T-Mobile Project Summary – GSA HHS Building (7WDC151B)

200 Independence Avenue SW, Washington, DC

May 9, 2025

Project Summary

- The HHS Building is located on Independence Avenue SW between 2nd Street and 3rd Street SW, with an address of 200 Independence Avenue SW Washington, DC. This site services the U.S. Capitol and National Mall area.

- T-Mobile is requesting approval to install one small mmWave antenna on the roof of the HHS Building. The purpose of the antenna swap 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 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 near the U.S. Capitol. 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 HHS Building (7WDC151B)

- The T-Mobile cellular equipment was installed on the HHS 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 the removal of two (2) existing antennas and the installation of two (2) new antennas. The new antennas will be placed at the front of the building using a similar mount design as the existing Verizon antennas. The antennas will be installed without penetrations to the façade or the roof.

- 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.

T-Mobile Scope of Work – GSA HHS Building

- Remove two (2) existing antennas and install two (2) new antennas of similar size.
- Sectors 2 & 3 remain the same.
- Sector 1: Remove one (1) existing LAA antenna (7.8”x7.8”) from existing sector mount. Install one (1) new mmWave antenna (8”x11”) on a ballasted overhang flush mount placed near the edge of the roof. Top of the antenna to be flush with the roof. Install grounding for new antenna. Install 1 DC power line and 1 shared fiber line (shared with sector 4).
- Sector 4: Remove one (1) existing LAA antenna (7.8”x7.8”) from existing sector mount. Install one (1) new mmWave antenna (8”x11”) on a ballasted overhang flush mount placed near the edge of the roof. Top of the antenna to be flush with the roof. Install grounding for new antenna. Install 1 DC power line and 1 shared fiber line (shared with sector 1).
- All new antennas and ancillary equipment to be painted to match the exterior façade of the building.
- Install new basebands in existing equipment cabinet.
- Construction timeframe: 3 days

T-Mobile Existing Equipment vs. Proposed Equipment

Existing Antenna Equipment

Total Equipment across all sectors - 15 panel antennas, 1 multibeam antenna, 21 RRUs and 10 hybrid cables. 325sf equipment platform.

Sector 1: 3 antennas, 1 multibeam antenna, 2 RRUs and 2 shared hybrid cable

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

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

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

Proposed Antenna Equipment

Total Equipment across all sectors - 15 panel antennas (which includes 2 mmWaves), 1 multibeam antenna, 21 RRUs, 10 hybrid cables, 2 DC power lines, 1 shared fiber line. 325sf equipment platform.

Sector 1: 3 antennas, 1 multibeam antenna, 2 RRUs and 2 shared hybrid cables, 1 DC power line and 1 shared fiber line (shared w/sector 4)

