CHANGE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
Air Traffic Organization Policy

AUS ATCT 7110.1A CHG 1

Effective Date:
April 27, 2017

SUBJ: Air Traffic Control

1. Purpose of This Change. This change transmits revised pages to AUS ATCT 7110.1A.

2. Audience. This change applies to all Air Traffic Personnel at the Austin ATC facility.

3. Where Can I Find This Change? This change is available on the FAA Web site at http:// loa.faa.gov

4. Explanation of Policy Change. See the Explanation of Changes attachment which has editorial corrections and changes submitted through normal procedures. The Briefing Guide lists only new or modified material, along with background.

5. Distribution. This change is distributed to the Austin ATC facility,TEXANA DISTRICT, FAA Directives Repository.

6. Disposition of Transmittal. Retain this transmittal until superseded by a new basic order.

Signed original on file

Robert P. Morris
Air Traffic Manager
Austin ATC Tower
Date: 04/27/2017

Explanation of Changes
Change 1

Direct questions through appropriate facility/service staff in the Quality Assurance and Training Department

The following notices are incorporated into this change and subsequently canceled:

-AUS ATCT N7110.31 - NEW ARRIVAL PROCEDURES (REF. RNAV OPD ARRIVALS)
-AUS ATCT N7110.32 - AMENDED PROCEDURES FOR ISSUING AUTOMATED CLEARANCES
-AUS ATCT N7110.33 - STARS SCRATCH PAD DATA
-AUS ATCT N7110.34 - BEACON CODES AND RADAR OPERATIONAL MODES
-AUS ATCT N7110.36 - APPENDIX B UPDATE
-AUS ATCT N7110.37 - APPENDIX C UPDATE
-AUS ATCT N7110.38 - TRANSFER OF VISUAL SEPARATION APPLICATION
-AUS ATCT N7110.39 - GO-AROUND PROCEDURES AND FEEDER AIRSPEEDS
-AUS ATCT N7110.40 - TOWER VISIBILITY UPDATES
-AUS ATCT N7110.41 - PRACTICE INSTRUMENT APPROACHES FOR VFR AIRCRAFT
-AUS ATCT N7110.42 - SAME RUNWAY OPPOSITE DIRECTION ARR/DEP PROCEDURES
-AUS ATCT N7110.43 - INTERIM CPDLC PROCEDURES
-AUS ATCT N7110.44 - OPPOSITE DIRECTION OPERATIONS PROCEDURES
-AUS ATCT N7110.45 - STARS SCRATCH PAD DATA
-AUS ATCT N7110.46 - RADAR OPERATIONAL MODES
-AUS ATCT N7110.47 - TOWER LOCAL TRAFFIC COUNT
-AUS ATCT N7110.48 - MANDATORY USE OF SURFACE MEMORY AIDS
-AUS ATCT N7110.49 - APPENDIX D ADDITION

FACILITY STANDARD OPERATING PROCEDURES HANDBOOK

FOR THE

AUSTIN AIR TRAFFIC CONTROL FACILITY

AUS ATCT 7110.1A

November 1, 2012

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

ORDER
AUS ATCT
7110.1A

Effective Date:
11/01/2012

SUBJ: Facility Standard Operating Procedures Handbook

Foreword

This order prescribes air traffic control procedures and phraseology for use by personnel providing air traffic control services. Controllers are required to be familiar with the provisions of this order that pertain to their operational responsibilities and to exercise their best judgment if they encounter situations not covered by it.

Michael W. Taber
Air Traffic Manager (A)
Austin ATC Tower

Date: _____

Distribution: AUS ATCT, TEXANA, REPOSITORY **Initiated By:** AUS-533

Facility Standard Operating Procedures Handbook
Explanation of Changes

A reformat of the content and multiple editorial changes facilitated the complete replacement of the original order. The following are highlights of the changes made:

Replaced Arrival Data (AD) with Data TRACON (DI) throughout this document. The Table of Contents was updated to reflect this change.

Old Chapter 2 – Tower Operations is now Chapter 3.
Old Chapter 3 – TRACON Operations is now Chapter 4.
Old Chapter 4 – General Procedures is now Chapter 2.

Revised the following paragraphs/subparagraphs as follows:

Old 2-2-1. FLIGHT DATA (FD) – ***now 3-2-1***

d. Combined the paragraphs concerning tower visibility requirements. Renumbered subsequent paragraphs.

