Charter Express

Flight Operations Manual

Effective: December 1, 2020

Where Outrageous Service and

Outrageous Safety is Second to None

The philosophy used in the preparation of this manual was to make it as concise and user friendly as possible. Regulatory documents and publications of higher authority such as Federal Aviation Regulations are referenced only since they are readily available on personal electronic devices.

Table of Contents

Mission Statement

Charter Express, clients and prospective customers come first. This philosophy will no doubt enhance our reputation and our clients' trust in us. Everyone with whom we come into contact must be dealt with fairly and with the highest ethical standards. In dealing with each individual honestly and fairly, we will build trust in our judgment and integrity. We must maintain our professional integrity both inside and outside the Flight Department. By our conduct we will enhance the Charter Express reputation for honesty, integrity, client confidentiality and good business practices. We must treat our fellow employees, our clients and passengers, with equal respect and dignity, both during and after business hours. This will forge a relationship that will continue to be the cornerstone of our success.

Every individual in the flight department must be prepared to perform various functions with the highest level of competency and we must act with enthusiasm and a sense of urgency. As individuals we must realize that the Flight Department's success depends upon our best efforts every day and a passion to exceed our clients' expectations.

The concerted actions of our personnel working passionately and productively together will result in the best possible Charter Express Flight Department. While we recognize the essential value of individual effort and creativity, we assert that our future success can be optimized through concerted action, understanding that significant personal fulfillment can come from being part of a winning team!

To be a winning team requires hard work and dedication of everyone involved.

Greg Hatcher

Charter Express

Corporate Management Safety Commitment

Charter Express intends to support, comply with, and, wherever possible, exceed all legislative and regulatory requirements and standards regarding safety and health. We will promote ethical behavior and respect the intrinsic value of our employees. We will provide them and our passengers with a safe and secure working/traveling environment through the development and embedment of a corporate safety culture in all of our aviation activities that recognizes the importance and value of effective aviation safety management and acknowledges at all times that safety is paramount.

Charter Express believes safety is a core business and personal value. The objective of safety is to support the Company's mission by helping to conserve vital resources. We will achieve this through the establishment of a proactive prevention program and a strong risk management strategy. We will identify unsafe acts and conditions which will be eliminated or mitigated to an acceptable degree. All levels of management are accountable for our safety performance, and toward that end, safety performance will be an important part of our management/employee evaluation system. We will ensure that relevant action is taken in response to any deficiencies that are discovered or identified.

Charter Express Flight Operations Safety Program will be published in a document, and it will be company policy.

Each of us will be expected to accept responsibility of and accountability for our own behavior. Each of us will have an opportunity to participate in developing safety standards and procedures. We will openly communicate information about safety incidents and will share the lessons learned with colleagues. Each of us will be concerned for the safety of others in our organization.

In summation, a succinct list of our Safety Program objectives is proffered:

- All levels of management will be clearly committed to safety.
- We will have open safety communications.
- We will involve all relevant staff in the decision-making process.
- The safety of our employees, passengers and support personnel will be a strategic issue of our organization.
- We will strive to continually improve our safety performance.

Signed: _____

Signed: _____

Purpose

The purpose of the Charter Express Flight Operations Manual (FOM) is to establish the company policies and procedures relating to the safe operation of all aircraft owned and operated by Charter Express. All Flight Operation personnel involved in aircraft operations are responsible for a thorough knowledge of and compliance with these policies and procedures.

The policies and procedures contained herein are sometimes more restrictive than the rules established by applicable Federal Aviation Regulations (FARs). In the event a clear conflict occurs between the policies and procedures of this manual and the Federal Aviation Regulations (FARs), the more restrictive of the two shall prevail.

The basis for sound operating policy involves three specific characteristics applicable to each crewmember:

    a.   Management of the flight under the direction of the assigned trip PIC
    b.   Operating under the premise of the "crew concept"
    c.   Utilization of standard operating procedures.

Knowledge of and commitment to each of these characteristics is the surest way to promote decision making that will ultimately lead to the desired sound operating policies and procedures expected by Flight Operation management.

While no system of policies or procedures can serve as a substitute for good judgment and prudent action on the part of managers or crewmembers, the policies contained herein have been developed to enhance safety, organization and teamwork during flight operations. In the event of an emergency involving the safety of persons or property, the assigned flight crew is authorized to deviate from the policies or procedures contained in this manual to the extent required to meet that emergency. Deviations involving Federal Aviation Regulations (FARs) shall be reported in accordance with FAR 91.3.

Policies and procedures are developed in accordance with current Federal Aviation Regulations, ICAO Rules of the Air, state and local regulations, and the approved training program. They are in place to strengthen and enhance the following priorities of our operation which, when taken together, becomes the hallmark of Charter Express' professionalism:

    a.   Safety - Operational safety, whether in the air or on the ground, is the underpinning of company flight operations. Safety is enhanced by the use of standard operating procedures, effective training, constant situational awareness, and the vigilant flight crew. It is the flight crew that is best able to adapt to the constantly changing face of the operational environment.

    b.   Passenger Comfort - Perception of the passengers that aviation professionals are operating the aircraft is developed by the quality of the ride, timeliness of the operation, and the service each passenger receives. Anticipation of upcoming maneuvers often allows the avoidance of large or abrupt attitude changes, rapid power changes, or frequent use of drag devices. Each flight must be conducted in a manner that increases passenger confidence in private air travel.

c. Schedule - The decision by a company or individual to invest considerable resources in private air transportation is done with an eye toward convenience and time saving. Company flight crews must be capable of predicting a reasonable schedule and then using every means at hand to meet that schedule within the bounds of safety and passenger comfort. Those means include the early coordination of pre-departure activities, planning ground operations to minimize taxi time, direct routings, and other such methods the assigned trip PIC deems to be prudent.

d. Economy - While a large monetary investment in a private aircraft may give the impression of unlimited funds, the aviation professional understands the importance of economy and efficiency. A passenger may be glad to have a crew burn additional fuel to maintain schedule for an important meeting. It is considered poor judgment however, to operate in a high speed, high fuel consumption regime if not required and without purpose. This is especially true if it also incurs unneeded stress on engines. Crews must use their best judgment to conserve resources whenever practical.

e. Client Relations - Charter Express goes to great lengths to market its services and promote the company in a positive manner. In fact, a great marketing tool available to the company is the relationship between Charter Express' employees, especially the flight crews, and the clients. At all times, whether on duty or off, flight crews are expected to conduct their selves in a manner that exhibits our appreciation for client support, expresses a desire to serve Charter Express and brings credit to the company.

Distribution

A copy of the Flight Operations Manual (FOM) will be furnished to all Flight Operations personnel.

a. Charter Express home office: 301 Louisiana St, Little Rock, AR 72203
b. On board each aircraft owned and operated by Charter Express, this is accomplished with the copy on each pilot's EFB.

Manual Revision Request

This manual is not intended to be a static document. It is not, nor will it ever be, in "final form." Suggestions to improve this manual are encouraged and should be discussed with supervisors. Suggestions should be submitted via email.

If adopted, the suggestion will be incorporated into the manual and a new revision distributed as soon as possible.

Note: Suggestions should be very specific and include all relevant information pertaining to the change.

Revisions

Published revisions to the manual will be issued when approved by the Director of Aviation.

Revised text will be highlighted by a vertical line in the margin of the page (as shown in this example) and will extend the length of the change. Each revised page will be dated and the revision number will appear in the page footer. In addition, at the front of each manual, a Record of Revisions will be maintained, and a List of Effective Pages for the manual will reflect the revision status of each page.

The Director of Aviation shall keep the master copy of this manual in both printed and electronic forms. It is the responsibility of each manual holder to maintain a current manual. The master copy can be used as a check for currency. Individuals will make changes to their own manual, as directed by the published instructions, and record the revision number and date of posting on the Records of Revisions page near the front of this manual.

Glossary

AME	Aviation Medical Examiner	ETD	Estimated Time of Departure
A/C	Aircraft	FAA	Federal Aviation Administration
AD	Airworthiness Directive	FAF	Final Approach Fix
AFM	Aircraft Flight Manual	FAR	Federal Aviation Regulations
AFT	Rear	FBO	Fixed Base Operator
AGL	Above Ground Level	FWD	Forward
AIM	Aeronautical Information Manual	GCA	Ground Controller Approach
AML	Aircraft Maintenance Log	HAA	Height Above Airport
ASB	Alert Service Bulletin	HAT	Height Above Touchdown
ASC	Aircraft Service Change	IAW	In Accordance With
ATC	Air Traffic Control	ICAO	International Civil Aviation Organization
ATIS	Automatic Terminal Information Service	IFR	Instrument Flight Rules
CAMP	Computerized Aircraft Maintenance Program (brand name)	IMC	Instrument Meteorological Conditions
		INDB	Inboard
CDI	Course Deviation Indicator	ISA	International Standard Atmosphere
CDP	Critical Decision Point	KIAS	Knots Indicated Airspeed
C/O	Carry-over	LAA	Local Airport Area
CPR	Cardio-Pulmonary Resuscitation	L/H	Left Hand
CTAF	Common Traffic Advisory Frequency	MAP	Missed Approach Point
C/W	Complied With	MDA	Minimum Descent Altitude
CYC	Cycles	MEL	Minimum Equipment List
DH	Decision Height	MEA	Minimum Enroute Altitude
DML	Deferred Maintenance Log	MMEL	Master Minimum Equipment List
DP	Department Procedures	MM	Middle Marker
DPE	Designated Pilot Examiner	M/M	Maintenance Manual
ETA	Estimated Time of Arrival		

Glossary continued

MSA   Minimum Safe Altitude

N/A   Not Applicable

N/C/W   Not Complied With

NDB   Non-Directed Beacon

NDT   Non-Destructive Test

NTSB   National Transportation Safety Board

OBD   Outboard

O/H   Overhaul

OM   Outer Marker

PAX   Passenger(s)

PF   Pilot Flying

PIC   Pilot in Command –The pilot responsible for the Operation and safety of an aircraft during flight.

PNF   Pilot Not Flying

QFE   Altimeter setting resulting in OAH indicated on airport surface

QNE   Altimeter setting for standard pressure (29.92 in g or 1013.25 hPa)

QNH   Altimeter setting for field (local) pressure

R/H   Right Hand

RON   Remain Over Night RVR Runway Visual Range

SIC   Second in Command

SOP   Standard Operating Procedure

SRM   Safety Risk Management

TERPS   Terminal Instrument Procedures (FAA)

T/O   Takeoff

V_2 Takeoff safety speed

V_{APP} Approach Climb speed (Gear up, approach flaps, one engine out configuration)

V_{ENR} Enroute climb speed with one engine inoperative.

V_{FR} Flap retraction speed

VFR   Visual Flight Rules

VMC   Visual Meteorological Conditions

V_{MCA} Minimum control speed away from ground effect

V_{MCG} Minimum control speed on the ground

VOR   Very High Frequency Omni-Directional Range

V_R Rotation Speed

V_{REF} Reference speed, 1.3 times the stall speed in landing configuration at landing gross weight.

Definitions

Ambulatory	Able to walk and not confined to bed.
Approved Training	The program of ground, simulator, and flight training Program for Flight crewmembers assigned to Charter Express aircraft. The program is selected in cooperation with training contractors to meet the requirements of FAR 91.
As Desired	The appropriate switch, control, or knob is in the desired position for the phase of flight that the aircraft is in.
As Required	The appropriate switch, control, or knob is in the present position for the phase of flight.
Assigned Trip Pilot in Command	A pilot meeting the requirements set forth by the Chief Pilot, assigned to a trip, and given the responsibility for the conduct of the flight and the safety of passengers and property.
Assigned Trip Second in Command	A pilot meeting the requirements set forth by the Chief Pilot and assigned to a trip to assist the assigned trip PIC in the conduct of the flight.
Captain	Company designated Line Captain
Checked	The appropriate gauge, switch, knob or other item has been looked at and found to be in the correct configuration, pressure, temperature, voltage, amps, or quantity.
Completed	The takeoff or approach briefing has been completed or a desired task has been finished
Differences Training	Training required for a flight crewmember that has qualified and served on a particular airplane, when the Company finds differences training necessary.
Initial Training	Training required for a crewmember that has not qualified and served in the same capacity on another airplane of the same group.
LIT – Operations	Charter Express principal operations base. PO Box 3525 Little Rock, AR 72203
Minimum Safe Return Altitude	An Altitude at or above TOSA that may be below safe altitude that allows for an immediate return to the departure airport. The briefed altitude that Phase 1 and Phase 2 items should be accomplished in the case of an emergency or abnormal.
Recurrent Training	Training required for a crewmember to remain proficient on a particular aircraft type.

Seat Swapping	A procedure under which pilots assigned to the same trip sequence alternate flying the aircraft on a flight-by-flight basis. Seat position does not change the assignment or responsibilities of the assigned PIC or assigned SIC.
Charter Express Crewmember	Any person assigned to perform duty on a company aircraft
Charter Express Flight Crewmember	Any pilot assigned to perform duty on a company aircraft
Charter Express	Here known as Charter Express, the company, flight operations or flight department.
TOSA	Takeoff Safety Altitude is the altitude where the aircraft accelerates to greater than VFR and the flaps are retracted to the clean configuration
Training Record	A file maintained at LIT Operations on each flight department crewmember containing records of ratings, qualifications, training, and currency, as applicable.
Transition Training	Training required for a crewmember that has qualified and served in the same capacity on another airplane in the same group.
Trip Sequence	A series of flights during one or more days commencing at the home base and terminating at the home base.
Upgrade Training	Training required for a flight crewmember that has qualified and served as SIC on a particular aircraft type before they serve as PIC on that aircraft.

Record of Revisions

Revision Number	Effective Date	Date Entered	Entered By
Original	10/01/2020		

1.1   Duties, Responsibilities, and Qualifications

Following are the duties, responsibilities, and qualifications of the management and operating personnel Charter Express Flight Operations. All personnel in all job categories have the authority to carry out their assigned duties and responsibilities, including their safety tasks, with the appropriate notification and coordination of their direct supervisors and/or other appropriate company officials.

1.1.1   Director of Aviation

Reports to: Chief Executive Officer
Supervises: Pilots, Director of Maintenance

1.1.1.1 Qualifications

Education: College Degree or Equivalent Experience
Licenses: ATP, type-rating in company aircraft, valid automobile driver's license, valid passport, and English Proficient
Medical: Maintain at least a second class, or a first class medical to support operations.
Experience: One year as Chief Pilot, management training
Skills: N/A

1.1.1.2 Position Description

It is the responsibility of the Director of Aviation to ensure the proper maintenance and safety of corporate aircraft and to oversee the general administration of the Charter Express Flight Department.

1.1.1.3 Duties and Responsibilities

a. Leads Charter Express Flight Operation to maintain a culture of safety with efficient procedures that support customer service.
b. Maintaining a high level of professional skill through training programs and self-study.
c. Complying with the contents of the FAR's and other state and local regulations that may apply to the operation of the aircraft.
d. Complying with procedures for the operation of company aircraft as written in this manual, the approved training program, and the Aircraft Flight Manual for the aircraft to be flown.
e. Establish and support the Flight Operations Safety Management System.
f. Oversee the development and maintenance of the Flight Operation Operations Manual.
g. Oversee the negotiation and execution of all contracts for the Aviation department.
h. Oversee the established employment qualifications, hiring procedures, salary structure and performance appraisal procedures
i. Remain informed on aviation equipment, products and services. Communicate with the CEO recommendations for Flight Operation expenditures and expansion needs.
j. Oversee the Flight Operation records as required by the FAR's, Manufacturers and Flight Department Management.
k. Acts as Pilot in Command or Second in Command in company aircraft.

1.1.2   Senior Captain

Reports to: Chief Pilot
Supervises: N/A

1.1.2.1 Qualifications

Education: College Degree or equivalent experience; aircraft-specific training, as required.
Licenses: FAA pilot certificate, with commercial, instrument, and aircraft specific type ratings, as
                  appropriate. Valid automobile driver's license, valid passport, and English Proficient
Medical: At least a second class, or a first class medical to support operations;
Experience: At least 10 Years of Service with Charter Express flight department.

1.1.2.2 Position Description

Senior Captains are directly responsible for the safe conduct of the flight to which they are assigned. Senior captains are the most visible representative to the passengers and must act with tact and decorum while ensuring a safe and punctual operation.

1.1.2.3 Duties and Responsibilities

a. Works within Charter Express Flight Operations to maintain a culture of safety with efficient procedures that support customer service.
b. Maintaining a high level of professional skill through training programs and self-study.
c. Complying with the contents of the FAR's and other state and local regulations that may apply to the operation of the aircraft.
d. Complying with procedures for the operation of company aircraft as written in this manual, the approved training program, and the Aircraft Flight Manual for the aircraft to be flown.
e. Act as Pilot in Command (PIC) or Second in Command on company aircraft.
f. Assist management in administering the Safety Management System. This will be done by "Leading by example".
g. Assist management, ensuring crewmember's compliance with international, federal, state and local regulations that apply to company aircraft operations and reporting.
h. Responsible for flight planning.
i. Responsible for obtaining a weather briefing
j. Check Notams for all applicable airports and navigation aids including alternates.
k. Consider performance, weight and balance.
l. Consider special weather operations such as icing, turbulence, etc.
m. Compute and order fuel, and insure fuel is loaded properly.
n. Consider any destination airport noise or special requirements.
o. Insure that ATC reservations are obtained if required.
p. Insure any required Customs notifications are completed.
q. Complete EFB/electronic device procedures.
r. Conduct any required passenger briefing and confirm destination airport, FBO, and ground transportation requirements.

1.1.3 Captain

Reports to: Chief Pilot
Supervises: N/A

1.1.3.1 Qualifications

Education: College Degree or equivalent experience; aircraft specific training, as required.
Licenses: FAA pilot certificate, with commercial, instrument, and aircraft specific type ratings, as
                 appropriate. Valid automobile driver's license, valid passport, and English Proficient
Medical: At least a second class, or a first class medical to support operations;
Experience: 3500 hours total time, 500 hours jet time and 500 Multi-engine

1.1.3.2 Position Description

Captains are directly responsible for the safe conduct of the flight to which they are assigned. Captains are the most visible representative to the passengers and must act with tact and decorum while ensuring a safe and punctual operation.

1.1.3.3 Duties and Responsibilities

a. Works within Charter Express Flight Operations to maintain a culture of safety with efficient procedures that support customer service.
b. Maintaining a high level of professional skill through training programs and self-study.
c. Complying with the contents of the FAR's and other state and local regulations that may apply to the operation of the aircraft.
d. Complying with procedures for the operation of company aircraft as written in this manual, the approved training program, and the Aircraft Flight Manual for the aircraft to be flown.
e. Act as Pilot in Command (PIC) or Second in Command on company aircraft.
f. Responsible for flight planning.
g. Responsible for obtaining a weather briefing
h. Check Notams for all applicable airports and navigation aids including alternates
i. Consider performance, weight and balance
j. Consider special weather operations such as icing, turbulence, etc.
k. Compute and order fuel, and insure fuel is loaded properly
l. Consider any destination airport noise or special requirements
m. Insure that ATC reservations are obtained if required
n. Insure any required Customs notifications are completed
o. Complete EFB/electronic device procedures
p. Conduct any required passenger briefing and confirm destination airport, FBO, and ground transportation requirements

1.1.4 Assigned Trip Second in Command

Reports to: Chief Pilot
Supervises: N/A

1.1.4.1 Qualifications

Education: College degree preferred or equivalent experience may be acceptable.
Licenses: FAA pilot certificate, with commercial, instrument, and aircraft specific type ratings, as appropriate. Valid automobile driver's license, valid passport, and English Proficient
Medical: At least a second class, or a first class medical to support operations;
Experience: 3500 hours total time, 500 hours jet time and 500 Multi-engine

1.1.4.2 Position Description

The assigned trip SIC is responsible for assisting the assigned trip PIC as directed. Company policy requires that the assigned trip SIC acts as a strong, supporting member of the cockpit team. In that capacity he is granted the authority, indeed is required, to question or comment on the assigned trip PIC actions on decisions that he believes might compromise the safety of the flight.

1.1.4.3 Duties and Responsibilities

a. Works within Charter Express Flight Operations to maintain a culture of safety with efficient procedures that support customer service.
b. Maintaining a high level of professional skill through training programs and self-study.
c. Complying with the contents of the FARs, and other state and local regulations that may apply to the operation of the aircraft.
d. Complying with procedures for the operation of company aircraft as written in this manual, the approved training program, and the Aircraft Flight Manual for the aircraft to be flown.
e. Preflight aircraft thoroughly before flight and perform post-flight inspection.
f. Ensure all checklists, manuals, and forms are on board.
g. Ensure proper loading of passenger baggage and cargo into aircraft.
h. Supervise fueling process (proper type, quantity, and procedures).
i. Assist ground crews in supplying and servicing aircraft.
j. Check catering, snacks, beverages, papers, magazines, and cleanliness of aircraft.
k. Complete EFB/electronic device procedures.
l. Other duties as directed by the assigned trip PIC to ensure the successful completion of the flight.

1.1.5   Director of Maintenance

Reports to: Director of Aviation
Supervises: Assistant Director of Maintenance

1.1.5.1 Qualifications

Education: College Degree or equivalent experience
Licenses: Air Frame and Power Plant
Medical: N/A
Flight Time: N/A
Experience: having broad knowledge of and experience with the Maintenance of aircraft of the class, category and type that the company operates
Skills: N/A

1.1.5.2 Position Description

The Director of Maintenance is responsible for the repair station and to ensure the proper maintenance airworthiness of corporate aircraft operated by Charter Express.

1.1.5.3 Duties and Responsibilities

a. Works within Charter Express Flight Operation to maintain a culture of safety with efficient procedures that support customer service.
b. Supervising maintenance personnel;
c. Ensuring the quality of aircraft, engine and avionics maintenance and repair;
d. Assisting with development of department policies, preparation of short and long-range plans, annual operating budget, assessment of aircraft cost studies, establishment of salary structures, and the establishment of minimum employment qualifications;
e. Developing assigned personnel to realize their full potential;
f. Assisting with establishment of performance appraisal procedures and dismissal standards;
g. Recommend the proper staffing for the maintenance department, Establishing schedules for periodic inspections, general overhaul, repairs and modifications;
h. Establishing and maintaining records as required by FARs, manufacturers and company policy; monitoring these records, if maintained by an outside agency;
i. Establishing maintenance safety rules and procedures;
j. Establishing spares and ground support equipment inventories;
k. Ensuring that department personnel are thoroughly familiar with company policies, appropriate FARs, pertinent manuals, practices and publications;
l. Establishing programs for maintenance technician proficiency training, reviews and upgrades, in accordance with FAA and company requirements;
m. Establishing aircraft handling procedures;
n. Establishing requirements for hangar space, grounds and a fuel farm, if applicable;
o. Helping monitor security and environmental affairs, including completing material safety data sheets on all chemicals, fire drills and safety training;
p. Helping coordinate activities of the maintenance department with flight operations;
q. Helping ensure that maintenance and flight crew personnel understand the company's objectives and each other's needs.

1.2.11 Line Service Technician

Reports to: Assistant Director of Maintenance
Supervises: N/A

1.2.11.1   Qualifications

Education: High School Graduate
Licenses: Driver's License
Medical: N/A
Experience: N/A
Skills: N/A

1.2.11.2   Duties and Responsibilities

a. Works within Charter Express Flight Operation to maintain a culture of safety with efficient procedures that support customer service.
b. Refueling aircraft;
c. Moving aircraft in and out of the hangar; Cleaning and restocking the aircraft;
d. Assisting in routine maintenance as directed by maintenance technician.
e. Assisting in preflight checks;
f. Assisting passengers in any appropriate manner;
g. Meeting arriving and dispatching departing aircraft;
h. Monitoring and maintaining the fuel logs at home base.

1.2.18 Primary and Collateral Duties

Flight Operations employees may be assigned collateral duties at the discretion of their supervisors. These duties are considered necessary to the efficient operation of the Flight Department however, should not interfere with the individual's primary duties. Individuals assigned these duties will remain accountable to their primary supervisor but may also report to another for their collateral duties.

Possible Assignments May Include	
• Training	• Budget/Financial
• Automation Support	• Aircraft Type Specialist
• Standardization	• Reports
• Flight/Maintenance Records	• Purchasing
• Publications	• Environmental Coordinator
• Safety Coordinator	• Security Coordinator
• Supply Procurement	• FBO Fuel Quality and Cost
• Wellness	• Emergency Response Plan
• Technical Library	• Special Projects (A/C acquisition, International etc.)

2   Safety Management System

A Safety Management System (SMS) is essentially a quality management approach to controlling risk. It provides the organizational framework to support a sound safety culture. For operators, the SMS can become an efficient means of interfacing with the FAA. With increased aviation activity and decreased resources, the SMS pushes the limits of current safety strategies and practices by developing and implementing a structured management system to control risk and meet legal responsibilities in aviation operations.

Quality systems are the standard practice used in many industries to ensure that a process consistently produces a high-quality product or service that meets customer expectations. The Charter Express Safety Management System is composed of the elements described in this chapter.

2.1   Scope of the Program

The SMS shall comprehensively examine the functions of Charter Express and the operational environment to identify hazards and to analyze associated risks. These functions include the organizational structure, processes and procedures, as well as the people, equipment, and facilities used to accomplish Charter Express mission. A suggested breakdown of operational and support processes includes:

   a. Flight operations;
   b. Maintenance and inspection;
   c. Cabin safety;
   d. Ground handling and servicing;
   e. Training.

2.1.1   SMS Structure and Organization

There are four major building blocks to an SMS program. These four areas are essential to a comprehensive safety-oriented management system. These four areas are addressed in great detail in the body of this manual. They include:

   a. Safety program and policy;
   b. Safety risk management;
   c. Safety assurance; and
   d. Safety promotion.

2.2   SMS Definitions

Accident - An unplanned event or series of events that results in death, injury, occupational illness, damage to or loss of equipment or property, or damage to the environment.

Analysis - The process of identifying a question or issue to be addressed, modeling the issue, investigating model results, interpreting the results, and possibly making a recommendation. Analysis typically involves using scientific or mathematical methods for evaluation.

Assessment - Process of measuring or judging the value or level of something.

Audit - Scheduled, formal reviews and verifications to evaluate compliance with policy, standards, and contractual requirements. The starting point for an audit is the management and operations of the organization, and it moves outward to the organization's activities and products/services.

   a. **Internal audit -** An audit conducted by, or on behalf of, the organization being audited
   b. **External audit** - An audit conducted by an entity outside of the organization being audited.

Aviation system - The functional operation/production system used by the service provider to produce the product/service.

Complete - Nothing has been omitted and the attributes stated are essential and appropriate to the level of detail.

Continuous monitoring - Uninterrupted oversight over the system.

Corrective action - Action to eliminate or mitigate the cause or reduce the effects of a detected nonconformity or other undesirable situation.

Correct – Accurately reflects the item with an absence of ambiguity or error in its attributes.

Documentation – information or meaningful data and its supporting medium (e.g., paper, electronic, etc.). In this context it is distinct from records because it is the written description of policies, processes, procedures, objectives, requirements, authorities, responsibilities, or work instructions.

Emergency Response Plan (ERP) – the documented procedure that the organization will follow in case of an accident or incident. The ERP must be trained and drilled.

Evaluation – [ref. AC 120-59A] a functionally independent review of company policies, procedures, and systems. If accomplished by the company itself, the evaluation should be done by an element of the company other than the one performing the function being evaluated. The evaluation process builds on the concepts of auditing and inspection. An evaluation is an anticipatory process, and is designed to identify and correct potential findings before they occur. An evaluation is synonymous with the term systems audit.

Hazard – any existing or potential condition that can lead to injury, illness, or death to people; damage to or loss of a system, equipment, or property; or damage to the environment. A hazard is a condition that is a prerequisite to an accident or incident.

Incident – a near miss episode with minor consequences that could have resulted in greater loss. An unplanned event that could have resulted in an accident, or did result in minor damage, and indicates the existence of though may not define, as a hazard or hazardous condition.

Lessons learned – knowledge or understanding gained by experience, which may be positive, such as a successful test or mission, or negative, such as a mishap or failure. Lessons learned should be developed from information obtained from within, as well as outside of, the organization and industry.

Likelihood – the estimated probability or frequency, in quantitative or qualitative terms, of an occurrence related to the hazard.

Line management – management structure that operates the aviation system.

Non-conformity – non-fulfillment of a requirement (ref. ISO 9000). This includes but is not limited to non-compliance with Federal regulations. It also includes company requirements, requirements of operator developed risk controls, or operator specified policies and procedures.

Operational life cycle – period-of-time spanning from implementation of a product/service until it is no longer in use.

Oversight – a function that ensures the effective promulgation and implementation of the safety-related standards, requirements, regulations, and associated procedures. Safety oversight also ensures that the acceptable level of safety risk is not exceeded in the air transportation system. Safety oversight in the context of the safety management system will be conducted via oversight's safety management system (SMS-O which is the FAA version).

Preventive action – action to eliminate or mitigate the cause or reduce the effects of a potential nonconformity or other undesirable situation.

Procedure – specified way to carry out an activity or a process.

Process – set of interrelated or interacting activities that transform inputs into outputs.

Product/service – anything that might satisfy a want or need, which is offered in, or can be purchased in, the air transportation system. In this context, administrative or licensing fees paid to the government do not constitute a purchase.

Product/service provider – any entity that offers or sells a product/service to satisfy a want or need in the air transportation system. In this context, administrative or licensing fees paid to the government do not constitute a purchase. Examples of product/service providers include: aircraft and aircraft parts manufacturers; aircraft operators; maintainers of aircraft, avionics, and air traffic control equipment; educators in the air transportation system; etc. (Note: any entity that is a direct consumer of air navigation services and operates in the U.S. airspace is included in this classification; examples include: general aviation, military aviation, and public use aircraft operators.)

Records – evidence of results achieved or activities performed. In this context, it is distinct from documentation because records are the documentation of SMS outputs.

Residual safety risk – the remaining safety risk that exists after all control techniques have been implemented or exhausted, and all controls have been verified. Only verified controls can be used for the assessment of residual safety risk.

Risk – the composite of predicted severity and likelihood of the potential effect of a hazard in the worst credible system state.

Risk control – refers to steps taken to eliminate hazards or to mitigate their effects by reducing severity and likelihood of risk associated with those hazards.

Safety assurance – SMS process management functions that systematically provide confidence that organizational products/services meet or exceed safety requirements.

Safety culture – the product of individual and group values, attitudes, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, the organization's management of safety. Organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety, and by confidence in the efficacy of preventive measures.

Safety Management System (SMS) – the formal, top-down business-like approach to managing safety risk. It includes systematic procedures, practices, and policies for the management of safety (as described in this document it includes safety risk management, safety policy, safety assurance, and safety promotion).

Safety objectives – something sought or aimed for, related to safety.

- Safety objectives are generally based on the organization's safety policy.
- Safety objectives are generally specified for relevant functions and levels in the organization.

Safety planning – part of safety management focused on setting safety objectives and specifying necessary operational processes and related resources to fulfill the quality objectives.

Safety Reporting and Feedback System (SRFS) aka Hazard Identification Program – part of the safety program were hazards and safety information is received from employees, mitigated and tracked.

Safety risk – the composite of predicted severity and likelihood of the potential effect of a hazard.

Safety risk control – anything that reduces or mitigates the safety risk of a hazard. Safety risk controls must be written in appropriate language, measurable, and monitored to ensure effectiveness.

Safety Risk Management (SRM) – a formal process within the SMS composed of describing the system, identifying the hazards, assessing the risk, analyzing the risk, and controlling the risk. The SRM process is embedded in the processes used to provide the product/service; it is not separate/distinct process.

Severity – the consequence or impact of a hazard in terms of degree of loss or harm.

Substitute risk – risk unintentionally created as a consequence of safety risk control(s).

System – an integrated set of constituent elements that are combined in an operational or support environment to accomplish a defined objective. These elements include people, hardware, software, firmware, information, procedures, facilities, services, and other support facets.

Top management – (ref. ISO 9000-2000 definition 3.2.7) the person or group of people who direct and control an organization.

2.3   Safety Policy

Charter Express is committed to developing, implementing and improving appropriate strategies, management systems and processes to ensure that all our aviation activities uphold the highest level of safety performance and meet national and international standards. Our commitment is to:

a. Develop and practice a safety culture across our entire aviation activities that recognizes the importance and value of effective aviation safety management and acknowledges, at all times that safety is paramount.
b. Define clearly for all staff their accountabilities and responsibilities for the development and implementation of safe practices and procedures.
c. Provide the staff with adequate and appropriate aviation safety information and training to enable them to implement safety strategy and policy.
d. Comply with, and wherever and whenever possible, exceed legislative, regulatory and corporate requirements and standards.
e. Ensure externally supplied systems and services that affect the safety of aviation operations meet appropriate regulatory and safety standards.
f. Establish and measure aviation safety performance against objectives.
g. Foster a learning environment by which we learn from our experiences and the experiences of others.
h. Regularly conduct safety and management reviews leading to improved processes.
i. Actively develop and improve the safety performance to conform to world class safety standards.
j. Safety Officers will report directly to the Director of Aviation and be responsible for managing our aviation safety program.

Each individual will always act with safety in mind, because we all have a responsibility to work in a safe manner. The application of effective aviation safety management systems and processes is integral to all aviation activities. The objective is to achieve the highest levels of aviation safety standards and performance.

All Personnel should actively report safety issues without fear of reprisal. They will comply with procedures set forth in the program directive.

2.3.1   Purpose

The purpose of the safety policy is to manage safety proactively and effectively. This is done by:

a. Obtaining consistent and optimal aircraft and human performance;
b. Identifying and managing safety risks specific to the company's flight operations;
c. Actively seeking feedback on and improving the company's safety management activities.

