

Construction Programs

The Department of Veterans Affairs' infrastructure—particularly within its health-care system—is at a crossroads. The system is facing many challenges, including the average age of buildings (60 years) and significant funding needs for routine maintenance, upgrades, modernization, and construction. VA is beginning a patient-centered reformation and transformation of the way it delivers care and new ways of managing its infrastructure plan based on the needs of sick and disabled veterans in the 21st century. Regardless of what the VA health-care system of the future looks like, the focus of *The Independent Budget* must remain on ensuring a lasting and accessible VA health-care system that is dedicated to the unique needs of these veterans and that can provide high-quality, timely care when and where they need it.

VA manages a wide portfolio of capital assets throughout the nation. According to its latest Capital Asset Plan, VA is responsible for 5,405 buildings and almost 33,000 acres of land. It is a vast network of facilities that requires significant time and attention from VA's capital asset managers.

Although Congress has funded a significant number of new projects and renovations to existing facilities, the average age of VA medical centers and associated buildings approaches 60 years. VA entered the 21st century with a legacy infrastructure that was designed and constructed to provide care in the era in which it was built. A great number of these facilities were built in the aftermath of World War II, although there are a significant number of facilities that date back to World War I and even to the Indian Wars of the 19th century.

With the exception of facilities constructed since the Vietnam War, by and large the design of these facilities is obsolete. They were created at a time when inpatient care was the focus, with an emphasis on hospitalization for most kinds of treatment. Structurally, they typically do not meet the needs of modern health-care delivery. Floor height, for example, precludes installation of modern wiring and heating and cooling systems. Building layout, as another example, is inefficient for today's health-care delivery, which focuses so much more on outpatient care.

These design characteristics often preclude VA from effectively adapting these buildings for other types of use. VA patches and renovates where it can, making do with obsolete facilities, all while the life-cycle costs of these facilities skyrocket due to their age. Additionally, these aging facilities create an increased burden on VA's overall maintenance requirements. They must be maintained aggressively so that their building systems—electrical, plumbing, capital equipment, etc.—are up to date and these facilities are able to deliver the best care possible in clean and safe environments. As the age increases, these costs go up, often dramatically so. Accordingly, more funding is funneled to these older projects, leaving less for other maintenance and construction needs and increasing the overall VA budget.

MAJOR AND MINOR CONSTRUCTION ACCOUNTS

VA is aware of the challenges it faces with respect to the maintenance backlog, and regularly surveys each facility as part of the Facilities Condition Assessment (FCA) process. VA estimates the cost of repair and uses this cost estimate as a component of its Federal Real Property Report requirements.

According to its latest 5-Year Capital Plan, VA has estimated the total cost of repairing all *D*-rated and *F*-rated FCA deficiencies at a staggering \$8 billion, even as VA and Congress have greatly increased the amount of funding and resources devoted to this critical aspect of capital asset management.

Although funding has increased for nonrecurring maintenance (NRM) recently, funding levels have only touched the surface of the backlog. For far too long, NRM and other maintenance issues were underfunded, helping to create a massive backlog. In recent years, funding has increased but still has only been in line with addressing the bare minimum for the current level of maintenance needs, with very little to significantly reduce the backlog (see “Increase Spending on Nonrecurring Maintenance”).

Maintenance is just one tiny portion of the major issues confronting the system. The IBVSOs are also concerned about the huge backlog of major construction projects, and the political and economic reality that fully funding each of these projects and constructing them in a timely manner may not be entirely feasible.

While the Capital Asset Realignment for Enhanced Services (CARES) process was ongoing, many VA’ construction priorities were put off, with Congressional appropriators choosing to wait to see what the result of the process would be before approving any new major construction projects. At the time, the IBVSOs argued that waiting was unnecessary because we knew many of these projects would be required.

During that time, VA’s major construction funding hovered at just a few hundred million dollars, far below the demands of the system. This exacerbated the backlog and created a deficit in construction that, even with the huge increases in major construction funding in the past few years, will be difficult to correct.

It was noted that the projects identified through CARES would ultimately require a large investment.

The VA Secretary at that time, Anthony Principi, testified that VA would require \$1 billion per year to get the plan moving. Funding lagged initially, but Congress has come close to that target recently. In a November 17, 2008, letter to the Senate Committee on Veterans’ Affairs, then-Secretary James Peake said VA would need at least \$6.5 billion over the following five years to meet its funding requirements for major medical facility projects.

