

STAFF RECOMMENDATION

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NCPC File No. 6638



**OFFICE OF PERSONNEL MANAGEMENT,
THEODORE ROOSEVELT BUILDING**
INSTALLATION OF 10 WIRELESS COMMUNICATION ANTENNAS
1900 E Street, NW
Washington, DC

Submitted by the General Services Administration

February 24, 2006

Abstract

The General Services Administration has submitted plans for the installation of ten transmitting and receiving antennas at the Office of Personnel Management headquarters building at 1900 E Street, NW. Three sets of three transmitting and receiving panel antennas will be installed at the roof and penthouse levels of the structure and an associated equipment cabinet would be constructed on the building's roof at the base of the penthouse. A GPS antenna will also be located on the roof of the building.

Commission Action Requested by Applicant

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

Executive Director's Recommendation

The Commission:

Approves the preliminary and final building plans for the installation of nine transmitting and receiving antennas, one GPS antenna, and an associated equipment cabinet at the Office of Personnel Management Building, 1900 E Street, NW, as shown on NCPC Map File No. 1.35 (38.30)-41967, for a period not to exceed 5 years.

Recommends to the General Services Administration that access to the building roof should be controlled and locked if possible. Moreover, necessary radio frequency non-ionizing radiation (RF) warning signs shall be placed at the rooftop access areas in a visible fashion near all roof access doors, and that roof drawings indicating areas where the Maximum Permissible Exposure (MPE) for the general and occupational radio frequency exposure levels could exceed 100-percent of the standard, should be posted on the penthouse walls or roof doors.

Requires the General Services Administration develop a submission to the Commission addressing the existing antennas at the Office of Personnel Management Building, and obtain approval regarding all building antennas that have not been previously reviewed by NCPC.

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PROJECT DESCRIPTION

Site

The Office of Personnel Management building is bounded by E Street, NW, to the north, and Virginia Avenue, NW on the south. On the east and west are 19th Street and 20th Street respectively. The proposed location of the antennas is limited to the western, northern and south ends of the building at the roof.

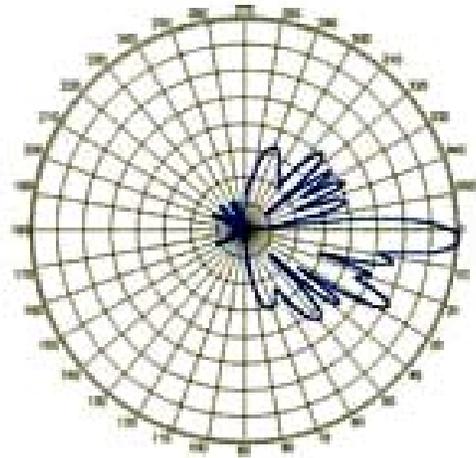
Background

The General Services Administration has submitted plans for the installation of T-Mobile antennas at the roof and penthouse of the building, and a GPS location antenna on the roof of the building. One associated equipment shed will also be located on the roof of the building adjacent to the penthouse.

