T-Mobile Project Summary – GSA VA Building (7WDC806A)

810 Vermont Avenue NW, Washington, DC 20005

June 16, 2025

T-Mobile Project Summary – GSA VA Building

- The VA Building is located on Vermont Avenue NW between H Street and I Street NW, with an address of 810 Vermont Avenue NW Washington, DC 20005. This site services the White House area, including Lafayette Square and McPherson Square.

- T-Mobile is requesting approval to install two (2) new mmWave antenna on the roof of the VA Building. The purpose of the antenna installation is to increase user capacity and maintain acceptable wireless calling and data signals. The mmWave is a line-of-sight antenna that targets pedestrian cellular users.

- The increased capacity in this area located near the National Mall and the White House is critical for the 25+ million visitors to the nation's capital, as well as special events like July 4th, Presidential Inaugurations, parades and large gatherings. The Department of Homeland Security has tasked the carriers with supporting the emergency communication ecosystem along the National Mall and T-Mobile's proposal serves to meet that need by providing additional capacity for its customers and emergency services.

T-Mobile Project Description – GSA VA Building

- The T-Mobile cellular equipment was installed on the VA building in 2004. T-Mobile has performed multiple upgrades over the last 20 years as required with the implementation of new technology.

- This project will require removing two (2) existing small cell antennas and installing two (2) new mmWave antennas. The new antennas will be face mounted, similar to the Verizon installation.

- The removal and installation will not adversely affect the viewshed. All antennas and ancillary equipment will be painted to match the exterior façade of the building structure.

T-Mobile Scope of Work – GSA VA Building

- Remove two (2) existing LAA (small cell) antennas.
- Install two (2) new mmWave antennas.
- Sector 1: Remove one (1) LAA antenna (7.8”x7.8”). Install one (1) new mmWave antenna (8”x11”) on new wall mounted pipe mount. (New pipe mount will place the antenna on the face of the building). Install power jumpers, fiber jumpers, and ground wire.
- Sector 2: Remove one (1) LAA (7.8”x7.8”) antenna. Install one (1) new mmWave antenna (8”x11”) on new wall mounted pipe mount. (New pipe mount will place the antenna on the face of the building). Install power jumpers, fiber jumpers, and ground wire.
- Sector 3: Remains the same
- Install two (2) new basebands in existing equipment cabinet.
- Construction timeframe: 3-5 days

GSA Approval Dates for T-Mobile Equipment at VA Building

Antennas:

(3) Ericsson Air1641 – October 2020

(1) Ericsson LAA 2205 Panel Antennas- October 2020

(2) Ericsson Air5322 (Proposed Swap w/existing LAA 2205)

(3) Ericsson Air6488 Panel Antennas- October 2020

(3) Ericsson APXVAARR24 Panel Antennas – October 2020

Radios:

(4) Ericsson Radio 4442 – October 2020

(4) Ericsson Radio 4449 – October 2020

Cabinets (200sf platform):

(2) Ericsson 6160 – October 2020

(1) Ericsson B160 – October 2020

T-Mobile Existing Equipment vs. Proposed Equipment

Existing Antenna Equipment

Total Equipment across all sectors = 12 panel antennas, 6 RRUs and 6 hybrid cables. 200sf equipment platform.

Sector 1: 4 panel antennas, 2 RRUs and 2 shared hybrid cable.

Sector 2: 4 panel antennas, 2 RRUs and 2 shared hybrid cable

Sector 3: 4 panel antennas, 2 RRUs and 2 shared hybrid cables

Proposed Antenna Equipment

Total Equipment across all sectors = 12 panel antennas, 6 RRUs and 6 hybrid cables. 200sf equipment platform.

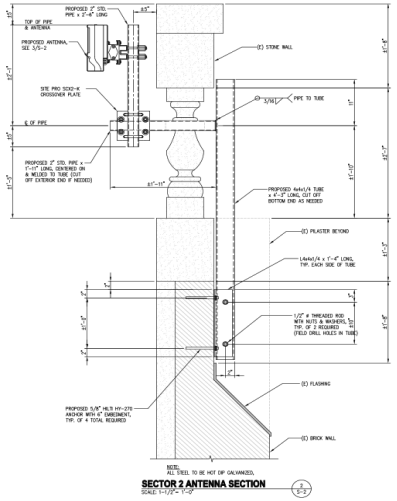
Sector 1: 4 panel antennas, 2 RRUs and 2 shared hybrid cable.

