

# STAFF RECOMMENDATION

S. Dettman

NCPC File No. 6644

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**GOVERNMENT ACCOUNTABILITY OFFICE**  
VERIZON WIRELESS TELECOMMUNICATION ANTENNAS  
441 G Street, N.W.  
Washington, DC

Submitted by the Government Accountability Office

March 13, 2006

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## **Abstract**

The Government Accountability Office (GAO) has submitted plans for the installation of twelve transmitting and receiving antennas at the GAO building located at 441 G Street, NW in the District of Columbia. Three sectors of four “flush-mounted” transmitting and receiving antennas will be installed at the mechanical penthouse level of the building. All radio equipment associated with the antennas will be located within the mechanical penthouse above the existing elevator mechanical shop. The project submission materials include all of the required radio frequency compliance information.

## **Commission Action Requested by Applicant**

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

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## **Executive Director’s Recommendation**

The Commission:

**Approves** the preliminary and final building plans for the installation of twelve transmitting and receiving antennas, and associated equipment at the GAO Building, 441 G Street, NW, as shown on NCPC Map File No. 1.22(38.30)41985, for a period not to exceed 5 years.

**Recommends** that access to the building roof areas be controlled and locked if possible, and that GAO should install radio frequency exposure warning signs at all rooftop access points in a highly visible fashion.

**Recommends** that roof drawings be posted on the mechanical penthouse walls and/or doorways indicating areas where the Maximum Permissible Exposure (MPE) for the general and occupational standards could exceed 100%.

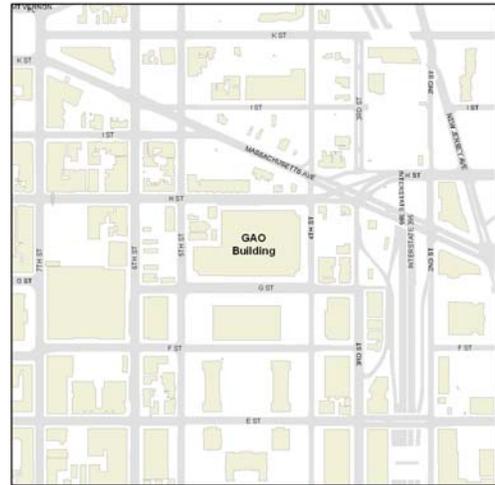
**Requires** GAO to develop an additional submission for the existing antennas at the GAO building to obtain Commission approval for all building antennas that have not been previously reviewed by the Commission.

\* \* \*

**PROJECT DESCRIPTION**

Site

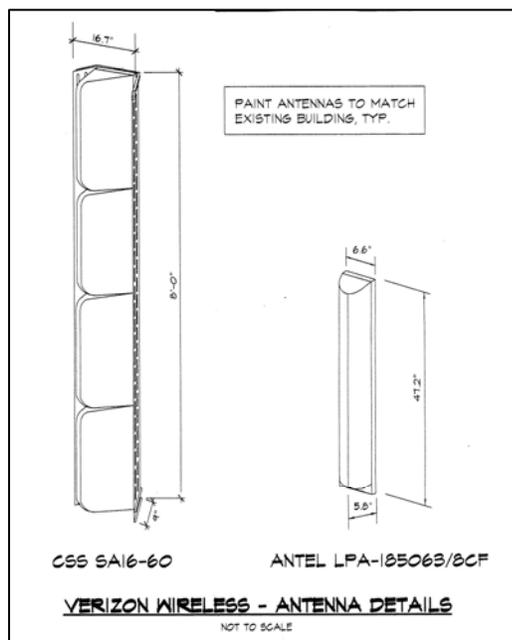
The GAO building is bounded by H Street NW, to the north; G Street NW, to the south; 4<sup>th</sup> Street NW, to the east; and 5<sup>th</sup> Street NW to the west. This site is located directly north of Judiciary Square. The proposed locations of the antennas are limited to the North, South, and West faces of the mechanical penthouse structure. There are approximately 23 existing antennas located on the mechanical penthouse. These antennas are operated by AT&T, Nextel, or belong to the GAO.