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

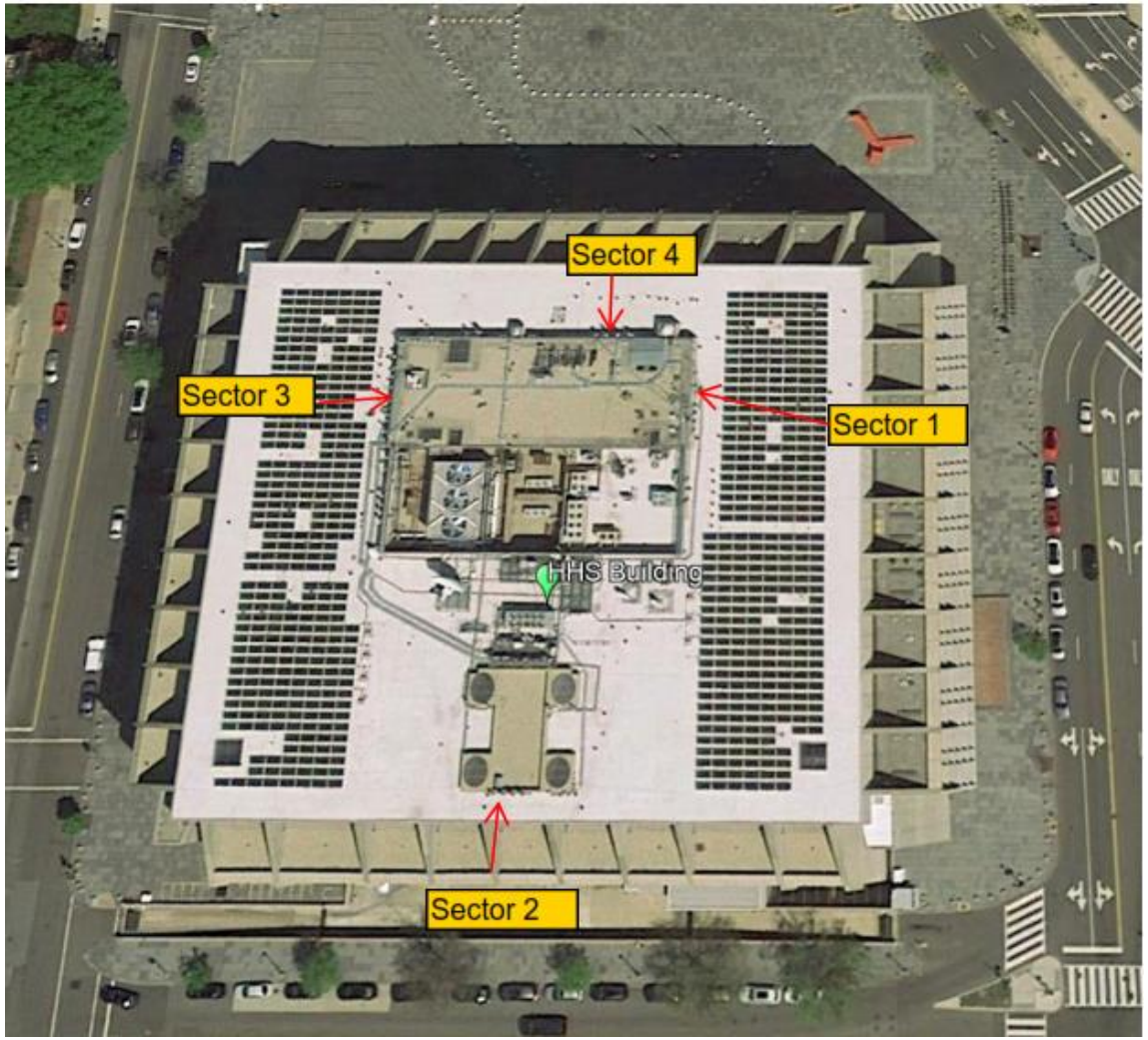
Sector 3: 4 antennas, 2 RRUs and 2 shared hybrid cables

Sector 4: 4 antennas, 2 RRUs, 2 shared hybrid cables, 1 DC power line and 1 shared fiber line (shared w/sector 1)