2.3.2 Responsibilities

The Director of Aviation is responsible for:

    a. Sustaining conditions that advance the safe operation of company aircraft;
    b. Providing the resources (in time and money) to assure the safe operation of company aircraft;
    c. Actively supporting the company's safety management system;
    d. Ensuring that flight operations are conducted in compliance with all applicable safety regulations;
    e. Validating and addressing safety-risk management deficiencies in an appropriate and timely manner.

Flight Operation personnel are responsible for:

    a. Adhering to directions contained in flight operations-related manuals, and related procedures; and
    b. Participating proactively in the safety management system by:
        i. Actively identifying, reporting and mitigating hazards and safety- risk management deficiencies;
        ii. Providing timely input to management to ensure that the company's safety-risk profile is accurate and up-to-date; and
        iii. When appropriate, applying hazard checklists to make sound preflight and in-flight decisions.

2.4 Organizational Structure and Responsibilities

Top management shall have the ultimate responsibility for the SMS and shall provide resources essential to implement and maintain the SMS. Top management shall appoint department personnel who, irrespective of other responsibilities, shall have responsibilities and authority that includes:

    a. Ensuring that processes needed for the SMS are established, implemented and maintained;
    b. Reporting to top management on the performance of the SMS and the areas that need improvement;
    c. Ensuring the promotion of awareness of safety requirements throughout Charter Express Flight Operations.

2.5 Safety Education and Training

Employees and applicable contract services personnel will be properly trained to do their assigned jobs prior to being released to work on their own. Technical training is the responsibility of the department. When specific safety related training is required, coordination will be accomplished with the appropriate training department or contractor to provide technical specialty trainers to assist in training presentations when necessary.

2.5.1   Employee Safety Training

Training will be documented for each employee. Managers are responsible to ensure that training records are up to date and on file in accordance with applicable state and federal laws. Types of training will consist of the following:

a. Recurrent: Once a year refresher course.
b. Remedial: Individuals who cause more than one accident or injury will be retrained. Remedial training will also be given to those employees who reveal a lack of knowledge or proficiency with respect to their jobs, even if no accident has resulted.

2.5.2   Scope of Activity

Charter Express Flight department personnel are tasked with any and all matters relating to the health and safety of fellow employees, customers or the general public who come in contact with this aviation organization. This also includes responsibilities imposed by national and local laws; and those pertaining to the environment. The Safety Team shall oversee the SMS process to ensure its active implementation and use.

2.5.3   Responsibilities

a. Oversee the operator's safety program, as part of the overall SMS;
b. Review loss prevention programs;
c. Review all major accidents, and selected high potential occurrences;
d. Review adequacy of corporate safety program, and make recommendations for revisions;
e. Review and approve all revisions to this manual;
f. Review Safety Team meeting minutes; and
g. Review other industrial hygiene and safety issues.

2.6   Safety Evaluations

A variety of safety evaluations should be conducted throughout the year. A safety evaluation or audit is considered part of the safety assurance process. It should be viewed as a valuable means of acquiring specific safety-related information about the aviation organization and a way to determine the overall health of the safety program.

2.7   Hazard Identification and Tracking

Charter Express is committed to improving flight, ground and operational safety. Top Management has determined that safety would be enhanced if there were a systematic approach for Pilots, Aircraft Technicians, and Support Staff to promptly identify and correct potential safety hazards. The primary purpose of Hazard Identification and Tracking (HIT) is for Pilots, Aircraft Technicians, and Support Staff to identify safety events, deviations from the Flight Operations Manual (FOM) and to implement corrective measures that reduce the opportunity for safety to be compromised.

2.7.1   Applicability

The HIT Report applies to all employees of Charter Express Flight Operations. Reports of events involving apparent noncompliance with FAR's and Charter Express Flight Operations FOM, that are not inadvertent or that appear to involve an intentional disregard for safety, criminal activity, substance abuse, controlled substances, alcohol, or intentional falsification are excluded from this program.

2.7.2   Reporting Procedures

When a Department Employee observes a safety problem or experiences a safety-related event, he shall note the problem or event and describe it in enough detail so that it can be evaluated by the Safety Officer.

2.7.2.1   Charter Express Flight Operations HIT Report Email

The employee should complete the HIT Report email for each safety problem or event; enough information should be made available to fully describe the event and any perceived safety problem. If applicable, a picture may also be included.

The HIT report email will be submitted in the following format: The subject line must contain HIT, the date the safety hazard was identified and if applicable the aircraft tail number, airport or location the hazard occurred.

Example

To: Billgoff23@yahoo.com

Subject: HIT AUG02 N313GL KLIT
                        OR
              HIT AUG22 HANGAR

2.11.4 Report Types

It is anticipated that three types of HIT reports will be submitted. Safety- related reports that appear to involve a possible noncompliance with FAR's and the FOM; reports that are of a general safety concern, but do not appear to involve possible noncompliance with FAR's and the FOM; and any other reports: e.g., involving catering and maintenance issues. All safety-related reports shall be fully evaluated and, to the extent appropriate, investigated.

2.11.4.1 Report Use

Neither the written HIT report nor the content of the written HIT report will be used to initiate or support any company disciplinary action, or as evidence for any purpose in an FAA enforcement action. This Form is designed to protect the identity of the employee who provides information if desired. These forms are readily available in your work area.

The reported event must not appear to involve criminal activity, substance abuse, controlled substances, alcohol, or intentional falsification. Reports involving those events will be referred to an appropriate FAA or Charter Express Flight Operations Corporate office for further handling. If upon completion of subsequent investigation, it is determined that the event did not involve any of the fore mentioned activities, then the report will be referred back to the Safety Officers for review.

2.11.5   Recordkeeping

All documents and records regarding this program will be kept by the Director of Aviation and only made available to other parties if indicated on the HIT Report. All documents and records regarding this program will be kept in a manner that ensures confidentiality and in compliance with 14 CFR and all applicable law.

2.12   Safety-Risk Management

A hazard is a condition, event, or circumstance that could lead to or contribute to an unplanned or undesired event. Risk is an expression of the impact of an undesired event in terms of event severity and event likelihood. Throughout this process, hazards are identified, risks analyzed, assessed, prioritized, and results documented for decision-making. The continuous loop process provides for validation of decisions and evaluation for desired results and the need for further action.

It is important that the SRM process shall be applied to the initial designs of systems, organizations, and products and to the development of operational procedures. The process defined in the safety assurance functions shall be used to respond to identified hazards and any associated changes to operational processes due to the identification of these hazards

Charter Express shall establish feedback loops between assurance functions to evaluate the effectiveness of safety risk controls. Charter Express shall define acceptable and unacceptable levels of safety risk (or safety risk objectives). Descriptions have been established for severity and likelihood levels. Charter Express shall define levels of management that can make safety risk acceptance decisions. Charter Express shall also define acceptable risk for hazards that will exist in the short-term while safety risk control/ mitigation plans are developed and executed. The following shall not be implemented until the safety risk of each identified hazard is determined to be acceptable in:

a. New system designs;
b. Changes to existing system designs;
c. New operations/procedures; and
d. Modified operations/procedures.

The SRM process shall not preclude Charter Express from taking interim immediate action to mitigate existing safety risk when and where it has been recognized. The SRM is the second building block of the SMS.

2.13   System and Task Analysis

Safety risk management begins with system design. That means looking at what we do and how we do it. System and task descriptions shall be developed to the level of detail necessary to identify hazards. Whether it is a physical system such as an aircraft or an operational system such as scheduling, flying or maintaining aircraft, it needs to be analyzed. A system or task description should completely explain the interactions among the hardware, software, people and environment that make up the system in sufficient detail to identify hazards and perform risk analysis. System and task analysis should consider the following:

a. Any interactions with other systems in the air transportation system (e.g. airports, air traffic control);
b. Required human factors considerations of the system (e.g. cognitive, ergonomic, environmental, occupational health and safety) for operations and maintenance;
c. Hardware components of the system;
d. Software components of the system;
e. Related procedures that define guidance for the operation and use of the system;
f. Ambient environment;
g. Operational environment;
h. Maintenance environment;
i. Contracted and purchased products and services;
j. The interactions between items or issues defined in the list above;
k. Any assumptions made about the systems, system interactions, and existing safety risk controls/mitigation.

2.14   Hazard Identification

Identify Hazards and Consequences: Potential hazards may be identified from a number of internal and external sources. Prior to risk analysis you must also include the consequence (undesired event) resulting from the hazard scenarios. Hazard scenarios may address the following: who, what, where, when, why, and how, regarding the hazard that is causing concern, as well as its potential consequences. This provides an intermediate product that expresses the condition and the consequences that will be used during risk analysis.

Hazards shall be identified for the entire scope of the system that is being evaluated, as defined in the system description, and documented using the Hazard Identification and Tracking Form. Once a hazard has been identified and documented, the information shall be tracked and managed through the Safety Reporting and Feedback process detailed in this section.

2.15   Risk Analysis

Analyze Hazards and Identify Risks: Risk analysis is the process whereby hazards are characterized for their likelihood and severity. Risk analysis looks at hazards to determine what can happen when. This can be either a qualitative or quantitative analysis. The inability to quantify and the lack of historical data on a particular hazard do not exclude the hazard from the need for analysis. A Risk Assessment Matrix is normally used to determine the level of risk.

The safety risk analysis process shall include a review of any existing safety risk controls, such as written policies, checklists, and standard operating procedures (SOP). It should also look at any triggering mechanisms (if this, then that). Another element to analyze is the safety risk of reasonably likely outcomes from the existence of a hazard, to include estimation of the likelihood and severity.

2.15.1 Risk Assessment

Consolidate and Prioritize Risks: Risk assessment is generally defined as the process of combining the impacts of risk elements discovered in risk analysis and comparing them against some acceptability criteria. Risk assessment can include the consolidation of risks into risk sets that can be jointly mitigated. The results of this comparison are used in the decision making process. Charter Express Flight Operations shall assess a hazard for its safety risk acceptability using the safety risk objectives of likelihood of happening and severity if it happened. Charter Express shall define levels of management that can make safety risk acceptance decisions.

2.16   Decision Making

Develop Action Plans: This step begins with the receipt of a prioritized risk list. Review the list to determine how to address each risk, beginning with the highest prioritized risk. The four options that may be chosen for a risk are transfer, eliminate, accept, or mitigate (T.E.A.M). Generally, design engineering follows the "safety order of precedence":

    a.   Design for minimum risk;
    b.   Incorporate safety devices;
    c.   Provide warning devices; and
    d.   Develop procedures and training.

2.16.1 Decision Making Process

A key part of the process is involving and consulting with people who will be affected by a decision and carefully documenting each step. There are significant benefits to using this decision process to deal with risk issues including:

    a.   Avoiding costly losses in the decision making process;
    b.   Ensuring that all aspects of the risk problem are identified and considered when making decisions;
    c.   Ensuring that the legitimate interests of all affected stakeholders are considered;
    d.   Providing the decision makers with a solid defense in support of decisions;
    e.   Making decisions easier to explain;
    f.   Providing a standardized set of terminology used to describe risk issues contributing to better communication about risk issues;
    g.   Providing significant savings in time and money.

2.17   Validation and Control

Evaluate Results of Action Plan for Further Action. Safety control/mitigation plans shall be defined for each hazard with unacceptable risk. Validation and control begins with (1) the results of scheduled analyses on the effectiveness of actions taken (this will include identification of data to be collected and identification of triggering events if possible; then developing a plan to review the data collected) and (2) the current status of each prioritized risk. If the status of a risk should change or the mitigating action does not produce the intended effect, a determination must be made as to what modifications to the system/process may be necessary. Safety risk controls shall be clearly described, evaluated to ensure that the requirements have been met, are ready to be used in the operational environment for which they are intended; and documented.

Substitute risk shall be evaluated in the creation of safety risk controls/ mitigations thus proactively identifying, assessing, and eliminating or controlling safety-related hazards, to acceptable levels can mitigate risks.

2.18   Safety Risk Management Process

A systematic approach to process improvement requires proactively searching for opportunities to improve the process at every step, not simply identifying deficiencies after an undesired event. Safety Risk Management has been defined as the process by which risk assessment results are integrated with political, social, economic, and engineering considerations for decisions about need/methods for risk reduction.

2.18.1 Likelihood Scale Definitions

Likelihood Scale Definitions		
Frequent	Individual	Likely to occur often.
	Fleet	Continually Experienced
Probable	Individual	Will occur several times.
	Fleet	Will occur often
Occasional	Individual	Likely to occur sometime.
	Fleet	Will occur several times.
Remote	Individual	Unlikely to occur, but possible.
	Fleet	Unlikely but reasonably expected to occur.
Improbable	Individual	So unlikely, it can be assumed it will not occur
	Fleet	Unlikely to occur but possible

2.18.2 Severity Scale Definitions

Severity Scale Definitions	
Catastrophic	Results in fatalities & loss of the system
Critical	Severe injury and major system damage.
Marginal	Minor injury and minor system damage.
Negligible	Less than minor injury and less than minor system damage.

2.18.3 Risk Assessment Matrix

Hazard Categories				
Frequency Of Occurrence	I	II	III	IV
	CATASTROPHIC	CRITICAL	MARGINAL	NEGLIGIBLE
0　FREQUENT	1	2	3	4
1　PROBABLE	2	3	4	5
2　OCCASIONAL	3	4	5	6
3　REMOTE	4	5	6	7
4　IMPROBABLE	5	6	7	8

The risk assessment matrix is used to establish existing risk and projected risk. All aspects of the Flight Operation should be assessed and re- assessed as necessary. New missions or systems should be assessed prior to dispatch or use. Each hazard or risk should be categorized using the matrix.

Probability of a single occurrence.

    a.   Frequent- Likely to occur frequently (an aircrew member might be fatigued).
    b.   Probable- Will occurs several times (no marshals available to park aircraft).
    c.   Occasional- Likely to occur sometime (bird strike)
    d.   Remote- Unlikely, but possible (loss of an engine)
    e.   Improbable- (complete loss of hydraulic and electrical power)

Exposure to that occurrence.

The number of opportunities that a single event can occur.

Severity of the event if it does occur.

    a.   Catastrophic- Death, loss of equipment.
    b.   Critical- Severe injury and major damage to equipment.
    c.   Marginal- Minor injury and minor damage to equipment.
    d.   Negligible- No injury and no damage to equipment.

A score should be generated and parameter set to mitigate the risk. Example:

   a. A risk assessment of 1, 2 or 3 is unacceptable. THIS IS A NO-GO SITUATION. Either the probability or the severity (or both) must be reduced.
   b. A risk assessment score of 4 is undesirable. A decision from management must be made on whether to accept the risk.
   c. A risk assessment score of 5 or 6 is acceptable; however management should review the assessment.
   d. A risk assessment score of 7 or 8 is acceptable, and the GO decision can be made by the Pilot in Command (PIC).

2.19   Flight Risk Awareness Management

Proactive identification of possible hazards and the use of risk management tools to mitigate risks. This process will provide ways for pilots to determine which flights have more risk and allow pilots to intervene and reduce risk when possible.

The tool has been developed for use in understanding different levels of flight risk and to allow Charter Express pilots to become familiar with this element of an SMS. It is important for Charter Express Flight Operations to understand that risk has several elements that must be considered, including probability, severity, and weighted value.

   a. What is the probability of a particular event occurring?
   b. If the event does occur, what is the severity likely to be?
   c. And what is the weighted value of this type of event compared to other aspects of the operation?

2.19.1 Operational Risk Awareness Tool

The Operational Risk Awareness Tool will assist both crew members in evaluating risk that might be encountered during the flight and lead the crew in mitigating or illuminating any high risks. If the crew determines the risk cannot be mitigated to a safe level (based on their experience and professional judgment), the crew will consult the Director of Aviation.

The Operational Risk Awareness Tool is comprised of two checklists. Both the departure and arrival considerations checklists should be completed during the pre-departure phase of operation. The Arrival Considerations checklist will be reviewed prior to commencing initial descent for the destination airport to remind the crew of risks during the approach and landing phase. If changes have occurred since the pre-departure Operational Risk Awareness was discussed, and now the crew considers the risk of approach and landing to be too high, an alternate landing airport will be chosen with a more manageable risk.

If there were any enhanced considerations noted for that flight (indicated with a check mark), use the notes section to provide information regarding the items checked i.e. weather delays, destination changes, flight cancellations due to weather, etc. The assigned trip SIC will send the completed checklist form(s) via email to the safety team in the following format: The email subject line will be the date the trip sequence started, aircraft Tail number and "ORA".

Example

To: billgoff23@yahoo.com
             geoff@hatcheraviation.com
             timc61513@gmail.com

Subject: HIT AUG02 N313GL KLIT

2.20   Safety Assurance

Charter Express Flight Operations shall monitor their systems and operations to continently identify new hazards, measure the effectiveness of safety risk controls that have been implemented, and ensure compliance with regulatory requirements.

2.21   IS-BAO Currency / Compliance Monitoring

To ensure IS-BAO compliance, changes to the IBAC (IS-BAO) protocols will be evaluated annually by the safety team using the compliance monitoring matrix. The safety team shall also monitor throughout the year operational data in the following categories:

   a.   Operations
   b.   Dispatch/Scheduling
   c.   Aircraft Maintenance
   d.   Line Service
   e.   Training
   f.   Documentation
   g.   Products and services received from subcontractors

The safety team will recommend necessary changes to the FOM and establish future safety goals.

2.21.1 Internal Evaluation

Charter Express shall conduct internal evaluations of the operational processes and the SMS at least annually to determine that the SMS conforms to requirements. Planning of the evaluation program shall take into account safety significance of processes to be audited and the results of previous audits.

The evaluation program shall include:

a.   Definition of the evaluation:

      i.   Criteria
      ii.   Scope
      iii. Frequency
      iv. Methods

b.   The processes used to select the auditors;
c.   The requirement that auditors shall not audit their own work;
d.   Documented procedures, which include the responsibilities, and requirements for:

      i.   Planning audits
      ii.   Conducting Audits
      iii. Reporting results; and
      iv. Maintaining records; and
      v.   Audits of contractors and vendors.

2.21.2 External Auditing of the SMS

Charter Express shall include the results of oversight organization audits in the SMS. Corrective actions should be mitigated and tracked.

2.22   Analysis of Data

Charter Express shall analyze data that has been acquired through the SMS process to demonstrate the effectiveness of risk controls in Flight Operations' operational processes, and the SMS. Through data analysis, Charter Express shall evaluate where improvements can be made to Flight Operations' operational processes, and the SMS.

2.23   Preventive/Corrective Action

Charter Express shall develop, prioritize, and implement, as appropriate:

a.   Corrective actions for identified non-conformities with risk controls; and
b.   Preventive actions for identified potential non-conformities with risk control actions.

Safety lessons learned shall be considered in the development of corrective actions and preventive actions. Charter Express shall take necessary corrective action based on the findings of investigations.
Charter Express shall prioritize and implement corrective action(s) in a timely manner and shall prioritize and implement preventive action(s) in a timely manner. Records shall be kept of the disposition and status of corrective and preventive actions as per established record retention policy.

2.24   Management Reviews

Top management will conduct regular reviews of the SMS, including:

   a. The outputs of SRM;
   b. The outputs of safety assurance; and
   c. Lessons learned.

Management reviews shall include assessing the need for changes to Charter Express operational processes and the SMS.

2.25   Continual Improvement

Charter Express shall continuously improve the effectiveness of the SMS and of safety risk controls through the use of the safety and quality policies, objectives, audit and evaluation results, analysis of data, corrective and preventive actions, and management reviews.

2.26   Safety Culture/Promotion

Top management shall promote the growth of a positive safety culture through the publication of senior management's stated commitment to safety to all employees and visible demonstration of their commitment to the SMS. They will also communicate the safety responsibilities for Charter Express' personnel. Clear and regular communication of safety policy, goals, objectives, standards, and performance will be made to all employees of Charter Express' Flight Operations. An effective employee safety feedback system that provides confidentiality as is necessary shall be established. A safety information system that provides an accessible efficient means to retrieve information shall be used, and there will be an allocation of resources made to implement and maintain the SMS. Safety promotion is the fourth and final block of the Safety Management System.

2.27   Communication and Awareness

Charter Express shall communicate outputs of the SMS to its employees, as appropriate; and shall provide access to the outputs of the SMS to its oversight organization, in accordance with established agreements and disclosure programs.

2.27.1 Safety Lessons Learned

Charter Express shall develop safety lessons learned. The lessons learned information shall be used to promote continuous improvement of safety. Charter Express shall communicate information on safety lessons learned.

2.28   Change Management Process

Prior to undergoing any significant change that could impact Flight Operations; a change management process will be undertaken. Events that will indicate the need for such a process are;

a. The introduction of a new aircraft type;
b. Significant change in the nature of the operation (e.g. dynamic business growth, new operating environment, etc.);
c. Changes in hiring or scheduling practices;
d. Changes to organizational structure;
e. Significant change in aircraft maintenance arrangements, etc.

As soon as it has been determined that the change event will occur, the Company Safety-Risk Profile will be reviewed. On the basis of that assessment, and any other available information, the Director of Aviation or his designee will develop a Change Management Plan. The Change Management Plan will include:

a. An assessment of the changes required to items such as:
b. A plan for development of the required changes.

    i. Operating and maintenance procedures and processes,
    ii. Personnel training and competency certification,
    iii. Flight Operations Manual,
    iv. Aircraft SOPs, etc.,

When the required changes have been developed, a Safety Management System Audit will be conducted before the change is implemented. After implementation of the change the Director of Aviation will review system performance at regular intervals. If there is any doubt of the effectiveness of the change management process, a more comprehensive post- implementation review or a Safety Management System Audit will be conducted.

2.29   Safety Management System Audit

A Safety Management System Audit is an independent evaluation of the safety management system of a company. While such an audit may be done to meet private operator certification or accreditation requirements, the prime purpose of a Safety Management System Audit is to identify areas in which safety performance may be evaluated and enhanced. A Safety Management System Audit is used to validate the corporate safety-risk profile, which in turn shall be employed as the basis to evaluate corporate safety performance. It may include:

a. Visits to one or more operating sites;
b. Interviews with managers and operational staff within and outside of the company;
c. Document reviews (e.g. for accuracy, currency and appropriateness); and
d. An evaluation of the safety management tools being employed by the company.

Findings from a Safety Management System Audit will be tracked in the hazard tracking system, and may be used to update the Company Safety- Risk Profile and the Safety Management Strategy.

2.30   Accidents/Incidents

Charter Express Flight Operations accidents and incidents are defined by classification and by category. Before they can be reported, it is necessary for the manager to classify and categorize the occurrence so the proper procedures for reporting and investigation can be followed. When in doubt, use the highest classification.

2.30.1 Classification for Notification and Reporting

a.   Major Accident: An accident that results in substantial property damage, serious injury or illness that requires immediate emergency medical care, or death. For aircraft accidents, the term "substantial damage" is per the definition in the NTSB Part 830 rules.

b.   Minor Accident: An accident that results in minor property damage, or which results in injury of illness requiring medical care.

c.   Incident: Any other occurrence which results in injury or illness requiring first-aid care, or which results in property damage.

d.   High Accident Potential: Events or on-going situations that have a high potential for causing injury, illness or damage to property if they recur.

2.30.2 Categories for Notification and Reporting

a.   Aircraft: Occurrences involving aircraft, whether in-flight or on the ground. This includes aircraft parked at the gate. In addition to reporting/notification guidelines in this manual, procedures in the Charter Express Flight Operations Emergency Response Program (ERP) should be followed.

b.   Employee: Occurrences involving injury or illness to an employee. If the employee injury or illness is sustained in operations involving aircraft, GSE, or facilities, report under those categories as well.

c.   Facilities: Occurrence involving this company's facilities - example, fire or other catastrophe in a building owned or leased by Charter Express.

d.   Ground Support Equipment (GSE): Property damage to GSE or caused by GSE. Also personnel injury or illness caused by GSE. If GSE is involved in an aircraft accident or incidents report under that category as well.

e.   Non-Employee: Occurrences involving injury or illness to either a customer or non-customer. If injury or illness is sustained in operations involving aircraft, GSE, or facilities, report under that category as well.

The first actions of management personnel at the scene of an accident, incident or high accident potential occurrence will be to take any measures necessary to prevent further injury or illness. This includes emergency medical care. It is essential that this occur prior to any other actions, including notification/reporting.

Notification is a brief communication concerning the accident or incident. It should contain enough information to identify the classification, category, time, location, and a brief description of the occurrence and suspected cause. Do not delay initial notification in an attempt to gather comprehensive information.

2.30.3 Accident Investigation

2.30.3.1 Aircraft Accident

If an aircraft accident occurs, the company must rely upon prepared and practiced responses.

a.   In addition to devoting every available resource to avoiding immediate injury and damage, Charter Express must quickly begin the actions outlined in the Emergency Response Program (ERP). A key function of the Safety Officer is to ensure the ERP is always up to date, with current management personnel and locator data, as well as numbers to call for all related offices.

b.   Once the accident scene has been brought under control, the Go Team Leader (the Safety Officer or a designated Charter Express Flight Operations employee) becomes the focal point of the company's investigation of the accident. The operator is an authorized participant in the investigation, under NTSB and international, ICAO Annex 13 rules. The investigating agency will call upon Charter Express to provide various areas of expertise as part of the investigation team. Charter Express should expect to deploy a "Go Team" to represent and gather information for later assessment. The deployment and equipping of this team is addressed in the ERP. The functions of various team members can be researched through the US National Transportation Safety Board.

c.   Since the objective of the investigation is to examine all aspects of the accident to determine the root causes, there is no opportunity for putting the operators "spin" on the findings. Lawyers and consultants are generally not permitted on the team, only those with substantial knowledge or expertise to contribute.

2.30.3.2 Non-Aircraft Accidents

These accidents will be investigated by management personnel under these accident investigation guidelines:

a.   Initiate the investigation into a major or minor accident, or an incident resulting in personnel injury or illness, within 24 hours after the occurrence. If it becomes apparent that more than 72 hours will be required to investigate the occurrence, then submit a preliminary report to the FDMGR group and follow up with status reports until the final report is complete.

b.   Investigations of incidents with only minor damage and no injury or illness should commence as soon as circumstances permit. Complete the investigation and submit the report within five working days.

c.   Employees involved in a major accident may be required to undergo a drug and or alcohol test. A drug and alcohol test should also be considered in a minor accident, incident, and high accident potential cases if, in the managers judgment, there is reasonable suspicion that the employees' actions may have been the result of drug and alcohol use. If a drug or alcohol test was performed on any employee, it must be noted on the accident report form.

In the event of an accident or incident, an employee may be asked to provide information regarding the event. The information will be submitted via email to management. The report should provide enough information to fully describe the event using the guidelines listed below. If applicable, a picture may also be included.

The Accident/Incident report email will be submitted in the following format:

Example

To: billgoff23@yahoo.com
              geoff@hatcheraviation.com
              timc61513@gmail.com

Subject: Accident/Incident Aug 02

Note   The subject line _must_ contain Accident/Incident, the date the event occurred.

Accident Incident Description:

a. Date and Time of occurrence
b. Name of person providing the information (if other than yourself)
c. Location of event
d. Names of Personnel Involved/Injuries (If Flight Crew note PIC/SIC)
e. Aircraft Type/Tail Number (if applicable)
f. Damage to Property/Aircraft
g. Passenger Names/Injuries
h. Describe event in detail; include any witnesses and their contact information if possible.

2.30.3.3 Corrective Actions

Corrective actions are the end result of a successful investigation. It should be indicated on the report whether these actions are recommended, planned, or completed. Actions should be specific, doable, and consist of one of three types as follows:

a. Actions to eliminate the cause or causes of the accident or Incident.
b. Actions to control the circumstances that caused the accident or incident
c. Personnel actions such as improved procedures, increased or enhanced training, or actions to discipline employees involved in the occurrence. Discipline is mandatory in those instances where employee carelessness or willful disregard of safety rules or company procedures results in an accident. It should also be considered anytime an employee exhibits conduct which shows a lack of concern for safe operating procedures even if no accident results.

Proposed corrective actions will be reviewed by Leadership Team, and safety staff. In the event of disagreement as to causes or solutions, the matter will be resolved in discussions before the Safety Team.

a. Corrective actions, as agreed to and annotated on the investigation report, should be carried out by appropriate managers. The final report should be communicated to all employees to prevent a similar occurrence.
b. Periodically monitor the success and continuation of the corrective action to ensure interest does not fade over time, and allow the erroneous behavior to recur.

3   Administration and Scheduling

3.1   Administration

This section defines hiring and employment policies for Charter Express Flight Operations employees and administrative procedures within the department.

3.1.1   Personnel Policies

Policies presented in this section are meant to augment those established by Charter Express. In the event of conflicts, the Director of Aviation will seek guidance and clarification from the corporate Human Resources department and other staff agencies, as required.

3.2   Employment Policy

It is the policy of Charter Express to hire the best-qualified person for any open position. The hiring process will be conducted in accordance with established practices of Charter Express Flight Operations and Human Resources. Internal candidates may be considered before outside sources are pursued, but internal candidates must meet the same qualification and performance standards required for the position.

Selection and promotions will be based on merit and not on seniority.

All personnel being considered for employment will be expected to meet the minimum standards as set forth in this manual. However, certain individual requirements may be revised or waived when, in the opinion of the Director of Aviation, the overall qualifications of the candidate warrant such action.

Special attention will be given to the candidates' licenses, logbooks, and any other records to assess and verify overall experience. A background investigation will be conducted, and all references will be checked.

3.2.1   Probation Period

The first 6 months of an individual's employment serve as a probationary period. During this time, a new employee's work performance, attitude, initiative, ability, and potential are evaluated. The employment relationship may be terminated without notice at any time during this probation period.

Each new employee will receive verbal performance reviews during the probationary period, as necessary to enhance performance.

3.2.2   Working Hours

The Director of Aviation is responsible for ensuring that all necessary work is accomplished and may be required to adjust working days and duty hours. The Flight Operations office will be open between the hours of 0830-1700 local. Flight crews will report for flying duty in accordance with guidelines in this section of the manual.

The Director of Maintenance is responsible for overseeing scheduled and unscheduled maintenance work whenever the aircraft are at home station.

3.2.3   Outside Employment or Business Activities

Employees should devote their best efforts to Charter Express and our business. However, we recognize employee's often wanting to engage in activities outside their employment, which are unrelated to Charter Express.

CONTRACT SERVICES FOR OTHERS - Charter Express will permit employees to provide contract services for other entities. The income made contracting elsewhere will be split with the company on a 75/25 basis. The company gets 75 percent of the revenue and the employee keeps 25 percent. All Contract Services must be pre-approved by the Director of Aviation to make sure they don't conflict with the needs of Charter Express flights.

3.2.4   Vacation

Vacations normally will be approved on a first-come, first-served basis with every effort being made to accommodate all requests.

3.2.5   Personal Appearance

Personnel may wear casual business attire in accordance with the Charter Express "Business Casual" guidelines i.e. dress slacks and polo shirts with game days being football attire.

3.2.6   Personal Conduct

Personal employee information will be considered confidential and as such will be shared only as required and with those who have a need to have access to such information. Charter Express' philosophy is to safeguard personal employee information in its possession and to ensure the confidentiality of the information. All Flight Operation personnel are always expected to be professional and maintain confidentiality, whether dealing with actual records, projects, or conversations, and abides by the obligations of confidentiality policies. Situations in violation of this policy include, but are not limited to:

a.   "Loose" talk among co-workers regarding personal information about any fellow employee.
b.   Allowing unauthorized access to computers, personal electronic devices, and cell phones in which confidential information, financial data, or employee personal information may be obtained.
c.   Sharing of information acquired by persons in the course of their work to others who don't have a need to know the information; accessing information that the individual doesn't have the authority to access in the course of their work, or doesn't have a need to know to carry out their job duties.

Flight department personnel serve as a direct representative between the company and customers. In both the business and operational sense, it is necessary for Charter Express's employees to conduct themselves in a manner that promotes customer trust and confidence. Flight department personnel are always expected to maintain a professional deportment befitting their position of responsibility, both on and off the job.

3.2.7   Tobacco Use

No flight, maintenance, or administrative employee shall smoke tobacco products at any time in company aircraft, hangar, or on flight operation property except for designated areas.

3.2.8   Drugs and Medication

It is our policy that essential measures are taken to assure that the use of controlled substances by Flight department personnel does not endanger the health and safety of other workers or passengers who board company aircraft. Accordingly, Charter Express prohibits the use of illegal drugs, possession, concealment, transportation, or distribution of illegal drugs, alcohol, and other unauthorized items while conducting any type of job assignment. "Possession" includes presence in the body. Being "under the influence" of a controlled substance refers to being in an unfit condition to work, whether impairment exists. Violation of this policy is grounds for immediate termination.

Certain drugs in common use, both prescription and non-prescription, may have a marked effect on the responsibilities and judgment of any flight department employee. Flight department personnel should advise the physician of their occupation, so that dosage and the response to medication can be determined and discussed.

FAR's require that a pilot not fly while taking drugs or medication that might impair ability or judgment. If in doubt, it is the responsibility of the flight crewmember to advise the Director of Aviation of the circumstances and seek qualified advice from a FAA airmen medical examiner to determine probable effects of the medication.

3.2.9   Use of Alcoholic Beverages

FAR 91.17 provides in part that no pilot may act as a flight crewmember after having consumed alcohol within the previous eight (8) hours or if the blood alcohol level is greater than .04 percent by weight or if under the influence of alcohol. Remember that it is easily possible to have a blood alcohol level well below the maximum, but still be "under the influence" of alcohol.

The nature of the business of Charter Express is such that change is normal. Given that fact, certain precautions must be taken by Flight Department personnel in order that he/she is not caught by a short notice schedule change.