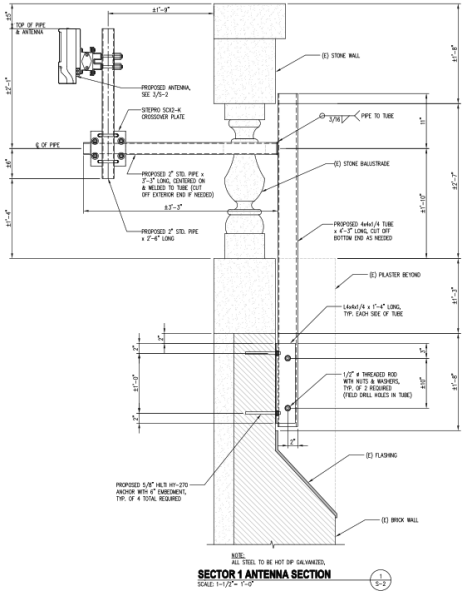
Sector 2: 4 panel antennas, 2 RRUs and 2 shared hybrid cable

Sector 3: 4 panel antennas, 2 RRUs and 2 shared hybrid cables

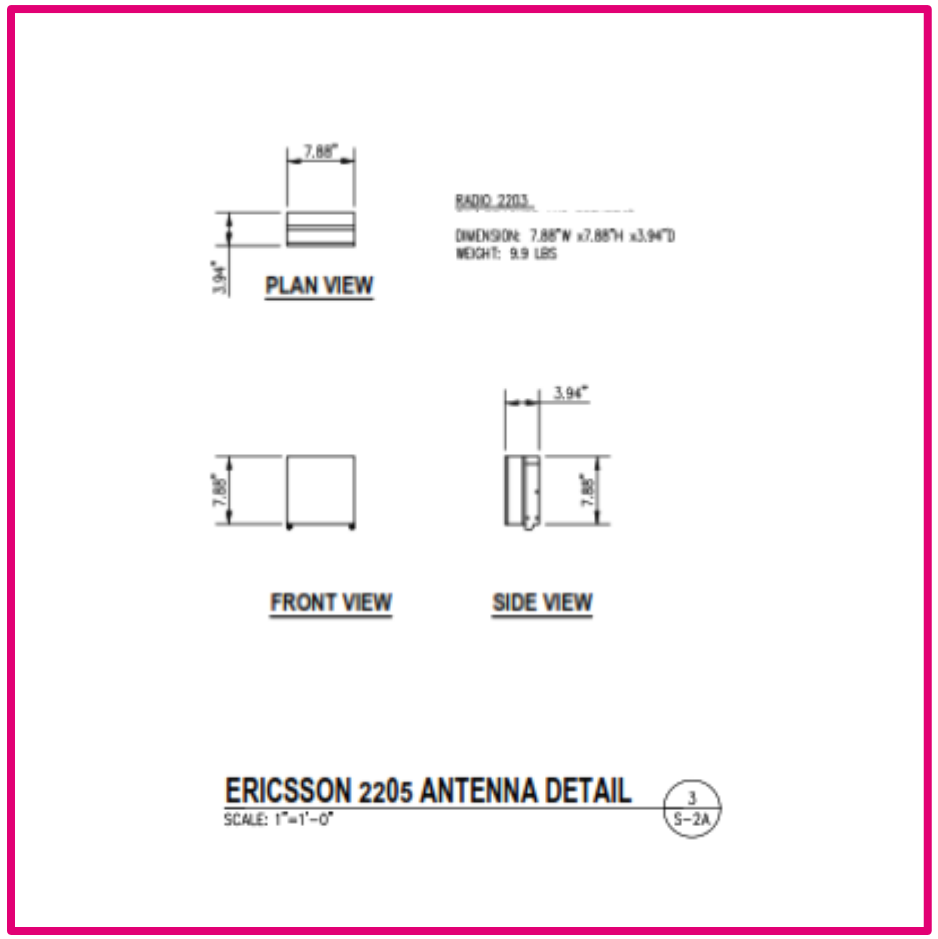
T-Mobile Existing Antenna Location – GSA VA Building

