Report to Congress on Plans for Re-establishing a VA Medical Center in New Orleans

R. James Nicholson
Secretary
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1. Introduction

This report presents an analysis of options and a summary level long-term plan for re-establishing a VA Medical Center in the City of New Orleans. It is submitted to Congress in compliance with P.L. 109-148 which includes the following directive: “The Department is directed to report to the Committees on Appropriations of both houses of Congress by February 28, 2006 on the long-term plans for the construction of a replacement hospital in New Orleans, Louisiana.” Although the Congressional directive refers to a replacement “hospital” this report refers to “Medical Center” since it more accurately describes the current and future VA planned presence in New Orleans.

VA’s plan is dependent upon a number of key assumptions. For example, expectations regarding the future veteran population and funding support and cooperation from state and local officials are all of particular importance - as is the restoration of the levy system. These assumptions, as well as others, are addressed in the discussion section for each proposed Option.

As acknowledged in numerous reports, VA’s immediate response to hurricanes Katrina and Rita was highly commendable. However, a great amount of work remains throughout the affected region. While this particular report deals with infrastructure, VA continues to focus on the human element as well - assisting veterans and VA employees with a variety of support programs to hasten their return to a normal life. Their individual problems are indeed formidable.

The principal VA objectives regarding the New Orleans area are not only to restore complete service to veterans in the most cost effective manner, but also to assist in the City’s restoration in the areas of health care and medical education. Prior to the hurricanes, VA’s Medical Center provided primary, secondary and tertiary care to veterans throughout southeast Louisiana, eastern Texas and western Mississippi. It also supported an extensive program of on-going medical research and training in conjunction with LSU and the Tulane University School of Medicine. The VA facility was in fact the primary teaching hospital training over 450 residents and specialists as well as over 900 associate health trainees annually. As such VA had an important role in the medical community in and around New Orleans. This “teaching” aspect and the synergy of operating in close proximity to other medical facilities was a major consideration in VA’s analysis of recovery options.

The report begins with a summary of VA capabilities in the affected region and the impact of hurricanes Katrina and Rita. This will provide the reader with an appreciation for VA related hurricane damage and recovery actions, as well as a frame of reference for the later discussion of the New Orleans Medical Center. Options for re-establishing the facility are presented in Section 3 and VA plan, which concludes that new construction of a facility shared with LSU is the preferred option, is discussed in Section 4. The report also has three Attachments: Attachment A is a summary of a contractor led assessment of damage sustained by the existing facility together with costing summaries of various re-establishment options; Attachment B is an analysis of demographics and the future workload the New Orleans Medical Center is expected to support; Attachment C is a Memorandum of Understanding (MOU) between VA and LSU Health Care Services Division wherein the Parties agree to jointly study state-of-the-art health care delivery options for New Orleans.
2. Background – VA in the Region and the Impact of Katrina and Rita

The Department of Veterans Affairs has an extensive network of facilities offering a wide variety of services and capabilities throughout the Gulf Coast area. Those within the area most affected by hurricanes Katrina and Rita are illustrated on Figure 1. The graphic provides a useful reference for the VA “footprint” in the affected region. Extending from Houston, Texas to Mobile, Alabama it covers the lower portion of Veterans Integrated Service Network (VISN) 16. As indicated, there are six existing Medical Centers (green stars) and twelve existing Community-Based Outpatient Clinics (CBOCs) (blue ovals) throughout this area. The red ovals indicate CBOCs that are planned for the future. The yellow ovals indicate CBOCs that are being established in an accelerated mode to temporarily alleviate the loss of VA Medical Center in New Orleans. Veterans Benefit Administration (VBA) Regional Offices and cemeteries of the National Cemetery Administration are also illustrated on the graphic.

In this coastal region the two Medical Center complexes that sustained hurricane damage are the Gulf Coast Veterans Health Care System (GCVHCS) in the Biloxi/Gulfport area and VA Medical Center in New Orleans. The most extensive damage occurred at Gulfport followed by severe flood damage at New Orleans. The following provides a short summary of hurricane damage to VA facilities in this area.
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2.1. Summary of Damage to VA Facilities in the Region

On Monday August 29, 2005 hurricane Katrina made landfall along the Gulf Coast with hurricane Rita following less than four weeks later on September 23. Damage to VA facilities in the Mississippi and Louisiana coastal areas was extensive and is summarized as follows:

- **Biloxi** – Although some damage did occur to the VA Medical Center at Biloxi this complex weathered the hurricane well and remained fully operational. All building systems, with the exception of emergency communications, continued to function normally during and after the hurricane. Damage at Biloxi included the asphalt shingle roofs on several buildings, window panes, seals and gaskets, doors and interior finishes, and some damage to electrical and mechanical systems. There was also significant site damage to the large number of live oaks and pines on the campus as well as to facility signage.