The company will fully support the action of any flight department employee that, after complying with this policy and through no fault of his/her own, makes their selves unavailable for duty due to the consumption of alcohol. This statement applies to the aftereffects as well as to the immediate effects of alcohol consumption. In the final analysis, the company relies on the consistent good judgment of all flight department personnel to maximize the level of safety that we provide. It is expected that all flight department personnel shall exercise prudence in the use of and the location where alcohol is consumed.

3.2.10 Personnel Records

When an additional type rating is added to the airmen certificate, a copy of the temporary certificate should be added to your pilot records followed by a copy of the new permanent certificate when received. Note that the temporary certificate is valid for 120 days. Inquiry should be made after 90 days if the new certificate is not received.

3.2.11 Violations

3.2.11.1 FAR Violations

Crewmembers charged with flight violations shall report the occurrence of such violations immediately to the Director of Aviation.

3.2.11.2 Airmen's/Medical Certificates

Any circumstances, actions, or violations that could in any way affect the validity of an airmen or medical certificate must be reported immediately to the Director of Aviation, including charges or conviction of driving while intoxicated (DWI) or driving under the influence (DUI).

3.2.12 Logbooks

It is each pilot's responsibility to maintain a pilot log in accordance with Federal Aviation Regulations. This log will include all information necessary to document currency requirements, including:

a.   Day and night takeoffs and landings
b.   Instrument time
c.   Actual or simulated instrument approaches, including type
d.   Flight training and proficiency examinations

3.2.13 Medical Qualification

Valid FAA first- or second-class medical certificate renewed every twelve months in accordance with FAR 61.23 (a)(1)(2).

Additional Medical Examination Requirements - Charter Express will pay for an annual Heart Screening at The Heart Hospital and all employees are expected to get a screening each year. In addition, our employees will be expected to complete a Full Physical once each year which is paid for by our health plan.   Pilots are also required to maintain a current Flight Physical.

3.2.17 Portable Electronic Devices

It is the responsibility of all Flight department personnel that have been issued a laptop computer, EFB and/or portable electronic device to:

a.   Care for this equipment and make a diligent effort to prevent any damage
b.   Ensure that the device is charged sufficiently to meet all requirements of your workday.
c.   Keep Software and required Apps updated
d.   While on duty, all flight department personnel shall abstain from conducting personal business on electronic devices while performing their work-related obligations.
e.   When not in use the EFB is to be stored in the side storage compartment to ensure the EFB will not cause a safety hazard or be damaged by any seat adjustment.

3.3   Expense Policy

3.3.1   Credit Cards

Employees will be issued one corporate credit card to be used only for business expenses. They shall not be used for personal purchases.

3.3.2   Business and Travel Expenses

Personnel will be reimbursed for necessary and reasonable expenses incurred while traveling or conducting Company business. As responsible employees, Flight department personnel should use common sense and contain costs to the extent possible.

3.3.2.1 Expense Reports

Travel/business expense receipts will be submitted to the Director of Aviation for processing, approval and payment.

3.3.3   Allowable Travel Expenses

3.3.3.1 Airline Tickets

Airfare will be reimbursed up to the cost of full-fare coach-class tickets for all business-related flights. Employees are responsible for paying the cost of upgrades.

3.3.3.2 Rental Cars

The use of rental cars is authorized if a crew will be remaining in one location for a period. The assigned trip Pilot in Command will determine when the cost or inconvenience of using taxis or local public transportation warrants the use of a rental car. If a rental car is used, it should be from an agency with established corporate accounts. Only one car will be rented per crew unless approved by their immediate supervisor.

3.3.3.3 Hotels

Reimbursement for lodging is limited to the cost of standard hotel accommodations. If upgraded accommodations are used, the individual employee may be responsible for the difference in price. Receipts are required for all lodging expenses, regardless of price.

3.3.3.4 Meals

When traveling on business away from home station, personal meal expenses will be reimbursed. Meals purchased for other people will be explained on the expense reciept and will include the name and affiliation of the guests and the nature of business being conducted.

3.3.3.5 Gratuities

Tips should not exceed standard amounts (approximately 15%-20% for meals and services). However, if tipping is "required" as a form of payment to receive timely and adequate aircraft services, explain the circumstances fully on the expense receipt.

3.3.4   Passenger Scheduling

3.3.4.1 Trip Requests

Aircraft scheduling shall, in all cases, be done in a manner consistent with the company's best interest considering such factors as the policies contained in this manual, deadhead time, aircraft availability, and duty times. Exceptions may be made only for the following:

   a. Maintenance Check Flights: Director of Maintenance directly involved in the conduct of inflight maintenance or evaluation of aircraft systems or equipment.
   b. Training Flights: Authorized FAA check airmen and certified flight instructors who are actively training or evaluating Charter Express Flight crewmembers. The Director of Aviation shall approve all training flights in advance. Training flights will be scheduled only to fulfill a specific requirement specified in the FARs. Passengers are not authorized on any training flights.

The Director of Aviation will coordinate the approval of the following flights on an individual basis:

   c. Emergency Flights: Certain provisions have been made to allow the use of Charter Express' aircraft for humanitarian reasons.
   d. Special request to help assist passengers meet arrival times necessary for business.

3.3.4.2 Review and Acceptance of Requests

The Director of Aviation will analyze the availability of aircraft and flight crewmembers, and accept or reject the trip.

3.3.4.3 Aircraft Status Report

The Director of Maintenance or his representative will provide an aircraft release for each aircraft departing LIT operations for a trip sequence. The aircraft current total time and the time remaining needed for maintenance will be reviewed and considered in relationship to the flying schedule immediately ahead.

3.3.4.4 Scheduling Changes

Normally, changes to passenger lists, itineraries, and service requests will be communicated to the Director of Aviation as they become known by the Executives. When received, the Director of Aviation will notify crew and maintenance via email. The Charter Express calendar will be updated as well.

Once a trip notification has been issued to the flight crew, any required changes to the itinerary due to delays for weather, ATC (EDCT's), last minute maintenance delays, etc., the Assigned Trip PIC should make direct contact with the lead passenger, Scheduling (billgoff23@yahoo.com) and the Assigned SIC to initiate the required changes.

> Note   Only "approved authorizers" (Lead Passenger or Person reserving the trip) may make changes to the trip itinerary.

Scheduling will follow up by contacting all concerned parties as required including but not limited to:

a.   Executive Assistants,
b.   FBO's,
c.   Ground transportation,
d.   Caterers,
e.   Maintenance/Line personnel.

In the event of last-minute passenger changes, a "PAX Update" email with be sent from either the Assigned Trip PIC as required regarding passenger changes on a specific leg or remaining legs of a trip sequence.

> Note   The assigned trip PIC shall not operate an aircraft with people on board who are not identified on the passenger manifest.

3.3.5   Crew Scheduling

3.3.5.1 Flight Crew Duty Assignments

The Director of Aviation is responsible for scheduling crews, designating assigned trip pilot in command, arranging for temporary crewmembers, assigning stand-by duties, and determining changeover times and locations for extended missions.

The Director of Aviation will review crew assignments to ensure that flying time and opportunities to develop experience are divided fairly and proportionately among Flight Crewmembers.

The Director of Aviation must be kept informed of anything affecting the availability of crewmembers, including vacation requests, scheduled training, business-related meetings and appointments, etc. Requests for time off to attend personal meetings or appointments should be presented in a timely fashion for consideration.

Temporary employees who are current and qualified in the aircraft may be used to fill vacancies in the crew complement. Prior to a temporary pilot being used for a Flight Deck assignment, the Director of Aviation will review the candidate's experience and qualifications.

3.3.5.2 Pilot in Command

An assigned trip PIC and SIC will be designated for each trip. The PIC will have overall responsibility for the aircraft and crew for the duration of that trip. If the crew consists of two Pilots in Command, the assigned trip PIC will be so noted on the trip email.

Pilots not qualified as PIC shall not be permitted to fly the aircraft from the left seat without prior written "authority to fly from the left seat" issued by the Director of Aviation. The written approval will be filed in the pilot training record at the flight operations.

Flight department management recognizes the value of left seat flying to the development of newly hired or upgrading flight crewmembers. For this reason, the assigned trip PIC on each trip sequence should make good use of appropriate flight segments to provide line flying experience to upgrading personnel. It is expected that the assigned PIC of the trip sequence will exercise good judgment prior to letting a pilot who is not fully qualified as a PIC to fly the aircraft from either seat. Even though the assigned trip SIC may be approved for left seat flying, the decision to allow him to fly the airplane with passengers onboard should include the following factors:

   a.   Accumulated experience
   b.   Ability
   c.   Wind
   d.   Weather
   e.   Runway conditions
   f.   Other operational factors

3.3.5.3 High Minimum Pilot in Command

A newly upgraded Pilot in Command, or one assigned to a new type aircraft, is required to spend the first 50 hours of Pilot in Command time in a controlled environment.

a. The first 25 hours will be logged with an experienced Pilot in Command acting as First Officer or observer.
b. During the next 25 hours, a new Pilot in Command may be scheduled to fly with a First Officer, but the Pilot in Command will occupy the left seat on all legs and will be the sole manipulator of the controls.

In addition, each Pilot in Command that has logged less than 50 hours PIC time in type shall be restricted to higher approach minimums:

a. DH/MDA: Add 100 feet to published minimums
b. Visibility: Add 1/4 mile (or 1200 feet RVR) to published minimums

> Note   The adjustment to minimums may be waived if the new Pilot in Command is flying with an experienced Pilot in Command. Adjustments are not required for the selection of or approaches to weather-alternate airports.

3.3.5.4 Use of Contract Flight Crewmembers

It is the standard policy of Charter Express to crew its aircraft with full-time company crewmembers. In instances when it becomes necessary to utilize contract personnel, flight crewmembers must meet the requirements of FAR 61, hold a current FAA first or second class medical certificate, valid ATP or commercial certificate, and be approved by the Director of Aviation. In no case will a contract pilot be allowed to serve as assigned trip PIC or fly the aircraft from the left seat without the prior specific written approval of the Director of Aviation.

In those cases where a crewmember, though technically a contract employee, is serving regularly as a company flight crewmember, that individual may be granted flying privileges consistent with the policies, qualifications and restrictions set forth in this manual. The Director of Aviation shall make all such approvals in writing to the individual. Payment for contract crewmember services will be made upon receipt of an invoice approved by the Director of Aviation.

3.3.5.5 Crew Availability

All crewmembers are subject to assignment to flight duty at any time. Crewmembers may be assigned to a trip, assigned as standby or assigned OFF during the notification – briefing time. A crewmember will be notified by the Director of Aviation in the event of an unscheduled trip. It is expected that the takeoff should be accomplished within 2 ½ hours of notification or unless a later specified departure time is requested. Anyone who cannot report for flight duty due to illness or a personal emergency, or knows they will be late for their reporting time, or cannot continue a mission for any reason will notify the Director of Aviation as soon as possible.

   a. Away from Home Station: During RONs or layovers at intermediate destinations, crewmembers are available for duty after completing normal crew-rest. The nature of the business of Charter Express is such that change is normal. Crews should manage their time so as to be available in the event of an unscheduled trip and be able to depart within 2 ½ hours from the initial notice (unless a later time is requested by the lead passenger).

3.3.5.6 Medical Fitness

Pilots will not be assigned, nor will a pilot accept duty as a flight crewmember with a known medical deficiency or a change in a known medical deficiency that would render them unable to meet the requirements of a current medical certificate. Flight crewmembers undergoing serious mental or emotional stress must immediately notify the Director of Aviation in any of the following cases.

   a. When suffering from any illness or physical incapacitation that in any manner affects the employee's ability to perform required flight crew duties.
   b. When the crewmember is suffering from extreme mental stress (such as that caused by marital difficulties or by the serious illness or death of a close family member) and, in the opinion of the Director of Aviation, the stress could affect the concentration and performance of individual.
   c. When taking medication, unless it is administered by a physician and approved, in writing, for use by the employee while performing inflight crew duties.
   d. Within a 24-hour period following an inoculation, due to the possibility of an adverse reaction to serums.
   e. Prior approval for the donation of blood by a crewmember is required from the Chief Pilot. Crewmembers may not perform flight duties for a period of 72 hours after the donation of blood.
   f. Crewmembers must not participate in scuba diving within a 24-hour period preceding a flight. Nitrogen absorbed into the blood can cause severe physiological problems at altitude.
   g. When an airmen medical examiner removes a flight crewmember from active flight status, a release to fly may be required from an FAA airmen medical examiner approved by the Chief Pilot

3.3.5.7 Medical Leave

Any flight operation personnel who need a non-emergency medical procedure that will require their absence to be more than 3 days shall put their request for time off in writing to the Director of Aviation. The request shall be submitted in a timely manner so that the flight operation can make any necessary schedule arrangements.

3.4.3.9 Sick Leave

Any department personnel needing to meet a doctor's or dentist's appointment shall notify their immediate supervisor or departmental manager as appropriate.

Flight Crewmembers:

FAA medicals will not be considered as a sick day; therefore, you should not plan on an entire day off.

3.4.4 Personnel Duty

It is recognized that proper rest and reasonable duty limits are an important component of safety. Use of fatigue countermeasures is recommended to mitigate risk during longer duty periods.

Flight Crewmembers:

The following standard is established for normal flight crew duty.

a. A maximum duty day of 14.5 hours beginning 1 hour prior to scheduled takeoff time and terminating 30 minutes after landing.
b. A maximum of 10 hours of flight time during any 24-hour period.
c. If overnight, the next day's takeoff should not be scheduled earlier than 11.5 hours after the last landing of the previous day.

Any trip scheduled by authorized company personnel that will exceed a 14.5-hour duty period requires the approval of the Director of Aviation. This decision will be based on available crew rest and consultation with the assigned crew.

Maintenance & Line Personnel:

All maintenance and Line personnel will not be scheduled for duty periods more than 16 hours with 8 hours off duty. All maintenance personnel can discontinue maintenance operations when they are fatigued. Notification is required to the Director of Maintenance or his representative.

3.4.4.1 Flight Crew Rest Requirements

Crew rest is defined as the period between flight duty periods (described above) that allows a crewmember to receive enough uninterrupted rest to safely resume his flying duties. All aircraft crewmembers are expected to manage their personal time to be well rested when they report for work.

Normal procedures are to schedule crewmembers for a minimum of 10 hours of crew rest between normal flight duty periods. However, due to occasional scheduling requirements the minimum 10 hours crew rest period may be reduced. The Director of Aviation may waive these requirements, but only on a case by case basis after considering all factors, including previous and subsequent schedule for the crew involved, crews' willingness to accept, safety, etc.

3.4.4.2 Exceptions to Flight Crew Duty Limitations

Once a trip has commenced, the assigned trip PIC is granted authority to extend the duty period from 14.5 to 16 hours, extend the flight time from 10 to 12 flight hours and reduce the normal crew rest from 10 hours to 8.5 hours when unusual circumstances arise such as aircraft maintenance problems, weather or ATC delays and delays by passengers due to an unintentional extended business meeting or traffic impediments. It is the company's intent to fully support the decision of the assigned trip PIC.

The assigned trip PIC will notify the Director of Aviation as soon as possible (preferably by email) if an extension should go over 16 hours of duty (18 hours international) or 12 hours of Flight time due to contingencies.

3.4.4.3 International Operations

During international operations, if the flight crew is augmented with a third pilot and adequate rest facilities are available; scheduling is authorized to schedule the crew per the following:

a. A maximum of 18 hours of duty beginning 2 hours prior to scheduled takeoff and terminating 1 hour after landing.
b. A maximum of 12 hours aloft
c. A maximum of 8 hours flight deck duty
d. A minimum of 16 hours free of duty following the 18-hour duty period

3.5   Trip Notification

The Director of Aviation will make every effort to make flight crew assignments several days in advance. However, that is not always possible. Final trip details will normally be provided via email as soon as possible. The following procedures are in effect:

a. Trip details and any other trip related information will be sent via email to crewmembers and maintenance. A reply email by all parties should be sent that the information has been received.
b. If there are any questions about the trip, you should request clarification either by email or telephone.
c. If there are any changes to the itinerary or other information concerning the trip, a revised email will alert each crewmember and maintenance. A reply via email shall be sent indicating that the information has been received.

3.6   Flight Records

It is imperative that accurate records be kept of all flight activity to satisfy various business and regulatory requirements.

3.6.1   Flight Documentation

3.6.1.1 Trip Flight Log data

Foreflight Log data is used to document actual flight activity, including flight times, fuel purchased, aircraft expenses, etc.

3.6.2   Record Keeping

The following records will be kept for each flight and retained by the Flight Operations:

- a. Director of Aviation
    - i.   Flight Log   Until Aircraft is sold
    - ii.   Trip Sheet   5 Years
    - iii. Schedules   5 Years
    - iv. Pilot Qualification / Training Records 1 Year
    - v.   Aircraft Operating Expenses 5 Years

- b. Director of Maintenance
    - i.   Deferred or Delayed Item Log 3 Years
    - ii.   Aircraft Flight Log   Until Aircraft is sold
    - iii. Permanent Aircraft Records Until Aircraft is sold

3.7   Currency of References

Flight department employees must always ensure they are using current reference materials and up-to-date procedures. A review of all reference materials used in the flight operations should be conducted on a regularly scheduled basis. The Director of Aviation will designate individuals to complete the reviews.

Flight Crews: the preflight inspection will include a physical check of inflight reference materials to determine if any materials will expire during the trip sequence; provisions will be made for the crew to obtain updated references while away from home station.

4   Operational Control and Flight Planning

4.1   Operational Control System

Operational control means the exercise of authority over the preparation, filing and amendment of a pilot's flight log (or equivalent) and a flight plan in respect of a flight, and the subsequent flight following during the course of the flight until it arrives at its destination.

4.1.1   General Description

The Director of Aviation is the principal contact with the lead passengers and their assistants. The Director of Aviation will ensure that sufficient information regarding a requested trip is received from requesters prior to determining aircraft availability. The process is as follows:

   a.   Receive trip request
   b.   Ensure adequate trip details are listed
   c.   Determine aircraft and flight crew availability
   d.   Coordinate details with the Assigned Trip PIC

4.2   Responsibilities and Authorities

No pilot will accept an aircraft for flight that has not been released by the maintenance department. The operational control of a flight is delegated to the Assigned PIC. A flight release will be deemed to have been given when the Assigned PIC has determined that:

   a.   The flight may be conducted in accordance with FAA regulations and standards.
   b.   The validity of all required licenses, permits, certificates, has been verified and the required equipment, documents and manuals are on board the aircraft.

Aeronautical charts	Aircraft Weight/Balance
Aeronautical Information Publications	MNPS/RVSM/RNP Letters of Authorization
Aircraft Certificate of Airworthiness	Fuel Credit Cards
Aircraft Certificate of Registration	Insurance Certificates
Aircraft Flight Manual	Letter of EU Registration
Aircraft Minimum Equipment List	Flight Operations Manual
Aircraft Noise Certification	Overflight Waivers
Intercept Procedures	Radio Telephone License or Permit
Checklists	Flashlight
Discrepancy/MEL Folders	Passenger Briefing Cards

   c.   All required aircraft maintenance work has been completed, the aircraft Certificate of Airworthiness is valid and sufficient time remains on the aircraft before the next required maintenance, to complete the trip for which the aircraft is being released.
   d.   The meteorological conditions are such that the flight can be conducted safely and in accordance with the FARs.

4.2.1   International Documentation

For international flights, the following items shall also be carried on board the aircraft:

    a. General Declaration forms
    b. Custom forms
    c. Copies of aircraft insurance certificate, pilot licenses, crew passports, Certificate of Airworthiness, and Aircraft Registration
    d. Sufficient cash to meet the anticipated demands of the trip
    e. E-APIS

    Note   Crew passports shall be renewed no later than 6 months prior to passport expiration date.

4.3   Flight Planning

Flight planning is the responsibility of the Assigned Trip PIC. All available weather and operational information will be used to plan a route that will provide the appropriate balance of passenger comfort and economy of operation. The route of flight, cruising speed and altitude must be carefully chosen to afford maximum operating efficiency of the aircraft. In addition, pilots will use all approved techniques to conserve fuel, and will "tanker" fuel when it is operationally prudent.

4.3.1   Weather Briefings

Flight crews will use all available information to receive accurate and timely weather information for the flight, including paper or electronic copies of forecasts for departure, enroute and arrival conditions. The PIC will receive updated weather for the destination and alternates, as he deems necessary. Flight crews will obtain a thorough weather briefing prior to each flight. Company pilots shall use one of the following weather briefing agencies before each flight:

    a. National Weather Service
    b. Flightplan.com
    f. ForeFlight
    g. Other approved aviation weather service

4.3.1.1 Operating Weather Minima

The following guidance is provided for the operation of Charter Express' aircraft. Minimum altitudes for IFR are provided in the Jeppesen/NOS electronic charts.

    a. VFR: The aircraft shall be operated with visual reference to the surface using VFR charts. A VFR flight shall not be commenced unless current weather reports and forecasts indicate that weather conditions along the route and at destination will be such that the flight can be conducted in compliance with VFR.
    b. IFR: The weather minima used for IFR departures and approaches shall be those specified in the standard instrument approach procedures used by Charter Express.

4.3.2   Flight Planning & Filing

Flights will normally be flown using an IFR flight plan. IFR flight plans should be filed with ATC and obtained for all flight operations carrying passengers. For purposes of this paragraph, "IFR Tower Enroute Control" shall constitute an approved IFR Flight Plan. For crew training purposes, aircraft may be operated VFR in the local training area (50 nautical mile radius from the airport of departure.)

At the discretion of the Assigned Trip PIC for the purpose of aircraft repositioning VFR; the maximum distance from the departure airport to the arrival airport shall not exceed 50 NM. The flight may be accomplished by using current and appropriate VFR sectionals or the Electronic Sectional Chart installed on the pilot's EFB to determine, i.e. minimum safe altitudes, obstacle clearances, and special use airspace. The weather will be no less than basic VFR minimums as per FAR 91.155. It is the policy of Flight Department for the crew to make all attempts to operate on an IFR flight plan, and only operate under VFR on reposition and maintenance flights without passengers on board.

Crews should consider the safety of the flight over convenience of the flight! Prior to departure from home base, the Assigned Trip PIC should generate a flight plan and file it for each leg of the trip to be flown. Computer generated ForeFlight flight plans are preferred. These flight plans may be used in the event more current information does not become available at intermediate destinations. For International Operations, a company approved service will provide flight plans.

4.3.2.1 VFR Airport Departure

In circumstances where flight crews have communications difficulty and cannot receive an IFR clearance on the ground prior to departure, the aircraft may depart VFR if basic VFR minimums as per FAR 91.155 are maintained until receiving an IFR clearance. At all times in the above circumstance special attention must be given to the minimum safe altitudes for direction of departure. This is especially true at night and/or in cases when there is a cloud ceiling above the departure airport area. Flight plans should be filed not less than 30 minutes before scheduled departure time.

   a. IFR flight plans will be filed for all passenger and special flights, and for other operations, whenever possible.
   b. VFR flight plans may be used at the Assigned Trip PIC's discretion for local-area training or maintenance test flights, when VFR conditions are better suited for the mission.

4.3.3   Flight-Planning Information

Charter Express crew members will maintain the following information for flight planning reference:

   a. Federal Aviation Regulations
   b. Aeronautical Information Manual
   c. ICAO Regulations
   d. International Flight Information Manual
   e. Charter Express Flight Operations Manual
   f. Aircraft Flight Manual
   g. Training Center Manual for assigned aircraft
   h. Enroute charts
   i. Instrument Approach Plates
   j. Airport and FBO directories

4.3.1   Weather Briefings

4.3.3.1 IFR Flight

A flight to be conducted in accordance with the instrument flight rules shall not be commenced unless the available information indicates that conditions, at the airport of intended landing will, at the estimated time of arrival, be at or above the airport operating minima.

4.3.3.2 Takeoff Alternate

A takeoff alternate is required anytime the departure airport is below published landing minimums. No takeoff will be made under these circumstances unless there is a suitable alternate airport within one hour's flying time at cruise speed with one engine inoperative. The weather forecast for the time of arrival at the takeoff alternate must be at or above the following minimums:

   a.   For precision approaches, ceiling of 600 feet and visibility of 2 miles.
   b.   For non-precision approaches, ceiling of 800 feet and visibility of 2 miles.
   c.   The published nonstandard alternate minimums for the airport.

In instances where departure airport weather is reported above takeoff minimums, but below the applicable approach weather minimums for the runway in use, a takeoff alternate airport must be available within one hour of flight time that meets the weather requirements of FAR 91.169 c(1)(2), and the minimums published in the alternate airport section of the Jeppesen/NOS approach charts.

4.3.3.3 When No Destination Alternate Airport is required

A destination airport does not require an alternate airport in accordance with instrument flight rules when the following conditions exist:

   a.   A standard instrument approach procedure is prescribed for the airport of intended landing.
   b.   Available current meteorological forecast from one hour before to one hour after the estimated time of arrival, a cloud base of at least 2,000 feet above the airport elevation and visibility of at least 3 statute miles.

4.3.3.4 Destination Alternate Airport

A destination alternate is required for all flights to foreign destinations. An alternate should also be listed when a destination airport has only one usable runway with an operable instrument approach at the estimated time of arrival. In addition to the following forecast meteorological conditions at the estimated time of arrival, the airport must meet servicing and performance standards for Charter Express' aircraft.

   a.   For airports with a precision approach procedure, a ceiling of 600 feet and visibility 2 statute miles.
   b.   For airports with a non-precision approach procedure, a ceiling 800 feet and visibility 2 statute miles.
   c.   The published nonstandard alternate minimums for the airport.
   d.   Any required alternate airport must have an approved instrument approach procedure other than GPS that is anticipated to be operational and available at the estimated time of arrival, and which the aircraft is equipped to fly.

4.3.4   Fuel Requirements

4.3.4.1 Normal Fuel Planning

The assigned trip PIC shall ensure that there is sufficient fuel onboard the aircraft to fly to the destination airport, via the planned route taking into account forecast wind conditions, altitude restrictions, and known or anticipated departure or air traffic delays and land with the following minimum fuel reserves.

Aircraft	Fuel
900B	3000 lbs.
CJ4 / M2	1000/ 800 lbs.

When meteorological conditions warrant, sufficient fuel to:

   a.   Execute one instrument approach and a missed approach at the destination airport,
   b.   Proceed to the filed alternate airport via routing and altitude that can reasonably be expected from ATC,
   c.   Execute one approach and landing and arrive with not less than (2,000 lbs Falcon 900 / 600 lbs CJ4 – M2) of fuel remaining.

4.3.4.2 Exceptions to Normal Fuel Planning

In cases where normal fuel reserves cannot be met, a reduced fuel reserve of 2,500 lbs. in the 900B or 600 lbs. in the CJ4 / M2 may be requested with the concurrence of both pilots. Once a flight has commenced, and unanticipated wind, altitude, holding/ATC delays, caused the aircraft to land with less than the planned minimum fuel reserve.

4.3.4.3 Minimum Fuel Reserves

Pilots shall advise ATC of a minimum fuel state by declaring MINIMUM FUEL when, having committed to land at a specific airport, the pilot calculates that any change to the existing clearance to that airport may result in landing with less than 2,000 lbs on the 900B or 600 lbs on the CJ4 / M2.

The flight crew shall declare a fuel emergency by broadcasting MAYDAY, MAYDAY, MAYDAY, FUEL, when the calculated usable fuel predicted to be available upon landing at the nearest airport where a safe landing can be made is less than 1,500 lbs Falcon 900 or 500 lbs CJ4/M2.

4.3.5   Oxygen Supply Requirements

Charter Express Flight Operations may not operate an aircraft unless the following oxygen supply requirements are met:

   a.   At cabin pressure altitudes above 10,000 feet up to and including 13,000 feet, the required minimum flight crew is provided with and uses supplemental oxygen for that part of the flight at those altitudes that is of more than 30 minutes' duration.
   b.   At cabin pressure altitudes above 13,000 feet each person on board the aircraft is provided and uses supplemental oxygen during the entire flight time at those altitudes; and
   c.   The pilot at the flight controls of an aircraft shall use an oxygen mask, if the aircraft is not equipped with quick-donning oxygen masks, and is operated at or above FL 250.

In addition, the requirements to operate a pressurized aircraft are as follows:

a. At flight altitudes above Flight Level 250 at least a 10-minute supply of supplemental oxygen is available for each occupant of the aircraft for use if a descent is necessitated by loss of cabin pressurization; and

b. At flight altitudes above Flight Level 410 one pilot at the controls of the airplane must wear and use an oxygen mask that is secured and sealed and that either supplies oxygen at all times or automatically supplies oxygen whenever the cabin pressure altitude of the airplane exceeds 14,000 feet.

A flight will not be commenced unless enough stored oxygen is carried to supply all crewmembers and passengers, as is appropriate to the circumstances of the flight.

4.3.6   Takeoff and Landing Distance Requirements

All operations will be conducted in accordance with AFM limitations and aircraft performance charts. Appropriate AFM landing field length adjustments for wet, snow covered, or icy runways must be observed.

4.3.6.1 Runway Requirement

Charter Express' aircraft will not be **<u>scheduled</u>** to operate to or from an airport where the longest hard-surface runway available is less than 5000' in length and 75 feet of width. If the longest runway available at the airport of intended landing is less than 5000' in length and 75' in width then the Director of Aviation may waive these requirements, but only on a case-by-case basis after considering all factors, including weather conditions for the day, landing weight, experience of the crew, etc.

Due to possible operational requirements at the intended airport of use such as changes in weather, winds and runway closures it may be operationally sound for the crew to utilize an alternate runway at that airport for takeoff and landing which may be shorter than 5000' in length. This is authorized if the crew is in compliance with 4.3.7.3 and 5.6.15 of this manual. The PIC shall consider such alternatives during the pre-flight phase and discuss any possible solutions.

4.3.6.2 Runway Conditions

a. Takeoff: No takeoff will be attempted from a runway that is covered with water, wet snow, or slush, exceeding the amounts specified in the Aircraft Flight Manual.

b. Braking Action: No operation will be conducted on a runway if braking action is reported as poor or "Nil". Domestic FICON reports poor = 1, Nil = 0.

The PIC will use full runway length unless an intersection takeoff can be made on a suitable section of the runway, and all runway limitations for takeoff are followed.

4.3.6.3 Takeoff

No pilot will take off a Charter Express aircraft unless the runway for takeoff has a length equal to or greater than the Balance Field Length specified in the Airplane Flight Manual for the particular aircraft weight and configuration, the runway elevation and surface conditions, and the temperature and wind conditions.

4.3.6.4 Runway Lighting

During hours of darkness, no aircraft will be operated into or out of an airport without adequate lighting.

4.3.7 Reduced Vertical Separation Minima (RVSM)

4.3.7.1 RVSM Planning

a. Verify that the aircraft is approved for RVSM operations.
b. Annotate the flight plan to be filed with the air traffic service provider to show that the aircraft and operator are approved for RVSM operations.
c. Check minimum equipment requirements pertaining to height- keeping systems; and
d. If required for the specific aircraft group, account for any aircraft operating restrictions related to RVSM airworthiness approval.

4.3.8 Special Flights

Coordination with the FAA will be required whenever the Certificate of Airworthiness is not in force (e.g. overdue inspection, airplane damage, un-serviceability, etc.). Procedures are detailed in the Maintenance chapter of this manual. Essential crew only (no passengers) shall be carried on Special Flights. The flight shall be conducted in accordance with all conditions specified by the FAA.

4.4   Aircraft Weight and Balance

The Assigned Trip PIC is responsible for the proper loading, including load security, weight, and weight distribution. All loadings (including fuel) shall be distributed using the current weight and balance calculation. The load shall be distributed to ensure that the center of gravity will remain within the prescribed limits throughout the entire flight. Use of EFB Pro and/ or ForeFlight Performance for computations is highly recommended.

Aircraft takeoff and landing weights shall not exceed the maximum weights specified in the approved Aircraft Flight Manual and that which would preclude the aircraft meeting performance requirements for takeoff, enroute, and landing at any airport used.

4.5   Airworthiness

In accordance with FAR 91.7, it is the responsibility of the Assigned Trip PIC to ensure that the aircraft Certificate of Airworthiness is valid before commencing a flight. The Certificate of Airworthiness of an aircraft is not valid unless the equipment, systems and instruments prescribed in the applicable airworthiness standard and all required equipment is functioning correctly.

The airworthiness of an aircraft is also not valid if the aircraft has any malfunction or discrepancy, unless the details of the malfunction or discrepancy are recorded and unmistakable warning is given at the flight crew station by removing, placarding, or tagging the affected item. In the case of deferred discrepancies, the Assigned Trip PIC shall assure himself that the affected equipment will still allow the flight to be completed safely.

With inoperative equipment, the assigned trip PIC shall exercise his judgment and use available resources in determining the airworthiness of the aircraft. Flight operation maintenance personnel should be consulted with the inoperative equipment problems and seek corrective procedures. In making the decision to dispatch an aircraft with inoperative equipment, the Minimum Equipment List (MEL) will be referenced by the assigned trip PIC to determine whether the aircraft can be dispatched. If the aircraft can be dispatched in accordance with the approved MEL, consideration should be given to the following items:

a. The safety of passengers and property
b. The function of the equipment as it relates to the proposed flight
c. The cause of the failure and its possible effect on other aircraft systems
d. Departure, enroute, and arrival weather
e. Departure and destination airport facilities
f. Departure and destination terrain

If a trip cancels due to maintenance every effort will be made to assist passengers in securing alternate forms of transportation.

4.5.1 MEL Deferral Procedures

Deferral procedures are specified in each MMEL approved for the aircraft and are detailed in the Maintenance section of this manual. Flight crews shall ensure that all "Operations" and "Maintenance" procedures are followed.