With major medical facilities now costing upwards of \$800 million to construct, and a long backlog of projects already identified, we are reaching a critical point in the management of VA’s health-care infrastructure. Are Congress and, by extension, the American people willing to continue to fund from \$1 billion to \$2 billion worth of new major medical facility projects in perpetuity? With the backlog of needed new projects and the maintenance and renovation requirements of its current aging infrastructure, something likely needs to change.

The major questions now are, what will VA’s 21st century health infrastructure look like and how it will be managed and sustained? Fully addressing these and related questions is important and will affect generations of veterans.

First and foremost, the IBVSOs intend to make every effort to protect the VA system for future generations of veterans. A well-thought-out capital and strategic plan is urgently needed, and the tough decisions must be made, not avoided, as was the response to the seemingly aborted CARES process. We are pleased the current Administration has committed to building the Department of Veterans Affairs of the 21st century, and we are eager to learn the specifics of what this means. We discuss this further in the section titled “Maintain Critical VA Health Infrastructure.”

Independent evaluators have concluded that VA today represents the “best care anywhere” in the United States. The IBVSOs want to ensure that VA’s infrastructure plan maintains that integrity for all the benefits VA brings to its enrolled population. Finally, we want to ensure that care is not fragmented and that high-quality, safe health care remains VA’s hallmark.

Given the President’s pledge to create the VA of the 21st century, the IBVSOs expect the Department to es-

Table 12. Major Construction Recommendations

Category	Recommendation (\$ in Thousands)
Major Medical Facility Construction	\$1,000,000
NCA Construction	\$60,000
Advance Planning	\$40,000
Master Planning	\$15,000
Historic Preservation	\$20,000
Medical Research Infrastructure	\$100,000
Miscellaneous Accounts	\$60,000
TOTAL	\$1,295,000

establish its plan in a transparent way, vet that plan through our community and other interested parties, and provide its plan to Congress for review, and approval if required. We hope it will create a strategic capital plan that all can accept and help collectively to accomplish. However, until this process materializes, we fear that VA's capital programs and the significant effects on the system as a whole and veterans individually will go unchanged, ultimately risking diminution and perhaps even disaster for VA and for America's sick and disabled veterans.

Until the new plan is in place, however, the IBVSOs will continue to argue for the funding needs of the current infrastructure system to make it safe and useful to veterans who need VA health care.

Major Medical Facility Construction—this amount would allow VA to continue to address the backlog of partially funded construction projects. Depending on the stage in the process and VA's ability to complete portions of the projects within the fiscal year, remaining money could be used to fund new projects identified by VA as part of its prioritization methodology from the 5-Year Capital Plan.

Table 13. Minor Construction Recommendations

Category	Funding (\$ in Thousands)
Veterans Health Administration	\$450,000
Medical Research Infrastructure	\$200,000
National Cemetery Administration	\$100,000
Veterans Benefits Administration	\$20,000
Staff Offices	\$15,000
TOTAL	\$785,000

National Cemetery Administration—numerous potential projects are listed in Table 7-3 of the 5-Year Capital Plan.¹ Funding for this account would allow construction to begin on at least two projects from this list, in accordance with VA's prioritization system.

Advanced Planning—this amount helps develop the scope of the Major Medical Facility construction project as well as to identify proper requirements for their construction. It allows VA to conduct necessary studies and research similar to the planning process in the private sector.

Master Planning—a description of *The Independent Budget* request follows later in the text.

Historic Preservation—a description of the *The Independent Budget* request follows later in the text.

Miscellaneous Accounts—these included the individual line items for such accounts as asbestos abatement, the judgment fund, and hazardous waste disposal.

The Independent Budget request is based on the level for these accounts historically.

¹ http://www4.va.gov/budget/docs/summary/Fy2010_Volume_4-Construction_and_5_Year_Cap_Plan.pdf.

CONSTRUCTION ISSUES

INADEQUATE FUNDING AND DECLINING CAPITAL ASSET VALUE:

The Department of Veterans Affairs must protect against deterioration of its infrastructure and a declining capital asset value.

The past decade of underfunded construction budgets has meant that VA has not adequately recapitalized its facilities. Recapitalization is necessary to protect the value of VA's capital assets through the renewal of the physical infrastructure. This ensures safe and fully functional facilities long into the future. VA's facilities have an average age of about 60 years, and it is essential that funding be increased to renovate, repair, and replace these aging structures and physical systems.