- **Gulfport** – Damage at the Gulfport VA Medical Complex, only 8 miles from the Biloxi Medical Center, was much more severe, to the point of catastrophic. The tidal surge from Katrina destroyed or made irreparable most buildings on the campus. Only the boiler plant and laundry survived, though both would need significant repair to resume operations. The Gulfport medical complex housed inpatient and outpatient mental health programs, substance abuse treatment programs, long-term care, primary care and specialty care and related support services. It also housed engineering and facilities management functions, billing and fee operations, long-term medical record storage and acquisition activities. Prior to the storm Gulfport employed 440 people. With respect to VA’s capability to provide health care in the region the loss of the Gulfport complex was a significant disaster. Patients were relocated to other VA facilities in the region and throughout the country.

- **New Orleans** – At the City of New Orleans Katrina hit land at 6:10 AM as a Category 4 hurricane with recorded sustained winds as high as 175 mph. The previous evening, 28 August, the New Orleans Levee Authority lost power to most pump operations. At about mid day on 29 August, the New Orleans levee system, that normally holds back storm flow from Lake Pontchartrain, incurred multiple breaches of several sections as a result of rising storm surge levels. That evening, the ‘eye’ was directly over the VA Medical Center with reported 100 mph winds. The flood that followed crippled VA Medical Center, the entire City of New Orleans, and surrounding parishes. Severe flooding caused extensive damage to VA Medical Center – more detail on damage to this specific facility is presented in Section 3 below. The other key VA facility in New Orleans that sustained damage was the Veterans Benefits Regional Office. This office was located in GSA leased space in the New Orleans Postal Office Tower building. Severe flooding caused the office to be vacated.

- **Cemeteries** – Several VA Cemeteries along the coastal area also sustained damage to grave markers, trees and shrubbery and were also littered with debris.

2.2. Summary of Recovery Steps in the Region

Clearly many of the patients that had been using VA facilities in the region are now among the evacuees that have been relocated to other parts of the region and the country. In anticipation of their return, and to continue support for those who remained, VA has taken several actions to restore service in the area (refer to Figure 1 for specific locations):

- **Biloxi** – The construction of a new hospital (that was already planned as part of the CARES program) is being accelerated. This project also includes a potential partnership with the USAF at Keesler AFB - at least with respect to continuation of Graduate Medical Education (GME) - a key concern of the Air Force. From a medical education standpoint the University of Mississippi is also very interested in VA recovery activity in Biloxi.
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- **Gulfport** – Since the Gulfport facility was already scheduled for closure (as part of CARES), no extensive recovery is planned. Workload is being shifted to the Biloxi Medical Center. However, a temporary modular clinic is being established on the Gulfport campus. A trailer park for 200 trailers has already been established there – these trailers are currently being used to house VA employees and patients.

- **Baton Rouge** - Capacity has been increased at the CBOC in Baton Rouge with the lease of the former clinic space to accommodate administrative operations for New Orleans.

- North and west of Lake Ponchartrain CBOCs are being established at Laplace (in leased space temporarily pending donation of land for a modular building), Hammond (also a modular building), and Slidell (in leased space). The modular buildings VA will be using are pre-fabricated temporary structures that can be erected quickly. These structures come complete with electrical wiring, components, circuit breakers and heating and cooling outlets.

- **Gretna, LA** - A temporary Regional Benefits facility has been established in Gretna, Louisiana (60,000 Sq Ft and 125 parking spaces) about ten miles to the west of downtown New Orleans.

- In the existing New Orleans VA complex a primary care clinic has been opened in space available above the adjacent parking structure - limited specialty care will be available shortly.

- Clean-up work at VA cemeteries also continues.

From the standpoint of outpatient medical care, the above actions will accommodate the anticipated patient workload in the near term. However, inpatient care will not be available in the immediate vicinity of New Orleans until VA’s Medical Center is re-established. **This is the principal issue regarding full VA recovery in the New Orleans area.**
3. VA Medical Center, New Orleans

The New Orleans VA Medical Center (NOVAMC) is located in Orleans Parish about six miles South of Lake Ponchartrain and a mile west of the Mississippi River as indicated by the star in the upper section of Figure 2. Part of a four-hospital complex, as shown in the lower portion of the figure, it is the major VA medical facility in the “Central Southern” Market area of VISN 16.