4.6 Abnormality Report Email

The Abnormality Report Email serves two purposes. It shall be completed and submitted to the Director of Aviation whenever a written report is or may be requested by the FAA, NTSB, or other agency. It will serve to document any incidents or events. It is the responsibility of the Assigned Trip PIC to submit an Abnormality Report email within 48 hours of return to home base under the circumstances as noted below.

The Abnormality Report email will be submitted in the following format:

TO	Bill Goff billgoff23@yahoo.com
Subject	Abnormality Report
Message Body	Information detailing dates, Times, persons, circumstances, and Action taken.

Abnormality Reports are confidential, the contents of which will be held in strict confidence by the Director of Aviation unless permission is obtained from the author to use information contained.

5   Standard Operating Procedures

5.1   General

Standard Operating Practices (SOP's) have been developed for Charter Express. These SOP's should help clarify the duties required of each Charter Express crewmember. Standardized procedures enhance safety and efficiency by establishing performance targets and effective crew communication techniques, which are the most important aspects of effective Crew Resource Management (CRM). A strong emphasis has been placed on flight crew standardization, cockpit awareness, situational awareness, crew communications and aircraft levels of automation. The established procedures have been divided into the following five (5) areas:

a.   General Operations
b.   Checklist Management
c.   FMS/Auto-pilot/Flight Director/Avionics Management
d.   Takeoff and Approach Briefings
e.   Standard Call Outs

Each area will define the actions expected from each crewmember under normal ground and flight operations. This should facilitate and improve communications among crewmembers and ensure that one crewmember is always responsible for aircraft control and that both crewmembers are aware of both lateral and vertical navigation guidance of the aircraft during all phases of flight.

5.1.1   PIC's Authority

The PIC assigned to a flight, shall have exclusive and final authority in accordance with FAR 91.3 as to whether or not the aircraft shall proceed to any destination, or undertake any flight. The PIC shall not be overruled by any passenger or executive, nor disciplined for well-considered decisions having to do with weather, mechanical condition of the airplane or other hazards. He should utilize all available resources in making decisions related to flight. The other crewmembers should be brought into all discussions concerning the operation of the aircraft as it relates to weather, mechanical condition or other hazards. The PIC has the final authority on all decisions relating to the operation of the aircraft.

5.1.2   Crew Resource Management (CRM)

Experience has shown that adherence to SOP's helps to enhance individual and crew cockpit situational awareness and will allow a higher performance level to be attained. Our objective is for standards to be agreed upon prior to flight and then adhered to, such that maximum crew performance is achieved and maintained; effective CRM dictates that both pilots be made aware of any actions taken by the other pilot.

The following is a listing of performance standards that we are striving to achieve.

5.1.2.1 Situational Awareness

a. Accomplishes appropriate pre-flight planning
b. Sets and monitors targets
c. Stays ahead of the aircraft by preparing for expected or contingency situations
d. Monitors weather, aircraft systems, instruments, and ATC communications
e. Shares relevant information with the rest of the crew
f. Uses advocacy / inquiry to maintain / regain situational awareness
g. Recognizes error chain clues and takes action to break links in the chain
h. Communicates objectives and gains agreement when appropriate
i. Uses effective listening techniques to maintain / regain situational awareness

5.1.2.2 Stress

a. Recognizes symptoms of stress in self and others
b. Maintains composure, calmness, and rational decision making under stress
c. Adaptable to stressful situations / personalities
d. Uses stress management techniques to reduce effects of stress
e. Maintains open, clear lines of communication when under stress

5.1.2.3 Communication

a. Establishes open environment for interactive communications
b. Conducts adequate briefings to convey required information
c. Recognizes and works to overcome barriers to communications
d. Operational decisions are clearly stated to other crewmembers and acknowledged
e. Crewmembers are encouraged to state their own ideas, opinions, and recommendations
f. Crewmembers are encouraged to ask questions regarding crew actions
g. Assignment of blame is avoided. Focuses on WHAT is right, not WHO is right
h. Keeps feedback loop active until operational goal / decision is achieved
i. Conducts debriefings to correct substandard / inappropriate performance and to reinforce desired performance

5.1.2.4 Synergy and Crew Concept

a. Ensures that group climate is appropriate to operational situation
b. Coordinates flight crew activities to achieve optimum performance
c. Uses effective team building techniques
d. Demonstrates effective leadership and motivation techniques
e. Uses all available resources
f. Adapt leadership style to meet operational and human requirements

5.1.2.5 Workload Management

a. Communicates crew duties and receives acknowledgement
b. Sets priorities for crew activities
c. Recognizes and reports overloads in self and in others
d. Eliminates distractions in high workload situations
e. Maintains receptive attitude during high workload situations
f. Uses other crewmember
g. Avoids being a "one-man show"

5.1.2.6 Decision Making

a. Anticipates problems in advance
b. Uses SOPs in decision making process
c. Seeks information from all available resources when appropriate
d. Avoids biasing source of information
e. Considers and weighs impact of alternatives
f. Selects appropriate courses of action in a timely manner
g. Evaluates outcome and adjusts / reprioritizes
h. Recognizes stress factors when making decisions and adjusts accordingly
i. Avoids making a decision and then going in search of facts that support it

5.1.2.7 Advanced/Automated Cockpits

a. Follows automation related SOPs
b. Specifies pilot and copilot duties and responsibilities with regard to automation
c. Verbalizes and acknowledges entries and changes in flight operation
d. Verifies status and programming of automation
e. Selects appropriate levels of automation
f. Programs automation well in advance of maneuvers

5.1.3 Transfer of Aircraft Control

One pilot shall always be dedicated exclusively to controlling the aircraft. When aircraft control is transferred, the pilot assuming control shall state, "I have controls". The pilot relinquishing control shall confirm. "You have the controls". During abnormal or emergency situations, the Pilot Flying (PF) shall always designate which pilot is to control the aircraft and which pilot will attend to the problem.

5.1.4 Minimum Aircraft Crew

The Trip PIC for each flight shall be responsible for all aspects of the flight. The other flight crewmember will be designated as the SIC and will perform the duties as assigned by the PIC and in this manual. The term, "Pilot Flying" (PF) and "Pilot not Flying" (PNF) refer to the individual actually controlling the aircraft at the time an action is required and the individual not controlling the aircraft at a specific point, respectively.

5.1.4.1 Crew Complement

Company aircraft shall be operated with properly rated and current assigned trip PIC and assigned trip SIC (If required) occupying these flight crewmember positions. In the event that additional flight crewmembers are carried for relief, they must also be rated and current with respect to the intended crew position.

Indications of substandard performance levels or any indication of a negative effect on the safety, quality of flight operations or fellow flight operation personnel will not be acceptable and will receive particular scrutiny. The Director of Aviation will conduct this review.

5.1.5   Flight Crew Qualifications

As part of their technical job qualifications, all pilots are expected to be knowledgeable of the provisions of the Federal Air Regulations (FARs) and the International Civil Aviation Organization (ICAO), as well as the procedures outlined in the Aeronautical Information Manual (AIM) and the International Flight Information Manual (IFIM). To the extent possible, this section will not repeat information contained in those regulations and procedural documents.

It is the responsibility of each individual to ensure that all required licenses, certificates and ratings are in force before acting as crew on Charter Express aircraft. Any suspected or known medical condition that might affect an assignment is to be brought to the attention of the Director of Aviation immediately.

All flight crewmembers shall meet the training and competency requirements specified in Chapter 7 (and or insurance requirements) prior to acting as flight crew.

5.1.6   Required Documents and Equipment

The following items shall be carried by each flight crewmember during all flight operations:

   a. Current FAA airmen certificate
   b. Current FAA medical certificate
   c. For international trips, valid passport, plus applicable visas or travel cards
   d. A picture ID, i.e. passport and driver's license

5.1.7   Checklists

The consistent and standardized use of checklists will assist crewmembers in completing their tasks in a safe and efficient manner and reduce the possibility of missing a required action. Checklists will be used by crewmembers on all flights to accomplish normal, abnormal and emergency operating procedures.

5.1.8   Background on Checklist Philosophy and Design

The major function of the checklist is to ensure that the crew will properly configure the aircraft for flight, and maintain this level of accuracy throughout the flight. Generally, the checklist is intended to achieve the following nine objectives:

a. Aid the pilot in recalling the process of configuring the aircraft.
b. Provide a standard foundation for verifying aircraft configuration that will defeat any reduction in the flight crew's psychological and physical condition.
c. Provide convenient sequences for motor movements and eye fixations along the cockpit panels.
d. Provide a sequential framework to meet internal and external cockpit operational requirements.
e. Allow mutual supervision (cross checking) among crewmembers.
f. Enhance a team (crew) concept for configuring the aircraft by keeping all crewmembers "in the loop".
g. Dictate the duties of each crewmember in order to facilitate optimum crew coordination as well as logical distribution of cockpit workload.
h. Serve as a quality control tool by flight department management with respect to flight crew evaluations.
i. Promote a positive "attitude" toward the use of the checklist.

One of the most important aspects of good cockpit management is the proper utilization of the checklist. The success attained by flight crews in the execution of normal as well as abnormal and emergency procedures is attributable to the reliability of the "Challenge and Response" checklist method. Another factor that has an effect on checklist performance is the relationship between the speed of performing the checklist and the accuracy of the check. Research has shown there is a very definite relationship between speed of performing the checklist and the error-rate. Therefore, if the pilot scans the appropriate panels rapidly because of time pressure, the accuracy of his perception will suffer and the probability of error will increase. This can be called the Speed / Accuracy Tradeoff.

As far as checklist design is concerned, by using a top to bottom order of checking panels and items, the design of the checklist can accommodate population stereotype of order and sequence (top to bottom is a common arrangement), as well as some bio-mechanical considerations (it is less fatiguing to move the arms and the head from above to below than vice- versa).

The use of appropriate flow patterns in conducting the checklist procedure can aid the process in the following ways:

a. Standardization of the checklist flow among pilots
b. Making the checklist sequence run parallel to the initial set up flow- patterns (which are done before "running" the checklist), and thereby simplifying the learning process and the daily use of the checklist process
c. Making the checklist actions logical and consistent (as opposed to intermittent) in the motor movement of the head, arms and hands

In addition to visual verification of the check item, motor movement such as touching controls and displays ("muscle memory" as some name it) is also an effective enhancement for the verification process. The use of the hand to guide the eye while using the flow pattern can substantially aid the checklist procedure by combining the mental sequencing process with motor movements. Furthermore, the use of the hand and finger to direct the eye to an alphanumeric display or control can aid in fixating the eyes on the specific item and prevent the eyes from wandering away from that indicator.

Some of the important lessons learned during past aviation history is for the pilot flying (PF) to call for the task checklist at the appropriate time and that very critical items should be completed first on the task checklist, and not last.

"**CRITICAL ITEMS**" means any aircraft configuration setting or change that if not set correctly would adversely affect the aircraft operation. These items will appear in larger BOLD print on the checklist and must be verified by BOTH pilots before continuing the checklist.

 "**CHALLENGE RESPONSE**" Items circled will be a CHALLENGE from the PNF with a proper RESPONSE from the pilot flying (PF).

Any Checklist item that refers to equipment that may not be installed on all aircraft will be indicated by the checklist item appearing in *italics*. Depending on the phase of flight, the checklist will either be a "**Do List**" or a "**Flow Verification List**" which is described later in this manual.

All checklist items should be done calmly and deliberately and at a pace where all items have been completed and verified as correct. The checklist should be read in a discernible, clear voice and the responses should be equally discernible and clear, answered as listed in the checklists or as required by standard operating practices. When an item being checked (such as hydraulic, cabin pressure, etc.) is not in the correct position it will be brought to the attention of the pilot flying (PF).

The checklist will only be started after a request from the pilot flying (PF). The pilot not flying (PNF) is not to initiate a checklist, but he should remind the pilot flying (PF) if he feels the request for it is overdue. The appropriate section will be called out, for example "After Takeoff Checklist", after completion, the PNF will reply "After Takeoff Checklist - Complete".

It is the intent to standardize flight deck procedures between aircraft types as much as practical. It is further recognized that type standardization may not always be practical; however, it is our intent to minimize the operational differences among types while maintaining the highest level of safety and effectiveness during the operation of our aircraft. Our company checklist will be used for normal flight operations. Bound or Electronic copies of all normal, abnormal, and emergency checklists are also kept aboard each aircraft for crewmember reference as the need arises for their use.

Company checklists will contain, in abbreviated form, all the information required by the **TRAINED FLIGHT CREW** to operate the aircraft safely in normal operations. The checklist will contain the minimum cues required for the trained crewmember to verify that the appropriate actions have been completed. The checklists will be organized by the following operational segments:

• BEFORE START – POWER OFF	Flow Verification	
• BEFORE START – POWER ON		
• POWERING AIRCRAFT BY OTHER THAN BATTERIES		
• QUICK TURN		
• BEFORE ENGINE START	Do List	
• BEFORE TAXI		
• TAXI		
• BEFORE TAKEOFF		

• AFTER TAKEOFF	Flow Verification	
• 18000 / CRUISE / STATION		
• DESCENT		
• 18000 DESCENT / APPROACH		
• BEFORE LANDING		
• AFTER LANDING		
• PARKING	Do List	
• SHUTDOWN		

5.1.9   Checklist Methods

The two main methods for conducting company checklist are as follows:

    a. Do List
    b. Flow Verification List

There is no absolute boundary for each method, and combinations of these will be employed to meet the needs of our flight department. The "Do List" will be the most dominant method used while the aircraft is on the ground and the "Flow Verification List" will be the most dominant method used while airborne.

Checklist Conduct:

The process of conducting the checklist is divided into four steps:

    a. Checklist initiation
    b. Completion of "Do List" or "Flow Verification List"
    c. Challenges and responses
    d. Checklist completion

A description for each step is as follows:

CHECKLIST INITATION

The initiation of the checklist is the responsibility of the pilot flying (PF). When initiating the checklist, consideration must always be given to the various influences that could interrupt or otherwise induce errors into the checking procedure. These influences might include changes in ATC clearances, routings or other ATC communications, abnormal or emergency situations, or passenger requests / distractions. Checklist initiation provides a primary means of task pacing and crew management. The pilot not flying (PNF) is not to initiate a checklist, but he should remind the pilot flying if he feels the request for it is overdue.

DO LIST

In this method the checklist is used to lead and direct the crewmember in configuring the aircraft using a step-by-step approach. Using this method an item is read and then accomplished. All "DO LIST" checklist items will be by reference to (reading) the checklist. After the checklist is initiated the pilot not flying (PNF) will reference the checklist and accomplish each item in a step-by-step procedure. He will call out the item being accomplished and then give the proper response if it is his response. When he comes to an item that requires a RESPONSE from the pilot flying (PF), he will call out the CHALLENGE and wait for the PROPER RESPONSE. When all items on that checklist are completed he will announce "_____ CHECKLIST COMPLETE".

FLOW VERIFICATION LIST

In a FLOW VERIFICATION LIST, these items are completed prior to the checklist being referenced. Since most of the airborne checks are completed in this manner the pilot flying (PF) will call for the appropriate checklist to be initiated and the pilot not flying (PNF) will complete the checklist by reference to the proper flow. **As the items are checked, he will call out the item being checked and respond with the proper response.** When he comes to an item that requires a RESPONSE from the pilot flying (PF), (designated by an asterisk *) he will call out the CHALLENGE and wait for the PROPER RESPONSE. When all items on that checklist are completed he will pick up the checklist and review the items to make sure nothing was omitted and then respond by announcing " CHECKLIST COMPLETE".

CHALLENGES AND RESPONSES

Circled numbers next to each checklist item that needs to be a CHALLENGE with a RESPONSE from the other pilot. "Challenge Response" means that the pilot not flying (PNF) will challenge the pilot flying (PF) who will reply with the correct response.

CHECKLIST COMPLETION

The final item (which is not printed on the checklist) to be accomplished on each phase of the checklist will be "_____ CHECKLIST COMPLETE". This call will be made by the pilot not flying (PNF) when all items on that checklist have been completed. Occasionally, it may become necessary to stop the progress of a particular checklist to accomplish other tasks. If any item cannot be completed, the checklist must be stopped at that item until it can be completed. Checklist items cannot be skipped. The checklist may then be restarted at an appropriate time at that item. IF ANY DOUBT EXISTS, THE ENTIRE CHECKLIST SEGMENT WILL BE RE-ACCOMPLISHED. In a few instances planned checklists "lines" are provided as a planned hold. In these instances, the pilot flying (PF) may request "_____ checklist to the line". This will serve as an intermediate completion point. The remaining items will be called for and the checklist completed at the appropriate time.

5.1.9.1 System Operations Applying to Company Aircraft.

a. If icing warrant, when lined up for takeoff, set Pitot Heat On and wait until TAT reading is above 0°C before takeoff power is set. DO NOT leave Pitot On if takeoff is delayed.

b. If visible moisture is present, or the ceiling is below 2,000 feet, and the outside air temperature is below +10 degrees C, the engine anti-ice system will be turned on prior to takeoff.

c. During icing conditions on the ground, it may be necessary to turn the engine anti-ice ON temporarily prior to starting that engine. The temperature probes might be frozen which could cause an engine start malfunction.

d. If the oxygen bottle is shut off, no flow will be present at the masks. However, the existing system pressure will be indicated on the O2 quantity gauge.

e. Aircraft APU will be started after each landing.

f. After each landing the flaps will be fully retracted, With the exception of currency flights where setting at takeoff position is appropriate.

g. Switching the batteries "ON" should only be done to check fuel quantity or to expeditiously start the APU

h. When placing the bus-tie switch to flight normal a slight difference in amperage should be observed between the left and right buses.

i. Starting the engines will be performed using the following flow:

    i. Boost Pump-ON (Light Out)

    ii. Generators-ON

    iii. Bus-Tie Switch-TIED

    iv. Computers-AUTO

    v. Start Push Button-PUSH (1 second max)

5.1.10 Pilot Incapacitation

Flight crews will use the "two communications" rule as a means of detecting and responding to suspected subtle incapacitation. Any time the pilot flying the aircraft does not respond appropriately to two communications associated with a significant deviation from a standard operating procedure or a standard flight profile, the Pilot Not Flying will announce "I have control" and assume command of the flight.

As a guideline, the deviation callouts listed in 5.1.12.1 may be useful in detecting subtle incapacitation. Below 300' the Flight Crew should adopt a one-communication rule for no response/deviation. Flight crews must understand the necessity for the communication rules to avoid difficulties in the transfer of command responsibilities, and that compliance is MANDATORY.

5.1.10.1   Deviation Callouts for All Approaches

If any of the following parameters are exceeded, the PNF will make the corresponding callout and verify that the pilot flying takes the appropriate corrective action. The pilot flying will acknowledge the callout verbally or with immediate corrective action.

Parameter	Limit	Callout
Airspeed	• Target speed minus 5 knots • Target speed plus 10 knots • Anytime below V_{ref}	"Airspeed"
Localizer	± 1 DOT	"Localizer"
Glideslope	± 1 DOT	"Glideslope"
Sink Rate	• 2000 fpm (when below 2000') • 1000 fpm (when below 1000') • Significant change when below 50'	"Sink Rate"

5.1.11 Use of Aircraft Lighting

Unless visibility is hindered due to meteorological conditions, aircraft lights should normally be set as follows:

a. Navigation lights on at all times when aircraft is powered
b. Beacon light on at engine start until engine shutdown
c. Taxi light should be used whenever the aircraft is in motion. Give consideration to avoid blinding other crew or line personnel at night. After Takeoff, once the gear is selected up, the PNF will select taxi light "OFF". When landing clearance is received, the PNF will select taxi light "ON".
d. Landing / Pulse lights on (after takeoff clearance is received). Pulse lights are to be used below FL180 with the exception for takeoff and landing at night.
e. Strobe Lights on when crossing an active/open runway, prior to taking the active runway for departure and remain on until clearing the landing runway.
f. Wing lights should be used when crossing an active/open runway, prior to taking the active runway for departure, remain on below FL180 until clearing the landing runway.

5.2   Preflight

5.2.1 Crew Reporting Time

The CREW is responsible for the aircraft being ready to depart at least 30 minutes prior to scheduled departure for domestic trips and one hour prior to international trips. Therefore, the minimum reporting time for a domestic trip is one hour prior to scheduled takeoff and two hours prior to a scheduled takeoff for an international trip.

When schedules cause difficulty in operating within maximum duty times, the assigned trip PIC is granted the authority to reduce the reporting time to accommodate duty time requirements, but only if other arrangements cannot be made and only to the extent that safety is not degraded. This might include preflight planning the previous day or having other flight operation crewmembers make necessary flight preparations. The Director of Aviation shall be responsible for administering and monitoring duty limits and rests requirements so that flight crewmembers receive adequate rest and flight safety is maintained.

5.2.2   Crew Briefing

Prior to departure, the PIC is responsible for conducting a crew briefing. This briefing may occur before or after completing safety checks and other cabin inspections. Items to be reviewed include but are not limited to the following:

a.   Sterile flight deck
b.   Ground and flight delays
c.   Unusual situations (e.g., MEL items)
d.   Review Aircraft Discrepancy Folders
e.   Enroute time
f.   Enroute and destination weather
g.   Destination city, airport and FBO
h.   Passenger considerations will be discussed
i.   Operational Risk Awareness

5.2.3   Crew Duties

5.2.3.1 Assigned Trip PIC

The Assigned Trip PIC is directly responsible for the safe and orderly conduct of the flight and is the final authority as to the operation of the aircraft.

Duties and responsibilities include but are not limited to:

a.   File the required flight plans and enter requested fuel load in BART Copilot no later than 3 hours prior to the scheduled departure with the exception for short notice (pop up) trips.
b.   Duties and responsibilities as described in 1.2.6.3 of this manual
c.   Encouraging and using effective CRM in the management of the crew.
d.   Conduct crew Briefing according to 5.2.2 of this chapter.
e.   Placing/Coordinating catering orders according to passenger profiles or specific trip request, including crew meals
f.   Supervision of crewmembers throughout the flight including flight preparation and completion of flight documentation.
g.   Development of crewmembers in techniques, methods, and day-to-day activities in accordance with Charter Express Policy and Standard Operating Procedures.
h.   Monitoring the crew's professional behavior.
i.   Meeting the passengers as they arrive for departure, confirm destination, ground transportation requirements and escort to/from the aircraft as needed.
j.   Communicating with passengers any weather, Air Traffic or Maintenance delays and Airport or FBO changes.
k.   Coordinate maintenance service and repairs when away from home base with the Director of Maintenance or his designee
l.   Assure that the Director of Maintenance or his designee is informed of any aircraft discrepancies.
m.   Ensure required paperwork (including processing of receipts, etc.) is completed properly.
n.   Conduct any required passenger briefing
o.   Check Discrepancy and MEL Folders

While the completion of some of these items may, at the discretion of the assigned trip PIC, be delegated to the assigned trip SIC, the ultimate responsibility for the execution of each remains with the assigned trip PIC. The assigned trip PIC is responsible for employing command authority and professional skill to ensure the safe and successful completion of all flight operations.

5.2.3.2 Assigned Trip SIC

The Assigned Trip SIC is responsible to the PIC to assist in flight preparation and for the safe operation of the aircraft. The SIC will be prepared to assume the duties of the PIC if that person becomes physically incapacitated and is unable to perform those duties. In addition, the SIC is responsible for:

a. Preparing the aircraft cabin.
b. Preflight of cabin safety equipment.
c. Perform security check for suspicious items.
d. Assure stock items in sufficient quantities.
e. Ice is on boarded.
f. Appropriate beverages are chilling.
g. Assist passengers with their bags; assure they have all their personal items.
h. Check cabin for items left behind.
i. Cabin cleanup including dishes and linens.
j. Prepare cabin for next flight.
k. Check Discrepancy and MEL Folders
l. Prepare and send discrepancy email per 5.7.2

5.2.3.3 Crew Duties Away from Home Base

a. Coordinate with lead passenger to confirm departure time and date.
b. Unload passenger baggage
c. Check aircraft for any articles left behind
d. Install protective covers if required
e. Monitor refueling
f. Clean interior
g. Have lavatory serviced (if required)
h. Arrange for crew transportation/hotel (if required)
i. Disconnect batteries
j. Security of aircraft (consider use of hangar and coordinate with Director of Aviation, especially in high cost areas).
k. Advise FBO of crew hotel and requirements for departure. Also make sure they know towing procedures as well as servicing
l. Remove potable water and other liquids that may freeze (if required)
m. Remove AED for temperature extremes (hot or cold)
n. Chock aircraft
o. Release parking brake
p. Check aircraft and lock it
q. Remove items affected by a hot cabin

5.2.4   Preflight Checks

5.2.4.1 Home

It is the responsibility of the Director of Maintenance to ensure maintenance inspections are completed as required; the Assigned Trip PIC is responsible for ensuring that the aircraft is released for flight by maintenance.

5.2.4.2 Aircraft Preflight Inspection

Prior to the first flight of the day, the assigned trip SIC shall conduct a thorough preflight of the aircraft in accordance with the manufacturer's recommended preflight checklist. On continuing flights, one crewmember shall perform an inspection of sufficient detail to ensure the aircraft is in an airworthy condition.

If the aircraft has been serviced or towed, particular attention should be paid to the service caps and doors, nose gear steering or tow links, and other areas of the aircraft that are particularly susceptible to being damaged during towing or servicing.

5.2.4.3 Flight Deck Preflight

The Flight Deck preflight checklist and aircraft setup should be completed at least 30 minutes before the scheduled departure time.

5.2.5   Fuel Procedure

Aircraft refueling will be supervised by Charter Express Pilots or Maintenance personnel and will ensure aircraft is properly grounded.

5.2.5.1 Fuel Contamination Precautions

If fuel is obtained from and unknown source or there is any reason to question the quality of the fuel, it should be checked during the pre-flight check. A reasonable quantity of fuel should be drawn from the lowest point in the fuel system into a clear glass jar. A "clear and bright" visual test should be made to establish that the fuel is completely free of visible solid contamination and water (including any resting on the bottom or sides of the container), that the fuel possesses an inherent brilliance and sparkle in the presence of light and that it exhibits the proper kerosene smell.

5.2.5.2 Grounding Requirements

Grounding prevents sparks by equalizing or draining the electric potentials and should safely dissipate any static or stray electricity that has built up in the aircraft or service vehicle(s). Flight Department personnel responsible for fueling aircraft will ensure grounding of the fuel service vehicle, equipment, hose nozzle, funnels, filters through which fuel passes to the aircraft before fueling begins.

5.2.6   Fueling with Passengers on Board

Aircraft may be fueled with passengers on board, embarking or disembarking, under the following conditions;

    a. One flight crewmember remains near the aircraft to immediately communicate with and assist in the evacuation of passengers in an emergency.
    b. When refueling with passengers embarking, onboard or disembarking, two-way communication shall be maintained by a suitable means between the ground crew supervising the refueling and the qualified personnel onboard the aircraft.
    c. All exits are clear of obstruction and available for passenger evacuation.
    d. The aircraft engines are not running, APU can be operating but not started during the fueling.
    e. Electrical power supplies are not being connected or disconnected, and any equipment likely to produce sparks or arcs are not being used.
    f. Smoking is not permitted in the aircraft or in the vicinity of the aircraft.
    g. Fueling is suspended when there are lightning discharges within 5 miles of the aircraft.
    h. Known high-energy equipment such as High Frequency (HF) radios are not operated.

5.2.7   APU Operation

The APU is normally used to meet operational requirements; discretion should be used in the length of time it is in operation. Normally, it will not be started more than one hour prior to scheduled departure. The APU must not be started while fueling the aircraft, however, if already in operation it may continue.

Flight department personnel trained with APU operations and emergency procedures will continually monitor the APU while in operation.

5.2.8   Flight Crewmember EFB configuration during Flight

Charter Express has incorporated the paperless cockpit concept therefore, it is vitally important for pilots to be able to access information quickly and accurately, while conducting their flight deck duties. It is expected that each crewmember be familiar and proficient, with the use of their EFB. This is particularly important using ForeFlight.

The following items are the minimum information that is expected to be running and available for easy access from the Home bar for the duration of the flight on both pilot's EFB's.

    a. ForeFlight: Create a route for the flight segment using the Route planner consisting of at least the departure and arrival airports, to be used during the flight.
    b. Aircraft Electronic Performance Program

Other information you may want readily available such as:

    a. AirNav website airport information for airports of intended landing.
    b. Boeing website noise information for airports of intended landing.
    c. Any other information you consider important to conduct your flight safely.

5.2.9   EFB Guidelines

a.   Both EFB's normally should be programmed with Departure, Destination, and Alternate airports prior to taxi.
b.   EFB operation by the crew during all phases of flight should be limited to either the PNF or PF, using extra caution to avoid simultaneous "heads down" situations.
c.   Before descending below 10000 AGL, every effort should be made to have the EFB's set with the Terminal and Approach procedures for the destination airport.
d.   In the event of single EFB operation, the crew must print/obtain a paper copy of all Terminal and Approach charts required for completing the flight.

5.2.10   Flight Clearance

a.   The SIC will obtain the flight clearance either through PDC or Radio call and make the read-back. The crew will review the clearance and ensure complete understanding.
b.   The Flight Management System (FMS) will be programmed with the departure and route of flight. In addition, initial course, heading and altitude assignments will be entered.
c.   The PIC normally will not proceed with ground operations until the flight clearance has been received, reviewed and is mutually understood.

5.2.10.1   VFR Departure

In circumstances where flight crews have communications difficulty and cannot receive an IFR clearance on the ground prior to departure, the aircraft may depart VFR if basic VFR minimums as per the FAR 91.155 are maintained until receiving an IFR clearance. At all times in the above circumstance special attention must be given to the minimum safe altitudes for direction of departure. This is especially true at night and in cases when there is a cloud ceiling above the departure airport area.

5.2.11   Cold Weather Operations

Department aircraft should be stored in a hangar when freezing precipitation or snow is anticipated. If the aircraft is exposed to accumulations of frost, ice or snow, the contamination will be removed in accordance with the aircraft manufacturer's recommended procedures and industry-standard methods prior to flight. The aircraft should be preheated, when possible, prior to attempting to activate any of the aircraft systems. Cabin systems (water storage, lavatories, food and drink containers, coffee-makers, etc.) must be properly handled (removed and stored in heated area, serviced with anti-freeze, etc.) to prevent damage from freezing or during defrosting. Aircraft parked outside should be headed into the wind when possible to minimize the accumulation of frozen precipitation in the openings around flight control surfaces. Covers and plugs should be installed to protect the engine inlets from accumulation while the aircraft is parked. The parking brake must be released after the aircraft has been chocked to prevent damage due to temperature changes. Use caution when removing snow from tail to prevent aircraft tipping.

When departing from Little Rock and meteorological conditions warrant, the following standard guidelines will be used for dispatching aircraft. It is the Assigned Trip PIC's responsibility to notify appropriate personnel as soon as possible if deicing is required.

Note   Maintenance requests if the aircraft is de-iced prior to departing LIT and is to remain out for a couple of days, the crew should have the airplane washed if destination weather conditions and facilities permit. The crew should ensure all the standard overnight covers are installed on the airplane and must supervise the wash.

5.2.12 Aircraft Critical Surface Contamination

Where frost, ice or snow exists, the PIC shall not commence a flight unless the aircraft has been inspected to determine whether any frost, ice or snow is adhering to the critical surfaces as defined. Such inspection shall be carried out by:

  a. The PIC;
  b. A crewmember designated by the PIC; or
  c. A person other than a crewmember, who:
      i.   Is authorized by Charter Express
      ii. Has received training concerning surface contamination.

When any frost, ice, or snow is found adhering to any critical surface, the contaminant will be removed completely before any flight is attempted. The methods for removing frozen contaminant include:

  a. The application of heat; i.e. warm hangar, solar heat (the sun), or the use of a heater;
  b. The application of a deicing/anti icing fluid (hold over times for the fluid type and the environmental conditions should be consulted); or
  c. Brushing

If a clean aircraft for departure cannot be assured, the only acceptable alternative is to cancel or postpone the flight until conditions are acceptable.

5.2.13 VOR Check

FAR 91.171 requires that each VOR system be checked within the preceding 30 days prior to use under Instrument Flight Rules. This check must be documented with a minimum of the date of the test, place, bearing error, and signature of the person completing the check.

5.3   Passenger and Cabin Safety Procedures

The primary objective of the Flight Operation is to transport its passengers as safely, efficiently, and comfortably as possible. Courteous service and professional conduct form the basis for relations with passengers. Review with the passengers:

   a.   Planned itinerary and ETE
   b.   Requested altitudes
   c.   Enroute and destination weather, including anticipated turbulence
   d.   Alternative plans if destination weather is marginal
   e.   Catering available
   f.   Comfort and convenience items of the aircraft
   g.   Passenger safety briefing (as required)

Passengers will always be escorted to and from the aircraft by a Charter Express employee at home base or by a crewmember while on the road and assisted with their luggage prior to and after flights.