Old 2-1-2. CLEARANCE DELIVERY (CD) – ***now 3-2-2***

d.5. Amended the process for dealing with a "Revised" routing to an aircraft that has already received their clearance.

k.1.(c) Amended local IFR clearance altitude to 3000 feet. This change incorporates and cancels **AUS ATCT N7110.09, Local IFR Altitudes**.

l. Added a new paragraph to define how SVFRs will be displayed via ARTS. Renumbered subsequent paragraphs.

m. Added a new paragraph to define how local VFR departures will be displayed via ARTS. Renumbered subsequent paragraphs.

n.2. Table Amended the 2-letter identifier for the Cargo Ramp.

Old 2-1-3. GROUND CONTROL (GC) – ***now 3-2-3***

d. Relocated old paragraph **2-2-4, Vehicular Traffic**, to GC. Renumbered subsequent paragraphs.

e. Inserted a note addressing WATER ROAD as under GC responsibility.

g. Relocated old paragraph **2-2-3, Special Designated Areas**, to GC. Renumbered subsequent paragraphs.

Old 2-1-4. LOCAL CONTROL (LC) – ***now 3-2-4***

g. Relocated old paragraph **2-2-9, Touch and Go Procedures**, to LC. Renumbered subsequent paragraphs.

i. Relocated old paragraph **2-2-10, Helicopter Procedures**, to LC. Added a new paragraph requiring LC to coordinate with GC for certain helicopter operations. Also added a subparagraph to address COTA operations. Renumbered subsequent paragraphs.

Old 2-2-1. RUNWAYS – *now 3-1-1*

c. Deleted the restriction for Touch and Go operations on RWY 17L/35R only.

Old 2-2-3. SPECIAL DESIGNATED AREAS

a. & b. Relocated paragraphs to GC. Renumbered subsequent paragraphs.

Old 2-2-4. VEHICULAR TRAFFIC

a. & b. Relocated paragraphs to GC. Renumbered subsequent paragraphs.

Old 2-2-9. TOUCH AND GO PROCEDURES

Relocated paragraphs to LC.

Old 2-2-10. HELICOPTER PROCEDURES

a. & b. Relocated paragraphs to LC.

Old 2-2-11. COORDINATION

c. Deleted the restriction for using RDVS equipment.

Old 3-1-1. ARRIVAL DATA (AD) – *now 4-1-1, DATA TRACON (DI)*)

a.1. Amended the paragraph concerning plus (+) routings on flight strips.

a.2. Removed the procedure regarding duplicate strips. Renumbered subsequent paragraphs.

b.2. Added a paragraph defining the procedures for releasing an IFR departure from San Marcos while the San Marcos Call-Up Area is open separately from Radar West. Renumbered subsequent paragraphs.

c.6. Relocated paragraphs to TC. Renumbered subsequent paragraphs.

c.9. Relocated paragraphs to TC. Renumbered subsequent paragraphs.

c.10. Removed the procedure regarding non-discrete beacon codes.

Old 3-1-2. RADAR POSTIONS – *now 4-1-2*

a.6. Removed the procedure requiring a hand-written VFR flight strip. Renumbered subsequent paragraphs.

b.3.(c) Amended the paragraph concerning the operational responsibilities of the San Marcos Call-Up Area by combining subparagraph (1) into this paragraph and removing subparagraph (2).

e.4. Amended the paragraph concerning VFR arrival aircraft crossing over the airport to the opposite downwind.

Old 3-1-3. WEST/EAST RADAR COORDINATOR POSITIONS (EC/WC) – *now 4-1-3, RADAR COORDINATOR POSITIONS (WC/EC/SC)*

Renamed the paragraph title. The Table of Contents was updated to reflect this change.

OLD 3-1-4. TRACON COORDINATOR POSITION (TC) – *now 4-1-4, TRACON COORDINATOR (TC)*

c. Relocated old paragraph **3-1-1c6** to TC.

d. Relocated old paragraph **3-1-1c9** to TC.

Old 4-1-1. PRACTICE APPROACH CLIMBOUT AT ABIA – *now 2-1-1*

a. Amended (Rerun) standard climbout instruction altitudes to 3000 feet. This change incorporates and cancels **AUS ATCT N7110.09, Local IFR Altitudes**.

Old 4-1-2. HELICOPTER PROCEDURES – *now 2-1-2, VFR HELICOPTER ARRIVAL PROCEDURES*

Renamed the paragraph title. The Table of Contents was updated to reflect this change.

a. Renamed the current subparagraph because of the addition of the following subparagraph.

b. Added helicopter arrival procedures for Feeder controllers.

Old 4-1-3. TURBOJET PROCEDURES – *now 2-1-3*

The paragraph title was missing from the Table of Contents – now applied.

