

Section One

Summary

1.1 ADMINISTRATIVE ACTION

This is a Final Environmental Impact Statement (FEIS) for the Master Plan 2003 Update for the National Institutes of Health (NIH) campus in Bethesda, Maryland.

1.2 INDIVIDUAL WHO MAY BE CONTACTED

The following individual may be contacted for additional information concerning the proposed action, this Final Environmental Impact Statement and other project documentation.

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1.3 ADDITIONAL REPORTS

The following documents are an integral part of the environmental documentation for the NIH Bethesda campus Master Plan and are incorporated into this Environmental Impact Statement by reference:

NIH Master Plan 2003 Update, the National Institutes of Health Main Campus, Bethesda, Maryland, NIH, 2005

Master Utility Plan: 2000 Update (UMUP), Mueller Associates II, Inc. and TA Engineering, Inc., 2000

Amendment to the 1995 Master Plan, NIH Main Campus, Bethesda, Maryland, NIH, 1999.

Final Supplemental Environmental Impact Statement, Proposed Revisions to Northwest Sector of the 1995 Master Plan, NIH, 1999

NIH Bethesda Campus Historic Resources Survey and National Register Determination of Eligibility, NIH, 1997

1995 Master Plan, the National Institutes of Health, Main Campus, Bethesda, Maryland, NIH, 1995

Final Environmental Impact Statement for the 1995 Master Plan, National Institutes of Health Main Campus, Bethesda, Maryland, NIH, 1996

NIH Central Infrastructure Utility System, Task 4.0, Master Utility Plan, Ross Murphy Finkelstein, 1992
Utility System Analysis and Planning, Task 3.0 Report, Ross Murphy Finkelstein, 1994

Master Plan Transportation Report for National Institutes of Health, Main Campus, Bethesda, Maryland, Grove/Slade Associates, Inc., 2004

1.4 EXISTING CONDITIONS SUMMARY

The primary mission of the National Institutes of Health (NIH) is to expand fundamental knowledge about the nature and behavior of living systems, to apply that knowledge to extend the health of human lives, and to reduce the burdens of disease and disability. The primary activity at NIH Bethesda is biomedical and clinical research, and it is the largest such facility in the world. About ten percent of all NIH research is conducted directly on the campus through the NIH intramural research program. Individuals and institutions outside NIH complete the remainder under the NIH extramural research grant and contract program, which is directed and coordinated through the NIH Office of the Director.

The NIH Bethesda campus is a 310-acre federal facility located in Montgomery County, Maryland, in suburban Washington, D.C. (See Appendix A for site mapping). For environmental assessment purposes, baseline or existing conditions are those present on the campus in the year 2003. About 17,500 NIH employees work on the campus in over 75 buildings with a cumulative occupiable gross floor area of nearly 7.4 million gross square feet (gsf) exclusive of parking. The Office of the Director of NIH and headquarters administration is located on the campus along with the administrative staff of 27 individual and independent research Institutes and Centers, (ICs), such as the National Cancer Institute and the National Heart, Lung, and Blood Institute, that comprise NIH.

All but one of the ICs maintains research facilities on the campus. About one-fourth of the campus employees are Ph.Ds, M.Ds, or hold both degrees, and are involved in clinical and basic biomedical research. Most of the remaining facilities and personnel on the campus provide very specialized support for the research function. Examples include training researchers and monitoring laboratory safety; handling and treatment of biological, chemical, and radioactive materials; laboratory animal care through the veterinary program; manufacture and maintenance of specialized research equipment; and computer services.

The focal facility on the campus is the Warren G. Magnuson Clinical Center. The Clinical Center is the largest facility in the U.S. devoted exclusively to biomedical clinical research. Clinical research consists of clinical trials where new techniques, medicines, treatments, and basic laboratory research findings are tested on volunteer patients. In 2004, over 8,600 were admitted to the Center for clinical trials as long term inpatients. Outpatients made over 100,000 trips to the campus for clinical trial appointments lasting a day or less.

