

# STAFF RECOMMENDATION

S. Sechrist

**NCPC File No. 6363**



---

**NATIONAL INSTITUTES OF HEALTH  
BUILDING 33 AND PARKING GARAGE  
FINAL SITE AND BUILDING PLANS  
Bethesda, Maryland**

Submission by the Department of Health and Human Services

November 26, 2003

---

***Abstract***

The National Institutes of Health (NIH) has submitted final site and building plans for a laboratory building (Building 33) and parking garage at its suburban Bethesda Campus along Wisconsin Avenue in Montgomery County, Maryland. The lab and parking garage will be located in the northeast corner of the campus in an area currently devoted to surface parking lots. A lab and parking garage were identified in the 1995 NIH master plan for this quadrant of the campus.

The Commission approved the preliminary site and building plans, and final foundation plans, for the lab and garage at its September 4, 2003 meeting. At that time the Commission requested that prior to submission of final site and building plans, NIH complete the Building 33 Risk Assessment and provide final design details showing proposed building hardening and building perimeter security; provide a simulation showing how the garage will be illuminated at night; and, provide material samples and details showing the appearance, construction and function of the aluminum garage screen. NIH has submitted the required information and staff recommends approval of the final site and building plans for the laboratory and parking garage.

***Commission Action Requested by Applicant***

Approval of final site and building plans pursuant to Section 5 of the National Capital Planning Act (40 U.S.C. § 8722(b)(1)).

---

***Executive Director's Recommendation***

The Commission:

**Approve** the final site and building plans for Building 33 and the structured parking garage in the northeast corner of the NIH Bethesda campus, as shown on NCPC Map File No. 3101.20(38.00) 41258.

\* \* \*

## *PROJECT DESCRIPTION*

The National Institutes of Health has submitted final site and building plans for a new laboratory building (Building 33) and a structured parking garage at its Bethesda, Maryland campus. The new lab and parking garage will be located in the northeast quadrant of the campus, in an area currently occupied by a number of surface parking lots. The laboratory will allow NIH to support its growing biodefense research agenda.

The Commission is reviewing the project pursuant to Section 5(a) of the National Capital Planning Act of 1952, which requires NIH to advise and consult with the Commission. The Commission's role is to provide planning advice and guidance.

### Building 33 Laboratory

The proposed laboratory is being constructed for the National Institute of Allergy and Infectious Diseases (NIAID), a component of NIH that conducts and supports research to understand, treat and ultimately prevent the myriad infectious, immunologic and allergic diseases that threaten hundreds of millions of people worldwide. The Institute has been mandated by President Bush to play a leading role in the nation's effort to protect civilians from deadly infectious diseases, whether they emerge naturally, or from deliberate release in a bioterrorist attack.

The proposed facility will incorporate laboratories, offices, conference rooms, animal quarters, mechanical space and waste handling areas. The laboratory will contain 79,000 net square feet (nsf) of space in four levels, including a basement level, with an interstitial (intermediate) floor at each level, and a penthouse. Roughly 14,000 nsf of the building will be dedicated to Biosafety Level (BSL) 3 labs (18%) and approximately 28,000 nsf (35%) will be devoted to BSL-2 labs. (The CLC has established four laboratory biosafety levels, ranging from: BSL-1 (educational labs where strains of viable microorganisms not known to cause disease in healthy adults are studied) to BSL-4 (research labs where dangerous or exotic agents that have a high risk of life-threatening disease for which there is no available vaccine or therapy, such as the Ebola virus, are studied)).

The partially depressed basement level of the facility will contain six loading docks, the vivarium, service uses such as a mailroom and security office, and mechanical space. The first floor will contain the main building entrance and security area. BSL-3 laboratories will be located in the center core, flanked by BSL-2 laboratories and offices on the exterior window walls, conference rooms and the cyber-library. The second and third floors are nearly identical to the first floor, although they lack the entrance and security area. The penthouse will contain the majority of the HVAC mechanical equipment, which includes all supply air handlers servicing the different systems in the building.

