



## BUILDING CONSTRUCTION PROJECT EXPERIENCE

### FEDERAL PROJECTS

#### **SP&D Building Design/Build, Brockton VAMC (Army Corp of Engineers Owners PM) Brockton, MA - Cutter Enterprises**

Alpha was invited to join a design/build team for a proposed Supply, Processing, and Distribution building at the Brockton VAMC being managed by the Army Corps of Engineers. The proposed two and a half story building comprises approximately 14,000 SF and is to be constructed where an existing theatre building will be razed, and will interface with existing pedestrian tunnels. Alpha performed research with the VA and utility agencies servicing the site to obtain information on existing underground utility lines. Survey control was established utilizing GPS to reference to NAD83 and NAVD88. An existing conditions survey was performed to locate the building, which was attached to a circumferential tunnel connecting numerous campus buildings. The building façade/tunnel interface, in particular the elevation of the interior entrance at this level, was a critical detail. A level loop was run between the building exterior and interior to obtain the ramped tunnel finished floor and the entrance to the existing theatre building. On the building exterior, site details such as walks, parking with curbing, utility structures, and other features were located. Alpha delivered an existing conditions survey prepared in the project CAD standards and an elevation model based on one-foot contours and invert elevations on gravity structures. The proposed SP&D building column line design ties into the column line configuration of the existing theatre building in order to align with an existing subterranean pedestrian corridor to the main hospital building and with the existing circumferential pedestrian corridor. Currently construction is just beginning and Alpha has located the existing columns at the interface which have been exposed during demolition. Future services include foundation and elevator shaft layout, and a final as-built, with other services as requested by the client.

#### **Massachusetts Military Reservation (formerly Otis Air Force Base), Bourne, Mashpee, and Sandwich, MA - Various Projects for Barbato Construction Company**

- **South Outer Road Entrance Security Improvements** – Performed layout for redesigned security gate entrance including guard building, pavement and curbing realignment, security enhancements, and relocated utilities.
- **Entrance Improvements for Building #5222** - Established control for construction of a new Entrance Portico by determining the as-built location of the existing column line grid. Established grid column lines and performed layout of new foundation, façade and roof framing.
- **Readiness Center Building Construction Site** - Alpha was contracted to provide the client with survey support in the laying out of the Camp Edwards Readiness Center. Alpha verified the horizontal and vertical control as provided on the contract documents and performed layout of the building access drives and parking lots.

## MUNICIPAL PROJECTS

### **Whitman Police Station, 20 Essex Street, Whitman, MA - Seaver Construction Company**

The project consisted of the construction of a new police station comprising approximately 12,000 SF in the Town of Whitman. Alpha provided layout of the building foundation, pinned the footing, and performed an as-built plan of the building foundation. Additional services included the layout and grading of the parking lots and curbing, and gravity structures. Upon completion, Alpha performed a final site as-built, including rim and invert elevations on gravity structures as required for obtaining a building occupancy permit.

### **Hanover Senior Center, 665 Center Street, Hanover, MA - Seaver Construction Company**

Alpha provided layout survey services for the construction of an approximately 8,000SF building. The building was laid-out with offsets for excavation and pouring the footing. The footing was then pinned for setting the panels for the foundation walls. Alpha also set control throughout the site for the civil site contractor's use in laying out the site improvements.

### **Dennis Police Station, #685 Route 134, Dennis, MA - Robert B. Our Company, Inc.**

Construction survey services were provided in support of the construction of a new 11,000SF police station and a 3000SF out-building. An interesting aspect to the project was its proximity to adjacent public water supply wells which resulted in locating a new septic system a quarter-mile from the station connected via a force main. Alpha provided the client with construction stakeout services for all site improvements throughout all phases of construction, with the exception of building layout which was performed by others. Alpha's services included an initial topographic survey to determine cuts and fills of particular areas of concern as requested by the client. Alpha performed layout of all site features including curbing and pavement, walks, utilities, detention pond, and the force main septic system and leach field. Throughout construction, as-built surveys were prepared for the building foundation, septic system and leach field, detention basin, and of the entire site.