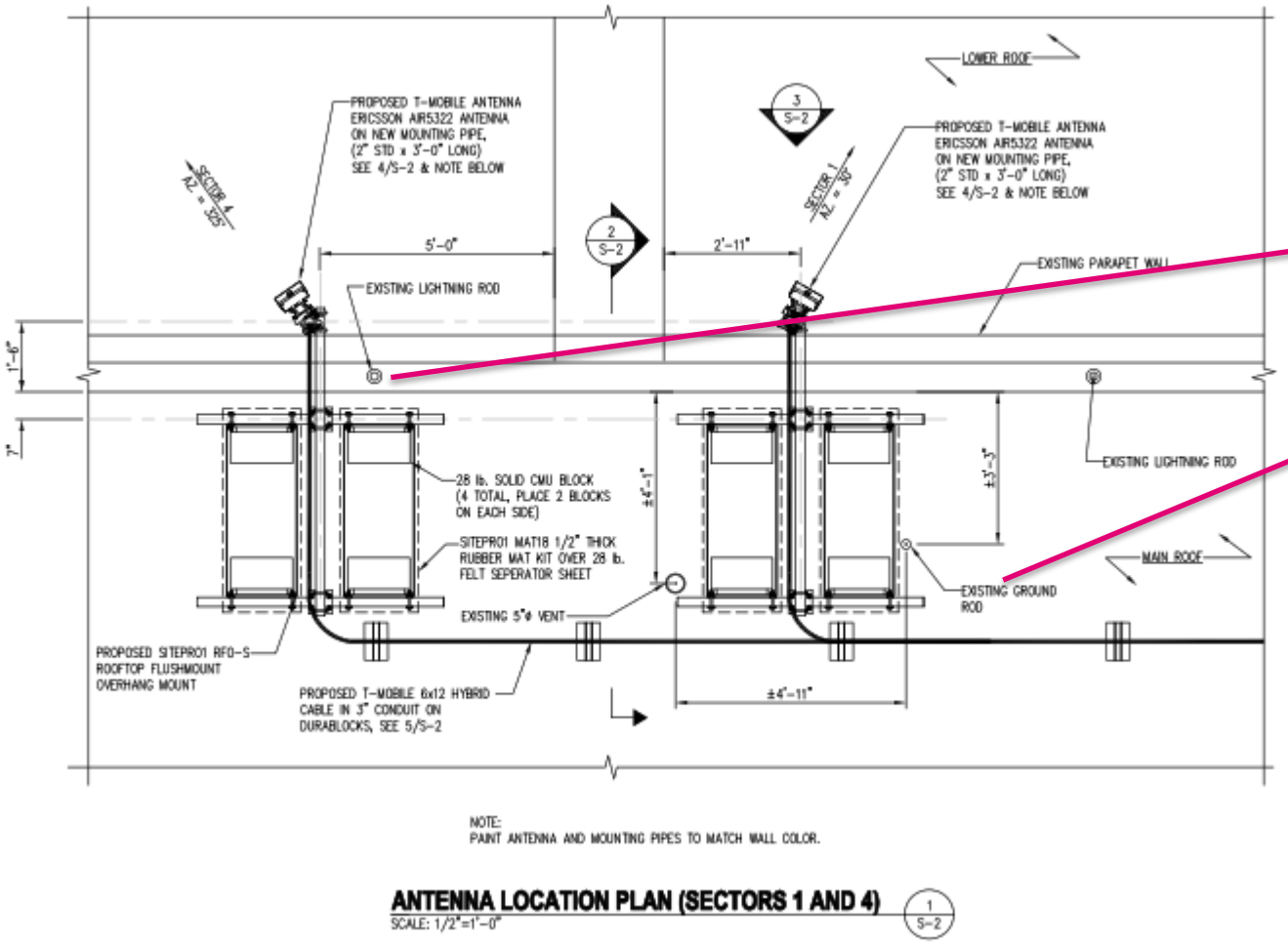
GSA Approval Dates for T-Mobile Equipment at HHS Building

Antennas:
(1) Air21 Panel Antenna – September 2016
(2) Ericsson Air1641 – October 2020
(2) Ericsson LAA 2205 Panel Antennas- October 2020
(2) Ericsson Air5322 (Proposed Swap w/existing LAA 2205)
(4) Ericsson Air6449 Panel Antennas- October 2020
(3) Ericsson APXVAARR24 Panel Antennas – October 2020
(1) Multibeam Spherical Antenna – October 2020
Radios:
(4) Ericsson Radio 4442 – October 2020
(4) Ericsson Radio 4449 – October 2020
(15) Ericsson Support Radios for the multibeam antenna – October 2020
Cabinets:
(2) Ericsson 6160 – October 2020
(1) Ericsson B160 – October 2020