As in past years, *The Independent Budget* veterans service organizations (IBVSOs) cite the Final Report of the President's Task Force to Improve Health Care Delivery for Our Nation's Veterans (PTF). It found that from 1996 to 2001, VA's recapitalization rate was just 0.64 percent. At this rate, VA's structures would have an assumed life span of 155 years. The PTF cited a PricewaterhouseCoopers study of VA's facilities management programs that found that to keep up with industry standards in the private sector and to maintain patient and employee safety and optimal health-care delivery, VA should spend a minimum of 5 percent to 8 percent of plant replacement value (PRV) on its total capital budget.

The FY 08 VA Asset Management Plan provides the most

recent estimate of PRV. Using the guidance of the federal government's Federal Real Property Council, VA's PRV is more than \$85 billion.² Accordingly, using the 5 percent to 8 percent standard for capital construction, VA's capital budget should be between \$4.25 billion and \$6.8 billion per year in order to maintain its infrastructure. VA's capital budget request for FY 2010—which includes major and minor construction, maintenance, leases, and equipment—was \$5.090 billion. The IBVSOs appreciate the Administration's efforts to increase the total capital budget, and we hope that future requests are in line with the system's needs.

Recommendation:

Congress and the Administration must ensure that there are adequate funds for VA's capital budget so that VA can properly invest in its physical assets to protect their value and to ensure that the Department can continue to provide health care in safe and functional facilities long into the future.

² VA Asset Management Plan, 26. www4.va.gov/oaem/docs/FY08AssetManagementPlan.pdf.



INCREASE SPENDING ON NONRECURRING MAINTENANCE:

The deterioration of many VA properties requires increased spending on nonrecurring maintenance.

For years *The Independent Budget* veterans service organizations (IBVSOs) have highlighted the need for increased funding for the nonrecurring maintenance (NRM) account. NRM consists of small projects that are essential to the proper maintenance of VA facilities to preserve their life span. NRM projects are one-time repairs, such as maintenance to roofs, repair and replacement of windows and flooring, or minor upgrades to mechanical or electrical systems. They are a necessary component of the care and stewardship of a facility.

NRM projects are essential: if ignored, they can really take a toll on a facility, leading to more costly repairs in the future, and the potential need for a minor construction project. Beyond the fiscal aspects, facilities that fall into disrepair can create access difficulties and impair patient and staff health and safety, and if needed repairs should develop into a larger construction project because they were ignored early on, an even greater inconvenience for veterans and staff results.

The industry standard for medical facilities is for managers to spend from 2 percent to 4 percent of plant replacement value (PRV) on upkeep and maintenance. The 1998 PricewaterhouseCoopers study of VA's facilities management practices argued for this level of funding, and previous versions of VA's own Asset Management Plan have agreed that this level of funding would be adequate.

The most recent estimate of VA's PRV is from the FY 08 Asset Management Plan. Using the standards of the federal government's Federal Real Property Council (FRPC), VA's PRV is just over \$85 billion. Accordingly, to fully maintain its facilities, VA needs an NRM budget of at least \$1.7 billion.

VA is aware of the challenges it faces with respect to the maintenance backlog, and it regularly surveys each facility as part of the Facilities Condition Assessment (FCA) process. Teams of professional engineers and cost estimators survey each medical facility at least once every three years. These surveys aim to assess all of a building's systems as well as issues related to the site (such as parking and mobility barriers and related issues). Each component of a facility is given a letter grade, *A* through *F*. Systems with a grade of *F* are items that require immediate attention. This could mean that an item, such as a heating or cooling unit, no longer functions or functions poorly or that the unit is well past its useful life and is in danger of imminent structural or systems failure. VA estimates the cost of repair for each item rated *D* or *F*, and it uses this cost estimate as a component of its Federal Real Property Report requirements.

According to VA's latest 5-Year Capital Plan, VA has estimated the total cost of repairing all *D*-rated and *F*-rated FCA deficiencies at a staggering \$8 billion, even as VA and Congress have greatly increased the amount of funding and resources devoted to this critical aspect of capital asset management.

VA uses the FCA reports as part of its FRPC metrics. The department calculates a Facility Condition Index, which is the ratio of the cost of FCA repairs to the cost of replacement. According to the FY 08 Asset Management Plan, this metric has gone backward from 82 percent in 2006 to just 68 percent in 2008. VA's strategic goal is 87 percent, and for the Department to meet that, it would require a sizeable investment in NRM and minor construction.

