



## FEDERAL PROJECT EXPERIENCE

- **Army Corp of Engineers**

**Brockton VAMC Supply, Processing and Distribution Addition Project - Cutter Enterprises, LLC Design/Build Team/ACOE/VA**

ALPHA performed an existing conditions survey of an area encompassing an existing Theatre building which was to be razed for construction of a new facility. GPS was utilized to establish survey control in the Massachusetts State Plane Coordinate System, and to tie to benchmarks with published elevations for localizing the survey to the NAVD88 vertical datum. ALPHA performed research with the VA to obtain copies of plans showing utilities servicing the building, or crossing the project area. The field conditions were unique in that one side was attached to a circumferential tunnel/corridor connecting numerous medical and support buildings. In addition, the floor of the tunnel in front of the Theater building was inclined in both directions to meet the elevation of an intersecting tunnel to the main hospital building. A level run was performed within the building corridor to obtain finished floor grades for the building design to accommodate for the existing change in elevation of the floor of the adjacent corridor. The final deliverable to the D/B team architect consisted of a digital CAD file prepared in ALPHA's CAD layering and symbology standards and containing the existing conditions and compiled utilities of the project area.

**New Bedford, MA VA Community Based Out-Patient Clinic - Colby Company Engineering (IDIQ Task Order)**

ALPHA provided boundary and topographic survey services in support of design engineering for a building expansion and interior building improvements. Research was performed to obtain record deeds and plans of the locus and abutting parcels. Utility research was performed with the City of New Bedford Engineering Department and the private utility companies servicing the area. The project was referenced to NAD83 utilizing GPS and to NAVD88 by conventional leveling to local benchmarks. An on-the-ground survey was performed to locate planimetric site features with elevations. The record boundaries were reconciled with the monumentation located in the field and monumentation was set at the lot corners where none was found. ALPHA prepared a digital deliverable in the ACOE CAD Standards depicting the property lines, topography and site features. The final deliverable included a survey report containing copies of relevant survey data and control tie-sketches of the points observed by GPS.

- **MA Air National Guard**

**Bldg 170 Operations & Training Facility, Otis ANG, MA - SMRT/MA ANG**

ALPHA performed an existing conditions survey of the site containing the newly constructed Operations and Training Building where the site conditions (i.e. parking, sidewalks, driveways, and access road) had not been completed. New survey control was established utilizing GPS in the NAD83 & NAVD88 datums. A topographic survey was performed

including the location of the newly constructed building and incomplete parking, utility installation, and other features. The client was provided with an AutoCAD file prepared in ALPHA's layering and symbology standards

- **NAVFAC/Naval Station Newport**

**Buildings 399CP & 988 Melville Station Upgrades – SMRT Architects & KMK Construction**

ALPHA performed an existing conditions surveys at two sites approximately 4.5 miles apart for generator facility upgrades. The sites were 'tied' together using GPS for reference to the NAD83 and NAVD88 datums. A survey was performed to locate relevant site features and a plan was prepared in ALPHA's layering and symbolgy standards in AutoCAD C3D and delivered to the project team.

**Building 1262 & 1298 Improvements – SMRT Architects & KMK Construction**

An existing conditions survey was performed in 2014 in support of Building/Site Improvements at Bldg 1262 (Salt Shed), and ALPHA returned in 2015 as the project expanded to other adjacent buildings and paved areas. Buildings, changes in pavement, utilities (with inverts on gravity structures), and other relevant features were located. ALPHA prepared a plan utilizing its' symbology and layering standards in AutoCAD C3D for the client's use in design.

**Bishops Rock Landscaping Improvements, Naval Station Newport, Newport, RI - RC&D & Williams Building Company**

ALPHA performed survey services for the prime and civil/site subcontractor constructing improvements on a reach of land referred to as Bishops Rock. The existing project control was used as the basis for construction layout along 1100 linear foot Barschow Road. Features laid-out with grades (where applicable) included guard rails, lighting, benches, and concrete pads for picnic tables, dumpsters, and portable toilets. A final as-built was prepared upon project completion.

- **RI Air National Guard – Quonset Base**

**Apron Improvements Quonset RI Air National Guard Base, North Kingstown, RI – Jacobs Engineering/RI ANG**

ALPHA performed a topographic survey in support of the design for replacement of an existing 18 acre concrete apron. Survey control was established based on existing Base control, performed a topographic survey of the existing concrete apron grid (varying pattern sizes), located all utility features and compiled underground gravity and other utility lines based on ANG record utility data. A digital CAD file was delivered to the Client prepared in the National CAD standard format.

- **US Department of the Agriculture Natural Resources Conservation Service**

**George Nichols Dam Rehabilitation, Westborough, MA - RC & D, Inc.**

Provided survey services in support of the rehabilitation of the George Nichols Dam and spillway. Survey control was established in the NAD83 and NAVD88 datums utilizing GPS. Construction layout included the Limit of Work, top and toe of slopes, perimeter drains, swales, and dam features. Prior to construction, ALPHA performed an existing conditions survey for future quantity take-off calculations. During the project numerous interim as-built surveys and volume calculations were performed; and a final as-built was prepared upon project completion.

- **US Fish and Wildlife Service – Assabet River National Wildlife Refuge New Visitor Center, Winterberry Way, Sudbury, MA - I. W. Harding Construction Co., Inc.**

Survey services included the layout and grading of 2600± linear feet of the Winterberry Way entrance drive from Hudson Road to the new visitor center being constructed in the Wildlife Refuge. The survey control was established by conventional methods utilizing existing project control established by others.

