

# STAFF RECOMMENDATION

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NCPC File No. 6720



## NATIONAL INSTITUTES OF HEALTH - BUILDING 10 CINGULAR PCS WIRELESS TELECOMMUNICATION ANTENNAS

Bethesda, Montgomery County, MD

Submitted by the National Institutes of Health (NIH)

November 30, 2006

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### Abstract

The National Institutes of Health (NIH) has submitted plans for the installation of a wireless telecommunications facility to provide voice, data, video, and broadband coverage. The facility will consist of nine (9) transmitting and receiving antennas at Building 10 located on the NIH main campus in Bethesda, Maryland. Three sectors of three transmitting and receiving panel antennas will be sled-mounted 15 feet above the main roof level, but not exceeding the height of the penthouse roof. All equipment associated with the antennas will be in eight equipment cabinets, also located on the main roof. Work will be phased, with initial construction to include the installation two antennas per sector and six equipment cabinets; a third antenna will be added to each sector, along with the remaining two equipment cabinets, as future capacity is needed.

### Commission Action Requested by Applicant

Approval of preliminary and final building plans pursuant to 40 U.S.C. § 8722(a) and (b)(1).

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### Executive Director's Recommendation

The Commission:

**Approves** the preliminary and final building plans for the installation of nine transmitting and receiving antennas, and associated equipment at the NIH – Building 10, as shown on NCPC Map File No. 3101.20(38.30)42147, for a period not to exceed five (5) years.

**Recommends** that the applicant secure and control access to the building roof areas and post radio frequency exposure notices at all rooftop access points, delineate exposure zones in a highly visible fashion, and post drawings and warning signs on the penthouse walls and/or doorways indicating areas where the maximum radiofrequency radiation exposure could exceed 100% of permissible limits.

**Requires** the applicant develop a submission to the Commission addressing the existing antennas at the NIH building that will require relocation as part of ongoing roof work for Building 10; and that the overall configuration changes to roof antennas take into consideration methods of reducing the cumulative radiation levels.

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**PROJECT DESCRIPTION**

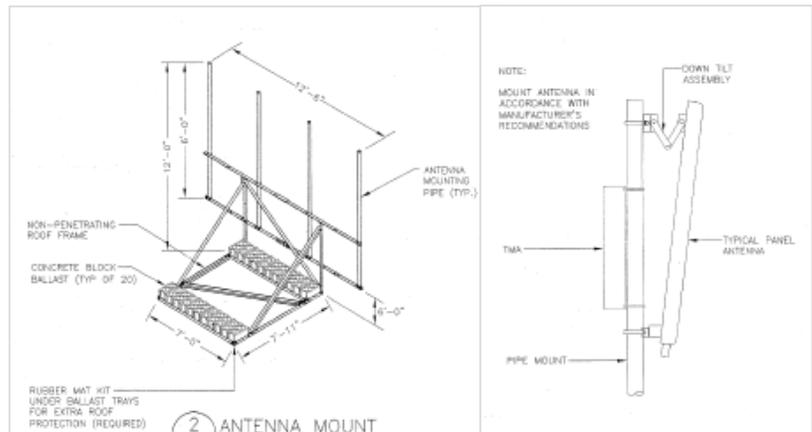
Site



The NIH is located in Bethesda, Montgomery County, Maryland; the campus is bounded by Wisconsin Avenue on the east, Old Georgetown Road on the west, West Cedar Lane on the north, and various “drives” on the south; Building 10 (the “NIH Clinical Center”) located at the center of the campus. The proposed locations of the antennas are limited to the north, east, and southwest elevations of the building. There are several existing Sprint and T-Mobile antennas on the roof; there will be no functional relationship to the existing antennas and the proposed Cingular facility.

Proposal

The proposed facility will provide enhanced voice, data, video, and broadband coverage for the NIH campus as well as increase capacity for Cingular service along to commercial and recreational entities along Wisconsin Avenue, Old Georgetown Road, and West Cedar Lane. The proposed facility will be unmanned and is expected to operate 24 hours per day, without interruption.