Given the low level of funding the NRM account has historically received, the IBVSOs are not surprised at the metrics or the dollar cost of the FCA deficiencies. The 2007 "National Roll Up of Environment of Care Report," which was conducted in light of the shameful maintenance deficiencies at Walter Reed Army Medical Center, further proves the need for increased spending on this account. Maintenance has been neglected for far too long, and for VA to provide safe, high-quality health care in its aging facilities, it is essential that more money be allocated for this account.

The IBVSOs also have concerns with how NRM funding is apportioned. Because it falls under the Medical Care Account, NRM funding has traditionally been apportioned using the Veterans Equitable Resource Allocation (VERA) formula. This model works when divvying up health-care dollars, targeting money to those areas with the greatest demand for health care. When dealing with maintenance needs, though, this same formula may actually intensify the problem, moving money away from older hospitals, such as in the Northeast, to newer facilities where patient demand is greater, even if the maintenance needs are not as high. We were happy to see that the conference reports to the VA appropriations bills required NRM funding to be apportioned outside the VERA formula, and we hope this will continue.

Another issue related to apportionment of funding came to light in a May 2007 Government Accountability Office (GAO) report. The GAO found that the bulk of NRM funding is not apportioned until September, the final month of the fiscal year. In September 2006, the GAO found that VA allocated 60 percent of that year's NRM funding. This is a shortsighted policy that impairs VA's ability to properly address its maintenance needs, and with NRM funding year-to-year, this policy could lead to wasteful or unnecessary spending as hospital managers rush to spend their apportionment before forfeiting it back. We cannot expect VA to perform a year's worth of maintenance in a month. It is clearly poor policy and not in the best interest of veterans. The IBVSOs believe that Congress should consider allowing some NRM money to be carried over from one fiscal year to another. We hope this will result not in hospital managers hoarding money but in more efficient spending and better planning, eliminating the current situation in which hospital managers sometimes have to spend through a large portion of maintenance funding before losing it at the end of the fiscal year.

Recommendations:

VA must dramatically increase funding for nonrecurring maintenance in line with the 2 percent to 4 percent total that is the industry standard so as to maintain clean, safe, and efficient facilities. VA also requires additional maintenance funding to allow the Department to begin addressing the substantial maintenance backlog of Facilities Condition Assessment-identified projects.

Portions of the nonrecurring maintenance account should continue to be funded outside of the Veterans Equitable Resource Allocation formula so that funding is allocated to the facilities that have the greatest maintenance needs.

Congress should consider the advantages of allowing VA to carry over some maintenance funding from one fiscal year to the next to reduce the temptation of hospital managers to inefficiently spend NRM money at the end of a fiscal year rather than lose it.



MAINTAIN CRITICAL VA HEALTH INFRASTRUCTURE:

A well-thought-out health infrastructure and strategic plan is urgently needed. Congress and the Administration must work together to secure the Department of Veterans Affairs' future by designing a VA of the 21st century while maintaining the integrity of its health-care system and all the benefits VA brings to its unique patient population.

We find ourselves at a critical juncture with respect to how VA health care will be delivered and what the Department of Veterans Affairs of the future will be like in terms of its health-care facility infrastructure. One fact is certain—our nation's sick and disabled veterans deserve and have earned a stable, accessible VA health-care system that is dedicated to their unique needs and can provide high-quality, timely care where and when they need it.

Over the past year, VA has begun to discuss its desire to address its health infrastructure needs in a new way. VA has acknowledged its challenges with aging infrastructure; changing health-care delivery needs, including reduced demand for inpatient beds and increasing demand for outpatient care and medical specialty services; limited funding available for construction of new facilities, which are growing prohibitively expensive; frequent delays in constructing and renovating space needed to increase access; and particularly the timeliness of construction projects. VA has noted, and we concur, that a decade or more is required from the time VA initially proposes a major medical facility construction project, until the doors actually open for veterans to receive care in that facility.

Given these significant challenges, VA has broached the idea of a new model for health-care delivery, the Health

Care Center Facility (HCCF) leasing program. Under the HCCF proposal, in lieu of the traditional approach to major medical facility construction, VA would obtain by long-term lease a number of large outpatient clinics built to VA specifications. These large clinics would provide a broad range of outpatient services, including primary and specialty care as well as outpatient mental health services and ambulatory surgery. Inpatient needs at such sites would probably be managed through contracts with affiliates or local private medical centers, although today we are unclear on how such arrangements would be managed.