Passengers should be kept advised of the flight's progress as necessary. Information regarding any known or imminent delays should be communicated to at least the principal passenger immediately. All safety related briefings and announcements will be made, regardless of passenger preference. These include:

   a.   Takeoff safety briefing for passengers who are not frequent travelers
   b.   Fasten seat belt prior to aircraft movement
   c.   Takeoff announcement
   d.   Fasten seat belt prior to entering turbulent areas or landing
   e.   Any safety of flight item

5.3.1   Aircraft Boarding and Ramp Procedures

   a.   Normally, all passengers will board and deplane through the lobby.
   b.   Aircraft shall be on the flight line 1 hour prior to departure time for domestic trips. Aircraft departing international shall be on the flight line 2 hours prior to departure time.
   c.   When a large number of passengers are departing in a close time frame, the passengers will be met and any bags will be collected and taken to the respective aircraft.
   d.   When aircraft are arriving with large numbers of passengers or with large amounts of baggage, maintenance or line personnel may let passengers pick bags up at the aircraft or at the main entrance to the respective building.
   e.   During special situations, such as aircraft parked long distances across the ramp, passengers running late, or boarding the aircraft in inclement weather, the passengers and their vehicle will be escorted onto the ramp and directed to their aircraft (as permitted by airport operations).
   f.   If it is necessary to board passengers with an engine operating, that engine must be opposite to the loading door so that passengers may approach the aircraft from the side with the engine shut down. If an engine is operating, one pilot must remain in the cockpit with the brakes set and the operating engines at idle power.

5.3.2   Stowage of Hand Luggage and Galley Equipment

Immediately prior to takeoff and landing the crew will visually check that galley equipment is securely stowed and the cabin is secure. In the event of moderate or greater in-flight turbulence, the crew will ensure that hand luggage, galley equipment, and other loose articles are securely stowed

5.3.3   Firearms

Firearms are not permitted aboard Charter Express' aircraft without prior approval of the Director of Aviation or the President. The carriage of sporting firearms requires that they be unloaded and are properly stowed in the baggage compartment. Ammunition will be stored in accordance with Hazardous Material Regulations.

Personal security weapons may be carried when authorized by the Director of Aviation. The Director of Aviation will ensure that the PIC has advance notification of such approval. The person or persons carrying the weapon must identify themselves to the PIC prior to boarding the aircraft.

When flying outside the United States, special considerations for the carriage and possession of firearms may be required.

5.3.4   Passenger Safety Briefing

In accordance with FAR Part 91.519, the PIC shall ensure that passengers are given a safety briefing appropriate to the passenger's needs and cover at least the items specified in this section. These briefings may be accomplished using the "Auto Briefer" if installed. As a minimum the briefings should address the following:

a.   Prior to takeoff:
   i.   When, where, why and how carry-on baggage is required to be stowed;
   ii.   The fastening, unfastening, tightening and general use of seat belts;
   iii.   When seat backs must be secured in the upright position and tables must be stowed;
   iv.   The use and location of the passenger oxygen system including the location and use of oxygen masks;
   v.   The location of emergency exits and for passengers seated next to an exit, how that exit operates;
   vi.   The location, purpose of, and advisability of reading the safety features card;
   vii.   The requirement to obey crew instructions regarding fasten seat belt signs and no smoking signs and the location of these signs;
   viii.   The location of any emergency equipment the passengers may have a need for in an emergency situation such as the ELT, fire extinguisher, survival equipment (including the means to access if in a locked compartment), first aid kit, life jacket or flotation device and life raft;
   ix.   Procedures for portable electronic devices;
   x.   That cell phones and personal electronic devices must be turned off prior to takeoff; and

b.   After takeoff, if not included in the pre takeoff briefing:
   i.   The advisability of using seat belts during flight.

c.   Inflight when the "Fasten Seat Belt" sign has been turned on for reasons of turbulence:
   i.   When the use of seat belts is required; and
   ii.   The requirement to stow carry-on baggage.

d.   Prior to passenger deplaning, the safest direction and most hazard- free route for passenger movement away from the aircraft following deplaning, and any dangers associated with the aircraft type such as pitot tube locations, or engine intakes.

The standard safety briefing may be shortened or eliminated for regular/ recurring passengers, who are familiar with the aircraft, route and have repeated exposure (e.g. company president) to that type of flight.

In accordance with FAR 91.519, an oral briefing is not required if the assigned trip PIC determines that the passengers are familiar with the above items. Pilots frequently use this statement as a reason to not "inconvenience" the passengers in an effort to expedite departure. The information in the briefing is rarely used; however, there are numerous examples of the real inconvenience to passengers occurring when they were unable to exit a burning airplane. The guiding principle in this subject must always be, "can the passengers conduct an unassisted evacuation from the aircraft after an accident?"

5.3.4.1 Passenger Information Card

A Passenger Information Card shall be available at each passenger seat containing, in printed or picture form, information on at least the following safety features of the aircraft:

a. The location and operation of emergency exits;
b. The Location and use of passenger oxygen systems;
c. The location of life jackets and life rafts; and
d. The location of emergency equipment.

5.3.5   Passengers Requiring Special Attention

Charter Express aircraft will transport an incapacitated or disabled passenger if he is capable of caring for himself/herself without requiring unreasonable attention or assistance from the flight crew under normal operating conditions. If special attention is required, an attendant that will be responsible for and capable of providing the special care and attention must accompany the passenger. Passengers must be ambulatory or have an attendant present on the flight. Disabled persons, incapacitated persons or children shall be seated so as to facilitate orderly passenger exit or emergency evacuation via the emergency exit or cabin door.

5.3.6   Children and Infants' Seating

A child who has reached his second birthday must occupy a seat with a separate seat belt properly secured about him for taxi, takeoff, landing, and whenever the fasten seat belt sign is illuminated.

5.3.7   Baggage / Special Items

Any items carried on company aircraft must be able to fit through either the main cabin door, or baggage door of the aircraft and must be secured or tied down in accordance with the FAR's. Unaccompanied baggage/inter-office mail carried on international flights must have a designated passenger to process such items through customs inspection.

Special attention should be given to any additional baggage or extra travel items that arrive at the hangar prior to any flights.

5.3.8   Portable Electronic Devices

No person shall operate a personal radio transmitter, television receiver, cellular phone or any other electronic device known to emit electromagnetic or radio frequency emissions that could interfere with the aircraft navigation systems during flight.

Portable tape recorders, pacemakers, hearing aids, electric shavers, CD players and laptop computers are acceptable for use on board Department aircraft.

5.3.8.1 Battery Safety

The two types of batteries commonly used to power consumer PED's brought on aircraft are lithium batteries (disposable) and lithium-ion batteries (rechargeable). Both of these types are capable of ignition and subsequent explosion due to overheating. Overheating may be caused by shorting, rapid discharge or overcharging. Overheating results in thermal runaway, which is a chemical reaction within the battery causing the internal temperature and pressure to rise. The result is the release of flammable electrolyte from the battery and, in the case of disposable lithium batteries, the release of molten burning lithium. Once one battery cell goes into thermal runaway, it produces enough heat to cause adjacent battery cells to also go into thermal runaway.

This produces a fire that repeatedly flares up as each battery cell in turn ruptures and releases its contents. Fighting a fire that contains either disposable or rechargeable lithium battery cells requires extinguishment of the fire and cooling of the remaining cells to stop the thermal runaway. Water is the most effective coolant. Halon replacement or water fire extinguishers should be used for initial knockdown of these fires, followed by immediate dousing with water from any available source.

5.3.8.2 Types of Lithium Batteries

    a.   AA Sized Lithium Batteries:

        i.   Disposable - Lithium (non-rechargeable) cells are constructed with metallic lithium. Metallic lithium is extremely flammable and cannot be extinguished with the typical hand-held extinguishers found on board transport aircraft. However, the amount of metallic lithium in each AA sized battery is very small and will consume itself in less than one minute. Lithium cells will spray molten lithium as they burn, which can cause severe bodily harm and spread the fire. Do not treat a fire involving a small number of lithium batteries as a Class D fire.

        ii.   Rechargeable - Lithium-ion (rechargeable) cells are constructed with a flammable electrolyte and have the same fire hazard as non-rechargeable cell.

    b.   Battery Pack (Multiple Larger) Lithium-ion Cells:

        i.   Laptop computers and other battery operated devices are often powered by battery packs using multiple larger lithium-ion battery cells. The individual cells are not visible and are encased in a plastic housing.

5.3.8.3 Fire Fighting Involving Lithium Batteries

The technique for fighting a fire involving lithium batteries is the same, regardless if the battery is a disposable or rechargeable lithium battery or battery pack. The procedures consist of three phases:

a. Phase 1: Extinguish the fire
   i. Relocate passengers away from device
   ii. Utilize water, Halon or Halon replacement extinguisher or extinguish the fire and prevent its spread to additional flammable materials.

b. Phase 2: Cool remaining cells
   i. After extinguishing the fire, douse the device with water or other non-alcoholic liquids to cool the device and prevent additional battery cells from reaching thermal runaway

c. Phase 3: Containment
   i. If confident that the fire has been extinguished and batteries cooled to a safe level, consider placing the PED in the trash bin or ice container to further contain the event. When placing the PED into a container, ensure all flammable material has been removed, so not to aggravate the situation.
   ii. The crew should then make a determination on whether to continue the flight or divert to an alternate.

Warning	- Do not attempt to pick up and move a smoking or burning device. Bodily injury may result. - Do not attempt to pick up and move a smoking or burning device. Bodily injury may result. - Do not cover the device or use ice to cool the device. Ice or other materials insulate the device, increasing the likelihood that additional battery cells will reach thermal runaway. - Only water or other non-alcoholic liquid can provide sufficient cooling to prevent reigniting or propagation of the fire to adjacent batteries. Water, though it may react with the tiny amount of lithium metal found in a disposable battery, is most effective at cooling remaining cells. - Do not use fire resistant burn bags to isolate burning lithium type batteries. Transferring a burning appliance into a burn bag may be extremely hazardous. Do not attempt to move the device until you are certain the fire is extinguished and the device is cool.

5.4   Taxi/Takeoff

In keeping with our sterile cockpit policy, all personal electronic devices on the flight deck must be in silent mode prior to engine start.

5.4.1 Taxi Operations

The Before Taxi Checklist shall be complete prior to moving the aircraft. Taxi clearance should normally be obtained prior to any aircraft movement unless operationally necessary to move the aircraft within the "non-movement" area into a position where a taxi clearance can be obtained. Caution must be used to ensure that jet blast does not cause damage, injury, or annoyance to persons or property.

After Landing, unless otherwise directed by ATC, Exit the runway without delay at the first available taxiway. Taxi clear of the landing runway beyond the runway holding position markings associated with the landing runway, even if that requires the aircraft to protrude into or cross another taxiway or ramp area. Once all parts of the aircraft have crossed the runway holding position markings, the pilot must hold unless further instructions have been issued by ATC.

Professional taxi technique requires safe speed consistent with weather, visibility, and surface conditions. Braking and turns must be anticipated in order to maximize passenger safety and comfort.

5.4.2 Takeoff

Takeoffs should be made from the most operationally suitable runway giving consideration to traffic flow, noise abatement procedures and ATC requirements as long as neither safety nor aircraft limitations are violated. Intersection takeoffs are acceptable at the discretion of the flight crew.

Many factors are involved in planning a takeoff; runway conditions, runway length, noise abatement procedures, obstacle clearance, weather and alternate takeoff airports should all be considered and discussed in order to accomplish a safe departure. The use of a Performance Program is a valuable tool and provides performance numbers to operate by; but only if the aircraft is operated with accurate techniques. Rolling takeoffs negate computed BFL computations. Improper rotation angles and rates negate computed climb performance numbers

Setting the proper pitch with the Flight Director for takeoffs (if not prohibited by the Aircraft Flight Manual) is the accepted procedure. Correct Rotation; three degrees per second to the computed rotation angle is the established and desired procedure. This allows for passenger comfort while maintaining proper performance; which translates to a safe and pleasant departure.

5.4.3   Performance Data

The PIC is responsible for ensuring that all aircraft performance parameters are satisfactory for safe operation. These include:

a.   Maximum gross takeoff weight
b.   Runway limit
c.   Second-segment climb
d.   Obstacle clearance
e.   Standard instrument departure climb requirements
f.   Max brake energy

If takeoff performance data, as listed in the checklist tabs or Electronic performance program are not deemed satisfactory for determining aircraft performance, the data must be computed or checked using the Aircraft Flight Manual.

5.4.3.1 Takeoff Data/Performance

Prior to takeoff, the required V-speeds and TOSA will be calculated, entered and displayed on the PDU's using the departure phase of flight.

5.4.3.2 Guidance Panel/Flight Director Setup

For all departures, the Altitude Selector should be set to the clearance altitude. When vertically navigating a SID or RNAV SID, the Altitude Selector should be set to comply with any published "at", "at or above" or "at or below" altitude restrictions. Crews must review all altitude restrictions on the SID or RNAV SID along with the final or "top" altitude to determine the appropriate altitude to set. The guidance panel and flight director should normally be set for takeoff as follows:

a.   TOGA Mode

    i.   Flight Director
    ii.   Speed Mode as required
    iii.   Both Lateral and Vertical Modes "Off"
    iv.   TOGA "Activated"

    Note   TOGA is de-selected when one of the following takes place.

- A new vertical mode is selected,
- when the crewmembers manually change the vertical guidance (Path Wheel),
- Automatically if the airplane reaches the ASEL

5.4.3.3 Flight Director Use

The Flight Director set up and departure procedure should be briefed as part of the Take-off briefing to ensure optimum and efficient use of crew resources during the normal take-off phase. This ensures crewmembers share the same situational awareness and associated plan of action.

  a.   Set heading Bug to Runway or Assigned heading prior to takeoff
  b.   At or Above 400' AFL selection of HDG/LNAV
  c.   At or Above TOSA Climb/VS/VNAV as required

In the event of an engine failure, minimum level-off height for flap retraction and acceleration to final climb speed is 1000 feet above ground level (AGL). In some cases, it may be necessary to extend the second segment climb to a nonstandard altitude in order to achieve obstacle clearance prior to level-off/acceleration.

5.4.4   Operations at Uncontrolled Airports

Company aircraft are sometimes required to land and takeoff from uncontrolled airports. The assigned trip PIC must ensure suitability of the airport. Traffic advisories should be requested from the CTAF frequency or local airport advisory. An overhead or downwind entry to the traffic pattern is recommended for traffic sighting. Pilots will turn Taxi Light ON after gear extension so as to configure the aircraft for maximum lighting upon arrival to the uncontrolled field.

When departing from an uncontrolled airport, broadcast departure intentions before taxiing and before taking the runway. Pilots should comply with the departure procedures for the airport including noise abatement procedures. Recommended procedures are:

  a.   Make frequent radio calls starting at least 15 nm from the airport of arrival.
  b.   Turn all exterior lights on. Dim interior lights as much as possible during night operation for better outside visibility.
  c.   Call the airport manager or FBO prior to departing on the trip to inquire about runway conditions, weather, NOTAM, runway lighting, obstacles or any possible hazards.
  d.   Review charts prior to flight and note minimum altitudes for terrain clearance.
  e.   Consider use of TCAS during taxi.

5.4.4.1 Communication/Broadcast Procedures

Communication/Broadcast Procedures		
Outbound	Before taxiing and before taxiing on the runway for departure	
Inbound	S t art i ng at least 15 miles out. Entering downwind, base and final. Leaving the runway	
Facility at Airport	Frequency Use	Instrument Approach
UNICOM Only (No Tower or FSS)	Published CTAF frequency (122.7; 122.8; 122.725; 122.975; or 123.00). If unable to contact UNICOM, use self-announce procedures on CTAF.	
No Tower, FSS, or UNICOM	Self-announce on MULTICOM Frequency 122.9.	Departing final approach fix (name) or on final approach segment inbound.
No Tower, FSS open	Communicate with FSS On CTAF Frequency	Approach completed/ terminated
FSS closed (No Tower)	Self-announce on CTAF.	
Tower or FSS not in operation		

5.4.5   Runway Incursion Prevention

The following procedures help prevent runway incursions:

a. Read back the taxi clearance including runway hold short instructions; PNF should write down complicated taxi instructions.
b. Both pilots should agree on the correct taxi clearance; If there is any doubt about the aircraft's specific position or clearance, the crew shall hold their position until receiving clarification.
c. Use of "progressive taxi" instructions;
d. During taxi, the PF will primarily concentrate on maneuvering the aircraft according to ATC instructions;
e. The PNF should use the taxi diagram to guide and follow the aircraft' progress via the taxi clearance;
f. before entering or crossing any runway,
    i.   pilots shall turn on all aircraft lights in accordance with 5.1.13 of this manual
    ii. visually and verbally "clear left and right"
g. TCAS should be utilized during taxi to gain situational awareness of other traffic.

5.4.7   IFR Takeoff Minima

Unless lower takeoff minimums are specified on the applicable instrument approach procedure chart, takeoff weather minimums for company aircraft are:

   a.   1/4-mile airport visibility
   b.   1/4-mile Runway Visibility Value (RVV) or 600 RVR

In addition to the minimums specified herein, the pilot shall consider all of the factors affecting uncontrolled airport operations, (i.e., other aircraft, animals or personnel on the runway, debris, pavement damage, etc.) and increase the takeoff minimum as necessary. Special attention shall be given to the charted minimum climb rate for obstacle avoidance as applicable.

If RVR minimums for takeoff are prescribed in an instrument approach procedure, but RVR is not reported for the runway of intended operation, the RVR minimum shall be converted to ground visibility in accordance with the table below and shall be the visibility minimum for takeoff on that runway.

RVR (feet)	Visibility (statute miles)
600	1/4
2400	1/2
3200	5/8
4000	3/4
4500	7/8
5000	1
6000	1 1/4

If weather conditions at the time of takeoff are below the approved landing minimums, pilots will designate a takeoff alternate not more than one hour from the departure airport at normal cruise speed in still air with one engine inoperative. Before takeoff, the pilots shall determine from weather reports, forecasts and NOTAM that the takeoff alternate is at or above the landing minimums and is expected to remain so for the time period during which the takeoff alternate is required.

5.4.7.1 Marginal Conditions

Operations are not authorized under the following conditions:

a. Thunderstorms of Level 3 intensity or greater at the airport or in the planned departure or arrival path.
b. A takeoff alternate must be available when the weather is reported below the applicable approach minimums for the runway in use at the departure airport.
c. Flight through the heavy rain shaft extending below a thunderstorm that may indicate the presence of a micro-burst.
d. Hail is falling at the airport.
e. Braking action reported as "poor" or "NIL" on the operating runway.
f. Takeoffs or landings on "contaminated" runways that may cause aircraft performance to be marginal. Use the applicable information in AFM. If there is any question in your mind, don't attempt it. (Err on the side of safety).
g. Crosswind or tailwind components exceeding the demonstrated or limited value in the AFM.
h. Snow or ice adhering to airframe, engine, or control surfaces.

5.4.8   Noise Abatement Procedures

It is the responsibility of the assigned trip PIC to check all available resources, to include flight publications and websites, to assure that the crew has any available airport noise abatement information. 14 CFR Part 36 requires the reporting of turbojet and large transport category aircraft certificated noise levels in units of Effective Perceived Noise Level in decibels (EPNdB).

The following data was reported to the Federal Aviation Administration in EPNdB by the aircraft manufacturer for noise certification purposes and are published in the Aircraft Flight Manuals.

Noise Levels EPNdB			
Aircraft	Take Off	Side Line	Approach
DA 900B	79.8	90.5	92.3
CJ4/M2	75.1	91.8	90.50

It should be noted that published certificated noise levels are determined at Maximum Takeoff and Maximum Landing weights.

NOTE: These noise levels are obtained with power cut-backs which is usually a power reduction of approximately 15 percent from takeoff thrust setting when a safe altitude is reached after takeoff.

Most airports and communities utilize a noise monitoring and analyses rating based on A/weighted decibels. This rating is identified with the symbol dB/A or just dB. This rating is derived using a combination of the following criteria:

        a.   Loudness of the sound
        b.   Length of time of the sound
        c.   How annoying the sound is to the average person
        d.   Size of the sound footprint
        e.   Number of noise events in a specific time period

If the symbols dB/A, or dB are used in the noise abatement procedure then the A/Weighted noise levels are the levels to which you are expected to comply. It should be specifically noted that the A-weighted noise levels in AC 36-3H are estimates calculated from the EPNdB data and do not represent actual certificated values.

NOTE: Each airport makes its own noise abatement procedures. The procedure could have different requirements and could use a noise measurement reported in EPNdB or in dB/A. The aircrew is required to understand the specific procedure and which noise measurement apply. The FAA considers the contractions dB/A and dB to both represent A/weighted noise levels when written in a noise abatement procedure.

When operating from an airport with noise abatement procedures in effect the profiles listed below will be the standard flight operation noise abatement operations procedures. When these procedures are used the aircraft will have a suitably quiet noise footprint and will have a decibel level that should not exceed published noise levels.

5.4.8.1 Noise Abatement Arrival Procedures

Inbound flight path should not require more than a 20-degree bank angle to follow noise abatement track.

     a. Observe all airspeed limitations and ATC instructions.
     b. Initial inbound altitude for noise abatement areas will be a descending path from 2500 feet AGL or higher. Maintain minimum airspeed (1 .3Vs+20 KIAS) with gear retracted and minimum approach flap setting.
     c. At the final approach fix (FAF) in IMC or not more than 4 miles from runway threshold in VMC extend the landing gear. Final landing flap configuration should be delayed at pilot's discretion to enhance noise abatement, but must achieve a stabilized approach no lower than 1000' AFL in IMC or 500' AFL in VMC.
     d. During landing use minimum reverse thrust consistent with safety for runway conditions and available length.

5.4.8.2 Noise Abatement Departure Procedures

Climb at maximum practical rate at V2+20 Knots indicated airspeed (KIAS) to 1000 feet above field level (AFL) with takeoff flap setting (Max deck angle not to exceed 20 degrees nose up).

     a. At 1000 feet AFL, accelerate to final segment speed (VFS) while retracting flaps. Reduce to a quiet climb power setting while maintaining 1000 FPM maximum rate of climb and accelerate; airspeed not to exceed 190 KIAS until 3000 feet AFL. If ATC requires a level off prior to 3000 feet AFL, power must be reduced so as not to exceed 190 KIAS until at or above 3000 feet AFL. At 3000 feet AFL, resume normal climb schedule with gradual application of climb power.
     b. At High Density airports, resume normal climb and speed reaching 1500' AFL.
     c. Observe all airspeed limitations, required climb gradients and ATC instructions.

For a takeoff with an initial assigned altitude within 1,500' of the airport elevation (AAE), pilots may elect to climb at V2+20 in the takeoff configuration until necessary for level-off at the assigned altitude.

Note	It is the pilot flying's responsibility for safe aircraft operation. It is recognized that aircraft performance will differ with aircraft type and takeoff conditions; therefore, the pilot flying always has the latitude to determine whether takeoff thrust should be reduced prior to, during, or after flap retraction.

5.4.9   Takeoff Briefing

A takeoff briefing shall be conducted by the pilot flying (PF) prior to each takeoff. The phrase "Standard Briefing will be used along with any special conditions if required, i.e. Balanced Field Length limited, snow, ice, or wet runways.

The "Standard Briefing" consists of the following:

   a.   Pilot not flying (PNF) calls out airspeed alive/cross checked, 80 knots cross checked, V1, rotate, positive rate of climb.
   b.   Pilot not flying (PNF) monitors all engine instruments and annunciator panel during takeoff.
   c.   In the event of a malfunction prior to 80 knots either pilot may call ABORT.

Reasons to consider an abort after 80 knots and prior to V1:

   a.   Engine failure
   b.   Engine fire
   c.   Thrust reverser malfunction
   d.   Unexplained directional control problem
   e.   Trim "clacker"

If a malfunction occurs at or above V1, continue the takeoff; fly the assigned departure procedure or heading and if able climb to the briefed Takeoff safe altitude. At or above the Takeoff safe altitude the aircraft configuration should be cleaned as required. Where there is no immediate action required, it is advisable to complete a Normal checklist if in progress or due prior to calling for the Abnormal checklist.

When an abort is initiated the following will be accomplished:

   a.   Pilot Flying (PF) will apply brakes, bring the throttles to idle and deploy the Thrust Reverser.
   b.   Pilot Not Flying (PNF) will deploy the air brake and advise ATC of the situation and plan of action.

5.4.10 Abort Procedures

It is Charter Express policy that the PF will not question the "Abort" call of another crewmember, but will immediately reject the takeoff if he can safely do so. After the aircraft is safely stopped, the cause for the call-out can be discussed.

5.5   Enroute

Normal Operating Cruise Speeds	
Falcon 900B	300/.80 Mach
CJ4/M2	Normal Cruise Setting

5.5.1   Flight Crewmembers at Duty Station

Each crewmember is responsible for complying with FAR 91.105, which addresses flight crewmembers at duty station. The following additional procedures apply:

    a. At least one crewmember will remain at their duty station while on the ground anytime an engine is running.
    b. Each crewmember will wear seatbelts and shoulder harnesses while at their duty station while the aircraft is in motion.
    c. Crewmembers are to remain at their duty station during all phases of flight unless the absence is necessary to attend to operational requirements of the aircraft or to satisfy physiological needs.
    d. Each crewmember will notify the other prior to leaving their duty stations.
    e. FAR 91.211 Supplemental Oxygen requirements must be strictly followed.

5.5.2   Weather Considerations

It is the PIC's responsibility to circumnavigate dangerous weather conditions when encountered enroute. If areas of severe weather cannot be circumnavigated, the PIC will give serious consideration to holding until conditions improve or landing the aircraft at an alternate destination. Passengers will be advised to fasten seat belts prior to encountering anticipated severe weather, and all loose objects in the cabin will be stowed.

Operation of company aircraft in hazardous weather is to be considered with the intent to avoid such conditions whenever possible. If circumstances require such operation, appropriate planning is required to guarantee a safe operation.

5.5.2.1 Thunderstorms

Precautions must be taken to avoid hail and turbulence in the vicinity of thunderstorms. Hail can be encountered in all directions from a storm, but it is usually on the downwind side. Do not fly under the anvil of storm cells, where hail is most likely. If possible, route deviations should be made well to the upwind side of a storm.

    a. The following minimum lateral separation should be considered:
       i. Above 20,000 feet MSL - 20 miles
      ii. Below 20,000 feet MSL - 10 miles
    b. Flights will not be flown into areas of known thunderstorm activity without a functioning weather radar system.

The aircraft will be operated at airspeeds recommended by the Aircraft Flight Manual. Flight crews will not operate Charter Express aircraft to or from an airport where thunderstorms of Level 3 intensity or greater are reported at the airport or the intended approach or departure course.

Flights requiring the use of weather radar or thunderstorm detection equipment shall operate with the understanding that it is company policy to use such equipment as an aid to the avoidance of severe weather associated with thunderstorms.

5.5.2.2 Wind Shear

Wind shear may create a severe hazard for aircraft within 1,000 ft AGL of a "micro burst", particularly during the approach to landing and in the takeoff phases. Because of the hazards associated with flying through and in the vicinity of these intense downdrafts, which on reaching the surface spread outward from the down flow center in all directions, the best defense is to avoid it altogether, as it could be beyond you or your aircraft's capability.

Pilots are to heed wind shear PIREPs as a previous pilot's encounter may be the only warning you will receive. On receiving such notice, alternate action such as delaying a departure or an arrival until the phenomena has passed is recommended.

If wind shear is encountered, prompt action is required. In all aircraft, the recovery could require full power and pitch attitude consistent with the maximum angle of attack for the aircraft. In addition, warn others as soon as possible by sending a PIREP to the closest air traffic services facility.

Wind shear conditions near the surface have been known to exist that makes it impossible for many types of aircraft to continue flight. Therefore, company aircraft shall not take off or land when known wind shear is present at the airport of intended operation that causes doubt in the capacity of the aircraft to sustain normal flight through the wind shear activity.

5.5.2.3 Turbulence

The PIC will include any information about anticipated turbulence in the preflight briefing, using National Weather Service terminology (light chop, light turbulence, moderate chop, moderate turbulence, severe turbulence, and extreme turbulence). Whenever possible, the PIC will advise the passengers of the anticipated time until turbulence may be encountered and the expected duration. Flights shall not proceed through areas in which turbulence of more than moderate intensity exists unless the flight crew cannot avoid those areas by weather radar references.

The flight crew will advise the passengers of the estimated time that turbulence will be encountered. The fasten seat belt signs will be turned on and an announcement will be made from the flight deck to advise passengers that turbulence is anticipated. If turbulence is encountered unexpectedly, the flight deck will turn the fasten seat belt sign on and make an announcement advising passengers to be seated immediately. For additional action, refer to the following chart.

5.5.2.4 Turbulence Intensity Criteria Chart

Turbulence Intensity Criteria			
Condition	**Airplane Reaction**	**Cabin Reaction**	**Crew Actions**
Light Chop	No appreciable changes in altitude or attitude. Slight, rapid and somewhat rhythmic bumpiness occurs.	Occupants may feel a slight strain against seat belts. Unsecured objects remain stable. Coffee is shaking slightly but not splashing out of cup. No difficulty in walking.	Seat belt signs on at PIC's option. Ensure passengers are seated. Verify seat belts fastened and infant/ child secure in passenger or child seat. Secure loose cabin, galley, and service items. Verify lavatory unoccupied.
Light Turbulence	Momentary, slight, erratic changes in altitude and attitude	Walking may be difficult. Coffee is shaking but not splashing out of cup.	
Moderate Chop	Moderate Turbulence Rapid bumps or jolts without appreciable changes in altitude or attitude.	Occupants feel definite strain against seat belt. Unsecured objects move about. Coffee is splashing out of cup; very difficult to walk.	Seat belt signs must be on. Ensure passengers are seated. Secure galley and galley items.
Moderate Turbulence	Changes in altitude or attitude occur, airspeed fluctuations occur.		
Severe Turbulence	Large, abrupt changes in altitude/attitude occur. Usually large airspeed fluctuations occur. Airplane may be momentarily out of control.	Occupants forced violently against seat belts. Unsecured objects tossed about or lifted from the floor. Walking is impossible as is standing without holding on to something for support.	Seat belt signs must be on. Ensure passengers are seated.
Extreme Turbulence	Airplane tossed violently about, very difficult to control; may cause structural damage.		

5.5.2.5 Wake Turbulence

All pilots shall be familiar with the wake turbulence procedures contained in the AIM, Chapter 7, Section 3 for information. Particular care must be used when following aircraft with a "heavy" designation as well as others such as the B-757 that are known to generate a stronger than normal wake. Extreme caution must be used to avoid the area below and behind a vortex generating aircraft.

5.5.3   Icing and Freezing Precipitation

The flight crew shall give careful consideration to all factors involved when operating into areas of known or anticipated areas of icing and assure that the aircraft anti-icing and de-icing systems are functioning properly. No person may continue to operate an aircraft enroute, or land an aircraft when in the opinion of the PIC icing conditions are expected or met that might adversely affect the safety of the flight.

Continued flight into areas of icing greater than moderate should be avoided. If icing conditions are encountered which have not been reported or forecast, it should be reported to the nearest Flight Service Station or Air Traffic Control unit. Because of the inherent dangers of flying in freezing precipitation, Charter Express will not operate into areas of reported severe icing conditions as defined by:

Severe Icing Conditions: The rate of accumulation is such that deicing/anti-icing equipment fails to reduce or control the hazard. Immediate flight diversion is necessary.

Takeoff and Landing in freezing drizzle and light freezing rain is permitted with increased surveillance by the crew. For takeoff the most current holdover tables (HOT) and requirements for operating in these conditions must be used.

Icing Conditions, Ice covered runways require a considerable increase in runway length. That exact length is often difficult to predict. Aircraft operations on slush, snow, or ice-covered runways shall be conducted in accordance with the applicable provisions of the Aircraft Flight Manual. Under no circumstances shall operations be conducted when runway braking action is reported as "poor" or "NIL" on the runway intended to be used for that operation. Even when runways are usable, the taxiway conditions may prevent flight operations. Do not attempt to taxi on smooth or glare ice.

5.5.4   Sterile Flight Deck

For the purpose of this section, critical phases of flight include all ground operations involving taxi, takeoff and landing, and all other flight operations conducted below 10,000 feet, Critical phases also include the last 1,000 feet prior to leveling off during climbs and descents.

Flight crewmembers may not engage in, nor may any PIC permit, any activity during a critical phase of flight which could distract any flight crewmember from the performance of his duties.

These activities include but not limited to:

   a. eating meals
   b. engaging in nonessential conversations within the Flight Deck
   c. engaging in nonessential communications between the cabin and Flight Crews
   d. using personal electronic devices for nonrelated flight activity
   e. reading publications not related to the proper conduct of the flight or safe operation of the aircraft

Internet usage by crew members is to be limited to appropriate flight or company related information. One pilot shall always be dedicated exclusively to controlling the aircraft (see the Transfer of Aircraft Control section).

5.5.5   Admission to Flight Deck

During cruise, passengers may be admitted to the flight deck to observe and ask questions. At the discretion of the PIC, passengers may observe takeoffs and landings, but must be briefed on sterile flight deck procedures and emergency egress during these critical times of flight.

5.5.6   Crew Meals

Flight crew meals should be consumed only during cruise flight. The possibility of food poisoning and resulting incapacitation make it inadvisable for pilots to eat the same menu selection. Different selections should always be provided for flight crewmembers.

5.5.7   No Smoking/Fasten Seat Belt Signs

The No Smoking and Fasten Seat Belt signs will be on whenever the aircraft is in motion on the ground and during takeoff and landing. It is the policy of Charter Express that smoking is not permitted on company aircraft. Therefore, the No Smoking sign will remain illuminated for the entire flight.

After takeoff the Fasten Seat Belt sign should remain on until the PIC is satisfied that no significant turbulence will likely be encountered. On arrival after the engines have been shut down, the Fasten Seat Belt sign will be turned off. This will signify that the passengers may deplane.

5.5.8   RVSM Operational Requirements

To operate in RVSM airspace:

     a.   Aircraft must have:
           i.   Two independent altitude-measuring systems
           ii.   One secondary surveillance radar altitude reporting transponder
           iii. One altitude alerting system
           iv. One automatic altitude control system
           v.   Approval from FAA assuring accuracy

     b.   Aircrews (and contract pilots) must be trained in:
           i.   Flight planning
           ii.   Aircraft preflight
           iii. Procedures prior to RVSM airspace entry
           iv.   In-flight procedures
           v.   Post flight procedures

The following Procedures for Operation in all RVSM airspace will be followed.