Background

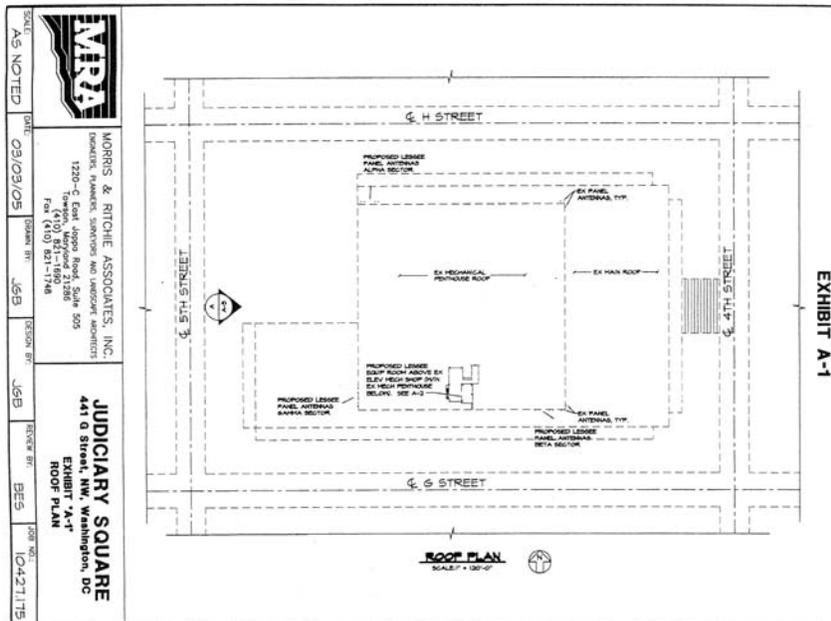
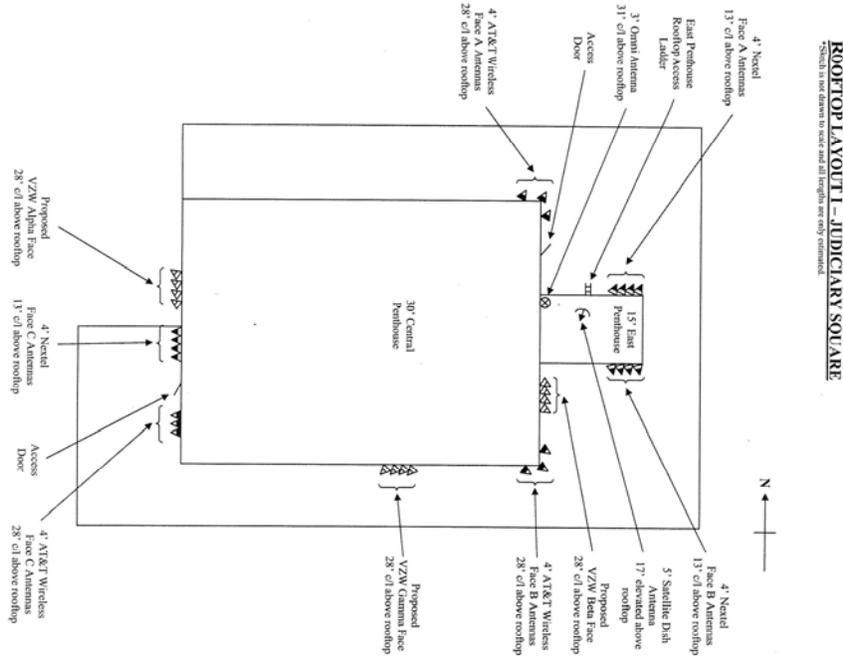
The GAO has submitted plans for the installation of 12 Verizon Wireless telecommunication antennas on the North, South, and West facades of the mechanical penthouse structure. All associated radio equipment will be located inside the mechanical penthouse and will not be visible from the outside.

Proposal



Three sectors, each containing four antennas, will be mounted flush just below the mechanical penthouse parapet at the roof of the structure. One antenna sector will face north toward H Street NW, a second sector will face south toward G Street NW, and the final sector will face west toward 5<sup>th</sup> Street NW. The proposal includes two different antenna models. The height, width, and depth of the first model are 96.0” x 16.7” x 9.0” respectively. The dimensions of the second model are 47.2” x 6.6” x 5.8”. All antennas will be flush-mounted to the mechanical penthouse so that they do not extend beyond the structures to which they are mounted. To further mask their presence the antennas will be painted to match the light façade of the supporting structure. The antennas will be mounted near the top of the mechanical penthouse façade but will not rise above the roofline. The associated radio equipment will be located inside the mechanical penthouse and will not be visible from the outside.

# GOVERNMENT ACCOUNTABILITY OFFICE BUILDING ROOF PLAN WITH EXISTING & PROPOSED ANTENNA LOCATIONS



<b>MORRIS &amp; RITCHIE ASSOCIATES, INC.</b> 1220-C East Joppa Road, Suite 505 Crown Point, Maryland 21226 Tel: (410) 521-1746 Fax: (410) 521-1748	<b>MP&amp;R</b>	DATE: 03/03/05	SCALE: 1/8" = 1'-0"	REVISION BY: JGB	REVISION BY: JGB	DATE: 10-27-75
	<b>JUDICIARY SQUARE</b> 441 G Street, NW, Washington, DC	PROJECT NO.: 10-27-75	REVISION BY: EES	REVISION BY: EES	REVISION BY: EES	REVISION BY: EES

## 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 associated radio equipment will be located inside the mechanical penthouse 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. The project submission materials include all of the required radio frequency compliance information. Staff recommends that the antennas be approved for a period not to exceed five years, consistent with the Commission's recommendations in the Antenna Guidelines.