This medical center has a critically important role in caring for patients throughout Southern Louisiana, Eastern Texas and Western Mississippi. Over 39,000 unique patients were treated in FY 2005. Pre-hurricane statistics included staffing of over 1,700 employees and 600+ volunteers, with an annual operating budget in excess of $130 Million.

Currently about two thirds of the patients previously being cared for in this facility have been seen at other VA Medical Centers. Those remaining in the area are being served by the CBOCs illustrated in Figure 1 on page 2.

Pre-Katrina, the medical center had active medical affiliations with Louisiana State Health Sciences Center and Tulane University Health Sciences Center. In FY 05, 124 resident positions were allocated to the medical center. In total, over 500 University residents, interns, and other allied health students were trained at the medical center. There were also nursing and Department of Defense (DoD) affiliations with: Charity/Delgado, Dillard, Our Lady of Holy Cross College, LSUHSC, Loyola, University of South Alabama, University of Phoenix, University of Mobile, University of Louisiana at Lafayette, University of Southern Mississippi, Mississippi University for Women, the 926th Air Force, the 1010th Navy, Naval Ambulatory Care Center, and the 4010th US Army Reserve Hospital.

The medical center also had affiliations for physical therapy with Bishop State Community College, and Elon College; for pharmacy with Xavier University in New Orleans and University of Louisiana at Monroe; for psychology with SUNY at Stony Brook, SUNY at Buffalo, Emory University, Texas Tech University, and University of Georgia; for social work with Florida State University, LSU at Baton Rouge, and Southern University of New Orleans.
Affiliations with Tulane University were in place for audiology/speech pathology with LSU at Baton Rouge and New Orleans and University of Florida; for recreational therapy with Grambling State University; for ophthalmology, respiratory care, radiology, and nutrition/food with Delgado Community College; for dental hygiene, cardiopulmonary science, medical technology and physician assistant with LSU; for medical technology and respiratory care with Nicholls State University; and for nutrition/food with Southern University in Baton Rouge. Through sharing agreements there was collaboration in the areas of Radiation Therapy and Professional Radiology Services.

The medical center also had a well funded research and development program, including studies in such diverse areas as hypertension, heart disease, kidney disease, prostate cancer, schizophrenia, PTSD, Alzheimer’s Disease, and more. All of which enhanced the ability to provide state-of-the-art medical techniques and treatments to veteran patients. The medical center was also the home of the Mental Illness Research, Education and Clinical Center (MIRECC) for VISN 16. A facility of significant importance to veterans, as well as to the extensive network of medical affiliates mentioned above, VA medical Center should be re-established without delay – this is supported by the demographic analysis presented later in this paper.

VA’s campus in New Orleans (see block diagram at Figure 3) occupies approximately 10-acres which is bounded by Perdido Street on the south (the main visitor entrance), Gravier Street on the north, and Freret Street to the east. Across Gravier Street to the north is Charity Hospital, (illustrated on Figure 2). This was another facility severely damaged by flooding. The western campus property line is shared with a building site owned by Charity Hospital’s Board of Administrators. Elevation of these facilities is very close to sea level (+/- 20 feet).

The NOVAMC medical center includes the following major structures:

- **Building 1** – This is the main hospital. It is originally of 1949 vintage construction consisting of 11-stories above grade, plus a basement level, a sub-basement level, and two above-roof equipment penthouse levels. This building originally included Quadrants A, B, C, and D (Figure 3), and has undergone numerous renovations to include the addition of Quadrant E - a 6-level plus basement infill connecting building 1 to Quadrant F (the Clinical/Research addition). The hospital is currently licensed (pre-Katrina) as a 450 bed acute care facility.

- **Building 2** – This is a 6-story plus partial basement facility, originally constructed in 1949 as a facility manager and staff nurses’ quarters. It is detached from the main hospital and recently served as administrative space.

- **Clinical Addition (Quadrant F)** – This 9-story plus equipment penthouse facility was constructed in 1982, along with the connecting link to the original main hospital. This portion of the facility supports major research functions.

- **NHCU and Parking Garage** – This 11-story 1990-vintage facility includes a multi-story parking structure atop of which is a two-story 120 bed Nursing Home Care Unit (NHCU).