Old 4-2-2. SCRATCH PAD DATA – *now 2-2-2*

b.1. Added a "Type Approach" category with "S" and "G" as a scratch-pad entries. Renumbered subsequent paragraphs.

b.2. Added a note concerning the use of "/"as a non-specified filler.

b.3. Added "B" to specify Radar South (RS) on climbout.

b. EXAMPLE Amended the examples to illustrate the above changes.

b.6. Added SVR (Special VFR), PAJ & JMP (parachute operations), DRY (Dryden Airport [TX05]), and LEX (Lexington Airport [TE75]) to the Three-Letter Identifiers table.

b.7.(a) Clarified the meaning behind the VF scratch-pad entry. This change incorporates and cancels **AUS ATCT N7110.08, Mandatory Scratch-Pad Entries**.

b.7.(b) Added F1 (At or over the Formula One site) to the Two-Letter Identifiers table.

Old 4-2-5. MINIMUM SAFE ALTITUDE WARNING PROCEDURES – *now 2-2-5*

b. Consolidated subparagraphs **b.** & **c.** to reflect national procedures (per FAA JO 7110.65, 2-1-6 SAFETY ALERTS).

Old 4-3-3. HANDOFFS – *now 2-3-3, SILENT HANDOFFS*

Renamed the paragraph title to differentiate from forced or automated handoffs (ref. new paragraph **2-3-2**) . The Table of Contents was updated to reflect this change.

b. Amended the paragraph to require LC to Quick-Look appropriate radar positions.

c. Relocated this paragraph to follow the Quick-Look reference. Renumbered subsequent paragraphs.

Old 4-4-3. BEACON CODE ASSIGNMENT/MONITORING – *now 2-4-3*

b. Amended beacon code assignment for 0270 to Alamo Tours.

Old 4-5-1. CENTER RADAR PROCESSING (CENRAP) PROCEDURES – *now 2-5-1*

c.9. Added a paragraph about using CENRAP-PLUS for training or scheduled outages.

d. Added CENRAP enable/disable procedures contained within AUS ATCT 7210.3.

old 4-5-2. NON-RADAR PROCEDURES to TRANSITION to a VFR TOWER – *now 2-5-2, NON-RADAR PROCEDURES*

Renamed the paragraph title and adjusted the subparagraphs to clarify ATC-VFR Tower operations. The Table of Contents was updated to reflect this change.

Old 4-7-3. IDENTIFIERS / ABBREVIATIONS – *now 2-7-3*

Amended the identifier for the Cargo Ramp.

Old 4-8-1. TRAFFIC MANAGEMENT – *now 2-8-1*

a.1.(b) Removed the requirement for a Feeder to pointout primary targets to another Feeder in Final airspace. Renamed and renumbered subsequent paragraphs.

a.4. Removed the requirement to keep turbojet arrivals high. Renumbered subsequent paragraphs.

a.5. Removed the requirement to keep turbojet arrivals fast. Renumbered subsequent paragraphs.

a.6. Removed the requirement to shortcut turbojet arrivals. Renumbered subsequent paragraphs.

b. Removed the Departure paragraph. Renamed and renumbered preceding paragraphs.

Old APPENDIX A, TOWER OPERATIONS – *now APPENDIX B*

B-12 Incorporated **AUS ATCT N7110.10, Appendix Updates**, for North Flow Intersection Departure Distances
B-13 Incorporated **AUS ATCT N7110.10, Appendix Updates**, for South Flow Intersection Departure Distances
B-16 Incorporated updates to the South Flow radar video map
B-17 Incorporated updates to the North Flow radar video map
B-18 Incorporated **AUS ATCT N7110.10, Appendix Updates**, for the MVA radar video map

Old APPENDIX B, TRACON OPERATIONS – *now APPENDIX C*

C-3 Incorporated updates to the South Flow radar video map
C-4 Incorporated updates to the North Flow radar video map
C-5 Incorporated **AUS ATCT N7110.10, Appendix Updates**, for the MVA radar video map
C-8 Incorporated updates to the South Flow GPS Fixes radar video map
C-9 Incorporated updates to the North Flow GPS Fixes radar video map

Old APPENDIX C, GENERAL OPERATIONS – *now APPENDIX A*

This appendix was moved to the front to coincide with the reorganization of the main document. Renamed and renumbered subsequent appendices.

New APPENDIX D, CIRCUIT OF THE AMERICAS (COTA) OPERATIONS

This appendix was created to encompass procedures for local operations reference COTA.