The original section of the Clinical Center, Building 10, was built in 1953. Over the years, many additions and wings have been built in response to the growing mandated research mission of NIH. Many of the Institute research buildings were built prior to 1955. Design and layout of these older buildings did not foresee the explosion in use of electronic laboratory equipment. The variety of biological, radiological, and chemical materials used in research has increased exponentially. Progress in research has increased the number of devices and equipment now considered essential for modern patient care.

The Mark Hatfield Clinical Research Center (CRC), which will replace the Magnuson hospital, is under construction with occupancy scheduled for 2004. Once the 240 bed CRC facility is complete, the remaining Magnuson Clinical Center and Building 10 facilities will undergo renovation after stabilization of building mechanical, electrical, and utility systems.

The Bethesda campus is currently in the midst of perhaps its most rapid transformation in its history. The Vaccine Research Center (VRC) (Building 40), the Louis Stokes Laboratory (Building 50), and the East Child Care Center (Building 64) all went into service in 2001. A new fire station (Building 51) and NIH electric power substation (Building 63) were built in 2003. Projects that are in various stages of design or

construction and scheduled for occupancy in 2004 include a Family Lodge, expansion of the Children's Inn, Phase I of the Neuroscience Research Center, a NIH/PEPCO Cogeneration facility, and two multiple level parking structures , MLP-9 and MLP-10. Building 33, a research facility, is also under construction and scheduled for service in 2005.

The events of September 2001 have brought about further changes that are in progress. Prior to that time, the campus was fully accessible to the general public. In the interim, a perimeter fence providing security has been built, and vehicles are checked or inspected at the portal entrances. A new Gateway Center for visitor screening, an accompanying visitor parking garage, and a commercial vehicle inspection facility, are now in the design stage and expected to open in 2005.

1.5 ALTERNATIVES UNDER CONSIDERATION

Two alternatives are under consideration: The Master Plan 2003 Update Alternative (also identified as the Master Plan or Master Plan Alternative), and the No Action Alternative. The Alternatives are discussed in Section 4. The Master Plan 2003 Alternative is a revision of the 1995 Master Plan for the Bethesda campus. The 1995 Master Plan and its 2003 Update have been developed using procedures in the National Environmental Policy Act (42 U.S.C. 4332 (2)(A)) and the Council on Environmental Quality regulations (40 C.F.R §1500 et. seq.). Government review agencies, utilities, NIH management and employees, residential neighborhood representatives, citizens, and interested parties were involved in the decision making process through a series of scoping and information meetings. Revisions to the Master Plan have been developed in consultation with community working groups, which were open to representatives from residential communities and civic organizations near the campus.

The Draft Master Plan 2003 Update and accompanying Draft Environmental Impact Statement (EIS) were published on October 1, 2004 for public review and comment. A public hearing was held on November 8, 2004 at Walter Johnson High School. Comment received at the public hearing is summarized in Section 6.2. Review and comment correspondence received is shown in Appendix H.

1.5.1 PROPOSED ACTION – THE MASTER PLAN 2003 UPDATE

The proposed action is the Master Plan 2003 Update of the 1995 Bethesda campus Master Plan. The Master Plan 2003 Update Alternative is the preferred alternative. It would guide and coordinate physical development of the NIH Bethesda campus in terms of buildings, utilities, roads and streetscape, landscapes, and amenities over the next 20 years in response to projected NIH administrative, research, and infrastructure support needs (Master Plan 2003 Update, NIH Main Campus, NIH, 2004). NIH may deviate from the plan to satisfy ongoing exigencies. The Master Plan does not commit NIH to implementing specific projects indicated or illustrated in the plan. Implementation of any feature or project in the Master Plan is dependent on Congressional funding.

