E-911 emergency calls placed in this area may not be successfully connected due to poor signal quality. Coverage south will successfully meet existing coverage from the Interstate 95 corridor.

Plot 7



Plot 7 shows Existing T-Mobile on-air coverage with the results of the CTHA332C Drive Test at 137' AGL. As shown in the 147' test results, coverage is prohibited by terrain along Route 79 just south of the chestnut street intersection. Additionally, there is also an area just south of the Durham Street intersection along Route 79 which also falls below the T-Mobile minimum receive signal level threshold of -84 dBm. In these areas, mobile and stationary system users will most likely experience coverage degradation resulting in poor voice and data quality and potential dropped calls. Additionally, E-911 emergency calls placed in this area may not be successfully connected due to poor signal quality.

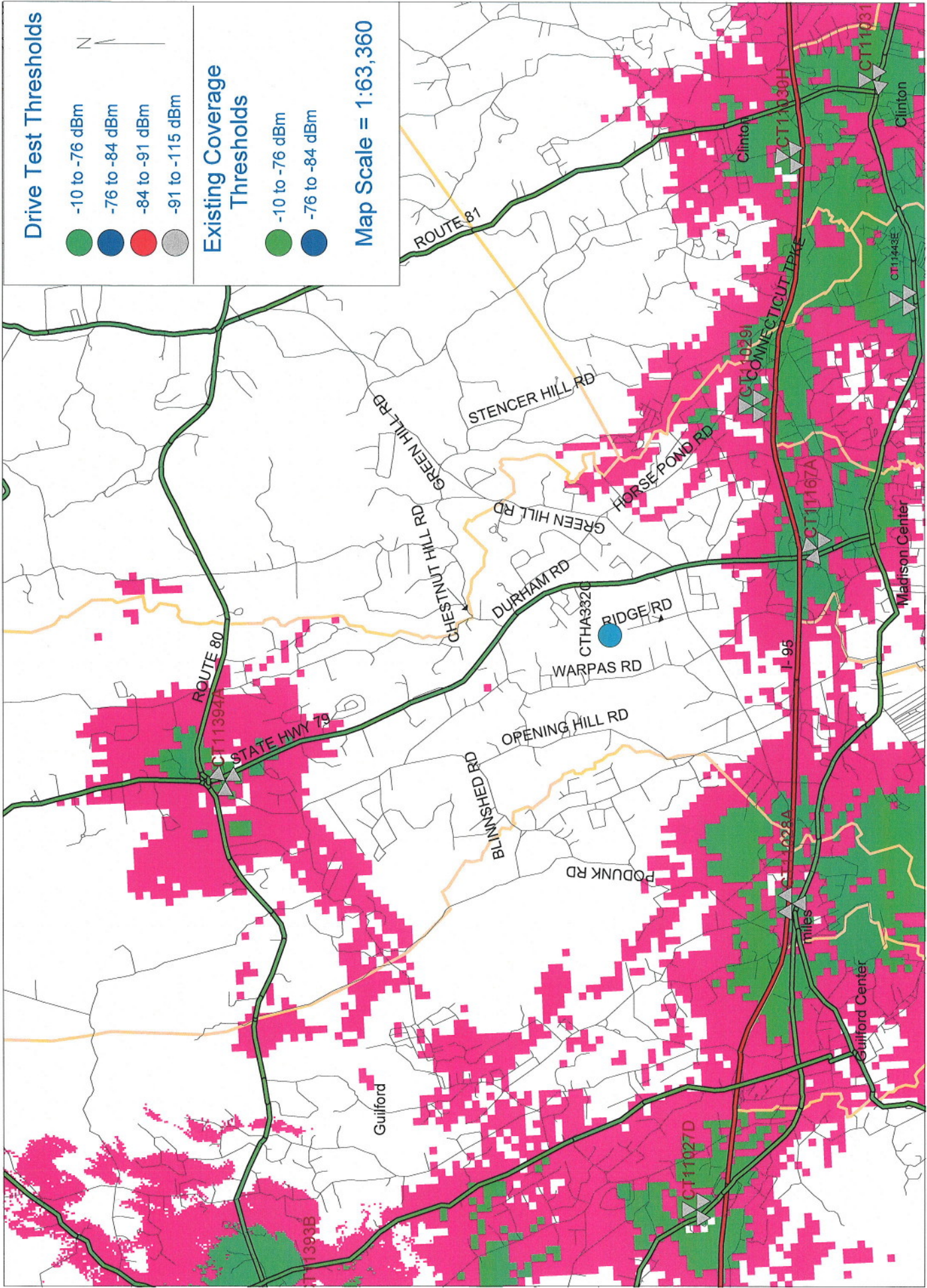
All plots will be attached in full size format as Addendum C