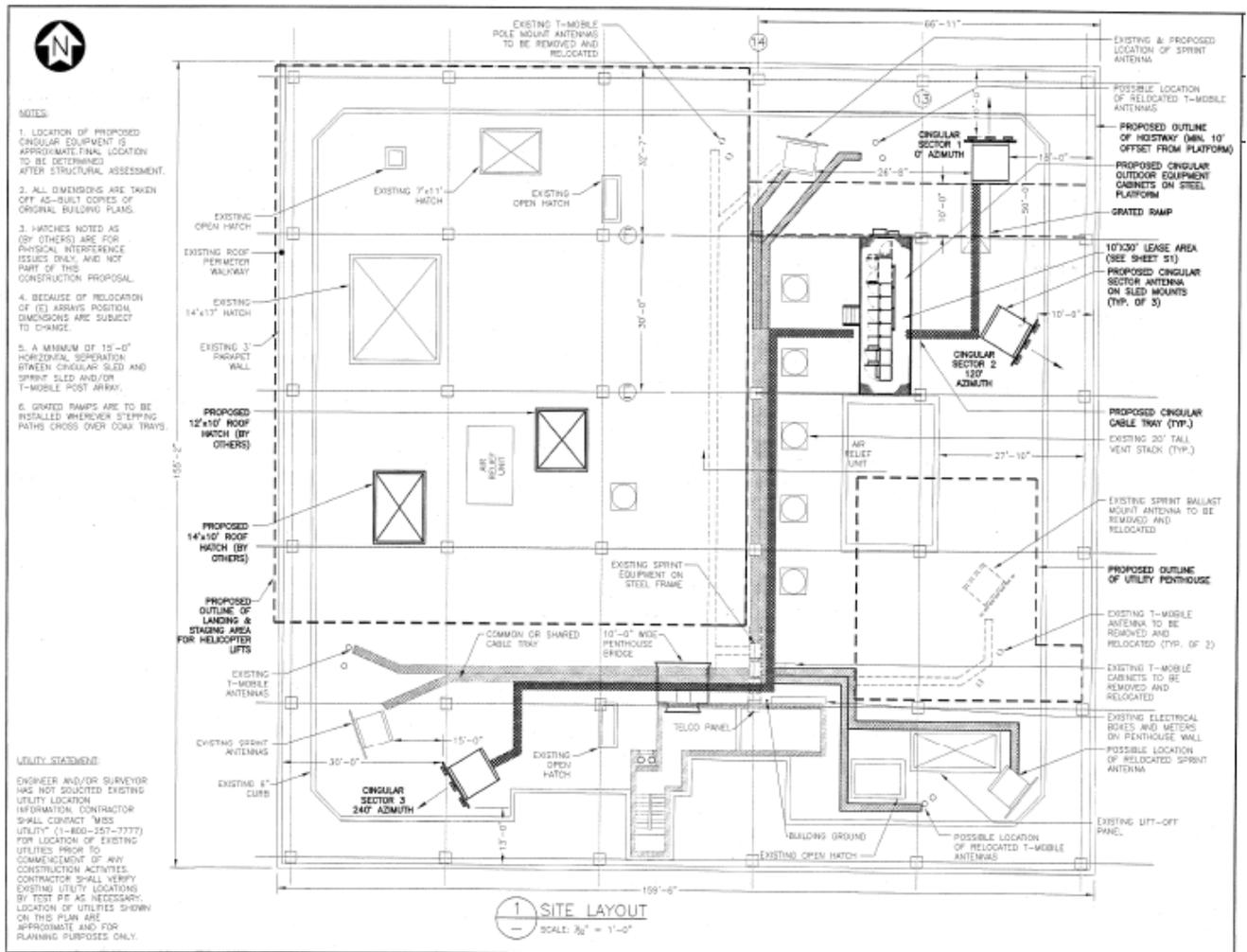


**PROPOSED ANTENNA DETAILS**

Three sectors, each containing two antennas, will be sled mounted on the roof and site approximately 15 feet above the main roof level (bet below the penthouse roof level). A third antenna may be added to each sector, as future capacity is needed. One antenna sector will face north, a second sector will face east, and a third will face southwest.