VA noted that in addition to leasing new HCCF facilities it would maintain VA medical centers (VAMCs), larger independent outpatient clinics, community-based outpatient clinics (CBOCs), and rural outreach clinics. VA has argued that adopting the HCCF model would allow VA to quickly establish new facilities that would provide 95 percent of the care and services veterans need in their catchment areas, specifically primary care, and a variety of specialty services, mental health, diagnostic testing, and same-day ambulatory surgery.

The Independent Budget veterans service organizations (IBVSOs) agree that the HCCF model seems to offer a number of benefits in addressing VA's capital infrastruc-

ture problems, including more modern facilities that meet current safety codes, better geographic placements, increased patient safety, reductions in veterans' travel costs, increased convenience, flexibility to respond to changes in patient loads and technologies, overall savings in operating costs and in facility maintenance, and reduced overhead in maintaining outdated medical centers.

While it offers some obvious advantages, the HCCF model also holds significant challenges. The IBVSOs remain deeply concerned about the overall impact of this new model on the future of VA's system of care, including the potential unintended consequences on continuity of high-quality care; maintenance of its specialized medical programs for spinal cord injury, blindness, amputations, and other health challenges of seriously disabled veterans; delivery of comprehensive services; its recognized biomedical research and development programs; and, in particular, VA's renowned graduate medical education and health professions training programs, in conjunction with longstanding affiliations with nearly every health professions university in the nation. Moreover, the IBVSOs believe the HCCF model could challenge VA's ability to provide alternatives to direct maintenance of its existing 130 nursing home care units (now called Community Living Centers), homelessness programs, domiciliaries, compensated work therapy programs, hospice and respite, adult day health-care units, the Health Services Research and Development Program, and a number of other highly specialized services, including 24 spinal cord injury centers, 10 blind rehabilitation centers, a variety of unique "centers of excellence" (in geriatrics, gerontology, mental illness, Parkinson's, and multiple sclerosis), and critical care programs for veterans with serious and chronic mental illnesses.

In general, the IBVSOs believe the HCCF proposal could be a positive development, with good potential. Leasing has the advantage of avoiding long and costly in-house construction delays and can be adaptable, especially when compared to costs for renovating existing VA major medical facilities. Leasing options have been particularly valuable for VA, as evidenced by the success of the leased space arrangements for many VA community-based outpatient clinics and Vet Centers.

However, the IBVSOs remain concerned with VA's plan for obtaining inpatient services under the HCCF model. VA says it will contract for these essential inpatient services with VA affiliates or community hospitals if needed. First and foremost, we fear this approach could negatively impact safety, quality and continuity of care, and

permanently privatize many services we believe VA should continue to provide. We have testified on this topic numerous times, and the IBVSOs have expressed objections in the Contract Care Coordination and Community-based Outpatient Clinics sections of this *Independent Budget*.

In November 2008, VA addressed a number of specific questions related to a Congressional request for more information on VA's plans for the newly proposed HCCF leasing initiative, including whether studies had been carried out to determine the effectiveness of the current approach; the full extent of the current construction backlog of projects; its projected cost over the next five years to complete; the extent to which national veterans organizations were involved in the development of the HCCF proposal; the engagement of community health-care providers related to capacity and willingness to meet veterans' needs; the ramifications for the delivery of long-term care and specialized services as discussed above; and whether VA would be able to ensure that needed inpatient capacity would remain available indefinitely.

Based on VA's response to that request, it appears VA has a reasonable foundation for assessing capital needs and has been forthright with the estimated total costs for ongoing major medical facility projects. For FY 2011, VA estimated \$2.3 billion in funding needs for existing and ongoing projects. The Department estimated that the total funding requirement for major medical facility projects over the next five years would be in excess of \$6.5 billion. Additionally, if the new HCCF initiative were fully implemented, VA indicated it would need approximately \$385 million more to execute seven of the eight new proposed HCCF leases.