T-Mobile Existing Antenna Location - GSA HHS Building



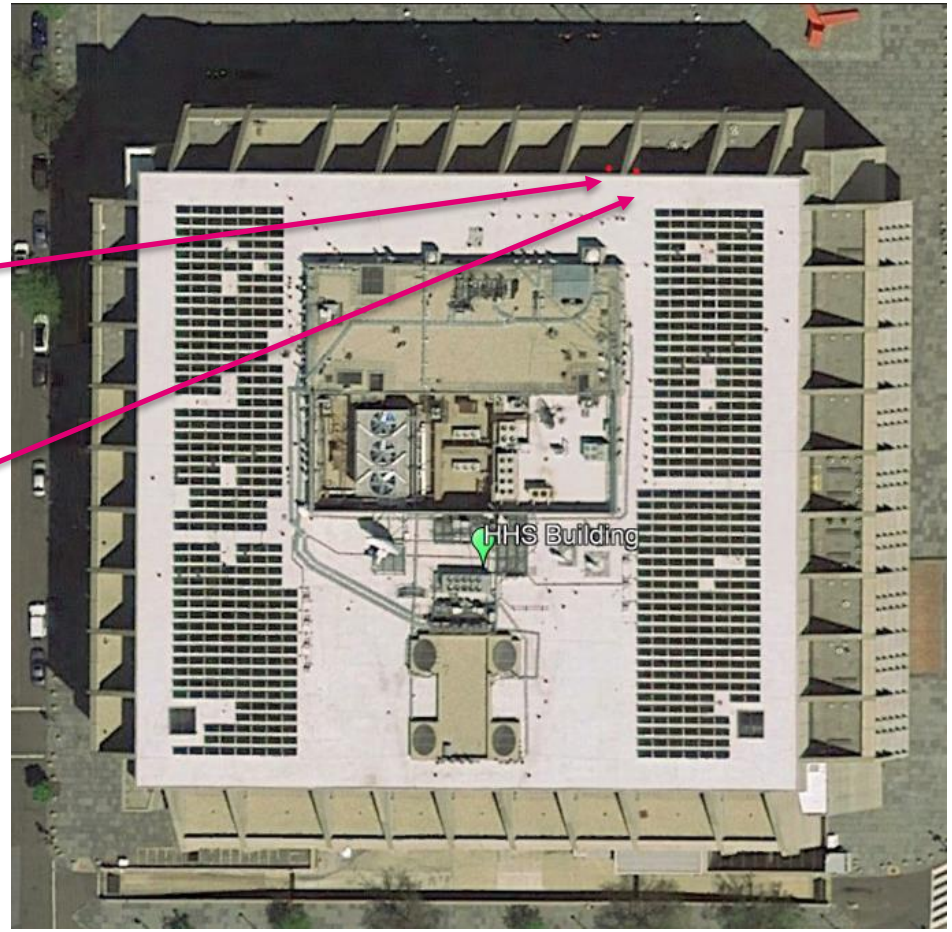
T-Mobile Proposed Equipment Installation - GSA HHS Building



