

FAA William J. Hughes Technical Center

NAS Laboratories

The National Airspace System (NAS) laboratories of the William J. Hughes Technical Center are the Federal Aviation Administration's (FAA) primary research, development, engineering, and test facility.

The NAS laboratories are integrated test beds for the performance of NAS modernization programs and projects of the NAS architecture 3.0 and support of operational air traffic control systems and subsystems. The laboratories are housed in buildings 300 and 316, occupy 151,685 sq. ft. of floor space which encompasses 108 different air traffic control computer systems and three radar sites.

The NAS laboratories support all stages of research and acquisition from concept exploration, system development, operational test and evaluation to field implementation. The NAS laboratories provide an innovative work environment which promotes the investigation, integration, and testing of new air traffic control systems. The NAS laboratories' work environment incorporates state-of-the-art technology through the application of engineering and scientific principles that integrate new and emerging technological breakthroughs.

The NAS laboratories' continuous improvement efforts have accomplished to become certified at level 2 for the FAA-Capability Maturity Model in configuration management and equipment transition. In addition, the goal of the William J. Hughes Technical Center NAS laboratories is to obtain ISO9001 certification.

The Laboratory Management Division

The division oversees and advises on system installation/integration and transition at the William J. Hughes Technical Center laboratories in support of the NAS management programs. The combined staff has over 1200 years of experience in NAS systems. The staff includes hardware and software engineers, mathematicians, programmers, draftsmen, technicians, and configuration management specialists. The division manages, directs, and coordinates the NAS activities of the laboratories for the William J. Hughes Technical Center and manages and operates most of the air traffic control (ATC) systems residing in the laboratories.

The NAS laboratories' core functions and capabilities provide for continuous automation of processes for the installation of emerging technologies. Our laboratories have unique functions and capabilities such as

- Core Functions Test Environment Facility Capabilities
- Laboratory Master Planning and Design
- Data and Voice Distribution
- Oceanic System Support Facility
- Laboratory Operations and System Maintenance
- Radar Facilities
- NAS Facilities OSHA and Environmental Standards
- Terminal System Support Facility Compliance Program
- Communication Support Complex
- System Administration
- Flight Service Station
- Enroute System Support Facility
- System Software Engineering
- Technical Computer Data Center
- System Hardware Engineering

R&D FACILITIES



- Tape Library Facilities
- Laboratory Enhancement Initiatives
- NAS Documentation Facility
- Y2K Compliance Engineering
- ATC NAS Field Support
- Configuration Management
- Network System Implementation
- Facilities Automation Network (FAN)
- Weather Support Complex
- Customer Service Center
- ATC Tower Support Facility
- Laboratory Capabilities Guide
- Human Factors Performance
- Model Work Environment Measurements and Analysis
- System Implementation Support
- Statistical Data Reduction
- System Engineering, Enhancements, and Analysis Support Services
- Security and Access Control
- NAS Adaptation
- Computer Automated Drafting (CAD) Support
- Automated Network Backup/Recovery Service
- Central Viewing Area

The combination of expert personnel and distinct laboratories at a centralized location makes the William J. Hughes Technical Center facilities the ideal place to conduct research for developing new, advanced air traffic and airway facilities systems. From management, engineering, and maintenance to NAS operations, the Laboratory Management Division has an honorable reputation as the premier division for laboratory management. Our fully integrated network of specialized laboratories offer state-of-the-art equipment and facilities dedicated exclusively, but not limited to, develop aviation systems and technologies. In addition, our Central Viewing Area has the capability to monitor test activity from various NAS laboratories from a central location.

If you would like further information regarding the capabilities of our facilities, contact:

Laboratory Management Division, ACT-400

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Facilities