Proposal

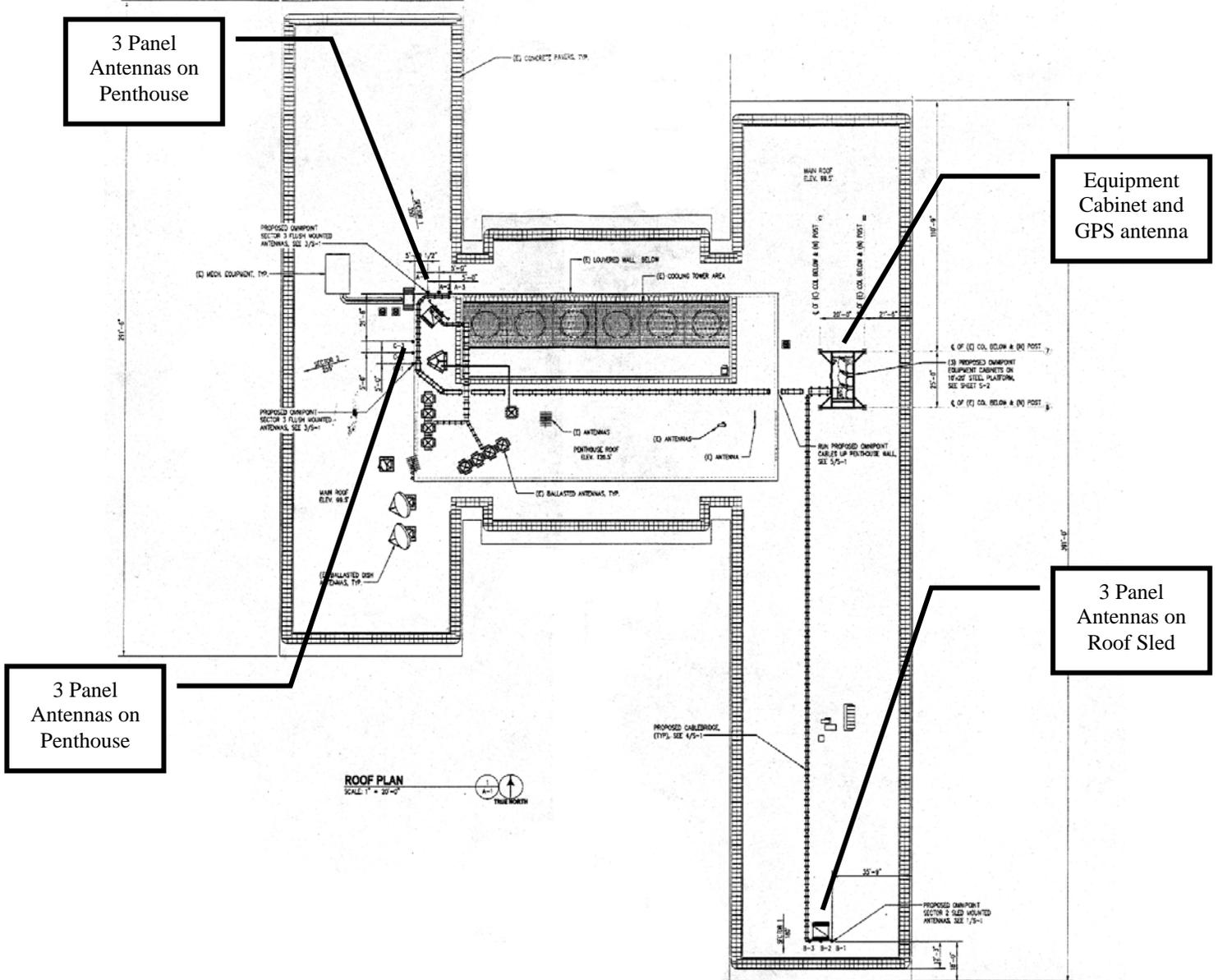
Two sectors, of three antennas each, will be mounted flush just below the penthouse parapet at the roof of the structure. One antenna sector will face west, another sector will face north toward E Street, and the final sector will face south, on a roof sled, towards Virginia Avenue. Each panel antenna will be 54 inches long by 12 inches wide by 4 inches deep.

The south array of three panel antennas is proposed to be mounted on a roof sled, anchored by temporary hardware and ballasted to the roof exterior in order to not penetrate the roof itself. This measure allows the antenna to be mounted at a height that provides necessary signal coverage being achieved at the location. The sled antennas are situated as far back on the roof as operationally possible, taking into account the down-tilt needed on the array, and still not reflect any signals upward off the edge of the building parapet. Tilting the main beam below the horizon is necessary so that less co-channel interference occurs at the site in reusing the same frequency. Additionally, the signal below the horizon addresses the needed area of close-in coverage being sought. The proposed site has a specific height above average terrain to achieve the required coverage area and reduction of signal toward the horizon.



**ELEVATION PATTERN OF
ANTENNA SIGNAL**

The antennas and mounting equipment will be painted a color to blend with the building. The GPS antenna will measure essentially 4 by 4 inches, conical in shape, and will be located on the roof near the equipment cabinet. The equipment cabinet will be a rectangle structure 63 inches high, 51 inches wide, and 28 inches deep. The cabinet would be painted to match the penthouse and installed on a steel platform at the base of the east façade of the penthouse.

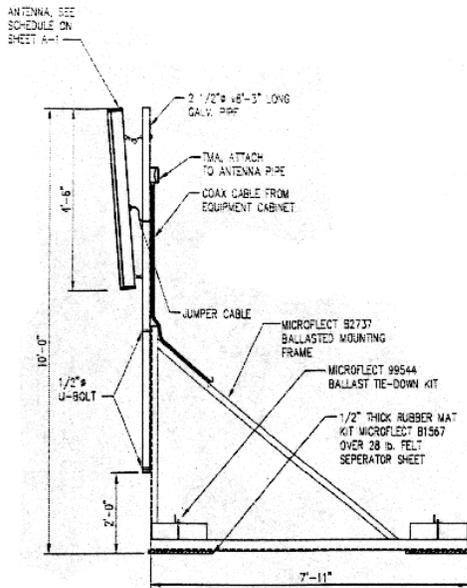
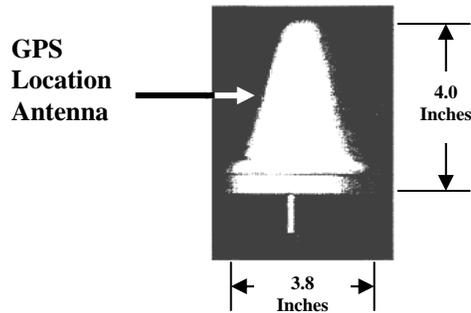


