

HEALTHCARE

ANTICIPATE, PREDICT, AND MANAGE

HALLMARKS OF LONG-TERM COMMITMENT IN HEALTHCARE

GLHN Architects & Engineers, Inc. has been engaged in healthcare projects for nearly all of its corporate history. These projects have been completed primarily for three clients: the Department of Veterans Affairs, Carondelet Health Services in Tucson, and University Medical Center in Tucson. GLHN has been providing professional services to VA continuously since 1975 and completed over 500 VA projects, including more than 330 task order assignments under four consecutively-awarded, national Indefinite Delivery Indefinite Quantity (IDIQ) contracts and two regional IDIQ contracts. The firm's background and experience in the healthcare industry allow it to anticipate related trends in technology and construction, predict future investments, and manage multiple concurrent healthcare projects. GLHN's healthcare experience focuses primarily on the following areas of expertise.

- **Design of outpatient clinics and major hospital renovations**
- **Master Planning and Facility Development Planning**
- **Preparation of Solicitations for Offer (SFO) and Request for Proposal (RFP)**
- **Authoring design guides and master specifications**
- **Facility Condition Assessments**
- **3rd Party Peer Review**

HEALTHCARE DESIGN PROJECTS

PRACTICAL APPLICATION OF TECHNICAL KNOWLEDGE

GLHN's expertise lies primarily in renovation of existing facilities and in coordination of complex multi-discipline designs.

- **Syncardia Clean Room Expansion** (artificial heart), Tucson, AZ
- **LBJ Tropical Medical Center Renovation**, American Samoa
- **Expand GI Clinic**, VA Albuquerque, NM
- **Nursing Home Neighborhood 9A Renovation**, VA Buffalo, NY
- **Lease Community Based Outpatient Clinics SFOs**, VA Las Vegas, NV
- **Mike O'Callaghan Federal Hospital Clinical / ER Expansion**, Nellis AFB
- **Mental Health Outpatient Bldg. RFP Package**, VA Tucson, AZ
- **Step Down Unit (SDU) Renovation**, VA Tucson, AZ
- **Ambulatory Care Renovations**, VA Brockton, MA

FACILITY CONDITION ASSESSMENTS (FCA) SURVEYING EXISTING CONDITIONS

GLHN has surveyed over 110 Department of Veterans Administration Medical Center campuses nationwide over the past decade, totaling over 1,500 buildings and 100 million GSF. FCA work for the VA also includes coordination and Quality Control of the VA's national secure and confidential database, holding over 150,000 total records on approximately 3,800 buildings in the VA system. The GLHN FCA team includes an architect, a mechanical engineer, an electrical engineer, a technology engineer, and a cost estimator. The team rates the existing condition of the facilities, records detailed information relating to deficient systems, and calculates the cost of corrective actions, employing an extensive database of local material and labor costs. GLHN is proud of its work for the VA because the firm's assessment data and prioritization of recommended corrective actions assist the Medical Centers in obtaining the necessary funding for capital improvement projects.

FACILITY DEVELOPMENT PLANS (FDP) TAKING THE FCA A STEP FURTHER

GLHN creates and implements Facility Development Plans (FDP). These studies go a step further than the Facility Condition Assessments. In addition to the technical review, emphasis is placed on assessment of the needs, goals, and resources of the client to develop both a short and long term space/functional plan. This involves prioritizing the clients' needs and identifying actions by timeframe to correct deficiencies and meet the goals of the client, including order of magnitude cost.

GLHN's study in Omaha included the Executive Summary, introductory materials, description of concepts, comparison of concepts, recommendations, and suggested procedures for study maintenance revision. Also included was a Facility Condition Assessment of the existing infrastructure and buildings, summary of the space planning efforts, the space functional analysis for the existing Omaha campus, workload projections, an update of the facility condition assessment report, and building plans showing existing space allocations.



In 2009, GLHN was contracted by the VA to provide architectural (including space programming), engineering, cost estimating, and scheduling services in the form of a Feasibility Study for the VA Medical Center in Omaha, Nebraska. GLHN performed on-site assessments of the existing facility in order to validate the facility conditions, (identify technical and infrastructure deficiencies), to verify current location and space allocations for each department and to identify significant functional deficiencies. The GLHN Team conducted on-site surveys of site, architectural, mechanical, electrical, technology systems, transport systems, physical security and structural conditions. The GLHN Team toured the facility, interviewed key technical staff, and reviewed pertinent documentation. GLHN worked closely with key VA staff to review and refine the preliminary planning concepts to create a refined and complete study including concept plans, schedules, and cost data. GLHN worked with local affiliates including Creighton University and University of Nebraska, local public utilities, and contractors, labor unions, and material suppliers in the Omaha area.

THIRD PARTY PEER REVIEW

HELPING TO ENSURE THE CLIENT A QUALITY PRODUCT

GLHN regularly provides third party peer review services to the Department of Veterans Affairs and other governmental clients. GLHN performs a technical review of engineering assumptions, calculations, models, approach, and compliance to design and specification standards. Peer reviews include site, civil, and landscape, architectural, structural, mechanical and plumbing, and electrical, fire alarm, and telecommunication disciplines. The peer review process helps the client to achieve an excellent product, as it encourages dialog among the design team and continuous improvement of the design solution.

DESIGN GUIDES, DESIGN MANUALS, AND MASTER CONSTRUCTION SPECIFICATIONS

AUTHORING THE STANDARDS

GLHN has worked closely with VA Central Office in Washington, D.C. in updating and revising its standards. Documents produced include the following:

DESIGN MANUALS

- HVAC Design Manual and Plumbing Design Manual for New Hospitals, Ambulatory Care, Clinical Additions, Energy Centers, Outpatient Clinics, Animal Research Facilities, Laboratory Buildings
- Electrical Design Manual for Hospital Projects
- Site Utilities Design Manual (including Sanitary) for New Hospitals, Ambulatory Care, Clinical Additions, Energy Centers, OPC, Animal Research Facilities, Laboratory Buildings
- Physical Security Design Manuals
[Mission Critical and Life Safety Protected]

DESIGN GUIDES

- Ambulatory Care (Hospital Based) Design Guide
- Outpatient Clinic Design Guide
- Lease Based OPC Design Guide [including Template SFO]

MASTER SPECIFICATIONS

- 42 electrical sections
- Plumbing sections

Standard Details

National CAD Standards VA Application Guide

Resident Engineers Handbook

Chapter for Purchase and Hire