

TRANSFORMING ARCTIC INFRASTRUCTURE

Excellence in engineering and design for extreme conditions

Michael Baker
INTERNATIONAL



USCG Kodiak MWD Facility / Coast Guard Air Station Kodiak, Kodiak, Alaska

ARCTIC REGION PROJECTS

350+

OFFICE LOCATIONS IN ALASKA

2

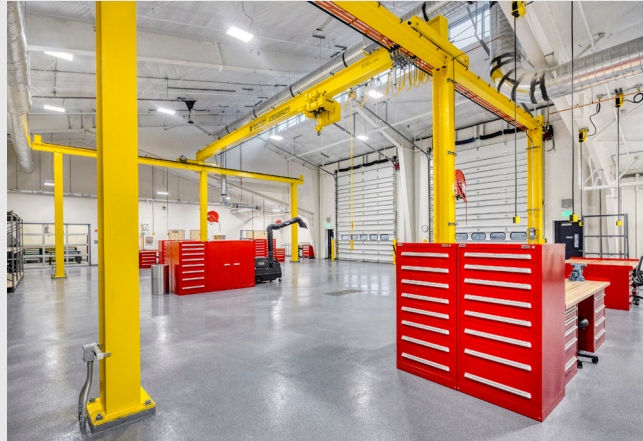
PERSONNEL IN ALASKA

68

YEARS OF ARCTIC REGION EXPERIENCE

83

We Make a Difference



U.S. Coast Guard Kodiak MWD Facility

Coast Guard Air Station Kodiak, Kodiak, Alaska

Michael Baker provided predesign, design, and construction administrative services. The project included demolishing and relocating an existing buoy yard, new paved parking and site access, as well as designing a new 21,000-square-foot Maintenance Weapons Division (MWD) facility. Additionally, Michael Baker developed a construction storm water pollution prevention plan, drainage designs meeting 25-year storm event criteria, and erosion and sediment control measures. The facility was designed to withstand environmental and structural challenges, complying with all required building codes and regulatory requirements.

Chena River Bridge Design and Replacement

Fort Wainwright, Fairbanks, Alaska

Michael Baker provided design and engineering services for replacing the Bailey Bridge over the Chena River. The project provided military and private vehicle access on an accelerated schedule due to harsh weather. The team performed civil, bridge, geotechnical, and electrical engineering, along with hydraulics, hydrology, and environmental permitting consultation, completing ahead of schedule. The new three-span bridge was designed to accommodate future widening and maintain navigational clearances. The project included comprehensive permitting and design support during construction.



FTW376 Unmanned Aircraft Hangar

Fort Wainwright, Alaska

Michael Baker, in collaboration with the UNIT Construction-McCool Carlson Green design-build team, designed the hangar to support the Army's new Gray Eagle UAV. This 58,000-square-foot facility includes an operations and maintenance hangar, special foundations, taxiways, aircraft aprons, and organizational parking. Michael Baker served as the designer of record for telecommunications infrastructure and RCDD design, provided technical design guidance for DoD secure work areas, and offered construction administrative services.





Alaskan Command Installation Development Plan (IDP) Addendum

**Joint Base Elmendorf-Richardson (JBER),
Anchorage, Alaska**

Michael Baker collaborated with ALCOM, ARNORTH, and JBER stakeholders to create the JBER IDP Addendum. The project involved planning for mission-related facilities like field training, munitions storage, airfield facilities, warehousing, dormitories, and dining facilities. The IDP Addendum included preliminary analysis, facility requirements, and proposed locations with rough cost estimates, supporting future ALCOM missions and feeding into follow-on Planning Charrette Reports.

Repair Airfield Aprons

King Salmon Airfield, Bristol Bay Borough, Alaska

Michael Baker provided design and geotechnical engineering services for replacing ~60,000 square yards of airfield parking aprons and taxiways. The project involved assessing and renovating the airfield pavements, drainage system, and taxiway lighting to meet current Unified Facilities Criteria standards. The project also addressed geotechnical challenges, such as a shallow water table and frost-susceptible fill material and incorporated local materials to withstand seismic activity. Michael Baker's role encompassed project management, surveying, pavement and lighting design, and permitting services.