The footprint of the lab facility will measure roughly 155 feet by 250 feet and the height of the building will be approximately 118 feet from the loading area to the top of the penthouse and 97 feet elsewhere around the building where only three stories are above grade. The building will be clad with a variety of materials, including brick, glass curtain wall, metal panels and a

perforated metal screen. The penthouse will be clad with metal panels, and a metal screen and louver system will obscure the mechanical equipment. Eight exhaust stacks will project from the penthouse. The main entrance will be a glass volume with a metal clad canopy.

### Parking Garage

The proposed structured parking garage will contain 1,230 parking spaces in seven-and-a-half levels. Because of grade changes on the site, one-and-a-half levels of the garage are below the main entrance. The building footprint measures approximately 138 feet by 575 feet and the height will measure between 66 feet on the Cedar Lane elevation and 68 feet next to North Drive. The area north of the garage, which is presently paved, will be landscaped over the future underground stormwater management system for the entire campus. The design of the parking garage is intended to be compatible with the new lab building as well as other parking garages on campus. The garage structure will be constructed of cast concrete and the north elevation, which is set back 250 feet from Cedar Lane, will have an aluminum screen applied for the majority of its length to add visual interest and partially screen the parking. The elevation facing Wisconsin Avenue has been developed with a glass enclosed stair and precast vertical spandrels. The west elevation, which is internal to the campus, will have an aluminum screen similar to the screen on the Cedar Lane elevation. The south facing elevation across North Drive from Building 33 relates to the lab by responding to its orientation, character and materials – it will have an aluminum screen wall, an aluminum and glass curtainwall, and precast vertical spandrels.

### Landscaping and Courtyard

A variety of tree types will be planted around the new laboratory, with a greater concentration of vegetation planted on the steep hill in front of the loading area to screen it from East Drive. The plantings proposed between the garage and Cedar Lane in and around the underground stormwater management system consist of a blend of native Maryland species in the form of groves and groupings of trees. There will be a variety of tree canopies throughout the lab and parking garage site – large and small canopy, flowering trees, as well as evergreens.

A pedestrian courtyard will be constructed between the new laboratory building and existing buildings 31C and 6B as an employee amenity. The courtyard will step up from North Drive where there will be a vehicular drop-off area. A terraced planter will be located in front of the courtyard and the lab to soften and differentiate this edge of the site. Within the courtyard there will be a combination of paved and tree-covered lawn areas, and seating walls and terraced areas will be provided for pedestrians. The decorative paving in front of Building 31C will also double as an accessible fire lane. Walkways and a grand stairway within the courtyard will connect this portion of the campus to the rest of the campus. Planting in the courtyard will consist of a combination of flowering trees, shade trees and large ornamental trees and groundcover.

### *PREVIOUS COMMISSION ACTION*

At its September 4, 2003 meeting the Commission approved the preliminary site and building plans, and final foundation plans, for Building 33 and the structured parking garage and made the following recommendations:

- Complete the Building 33 Risk Assessment and provide final design details showing proposed building hardening and building perimeter security.
- Provide a simulation showing how the garage will be illuminated at night.
- Provide material samples and details showing the appearance, construction and function of the aluminum garage screen.

### *CONSULTATION*

#### Community Liaison Council

The Community Liaison Council (CLC), comprised of NIH representatives, citizen associations and local government, and including a NCPC representative, meets monthly at NIH. The CLC has discussed the proposed laboratory on a number of occasions and the project is controversial within the community. As a result, NIH initiated a risk assessment of the laboratory. Three members of the CLC are members of the Risk Assessment Steering Committee. On November 20, 2003 the results of the final Building 33 Risk Assessment were presented to the CLC. There are members of the CLC who remain concerned about locating this facility at the Bethesda campus.