The proposal includes a single antenna model of galvanized steel and measuring 54'7" in length, 10.3" in width, and 5.5" in depth. These are the smallest available for Cingular to provide the high-speed data rate for their customers. Operating frequencies will be 869.04-879.99 & 890.01-891.48 MHz analog spectrum, and 1950-1965 & 1985-1990 MHz within PCS spectrum. All will be sled-mounted and placed so that planned roof work at Building 10 can be carried out without relocation of the antennas. To camouflage the antennas and support structures, all will be painted to blend in with the sky; no screening is proposed for this work. The associated equipment will be located in equipment cabinets (one Purcell, three BTS, and two UMTS) measuring a maximum of 76.4" x 35" x 35"; all cabinets will be placed on a 10'x30' steel roof platform and will be set back from the roof edge to eliminate visibility from the ground.

The facility will comply with all FCC and OSHA requirements for notification of occupants; signage informing that transmitting antennas are in use will be placed at all access points to the roof level as well as behind antennas. The roof is a secured area and is not accessible to the general public.



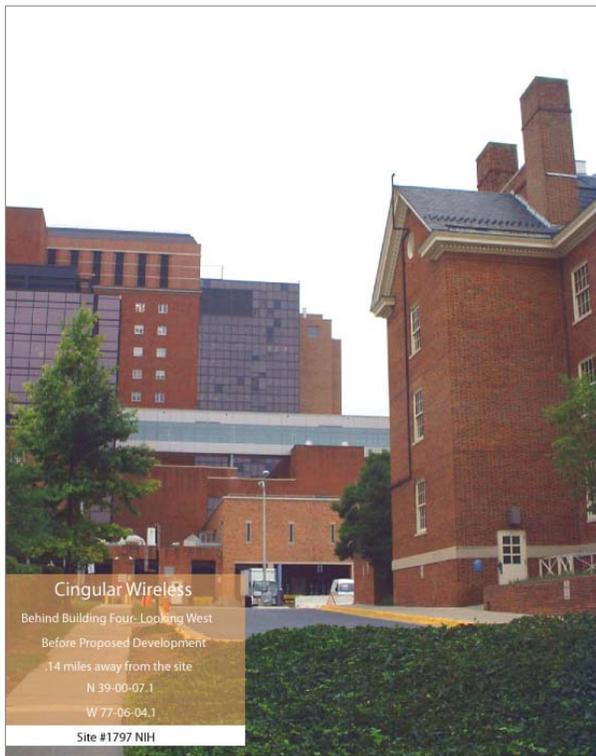
**NATIONAL INSTITUTES OF HEALTH – BUILDING 10  
ROOF PLAN WITH PROPOSED ANTENNA LOCATIONS**