- **Boiler Plant** - A 1950-vintage two-story central boiler plant is located on the northeast portion of the campus along Freret Street.
As stated earlier, severe flooding associated with hurricane Katrina began in this area late in the morning of August 29, 2005, when portions of the New Orleans levy system collapsed. Buildings in the complex sustained extensive damage which worsened over time when the flood waters failed to recede (VA’s Medical Center complex is within several blocks of the Louisiana Superdome – the photo in the introduction illustrates the severity of the flooding).

Water from the breached levees flooded the entire area around the medical center, including the basement and sub-basement of the main building - the areas that house the facility’s major electrical, mechanical and dietetics equipment. The facility had no electrical power or air-conditioning for weeks following the hurricane. This condition caused extensive water/moisture damage both to the building and to equipment. Since there was no power to the complex for a long period of time the mildew and mold continued to spread creating unacceptable conditions for a medical facility. The excessive moisture damaged delicate medical instrumentation throughout the facility - similar conditions were experienced in the neighboring hospitals illustrated in Figure 2. VA’s Medical Center remained empty until December of 2005 when a primary care clinic was established in the tenth floor of the former Nursing Home (NHCU) building where the parking garage also exists. In March of 2006 a specialty clinic will open in the 9th floor NHCU.

3.1. The Need for a VA Medical Center in the Vicinity of New Orleans

The demand from the initial CARES process culminating in the Secretary’s CARES decision of May 2004 projected gaps in inpatient and outpatient care. These projections are still valid despite evacuations of the two Louisiana “parishes” most impacted by the hurricanes – Orleans and St Bernard. Attachment B of this report provides more detail on this very important issue and concludes that over the long term, a significant percentage of veteran evacuees will return to the catchment area resulting in very little change to demand projections – particularly with respect to utilization. This “rate of return” is already increasing - the data in the table below compares cumulative unique patients seen in New Orleans (and its associated clinics) this year and the last two years. While the numbers were down significantly in October the rate of increase has been accelerating such that by January the numbers were approaching 2/3rds of last year’s workload. Considering that new clinics are just starting up, and housing is still limited, this is a clear indication that workload is gradually returning to previous levels.

<table>
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<th>November</th>
<th>December</th>
<th>January</th>
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<tr>
<td>FY06 Post Katrina</td>
<td>6,378</td>
<td>10,602</td>
<td>17,521</td>
<td>21,326</td>
</tr>
</tbody>
</table>

Based on the demographic analysis in Attachment B, and observation of actual workload in the last few months, a basic assumption in this report is that there will be somewhat fewer but sufficient numbers of veterans with a reasonably high “utilization rate” to justify the re-establishment of a hospital either in, or close to, the City of New Orleans.
3.2. Options Considered

Four options for re-establishing a VA Medical Center in the vicinity of New Orleans were considered:

- **Option 1**: Restore and Hurricane Harden the Existing Medical Center
- **Option 2**: Renovate and Remodel the Existing Medical Center
- **Option 3**: Construction of a New Medical Center as a “Shared Facility” in the general area
- **Option 4**: Construction of a New Medical Center as a “Stand Alone” facility on higher ground on a site yet to be determined

Common assumptions or considerations that will affect all of these options in varying ways are provided below. Additional assumptions specific to each option are included in the discussion below for each option.

- **Veteran Population/Utilization Trends**: Demand for Medical Center level care for the New Orleans catchment area (which goes beyond city limits) will return to sufficiently high levels (see Attachment B). Even with slow repopulation of the heavily affected parishes of Orleans and St. Bernard there will be little change to CARES assumptions of increased demand - to include some evacuees from the city resettling in surrounding areas as evidenced by the above table.

- **Levy Infrastructure**: The levy system will be repaired to pre-Katrina conditions by June 2006.

- **Weather**: The intense tropical storm and hurricane activity experienced the past two years will continue for the next five years (National Weather Service prediction).

- **Relationship with Affiliates**: Affiliates are committed to VA (and vice versa); relationships will be established in the region with priority to a “shared service” model in the City.

- **Availability of Qualified Workers**: Although there has been some concern that the medical professional/service workforce may choose to permanently relocate outside the metropolitan area recent indications are more positive. Given the continued improvements, it is assumed that by the time a Medical Center is re-established, adequate numbers of qualified workers will be available. In addition, VA’s compassionate actions on behalf of New Orleans employees during and after the hurricane as well as the commitment to return a full range of services to the city will solidify VA’s position as an employer of choice.

- **Revitalization**: The continued presence of a VA Medical Center is important to the revitalization of the City of New Orleans.

- **Other VA Activities**: For all options, accommodations will be made for both the Veterans Benefit and the National Cemetery Administrations to share space as needed.