The Bethesda campus employee population was 16,350 in 1995. At that time, the federal government was making major efforts to “downsize” and reduce the number of employees. Consequently, the 1995 Master Plan projected a short term decline in the number of campus employees through 2000. A generally linear increase after that date to about 18,000 in 2015 was projected. However, beginning in 1998, the NIH annual research budget began to increase at a faster rate than that experienced over the preceding decades, a change unanticipated in 1995. Some of the increase is attributable to the rapid definition of the human genome, a task that was originally expected to take decades. Other factors, such as clinical and biodefense research programs, are at work as well. As a result, the campus population has

already increased to about 17,500 in 2003.

Programming of future campus personnel and facilities was determined through an extensive series of interviews with NIH management and individual Institute and Center directorates. Many Institutes anticipate continued rapid expansion of research into new areas as a result of the human genome definition. Their projections were combined into an overall estimate of potential population for the NIH Bethesda campus. Cumulatively, the projections indicate that the campus intramural researcher population would grow from about 8,500 in 2000 to about 14,500 in 2020. If unconstrained by traffic congestion, utility system capacities, or consideration of the surrounding community, this increase in personnel directly involved with research, along with personnel involved in essential support, would increase the campus population to about 26,000.

Adding personnel beyond a level of about 22,000 to the campus becomes increasingly complex within site physical constraints, and planning principles and goals. As a basis for planning, the Master Plan 2003 Update, therefore, has established a campus population 22,000 level, at this time, as a reasonable number of personnel that can be accommodated within these constraints, and the Master Plan's own principles and goals.

Proposed facilities and planning criteria are detailed within the Master Plan document, and are summarized in Section 4.7.1 of this Draft EIS.

The principal features of the Master Plan are:

- Construction of the state-of-the-art Hatfield Clinical Research Center hospital with associated clinical research laboratories. The 1,050,000 gross square foot (gsf) facility will replace the existing Clinical Center inpatient hospital 240 inpatient beds.
- Stabilization of nearly half a million gsf of space in the existing Magnusen Clinical Center Complex to prepare it for adaptive reuse.
- Construction of up to 12 new buildings for intramural research. The new buildings would add a net of about 2.17 million gsf of laboratory space.
- A continuation of the upgrading and modernization program for support utilities and infrastructure, particularly the Central Heating and Refrigeration Plant, campus steam, chilled water, and electric power distribution systems.
- Replacement of housing and care facilities for animals used in research with state-of-the-art facilities that satisfy modern design, accreditation, and program requirements.
- Consolidation of surface parking into multiple level and underground parking structures.
- Construction of a Loop Road that follows existing campus streets to improve campus vehicle circulation and emphasize pedestrian and bicycle use in the central core area of the campus.
- A physical reorganization of the campus to improve administrative and operational functions, raise the aesthetic level or ambience, and protect older campus buildings of historic value.
- Management of stormwater through a site Institutional Stormwater Management Plan that will meet Maryland standards throughout the campus.
- Construction of expanded child care facilities for employees, small scale retail and service activities, and other employee amenities.
- Enhancement of a natural area or buffer zone around the periphery of the campus through removal of surface parking and increased landscaping. The zone would buffer residential neighborhoods surrounding the campus from NIH facilities and activities.

1.5.2 NO ACTION ALTERNATIVE

Normally, the No Action Alternative can be defined as no net growth or change in employee numbers or facilities in relation to baseline or existing conditions. Facilities would be replaced or rehabilitated as necessary to maintain site functions. However, NIH is already “committed” to a number of projects that will be implemented in both the Master Plan and No Action Alternatives. A number of buildings are in various stages of planning, design and construction, and can be expected to go forward to fruition. These projects are included in the No Action Alternative and are itemized in Table 4-3.

Under the No Action Alternative, the total building floor space would increase from about 7.4 million gsf to about 8.9 million gsf in 2007. The estimated No Action Alternative employee population would be about 17,900. About two-thirds of the space increase is attributable to the Hatfield Clinical Research Center. About two-thirds of the population increase is attributable to Research Building 33. The Neuroscience Research Center and Hatfield Clinical Research Center projects would primarily involve internal campus transfer of employees, and not new hires.

