

SUMMARY

Engineering experience with industry-leading transportation, aerospace, and security companies for over 30 years, including the following highlights:

- Design of tower, power, and microwave systems related to the DHS SBInet program.
- Switch beam and wayside subsystem design for monorail Automated People Mover (APM) systems in Tampa, Jacksonville, and Las Vegas.
- Supported design, installation and test & commissioning phases of APM projects in the US, South Korea (Seoul), Qatar (Doha), Brazil (Sao Paulo), Saudi Arabia (Riyadh)
- Design team member for night vision flight subsystem of the Apache Helicopter.
- Award- winning design of ambulances.

WORK EXPERIENCE

Mountford Consulting Services, Gainesville, FL
Principal

2007 – Present

Transportation Industry:

- Contributed in the design of monorail switch beams and for transportation projects in Saudi Arabia and Brazil, including the development of preliminary plan, review of fabrication drawings, and review of FEA/other design review data.
- Conducted inspection of existing systems and providing maintenance recommendations.
- Supported Platform Screen Door (PSD) subsystem project proposal development documentation for the 27-station, Montreal, CA based REM project, including preparation of proposal narrative, PSD technical specifications, and review of supplier proposals.
- Supported development of Platform Screen Door technical specifications and supporting documentation (including interface design and overall station layout) for PSD project in Tel Aviv Metropolitan Mass Transit System.
- Supported test and commissioning activities as subcontracted client representative for airport APM in Doha, Qatar. This involved witnessing of tests for APM subsystems, including power distribution, platform screen door, automatic operation, fire systems, UPS, guideway & guideway equipment installation, maintenance facility & equipment, as well as participating in testing progress meetings.
- Participated as subcontracted SME in study to assess operational effectiveness of fielded guideway intrusion detection systems in Vancouver, BC.
- Contributed in the development of subsystem requirements document for the design and installation of Linear Induction Motor (LIM) Rail project in Vancouver, CA.
- Conducted tire adhesion study, including evaluating the polishing affects due to vehicle operation, on rubber-tired APM projects.

Tower/Communication Industry

- Directed feasibility study to optimize leg spacing verses foundation depth.
- Supported proposal preparation for major DHS/CBP boarder security project.
- Project and field team management of multiple DHS/CBP boarder security projects along the US Southern Border (locations included Laredo, El Centro, Del Rio, Amistad).
- Project and field team management for large diameter, 4 and 7 GHZ, microwave antenna installation for the Department of Energy.

Mitsubishi Heavy Industries America (MHIA), Tampa, FL
Engineering Manager

2015 – Present

Transportation Industry:

- Contributed from the design through testing phases of the Tampa International Airport APM project to a new rental car facility (SkyConnect), providing input on multi-discipline subsystems, including Platform Screen Doors, Civil/Station Interfaces, Communication Subsystems, Guideway element construction/installation, and installation interfaces.
- Represented MHIA in client design meetings and civil construction coordination meetings to ensure implementation of interfaces to support MHIA's subsequent systems' installation.
- Coordinated subcontractor activities through design, construction, and testing phases.

L-3 Communications, Reston, VA
Director of Engineering

2007 – 2010

SBIInet Program, Department of Homeland Security

- Responsible for site construction, tower, power, and microwave subsystems as a subcontractor to Boeing on the SBIInet (Secure Border Initiative network) program.
- Responsible for over 30-member, multiple-discipline, Engineering team to develop site construction drawing packages and typical design drawings for responsible subsystems.
- Design of off-grid and green only power systems for isolated communication sites.
- Provided design guidance and design review development for responsible subsystems.
- Conducted design reviews with end client/end user (DHS and CBP, respectively)

Bombardier Transportation, Orlando, FL

1994 – 2007

The Transportation Group, Inc. (Subsidiary of Bombardier Inc.), Orlando, FL
Systems Engineering Manager/Project Engineer/Senior Engineer

1990 – 1992

Yong-In ART, Seoul, South Korea

- Responsible for systems related design and installation design activities for the Yong-In ART project with an Engineering man-hour budget of 135,000 hours. Supervise Engineering staff for Communications, Civil, PS&D, and O&M disciplines.
- Manage design and installation of guideway intrusion detection system (GIDS) for this advanced rapid transit system. Activities include the direction of build-to-print design documentation, oversight to the manufacturing, installation, and testing of an operable prototype as well as conducting client design reviews.

Monorail, Las Vegas, NV

- Managed switch design and wayside system installation design activities for the Las Vegas monorail project with an Engineering man-hour budget of over 11,000 hours. Responsibilities included structural design/analysis, component selection, oversight of build-to-print drawing packages for subsystem fabrication, and management of the Orlando Office staff.
- Provided on-site engineering support for installation, testing, and start up project phases.
- Primary activities included initial set-up of switch operation and sensors, resolution of installation issues, and mechanical engineering support relating to the guidebeam, switch beam, wayside equipment installation, and conductor bar design/installation.

Monorail, Jacksonville, FL

- Assumed Engineering/Project Manager role of all engineering disciplines for the Jacksonville monorail and client interface regarding technical and contract issues starting with the Completion Option project extension in 1999.
- Provided on-site engineering support for installation, testing, and start up project phases.
- As lead mechanical engineer, responsibilities included guidebeam, switch beam, fixed facility, and wayside subsystem installation design and design related functions.

Monorail, Tampa, FL

- Lead Engineer for design and installation of steel guidebeam and switches. Directed guidebeam sub-contractor related activities during installation and start-up phases of Utah Test Track and Tampa Airport systems.

Martin Marietta Information Systems, Orlando, FL

1994

Martin Marietta Aerospace, Orlando, FL

1984 – 1990

Senior Engineer/Engineer

Member of engineering team responsible for LANTIRN Support Equipment design and documentation per US Air Force and Foreign Military Sales contract requirements.

Precision Mechanical Design Department

Member of engineering team responsible for support production of TADS/PNVS flight systems for the Apache Helicopter, applying Geometric Dimensioning & Tolerancing (per ANSI Y14.5) skills in evaluating interferences that occurred in production.

Product Support/Training Department

Prepared and conducted 12-week training courses instructing US Army personnel on Operations & Maintenance of Automatic Test Equipment used to support the TADS/PNVS flight system.

Wheeled Coach Industries, Orlando, FL

1992 - 1994

Mechanical Engineering Manager

Supervised seven-member staff to complete ambulance exterior and interior design/drawing packages per customer specifications in order to support a 35 unit per week production rate.

- Supervised designers, including directing day to day activities, managed complex design projects, drawing accuracy, and personnel issues.
- Conducted in-house training classes for Mechanical Engineering Staff on Pro/Engineer 3-dimensional, solid modeling CAD application.
- Created Pro/Engineer programmed models for major ambulance subassemblies.

EDUCATION

Bachelor of Science in Mechanical Engineering

1984

University of Florida, Gainesville, FL

Continuing Education/Coursework

- Pro/Mechanica, Pro/Engineer's finite element analysis module, in 1999.
- Pro/Engineer 3-dimensional solid modeling CAD application in 1993.
- Working knowledge of Pro/Engineer, AutoCAD, MathCAD, and MS Office software.