Estimated costs are included for each of the options but these continue to be refined. The most recent supplemental request submitted to Congress during the week of 13 February included $600M for a VA Medical Center in New Orleans. When added to the $75M previously approved, the initial estimate totals $675M. The costs included for each of the options described below are the most recent reported by the firm of Leo A. Daly – more detail on these is provided in Attachment A.
3.2.1. **Option 1: Restore and Hurricane-Harden the Existing Medical Center**

**General Description**
In this option VA would re-establish the existing Medical Center by restoring it to a condition similar to that before the hurricanes. Steps would also be taken to better protect the facility from severe flooding. For example, all critical and sensitive equipment would be moved to higher floors and lower floors would be used for less critical activity (parking, non critical storage, etc.). All damage to equipment and interior finishes from the effects of very high humidity over a long period of time (mold, etc.) would be repaired to the extent possible. More detail regarding this option is included in Attachment A under Option A.

**Critical Assumptions Specific to this Option**
- Hazardous conditions for a medical facility (like mold and difficult to detect contamination) can be effectively removed.

**VA Potential Cost**
- Approximately $288M

**Pros**
- Option 1 has the lowest initial cost.
- No site selection required; potentially the quickest way to re-establish a VA Medical Center in New Orleans (24 months to 3 years)

**Cons**
- Although the facility would be better protected from flood damage, it would still be located in the flood plain where accessibility could be difficult if flooding occurred again.
- Money would be spent on repairing an older (1950's vintage) facility.
- Since the repair would not involve any extensive modernization, recurring operating costs would be similar to that prior to Katrina.

**Issue**
- Successful cleansing and disinfecting the hospital complex is the principal issue for this option.
3.2.2. **Option 2: Renovate and Remodel the Existing Medical Center**

**General Description**
VA would re-establish a medical center by renovating and remodeling the current facility. The complex would be restored as per [Option 1](#), but in addition deficiencies to the 1950's era portions of the complex would also be addressed. All damage to equipment and interior finishes from the effects of very high humidity over a long period of time (mold, etc.) would be repaired to the highest degree possible. Sections of the building would be remodeled to accommodate a different modus operandi. For example as in [Option 1](#) all critical and sensitive equipment would be moved to higher floors and lower floors would be used for less critical activity (parking, non critical storage, etc.). For example, the primary engineering and food service infrastructure would be placed above Katrina’s precipitated “levee break” flood level. This would involve significant revamping/renovations to the first floor level as well as the construction of a new stand-alone Engineering Utility Plant tower building, probably on the site of (a razed) Building 2 in the northwest corner of VAMC campus. However [Option 2](#) could also include the addition of two more floors - this would depend on a more detailed engineering assessment. More detail regarding this option is included in [Attachment A](#) under [Option B](#).

**Critical Assumptions Specific to this Option**
- Hazardous conditions for a medical facility (like mold and difficult to detect contamination) can be effectively removed.

**VA Potential Cost**
- Approximately $622M

**Pros**
- Since the renovation would include extensive modernization, recurring operating costs would be lower than prior to Katrina.
- Although more time consuming than [Option 1](#), no site selection is required; therefore, this option could also lead to re-establishing the Medical Center quicker than new construction (2 to 3 years).

**Cons**
- Although the facility would be better protected from flood damage it would still be located in the flood plain where accessibility could be difficult if flooding occurred again.
- Money would be spent on modernizing an older facility.

**Issue**
- Successful cleansing and disinfecting the hospital complex is the principal issue for this option.
3.2.3. **Option 3: Construction of a New Medical Center as a “Shared” Facility – Same General Area**

**General Description**

Under this option VA would build a new structure in the downtown area close to its partners, Louisiana State University (LSU) and Tulane Medical School. The State of Louisiana’s safety-net health care system, Medical Center of Louisiana, is managed by LSU. The system in New Orleans includes Charity Hospital and University Hospital. The proposed concept is a hurricane hardened; single campus/shared support services model to be located at a new site and would include replacing Charity Hospital. This concept will enable VA to replace an aging, outdated 1950s facility with a state of the art medical center to provide quality health care for veterans.

A site in proximity to the current medical center (see Figure 4) would be acquired by the State of Louisiana and is expected to be donated for the shared campus. Each partner, VA and Medical Center of Louisiana/New Orleans (MCOL/NO), would assume ownership of their portion of the donated land. In addition, although the site would be located within the flood plain, there is sufficient land to ensure adequate hurricane hardening of the campus. The complex would need to be constructed so that operations could continue even under extreme circumstances.