1.6 SUMMARY OF IMPACTS AND MITIGATION

The Master Plan is a long range planning guidance document, and it will not generate direct physical impacts such as those associated with construction. It must be flexible to meet changes in NIH needs and campus conditions. This EIS furnishes information, supplementary to the Master Plan, and identifies the potential impacts that could occur. While some impacts are determined for intermediate periods, the delineated Master Plan impacts are based on, or assume, full implementation of the Master Plan, i.e. building space would increase from 7.4 to 10.7 million gsf, campus population would grow from 17,500 to 22,000, and all plan elements and features would be implemented. The delineated impacts, therefore, indicate the potential cumulative effects of the Master Plan. They can be viewed as an impact framework or envelope within which the incremental impacts of individual projects would fall, if and when they are implemented. The delineated potential impacts are conditional or contingent upon the extent of any actual implementation. Actual cumulative impacts would fall in the range between those indicated for the No Action and the Master Plan Alternative. The potential impacts of the Master Plan and No Action Alternatives are summarized in Table 1-1 (See Page 1-7).

The Master Plan 2003 Update and No Action Alternatives were developed on the basis of a one parking space per two employee (0.50) parking ratio goal in accordance with the criteria in the 1989 NCPC Comprehensive Plan for the National Capital. NCPC adopted an updated Comprehensive Plan a few weeks prior to the publication of the Draft Master Plan 2003 Update and the Draft Environmental Impact Statement. The Updated Comprehensive Plan lowered the federal employee parking ratio goal for NIH to one space per three employees, or 0.33.

Accounting for the new goal would require major changes in the NIH documents. For simplicity, the 0.50 ratio has been retained in the final Master Plan and EIS documents. However, NIH has committed to updating its Bethesda campus Transportation Management Plan over the next year to establish a realistic employee parking ratio goal for the campus. It is NIH policy to update its campus Master Plan every five years. The new parking goal and its potential effects will be accounted for in the next Master Plan and EIS update.

NIH will also finalize a Bethesda campus Urban Forest Stand Delineation and Conservation Plan meeting Maryland Department of Natural Resources requirements over the next year. NIH is committed to these measures as well as those listed in Table 1-2 to mitigate the potential impact of the proposed Master Plan

or No Action Alternatives.

1.7 APPROVALS/ACTIONS REQUIRED BY OTHER GOVERNMENT AGENCIES

Section 5(a) of the National Capital Planning Act of 1952, as amended (40 U.S.C. § 71d(a)), provides that each federal agency in the National Capital Region shall advise and consult with the National Capital Planning Commission (NCPC) in the preparation of plans and programs which affect the National Capital prior to preparation of construction plans. NCPC defines a master plan as an integrated series of documents in graphic, narrative, or tabular form that present a plan for the orderly and long range development of an installation, generally over a period of 20 years. NCPC maintains that a master plan approved by the Commission is a required preliminary stage for the preparation of building and site plans for specific projects. If the installation is in the Maryland portion of the National Capital Region, then the Maryland-National Capital Park and Planning Commission (M-NCPPC) acts in an advisory capacity to NCPC.

In accordance with Section 102(2)(A) of the National Environmental Policy Act of 1969 (NEPA), as amended (42 U.S.C. § 4332(2)(A)), federal agencies must utilize a systematic, interdisciplinary approach which will ensure the integrated use of natural and social sciences in planning and decision making that may have an impact on the human environment. Regulations of the Council on Environmental Quality (CEQ) (40 C.F.R. Parts 1500-1508) require that agencies assess the environmental effects of their actions, document studies and identify impacts. Documents can take the form of Categorical Exclusions, Environmental Assessments, or Environmental Impact Statements, and their supporting documents (Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act, Council on Environmental Quality, 1978). It is NCPC policy that federal developments and projects requiring NCPC review and comment also satisfy all NEPA requirements using the criteria established by CEQ before NCPC review.