5.5.8.1 Flight Planning

     a.   Verify that the assigned aircraft is approved for RVSM and that all required equipment is operating.
     b.   Annotate the flight plan to show that the aircraft and crew are approved and trained for RVSM operations.
     c.   Check current and forecast weather with an emphasis for turbulence that may affect RVSM operations.
     d.   Flight crewmembers will be thoroughly familiar with all contingency procedures in case of equipment failure while operating in RVSM airspace.

5.5.8.2 Aircraft Preflight

a. Review discrepancy log to ascertain that all equipment required for RVSM operations is working normally or the aircraft MEL allows flight into RVSM airspace.
b. During external preflight inspection pay particular attention to the static sources (especially the paint and skin condition around them) and all aircraft antennas.
c. Before takeoff set the aircraft altimeters to the local altimeter (QNH) setting and assure that the reading is within 75 feet of the known aircraft altitude above sea level and that the two primary altimeters are within 75 feet of each other.
d. All RVSM required equipment should be checked for normal operation prior to takeoff if a check of that system can be performed.

5.5.8.3 Procedures Prior to entering RVSM airspace

a. Assure that the altitude alerting system is working properly prior to entering RVSM airspace.
b. Engage the autopilot prior to Flight Level 280 and operate the autopilot at all times above Flight Level 280, to assure proper altitude control system operation.

5.5.8.4 RVSM In-Flight Procedures

a. Flight crews should comply with aircraft operating restrictions (if required for the specific aircraft group) related to RVSM airworthiness approval;
b. Emphasis should be placed on promptly setting the sub-scale on all primary and standby altimeters to 29.92 in. Hg/1013.2 (hPa) when passing the transition altitude and rechecking for proper altimeter setting when reaching the initial cleared flight level (CFL);
c. In flight it is essential that the aircraft be flown at the cleared flight level. This requires that particular care be taken to ensure that ATC clearances are fully understood and followed. Except in contingency or emergency situations, the aircraft should not intentionally depart from the cleared flight level without a positive clearance from ATC;
d. The pilot flying will adjust the rate of climb or descent to 1000 feet per minute or less for the last 1000 feet prior to level off altitude;
e. The pilot flying the aircraft will orally state when the aircraft begins to level at a RVSM altitude;
f. The Pilot Not Flying will confirm the level off. During cleared transition between levels, both crewmembers will ensure any altitude overshoot or undershoot does not exceed 150 feet.
g. The autopilot will be engaged at all times while operating in RVSM airspace. An automatic altitude-control system should be operative and engaged during level cruise, except when circumstances such as the need to re-trim the aircraft or turbulence require disengagement. In any event, adherence to cruise altitude should be done by reference to one of the two primary altimeters;
h. Both crewmembers will be aware of how any in-flight turbulence is affecting the aircraft altitude;
i. The altitude-alerting system should be operational

j. When leveling off at cruise altitude and at intervals of approximately one hour, crosschecks between the primary altimeters and the stand-by altimeter should be made. A minimum of two primary altimeters should agree within 200 feet or a lesser value if specified in the aircraft-operating manual. The one-hour station checks would be an opportune time for accomplishing this check. Failure to meet this condition shall require that the altimetry system be reported as unreliable and ATC notified. The difference between the primary and stand-by altimeters should be noted for use in contingency situations:

   i.   The normal pilot scan of flight deck instruments should suffice for altimeter cross-checking on most flights,
   ii. At least the initial altimeter crosscheck in the vicinity of the point where Class II navigation is begun should be recorded (e.g., on coast out). The readings of the primary and standby altimeters should be recorded and available for use in contingency situations;
   iii. Normally, the altimetry system being used to control the aircraft should be selected to provide the input to the altitude-reporting transponder that is transmitting information to ATC; and
   iv. If the pilot is notified by ATC of an Actual Aircraft Deviation error that exceeds 300 feet then the pilot should take action to return to the cleared flight level as quickly as possible.

5.5.8.5 Post Flight Procedures

Discrepancy write-ups of RVSM required equipment must be clear and complete. The following information is important when making a write-up as it will assist maintenance in repairing the equipment:

   a. Primary and secondary altimeter readings
   b. Altitude selector settings
   c. Subscale (Coleman window) setting on the altimeter
   d. Autopilot used and differences if alternate autopilot is used
   e. Altimeter readings if alternate static source selected
   f. Air data computer selected and alternate uses
   g. Transponder selected and alternate uses

5.5.9 Altitude Awareness

Crew coordination is essential in altitude management. Upon receiving a new altitude assignment from ATC, the PNF will read back the altitude to ATC, set the newly assigned altitude. The PF will confirm the altitude selected. As the autopilot captures the assigned altitude, the PF will state, "Altitude captured". If there is any doubt about the proper altitude assignment by either flight crewmember, confirmation will be requested from ATC.

5.5.10 Automation Philosophy

Automated Flight Control Systems - Highly automated cockpits are the norm in aircraft today and does much to enhance safety, reduce crew workload, and improve operational capability. Pilots must maintain the skills required to operate all levels of automation and the skill to shift between levels when required. The level chosen should permit a comfortable workload and maintenance of situational awareness.

The following apply to the use of automation:

a. One pilot shall be dedicated exclusively to controlling the aircraft, regardless of the level of automation in use.
b. Both pilots must be aware of all settings and changes to the auto- flight systems.
c. Use of automation in high density areas is helpful and recommended, but never to the extent that tasks are allowed to interfere with outside vigilance.

The levels of automation below can be described in terms of Direct, Basic Tactical and Strategic employment.

5.5.10.1 Level One

No automation is employed. Autopilot, flight director and auto throttles are disconnected. With the exception of visual approaches and deliberate decisions to maintain flying proficiency, Level One is essentially a non- normal mode for advanced Flight Deck aircraft. It is, however, appropriate for any situation in which immediate, direct control of the aircraft flight path is necessary, including:

a. Suspicious, confusing or unexpected response from the automation or flight instrument displays
b. Wind shear recovery
c. Collision avoidance maneuvers, including a response to a TCAS or a PRM breakout instruction
d. Aircraft upset
e. GPWS terrain warning

5.5.10.2 Level Two

Airplane is being hand-flown with basic flight director guidance. This is the primary mode used for takeoff, initial departure, and landings.

5.5.10.3 Level Three

Autopilot may be in use. Flight director may be coupled to raw radio data or basic modes such as HDG or ALT. Aircraft speed and vertical/lateral flight paths are controlled through the Flight Guidance Control Panel (FGC) on a tactical basis. This level is appropriate when responding to ATC instructions in dynamic environments such as terminal operations, including close-in changes in the landing runway.

5.5.10.4 Level Four

Full use of automation in LNAV/VNAV operation. Flight director and autopilot are engaged. This is the primary level of automation for non- terminal operations of advanced Flight Deck aircraft. FMS is used for the control of both lateral and vertical flight paths on a strategic basis. Great care must be taken to maintain situational awareness. Monitoring and mode awareness are critical.

Use of the highest levels of automation during terminal operations must be limited to situations permitting advance preparation, review of FMS programming and complete crew briefings. Level Four is not appropriate when significant changes to route or landing runway have been issued by ATC. In those situations, pilots should revert, at least temporarily, to lower levels of automation.

5.5.10.5 Automation Policies

It is important for Flight Crewmembers to be proficient with all levels of automation and be able to recognize when a lower level of automation is necessary. For standardization purposes, the operation of the flight director computer, flight director and FMS will be performed as follows:

a. AUTO-PILOT ENGAGED: When operating with the autopilot engaged, all flight director mode selection (approach, Nav., etc.) and heading changes will be made by the pilot flying (PF). These functions may be delegated as necessary to the Pilot Not Flying (PNF) when operating in "high workload" environments. The pilot flying (PF) preferences should be clearly indicated during the preflight briefing or as conditions warrant.

b. AUTO-PILOT NOT ENGAGED: When operating with the autopilot not engaged; flight director mode selection (HDG, NAV, APP, etc.) will be made by the pilot not flying (PNF) under the direction of the pilot flying (PF), assignments of the HDG, ALT, Speed by ATC will be set by the pilot not flying (PNF) and verified by both crewmembers. These functions may be performed as necessary by the pilot flying (PF) when operating in "high workload" environments. The pilot flying (PF) preferences should be clearly indicated during the preflight briefing or as conditions warrant.

c. The Pilot Not Flying (PNF) will set up all communications and navigation frequencies. Because of the controls location, each crewmember will set their respective navigation course (ILS, VOR) unless otherwise communicated by the pilot flying (PF).

5.5.10.6 FMS Procedures

Before each flight, during the avionics setup the crew should check/set the following items. If a different speed is required, the crew should select manual speed and adjust as needed

a. Select the FMS Speeds and verify the following standard configuration:

  Climb: 260/.72
  ii. Descend: 300/.80/3.0
  iii. Departure: 200kts/4.0nm 2500 AGL

b. APPROACH
  i. Clean: 190
  ii. SF1: 180
  iii. SF2: 160
  iv. SF3: VAP

The pilot flying (PF) shall not divert his attention from aircraft control in order to make FMS inputs. The Pilot Not Flying (PNF) will be responsible for all inputs to the FMS as directed by the PF or as required to comply with ATC clearances and instructions. FMS inputs shall be visually verified by the PF in the waypoint list as being correct prior to being activated. When making FMS inputs, the PNF will hold at the "activate" prompt to allow the PF to confirm the modification is correct. The PF will then state "Activate"; The PNF activates the change and states LNAV available, the PF will confirm LNAV captured.

No changes in FMS programming or Flight Director Modes will be initiated without verbal communications and acknowledgment.

a. BEFORE STARTING THE ENGINES: All FMS programming should be accomplished prior to starting the engines. If a SID is part of the departure clearance, it will be reviewed by both crewmembers.
b. IFR APPROACH: The FMS approach programming and approach briefing should be completed and reviewed by both pilots before 10000 feet AGL. If possible, this operation should take place during low workload periods such as cruise flight.
c. VISUAL APPROACH: a visual approach should be backed up with any available instrument approach, an ILS being the first choice and a GPS second. In any other instances, the runway threshold with extended centerline will be selected.

As a final conclusion, it is important to keep in mind that without proper communication, situation and mode awareness can be compromised. Both crewmembers should have the same "mental picture" (both lateral and vertical) of the intended flight path of the airplane. A FMS flight plan review and a MFD display by reference to the longitudinal axis will enhance situational awareness. Unless advance preparation is available, any new ATC instructions such as runway change will probably require a lower level of automation. Attention to duty is the mark of a professional pilot and important to the safe operation of the aircraft. Periodic self-assessment as to the level of professionalism an airman is maintaining might take the form of a question: "Am I in the loop, out of the loop, or am I just wondering where the loop is (i.e. Helmet Fire)?"

5.5.11 RNAV Operations

The following principles apply to all area navigation system (FMS, GPS, etc.) operations:

a. Pilots shall maintain proficiency in programming and operating their aircraft's area navigation system. Initial and recurrent training will include use of FMS for departure, enroute, arrival, holding, approaches, and missed approach operations.
b. Both pilots should never simultaneously become involved with area navigation system tasks.
c. Bearing and distance between each waypoint should be verified by crosscheck of charted information. Due to the differences in magnetic variation models, small differences in magnetic courses are acceptable.
d. The EFIS map display should have the active waypoint visible during departure and descent in order to provide effective position awareness. If an active waypoint is "off-scale" on the EFIS map, the crew should verify its position by reasonableness of bearing and distance and checking another source such as the chart or computer flight plan. When available, raw data should be tuned and displayed to maintain position awareness on long "direct" legs.
e. Avoid excessive heads-down time at low altitude for system operation. Raw data VOR, ILS, and ADF displays should be used in the traditional manner whenever necessary. When ATC issues close-in changes to route or runway, raw data should be tuned and displayed FIRST. Reprogramming of the FMS should not be attempted unless it can be accomplished in accordance with Flight Operations policies on waypoint entry, review and confirmation.
f. For departures, arrivals, and approaches, appropriate charts will be out of the flight kit, opened and available. During the enroute phase of flight, supporting documents should be readily available for use even though total auto-flight/FMS navigation may be in use. This practice promotes situational awareness, makes additional information readily available for route changes, and provides backup in the event of FMS failure.

5.5.12 EGPWS/TAWS

Controlled Flight into Terrain (CFIT) continues to be one of the greatest risks to safety of flight. The most effective tool for prevention has been shown to be the Ground Proximity Warning System (GPWS).

When a GPWS warning occurs the pilot flying (PF) must immediately, without hesitating to evaluate the warning, execute whatever pull up action is required to silence the warning and assure the crew of terrain clearance. This immediate pull up maneuver should be followed except in clear, daylight, visual meteorological conditions when the flight crew can immediately and unequivocally confirm a false GPWS warning.

Flight crews will use the terrain display function (on aircraft so equipped) tied to the MFD when terrain threats are a consideration and as described in the expanded checklist sections of the AFM.

5.5.13 Cockpit Voice Recorder (CVR)

The CVR as equipped shall be operated continuously from the time the electrical power is first applied to the time that the aircraft is shut down and the electrical power is removed.

No communications may be erased from the CVR from the time that the electrical power is applied for the purpose of flight. The CVR is a tool used exclusively for the purpose of investigating an accident or incident. Any information gathered from the CVR is to be used only for that purpose and will not be released to anyone not involved in such investigations. Follow AFM procedures for disabling the CVR following an incident to preserve the data.

5.5.14 Flight Data Recorder (FDR)

The FDR as equipped, shall be operated continuously from the time the electrical power is first applied, to the time that the aircraft is shut down and the electrical power is removed.

The FDR is a tool used exclusively for the purpose of investigating an accident or incident. Any information gathered from the FDR is to be used only for that purpose and will not be released to anyone not involved in such investigations. Follow AFM procedures for disabling the FDR following an incident to preserve the data.

5.5.15 Traffic Collision Avoidance System (TCAS)

All TCAS operations should be in accordance with the Approved Flight Manual Supplement for the equipment. The ACAS II equipment, known as TCAS II, provides a last resort safety net designed to prevent mid-air collisions between aircraft. To achieve the full safety benefit of TCAS II, it is critical that pilots respond accurately and promptly to resolution advisories (RAs). Even in aircraft with a TCAS II onboard, the crew must continue to maintain a visual lookout to avoid collisions, because some aircraft, either do not transmit their altitude via the transponder and thus can only be the basis for a TA, or are invisible to the TCAS II system because they are not equipped with a transponder. Any time you comply with a RA be sure to use the correct phraseology.

The TCAS system shall be on at all times during flight as per FAR 91.221(b) in all meteorological conditions. "TA/RA" mode shall be selected unless the crew deems that the current situation, operating conditions, or TCAS limitations make use of "TA Only" mode desirable.

TCAS does not relieve the crew of their "see and avoid" responsibility under the FARs. Crewmembers must remain vigilant to the possibility that other aircraft may be flying in close proximity to their aircraft. Visual scanning along the aircraft flight path is required any time meteorological conditions permit.

During the departure/climb out phase of flight the TCAS shall be selected to "NORMAL" and the range shall be selected to no more than 20 miles (a lower range should be selected in congested airspace). This setting shall be held until in positive control airspace above FL 180.

During the enroute phase of flight, the TCAS system may be selected to any mode or range appropriate to the route and altitude being flown.

During the descent, approach, and landing phases of flight, the TCAS system shall be selected to "NORMAL" and the range shall be selected to no more than 20 miles (a lower range should be selected in congested airspace). This setting shall be initiated when descending out of positive control airspace below FL 180.

5.5.16 Supplemental Oxygen Equipment

The following precautions must be observed when oxygen is in use:

a. The PIC will ensure the "No Smoking" sign is illuminated and strictly observed whenever oxygen is being used.
b. Crewmembers will be familiar with the location and use of walk- around oxygen bottles.
c. Crewmembers will not leave their stations to administer to the passengers unless they use a walk-around oxygen bottle.

5.5.17 Flights Over Water

For flights over water more than 50 nautical miles from the nearest shore (beyond gliding distance from the nearest shore), aircraft shall be equipped with a life jacket or flotation device for each occupant.

For flights over water more than 30 minutes flying time or 100 nautical miles from the nearest shore, all aircraft must be equipped with:

a. A life jacket, having a survivor locator light, for each occupant of the aircraft;
b. Enough life rafts, each having a survivor locator light, a pyrotechnic signaling device and a survival kit, to accommodate all occupants of the aircraft;
c. A buoyant, water-resistant signaling device;
d. Radio communications equipment able to transmit to and receive from a surface facility, including:
    i.   Two transmitters;
    ii.   Two microphones;
    iii. Two headsets or one headset and one speaker;
    iv.   Two receivers; and
    v.   Two independent radio navigation units.

5.5.18 Microphones

Headsets or earpieces shall be used in lieu of speakers on all aircraft below the transition level.

5.6   Approach and Landing

5.6.1   Instrument Approach Procedures

When an instrument letdown to an airport is necessary, Charter Express aircraft will use a standard instrument approach procedure described in the Jeppesen/NOS Electronic Charts. The authorized Decision Altitude (DA) or Minimum Descent Altitude (MDA) is the highest of the following:

a. The DA or MDA prescribed by the approach procedure.
b. The DA or MDA for which the aircraft is equipped.

No aircraft will be operated below the published MDA or DH except in accordance with paragraph 5.6.14 of this manual. Approaches to airports where the reported visibility is below the visibility minimum on the approach chart are not authorized. If RVR reports are available, they shall be considered the controlling visibility reference. However, if the aircraft is established on the final approach segment (passed the FAF or established on the glide slope below the published GS intercept altitude) and the weather is then reported below the approach chart visibility value, the approach may be continued to the missed approach point (MAP) and altitude at which point the requirements of Paragraph 5.6.14 must be met or a missed approach will be executed

5.6.1.1 Weather Restrictions

The PIC will comply with all FAR's and company guidance in regards to weather restrictions. In addition, approaches will not be flown when:

a. Wind or gusts exceed 50 knots.
b. Known wind shear reported on the runway or up to 2,000 ft above the surface that causes doubt as to the capability of the aircraft to sustain normal flight through the shear activity.
c. Crosswind component exceeds the demonstrated crosswind component in the AFM.
d. At Aspen, CO. (KASE) or Sun Valley, ID. (KSUN); during the period between one hour after official sunset and one hour before official sunrise.
e. At other airports under conditions that may be set by the Director of Aviation.

5.6.1.2 Mountainous Airport Operations

Mountainous airport operations present an increased risk, therefore additional planning and consideration is required to help mitigate these risks. Mountainous airports often have higher than normal approach minimums making fuel planning and non-standard alternate airport weather minimums a vital part of preflight planning. Many mountainous airports often have night time airport curfews and approach procedures that limit aircraft to day only use. Due to procedure design restrictions many approaches may not have straight-in approach minimums, limited to only certain categories of aircraft, and could have increased missed approach climb gradients. Pilots need to thoroughly review all approaches and arrival procedures in the preflight planning stage to identify issues as early as possible before the aircraft departs.

Additional Preflight planning considerations:

a. Steep descent angle straight-in approach maneuver.
b. Configuring the aircraft early to assist with steep descent angle approaches.
c. Flaps 2 landing configuration.
d. Missed Approach climb gradient restriction.
e. Missed Approach maximum turn radius and speed restrictions.
f. Procedures in the event of a low level balked landing.
g. Performance data listed in section 5.4.3.

Arrival:

It is the recommendation of Charter Express that the crew will use a published Instrument Approach Procedure (IAP) or a Charted Visual Flight Procedure (CVFP) to transition to the landing phase at mountainous airports regardless of the visual conditions.

Circling Only Minimums except for Aspen (KASE) where 4500/6 are authorized for arrival.

Due to procedure design restrictions, some straight-in procedures will only publish circling minimums. It is important to note that the fact that straight-in-minimums are not published does not preclude pilots from landing straight-in if they have the active runway in sight and have sufficient time to make a normal approach for landing. Under such conditions and when ATC has cleared them for landing on that runway, pilots are not expected to circle even though only circling minimums are published. If they desire to circle, they should advise ATC

Although Charter Express aircraft are category C; Company Policy is that all circling maneuvers are to be accomplished using Category D minimums.

If a straight-in approach only publishes circling minimums but does not publish category D minimums, the crew must be assured that weather conditions and terrain are sufficient to allow the aircraft to land straight-in without the need for a circling maneuver. If this cannot be assured, an alternate airport should be considered.

Departure:

One-Engine Inoperative Contingencies:

When higher than standard climb gradients are required due to obstacles surrounding the airport, there will be published Obstacle Departure Procedures (ODP) or Standard Instrument Departures (SID), to assist the pilot in maintaining obstacle clearance while transitioning to the En-Route structure. It should be noted that the departure procedure design, including climb gradients, does not take into consideration the performance of a particular aircraft; it only considers obstacle protection for all aircraft. Published Departure Procedures, design using both TERPS and ICAO standards, are based on all engines operating; contingency procedures in the event of engine failure or other emergency after V1 remain the operator's responsibility.

The following are acceptable methods of meeting these contingencies:

a. Assure that the aircraft takeoff weight is appropriate to meet the published ODP or SID climb gradient with one engine inoperative, for the conditions at time of departure.
b. Depart with weather conditions that will allow a climb with one engine inoperative to the Minimum Safe Altitude, Minimum En-Route Altitude or Minimum Off-Route Altitude in visual conditions, using see and avoid techniques for lateral and vertical obstacle clearance. This is **NOT** permitted at night.

When utilizing a published ODP or SID in mountainous areas, the recommended operating practices for company aircraft are:

a. When weather conditions are below 3SM visibility and/or 1000FT ceiling: depart at a weight and temperature that will allow the aircraft to meet or exceed the published TERPS/ICAO climb gradient. This is determined by using the AFM or the aircraft performance calculator EFB-Pro.

b. When weather conditions are between 3-5SM visibility and/or 1000FT-3000FT ceiling: Determine both the maximum takeoff weight to meet the published SID or ODP climb gradient using the AFM or the aircraft performance calculator EFB-Pro and the maximum takeoff weight published in the APG takeoff runway analysis report. The aircraft should be loaded so that the takeoff weight is not greater than approximately midway between the two takeoff weight values, at the time of departure.

5.6.1.3 General Procedures

Both members of the flight crew will monitor the performance of the aircraft and the actions of other crewmembers to ensure that all procedures are accomplished in a safe and effective manner.

While enroute the PNF will review with the PF:

a. The latest ATIS information (if available), destination weather, runway, type approach in use and NOTAM data as soon as practical.
b. Aircraft performance data and requirements.
c. Airport data to include elevations, obstacle location and heights, runway dimensions, lighting systems, taxiway layout and FBO location.
d. Brief the anticipated IMC or Visual approach to be flown with the PF.
e. Program all FMS to the extent possible for the approach to be flown.
f. Verify all navigation and communication frequencies at an appropriate time.
g. For both instrument and visual approaches, the PNF will tune in all available navigation aids and set them up to provide the aircrew with additional reference information for the approach.

5.6.1.4 Approach Category

The minimum approach category for Charter Express aircraft will be in accordance with the AFM.

5.6.2 IFR / IMC Approach Briefing

A full IFR approach briefing will be conducted whenever the reported or forecasted weather conditions are below VFR minimums or if an instrument approach is expected or requested. The instrument approach plate will be used for reference during the approach briefing. It is highly recommended that the autopilot be used during the crew briefing.

The crew briefing should include a discussion of at least the following for approaches in IMC in this recommended order:
   a. Approach to be used
   b. All navigation frequencies and the inbound courses verified
   c. Pertinent altitudes, including the FAF altitude, step downs and minimums (DH / MDA)
   d. Field elevation and TDZE
   e. Minimum Safe Altitude (MSA)
   f. The missed approach procedure, holding fix including entry to be used and pattern
   g. Minimum visibility required for the approach
   h. Target final approach speed
   i. Additional additives as required by conditions.

After the actual approach to be flown is briefed, the (PF) will complete the remainder of the briefing concerning the conditions at the destination, such as wind, and possible alternate airport, runway contamination, icing, convective activity, anticipated turn off taxiway, etc. If the approach and landing do not present any unusual circumstances, the pilot flying (PF) will reply "Complete" when challenged by the pilot not flying (PNF) during the 18000 / DESCENT / APPROACH check.

The following is a Sample IMC Approach Briefing:

This will be an ILS approach to Runway 4L at Little Rock Ar. The localizer frequency is 110.3 and the inbound course is 045 degrees. We'll cross Lasky at 1812 feet MSL down to the decision altitude of 508 feet MSL which is 250 feet on the radar altimeter. The airport elevation is 266 feet with a touchdown elevation of 258 feet. The MSA is 3300 feet in all quadrants. The missed approach procedure is climb to 1500 feet then a climbing left turn to 3500 feet outbound via the LIT VOR radial 303 to ROLAN intersection and hold. It will be a tear drop entry with right hand turns. The minimum required visibility is ¾ of a mile or 4000 RVR. Your Vref speed of 115 knots.

If the airport of intended landing is an uncontrolled airport the pilot not flying (PNF) will contact UNICOM and obtain the airport advisory information as soon as practical and if possible, monitor the frequency for traffic while inbound to the airport.

5.6.2.2 Circling Approach Briefing

In addition to the items included in the IFR Approach briefing described above, the following subjects will be briefed and discussed for circling approaches:

    a.   Approach Category: Use Category D minimums
    b.   Entry, direction and pattern of the circling maneuver.
    c.   Aircraft configuration during the circling approach
    d.   Speeds to be flown.
    e.   Missed approach procedure, if instrument conditions are encountered during the circle.

> Note   Special attention will be given to terrain and obstruction clearance altitudes, as shown on approach charts.

5.6.2.3 VFR / VMC Approach Briefing

A modified version of the IFR approach briefing will be used. The crew briefing should include but not limited to a discussion following in this recommended order:

    a.   Airport and runway to be used
    b.   Field elevation and pattern altitude
    c.   Pattern entry, i.e. "Overhead for a left downwind"
    d.   Course guidance (ILS backup, GPS or extended runway centerline)
    e.   Obstacles in the vicinity of the airport
    f.   Target final approach speed
    g.   Additional additives as required by conditions.

> Note   All visual approaches shall be backed up by an instrument approach if available.

The following is a sample of a Visual Approach Briefing:

This will be a visual approach to runway 4L at Little Rock, AR. The field elevation is 266 feet with a traffic pattern of 1800 feet. It will be a straight in approach backed up with the ILS. The localizer frequency is 110.3 with an inbound course of 045 There are several towers to the west of the inbound course. Your VREF speed is 115 knots.

5.6.3   Navigation, Radio and Visual Approach Guidance

Both electronic glideslope indications should be followed during VFR approaches as well as during IFR conditions. During IFR conditions, navigation station identifiers will also be verified by reception of the published aural identification signal. Station identifiers are accomplished by the code displayed on the PFD (i.e. the ILS 4L will display ILIT indicating the correct frequency is tuned).

Visual approach guidance such as VASI, PAPI, T-Bars, etc. will be followed when installed unless the use of such systems is not operationally feasible.

The Pilot not Flying (PNF) normally accomplishes communication radio tuning and air to ground communications. Radio tuning should be coordinated so the previous radio frequency is maintained in another tuning head until contact is made on the new frequency.

All ATC instructions or clearances must be read back to ATC exactly as given by the controller. If there is any doubt, clarify with the controller. The PF shall then confirm the new clearance or instruction. Crewmember radio procedures are a mark of airmen professionalism. Clever or "cool" is not necessarily the way you sound to others. The Aeronautical Information Manual is the final authority regarding acceptable radio phraseology. Do not use nonstandard terminology. This is an easy habit to fall into, but a bad one. It just causes confusion and unnecessary radio transmissions to clarify what you said. Use courtesy and exhibit a calm demeanor when communicating with ATC and other agencies. It never pays to become angry when dealing with anyone on the radio. Remember, we can't see their radar screen and can't know the complete traffic situation.

Navigation radios should be tuned by the pilot not flying (PNF) on direction or request of the pilot flying (PF). A navigation frequency shall not be changed without notifying the other pilot. The Pilot not Flying (PNF) will identify each navigational radio frequency when selected. Approach aid frequencies shall always be identified and compared with the approach chart with particular attention that the proper approach procedure has been selected. During NDB approaches the NDB radio should be monitored throughout the approach. Do not fail to reconfirm the frequencies and procedures if the controller changes an approach or a runway. Request an extended pattern or holding if necessary, to comply with a changed situation.

5.6.4 Display and Monitoring Requirements

Both pilots will display the approach in accordance with the Aircraft Flight Manual. Raw data is the final authority.

5.6.5 FMS/GPS Approach Operations

Situational awareness, briefings and communication are critical to successful execution of FMS/GPS approaches.

a. Crews should use all available radio navaids, but also should attempt to navigate using identical navigation displays.
b. FMS programming for the IAP and the approach briefing should be completed prior to arrival into the terminal area, preferably prior to descent. The CDU should be examined to confirm that all waypoints and course/distances contained in the database procedure, including the missed approach, conform to the printed chart. The approach chart is the final authority.
c. The PNF selects the database Instrument Approach Procedure (IAP), programs the FMS, reviews the entries and modifications with the PF.
d. Review should include crosscheck of individual leg course/distance as well as the vertical constraint and descent angle at each waypoint.
e. Proper setting of the Altitude Selector (ASEL) is critical to VNAV approach operations. Upon capturing an assigned altitude, Charter Express Investments Holdings LLC crews will preselect the next required altitude for the procedure. The PNF will set the ASEL as requested by the PF. After the final altitude on the approach is captured, the missed approach level off altitude will be selected in the ASEL window. Both pilots will confirm all settings verbally.

5.6.6   SBAS Approaches

There are three approved SBAS approach types:

a. Approaches that use LNAV for lateral guidance continue to operate the same as they currently do providing a 400 to 600 ft. minimum descent altitude. However, the lateral accuracy has been greatly increased because of the updated GNSS position data.
b. Approaches that use Baro-VNAV for vertical guidance provide a 350 to 400 ft. minimum descent altitude. These approaches are used when failures or faults prevent the use of full vertical guidance of a GNSS signal. The vertical guidance is based on barometric altimetry and is subject to pressure altitude and temperature variations which may require a correction factor.
c. LPV approaches are Localizer Performance with Vertical guidance approaches. They are an ILS look-alike approach, in that the FMS simulates the ILS glideslope using information found in the navigation database. Like an ILS, LPV approaches do not use barometric altimetry in their vertical glide path computations. LPV approaches are not subject to the same temperature and pressure variations as Baro-VNAV approaches. LPV is a minimum that provides near Category I decision altitudes of 200 to 300 ft.

5.6.7   VNAV for Non-Precision Approaches

VNAV can facilitate a stabilized, constant descent during non-precision approach operations. The stabilized descent is preferable to the traditional "dive and drive" descents previously associated with non-precision procedures. Pilots should be mindful that the VNAV path is based upon barometric air data and unlike an electronic glideslope, a VPATH is susceptible to corruption by altimetry errors. Also, it is critical to understand that descents below the MDA must be conducted visually, as obstacle clearance is not provided by the VPATH pointer below Minimum Descent Altitude (MDA). For straight in approach procedures; Charter Express has adopted the Continuous Descent Final Approach (CDFA) technique.

For approach procedures in the United States, where vertical navigation minimums (LPV or LNAV/VNAV) are not provided, Flight Crews shall add the mean vertical margin of 40 feet to the published MDA (H) and use the derived DA (H) to avoid descending below the MDA (H) in case of a Missed Approach.

> Note   For approaches outside of the United States, Flight Crews will consult the appropriate States rules.

The following points must be taken into consideration:

a. The path characteristics vary, depending upon the design of the IFR procedure and most significantly, the location of the missed approach point (MAP) specified by the chart. Crews must ensure that the FMS computed glidepath is calculated to the threshold of the approach runway.
b. Crews must also consider intermediate level off restrictions inside the FAF and ensure that the computed glidepath does not result in descending below them.
c. While VNAV "guidance" often is displayed below MDA, it provides no guarantee of obstacle clearance. VASI/PAPI and other visual references should be used to establish and maintain a stabilized descent to the runway. Following VNAV guidance below MDA in IMC is never permitted.

d. Crosscheck of distance to TOD and VNAV pointers is required prior to the FAF; VNAV should not be used if pointers disagree by more than a half of a dot.

e. Altitude pre-selector (ASEL); is set to Missed Approach altitude once passing FAF.

5.6.8   Stabilized Approach

All Approaches should be stabilized by 1000' AGL. An approach is stabilized when the following criteria are met:

a. The aircraft is on the correct flight path
b. Only minor changes in heading/pitch are required to maintain the correct flight path
c. The airspeed is not greater than 20 knots above the approach speed and is not below the approach speed.
d. The aircraft is in the correct landing configuration.
e. Sink rate should be no greater than 1000 feet per minute
f. Power setting is appropriate for aircraft configuration.
g. All briefings and checklists have been completed.
h. ILS approaches must be within one dot of course and glideslope

On non-precision approaches and during circling maneuvers, it may not be possible to establish final landing configuration until later in the approach. In such instances, the pilot will stabilize the approach as soon as possible before landing. An approach that becomes destabilized below 1000 feet AGL under IMC conditions and 500 feet AGL for VMC conditions requires an immediate go-around. A stabilized approach is the safest profile and it is one of the most critical elements of a safe approach and landing operation. The aircraft should be stabilized on profile prior to descending through the1000 feet above the touchdown zone in Instrument Meteorological Condition (IMC) or through 500 feet above Touchdown Zone Elevation (TDZE) in Visual Meteorological Conditions (VMC). Configuration, trim, speed, and glide path should be at or near the optimum parameters early in the approach to avoid distractions and conflicts as the airplane nears the threshold window. The electronic or visual glide path or an optimum safe glide path should be established and maintained. The airplane should be in the proper landing configuration, on the correct lateral and vertical track. Airspeed should be within the acceptable range specified in the AFM landing data. Airspeed control should assure that the aircraft will arrive at
50 feet above the landing surface at briefed Vref speed. It should be noted, as it applies to stabilized approaches, that following lateral and vertical tracks should require only normal bracketing corrections (i.e. small corrections in airspeed, rate of descent and variations from the lateral and vertical path). An approach that requires abnormal bracketing does not meet the stabilized approach concept, and a go-around should be initiated.