- **U.S. Department of Veterans Affairs**

**PET/CT Scan building addition VAMC West Roxbury, MA - SMRT/VA**

ALPHA performed an existing conditions survey for a proposed building addition/expansion. Survey control was established in the NAD83/NAVD88 datums utilizing GPS. The survey included the location of the existing buildings, utility pads, building penetrations, evidence of utilities, and other relevant features. Client was provided with a AutoCAD C3D file prepared in the VA CAD Standards depicting the existing conditions, compiled utilities, and one-foot contours.

**Replace Fuel System & Underground Storage Tank, VAMC West Roxbury, MA – Edward Paige Corp/Ironclad Services/VA**

Based on the survey control for the PET/CT Scan project, ALPHA performed a limited topographic survey to confirm existing grades. A baseline was established for the client's use, although ALPHA performed the layout of the new access drive, concrete pad for the above ground storage tank.

**Replace LINAC (Linear Accelerator) Unit, 150 South Huntington Ave, Jamaica Plain, MA – Ironclad Services/VA**

ALPHA's client was constructing a new building addition for the LINAC at the Jamaica Plain VA facility. The proposed addition was to be a free-standing building constructed where the two walls of the existing building intersected at an oblique angle. The existing building walls were located, the proposed addition calculated and the designed addition fit to the existing building. A construction baseline was established for the client to complete their building construction activity

### **Building Utilization Review and Reuse Initiative - Brockton, Bedford, & Northampton VA Medical Centers/Enhanced Use Lease Program - Fort Hill Infrastructure Services/VA**

Boundary and existing conditions surveys were performed at each of the VA facilities in support of the future development of residential housing for at-risk and homeless Veterans. Research for record boundary and ROW information was performed at the respective Registry of Deeds and Municipal Engineering Departments. Utilities were researched and compiled from existing VA site documentation. Survey control was established in the NAD83 coordinate system and formed the basis of an on-the-ground survey to locate record boundary monumentation, site improvements (i.e. parking lots, roads, curbing, observable evidence of underground utilities, etc.). An easement Plan of Land was prepared based on the VA's pre-designated lease area configuration showing the existing site improvements, existing boundary lines, and proposed lease lines. In addition, a metes and bounds description was prepared for the lease area on each site.

### **Massachusetts National Cemetery/Realign, Reset, Headstones & Re-Sod Select Burial Sections - Cape Fear Land Management**

ALPHA provided survey services to the contractor responsible for the removal and restoration of the headstones in seven Burial Sections totaling approximately 14 acres. In addition, the Sections were each being re-sodded and the contractor required a topographic survey prior to the removal of the headstones. ALPHA performed research with the MA National Cemetery VA office to obtain copies of the Gravesite Layout Plans showing the original monumentation defining the headstone layout grid pattern. GPS was used to establish survey control in the NAD83 coordinate system, and to tie to benchmarks with published elevations for localizing the survey to NAVD88 vertical datum. An on-the ground survey was performed to locate the individual headstones, the existing grid monumentation, and perform a pre-removal topographic survey of the individual Sections. Existing Conditions plans were prepared in ALPHA's CAD layering and symbology standards for each Section depicting the individual locations, grid monuments, and select planimetric features (i.e. edge of road, tree line, electric and sprinkler boxes, benches, etc.).

### **Steam Line Improvements, Providence VAMC, Chalkstone Ave, Providence – Dewberry (IDIQ Task Order)/VA**

ALPHA provided surveying services to Dewberry in support of their engineering design for steam line improvements at the Providence VAMC. Research was performed with the VA to obtain plans showing existing utility lines within the path of the steam line to be upgraded. GPS was used to establish survey control in the RI State Plane Coordinate System, and for referencing the project to the vertical datum used by the Providence VA. An on-the-ground survey was performed to locate existing site features, specifically visible evidence of underground utilities, within and crossing the steam line. Invert elevations were obtained on gravity lines, and underground utilities were compiled from hardcopy plans made available by the VA, and from a digital Site Plan of the facility compiled by the VA. The final project deliverable consisted of a digital file of the survey prepared in the VA's CAD standards.

### **Campus-wide Stormwater, Sanitary Sewer and Water Line Inventory, Providence VAMC, Chalkstone Ave, Providence, RI – Dewberry (IDIQ Task Order)/VA**

ALPHA performed a utility investigation focused on the water, sanitary sewer, and storm drainage systems for the entire VA campus comprised of approximately 25 acres. Expanding

on an earlier steam line project, extensive additional research was performed with the VA for plans showing record locations of the three systems. Survey control established for the steam project was established by GPS observations to off-site control monuments to localize the survey to an existing regional network and expanded upon for this project. ALPHA performed an on-the-ground survey to locate all visible utility features including gates, catch basins, manholes, hydrants, and other pertinent features. The sewer and drain structures were opened and invert and pipe sizes were obtained.

Using the VA's existing compiled Site Plan as a reference, ALPHA prepared an AutoCAD file in conformance with the VA's CAD standards. Working with an extensive collection of VA plans and the field survey data, the three utilities were compiled campus-wide. ALPHA worked in close collaboration with the VA's facilities maintenance staff resulting in a thorough investigation of these systems, and resulted in uncovering structures where the record utility plans were ambiguous or information was not available.