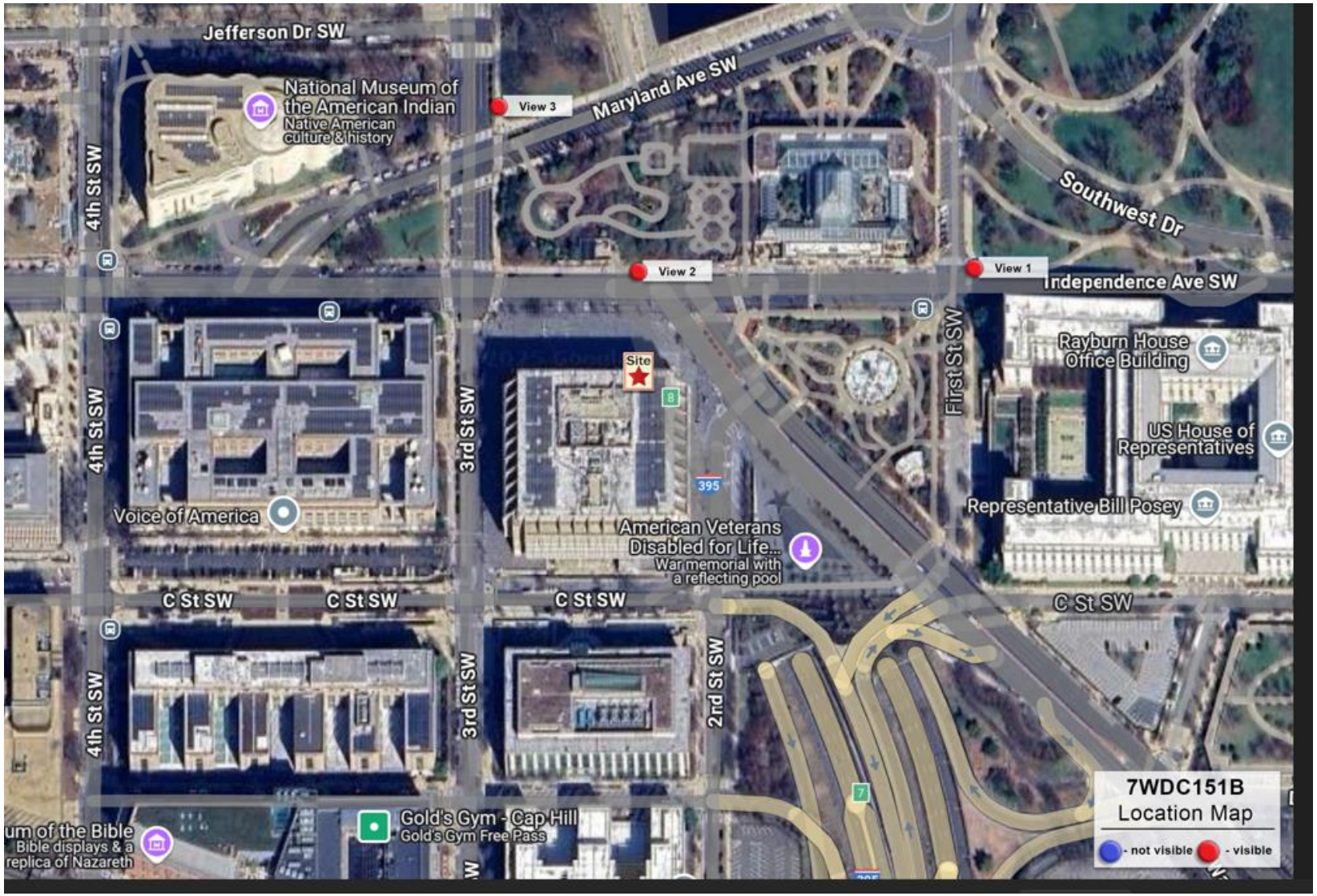
NOTE:
PAINT ANTENNA AND MOUNTING PIPES TO MATCH WALL COLOR.

ANTENNA LOCATION PLAN (SECTORS 1 AND 4) 1/S-2

SCALE: 1/2"=1'-0"



T-Mobile Photo Sims – Location Map



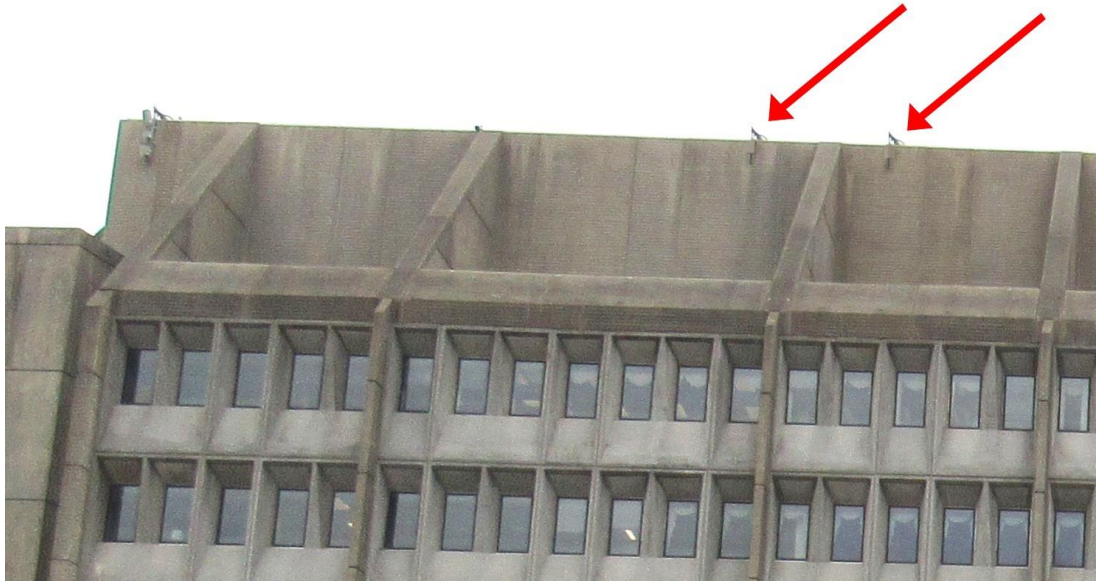
T-Mobile Existing vs. Proposed (View 1)