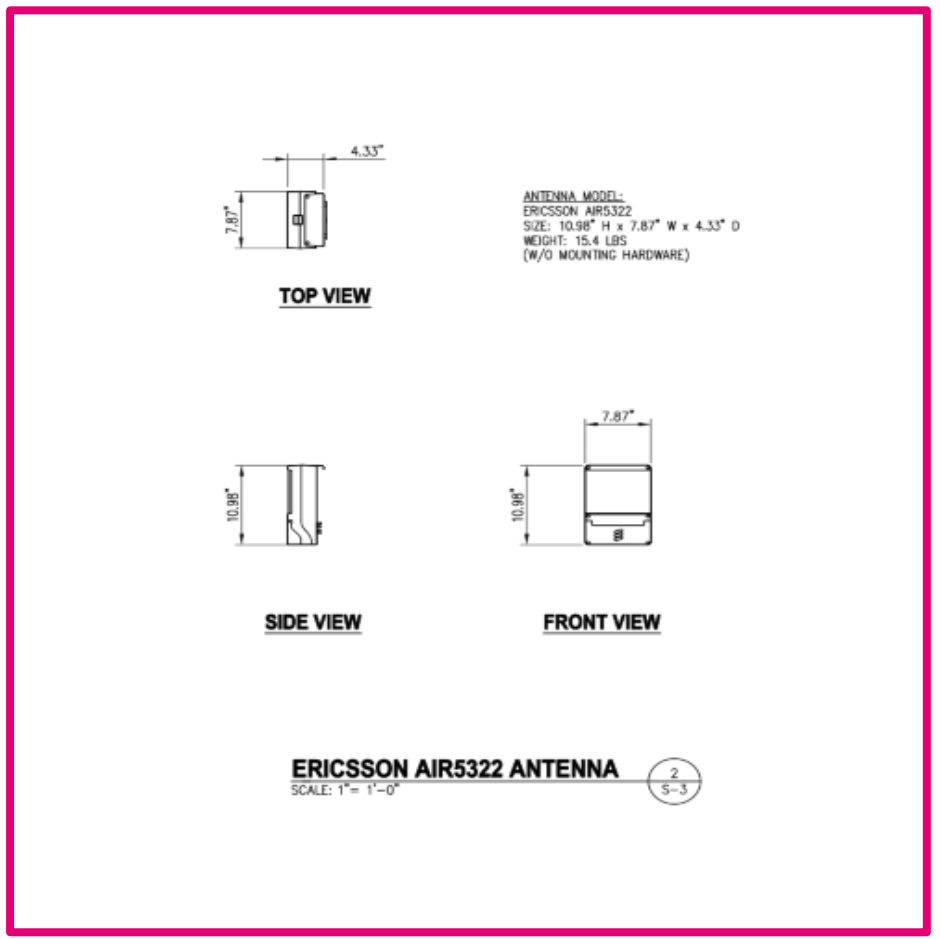
T-Mobile Proposed Equipment Installation - GSA VA Building