### Existing Antennas

In context with the location of the proposal, the building plans identify 23 existing antennas that have not been submitted to the Commission for review prior to their installation. GAO personnel indicated that some of these antennas were installed in 1998; others in 1999. While the current RF evaluation has taken into account the type and power emissions of the existing antennas, no other additional information has been provided by GAO to adhere with the Commission's review process for their approval at the current location. Consequently, staff believes that the Commission should require GAO to submit project information for these existing antennas in compliance with NCPC's Guidelines and Submission Requirements for Antennas on Federal Property in the National Capital Region.

### Proposed Antennas – Radiofrequency Radiation

An analysis determining the potential effects of radiofrequency non-ionizing radiation on the general public and occupational personnel was prepared on July 21, 2005 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).

The results of this analysis show that no areas of the rooftop have the potential to exceed 20 percent of the occupational MPE due to the mounting location and the power at which these radio systems operate. Normally, exposure limits within the immediate area of operating antennas can reach up to or over the MPE for occupational criteria (limits established for personnel who, due to work or routines, encounter the actual antennas during any time period). These areas of exposure are usually within four to ten feet of the antenna surface or structure area. The RF analysis report also indicates that no further exposure controls are warranted or recommended given that "NOTICE" signage already exists at all rooftop access points. The RF analysis concludes that the addition of the 12 proposed Verizon Wireless telecommunication antennas will not alter the existing structure's compliance with all applicable exposure limits and guidelines adopted by the FCC governing human exposure to radiofrequency electromagnetic

fields. None of the proposed antennas creates an adverse exposure level exceeding the 100-percent MPE for general public exposure.

The cumulative effects of any exposure levels have been factored in 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.

**Staff recommends that the Commission highlight to the GAO that access to the building roof areas should be controlled and locked if possible. Moreover, GAO should ensure that necessary RF warning signs are placed at all rooftop access points in a highly visible fashion.**

**Staff recommends that the Commission highlight to the GAO that roof drawings should be posted on the mechanical penthouse walls and/or doorways indicating areas where the MPE for the general and occupational standards could exceed 100%.**

CONFORMANCE

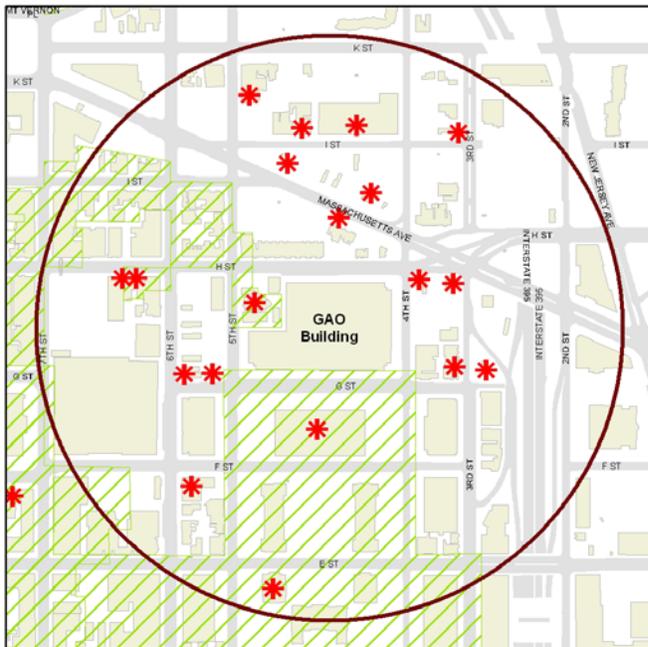
Comprehensive Plan for the National Capital: Federal Elements

Staff has determined that the proposed antenna installation is consistent with the policies described in following three elements of the Comprehensive Plan: Federal Environment, Preservation and Historic Features, and Parks and Open Space.

National Environmental Policy Act

Pursuant to the regulations implementing the National Environmental Policy Act (NEPA), the GAO 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. Staff’s evaluation of this project finds it is in conformance with the NCPC Categorical Exclusion requirements under §8(C)(20) of the Commission’s Environmental and Historic Preservation Policies, “review and approval of the installation of communication antennae on federal buildings.” Staff finds that the proposed antennas, with their location, design, and completed RF review, adhere to the Commission’s exclusion requirements.



Surrounding Historic Properties

National Historic Preservation Act

A Section 106 review of the proposal by the District of Columbia State Historic Preservation Office (DC SHPO) indicated

that the project will have no adverse affect on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP) or any surrounding historic districts.

A ¼ mile radius was used to analyze any potential visual effects the project could have on the surrounding historic environment. This distance was determined to be the Area of Potential effect (APE). Within this distance there are two historic districts, Downtown Historic District and the Pennsylvania Avenue National Historic Site, and 21 properties currently listed on, or eligible for, the NRHP. After site visits [by the applicant] to these historic resources it was determined that the proposal to install 12 Verizon Wireless antennas will have no adverse effect on National Register-listed or eligible properties located within the project APE.

NCPC staff has reviewed the photo simulations submitted by GAO and has determined that no visual effects to any elements of the L'Enfant Plan or surrounding historic resources would occur.



Simulated View - North



Simulated View - South



Simulated View - West

## **COORDINATION**

### Coordinating Committee

The Coordinating Committee reviewed this item at its meeting on March 15, 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.