The single campus would include separate, autonomous bed towers and outpatient clinical space for VA and the Medical Center of Louisiana. All critical electrical, mechanical, and sensitive systems will be located in the upper floors to reduce the risk of flooding damage. Common areas would provide space for shared non-clinical support services such as parking, food services, laundry, energy and utility management, and helipad - these would be located in sections of the facility convenient to the bed towers. Separate, though contiguous, diagnostic, major therapeutic and interventional areas such as laboratory, radiology, catheterization labs, and operating suites would be built for both VA and the MCOL/NO.

The facility would be smaller than the existing hospital (approximately 200 beds, about 60 of which would be for nursing home care). It would include sufficient parking spaces to meet the projected 2023 CARES program requirement. More detail regarding this option is included in Attachment A under Option C-2.

**Critical Assumptions Specific to this Option**

- Congressional support for a sufficiently large VA supplemental is obtained.
- The State of Louisiana obtains adequate funding to finance the MCOL/NO sections of the facility.
- The State of Louisiana provides land sufficient for the hospital complex.
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VA Potential Cost

- Construction estimate for VA’s share is approximately $636M.

Pros

- Since this option would result in a “state of the art” facility that would be shared by others, it would be the least expensive in terms of recurring operating costs.
- This option would be the most beneficial for rejuvenating the City of New Orleans since new facilities would be constructed in the heart of the City demonstrating a highly visible commitment.
- This option would leverage the mutual strengths of all medical affiliates in the region.

Cons

- Option 3 would be complex to implement in that a number of separate organizations would have to agree on the detailed plan (VA, the State, the City and the US Congress) and funding.
- Since this would involve new construction of a hardened, flood protected facility, initial costs would be high.
- A substantial amount of money would be spent on building a modern facility in an area susceptible to flooding.
- Time involved would be longer than repairing or modernizing the existing facility.

Issue

- Uncertain funding for the affiliate is the major issue associated with this option.
3.2.4. **Option 4: Construction of a New “Stand Alone” Medical Center Hospital on Higher Ground**

**General Description**
Under this option, VA would build a new complex in a location outside the flood plain. This VA Medical Center would provide all necessary services and would be a stand alone facility with no adjacent “partners”. However, affiliation would be established with other medical centers in the region to the extent possible. More detail regarding this option is included in Attachment A under Option C-1.

**Critical Assumptions Specific to this Option**
- Congressional support for a sufficiently large VA supplemental is obtained.

**Potential Cost**
- Construction estimate is approximately $645M

**Pros**
- This facility would be secure and fully accessible regardless of flooding.
- Since it would be based on a modern design, operating costs would be lower than with the current building.

**Cons**
- Initial cost would be high.
- An exclusive site for VA would have to be purchased.
- Separation from affiliates would tend to complicate any “sharing/support” arrangements.
- Would send a mixed signal to those trying to re-vitalize the City of New Orleans.

**Issues**
- Adequate funding and “approval” to re-locate out of the City proper are the principal issues.
3.3. Evaluation of Options

Key consideration in evaluating the above options are the condition of the existing hospital, the initial investment and 20 year operating costs, and the synergy gained from affiliation with other medical facilities.

3.3.1. Both Options 1 and 2 focus on repairing, or completely renovating/modernizing, the existing facility. These courses of action rest heavily on the ability to completely remove all mold and contaminants in the hospital building. **A key observation from the engineering assessment (summary at Attachment A) was that the greatest perceived enemy to complete recovery to full-functionality is the post-flood high humidity conditions and resultant spread of mold, mildew and other bacteria.** The basement floor structure was submerged temporarily in a saturated condition for approximately 2-1/2 weeks before the water was pumped out. The sub-basement was submerged somewhat longer. Water contact by submersion for such a time period would not affect structural integrity. However, the pollutants within the floodwater could have an undesirable effect on the long-term durability, appearance and smell of the concrete surfaces. Concrete masonry walls and clay tile in these levels that were submerged would require complete removal due to the probability that contaminated sewage laden floodwater penetrated into the cores through mortar joints as a result of hydrostatic water pressure. This trapped polluted water would be nearly impossible to ever completely remove, and its retention and on-going leaching through the wall systems would be untenable. Another major area of concern lies with the air conditioning ductwork throughout the facility. All air-handling equipment and most ductwork located in the basement and sub-basement levels was completely submerged in the polluted floodwater. All such equipment and ductwork would have to be removed from the site. A related problem with the damaged air-handling equipment and ductwork is that several of these submerged systems were dedicated to serving first floor clinical and other functional areas. As such, not only are these first floor areas currently without air-conditioning, their associated ductwork, which traverse between these two levels, continue to be subjected to mold/mildew and other bacterial contamination. This is due to the fact that the contaminated ductwork originating from the basement below continues to provide open ‘conduit’ paths in which such contaminants may flourish. The extensive evidence of lingering mold and contamination is a major concern. VA officials do not have a high degree of confidence that complete elimination of this contamination is possible.