### **Harwich Police and Fire Public Safety Facility - Additions and Renovations, #175 & #183 Sisson Road, Harwich, MA - Bufftree Building Company/Robert B. Our Company, Inc.**

Alpha performed construction survey services for Bufftree Building Company in support of the construction of an 8500 SF stand-alone addition attached to the existing fire station to create a combined police and fire public safety complex with combined dispatch. Alpha provided building column line and anchor-bolt layout for the building construction and prepared a Foundation As-built plan. Alpha also performed layout for all site improvements including parking lots, curbing, lighting, and site drainage. In addition, Alpha laid out and as-built the components of an on-site Subsurface Sewage Disposal System installed by Robert B. Our Company.

### **Mashpee Fire Station #2, 101 Redbrook Rd, Mashpee, MA - Barbato Construction Company**

Alpha performed layout services for the construction of a new approximately 3000 SF fire station. Services included the re-establishment of property lines, layout of the limits of clearing, and staking the building corners. In addition, control was set for the site contractor who performed their own layout.

## PRIVATE PROJECTS

### **Bristol-Myers Squibb - Large Scale Cell Culture (LSCC) Building #110 - Devens, MA (formerly Fort Devens) - Parsons/Skanska**

The LSCC Building #110 project site is located on the former U.S. Army Base at Fort Devens, Ayer, MA. All survey personnel working on this site were required to undergo Unexploded Ordinance Safety Certification training. Alpha performed layout services to four separate contractors in support of the construction of Bristol-Myers Squibb's Large Scale Cell Culture (LSCC) Building #110 and associated Combined Utility Building (CUB). The majority of the work was performed for Parsons/Skanska, however Alpha also supported the Wm. M. Collins Company, Total Facility Solutions, Inc., and Arden Engineering Construction.

Alpha performed survey layout services for the construction of an approximately 80,000 square foot three-story building housing laboratory casework and manufacturing equipment, and a separate building housing the supporting utility services. Within these two buildings Alpha provided survey control lines, and layout of equipment location and associated utility lines. The utility line locations included layout of floor, wall, and roof coring and utility hanger locations on all three floors. Alpha provided a survey crew on a daily basis for approximately one-year, with decreased support for the following six months until the project was put on-hold due to the economy.

### **Braintree Transfer Station, Braintree, MA - Callahan Construction**

Working directly for Covanta Energy, the operator of the Transfer Station for the Town of Braintree, Alpha had performed an existing conditions and boundary survey, and wetland resource areas location in support of the design of facility improvements planned for the existing transfer station. Based on our prior survey, Alpha is providing construction layout services in support of improvements including a covered extension to the tipping platform, relocation of the existing truck scale/tarping enclosure, maintenance building addition, and new scale house and administrative office. After tying into the existing building columns and providing the information to the designer, Alpha has been laying-out column locations, piles, and building addition corners, and providing anchor bolt as-built locations.

### **Tian Ann Temple – Anchor Bolt As-built, Braintree, MA – Liao Associates Structural Engineers**

The client had performed the structural design for a Temple being built in Braintree, the owner of which requested an as-built plan of the already installed anchor bolts. The as-built included the location of individual anchor bolts in horizontal and vertical position, and would form the basis for steel column fabrication for the main building which was an L-shaped structure measuring 146 feet by 136 feet. The anchor bolt as-built included a section of foundation 'high-wall' creating a situation where the as-built elevations were just as critical as the horizontal locations with regards to steel frame fabrication. The final deliverable was comprised of a hard-copy plan stamped and signed by a Registered Professional Surveyor and CAD file of the final as-built.

**TD Bank Building, 405 Franklin Street, Braintree, MA- Consigli Construction Co.**

Alpha had performed an existing conditions and boundary survey for the owner in support of future site development. Based on this survey, the client was provided with survey services in support of the construction of a retail building housing a bank and a stand-alone drive-thru structure. While the contractor and its sub-contractors performed the majority of their respective layout, Alpha provided the contractor with layout of the main structures to ensure they were within the required set-backs. Upon completion of the main building foundation, the foundation was located and an as-built plan provided to the client. Upon conclusion of all construction, Alpha performed a final complete site as-built including the locations of the buildings, all on-site utilities with the locations of ties to the main lines, and inverts on gravity structures. The client was provided with a stamped and signed hard copy and a digital file of the final as-built.