T-Mobile Existing vs. Proposed (View 2)

T-Mobile Existing vs. Proposed (View 3)

T-Mobile Existing vs. Proposed (Close-Up)

Existing w/Verizon on the Corner

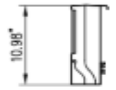


Proposed T-Mobile mmWave Antennas

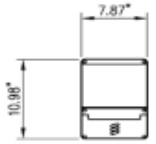
Antenna and Mount Specifications: Proposed mmWave Air 5322

TOP VIEW

ANTENNA MODEL:
ERICSSON AIR5322
SIZE: 10.98" H x 7.87" W x 4.33" D
WEIGHT: 15.4 LBS
(W/O MOUNTING HARDWARE)

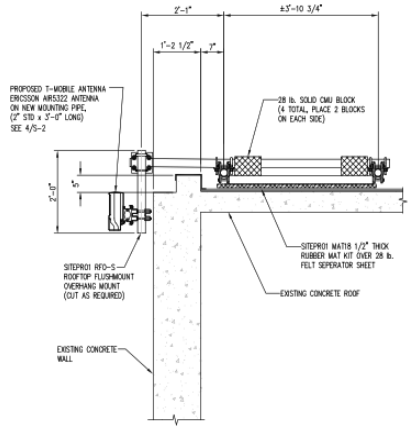


SIDE VIEW

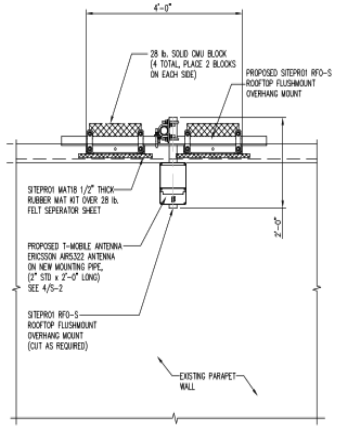


FRONT VIEW

ERICSSON AIR5322 ANTENNA
SCALE: 1"= 1'-0"
2
S-3



ANTENNA SUPPORT FRAME SECTION
SCALE: 3/4"=1'-0"
2
S-2



ANTENNA SUPPORT FRAME ELEVATION
SCALE: 3/4"=1'-0"
3
S-2

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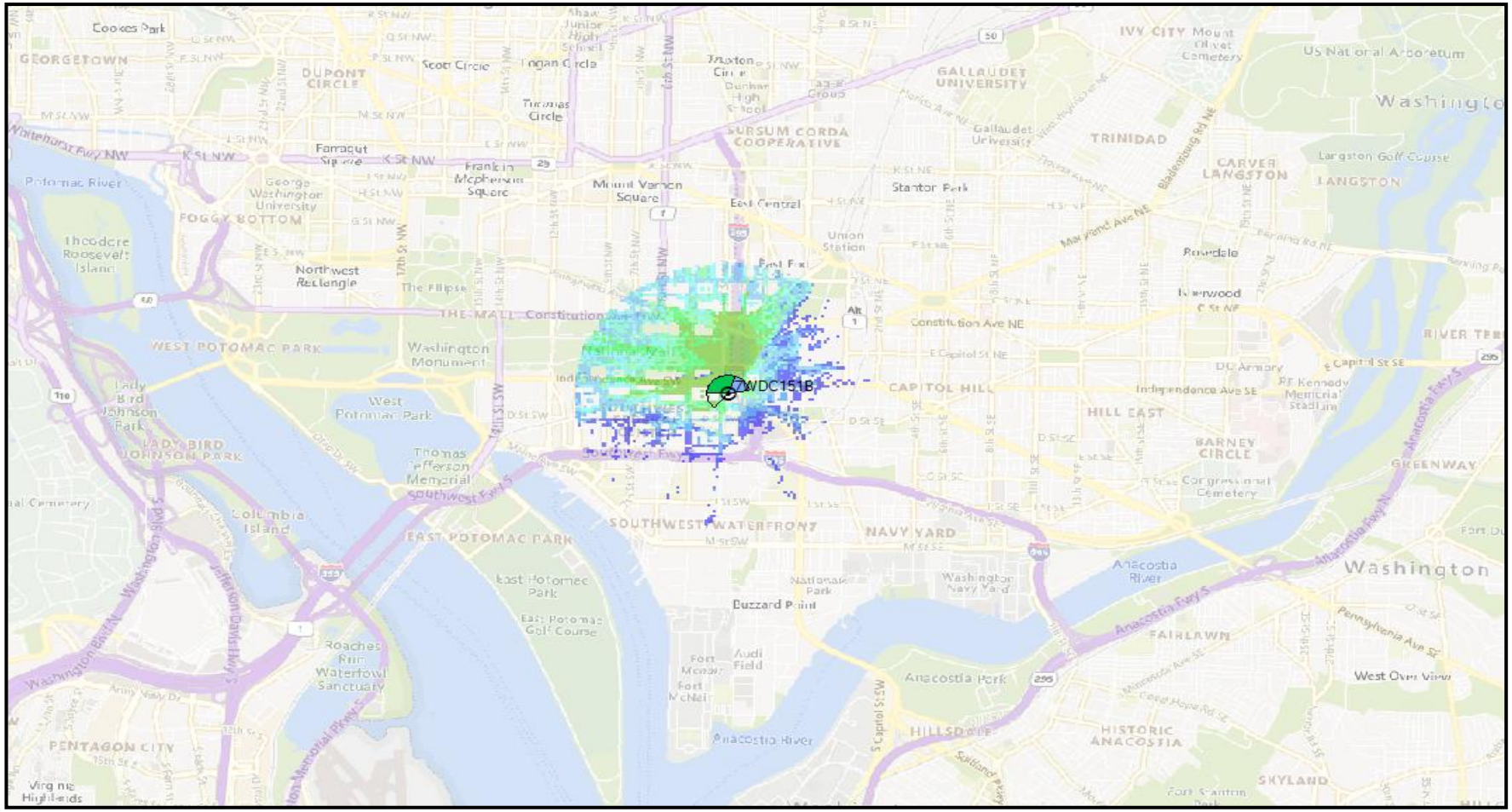
T-Mobile HHS Building Construction Schedule mmWave

- **Day one:**
  Deliver and stage equipment.
  Install new ballast mounts
  Install conduits on durablock sleepers for DC power lines and shared fiber line.

- **Day two:**
  Install pre-painted mmWave antennas
  Install basebands inside cabinet

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

T-Mobile Coverage Map for 7WDC151B/HHS Building – All Bands



The mmWave antennas do not improve coverage, they increase capacity for 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

Structural Inspection Letter- 7WDC151B/HHS Building – 4/21/2025