#### Montgomery County Planning Board

The Montgomery County Planning Board, Maryland-National Capital Park and Planning Commission (M-NCPPC), reviewed the preliminary project plans for Building 33 and the adjacent parking garage at its July 21, 2003 meeting, and forwarded a number of comments to NCPC that are discussed in detail in the preliminary report. The additional design details submitted by NIH address the County's concerns relating to the visibility of the parking garage. Furthermore, NIH has included the County in their on going discussions with the Maryland State Highway Administration on the proposed new North Drive entrance.

### *EVALUATION*

Staff recommends approval of the final site and building plans for the NIAID laboratory and parking garage. The proposed lab is well designed and the courtyard will be an amenity to employees in this quadrant of the campus. Staff finds the design of the lab building to be well developed and characteristic of the modern laboratory architecture on the NIH campus in recent years. Each of the issue areas raised by the Commission during its September review of the preliminary laboratory and garage plans has been satisfactorily addressed by NIH, and is discussed below.

### Building 33 Risk Assessment

NIH initiated a two-phased risk assessment for the lab at the request of the CLC to identify potential hazards or threats to the facility (phase 1) and to recommend prevention and mitigation measures (phase 2). Three members of the CLC were on the steering committee as well as various NIH officials representing science, planning, safety, and health. Physical and structural security experts have also been consulted.

The first phase of the risk assessment, the hazard assessment, accomplished the following:

- Explored potential hazards associated with Building 33.
- Established a “worst case” model simulating release of anthrax spores based on laboratory range finding studies.
- Developed both credible and extreme incident scenarios that could potentially be subjected to quantitative analysis, and proposed a process for conduct of the risk assessment based on the information developed in the hazard assessment.

The risk assessment (Phase 2) then tested the scenarios established in the hazard assessment. From the “maximum possible risk” analysis it was determined that the countermeasures planned by NIH were sufficient to prevent any potential public health harm from the operation of Building 33. These countermeasures consist of building hardening and perimeter security (discussed below), as well as other security programs, such as:

- Personnel Reliability Screening
- Information Technology Security
- Material Control and Accountability
- Material Transfer Security
- Biosecurity Program Management

Together the security measures are intended to both effectively manage employees and visitors within the facility, and harden and secure the structure itself from physical attack.

### Building Hardening and Perimeter Security

NIH proposes two levels of physical security for Building 33 – building hardening and perimeter security.

The building will be structurally enhanced to resist lateral and progressive collapse resulting from a possible blast. This is achieved through certain façade enhancements, such as: insulated metal panels, reinforced curtainwall and structurally reinforced ribbon windows, reinforced precast panels, laminated windows and strengthened window framing, and forced-entry-resistant exterior doors. The exterior of the facility will also be protected through the use of electronic CCTV surveillance, and security and law enforcement personnel. Staff supports these measures because they are being designed into the building and should not be visible.

The perimeter of the laboratory site will be secured through the use of stone retaining walls, bollards, reinforced brick terrace walls and a vehicular control device at the entrance to the loading area. The three-foot field stone retaining wall will be located along East Drive between the loading area and the main entrance to Building 33. The retaining wall is a typical retaining wall feature used throughout the NIH campus. The terraced retaining walls around the entrance to the courtyard will also be reinforced to provide the necessary setback at the building entrance. Finally, three-and-a-half-foot cast stone bollards with the NIH logo, four feet on-center, will be installed at the entrance to the courtyard and a pop up barrier is proposed at the entrance to the loading area.

While it would have been preferable to see no perimeter security around Building 33, staff finds the proposed perimeter security elements acceptable. Neither the stone retaining wall nor the terraced brick walls will read as security elements and the bollards, while clearly security elements, are minimized. The pop up barrier is located sufficiently within the loading dock entrance area and will not be visible from any public right-of-way.