F-35A Operations Support Squadron, Weapons and Tactics/Intelligence Facility

Eielson Air Force Base, Alaska

Michael Baker, in collaboration with Design Alaska, provided design and engineering services for a new 12,142 square-foot facility. The project used a fast-track approach and incorporated local materials. Ground improvement was achieved through deep dynamic compaction, avoiding the removal of contaminated soils. The facility features comprehensive fire protection, LED lighting, and an emergency back-up generator. It is LEED Silver® certified, with energy-efficient systems and stormwater management designed to retain runoff on-site.

CAPABILITIES

Anti-Terrorism & Force Protection

Architecture & Engineering Design

Aviation Design & Management

Building Information Modeling

Construction Management

Cost Engineering & Management

Cybersecurity for Facility Related Systems

Design-Build & Alternative Project Delivery Methods

Energy Management

Environmental Consulting & Permitting

Geospatial Information Technology

Military Master Planning

National Environmental Policy Act Compliance

Per- and Poly-Fluoroalkyl Substances Consulting

Program Management

Resiliency Planning & Consulting

Site Development

Site Utility Assessment

Survey, Mapping & LiDAR

Sustainability Consulting

Unmanned Aerial Systems Inspection Services

Water Resource Management

Water & Wastewater Engineering

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Michael Baker

INTERNATIONAL

FEATURED PROJECTS

Dormitory Building 98 Repair

Pituffik Space Base, Greenland

Michael Baker provided design and engineering services for the renovation of Dormitory Building 98. The project aimed to remodel 49 apartment units and included interior and exterior renovations, mechanical, electrical, and plumbing design, civil engineering, fire protection, and sustainability design. The renovation added a multi-purpose area on each floor and improved the building's insulation, HVAC, and fire protection systems. The project also involved topographic surveying, geotechnical evaluation, and HAZMAT services, ensuring compliance with federal and Air Force standards.

Airborne Warning and Control System Hangar and Alert Facility

Joint Base Elmendorf-Richardson, Alaska

Michael Baker provided designer-of-record services for renovating Building 14410, Hangar 8, and the new Alert Facility. The project included geotechnical and telecommunications engineering, cybersecurity, architectural design, quality control, and LiDAR services. The renovation upgraded the hangar to meet seismic codes and new avionics capabilities. The project ensured compliance with cybersecurity standards and integrated secure communications systems. The design aimed for LEED Silver® certification and included extensive coordination with security personnel to meet all U.S. Air Force requirements.

EIE390 390 F-35A Youth Center

Eielson Air Force Base, Alaska

Michael Baker, as a subconsultant to Design Alaska, provided design and engineering services for the new 20,354-square-foot facility. Michael Baker served as the telecommunications designer of record, offering expertise in cyber control of mechanical systems and conducting architectural and structural independent technical reviews. Additionally, services encompassed telecommunications, fire protection, water and drainage systems and site improvements.

South Loop Taxiways Repair

Eielson Air Force Base, Alaska

Michael Baker prepared design plans, specifications, cost estimates, and construction schedules for the full-depth replacement of 13,853 square yards of asphalt concrete pavement. The project aimed to eliminate foreign object debris risks and support intensive use by F-35s and foreign aircraft. The design included partial-depth removal and full-depth pavement demolition, topographical surveying for drainage, and adequate storm drainage design. The team overcame inaccessible drain lines and coordinated with airfield operations to minimize impact during construction. Michael Baker's role included geotechnical investigation, pavement design, and pavement marking design.

U.S. Army Garrison Alaska Quality of Life Development Plan

U.S. Army Garrison Alaska Fort Wainwright, Fairbanks, Alaska

Michael Baker's services included modifying the traditional ADP process to gather extensive feedback from various stakeholders. Contributions focused on improving communal facilities and recreational opportunities, incorporating both mental and physical health into the planning process. By integrating known Quality of Life predictors and the results of DoD surveys related to suicide prevention, they ensured these key indicators were addressed holistically. This complex issue required a broad assessment, deep knowledge of Fort Wainwright's current assets and issues, and expert integration into one cohesive development plan.