NCPC approved the Draft Master Plan 2003 Update at its January 6, 2005 meeting. NCPC made two recommendations for inclusion in the final Master Plan and EIS documentation: (1) finalization of a campus Forest Conservation Plan for the campus, and (2) an update of the NIH Bethesda Transportation Management Plan. Both items should be completed within a year of the Draft Master Plan 2003 Update approval. NIH will comply with these requests.

A Master Plan approved by NCPC is necessary for construction of any major projects proposed in the plan. On the other hand, NCPC Master Plan approval does not imply NCPC approval of construction of specific projects. When individual major projects are proposed for construction, project specific environmental documentation and NEPA public involvement will be completed, where warranted. NIH would also prepare a revision to its Master Plan when significant deviations from the approved Master Plan are proposed.

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CATEGORY	MASTER PLAN ALTERNATIVE POTENTIAL IMPACT	NO ACTION ALTERNATIVE POTENTIAL IMPACT
Socioeconomic/Land Use	<ul style="list-style-type: none"> No significant impact expected. 	<ul style="list-style-type: none"> No significant impact expected.
Environmental Justice	<ul style="list-style-type: none"> No disproportionate impact to minority or low-income populations. 	<ul style="list-style-type: none"> No disproportionate impact to minority or low-income populations.
NIH Traffic Generation	<ul style="list-style-type: none"> NIH AM and PM traffic generation increases by about 26%. Trip generation would be less than what NIH Bethesda generated in 1992. 	<ul style="list-style-type: none"> NIH AM and PM traffic generation increases by about 2%. Trip generation would be less than what NIH Bethesda generated in 1992.
Intersection Congestion	<ul style="list-style-type: none"> The number of intersections around the campus with Critical Lane Volumes (CLV) greater than 1,600 increases from one, currently, to eight in 2023. 	<ul style="list-style-type: none"> The number of intersections around the campus with Critical Lane Volumes (CLV) greater than 1,600 increases from one, currently, to eight in 2023.
Parking	<ul style="list-style-type: none"> Maintain 0.50 parking space per employee ratio, but see parking in Table 1-2 	<ul style="list-style-type: none"> Maintain 0.50 parking space per employee ratio, but see parking in Table 1-2
Buffer/Bikeways	<ul style="list-style-type: none"> Buffer zone landscaping is enhanced. Buffer parking surface is reduced from 6.8 to 0.6 acre. 	<ul style="list-style-type: none"> Limited buffer zone enhancement. Buffer parking that can be accommodated in MLP-9 and MLP-10 is eliminated. Buffer parking surface reduced to 3.1 acre
Steam Demand	<ul style="list-style-type: none"> Peak day demand increases from 585,000 to 968,000 lb/hr. 	<ul style="list-style-type: none"> Peak day demand increases from 585,000 to 776,000 lb/hr.
Chilled Water Demand	<ul style="list-style-type: none"> Peak demand increases from 51,112 to 76,900 tons per day. 	<ul style="list-style-type: none"> Peak demand increases from 51,112 to 66,700 tons per day.
Electric Power Demand	<ul style="list-style-type: none"> Maximum demand increases from 74,500 to 132,000 KVA per day. 	<ul style="list-style-type: none"> Maximum demand increases from 74,500 to 107,000 KVA per day.
Peak Water Demand	<ul style="list-style-type: none"> Peak workday demand increases from 3,800 to 6,400 gallons per minute. 	<ul style="list-style-type: none"> Peak workday demand increases from 3,800 to 5,200 gallons per minute.
Sanitary Sewer	<ul style="list-style-type: none"> Peak workday flows to Cedar Lane increase from 2,400 gpm to 4,100 gpm. 	<ul style="list-style-type: none"> Peak workday flows to Cedar Lane increase from 2,400 gpm to 3,000 gpm.
Natural Gas	<ul style="list-style-type: none"> Peak demand increases from 684,000 cf/hour to 1.26 million cf/hr, but NIH gas line capacity limited to 700,000 cf/hr. 	<ul style="list-style-type: none"> Increase peak demand from 684,000 cf/hour to 1.03 million cf/hr, but NIH gas line capacity limited to 700,000 cf/hr.