Reuse of the existing complex may be acceptable for a non medical facility but not for a hospital with patients susceptible to infection. **The options addressing the existing facility are deemed too risky for future patient care and are unacceptable the Department.**
3.3.2. Both Options 3 and 4 require new construction that would result in modern, highly efficient facilities. The long term cost of each option (consisting of the initial investment and anticipated operations and maintenance costs over a 20 year period) would likely be more favorable. The table below provides a summary of data from the Engineering Assessment (Attachment A). This information continues to be refined but in general supports new construction Options (3 and 4) as being more economical over the long term.

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<th>($)</th>
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<th>Maintenance (20 Year)</th>
<th>Operations (20 Year)</th>
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<td>Option 3</td>
<td>$636</td>
<td>$42*</td>
<td>$155*</td>
<td>$3,666*</td>
<td>$4,499*</td>
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<tr>
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<td>$42</td>
<td>$156</td>
<td>$3,666</td>
<td>$4,509</td>
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*Note: The estimates included in this table continue to be refined. For example the “sharing” arrangements for Option 3 (that will affect the 20 year utilities, maintenance, and operations costs) will be developed by a VA/Louisiana Medical Center Study Group soon to be formed. As described in paragraph 4.1.2, this Study Group will have a key role in outlining the specific details of a “shared facility”.

Option 4 calls for new construction on higher ground, but it does not appear likely the other hospitals will leave the current area. VA’s solution for re-establishing a Medical Center in New Orleans hinges in a major way on recovery efforts taken by the State of Louisiana and the federal government. Recently there have been clear signals from state and federal authorities that New Orleans will be restored and that sizable amounts will be spent on levy restoration and repair of vital infrastructure. Given these conditions the major medical facilities (LSU, Tulane etc) are far more likely to remain in the City. The preference for VA is to remain in close proximity of these other hospitals so sharing arrangements can be coordinated and a more effective medical environment established. This “synergy of sharing” is a very important consideration. In this regard Option 3 is likely to be the most effective of the new construction options because it will be a shared facility providing the added benefit of co-location. The cost effectiveness of this course of action is attractive to VA (as well as to local and State officials).

VA is a leader in patient safety, disease management, health promotion, customer satisfaction, and the electronic health record. LSU and Tulane have well-established Centers of Excellence in research and clinical delivery of services in areas such as cancer care, cardiovascular diseases, epilepsy and seizures, neurosciences, and rehabilitation. The shared campus model will leverage these strengths, providing quality, cutting-edge health care for all beneficiaries, VA and non-VA. As an employer of choice, the joint operations will improve recruitment and retention of clinical staff.

VA believes that a new facility can, and should, be built within the City proper. This approach will provide added emphasis to the commitment of bringing New Orleans back to full functionality and it can be hurricane hardened to preclude a reoccurrence of flood damage. Given the considerable expense of both repair and renovation and the risk associated with removal of mold and other contaminants in the existing complex, new construction is believed necessary. The new construction option with the most attractive cost effectiveness is Option 3 — it is therefore VA’s preferred Option.
4. VA Approved Plan

Option 3, the construction of a new Medical Center as a shared facility, will re-invigorate the medical care environment in and around New Orleans. The general geographical area for this new facility was illustrated in Figure 4. A summary description of the planned complex is provided in the paragraphs below.

4.1. Key parameters of new facility

The single campus would include separate, autonomous bed towers and outpatient clinical space for both VA and the Medical Center of Louisiana/New Orleans (MCOL/NO). An illustration of the envisioned complex is provided in Figure 5. All critical electrical, mechanical, and sensitive systems will be located in the upper floors to reduce the risk of flooding damage.
Common areas would provide space for shared non-clinical support services such as parking, food services, laundry, energy and utility management, and helipad. Separate, though contiguous, diagnostic, major therapeutic and interventional areas such as laboratory, radiology, catherization labs, and operating suites, would be built for both VA and the MCOL/NO.