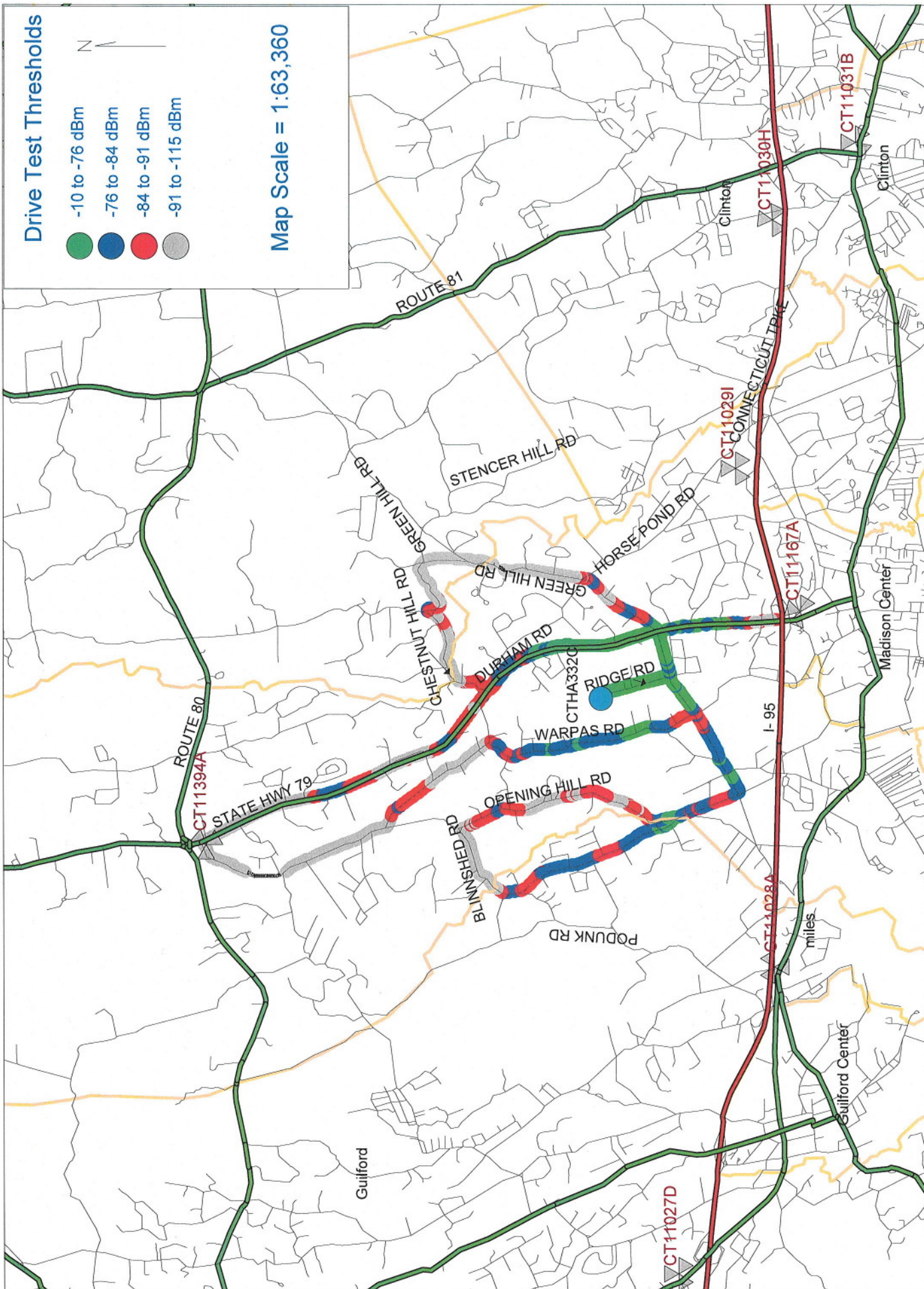
Conclusion

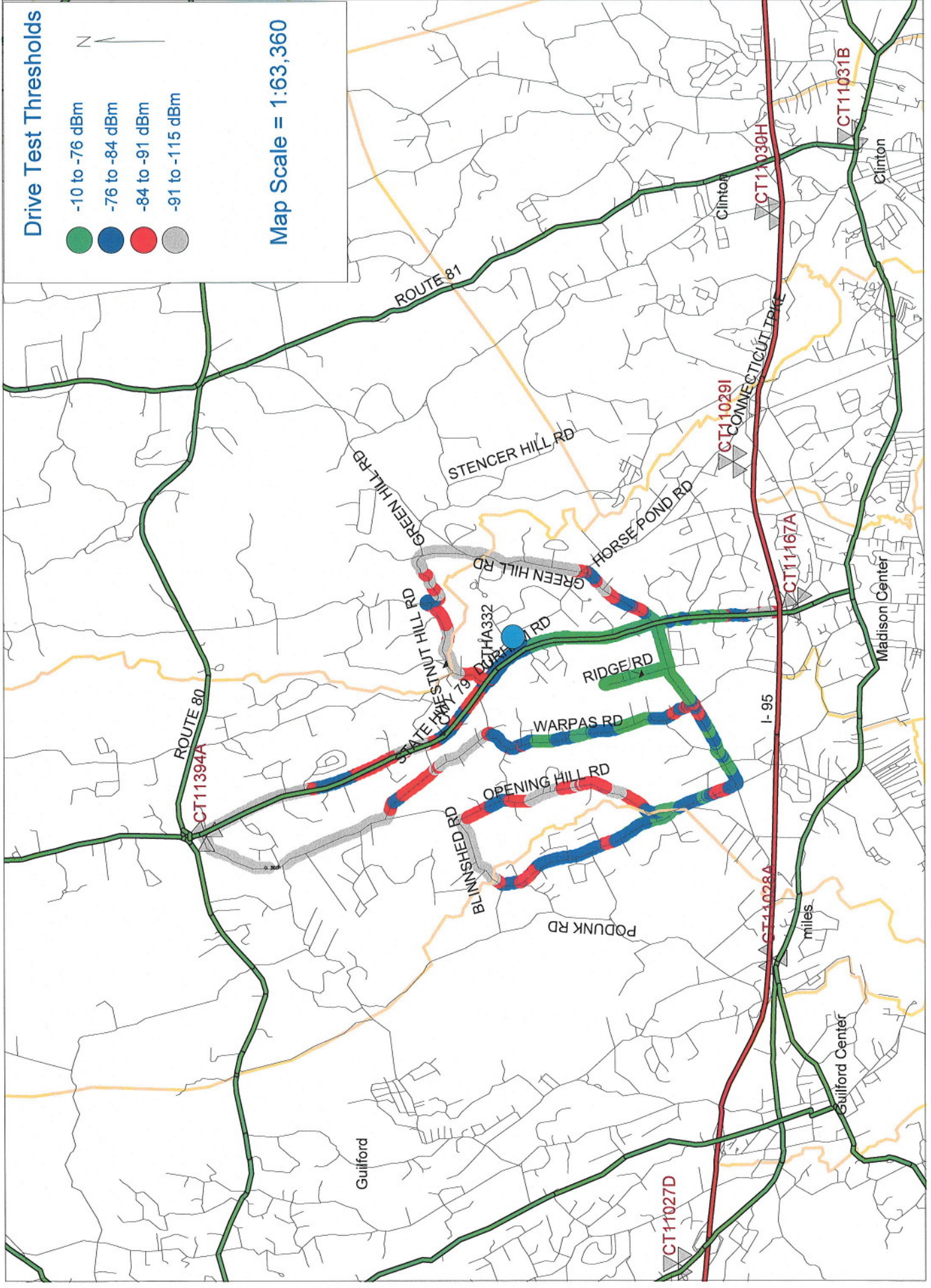
Based upon the coverage plots produced from the drive test conducted at the proposed T-Mobile CTHA32C - Madison facility, the minimum height required to provide coverage the intended objective is 147 feet AGL. At 147' coverage will meet existing coverage to the south along Route 79 in the Interstate 95 area at the T-Mobile minimum coverage threshold of -84 dBm. North along Route 79, coverage remains contiguous to the defined terrain break point in the Chestnut Hill Road Area.