5.6.9   Side Steps and Circling Approaches

Side step or circling approaches are authorized, provided they are flown using a conservative philosophy. A side step or a circling approach will not be attempted in marginal conditions or if the crew has any reservations about the appropriateness or safety of the maneuver.

5.6.9.1 Side Step

A crew may request a side step maneuver to complete the landing phase of an approach on a parallel or conveniently aligned runway. Normally, the request will be made to the Tower controller after passing the marker. If approved for the side step, the crossover maneuver must be completed not lower than 500 feet AGL. Similar crew procedures should be used for the side step as those used for the circling approach.

5.6.9.2 Circling Approach

Flight crews will use the following guidance to supplement normal circling approach procedures:

Circling approaches are a demanding maneuver and shall be carefully briefed prior to commencement. The auto-pilot should be used in accordance with the AFM during the circling portion of the circling approach for better altitude control and pilot orientation. In no case will the pilot flying (PF) descend below the published MDA during the circling maneuver until such time as further descent is required to intercept a normal glide path for landing.

   a. Category D circling minimums will be used for all Company aircraft.
   b. One pilot must have continual visual reference with the airport. The pilot who can best maintain visual reference with the active runway should fly the initial portion of the circling approach. The full attention of the PF is required outside the aircraft to keep the runway in view and to position the aircraft for landing.
   c. The PNF must closely monitor the instruments and call out any deviations in airspeed deviations of +5 knots and altitude deviations of +50 feet. He should also advise the PF of excessive bank angles or pitch attitudes.
   d. Because the aircraft will be maneuvering, the crew may elect to delay configuring the aircraft for landing until established in the airport traffic pattern. Fly in accordance with the AFM procedures.
   e. If the circling maneuver is being flown from the right seat, and the pilot in the left seat determines that the aircraft is in a position from which he can comfortably complete the visual approach to landing, he will call "I have control," and use prescribed procedures to take the controls. Following the transfer, the right seat pilot will monitor the approach, paying close attention to altitude, airspeed, angle of bank, and pitch attitude.
   f. If instrument conditions are encountered during the circling maneuver, or if the PF loses visual contact with the airport environment, a missed approach shall be executed immediately. The PF will initiate a climb while turning the aircraft toward the landing runway. When established on the missed approach course for the instrument approach flown, the PF will complete the published missed approach procedure. Control will not be transferred during the missed approach, except for pilot incapacitation or a mechanical malfunction that requires the aircraft to be flown from the opposite side.

Circling approaches are not recommended under conditions of low ceilings and visibility or at night. They are prohibited when the ceiling and visibility are reported below 800 feet and 2 miles in daytime, 1000 feet and 3 miles in nighttime, or published landing minimums, whichever is greater.

5.6.11 Night Landing

When practical under existing traffic, wind, and runway conditions, a landing runway shall be selected that has ILS, VASI or other glideslope references available during all night operations. In the absence of glideslope aids, a downwind entry and normal pattern is preferred. Straight-in approaches to runways over areas lacking lighted ground references and without glideslope reference are not recommended.

5.6.12 Precision Runway Monitor (PRM)

ATC procedures permit ILS instrument approach operations to dual or triple parallel runway configurations. Approaches designated as Simultaneous Close Parallel are also designated as PRM Approaches.

Parallel approach operations demand heightened pilot situational awareness. A thorough Approach Chart review should be conducted with, as a minimum, emphasis on the following approach chart information: name and number of the approach, localizer frequency, inbound localizer/azimuth course, glide slope intercept altitude, decision height, missed approach instructions, special notes/procedures, and the assigned runway location/ proximity to adjacent runways. Pilots will be advised that simultaneous ILS/ MLS or PRM approaches are in use. The close proximity of adjacent aircraft conducting these types of approaches mandates strict pilot compliance with all ATC clearances. Strict radio discipline is mandatory during parallel approach operations. This includes an alert listening watch and the avoidance of lengthy, unnecessary radio transmissions. Attention must be given to proper call sign usage to prevent the inadvertent execution of clearances intended for another aircraft. Use of abbreviated call signs must be avoided to preclude confusion of aircraft with similar sounding call signs. Pilots must be alert to unusually long periods of silence or any unusual background sounds in their radio receiver. A stuck microphone may block the issuance of ATC instructions by the final monitor controller during the approach.

Charter Express' pilots are certified for PRM approaches using the FAA training resources website www.faa.gov/training_testing/training/prm/. Documentation of its completion is maintained in the pilot's Training Folder.

5.6.13 Visual Descent Point (VDP)

A VDP should be calculated before flying any non- precision approach. The VDP is that point along the final approach course from which a 3-degree glideslope from the MDA allows a touchdown within the first 1000 feet of the landing runway. (VDPs are not applicable to circling approaches.) If an approach does not have a published VDP, use the following guidelines:

5.6.13.1 LOC/VOR/DME Approach

To calculate the distance of the VDP from the runway, multiply the height of the MDA above the airport by 0.003 (or multiply by 3 and divide by 1000). Use the answer (expressed in miles) and adjust the final approach DME by that amount

	Example:	MDA	2,000' MSL
		Field elevation	1,500' MSL
		Height of MDA above airport	500' AGL
	Calculation:	500 x .003 = 1.5 miles from the runway to VDP	

5.6.13.2 Timed Approach

To calculate the time from the FAF to the VDP on a timed approach, multiply the height of the MDA above the airport by 0.1. (Or divide by 10) and subtract the answer (expressed in seconds) from time-to-miss. Using the example above:

Calculation: 500 x 0.1 = 50 seconds
Time to miss = 2:55
Time to VDP = 2:55 - :50 = 2:05

5.6.14 Requirements for Landing

Pilots may not operate an aircraft at any airport below the authorized MDA or continue an approach below the authorized DA unless:

a. The aircraft is continuously in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal maneuvers, and;
b. The flight visibility is not less than the visibility prescribed in the standard instrument approach being used; and
c. At least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot:
    i.   The approach light system, except that the pilot may not descend below 100 feet above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are also distinctly visible and identifiable.
    ii. The threshold.
    iii. The threshold markings.
    iv. The threshold lights.
    v.   The runway end identifier lights.
    vi. The visual approach slope indicator.
    vii. The touchdown zone or touchdown zone markings.
    viii. The touchdown zone lights.
    ix. The runway or runway markings.
    x.   The runway lights.

Pilots will immediately execute an appropriate missed approach procedure when either of the following conditions exists:

a. Whenever the previously mentioned requirements of this section are not met at either of the following times:
    i.   When the aircraft is being operated below MDA; or
    ii. Upon arrival at the missed approach point, including a DA where a DA is specified and its use is required, and at any time after that until touchdown.
b. Whenever an identifiable part of the airport is not distinctly visible to the pilot during a circling maneuver at or above MDA, unless the inability to see an identifiable part of the airport results only from a normal bank of the aircraft during the circling approach.

5.6.15 Landing

Landings shall be conducted to the most operationally suitable runway giving consideration to traffic flow, noise abatement and ATC requirements as long as neither safety nor aircraft limitations are violated. A safe landing and a stabilized approach commences prior to takeoff. Adhering to the SOPs and the best practices for stabilized approaches will always be the first line of defense in preventing a runway overrun. The use of a Performance Program and ARINC performance is a valuable tool and provides performance numbers to operate by: but only if the aircraft is operated with accurate techniques. Non-stabilized approaches, excess airspeed, extended flares and delayed touchdowns all negate landing computations.

No aircraft shall depart unless its weight on arrival, allowing for normal consumption of fuel and oil in flight (in accordance with the landing distance in the Airplane Flight Manual for the elevation of the destination or alternate airport and the wind and weather conditions expected there at the time of landing), would allow a full stop landing at the intended destination airport within 60 percent of the effective length of runway from a point 50 feet above the intersection of the obstruction clearance plane and the runway. For the purpose of determining the allowable landing weight at the destination airport the following is assumed:

    a.   The airplane is landed on the most favorable runway in still air.
    b.   The airplane is landed on the most suitable runway considering the probable wind velocity and direction and the ground handling characteristics of the airplane, and considering other conditions such as landing aids and terrain."

Conditions at the destination airport may change between the time of departure and the time of arrival; therefore, the crew shall discuss and review the landing distance required after receipt of new weather reports at the intended airport of landing. If the airport and associated runway surface conditions are forecast to worsen, the crew shall develop an alternate plan of action in the event that a missed approach or go around becomes necessary.

5.6.16 Missed Approaches

5.6.16.1 Go-Around

Either pilot may command a go-around for any reason at any time. The PF needs only to call, "Going Around," and do so. When the PNF calls "Go Around," the PF must immediately execute the published missed approach procedure.

5.6.16.2 Missed Approach Procedures

Either pilot may be required to fly a missed approach, depending on when or for what reason the missed approach is initiated. The following procedures will apply, regardless of the seat the pilots are occupying.

    a.   The missed approach will be reviewed during the approach briefing. Both pilots must understand the published procedures and be familiar with initial missed-approach headings and altitudes.
    b.   Once the missed approach is initiated, the PF will fly the complete published approach. Control will not be transferred during the missed approach, except for pilot incapacitation or a mechanical malfunction that requires the aircraft to be flown from the opposite side.
    c.   The PNF performs ATC communication, tuning and identifying navaids, and running checklists. The PNF will monitor the missed approach procedures using the published approach plate.
    d.   Normal checklist call-outs concerning aircraft-configuration changes will be made by the PF and confirmed by the PNF.
    e.   The PF will confirm the flight director mode prior to engaging the autopilot.
    f.   If a transfer of control is required, the transfer will be made only under the following conditions:
          i.   The aircraft is established at the final missed approach altitude.
         ii.   All configuration changes have been completed.

Pilots generally have an expectation of landing when commencing an approach, even in marginal weather. In an attempt to avoid the "programmed to land" syndrome, the pilot flying (PF) should ready himself for a go around throughout the approach. The pilot flying (PF) should brief the pilot not flying (PNF) in the procedure for setting up the LNAV missed approach procedure. The pilot flying (PF) should expect to execute a missed approach unless his expectation is countered by a call indicating the runway environment is in sight.

The missed approach decision requires trained coordination within the flight crew. The Pilot not Flying (PNF) responsibility for callouts, especially during the precision approach, may mean that the aircraft is descending at low altitude with the Pilot not Flying (PNF) looking outside the cockpit for the runway. This procedure requires that the PF be acutely aware of altitude and the decision height.

It is always the responsibility of the Pilot not Flying (PNF) to be familiar with the missed approach procedure whether conducting an IMC or VMC approach. When the pilot flying (PF) initiates the missed approach, he may remember only the initial heading and altitude in the briefing. The Pilot not Flying (PNF) should ensure that the complete procedure is available to the pilot flying (PF).

5.6.17 CAT II and III Operations

CAT II or III approaches are not authorized.

5.7   Arrival

a.   Prior to Arrival

The assigned PIC will review with other crewmember(s) the logistics needed upon arrival. An ETA email will be sent as early as possible prior to arrival with the following information and format. Follow up with either an AFIS message or radio call if there is no response from FBO or FBO email is not available.

To:	FBO
CC	
Subject	
Message Body:	ETA, passenger, transportation, baggage and aircraft service requirements
Flights to KLIT	Advise whether or not security is needed to meet the airplane.

b.   Arrival at the destination

The passengers' needs are the first concern of the crew and every effort must be made to conveniently and expeditiously get the passengers on their way. It is the PIC's responsibility to escort passengers from/to the aircraft to awaiting transportation. The PIC should also provide contact information to the lead passenger if necessary, to ensure passengers are able to contact the crew and provide any updates or additional information for the trip.

 "Turning" the cockpit or securing the aircraft should be accomplished once the passenger needs are met and ensuring they depart the FBO safely.

5.7.1 Electronic Flight Log Procedures

The assigned trip PIC is responsible for entering flight log information into ForeFlight and sending the flight log to Maintenance.

5.7.2 Discrepancy Items

It is the responsibility of the assigned trip SIC to send a discrepancy email. List any discrepancies including a description of what happened, and what the crew did to troubleshoot. Number and list each discrepancy individually and be as specific as possible as this will help maintenance. If no discrepancies exist for the trip sequence, write "No Discrepancies".

To	billgoff23@yahoo.com
	geoff@hatcheraviation.com
	timc61513@gmail.com
Subject	N131LG
Message Body	
	No Discrepancies.
	Thanks
	BG or GH

5.7.2.1 MEL Items

For items that fail prior to departure, the crew will reference the MEL handbook to determine dispatch ability and comply with the procedures listed for any MEL item(s). Prior to departing, the Assigned Trip PIC will send an email to flight department personnel; the subject line will contain the entire tail number (in CAPS) along with MEL The main text of the message will describe the MEL item. Add any other information that would be helpful to maintenance in determining a fix for the problem; Complied with MEL procedures. Close the email with the crews' initials.

Note	If you are conducting a multiple leg trip, there is no need to send the same MEL item prior to each subsequent departure

TO	billgoff23@yahoo.com
	geoff@hatcheraviation.com
	timc61513@gmail.com

Subject	N131LG MEL (all CAPs)
Message Body	APU Fire Detect Fail.
	Maintenance complied with (M). APU will not be used.
	Thanks,
	BG

5.7.3   Closing Flight Plans

When operating in controlled airspace flight plans will normally be automatically closed by ATC. If there is any doubt, the PIC shall check with ATC upon arrival at destination to ensure that the flight plan has been closed.

5.7.4   Securing the Aircraft

All crewmembers share responsibility for securing the aircraft and contents during all layovers and preparing for the next flight.

Parking brakes will normally be released after the aircraft has been chocked. If strong winds are expected, brakes should be reset, all gear choked and assure the nose gear torque link is engaged. Pitot and static covers will be installed when conditions require. Crewmembers should restore the interior to preflight condition before leaving the aircraft. Seats and seat belts should be straightened, dishes, glassware and galley equipment cleaned and stored, waste materials discarded, and the lavatory serviced. Any liquids subject to freezing must be drained or removed if cold temperatures are expected.

All doors and access panels will be closed and locked before the crew departs the airport. Additional security precautions may be used, as described in the Security section of this manual.

The assigned trip PIC must ensure servicing of the aircraft. It is recommended that all outside covers be installed especially if inclement weather is in the forecast. During cold, inclement weather, drain water systems or if possible store the aircraft in a hangar.

6   Emergency Procedures and Equipment

6.1   Authority of the Pilot in Command

The PIC will remain in command of the aircraft during and after any emergency until the aircraft has safely landed or, in the event of a forced landing, he has been relieved by appropriate emergency-response and medical personnel. In emergency situations that require immediate decisions and action, the PIC may follow any course of action that he considers necessary under the circumstances. In such instances, he may deviate from prescribed operational procedures and methods, weather minimums, and FARs.

Assisted by the members of the crew, the PIC will:

    a. Consider all factors that would affect the safety of the people on board and those on the ground.
    b. Alert appropriate controlling agencies and notify them of the situation, location and intentions.
    c. After landing, evacuate the aircraft and take necessary immediate actions to prevent additional injury or loss of life.
    d. Treat injuries and provide for the continued safety and welfare of survivors.
    e. Establish contact in accordance with the Charter Express Emergency Response Plan.

In the event the PIC exercises emergency authority, he will keep appropriate Air Traffic Control and other facilities fully informed of the progress of the flight. Each PIC who deviates from an FAR shall, upon the request of the Administrator, send a written report of that deviation to the Administrator within 48 hours. Charter Express utilizes the Abnormality Report as detailed in Chapter 4 for this purpose.

6.2   Emergency and Abnormal Procedures

An emergency situation will be dealt with on a priority basis and integrated into the flight-related duties currently being performed. The priority of action should be based on the seriousness of its effect on the operation of the aircraft and the ability to continue the mission.

6.2.1   Crew Duties

At all times during an abnormal or emergency situation, the main priority of the PF is flying and maintaining control of the aircraft. The PNF will assist the PF by examining the cause of the abnormality and taking appropriate action, as called for by the flight manual and checklist. If immediate action is not required, the crew should complete any checklist in progress before dealing with the abnormality. The following items must be considered along with the items called for in the emergency checklist.

    a. MAINTAIN CONTROL OF THE AIRCRAFT.
    b. Identify and confirm the abnormality/emergency.
    c. Silence aural warnings. Reversed these two items.
    d. Confirm that all memory items were accomplished, and complete the checklist. Address all notes, cautions, and warnings.

6.2.1.1 Use of Checklists

Most in-flight emergencies happen without warning and with little time to prepare. Therefore, it is important that all members of the flight crew have a thorough knowledge of their response to all types of emergency situations. The aircraft checklist will be used to the maximum extent possible during all phases of an emergency situation. Crewmembers must commit immediate action items to memory and be able to perform initial actions without hesitation.

In addition, crewmembers must understand their continuing responsibilities after an emergency landing or ditching to provide for the safety or survival of themselves and their passengers.

6.2.2 Guarding Critical Systems

Hurried actions can lead to an even more serious situation. Therefore, the PF will guard critical operating systems to ensure they are not inadvertently shut down or disabled. These include:

   a.   Operating engine throttle
   b.   Operating generator
   c.   Operating engine fuel supply
   d.   Any other operating system needed for continued flight of the aircraft.

Note   Both pilots will identify and agree on the movement of any switches or controls of critical systems. The PNF will read the challenge item in the checklist, place his hand on the appropriate switch or control, and state the response action to be taken. He will not move the switch or control until the PF has visually confirmed the selection and verbally agreed with the action to be taken.

6.2.3 Declaring an Emergency

The safety and survival of the passengers and crew depend to a great extent on how rapidly emergency assistance is requested and rescue forces are alerted. Therefore, it is important that ground stations be notified immediately of any emergency that requires priority handling or could result in a crash landing or ditching.

   a.   Set transponder to code 7700.
   b.   Declare an emergency on the assigned air-ground frequency, emergency frequencies 121.5 or 243.0, and the maritime distress frequencies 2182 or 4125 kHz.
   c.   Be prepared to relate the number of souls on board, and the fuel remaining in minutes or Hours
   d.   Comply with information and clearances received. Accept the communications control offered by the ground radio station, silence interfering stations, and do not shift frequency or change to another ground station unless absolutely necessary or instructed to do so. Keep the controller informed of the current status of the situation.

6.3   Emergency Landing or Ditching

Prior to landing with an emergency, preparation and crew coordination is critical. Many factors will affect the landing, including the severity of the situation, and the time available to prepare. This section is divided into unplanned emergency landings, where no or very little time is available, and planned emergencies, where some planning time is anticipated.

6.3.1   Unplanned Emergency Landing

An unplanned emergency is basically defined as one where there is no time for crewmember or passenger briefings, and cabin preparation. The most common unplanned emergencies are un-forewarned or unanticipated landings that occur just short of the runway, runway overruns, and takeoff or abort failures. They can be on land or in water. Be Prepared! If possible, the flight crew will announce "BRACE, BRACE, BRACE!" prior to impact. Situational awareness, assessment, and quick and effective decision- making are the keys to safety and survival. Crewmember emergency responsibility is truly tested in an unplanned emergency evacuation.

6.3.1.1 Crew Communications

After the aircraft has come to a halt, if possible, the PIC will continue with the commands for an emergency evacuation described in the following paragraphs.

6.3.2   Planned Emergency Landing and Evacuation Procedures

In a planned emergency there is some time available for establishing a plan of action, briefing the crewmembers and passengers, and preparing the cabin. A planned emergency can be on land or in the water (ditching). It can be as benign as a precautionary landing at an airport, taxi to the FBO, and a normal deplaning. In a planned evacuation into water, survivability is enhanced due to the time available to strengthen resources. The flight crew should attempt to accomplish as much preparation as possible, time and conditions permitting. Prior to Ditching and Prior to Off Airport Landing Checklist have been developed for crewmember use and is available on each EFB.

6.3.2.1 Passenger Emergency Briefing and Cabin Preparation

The emergency briefing provided in the event of an emergency, where time and circumstances permit, shall consist of instructions pertaining to:

a.   Seat belts;
  i.   Lap belts must be fastened snug around the hips;
  ii.   If carried, child restraint devices should be checked to ensure they are secured to the aircraft seat with a seat belt and do not restrict access to emergency exits;
  iii.   Seat belts must remain fastened until the aircraft comes to a complete stop.
b.   Seat backs and tables:
  i.   Seat backs must be upright and tables must be secured.

c.   Carry-on baggage:
  i.   All carry-on baggage including handbags or any other items of mass must be safely stowed in approved locations. Seat pockets may be used for smaller items.
d.   Safety Features Card:
  i.   Advise passengers to review the Safety Features Card and to pay particular attention to exit locations and operation;
  ii.   Ensure that passengers seated next to emergency exits are willing and able to open that exit. If not, request the assistance of an able bodied person (ABP);
  iii.   If possible, assign an ABP to assist young or special needs passengers;
  iv.   Advise passengers of the safest direction and least hazardous route to move away from the aircraft once outside.

    e.   Brace position (when to assume, how long to remain):

        i.   Advise passengers that they must listen for verbal commands:

A.   <u>500' to Landing:</u>

Upon hearing this call, ensure all passengers are in their seats with their seat belts fastened.

B.   <u>50' Prior to Landing:</u>

The command "BRACE, BRACE, BRACE", will be given prior to impact/landing, at which time the passengers will assume and maintain the brace position illustrated on the Safety Features Card until the aircraft has stopped and;

C.   <u>After Impact/Landing</u>:

If required, when the command "EVACUATE, EVACUATE, EVACUATE" is given the passengers will be instructed to immediately "release seat belts" and "get out" of the aircraft using the nearest useable exit. If an evacuation is not required, the command "Remain Seated" will be given by the flight crew.

    f.   Life jackets (if applicable):

        i.   If an emergency landing is anticipated on water, advise passengers to immediately locate and don life jackets, secure with straps and to inflate only when outside the aircraft.

    g.   Child restraint system (if applicable):

        i.   Evacuation procedures for the occupant of a child restraint system.

6.3.2.2 Crew Communication

After landing (or impact), if it is determined that fire or possibility of fire exists, or that remaining with the aircraft would otherwise endanger life or physical well-being, an emergency evacuation will be accomplished. After completing the Evacuation Checklist, if the PIC decides that an evacuation is required, he will announce, "EVACUATE, EVACUATE". Upon hearing this call the PNF will first assess the conditions of the evacuation route, and then initiate the evacuation of the passengers. If an emergency evacuation is not required the crew can advise by announcing, "REMAIN SEATED". The PNF will instruct the passengers to "Remain Seated" and will explain their intentions.

6.3.3   Ditching

6.3.3.1 AMVER System

The crew should be aware of a report known as the Automated Merchant Vessel Report System (AMVER). Every merchant vessel on the North Atlantic has filed a sail plan with a computer in New York giving the intended route, speed, etc. If an aircraft is in trouble with a ditching possible, the crew may contact the Coast Guard or air traffic control and ask for AMVER information. In approximately 10 minutes, the crew will have the name and location of every merchant vessel within 100 miles of the aircraft's reported position. Oceanic control should report the situation to the Coast Guard. The Coast Guard then initiates the AMVER system. This expedites the diversion of a seagoing vessel to the area. (www.amver.com)

Once the decision has been made to ditch, the crew should take advantage of ditching assistance provided by a seagoing vessel. If available, any nearby ship will provide the surface wind, the recommended ditching heading, and the sea condition. The ship can also give radar vectors to a ditching near the ship when weather is a factor. Set up a pattern for the ditching in close proximity to the vessel that will standby to pick up passengers and assist in any way.

6.3.3.2 Ditching Heading

The crew must determine the best ditching heading, using information based on weather reports and reading sea conditions. Normally, there is a primary swell and one or more secondary swells, often moving in different directions. During daylight, the primary swells can be best observed from an altitude of 10,000 to 12,000 feet. Secondary swells become visible at lower altitudes. During nighttime, the landing lights should be used to illuminate the surface of the sea.

If the surface wind is more than 35 knots, the ditching should be made into the wind, regardless of the direction of the swells. However, a ditching into the upslope of a swell should be avoided. If the surface wind is less than 35 knots, ditch parallel to a major swell.

6.3.3.3 Water Landing

A water landing can result in sudden and violent forces acting on the aircraft, so it is imperative that all crewmembers and passengers remain in their seats with seat belts and shoulder harnesses securely fastened until the aircraft comes to a complete stop.

6.3.4   Evacuation

A crewmember will give the order to evacuate the airplane when the airplane has come to a complete stop. When the command to evacuate is given, the evacuation must be executed in a prompt, but orderly, fashion. If possible, the PNF will leave the Flight Deck first and move to the aft exit point to assist in passenger evacuation. Upon securing the aircraft, the PF will assist at the forward exit point.

The suitability of an exit must be considered before it is opened. Some considerations are its height above the ground or waterline, and its proximity to any fire. Passengers should be directed to the nearest suitable exit, and urged to move rapidly through it.

6.3.4.1 Land Evacuation

After landing, passengers must be instructed to clear the exit area and move without delay to a safe distance from the aircraft to reduce the risks or injury from a fire or explosion. Passengers exiting ahead of the wing should move to a point well forward of the aircraft nose. Those exiting behind the wing should move a safe distance behind the aircraft, but off to the side of the path of the landing and away from any spilled fuel.

6.3.4.2 Water Evacuation

After ditching, each crewmember will quickly move to the assigned exit to position life rafts and assist in evacuating passengers from the aircraft. Life rafts will not be removed from their stowage areas nor should an exit be opened until the aircraft has come to a complete stop. After the aircraft has come to a complete stop, the over-wing emergency exit must be opened and the lifeline attached; one end to the inside and the other end to the wing. The life raft should be removed from its stowage area, the retaining lanyard secured to the lifeline, the raft lifted through the exit and inflated. The raft should be boarded initially by two able passengers to assist the others during boarding.

The first person aboard the raft should assure raft inflation and, to the extent possible, hold the raft away from damaged aircraft structures. The second on board will assist other passengers in boarding. Depending on the seas and extent of injuries, people may be transferred directly from the aircraft into the life raft. If unable to board directly, passengers should be instructed to inflate their life vests after they exit the aircraft. Persons on the wing should hold on to the wing lifeline. Those in the water should hold on to a life raft heaving line to avoid drifting or being washed away.

Persons entering the raft will be instructed to sit with their backs against the rail and their feet toward the center. No one should be allowed to stand. Sharp objects, including shoes that can damage the raft should be removed. Persons should move on hands and knees, and unnecessary movement should be restricted.

When everyone is aboard the raft, the lanyard may be cut and the sea anchor deployed immediately. It is recommended to keep the rafts as close as possible to the floating aircraft, because the size of the aircraft would be easy to spot by search and rescue teams. Life rafts should not be tied together, unless the seas are very calm. All loose equipment should be secured when not in use so that it is not washed overboard.

6.4   Survival and Survival Equipment

When all passengers have been evacuated and are safely away from the aircraft, a member of the flight crew may be assigned to remove any emergency equipment or personal items that would be of use in a survival situation. Such items include, but are not limited to, fire extinguishers, flashlights, crash axe, portable oxygen bottles, first aid kits, blankets, clothing, food and water.

Survival kits will be carried on company aircraft so in the event of forced landing the passengers and crew can be provided with fire, shelter, drinking water and a means of signaling.

6.4.1 Life Rafts/Survival Kits

Life rafts should be removed from the aircraft (if possible) in any survival situation so that the crew and passengers can access the survival kits.

The following equipment is included in aircraft survival kits:	
• Flashlight	• Mooring Line
• Signal Mirror	• Sea Anchor
• Whistle	• Bailing Bucket
• Dye marker	• Hook Type Knife
• Canopy and Mast	• Rations Kit
• Utility Knife	• Compass
• Manual Inflation Pump	• Survival Manual
• Locator Light	• Water Bag/Cup
• Flare Kit	• Heaving Ring
• Repair Kit	• First Aid Kit
• Fishing Kit	• Sponge
• Radar Reflector	•

6.4.2 Survival Crew Duties

Mental attitude cannot be overemphasized when discussing survival. The crew must demonstrate confidence that rescue is simply a matter of time. Crewmembers should mix with the passengers and demonstrate an interest in them. The proper mental attitude will help sustain a strong will to live, even when one's physical condition is at its lowest point.

The primary responsibility of the PIC and members of the crew is the welfare of the passengers and one another. When rescue assistance arrives, the PIC will ensure the orderly transfer of responsibility for the passengers and crewmembers to competent authority.

6.5 Post-Accident/Incident Procedures

While aircraft accidents and incidents are rare occurrences in corporate aviation, all Flight Operations personnel must be familiar with the procedures to be used following such an event. The document controlling many of the definitions, information, and procedures to be used is National Transportation Safety Board (NTSB) Part 830, contained in Appendix B. The Accident/Incident Reporting Form is located in Forms section of this manual. An Emergency Response Plan is available as needed.

6.6   Inflight Passenger Illnesses

If the PIC determines that a passenger needs immediate medical assistance, he will divert the aircraft to the closest suitable airport. Suitability of an airport, military or civilian, will depend on the nature of the illness and the medical support available.

An emergency may be declared if the PIC believes that the situation demands priority handling. If a passenger is removed from a company aircraft for medical reasons, a crewmember or other company employee should accompany the passenger to the hospital. The Director of Aviation should be notified as soon as possible.

6.6.1   First Aid Kits

Medical and first aid kits are specially designed for the environment in which they will be deployed. All meet and exceed any and all applicable U.S. federal regulations.

Emergency response professionals design the kits with a specific focus on ease of use during likely emergency situations. Supplies are separated into special airway, bandaging, assessment, and medication pouches. Each easily removable nylon pouch has a plastic window and is color-coded for quick identification during emergency situations. First aid kits are located on the west wall of the hangar, line services area, flight planning room and each aircraft.

6.6.2   Threats of Facilities

6.6.2.1 Fire Emergencies

a. If you discover a fire or notice smoky conditions:

    i.   Alert people in the area of the need to evacuate.
    ii.   Activate the nearest fire alarm pull station.
    iii. Evacuate the building utilizing the routes outlined in this plan.
    iv. Only attempt to combat a fire if you can do so without endangering your own safety and only then after notifying someone of your whereabouts.

b. If the building fire alarm is sounding or you receive notification of a fire emergency:

    i.   Evacuate the building utilizing the emergency evacuation routes. You may collect valuables (i.e. purse, coats, etc.) if within a reasonable reach and will not interfere with evacuation of the building. Quickly shutdown operating equipment (e.g. compressed gas cylinders). Check all doors and stairways for signs of fire before opening or entering. Doors should be closed upon evacuating. DO NOT use the elevators unless directed by emergency personnel.

    ii.   If you come into contact with an employee or visitor, you should direct them to evacuate the building. If you come into contact with an individual who is disabled or having difficulty evacuating you should assist those persons in evacuating the building, if doing so will not endanger the personal health or safety of yourself or the individual needing assistance. If rescue duties are called for, the Fire Dept. will perform these duties. Please pay attention to the location and status of any person needing rescue and relay that information to the Fire Dept. officer in charge.

iii. From a safe location call the Fire Department (911). State your name, your location (Charter Express Inc. Hangar 2111 Bond St.), and the nature of the call. Speak slowly and clearly. DO NOT HANG UP UNTIL 911 STAFF HAVE ALREADY HUNG UP! (NOTE: Charter Express Security may have already notified LRFD).

iv. Once out of the building, gather at TAC Air main entrance (parking lot side) to be surveyed. In the event that the primary assembly area is not safe or available, you should gather at the rear of the building parking lot (Bond Street side).   A Coordinator will conduct a brief survey of all present to determine if anyone is potentially missing and possibly still in the building. You should not leave the assembly area to re-enter the building or go to another area until advised to do so by the Coordinator.

Note   The Fire Alarm will sound with the activation of the sprinkler system, but the Fire Alarm will not activate the sprinkler system.

6.6.2.2. Severe Weather

a. Severe Thunderstorm

  i. Stay indoors
  ii. Monitor news and weather services for further information.
  iii. Be aware that some Thunderstorms can develop tornado conditions.

b. Tornados

  i. Upon notification of a Tornado warning by PA announcement or siren, take shelter in the pre-designated shelter area.
  ii. If you come into contact with an employee or visitor, you should direct them to take shelter in the building. If you come into contact with an individual who is disabled or having difficulty taking shelter, you should assist the individual in getting or taking shelter.
  iii. If you are unable to seek shelter in the designated area, move away from windows. Stay away from areas having a wide, free span roof or the upper levels of a building. Take cover under heavy furniture.
  iv. If you are outdoors and unable to access an indoor shelter, lie flat in the nearest depression, such as a ditch.
  v. After the danger has passed, you should report to the designated assembly point to allow the Coordinator to take a survey of all present to determine if anyone is missing.