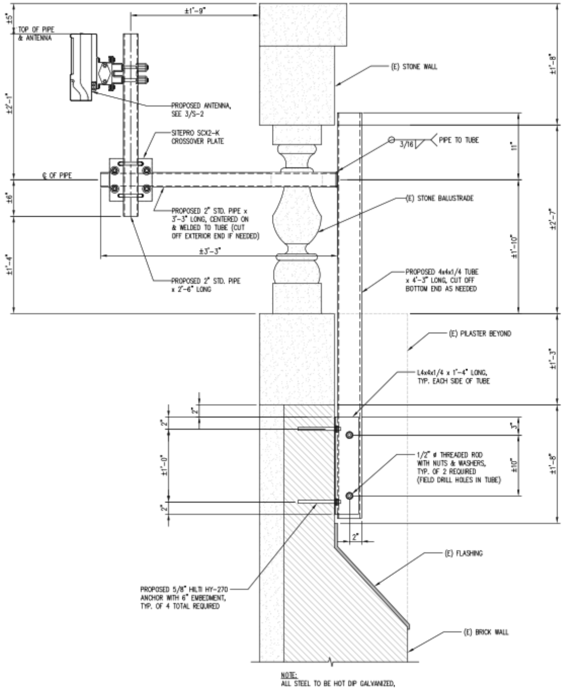


Antenna Specifications: Existing LAA 2205 vs. Proposed mmWave Air 5322

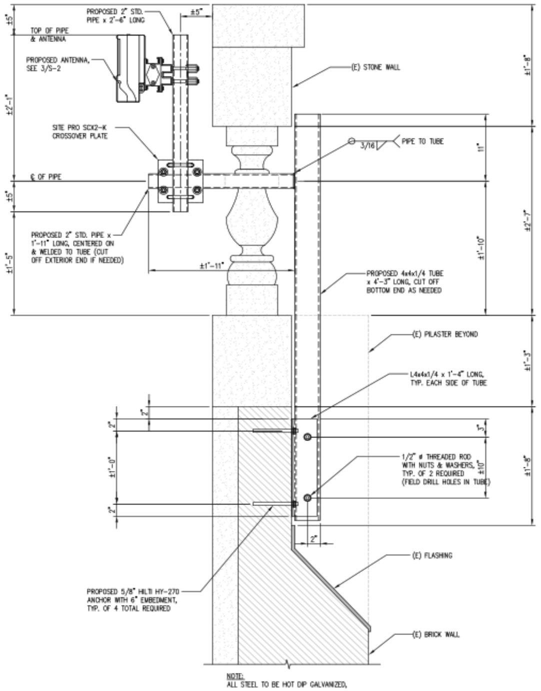




Proposed Mount Design



SECTOR 1 ANTENNA SECTION (1/S-2)
SCALE: 1-1/2"= 1'-0"



SECTOR 2 ANTENNA SECTION (2/S-2)
SCALE: 1-1/2"= 1'-0"