TABLE 1-1 SUMMARY OF POTENTIAL IMPACTS. (page 1 of 3)

CATEGORY	POTENTIAL IMPACT MASTER PLAN ALTERNATIVE	POTENTIAL IMPACT NO ACTION ALTERNATIVE
Noise Traffic Parking Chiller Plant Building Fans	<ul style="list-style-type: none"> • Leq noise levels increase by 2 dBA or less. • No impact. • Nighttime Leq noise level at NIH property line is maintained at 45 dBA or less • Nighttime Leq noise levels of 55 to 58 dBA. 	<ul style="list-style-type: none"> • Leq noise levels increase by 2 dBA or less. • No impact • Nighttime Leq noise level at NIH property line is maintained at 45 dBA or less. • Nighttime Leq noise levels of 55 to 58 dBA.
Air Quality Traffic Parking Boiler Stacks	<ul style="list-style-type: none"> • No impact. Will meet Air Quality Standards. • No impact. Will meet Air Quality Standards. • Will meet Air Quality Standards. Annual nitrogen oxide increase to 123.9 tons emissions. 	<ul style="list-style-type: none"> • No impact. Will meet Air Quality Standards. • No impact. Will meet Air Quality Standards. • Will meet Air Quality Standards. Annual nitrogen oxide increase to 108.1 tons emissions.
Wastes Solid Medical/Pathological Chemical	<ul style="list-style-type: none"> • Generation relatively constant. Continue to increase recycling rate. • Reduction in generation per researcher offsets growth in researchers • Generation relatively constant 	<ul style="list-style-type: none"> • Generation relatively constant. Continue to increase recycling rate. • Reduction in generation per researcher offsets growth in researchers • Generation relatively constant
Cultural Historic Archeological	<ul style="list-style-type: none"> • Demolition of Building 7, which is eligible for the National Register. Potential visual effects on campus historic properties. No effect to off-campus properties. • Potential impact at “sensitive” archeological sites. 	<ul style="list-style-type: none"> • Potential visual effects on campus historic properties. No effect to off-campus properties. • No potential impacts.
Trees Terrestrial/Aquatic Impact	<ul style="list-style-type: none"> • Potential loss of 500 mature trees. • No significant impact 	<ul style="list-style-type: none"> • Potential loss of 100 mature trees. • No significant impact.
Aesthetics	<ul style="list-style-type: none"> • Vast majority of campus 250-foot buffer zone is maintained in open space, with the exception of limited areas required for security-related projects. 	<ul style="list-style-type: none"> • Vast majority of campus 250-foot buffer zone is maintained in open space, with the exception of limited areas required for security-related projects, and some surface parking.

TABLE 1-1 SUMMARY OF POTENTIAL (page 2 of 3 Cont'd).

CATEGORY	POTENTIAL IMPACT MASTER PLAN ALTERNATIVE	POTENTIAL IMPACT NO ACTION ALTERNATIVE
Energy	<ul style="list-style-type: none"> • Energy consumption continues to grow. The extent of actual growth is dependent upon the success of NIH demand management strategies • Demand increases due to growth in building space and greater demand per unit of space in research facilities. 	<ul style="list-style-type: none"> • Energy consumption continues to grow. The extent of actual growth is dependent upon the success of NIH demand management strategies. • Demand increases due to growth in building space and greater demand per unit of space in research facilities, but to a lesser extent than the Master Plan Alternative.
Construction Noise Fugitive Dust Wastes	<ul style="list-style-type: none"> • Localized noise impacts in vicinity of projects. • Localized impacts. • Construction could generate 1,500 tons/yr of construction waste. 	<ul style="list-style-type: none"> • Localized noise impacts in vicinity of projects. • Localized impacts. • Construction could generate 1,500 tons/yr of construction waste until 2006.