6.6.2.3 Earthquakes

Earthquakes occur without warning. Some earthquakes are instantaneous tremors and there are significant sustained events followed by aftershocks. During an earthquake:

a. If indoors stay there and take cover. Suggested locations inside buildings that provide cover include:
  i. Standing in a doorway and bracing your hands and feet against each side.
  ii. Getting under sturdy furniture, such as work tables or desks.
  iii. Standing flat against an interior wall.
  iv. Stay near the center of the building and avoid glass windows and door.
  v. Minimize your movements to a few steps to a nearby safe place.

b. Stay inside until shaking stops and it is safe to go outside. Research has shown that most injuries occur when people inside buildings attempt to move to a different location within the building or try to leave.
   i. Be aware that the electricity may go out or the sprinkler systems or fire alarms may activate.
   ii. DO NOT use the elevator.
c. If you come into contact with an employee or visitor, you should direct them to evacuate the building. If they are disabled or having difficulty evacuating, you should assist the individual in evacuating the building if doing so will not endanger the personal health and safety of yourself and the individual needing assistance.
d. Once out of the building, gather at the Primary Assembly Area (TAC Air) to be surveyed. In the event that the primary assembly area is not safe or available, you should gather at the Secondary Assembly Area (Charter Express Group). Coordinator will conduct a survey of all present to determine if anyone is missing and possibly still in the building. You should not leave the assembly area to re- enter the building or go to another area until advised to do so by the Coordinator.

6.6.2.4 Workplace Violence

Workplace violence may take the form of various types of personal assaults, including armed attacks. The only warning that you might receive of a workplace violence incident is the sound of gunfire, scuffling or other employees yelling a warning.

a. Gunfire or Assailant with a Weapon
   i. EVACUATE: If you hear gunfire, see someone with a weapon, or see people running IMMEDIATELY EVACUATE the building using the closest exit and RUN TO SAFETY at a distant public location; report everything you saw and heard to 9-1-1.
   ii. SHELTER IN PLACE: If you cannot evacuate, seek refuge in an area that can be locked from the inside, HIDE behind things that could stop /slow a bullet (e.g., full file cabinets, concrete walls, heavy furniture) and BE SILENT and REMAIN HIDDEN until the Police arrive. Doors without locks can be wedged or barricaded. OBEY all POLICE / SECURITY OFFICERS INSTANTLY, WITHOUT QUESTION. Remain calm.
   iii. If a phone is immediately available in your area, and if it is safe to do so, call 911
   iv. Should the attacker(s) see you: YOU must decide what to do:
        a) If possible, RUN AWAY.
        b) Attack the assailant only as a last resort.
        c) NEVER GIVE UP! Your chances are improved by continuing to violently defend yourself, no matter what.
b. Hostage Situation
   i. EVACUATE: If you see a hostage situation, IMMEDIATELY EVACUATE the building using the closest exit and RUN TO SAFETY at a distant public location.
   ii. Report everything you saw and heard to the 911 operator.

c. Physical Threat/Bomb Threat

   i.   When and if advised to do so by the authorities, evacuate the area immediately, using the nearest safe route.
   ii. Bomb threat: see the following section.

6.6.2.5 Bomb Threat Procedures

a. If you receive a telephone threat:

   i.   Be courteous. Pretend difficulty in hearing. Keep the caller on the line as long as possible.
   ii. Take notes using the Bomb Threat Checklist.
   iii. After the caller hangs up, call 911.
   iv. Listen for directions. Do not talk to anyone except as directed by 911.
   v.   If a written bomb threat is received save all materials and avoid handling as much as possible.

b. Reporting

   i.   All bomb threats must be reported to 911. Many reports of bombs are false alarms intended to create a disturbance at a specific location. For this reason, the decision of how to react must be carefully considered by the appropriate officials.
   ii. The Police and/or Fire Department will evaluate any threats received at the Charter Express Building. All Tenants will be notified, and informed of the recommended course of action.

c. Search

   i.   Examine your office space for strange or suspicious Items. No one knows your area, as well as you do. What appears commonplace to an outsider may be out of place to you.
   ii. DO NOT TOUCH any suspicious items. Some bombs are set to detonate upon movement.
   iii. Immediately report any strange or suspicious item to the Building Management Office or Security.

d. Evacuation

   i.   All occupants will be advised whether or not to leave the area, but the final decision to evacuate your area rests with you.
   ii. Should it be necessary to move to another level, USE THE STAIRS AS ELEVATORS WILL NOT BE USED DURING EVACUATION!

6.6.2.6 Special Emergency (Air Piracy/Hijacking)

In the event a special emergency condition of air piracy, or other hostile act by a person(s) aboard an aircraft, which threatens the safety of the aircraft or its passengers the flight crew should:

a. If circumstances permit, apply distress or urgency radio-telephony procedures. Include the details of the special emergency. (see AIM 6-3-1)
b. If circumstances do not permit the use of prescribed distress or urgency procedures, transmit on the frequency in use at the time as many of the following elements as possible:
   i.   Name of station addressed
   ii. Aircraft identification and position
   iii. Nature of the emergency

If unable to provide the above information, use code words and or transponder as follows:

c. Spoken words "Transponder seven five zero zero"
d. Set transponder code 7500

If it is possible to do so without jeopardizing the safety of the flight, the pilot of a hijacked passenger aircraft, after departing from the cleared routing over which the aircraft was operating, will attempt to do one or more of the following things, insofar as circumstances may permit:

a. Maintain a true airspeed of no more than 400 knots, and preferably an altitude of between 10,000 and 25,000 feet.
b. Fly a course toward the destination which the hijacker has announced.

If these procedures result in either radio contact or air intercept, the pilot will attempt to comply with any instructions received which may direct the aircraft to an appropriate landing field or alter the aircraft's flight path off its current course, away from protected airspace.

Reference AIM 6-3-4

7   Training

Charter Express employees are always expected to maintain the highest level of professionalism. This includes an expectation of self-study to remain information-current in the aviation industry. Areas of self-study include, but are not limited to, advancements in technology, regulatory changes, changes, and updates to aircraft operating procedures. Flight Department personnel are challenged to be the most proficient and professional in the world. In support of this philosophy, our training is expected to be challenging and thorough. All flight department personnel are always expected to maintain the highest level of proficiency. Pilots are also expected to maintain the highest skill levels in basic flying techniques with use of auto flight or other automated systems and worldwide ATC procedures.

7.1   General Training Program Requirements

All individuals and training schools providing training to Charter Express' personnel shall:

   a. Be conducted in accordance with the Charter Express training programs.
   b. Be conducted using the manuals, publications, check lists and other relevant documents used by Charter Express and
   c. Be given on the same type and model aircraft or approved flight simulator of the same type and Flight Deck layout, as that used by Charter Express.

Aircraft flight training is the responsibility of the Director of Aviation. He shall ensure that any person or company designated to conduct aircraft flight or simulator training is competent to do so.

7.2   Aircraft Critical Surface Contamination Training

All Charter Express operating personnel (flight crew, maintenance, and Line) prior to commencement of operational duties will receive Aircraft critical surface contamination training that will include but not limited to:

   a. The effect of contamination on a critical surface.
   b. Aircraft inspection procedures.
   c. Aircraft de-icing/anti-icing training for.

         i.   De-ice/Anti-ice equipment
         ii.   Aircraft de-icing/anti-icing procedures

Operating personnel will receive recurrent de-icing/anti- icing procedures training every 24 months.

7.3   General Flight Crew Training

All flight crew members will receive a Flight Operations training syllabus for initial training. This training is required for all newly hired employees involved in control of flight operations as appropriate to their assigned duties. The purpose of this training is to ensure crewmembers have an adequate knowledge of procedures unique to the operations of Charter Express. The training shall include but not limited to the following:

  a.   Flight planning and operating procedures;
  b.   Fueling procedures including procedures for fueling with passengers on board and fuel contamination precautions;
  c.   Critical surface contamination and safety awareness program;
  d.   Passenger safety briefings and safe movement of passengers to/from the airplane;
  e.   Use of minimum equipment lists (if applicable);

  f.   Airplane icing, and other meteorological training appropriate to the area of operations;
  g.   Navigation procedures and other specialized operations applicable to Charter Express;
  h.   Handling of disabled passengers;
  i.   Emergency Procedures Training
  j.   High Altitude Training
  k.   International Operations Training
  l.   Checklist Usage, philosophy and design

7.4.1   Flight Crew Specific Training

Charter Express pilots shall attend training conducted by organizations and operators selected by the Director of Aviation. These organizations shall meet all requirements of both the original equipment manufacturer and Federal Aviation Regulations relating to the establishment of an Air Agency and empowered to operate an approved Training Center in accordance with the training specifications FAR's 14 CFR Part 142.
Charter Express utilizes only approved Level C or D flight simulators for aircraft type flight training. Where the flight simulator has differences in performance, systems, avionics or Flight Deck layout and configuration, from company aircraft, additional training on these differences will be given. Training shall include but not limited to the following:

  a.   Initial certification training.
  b.   Recurrent and transition training.
  c.   Aircraft manufacturers' schools.
  d.   Emergency Procedures Training.
  e.   RVSM Training.
  f.   Crew Resource Management (CRM).
  g.   International Procedures Training
  h.   Additional training as determined by management.

Pilot training shall be scheduled to enable pilots to accomplish simulator training as a two pilot crew whenever possible. The training organization shall provide a written summary and evaluation of work performed by each flight crewmember during training to the Chief Pilot. Personal training files will be accessible to each individual pilot.

7.4.2   Part 142 School Syllabus

The Training Syllabus is available through the training provider.

7.4.3   Flight Crew Training Schedules/Intervals

Pilots not already qualified in the aircraft type will be assigned to initial training within 12 months of employment if applicable. Training intervals shall not exceed 12 months alternating between types of aircraft flown. All captains and type-rated pilots will complete the proficiency checks required under FAR Part 61.58 during recurrent training. All other pilots will complete proficiency checks required under FAR Part 61.55 if applicable.

   Note   Charter Express prohibits simulated emergency or abnormal situations with passengers on board.

7.4.4   Transportability of Pilot Proficiency Check

Pilots that have a current qualification (a valid pilot proficiency check from an operator or commercial operator that uses a similar training program and proficiency check) will be considered to meet Charter Express training and proficiency requirements when they have completed training on the following:

   a.   Flight Operations Manual;
   b.   Emergency procedures on each type of aircraft the pilot is assigned to fly;
   c.   Pilot ground training on each type of aircraft the pilot is assigned, sufficient to cover the aircraft Standard Operating Procedures, equipment differences and special authorizations.

7.4.5   Flight Crew Upgrade Training

Upgrade training to Pilot in Command for pilots who have qualified and served as a second-in-command on that aircraft type will include the following:

   a.   Command and decision making;
   b.   Train and demonstrate proficiency as a Pilot in Command in all areas of aircraft handling and operation as outlined in the initial course; and
   c.   Special authorization qualification (e.g. lower takeoff limits if not authorized, etc.).

7.4.6   Flight Crew Currency

In addition to holding current licenses and medical certificates, flight crews must have successfully completed the training programs and competency checks as prescribed in this chapter. That training shall include initial and annual recurrent training as noted in this chapter. In order to maintain landing currency, PICs and SICs must have accomplished within the preceding 90 days:

   a.   Three takeoffs and landings
   b.   Three night takeoffs and landings, or have met the requirements of FAR 61.57 (e)(3)(iv)(B) within the preceding 12 months (to be night current)

To maintain instrument currency, PICs and SICs must have accomplished within the preceding six months:

a. Six instrument approaches
b. A holding pattern
c. Intercepted and tracked a course

Flight crewmembers are not required to meet the above qualifications for special flights, training or positioning flights.

7.4.7 Pilot Proficiency Certification

All training will be done on the basis of "training to performance". That means that the person conducting or providing the training will not consider the training complete until the candidate can effectively perform the tasks that they are being trained to do. Upon completion of the training the person conducting or providing the training will ensure that the training has been recorded in each individual's training record. Pilots will complete an exam set by the training school at the end of initial Aircraft Type Ground Training. The exam will be reviewed with the candidate to ensure that the correct answers to all of the questions are understood.

7.4.8 Certification

At the completion of initial and recurrent aircraft type flight training, pilots will be certified as proficient by one of the following:

a. An examiner in the flight training school that Charter Express has contracted with to provide pilot aircraft type simulator flight training.
b. An aviation examiner approved by the FAA.

The proficiency certification will be done to the standard specified which must be assessed as "Satisfactory" in order to constitute a completion of training. The Pilot Proficiency Check form used by the flight training school may be used to record the results of the training to proficiency. The form will then be retained in the individual's Training Record for a minimum of 36 months.

7.5 Maintenance Technician Training

To meet the need of the complexity of the aircraft, engines and systems factory approved training is essential. Meeting this need will not only improve safety, but also minimize our maintenance down time. Training will meet the requirements of Part 145 repair station.

Charter Express Maintenance personnel shall attend training conducted by organizations and operators selected by the Director of Maintenance with the assistance of the Director of Aviation. These organizations shall meet all requirements of both the original equipment manufacturer and Federal Aviation Regulations relating to the establishment of an Air Agency and empowered to operate an approved Training Center in accordance with the training specifications FAR's 14 CFR Part 142.

Training will include but not limited to the following:

    a. OEM Airframe
        i.   Initial Training Course
        ii.   Reoccurring Airframe Course
        iii. Run/Taxi
        iv. Advance troubleshooting

    b. Engine
        i.   Initial Line Maintenance
        ii.   Reoccurring Line Maintenance

    c. Advanced Course
        i.   Flight Safety Master Technician FAA Inspector Authorization (IA)
        ii.   Maintenance Resource Management (MRM)
        iii. Reduced Vertical Separation Minimum (RVSM)

    d. Company Training
        i.   Procedures on the use of the Charter Express Minimum Equipment List (MEL)
        ii.   Operational knowledge for shop equipment and flight line operations in conjunction with Line Service (see 7.5)

7.5.1   Maintenance Training Schedules/Intervals

Scheduling will be at the discretion of the Director of Maintenance.

7.6   Training Records

A current master training record shall be maintained for each employee at company flight operations. The record must contain a current and accurate copy of the following items:

    a. Flight Crew Training Records
        i.   Pilot record section including personal data and qualifications
        ii.   Competency section including FAR 91 proficiency evaluation
        iii. Training section including previous 36 months training records
        iv. FAA medical and FAA airmen certificates
        v.   Photo identification including copies of current passport, driver's license, and appropriate Universal or IBAC I.D. cards.

     b.   Maintenance Technician
          i.   FAA Aircraft Technician Certificates,
          ii.   Training certificates

It is the responsibility of each employee to see that all changes and updates to the above items are submitted to the training records officer in a timely manner.

8   Aircraft Maintenance

8.1   Responsibilities of the Director of Maintenance

The Director of Maintenance is responsible for the planning and control of all maintenance, liaison with the Federal Aviation Administration on maintenance topics, and liaison with all persons or Approved Maintenance Organizations (AMOs) performing maintenance on Charter Express aircraft. He shall have access to all applicable technical and regulatory publications necessary to perform these duties and shall ensure that those publications are kept up to date. The Director of Maintenance shall remove from service any aircraft that are unsafe, or that do not comply with the regulatory requirements of the Federal Aviation Administration (FAA) or the guidelines set forth in this manual. In cases of absence, the duties of the Director of Maintenance may be assigned to another qualified person via verbal or electronic communication.

8.1.1   Maintenance Policies and Responsibilities

The primary and direct responsibility of the maintenance department is to maintain the company aircraft in an airworthy condition.

Company policy requires that the highest degrees of safety standards be met. No aircraft will be returned to service unless the Director of Maintenance is satisfied that the aircraft and its equipment are in airworthy condition. It is this department's direct responsibility to provide company aircraft that are in airworthy condition and able for flight release.

All repairs, overhauls and alterations to an aircraft must be made in a safe and efficient manner according to the standards set forth by the manufacturer's recommendations and pertinent FARs. All inspections, scheduled removal and overhaul/replacement of life-limited parts will be at intervals not exceeding those recommended by the manufacturer or approved by FAA. Overhaul/replacement of a life-limited part or assembly may be extended by written authorization from the manufacturer and the regulatory authority for a specific component.

Charter Express shall not allow any person in its employ or contract labor to perform a maintenance repair for which that person does not have the experience and the applicable licenses unless that person is under the direct supervision of a licensed Airframe and Powerplant Aircraft Technician that has performed that particular task previously.

The Director of Maintenance will periodically check aircraft to verify that the aircraft registration and airworthiness certificates are current and correct.

8.2   Technical Records

Immediately upon finding a defect in an aircraft, or upon completing any maintenance on an aircraft, the person discovering the defect or performing the maintenance shall enter details of the event in the applicable technical records required by applicable Federal Aviation Regulations (FAR's). If the event occurs between scheduled maintenance checks, the entries shall be made in the maintenance records. The Director of Maintenance shall ensure that aircraft log entries are transcribed to the applicable airframe, engine, or component records. Details of defects found during a scheduled maintenance check, or of maintenance performed during such a check, may be entered directly in the applicable airframe, engine, or component record.

8.2.1   Maintenance Control Procedures

A record shall be made of all maintenance, except routine maintenance, performed on aircraft, engines, appliance, or parts thereof, in accordance with appropriate Federal Aviation Regulations. These records shall be preserved in an easily retrievable manner to provide the following data to the Director of Aviation and to the Director of Maintenance:

   a.   Current aircraft status.
   b.   Maintenance history
   c.   Aircraft and equipment performance reliability

Records shall be maintained to accurately control the length of service life of all major components (equipment and structures). These records shall reflect the complete service life of any component that could be interchanged from one aircraft to another thus shortening the overall aircraft service life.

Aircraft maintenance records shall be completed each time an aircraft component or part thereof is removed or installed. These records shall reflect the history and current disposition of such components and parts. A permanent record file will be maintained for each aircraft until such time that the aircraft is transferred, sold, or retired from service. This record file shall contain the aircraft flight log, airframe log, engine log, 337 forms, Airworthiness Directives compliance form, Service Bulletins compliance form, current weight and balance report, and maintenance history report compiled by a computerized aircraft maintenance program.

8.3   Maintenance Schedules

All aircraft shall be maintained in accordance with the approved maintenance schedule approved by the Federal Aviation Administration (FAA) and in accordance with the guidelines stated in the document for that type of aircraft. Changes in operations, such as the introduction of MNPS, RVSM, CAT II etc. may require amendment of the maintenance schedules. This requirement will be assessed as part of the special flight authority application process.

8.4   Airworthiness Directives

The Director of Maintenance shall maintain a system to ensure that the aircraft follow all applicable airworthiness directives and other mandatory maintenance requirements. He shall examine the aircraft records upon appointment to the position, and upon each acquisition of a new aircraft, to verify this compliance. The Director of Maintenance shall review all new and revised airworthiness directives upon receipt, to determine if they are applicable. He shall enter details of all applicable airworthiness directives, and details of all directives pertaining to the aircraft make and model, in the appropriate airframe, engine, or component technical record. The Director of Maintenance shall determine the date, airtime, or operating cycles, when the actions specified in the directive must be taken.

Upon receipt of all recommendations issued by the aircraft, engine, and component manufacturers in the form of service bulletins or equivalent documents, the Director of Maintenance shall review the recommendations to determine whether compliance is appropriate. The Director of Maintenance will keep a record of each such decision made and retain the record along with the service bulletin or equivalent document. All records required by this section shall be retained for not less than six years.

8.5   Deferred Rectification of Defects

All discrepancies shall be rectified before further flight of the aircraft, except as provided in this section. Where permitted by FAA regulatory provisions as applicable, aircraft having outstanding discrepancies may be operated subject to the following procedures:

a. Where a Minimum Equipment List (MEL) has been approved and the list includes limits on the amount of time equipment may be inoperative, those limits apply.
b. Where the MEL does not specify time limits, the aircraft may be operated following discovery of a discrepancy. This provision is conditional to the following procedure:

    i. The pilot reports and co-ordinates the discrepancy deferral with the Director of Maintenance, who co-ordinates the authorization of the deferral.
    ii. If required, he will seek advice from a qualified AMO that the discrepancy does not invalidate the aircraft certificate of airworthiness.
    iii. The authorization shall be recorded in the MEL Discrepancy Folder and original filed in the maintenance record.
    iv. The MEL Discrepancy Folder entry shall specify the reason for the deferral and the latest date by which the discrepancy must be corrected, but no longer than at the next scheduled maintenance event; and
    v. Rectification shall take place as soon as practical following discovery of the discrepancy.

8.6   Minimum Equipment List (MEL)

All aircraft will have a current Minimum Equipment list (MEL) onboard. Contents of the MEL include:

a. The appropriate FAA approved Master Minimum Equipment List (MMEL)
b. The assigned Federal Aviation Administration Letter of Authorization
c. Master Minimum Equipment List Preamble

Equipment installed on the aircraft (other than passenger convenience items, such as: galley equipment and passenger entertainment devices) that is in excess of what is required and is not listed on the MMEL must be operational for dispatch. Any equipment not shown on the MMEL should be considered operational, as it is part of the original aircraft type certificate. Dispatch of any aircraft must be approved by the Director of Maintenance or his representative when a discrepancy pertaining to an MEL item has not been cleared.

The Federal Aviation Administration Letter of Authorization and the MMEL constitutes a Supplemental Type Certificate for the aircraft and must be carried on board the aircraft as prescribed in 91.213 (a) (2) of the FAR's.

8.7.1 Nonessential Equipment and Furnishings (NEF)

NEF are those items installed on the aircraft as part of the original type certification, supplemental type certificate, or other form of alternation that have no effect on the safe operation of the flight and would not be required by the applicable certification rules or operational rules. They are those items that, if damaged, inoperative, or missing, have no effect on the aircraft's ability to be operated safely under all operational conditions.

8.7.2   MEL Flight Discrepancies

The procedures for handling flight discrepancies will be as described in Chapter 5 of this manual.

8.8   Recurring Defect Control

At intervals not to exceed one month, the Director of Maintenance shall review the aircraft technical records to detect any recurring defects. Any defect that has occurred three times or more within the past month or the past 15 flight segments shall be reported by the Director of Maintenance to the maintenance staff or AMO responsible for maintenance. If a defect that has been reported as a recurring defect occurs again within one month of receiving the report, the Director of Maintenance shall ensure that the corrective action includes a complete investigation of the affected system(s), taking into consideration all previous occurrences of the defect and the actions taken to correct them. The maintenance record entry for rectification of the defect shall indicate that a recurring defect investigation has been carried out.

8.9   Technical Dispatch

Technical dispatch of aircraft shall be by means of the maintenance records. The Director of Maintenance shall ensure that all items of deferred maintenance other than those recorded in the current page of the maintenance records are entered on an approved serialized list attached to the front page of the log. Immediately following completion of any item of scheduled maintenance specified by a maintenance schedule, airworthiness directive or other mandatory requirement, the Director of Maintenance shall review the aircraft technical records to determine the date, flight time, or operating cycles when the next scheduled maintenance activity will become due, and make an entry to that effect in the records.

A flight release will be issued per FOM 3.4.2.1

8.9.1   Minimum Standards for Equipment

Charter Express shall follow the minimum performance and quality control standards for materials, parts or appliances used on company aircraft through Technical Standard Orders (TSO) that have been established by the FAA. This will ensure that the equipment will perform its intended purpose under specified conditions.

Replacement parts must be purchased from a source to ensure that the product or parts were produced under a TSO or PMA as issued by the FAA. These methods assure that quality and not bogus parts are provided. All Charter Express pilots, Aircraft Technicians, operators, manufacturers, and accident investigators should report any major Aircraft Technical malfunctions and defects of parts or materials or appliances to the local FAA office or on FAA form 8010-4.

8.10   Aircraft Weight & Balance Control

The Director of Maintenance shall maintain and retain weight and balance reports and amendments for all aircraft. Details of the empty weight and center of gravity of each aircraft shall be kept in the maintenance records and on board the aircraft. Although not required by Part 91, aircraft will be weighed, and the new center of gravity calculated when major components are added or removed from the aircraft. This information will be provided to the Director of Aviation to be used in the computation necessary for flight planning.

8.11   Maintenance Arrangements

All aircraft maintenance shall be performed by the company's own authorized qualified Aircraft Technician, or approved maintenance organization (AMO). An approved maintenance organization (AMO) shall hold proper license/ratings and scope for the work to be undertaken, authorized in writing in the form of a contract, purchase order or letter. Each request for maintenance shall specify that the work be performed and certified in accordance with the applicable requirements of the Federal Aviation Regulations (FAR's) and in accordance with this document. The Director of Maintenance shall make all planned maintenance arrangements. In the case of unplanned maintenance away from main base, the PIC may request the maintenance in writing. This may be done by completing a work order or similar document provided by the AMO. The Director of Maintenance shall be notified of all unplanned maintenance activities as soon as practical.

The selection of any qualified Aircraft Technician or AMO to perform the maintenance is at the discretion of the PIC and in conjunction with Charter Express Maintenance; however, he should confirm that they hold a certificate/license appropriate to the work to be done and that all the specific scope and limitations of the work to be done are covered under the work order. Relevant sections of the appropriate manuals will be supplied to each person who performs or certifies work. If there is any doubt, they should seek the advice of the Director of Maintenance.

The maintenance of company aircraft sometimes will require both major and minor repairs in nature that will have to be performed by outside organizations. Among other considerations, these organizations must have an established track record or recommendations from other reputable sources within the aviation community. This is important selecting an AMO.

Projected work is described and specified in the fullest detail as possible. Estimates of cost are to be as accurate as possible. Once an estimate for work has been established, a purchase order or agreement shall be drawn up between Charter Express and the AMO. The AMO shall provide a delivery schedule. If the agreed completion date cannot be met, the AMO must immediately notify Charter Express as soon as possible. Upon completion of the work an entry must be made in the appropriate aircraft records by the AMO reflecting the work that has been done in accordance with all applicable requirements of the Federal Aviation Regulations (FAR's).

8.12   Flight Authorization

The Director of Maintenance shall be responsible for all applications made to the Federal Aviation Administration for aircraft letters of authorizations and is authorized to make any required declarations for this purpose on behalf of the company.

An aircraft will not be operated after an incident until maintenance has released the aircraft. This can be done in writing or verbal by the Director of Maintenance.

8.13   Special Flight Authorization

The Director of Maintenance shall be responsible for all applications made to the FAA for aircraft special flight authorities and is authorized to make any required declarations for this purpose on behalf of the company.

8.13.1 Special Flight Request Procedures

Contact local FAA office where aircraft is located and talk with a maintenance inspector. He may ask you to fax or email your request for processing.

The special permit request should include the following information:

a. Make, model, serial number and registration number of the aircraft.
b. Departure location
c. Arrival location
d. Reason for special permit request (maintenance, etc.)
e. Date aircraft will depart (the FAA will usually grant a 10-day window for the special flight)
f. Request IFR flight if practical and needed. Normally they grant a special permit for daylight VFR only.
g. Ask for permission for Aircraft Technician to accompany aircraft if practical. Normally special permits are issued to include only personnel needed to conduct the flight.
h. All applicable AD notes must be complied with prior to special flight (unless it must be ferried to comply with an AD note)
i. Aircraft must be inspected by an Aircraft Technician or repair station prior to the special flight and a statement must be placed in the maintenance records. Example: "this aircraft has been inspected and is safe for special flight from_____ to_____ Signed_____.
j. Copy of the special permit must be placed as instructed per the text of the special Permit.

8.14   Aircraft Maintenance Schedules

8.14.1 Maintenance Inspection Discrepancies

During daily service inspections and routine required maintenance inspections, discrepancies noted will be written up in the Aircraft Discrepancy Folder. The discrepancy will note the item number, description of the discrepancy. If the item is then worked off, it will be signed off by the Aircraft Technician and appropriate maintenance record entries made. Some items may require MEL action, if then additional action will be in accordance with MEL requirements.

All discrepancies are to be complied with in a timely manner. Notify the Director of Maintenance, Director of Aviation, and crews if any major discrepancies impact the flight schedule.

After the discrepancy has been complied with and inspected, the Aircraft Technician will approve the aircraft for returned to service by issuing a flight release per FOM 3.4.2.1

8.14.2 Maintenance Inspection Records

Charter Express Flight Operations, shall ensure that the following records are kept for the periods mentioned below:

a. The total time in service (hours, calendar time and cycles, as appropriate) of the airplane and all life limited components.
b. The status of compliance with all applicable mandatory continuing airworthiness information.
c. Appropriate details of modifications and repairs.
d. The time in service (hours, calendar time and cycles, as appropriate) since the last overhaul of the airplane or its components subject to a mandatory overhaul life.
e. The status of the airplane's compliance with the maintenance program; and
f. The detailed maintenance records to show that all requirements for the signing of a maintenance release have been met.

The records above shall be kept for a minimum period of 90 days after the unit to which they refer has been permanently withdrawn from service and a minimum period of one year after the signing of the maintenance release.

8.14.3 Daily Service Inspections

Prior to being released for a trip sequence, the Daily Service inspection(s) shall be performed using manufactures recommendations by an Aircraft Technician experienced with the type of aircraft.

8.14.4 Functional Check Flights

Functional check flights for Charter Express aircraft require that an aircraft be flown before carrying passengers if it has been repaired or altered in any way that could have changed its flight characteristics or affected its operation in flight. The Director of Maintenance shall schedule/coordinate functional check flights for maintenance test purposes. Takeoffs and landings should be conducted in VFR conditions and daylight operations are preferred. Transportation of personnel that are not required for the test flight is not authorized.

If a ground test/run can show conclusively the repair or alteration has not changed the flight characteristics or substantially affected the flight operation of the aircraft, then a functional check flight is not required.

8.14.5 Scheduled Maintenance

Scheduled maintenance shall be performed on company aircraft because of the accumulation of flight hours, cycles, landings, or calendar, as dictated by the manufacturer or the FAA.

8.14.6 Unscheduled Maintenance

Unscheduled maintenance on Charter Express aircraft shall be performed on aircraft resulting from activity that generates a discrepancy including normal wear and tear. All aircraft discrepancies discovered by flight crews will be recorded by a discrepancy e-mail in sufficient detail to provide maintenance personnel with adequate guidance to properly troubleshoot and correct the discrepancy.

8.14.7 At Home Base

The Director of Maintenance will coordinate the procedures required for resolving open discrepancies with the appropriate technicians for corrective action. Upon completion of the corrective action, the technician will record his actions taken by replying to the discrepancy e-mail. The Director of Maintenance will assure the corrective action is recorded in the aircraft maintenance logbook and release the aircraft for flight, as necessary.

8.14.8 Away from Home Base

While a Charter Express aircraft is away from home base (KLIT) and develops an airworthy issue, the Assigned Trip Pilot in Command should consult with the Director of Maintenance or his representative concerning possible courses of action.

Consideration of MEL or corrective action will be given by the Director of Maintenance. Upon completion, the technician will detail the corrective action, sign with his certificate number on the proper paperwork for the Director of Maintenance. Pilots may be asked to monitor the work performed. If the work does not appear to be proceeding in a timely, orderly, and safe fashion, the PIC will contact the Director of Maintenance.

8.14.9 Ramp Safety

Observe the safety zone, which is 25 feet around the perimeter of the aircraft.

   a. Speed limit is never more than 2 miles per hour.
   b. A positive brake check must be made before entering the area.
   c. Chock or set parking brakes for all ramp equipment.
   d. Report any damage, no matter how slight, to the trip captain and the maintenance technician on duty.
   e. Place chocks in front of and behind the wheels of all aircraft and any equipment to prevent inadvertent movement.
   f. Watch and listen for any aircraft starting engines if you were not previously notified of a departure. The red anti-collision light is usually a good indication of engines starting.

8.14.10   Foreign Object Damage

Foreign Object Damage (FOD) is an expensive and potentially dangerous concern for aircraft operating at the Charter Express flight department facilities. All employees will practice safe ramp and hangar operations to limit exposure to FOD as well as perform periodic ramp inspections for debris.

8.14.11   Departing Aircraft

All employees shall follow a strict guideline when dispatching aircraft from the Charter Express flight line.

   a. Aircraft shall be on the flight line 1 hour prior to departure time for domestic trips.
   b. Aircraft departing international shall be on the flight line 2 hours prior to departure time.
   c. All aircraft shall be fueled and completely stocked 30 minutes before departure time (one hour for international trips).
   d. Remove wheel chocks and rug from the aircraft prior to the crew starting the engines.
   e. All flights departing from the Charter Express ramp area must be marshaled off the ramp.

8.14.12   Aircraft Quick Turns

Quick turns generally refer to flights that will be on the ground less than one hour. Request service needs from the crew and accommodate as possible. A fuel truck will be standing by prior to the aircraft landing on the ground. Pilots may send a fuel load prior to landing or may give personnel the fuel load once on the ground. If time permits, equip the aircraft as a normal trip.

8.14.13   Assisting Passengers

Personnel will assist in loading and unloading of luggage. Escort all passengers to and from the aircraft in a direct route. Personnel shall not direct any passenger under the wing of an aircraft or within 10 feet of any moving surface of the aircraft. Inform passengers of the designated smoking areas and advise passengers that there is no smoking on the ramp or inside flight operations.

8.14.14   Fueling of Aircraft

Charter Express personnel shall fuel and defuel aircraft according to the fuel load specifically given for each trip for a particular aircraft.

8.14.15   Defueling of Aircraft

Maintenance personnel will oversee the defueling of aircraft to the specified weight.

8.14.16 Cleaning of Aircraft

When an aircraft returns from a trip, specific duties must be accomplished to ensure the aircraft is cleaned properly and as safely as possible.

a. Follow all safety precautions while working in and around the aircraft.
b. Personal protection equipment shall be used when exposed to hazardous materials such as soaps, chemicals, compressed gases, and fuels.
c. Remove all items previously put on the aircraft for the flight. This includes all catering, trash, drinks, etc.
d. Service the Lavatory as required.
e. Connect a Ground Power Unit (GPU) to the aircraft in accordance with the procedures checklist to power up the aircraft to clean. Batteries must not be used to power up the aircraft!
f. Upon completion of the cleaning process, the aircraft is to be powered down and secured.

BLANK PAGE