#### Parking Garage Illumination and Screening

NIH has provided a scaled model of the proposed aluminum screen that will be used on the north façade of the parking garage (the southwest elevation of the garage will also have the applied screen; however, the material and color are different to be compatible with the adjacent lab). The screen consists of a 12-foot-wide by 15-foot-grid, infilled with aluminum grating in a light green color. The grates will be overlapping to give the screen a shingle appearance. The screen panels will measure approximately 2 feet by 12 feet, and will be framed and fixed to the vertical concrete wall members. The orientation of the shingles allows for natural light to enter the garage; however, the lights within the garage are baffled and project to the floor, minimizing light spread beyond the garage facade. Lights located on the top level of the garage are fixed to the parapet guardrails and are designed to project inwards.

The detailed screen plans submitted by NIH demonstrate that the screen functions to reduce the apparent mass of the garage by projecting a lighter, trellis-like image. Furthermore, they demonstrate that light emitting from the garage will have a minimal impact on the surrounding community. Additional planting proposed by NIH will also provide an enhanced level of screening.

#### Staff Recommendation

NIH has provided additional information that clearly describes the function and appearance of the parking garage aluminum screen, as well as illustrations showing how the screen will help to obscure any ambient lighting beyond the campus boundaries. The final building plans also detail how the perimeter of the laboratory will be secured through the use of stone faced retaining walls, brick terracing and bollards, and the project report describes how the building itself will be hardened to mitigate any risk associated with the facility. The Building 33 Risk Assessment Executive Summary describes the process by which the risk of the facility was assessed, as well as the implementation of specific security programs. Staff recommends approval of the final site and building plans for the laboratory building and parking garage.

## *CONFORMANCE*

### Master Plan

A laboratory and structured parking garage are included in the NIH 1995 Master Plan, approved by the Commission in 1996 and modified in 1999, as shown on NCPC Map File No. 3201.10(05.12)-40699. The plan shows a rough footprint for a lab facility, with an attached structured parking garage facing Wisconsin Avenue, rather than Cedar Lane as currently proposed. Like many federal parking facilities constructed after 1995, the garage has been separated from the facility and will now be a stand-alone building for security reasons.

NIH has drafted a revised master plan, which staff has commented on, that will likely be submitted for Commission review in late 2003. The revised master plan will reflect the current footprint of the proposed lab and parking garage, as well as circulation improvements around the entire campus, including the new North Drive entrance. The document will also incorporate the future vehicle inspection station and visitor center along Wisconsin Avenue.

### National Historic Preservation Act

NIH initiated Section 106 consultation with the Maryland Historical Trust (MD SHPO) in April, 2003. On May 21, 2003 NIH received a letter from the MD SHPO concurring with their determination of no effect.

### National Environmental Policy Act

Pursuant to the regulations implementing the National Environmental Policy Act (NEPA), NIH has determined that the project qualifies as a Categorical Exclusion in accordance with its procedures. The review by NIH updated the earlier analysis under the comprehensive evaluation of the 1995 Master Plan Environmental Impact Statement (EIS) that included the development of a laboratory building at the site location now proposed for Building 33. That EIS concluded in a Record of Decision determination that found no significant adverse environmental effects from the laboratory siting.

The removal of significant areas of surface parking by the development of the consolidated parking structure allows areas of pervious green space to be re-established adjacent to the perimeter buffer areas of NIH. This aspect of the proposal is an important attribute that has been sought by staff to implement goals of the NIH Master Plan and the NIH perimeter buffer. Additional landscape vegetation planted within the pervious open space areas provides important screening of the planned new structures from Wisconsin Avenue (MD Route 355) and adjacent West Cedar Lane.

### Federal Capital Improvements Program

The laboratory and structured parking garage were included in the Federal Capital Improvements Program (FCIP), FYs 2003–2008, which was adopted by the Commission on July 11, 2002. Congress has appropriated \$186 million for this project.

### Comprehensive Plan

The proposal is consistent with the Comprehensive Plan for the National Capital. The Federal Facilities Element designates the installation as a Research, Development and Testing Facility with a medical purpose. The proposed parking garage is also consistent with the Federal Facilities Element which contains the following policy: In the interest of efficient use of the land and in improving the appearance of Federal properties, parking at Federal facilities should be located in structures to the extent practicable.