VA’s facility would be smaller than the existing hospital (approximately 200 beds, about 60 of which would be for nursing home care). It would include sufficient parking spaces to meet the projected 2023 CARES program requirement. Ingress and egress from an elevated highway would also be part of the planned complex.

Additional key parameters/capabilities to be considered in the planning process:

- **Square footage:**
  - 870,573 SF of Acute Care for VA portion (2005 CARES)
  - 12,000 SF Central Plant Building
- **Anticipated number of floors:** 8 to 10
- **Hurricane hardening:**
  - Generator Concept: The generators shall be sized to serve both VA and MCOL/NO sections of the complex. For VA 30% of the total shared system cost is included in VA cost estimate for Option 3. VA section of the facility will require a 7 MW Diesel Powered Generator.
  - Pumps: Pumps will be sized to serve a 1.5 million gallon water tower. The water tower will be sized to accommodate the fire sprinkler system.
  - The entire area will be elevated a minimum of 2’ above the recorded Katrina flood plain and the lowest floor level will be 6’ above the Katrina flood plain.
  - Protection of Sensitive Equipment: The following components will be located at least 6’ above the recorded Katrina flood plain:
    - Chillers
    - Air Handling Equipment
    - Boilers
    - Helipad
    - Elevated Roads
    - Water and Sewage Storage Facilities
  - Boat Dock: A boat dock will be provided in the vicinity of the loading dock.
  - Foundation integrity: Deep pile foundations per geotechnical recommendations will be used.
- **Numbers of inpatient beds:** Approximately 200 per VA 2005 CARES program, (or as determined by actuarial analysis).
- **Numbers of nursing home beds:** Approximately 60 Beds
- **Special Facilities/Programs**
  - Rehabilitation Medicine
  - Medical Surgery
  - Dialysis
  - Cardiac Surgery
  - Women’s PTSD
  - PTSD
  - Mental Health
- **Parking facilities:**
  - 300 Elevated
  - 2000 Surface
- **Administrative Space:** In accordance with the 2005 CARES program, (as adjusted for actuarial analysis).
4.1.1. Estimated Timeline

An estimated macro timeline, based on experience with similar construction, is provided at Figure 6 below:

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<tr>
<th>ID</th>
<th>Task Name</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
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</table>

Figure 6: Estimated Macro Timeline.

4.1.2. Cooperative Arrangements with Others

Key to the success of a shared complex are the details concerning the day-to-day working arrangements and legal documents associated with a meaningful partnership. In this regard discussions have been ongoing for several months but reached a critical point on February 16, 2006, when VA hosted a meeting in New Orleans. The purpose of this important meeting was to discuss ways in which VA and LSU (also other affiliates) could collaborate in providing quality, efficient healthcare in a mutually beneficial way to their individual constituencies.

In addition to VA representatives, the meeting was attended by representatives from the State of Louisiana, the Louisiana Recovery Authority, LSU, Tulane, Department of Health and Human Services, FEMA, and Congressional Staff (Sen. Landrieu and Rep. Baker). The office of Federal Support for the Recovery and Rebuilding of the Gulf Coast Region also was informed and provided with a complete brief.

VA and LSU both agreed to draft and sign a Memorandum of Understanding (MOU) that would create a “Collaborative Opportunities Study Group” to further analyze potential sharing agreements. The MOU was signed on 23 February, 2006 – a copy of which is included as Attachment C to this report. As indicated in the above schedule, this MOU initiates the important work to define the scope of the new facility. This information will be used for more extensive schematic and construction designs.

The parties involved in the joint study fully intend to achieve a mutually beneficial outcome. If for any reason a permanent, collaborative solution cannot be attained, the results of the study will be invaluable to VA in reaching an independent determination on how to address veterans’ health care needs in New Orleans. VA fully anticipates that vast majority of the data obtained in the joint study could be utilized if an independent determination is ultimately required.
5. Conclusion

The Department of Veterans Affairs, together with the Louisiana State University Health Care Services Division, is committed to creating a modern, 21st century medical complex in the City of New Orleans. The need for a continued VA presence is supported by the latest demographic projections and the most favorable option for re-establishing this presence is the one which provides the maximum potential for sharing and leveraging a variety of medical capabilities. In the months ahead the plans for this modern complex will continue to be defined with the objective of initiating schematic design in early 2007.

VA values its affiliations with medical universities, medical schools and public and private healthcare facilities and views this initiative as a unique opportunity to re-establish world class care to veterans in the region, redefine the relationship with important affiliates, and assist in re-invigorating the healthcare environment in the City of New Orleans.