The IBVSOs agree with VA's assertion that it needs a balanced capital assets program, of both owned and leased buildings, to ensure that demands are met under current projections. Likewise, we agree with VA that the HCCF concept could provide modern health-care facilities relatively quickly that might not otherwise be available because of the predictable constraints of VA's major construction program. VA indicated in its Congressional letter that the eight sites proposed for the HCCF initiative were chosen to ensure there would be little impact on VA specialty inpatient services or on delivery of long-term care. However, what is not clear to us is the extent to which VA plans to deploy the HCCF model. In areas where existing CBOCs need to be replaced or expanded with additional services because of the need to increase capacity, the HCCF model would seem ap-

appropriate and beneficial. On the other hand, if VA plans to replace the majority or even a large fraction of all VAMCs with HCCFs, such a radical shift would pose a number of concerns for us. But we see this challenge as only a small part of the overall picture related to VA health infrastructure needs in the 21st century. The emerging HCCF plan does not address the fate of VA's 153 medical centers located throughout the nation that are on average 55 years old or older. It does not address long-term-care needs of the aging veteran population, inpatient treatment of the chronically and seriously mentally ill, the unresolved rural health access issues, or the lingering questions on improving VA's research infrastructure.

The major questions that confront us today are, what will VA's 21st century health infrastructure look like and how it will be managed and sustained? Fully addressing these and related questions is extremely important and will impact generations of sick and disabled veterans.

Given the President's pledge to create the VA of the 21st century, the IBVSOs expect VA to establish its plan in a transparent way, vet that plan through our community and other interested parties, and provide its plan to Congress for review, and approval if required.

Congress and the Administration must work together to secure VA's future and the highest quality of care for our nation's veterans. It will take the joint cooperation of Congress, veterans advocates, and the Administration to support this reform, while setting aside resistance to change, even dramatic change, when change is demanded and supported by valid data. Accordingly, we urge the Administration and Congress to live up to the President's words by making a steady, stable investment in VA's capital infrastructure to bring the system up to match the 21st century needs of veterans.

Finally, one of our community's frustrations with respect to VA's infrastructure plans is lack of consistent and periodic updates, specific information about project plans, and even elementary communications. We ask that VA improve the quality and quantity of communication with the IBVSOs, our larger community, enrolled veterans, concerned labor organizations and

VA's own employees, affiliates, and other stakeholders, as the VA capital and strategic planning process moves forward. We believe that all of these groups must be made to understand VA's strategic plan and how it may affect them, positively and negatively. Talking openly and discussing potential changes will help resolve the understandable angst about these complex and important questions of VA health-care infrastructure. While we agree that VA is not the sum of its buildings, and that a veteran patient's welfare must remain at the center of VA's concern, VA must be able to maintain an adequate infrastructure around which to build and sustain "the best care anywhere." If VA keeps faith with these principles, we are prepared to aid VA in accomplishing this important goal.

Recommendations:

VA must develop a well-thought-out health care infrastructure and strategic plan that becomes the means for VA to establish a veterans' health-care system for the 21st century.

Congress, the Administration, and internal and external stakeholders must work together to secure VA's future, while maintaining the integrity of the VA health-care system and all the benefits VA brings to its unique patient population.

VA's implementation of the Health Care Center Facility model, including the seven currently proposed projects, must fully address the potential impact of this model on VA's specialized medical care programs; continuity of high-quality care, delivery of comprehensive services, protection of VA biomedical research and development programs, and particularly the sustainment of VA's renowned graduate medical education and health professions training programs.

VA must improve the quality and quantity of communications with internal and external communities of interests, including the coauthors of this *Independent Budget*, concerning its plans for future VA infrastructure improvements.

EMPTY OR UNDERUTILIZED SPACE AT MEDICAL CENTERS:

The Department of Veterans Affairs must use empty space appropriately.

Studies have suggested that the VA medical system has extensive amounts of empty space that can be reused for medical services. It has also been suggested that unused space at one medical center may help address a deficiency that exists at another location. Although the space inventories are accurate, the assumption regarding the feasibility of using this space is not.

Medical facility planning is complex. It requires intricate design relationships for function, particularly because of the demanding requirements of certain types of medical equipment. Because of this, medical facility space is rarely interchangeable, and if it is, it is usually at a prohibitive cost. Unoccupied rooms on the eighth floor, for example, cannot be used to offset a deficiency of space in the second floor surgery ward. Medical space has a very critical need for inter- and intradepartmental adjacencies that must be maintained for efficient and hygienic patient care.

When a department expands or moves, these demands create a domino effect of everything around it, and these secondary impacts greatly increase construction expense, and they can disrupt patient care.

Some features of a medical facility are permanent. Floor-to-floor heights, column spacing, light, and structural floor loading cannot be altered. Different aspects of medical care have different requirements based upon these permanent characteristics. Laboratory or clinical spacing cannot be interchanged with ward space because of the needs of different column spacing and perimeter configuration. Patient wards require access to natural light and column grids that are compatible with the layout of rooms. Labs should have long structural bays and function best without windows. When renovating empty space, if the area is not suited to its planned purpose, it will create unnecessary expenses and be much less efficient.