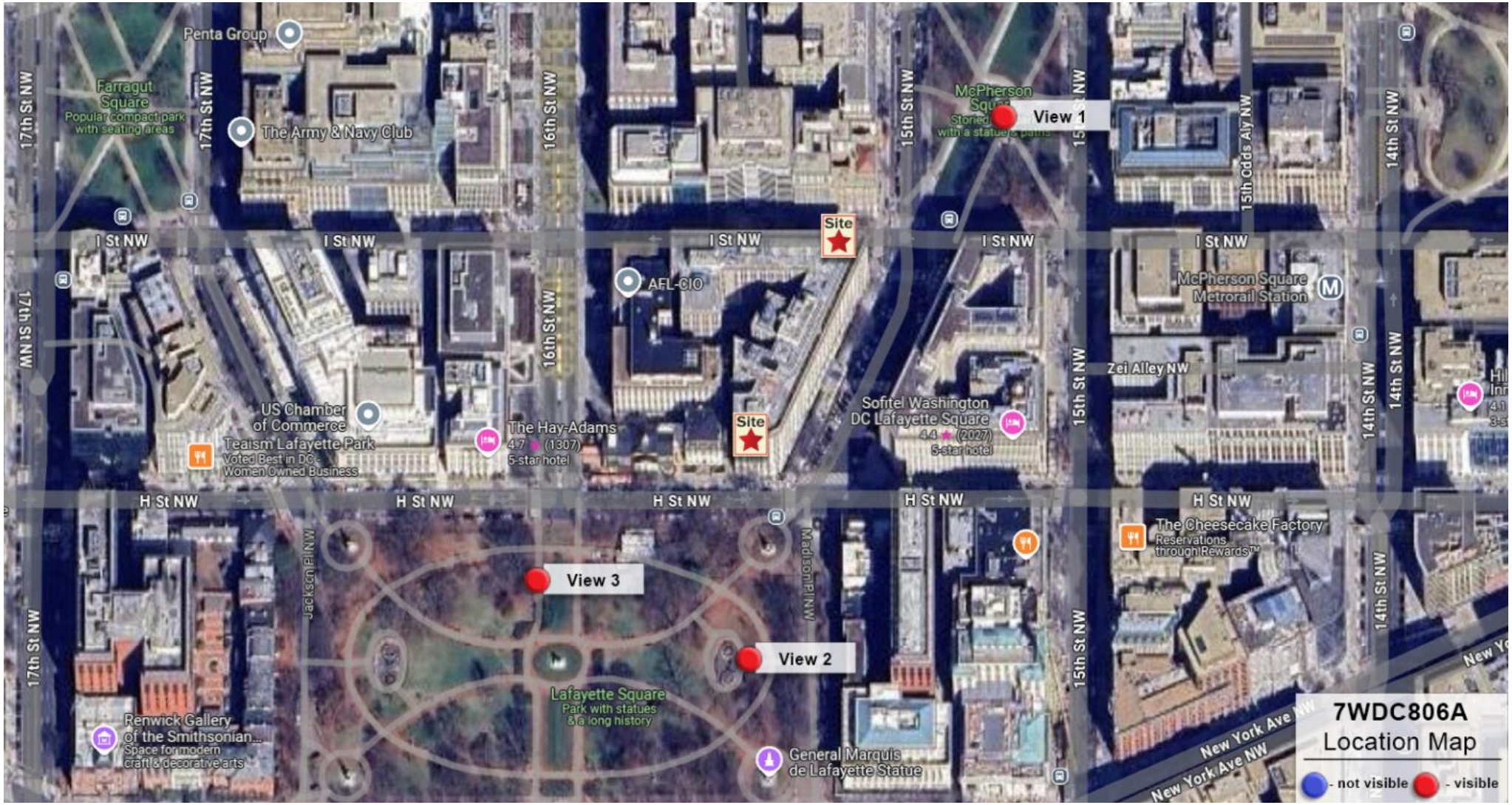
T-Mobile VA Building Construction Schedule mmWave

- **Day one:**
  Deliver and stage equipment.
  Install new wall mounts w/pre-painted pipes.
  Install new mmWave pre-painted antennas.
  Install power and fiber jumpers.
  Install new ground wires.

- **Day two:**
  Install basebands inside cabinet
  Orient antennas

- **Day three:**
  RF Integration
  Trouble Shoot
  Clean-up site

T-Mobile Photo Sims VA Building– Location Map



T-Mobile Existing vs. Proposed (View 1)