PROJECT ANALYSIS

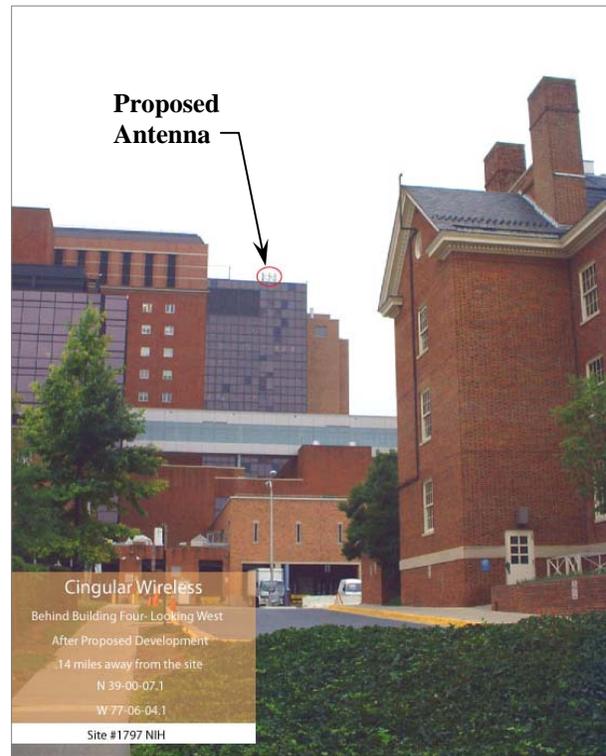
Executive Summary

**Staff finds that the proposed work meets the general criteria of Section 3 of the NCPC Antenna Guidelines, and recommends approval of the proposed antenna installation, for a period of five (5) years.** The applicant will locate the antennas to minimize their appearance, and they will not be readily apparent to the public at ground level. The associated radio equipment will be setback from the roof edge and will not be visible from the street. The proposal is consistent with the Commission’s Antenna Guidelines and with the Telecommunications Act of 1996 that encourages placement of commercial antennas on federal property.

In context with the location of the proposal, the building plans identify several existing antennas that appear to require relocation as part of planned roof work. While the current RF evaluation has taken into account the type and power emissions of the proposed antennas, no other additional or necessary information has been provided for the existing antennas to be relocated. Consequently, staff believes that the Commission should request NIH to submit project information and submittal data for these existing antennas in compliance with NCPC’s Guidelines and Submission Requirements for Antennas on Federal Property in the National Capital Region.



**BEFORE ANTENNA INSTALLATION**



**PROPOSED ANTENNA INSTALLATION  
PHOTO SIMULATION**

### Radiofrequency Radiation

The applicant has submitted certification that the facility will not disturb or diminish existing radio, television, and telephone signals, or the operation of other household electronic appliances, and that Cingular will operate within its spectrum of frequencies and not interfere with the county's emergency or other frequencies or with hospital equipment. The proposed antenna complies with the RF radiation guidelines adopted by the FCC as well as OSHA health and safety regulations.

While the proposed antennas do not independently exceed RF radiation limits established by the FCC, an analysis of cumulative effects indicates that limited portions near the south edge of the roof have the potential to exceed 100% of Maximum Permissible Exposure (MPE) FCC limits established for the general public and occupational personnel. Due to this exposure level, the analysis recommends posting of notices and delineation of areas exceeding exposure limits. The report recommends that workers use an RF monitor, follow time exposure limits, and observe a cool down period in a low exposure area following work. No rooftop areas are accessible to the general public.

Staff recommends that the Commission request that the NIH secure and control access to the building roof areas and post radio frequency exposure notices at all rooftop access points, delineate exposure zones in a highly visible fashion, and post drawings and warning signs on the penthouse walls and/or doorways indicating areas where the maximum radiofrequency radiation exposure could exceed 100% of permissible limits.

Staff also recommends that the overall configuration of antennas (as part of ongoing roof work) should take into consideration methods of reducing the potential cumulative radiation levels.

### CONFORMANCE

#### Comprehensive Plan for the National Capital: Federal Elements

Staff has determined that the antenna installation would not have an effect on other federal facilities and is consistent with the Federal Elements of the Comprehensive Plan.

#### National Environmental Policy Act (NEPA)

Pursuant to the regulations implementing the National Environmental Policy Act, the NIH conducted an independent NEPA evaluation of this project and submitted the results to NCPC. According to the documentation submitted to NCPC, the results of this evaluation demonstrate that this project will not have any adverse impact on the natural, built, or human environment. The NIH has concluded that the project is categorically excluded from NEPA based on their environmental review.

#### National Historic Preservation Act

NIH has concluded that no National Historic Preservation, Section 106, review of the antennas is required since there are no direct or visual effects on historic properties in the area. The Maryland State Historic Preservation Office concurs with this determination.