At heights below 147 feet, the radio signal from the proposed facility will experience degradation from the existing tree canopy and terrain along Route 79 prior to the defined terrain break point in the Chestnut Hill Road Area, resulting in non-contiguous coverage along this objective area. This will yield areas of unreliable service to T-Mobile customers for voice and data services and additionally will not allow T-Mobile to provide reliable E-911 services as mandated by the federal government.

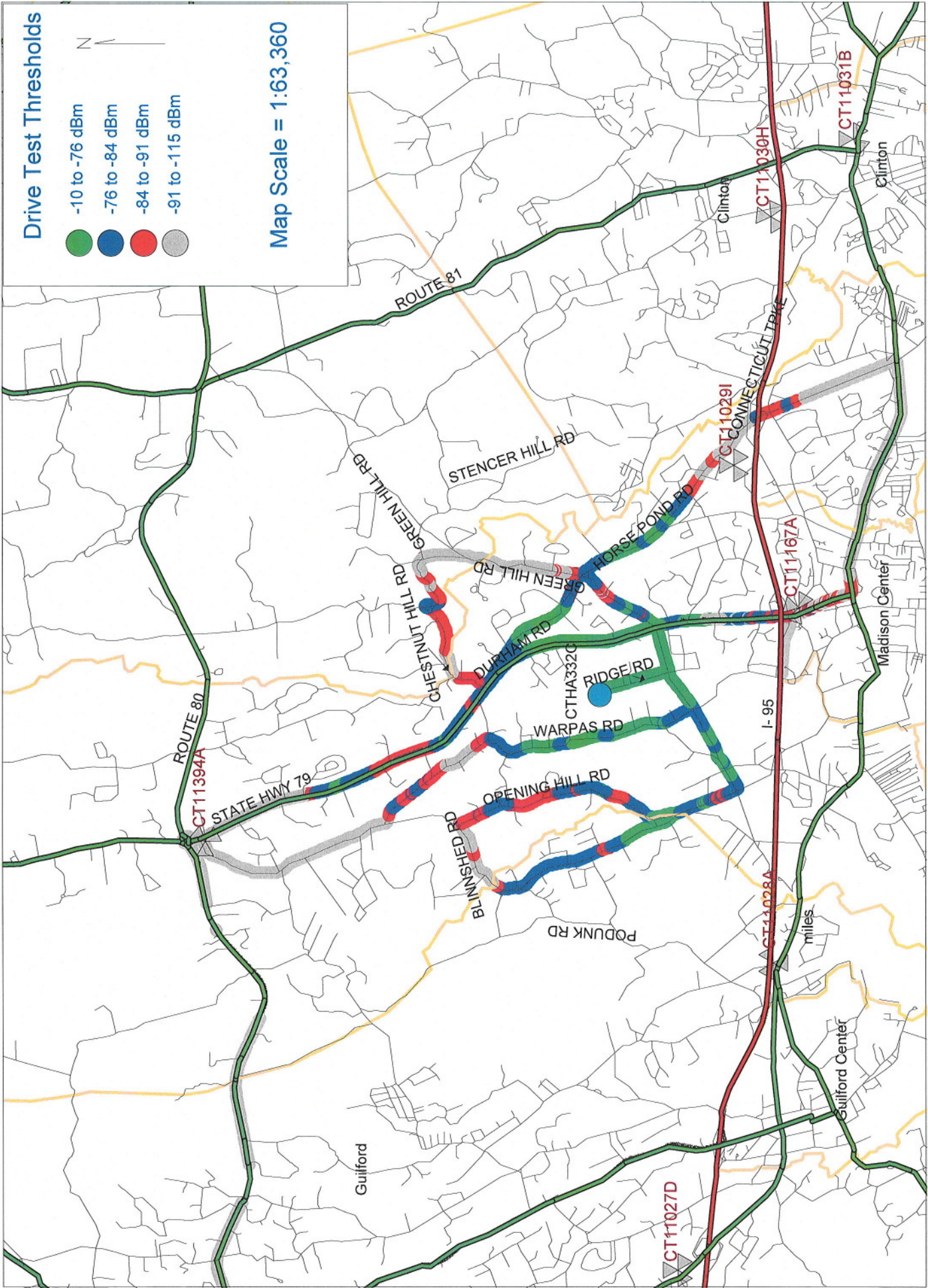
Based upon the results of this drive test, the ability to cover the full Route 79 objective with one site is not achievable, even at heights up to 177' AGL. The test did define the Chestnut Hill Road intersection as the breakpoint line where reliable coverage from this candidate will stop. A future site will be required in the future to complete coverage along the Route 79 corridor from Interstate 95 to Route 80.