**Retail Development/Building Conversion – 70 Concord Avenue, Belmont, MA - Seaver Construction Company**

Alpha provided layout survey services for the construction of an approximately 8,700 SF addition to an existing 8,500 SF building. Based on a survey prepared by others, Alpha recovered existing control and boundary monumentation for confirming the location of the existing and proposed buildings with relation to the building set-back lines. The building addition was designed to tie into existing column lines and required the field location and orientation of the addition to the existing columns at the building interface. The building included a rounded corner for which Alpha laid-out a working point as a basis for the contractor's building lay-out. The building is currently under construction.

**Upper Blackstone Valley WWTP, Nippnapp Trail, Millbury, MA - William M. Collins Company, Inc.**

The client was installing a 42" fiberglass ductwork in the ceiling of an existing waste water treatment plant. Alpha was requested to obtain bottom of girder elevations along the proposed path of the ductwork on an approximately 20-foot high ceiling. The survey encompassed three different sections and two different floors of the building. The girder elevations were referenced to an existing vertical project datum, and due to limited accessibility, elevations were obtained utilizing reflectorless capability of the robotic total station. The required elevation accuracy was one-quarter inch, requiring multiple observations for quality control purposes. The hanger fabrication would be based on the elevations determined by the survey.

**The Village at 815 Main Street, Wareham, MA – Construction Layout – Robert B. Our Company, Inc. (#10100) and J.K. Scanlon Company Inc.**

The project consisted of a 49 Unit 40B Residential development on 8.9 acres in Wareham, MA. Alpha provided the client with construction layout for all site grading, pavement, and utilities including drain and sewer, while the buildings were laid-out by others. Upon completion of the utility installation, Alpha prepared an as-built of the drainage system and an as-built water service tie-plan per project requirements. In addition, an as-built was prepared of the on-site septic system, which was composed of both a gravity and force main system and contained two separate leaching fields. Layout and grading was provided for all pavement and utilities throughout construction. At the completion of the project, an as-built was prepared for the entire site showing all improvements including buildings, parking, curbs, walks, utility systems, detention ponds, lighting, all other relevant site features and one-foot contours. For project financing purposes, an ALTA Land Title Plan was prepared along with a Certificate of Compliance.

**Restaurant Conversion – 383 Washington Street (Rte 1A) Attleboro, MA – KNC Management Enterprise/The Trilogy Group, LLC**

Alpha provided surveying services in support of the conversion of a former Memphis Roadhouse Restaurant to an IHOP. The project consisted of an initial topographic and ALTA Land Title Survey in support of the client's financing of the development and in support of architectural renovations and engineering design to manage traffic flow through the site and to address handicap accessibility. Alpha performed deed and plan research and performed a boundary and existing conditions survey and utility compilation. The owner's development advisor typically represented the owner during the project review and submittal process with the City of Attleboro. With identical land use, no change in site grades, and the existing curb cut to the State Highway remaining unchanged, Alpha provided support in the preparation of development documents for the client's developer to submit to the relevant City Departments. In addition to the Boundary and Topographic and the ALTA Land Title Plans, Alpha prepared a proposed Parking Configuration Plan, Sign and Disturbed Area Plan, and a final Sign As-built Plan.

**ADA Accessibility Review - Pearl, Ivory, & Granite Plazas, Braintree, MA – FX Messina Enterprises**

Alpha's client owns three retail properties where we had performed prior boundary and existing conditions surveys. For this particular project, the client was interested in upgrading sidewalk access and re-configuring parking areas. Alpha was requested to perform a survey of each of the properties with particular focus on existing handicap accessibility and driveway parking lot grades. The data was being reviewed to determine existing ADA compliance and ensure proposed upgrades would also be compliant. Spot grades were obtained at critical locations of existing accessible curb cuts and ramps for calculating slopes, and in support of planning proposed changes in parking layout and potential re-location of sidewalk access and ramps.

**Water Wizz – Water Park Expansion Project – 3031 & 3033 Cranberry Highway, Wareham, MA – Water Wizz/WhiteWater West Industries, Ltd.**

Based on a prior boundary and limited existing conditions survey of this 6.7 acre site, Alpha expanded the topographic survey to include an existing water slide at the focal point of the site. The proposed expansion was to be adjacent to the slide, and therefore the survey included the adjacent park attractions and associated support facilities, as well as the main office building, abutting parking lots, and highway access. Alpha performed extensive research with the utility companies servicing the site to identify service connections and major water, gas, electrical, and communication lines servicing the numerous site facilities. The client's designer was provided with a digital CAD file prepared in Alpha's CAD layering and symbology standards.