Renovating old space rather than constructing new space creates only a marginal cost savings. Renovations of a specific space typically cost 85 percent of what a

similar, new space would. When you factor in the aforementioned domino or secondary costs, the renovation can end up costing more and produce a less satisfactory result. Renovations are sometimes appropriate to achieve those critical functional adjacencies, but they are rarely economical.

Many older VA medical centers that were rapidly built in the 1940s and 1950s to treat a growing veteran population are simply unable to be renovated for more modern needs. Most of these Bradley-style buildings were designed before the widespread use of air conditioning, and the floor-to-floor heights are very low. Accordingly, it is impossible to retrofit these buildings for modern mechanical systems. Long, narrow wings radiating from a small central core are an inefficient layout for modern use. Such a central core, too, has but a few small elevator shafts, complicating the vertical distribution of modern services.

Another important problem with this unused space is its location. Much of it is not in a prime location; otherwise it would have been previously renovated or demolished for new construction. This space is typically located in outlying buildings or on upper floor levels and is unsuitable for modern use.

Public Law 108-422 gave VA incentive to properly dispose of excess space by allowing it to retain the proceeds from the sale, transfer, or exchange of certain properties in its Capital Asset Fund. Further, that law required VA to develop short- and long-term plans for the disposal of facilities, which are reported to Congress annually. VA must continue to develop these plans, working in concert with their architectural master plans and the long-range vision for a site.

Recommendation:

VA should develop a plan for addressing its excess space in nonhistoric properties that are not suitable for medical or support functions as a result of their permanent characteristics or locations.

PROGRAM FOR ARCHITECTURAL MASTER PLANS:

Each VA medical facility must develop a detailed master plan.

The delivery models for quality health care are in a constant state of change. This is due to many factors, including advances in research, changing patient demographics, and new technology.

The Department of Veterans Affairs must design its facilities with a high level of flexibility in order to accommodate these new methods of patient care. It must be able to plan for change to accommodate new patient care strategies in a logical manner with as little effect as possible on other existing patient care programs. It must also provide for growth in existing programs.

A facility master plan is a comprehensive tool to look at potential new patient care programs and how they might affect the existing health-care facility. It also provides insight with respect to possible growth, current space deficiencies, and other facility needs for existing programs and how they might be accommodated in the future.

In some cases in the past, VA has planned construction in a reactive manner. Projects are first funded and then placed in the facility in the most expedient manner; often not considering other projects and facility needs. This may result in shortsighted construction that restricts rather than expands options for the future.

The IBVSOs believe that each VA medical center should develop a comprehensive facility master plan to serve as a blueprint for development, construction, and growth of the facility. VA has recently allocated significant funding for four critical programs: long-term care, severe mental illness, domiciliary care, and polytrauma. A comprehensive plan addressing these needs must be developed and included in any master planning of facilities that will provide these services.

VA has undertaken master planning for several of its facilities, most recently Palo Alto, California. This is a good start. But VA must ensure that all facilities develop a master plan strategy to validate strategic planning decisions, prepare accurate budgets, and implement efficient construction that minimizes wasted expenses and disruption to patient care.

Recommendation:

Congress must appropriate \$15 million to provide funding for each medical facility to develop a master plan. The master plan shall include all services offered at the facility and also should include long-term care, severe mental illness, domiciliary care, and polytrauma programs as they relate to the particular facility.



ARCHITECT-LED DESIGN-BUILD PROJECT DELIVERY:

The Department of Veterans Affairs must evaluate use of architect-led design-build project delivery.

The Department of Veterans Affairs currently employs two project delivery methods: design-bid-build and design-build. Design-bid-build is the most common method of project design and construction. In this method, an architect is engaged to design the project. At the end of the design phase, a complete set of contract documents is prepared. Based on these documents, contractors are invited to submit a bid for construction of the project. A contractor is selected based on this bid and the project is constructed. With the design-bid-build process, the architect is involved in all

phases of the project to ensure that the design intent and quality of the project is reflected in the delivered facility. In this project delivery model, the architect is an advocate for the owner without any conflict of interest.

The design-build project delivery method attempts to combine the design and construction schedules to streamline the traditional design-bid-build method of project delivery. The goal is to minimize the risk to VA and reduce the project delivery schedule. Design-build, as used by VA, places the contractor as the design builder.