Drive Test Results: CTHA332C @ 147'



Drive Test Thresholds

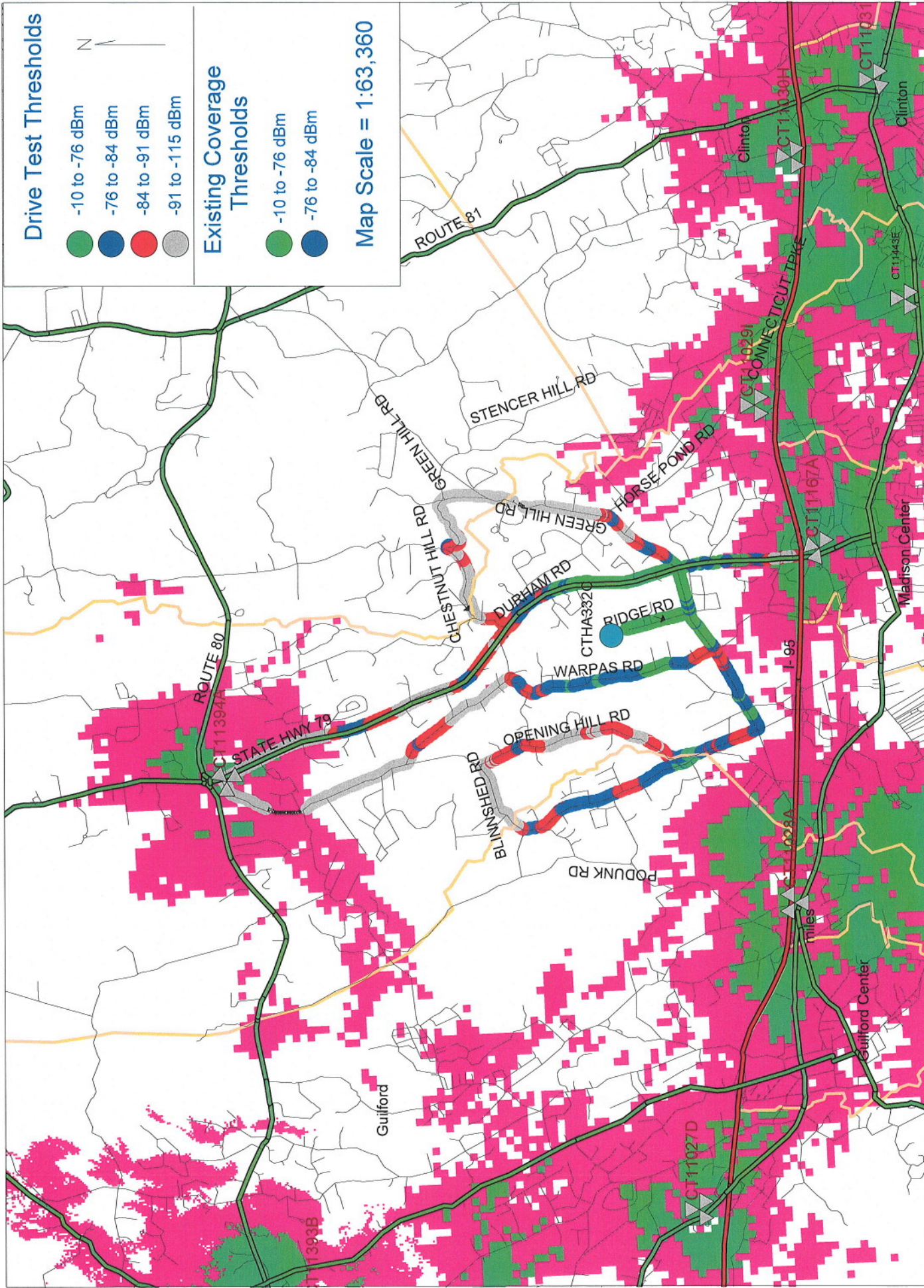
- -10 to -76 dBm
- -76 to -84 dBm
- -84 to -91 dBm
- -91 to -115 dBm