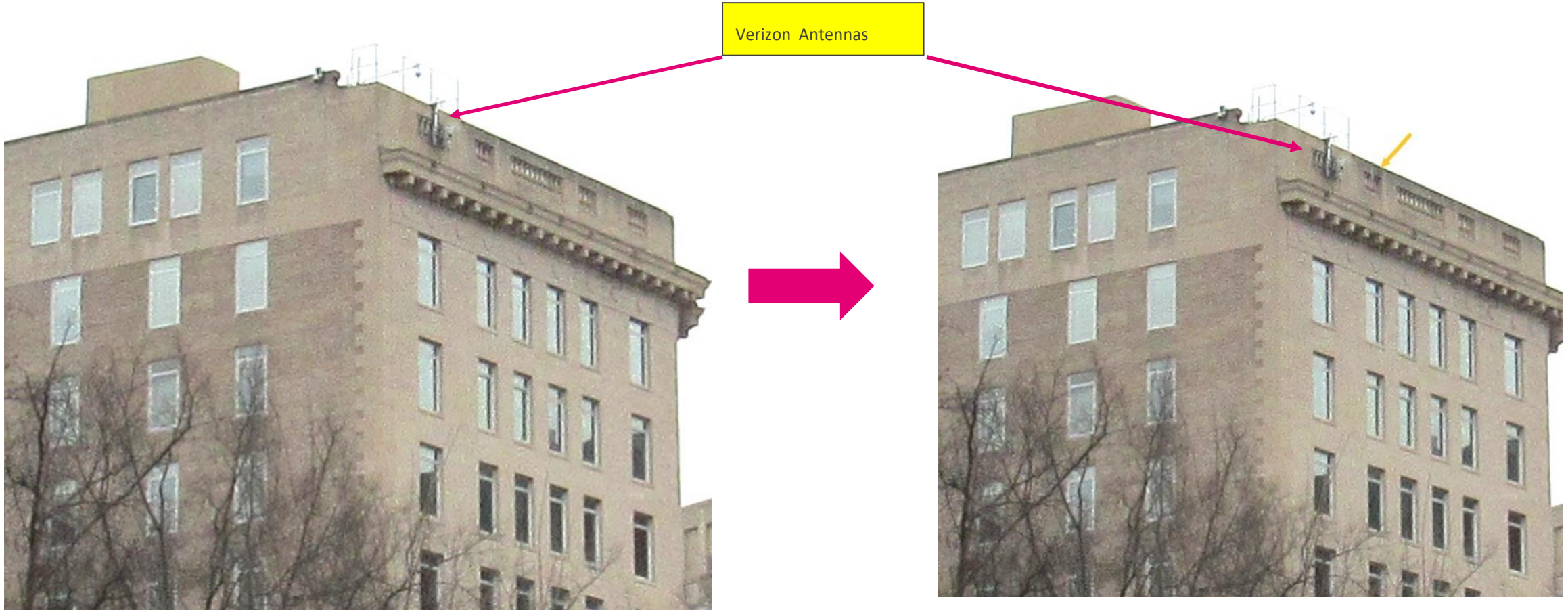
T-Mobile Existing vs. Proposed Sector 1 (Photo Sim) Close up View

T-Mobile Existing vs. Proposed (View 2)

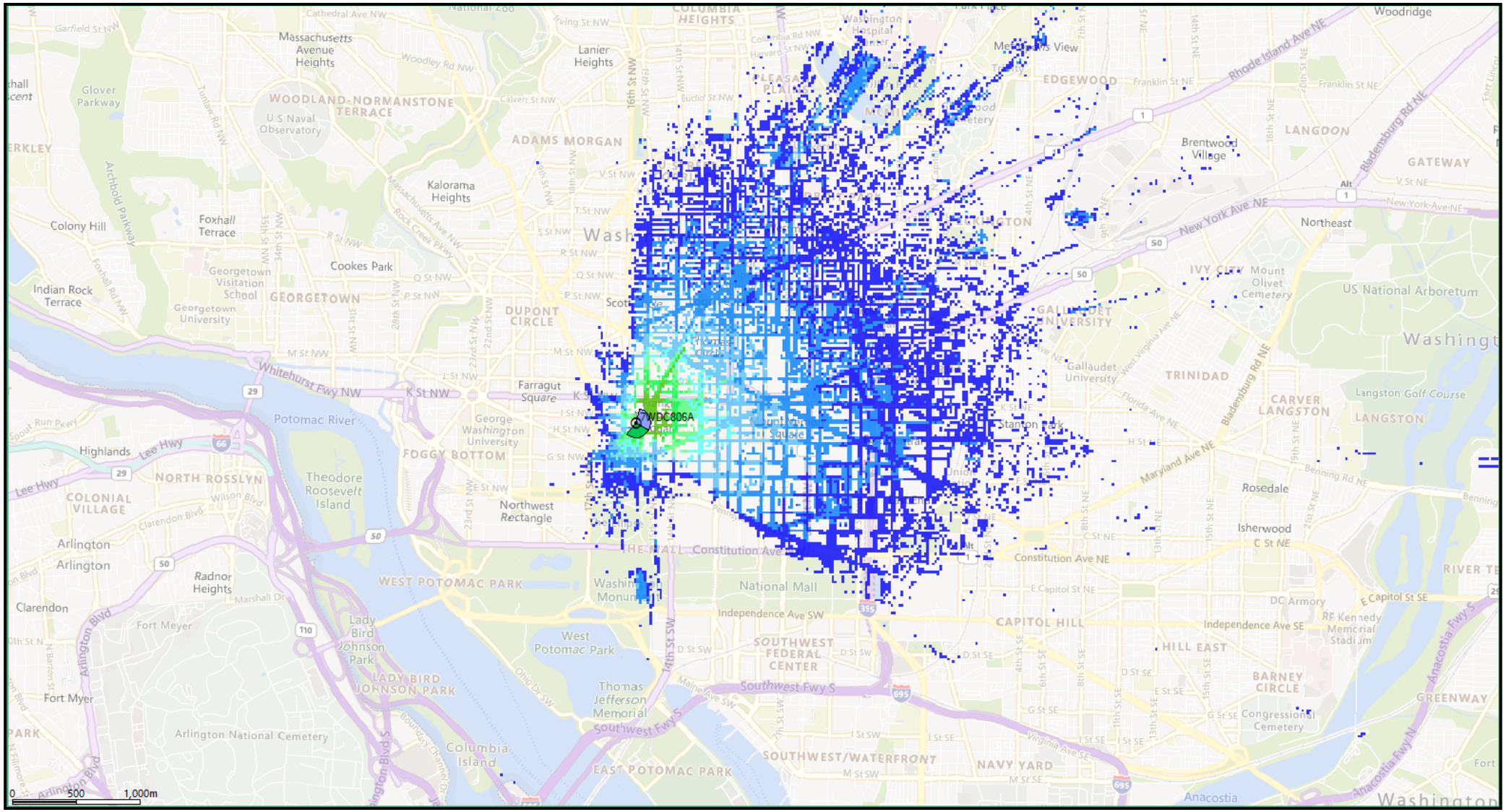
T-Mobile Existing vs. Proposed Sector 2 (Photo Sim) Close up View