Under the contractor-led design-build process, the contractor is given a great deal of control over how the project is designed and completed. In this method, the architect and design professionals are hired by the contractor. With the architect as a subordinate, a contractor may sacrifice the quality of material and systems in order to add to his own profits at the expense of the Department.

Use of contractor-led design-build has several inherent problems. A shortcut design process reduces the time available to provide a complete design. This provides those responsible for project oversight inadequate time to review completed plans and specifications. In addition, the construction documents often do not provide adequate scope for the project, leaving out important details regarding the workmanship and/or other desired attributes of the project. This makes it difficult to hold the builder accountable for the desired level of quality. As a result, a project is often designed as it is being built, often compromising VA's design standards.

Contractor-led design-build forces VA to rely on the contractor to properly design a facility that meets VA's needs. In the event that the finished project is not satisfactory to VA, the Department may have no means to insist on correction of work done improperly unless the contractor agrees with VA's assessment. This may force VA to go to some form of formal dispute resolution such as litigation or arbitration.

An alternative method of design-build project delivery is architect-led design-build. This model places the architect as the project lead rather than the contractor. This has many benefits to VA. These include ensuring the quality of the projects as the architect reports directly to VA to address issues of quality and design. A

second benefit to VA is the ability to provide tight control over the project budget. This is a result of budget issues being addressed in the earliest stages of design. As a result, the architect is able to access pricing options during the design process and develop the design accordingly.

Another advantage of architect-led design-build is in the procurement process. Since the design and construction team is determined before the design of the project begins, the request for proposal process is streamlined. As a result, the project can be delivered faster than the traditional design-bid-build process. Finally, the architect-led-design-build model reduces the amount of project claims and disputes. It prevents the contractor from "low balling," a process where the contractor submits a very low bid in order to get a project and then attempts to make up the deficit with change orders. Because the architect and the contractor are a "team," there is no adversity and the project will likely run much smoother.

Recommendations:

VA must evaluate the use of architect-led design-build as an alternate method of project delivery in place of the contractor-led design-build project delivery method currently employed by the Department.

VA must institute a program of "lessons learned." This would involve revisiting past projects and determining what worked, what could be improved, and what did not work. This information should be compiled and used as a guide to future projects. This document should be updated regularly to include projects as they are completed.

PRESERVATION OF VA'S HISTORIC STRUCTURES:

The Department of Veterans Affairs must further develop a comprehensive program to preserve and protect its inventory of historic properties.

VA has an extensive inventory of historic structures that highlight America's long tradition of providing care to veterans. These buildings and facilities enhance our understanding of the lives of those who have worn the uniform, and who helped to develop this great nation. Of the approximately 2,000 structures in the VA historic building inventory, many are neglected and deteriorate year after year because of a lack of funding. These structures should be stabilized, protected, and preserved because they are an integral part of our nation's history. One example is an Indian school building located in Wisconsin. Because of lack of attention, this facility has declined to such an extent that VA is in the process of arranging for demolition.

Most of these historic facilities are not suitable for modern patient care. For the past seven years, *The Independent Budget* veterans service organizations (IBVSOs) have recommended that VA conduct an inventory of these properties, classifying their physical condition and their potential for adaptive reuse. VA has moved in that direction and historic properties have been identified. Many of these buildings have been placed in an "Oldest and Most Historic" list and require immediate attention.

The cost for saving some of these buildings is not very high considering that they represent a part of history which enriches the texture of our landscape and once gone cannot be recaptured. For example, the Greek revival mansion in Perry Point, Maryland, built in the 1750s, can be restored and used as a training space for

about \$1.2 million. The Milwaukee Ward Memorial Theater, built in 1881, could be restored as a multi-purpose facility at a cost of \$6 million. This is much less than the cost of a new facility.

Saving these buildings also fits into VA's commitment to "green" architecture. Materials are reused, reducing the amount of resources needed to manufacture and transport new materials.

As part of its adaptive reuse program, VA must ensure that facilities that are leased or sold are maintained properly. VA's legal responsibilities could, for example, be addressed through easements on property elements, such as building exteriors or grounds.

The IBVSOs support provisions of P.L.108-422, "Veterans Health Programs Improvement Act," which authorized historic preservation as one of the uses of a new capital assets fund that receives funding from the sale or lease of VA property.

Recommendations:

VA must continue to develop a comprehensive program to preserve and protect its inventory of historic properties.

VA must allocate funding for adaptive reuse of historic structures.