Map Scale = 1:63,360

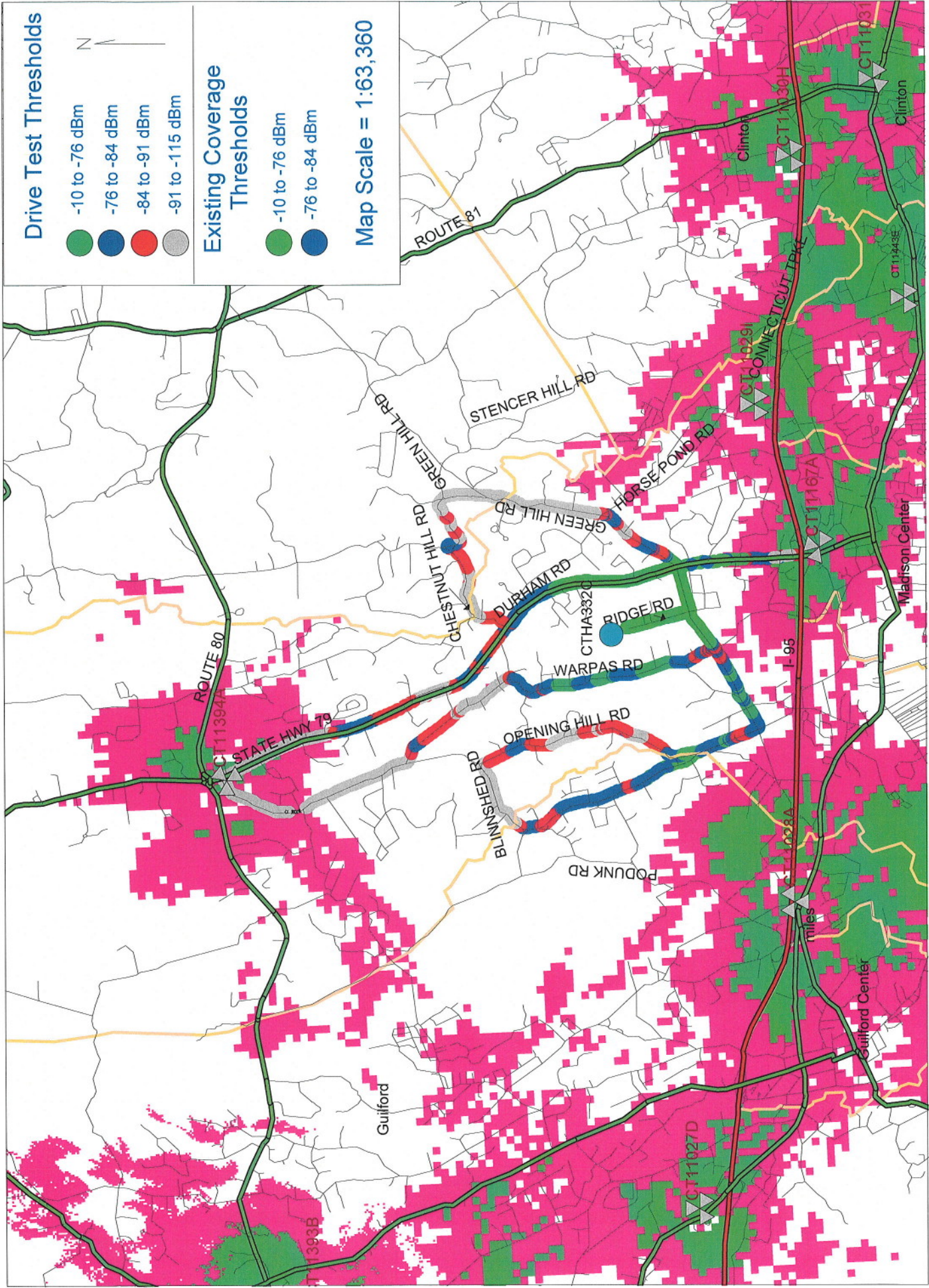
Drive Test Results: CTHA332C @ 177





Existing T-Mobile Coverage With CTHA332C Drive Test Results @ 137'