TABLE 1-1 SUMMARY OF POTENTIAL IMPACTS. (page 3 of 3 con't)

Context	Mitigation Measure
Traffic	<ul style="list-style-type: none"> • Within legislative and budgetary constraints, implement Transportation Management Plan (TMP) measures that will maintain NIH trip generation at established MOU AM and PM peak hour goals. • Continue to develop and adopt additional TMP measures that reduce NIH Employee single occupancy vehicle mode trips. Possible measures may include expansion of alternate work schedules and telecommuting programs, reorganization of NIH transportation/parking management, increasing the level of traffic and parking monitoring, seeking further TMP budgeting and funding, improving intrafacility and internal campus shuttle service, establishing an Emergency Ride Home Program, establishing a TMP Center, and developing concepts for increased use of satellite parking. • Continue semiannual surveys of NIH traffic generation.
Neighborhood Parking	<ul style="list-style-type: none"> • Maintain employee awareness of neighborhood parking situation. • Incorporate restrictions in construction contracts that discourage contractors from parking in surrounding residential areas.
Parking	<ul style="list-style-type: none"> • Update the Transportation Management Plan to establish a realistic parking space per employee ratio goal.
Lighting	<ul style="list-style-type: none"> • Follow Master Plan lighting concept plan to increase safety and security while controlling intrusive illumination into residential areas.
Solid Waste	<ul style="list-style-type: none"> • Recycling program with same goals as Montgomery County. • Continue and expand ongoing program for minimization of such wastes as is feasible.
Mixed/Hazardous Waste	<ul style="list-style-type: none"> • Continue and expand ongoing program for minimization of such wastes as is feasible. • Develop an Environmental Management System that includes waste minimization as a key element.
Medical/Pathological Waste	<ul style="list-style-type: none"> • Continue and expand ongoing program for minimization of such wastes as is feasible.
Energy	<ul style="list-style-type: none"> • Incorporate energy conservation designs and features into new and renovated facilities. • Continue energy conservation measures associated with steam and chilled water production.
Cultural Historic Archeological	<ul style="list-style-type: none"> • Complete Section 106 process in planning/design phase for major projects which may affect potentially historic structures. • Complete Phase I, and if necessary, Phase II and III Surveys prior to construction of projects proposed for archeological sensitive areas.
Terrestrial Vegetation	<ul style="list-style-type: none"> • Finalize a campuswide Urban Forest Stand Delineation and Conservation Plan. • Complete Conservation and Protection Plans for construction projects that affect mature trees. • Maintain 15% tree canopy cover on a campuswide basis to the extent feasible.

TABLE 1-2 MITIGATION MEASURE SUMMARY (1 of 2).

Context (cont'd)	Mitigation Measure (cont'd)
Aesthetics	<ul style="list-style-type: none"> • Concentrate large buildings in the central core of the campus and reduce building heights as one approaches the perimeter buffer. • Provide additional plantings in perimeter buffer area on north, west, and south sides of the campus to screen residential neighborhoods. • Provide plantings in east side buffer area to minimize visual effects on Naval Medical Center Hospital Tower.
Building Fan Noise	<ul style="list-style-type: none"> • Assess mitigation as needed on a case by case basis.
<p>Construction Noise</p> <p>Fugitive Dust</p> <p>Scheduling Traffic</p>	<ul style="list-style-type: none"> • Mix concrete off site, where feasible. • Use electric driven equipment, where feasible. • Use hydraulic instead of pneumatic tools, where feasible. • Schedule noisy operations to coincide with high ambient noise. • Turn off idling equipment when not in use. • Provide enclosures around stationary equipment, where feasible. • Require silencers on compressors. • Contractors comply with State regulations. • Seed and stabilize disturbed areas. • Provide stabilized stone construction entrances. • Apply spray-on adhesives to mineral soils as appropriate. • Sprinkle or wet high dust areas as appropriate. • When feasible, limit work to 7 AM to 4 PM, Monday through Friday. • Route construction traffic to NIH entrances away from adjacent neighborhoods. • Include provisions for contractor employee use of transit in contract documents.

TABLE 1-2 MITIGATION MEASURE SUMMARY (2 of 2 cont'd).

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