entrex
communication services, inc.
6100 Executive Blvd, Suite 430 • Rockville, MD 20852 • Tel: 202.408.0960

April 30, 2025

Ms. Emily Nelms
T-Mobile USA
12050 Baltimore Ave, Beltsville, MD 20852

Re: T-Mobile Site No. 7WDC151B, HHS Building
200 Independence Avenue, SW Washington, DC 20024
Entrex Project Number: 1168.049

Dear Emily:

This letter is to confirm that Entrex Communication Services (Entrex) has conducted a visual inspection of the existing T-Mobile antennas and antenna support frames at the above referenced site on April 28, 2025, to assess the structural condition of the existing T-Mobile installation.

The inspection of the T-Mobile installation including the following components:

1. Equipment cabinet support platform on main roof
2. Screened antenna support frame on north penthouse wall
3. Ballasted RRU support frames on penthouse roof
4. Wall mounted antennas on penthouse walls
5. Cable trays on building roof & penthouse roof

Our inspection did not find any deficiencies, deterioration, or any other issues with the existing components listed above, and we therefore certify that the existing installation is in good structural condition, and in compliance with the original design intent.

Please let us know if you have any questions or if we can be of further assistance.

Sincerely,

Camille Shabshab, P.E.
President
Entrex Communication Services, Inc.