Drive Test Thresholds

- -10 to -76 dBm
- -76 to -84 dBm
- -84 to -91 dBm
- -91 to -115 dBm

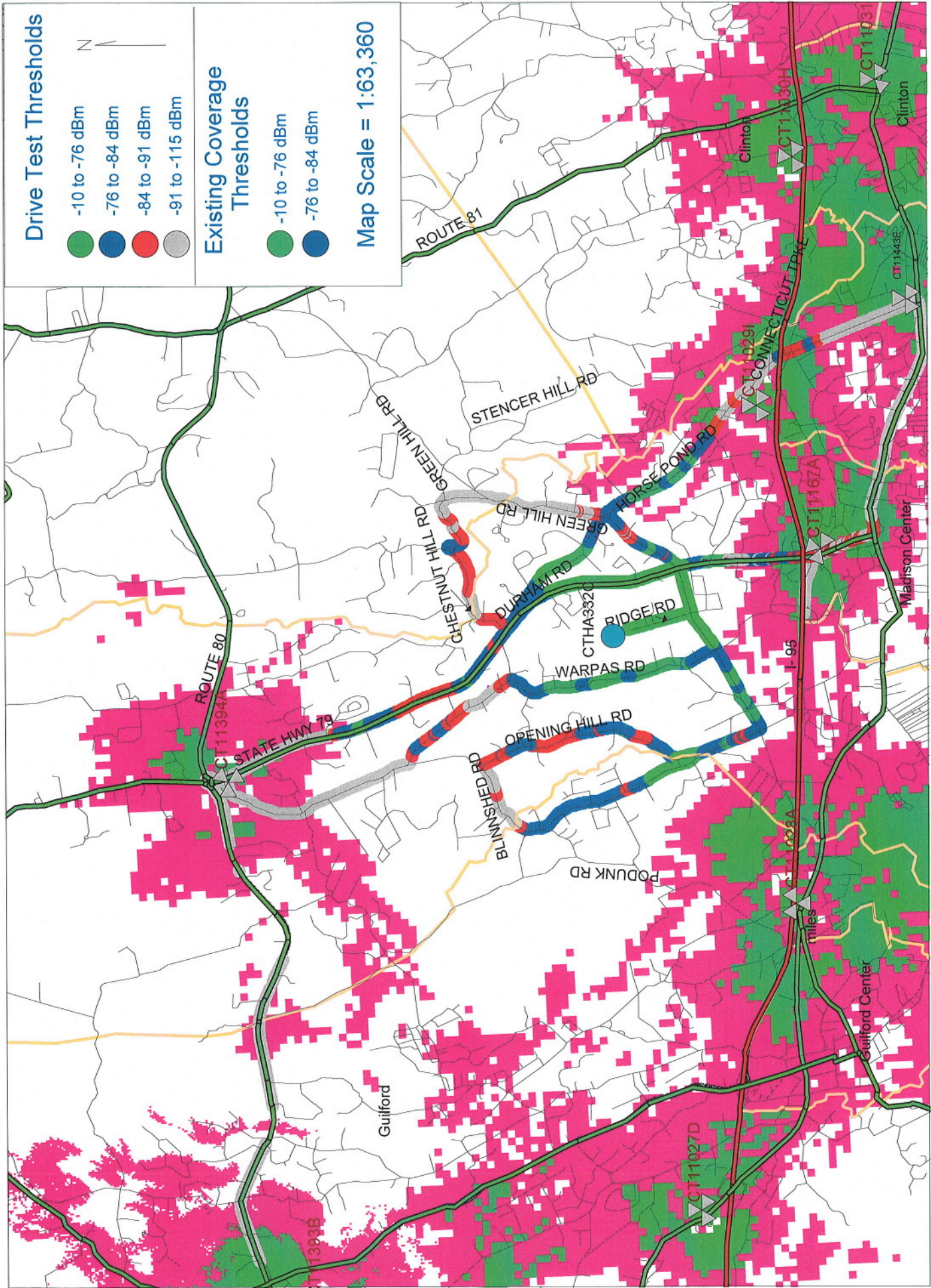
Existing Coverage Thresholds

- -10 to -76 dBm
- -76 to -84 dBm

Map Scale = 1:63,360

Existing T-Mobile Coverage With CTHA332C Drive Test Results @ 147'





Map Scale = 1:63,360

Existing T-Mobile Coverage With CTHA332C Drive Test Results @ 177'