OFFICE OF PERSONNEL MANAGEMENT BUILDING ROOF PLAN WITH PROPOSED ANTENNA LOCATIONS

PROJECT ANALYSIS

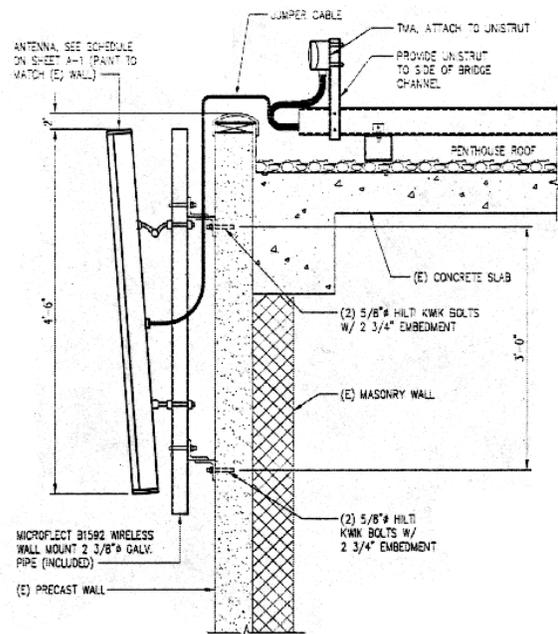
Executive Summary

The staff recommends that the project plans be approved. The applicant will locate the antennas to minimize their appearance, and they will not be readily apparent to the public at ground level. The GPS antenna and the equipment cabinet would 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. Staff recommends that the antennas be approved for a period of five years, consistent with the Commission's recommendations in the Antenna Guidelines for buildings located in the monumental core.



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

(ROOF SLED)



ANTENNA SECTION
SCALE: 1"=1'-0"

NOTE:
1. PAINT ANTENNA AND MOUNT TO MATCH EXISTING PENTHOUSE WALL

PROPOSED ANTENNA DETAILS

Finally, in context with the location of the proposal, the building plans identify several (approximately 18) existing antennas that appear to not have been submitted to the Commission at any time for review prior to their installation. GSA personnel indicated some of these elements were installed approximately in 1998 according to property records. While the current RF evaluation has taken into account the type and power emissions of the existing antennas, no other additional or necessary information has been provided by GSA to adhere with the Commission's review process for their approval at the current location. Consequently, staff believes that the Commission should request GSA 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.

Radiofrequency Radiation

An analysis determining the potential effects of radiofrequency non-ionizing radiation on the general public and occupational personnel was prepared in January 2006 for submission purposes. This analysis used a computerized evaluation program to determine the electromagnetic power surrounding the existing and proposed antennas, and measures compliance with the Maximum Permissible Exposure (MPE) limits for the general public and occupational personnel established by the Federal Communications Commission (FCC).

No areas off the roof, either extending down toward the streets or outward beyond the building perimeter, exceed 100 percent of either the general public or occupational worker exposure levels. None of the proposed antennas create an adverse exposure level exceeding the 100-percent MPE. Only by climbing a ladder in close proximity to various existing rooftop antennas could exposure levels exceed the maximum allowable to the general public. Those areas, in normal building use, would not be available to the public.

Cumulative effects of any exposure levels have been factored by the evaluation program and have found to be within all standards specified by the FCC requirements. The analysis also determined that it is extremely unlikely that any personnel would come in contact with areas that exceed the occupational MPE. However, five areas—a six and one half foot radius area and four two-foot radii areas do have high exposure levels. The exposures areas are very inaccessible and extend only two to six feet from the antennas. The final evaluation analysis resulted in several radiofrequency safety program recommendations, including:

- Controlling access to the roof.
- Posting warning maps of exposure areas that the rooftop access areas.
- Wearing radiofrequency exposure monitors when on the roof.
- Reducing antenna power prior to performing work at antenna heights.
- Periodic monitoring of radiofrequency levels on the roof.
- Additional analysis if changes are made to the operation or number of antennas.

Staff recommends that the Commission highlight to the General Services Administration that access to the building roof areas should be controlled and locked if possible. Moreover, necessary RF warning signs shall be placed at the rooftop access areas in a visible fashion near doors and roof drawings should be posted on the penthouse walls or doorways, as recommended by the RF analysis report, indicating areas where the MPE for the general and occupational

standards could exceed 100-percent exposure.