T-Mobile Existing vs. Proposed (View 3)

T-Mobile Existing vs. Proposed Sector 3 (Photo Sim) Close up View



7WDC806A/VA Building mmWave Coverage (Zoom in View)



Best Signal Level (dBm) >=-94
Best Signal Level (dBm) >=-99
Best Signal Level (dBm) >=-104
Best Signal Level (dBm) >=-109
Best Signal Level (dBm) >=-114
Best Signal Level (dBm) >=-119
Best Signal Level (dBm) >=-124

The mmWave antennas are line of sight antennas that increase capacity for pedestrian cellular users.

T-Mobile Frequencies/Spectrum

Tech	Band	Bandwidth	DL Center Freq (Mhz)	UL Center Freq (Mhz)	
LTE	L2100	20	2145	1745	
LTE	L1900	15	1937.5	1857.5	
LTE	L700	5	731.5	701.5	
LTE	L600	5	619.5	665.5	
NR	N71	20	632	678	
NR	N41	100	2640	2640	
NR	N41	90	2545.29	2545.29	
NR	N1900	10	1970	1890	
NR	N1900	5	1992.5	1912.5	
NR	N258	100	24300	24300	mmWave
NR	N258	100	24400	24400	mmWave
NR	N258	100	24800	24800	mmWave
NR	N258	100	24900	24900	mmWave
NR	N258	100	25000	25000	mmWave
NR	N258	100	25100	25100	mmWave
NR	N258	100	25200	25200	mmWave

T-Mobile Site Audit – 7WDC806A/VA Building

A site audit was performed for T-Mobile on 2/27/2025.

The audit included the inspection of the following :

- Required Signage placement
- Antenna condition – Inspect paint, orientation, stability
- Mount condition- Inspected for signs of corrosion, lose or missing bolts, paint, correct ballast (sled mount)
- Cabling – Including the inspection of cable trays, sleepers, fasteners
- Grounding – Secured ground wires
- Stealth structures – paint, fasteners, stability
- Platform – ladder, railings, clear walkway, corrosion, sharp edges, holes in platform, cabinet
- Obsolete equipment
- Walkways – clear access, pavers, mats, etc.

Conclusion: No deficiencies were identified.