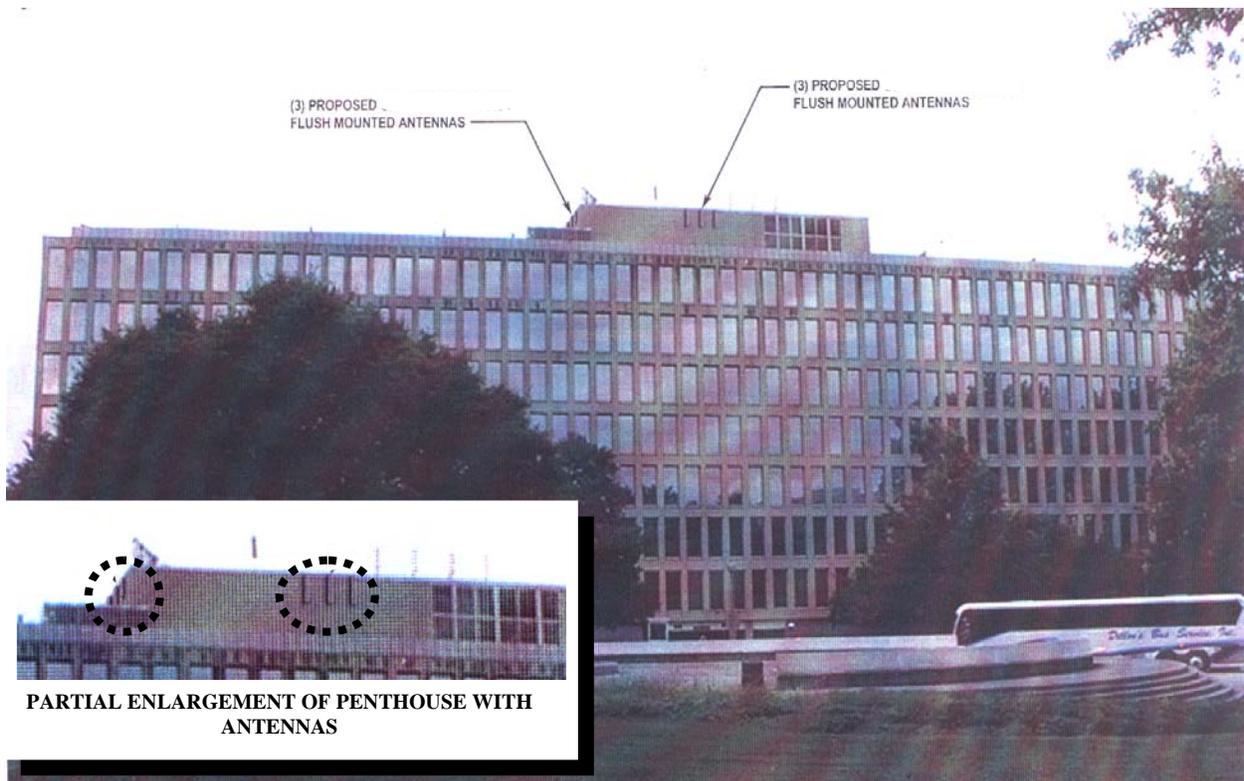
CONFORMANCE

Comprehensive Plan for the National Capital: Federal Elements

Staff has determined that the proposed antenna installation is consistent with the Federal Elements of the Comprehensive Plan.

National Environmental Policy Act

Pursuant to the regulations implementing the National Environmental Policy Act, the General Services Administration submitted a conclusion that the project is a categorical exclusion based on both the GSA environmental review standards, and in conformance with the NCPC Categorical Exclusion requirements under §8(C)(20) of the Commission’s Environmental and Historic Preservation Policies. Staff examination finds the proposed antennas, with their location, design, and completed RF review, adhere to the Commission’s exclusion requirements.



**SIMULATED VIEW OF OPM BUILDING PROPOSED ANTENNA LOCATIONS
AS SEEN FROM WEST**

National Historic Preservation Act

GSA has determined that no further review of the project under Section 106 of the National Historic Preservation Act is required. The building is not eligible for listing in the National Register of Historic Places. Additionally, the antennas to be installed do not affect any historic resource near the planned location.

The staff has reviewed the photo simulations submitted by GSA and has determined that no visual effects to any elements of the L'Enfant Plan (the surrounding streets and Rawlins Park) would occur.

COORDINATION

Coordinating Committee

The Coordinating Committee reviewed this item at its meeting on February 8, 2006, and forwarded the proposal to the Commission with the statement that the project has been coordinated with all agencies participating. The participating agencies were NCPC; the District of Columbia Office of Planning; the Department of Housing and Community Development; the General Services Administration and the Washington Metropolitan Area Transit Authority.