TABLE OF CONTENTS

Chapter 1 - INTRODUCTION

Section 1 - GENERAL

Chapter 2 - GENERAL PROCEDURES

Section 1 - AIRPORT OPERATIONS AT THE AUSTIN-BERGSTROM INTERNATIONAL AIRPORT

Section 2 - STARS

Section 3 - AUTOMATED INTRAFACILITY TRANSFER

Section 4 - BEACON CODES

Section 5 - RADAR OPERATIONAL MODES

Section 6 - CLASS C SERVICE

Section 7 - FLIGHT PROGRESS STRIPS

Section 8 - LOCAL FLOW MANAGEMENT

Section 9 - PRACTICE APPROACHES (RERUN)

Chapter 3 - TOWER OPERATIONS

Section 1 - TOWER STANDARD OPERATING PRACTICES (SOP)

Section 2 - TOWER POSITIONS

Chapter 4 - TRACON OPERATIONS

Section 1 - TRACON POSITIONS

APPENDICES

CHAPTER 1 - INTRODUCTION

SECTION 1 - GENERAL

1-1-1. PURPOSE

This handbook provides direction and guidance for the day-to-day operations in the Austin Terminal Area. Personnel are required to be familiar with the provisions of this order and to exercise their best judgment when encountering situations not covered.

1-1-2. DISTRIBUTION

This handbook is distributed to Austin ATC Tower, Texana District, and the Facility Directives Repository.

1-1-3. EFFECTIVE

This handbook is effective November 1, 2012 and supersedes and cancels AUS ATCT Order 7110.1, Facility Standard Operating Procedures, dated January 24, 2012.

1-1-4. CANCELLATION

The following notices are incorporated into this change and subsequently cancelled:
AUS ATCT N7110.08, Mandatory Scratch-Pad Entries
AUS ATCT N7110.09, Local IFR Altitudes
AUS ATCT N7110.10, Appendix Updates

1-1-5. PUBLICATION DATES

The changes to this Order will be scheduled, published and issued as necessary to ensure that its provisions remain current.

CHAPTER 2 - GENERAL PROCEDURES

SECTION 1 - AIRPORT OPERATIONS AT THE AUSTIN BERGSTROM INTERNATIONAL AIRPORT

2-1-1. PRACTICE APPROACH CLIMBOUT AT ABIA

The Approach Control feeder positions (RW, RE and RS) must be responsible for issuing climbout to aircraft executing a missed approach or rerun at the Austin-Bergstrom International Airport:

a. Approach Control must advise Tower when an arriving aircraft will execute a missed approach or rerun. The standard climbout instructions are:

1. Runway 17L - Turn left heading 080, climb and maintain 3,000.

2. Runway 17R - Turn right heading 260, climb and maintain 3,000.

3. Runway 35L - Turn left heading 260, climb and maintain 3,000.

4. Runway 35R - Turn right heading 080, climb and maintain 3,000.

b. Approach Control must advise Tower when non-standard climbout instructions are issued.

2-1-2 SAME RUNWAY OPPOSITE DIRECTION PROCEDURES

DEFINITION of Opposite Direction Operations: IFR/VFR Operations conducted to the same or parallel runway where an aircraft is operating in a reciprocal direction of another aircraft arriving, departing, or conducting an approach.

NOTE: *"Reciprocal direction" is defined in FAA JO 7110.65, 1-2-2c*

a. Responsibilities:

1. Local Control (Tower) and Final Control (TRACON) share the responsibilities to coordinate ODO and issue traffic advisories as prescribed in this order.

2. Tower is responsible for cutoff point compliance for opposite direction arriving and departing aircraft in accordance with paragraph **b3(a)**.

3. TRACON is responsible for cutoff point compliance for opposite direction arrivals in accordance with paragraph **b3(b)**.

b. Procedures for Aircraft Receiving IFR Services:

1. General:

(a) These procedures are only applicable when TRACON radar is operational.

(b) When the Certified Tower Radar Display (CTRD) is out of service, TRACON will be responsible for ensuring (arrival and departure) cutoff points are met.

(c) ODO procedures in this paragraph are applicable when two aircraft will execute approaches to opposite ends of the same runway, or an aircraft will depart prior to an arrival on an opposite direction approach to the same or parallel runway.

(d) Traffic advisories must be issued to both aircraft.

EXAMPLE-
OPPOSITE DIRECTION TRAFFIC (distance) MILES (position), (type aircraft)
OPPOSITE DIRECTION TRAFFIC DEPARTING RUNWAY (number), (type aircraft)
OPPOSITE DIRECTION TRAFFIC (position), (type aircraft).

(e) Opposite direction same runway operations with opposing traffic inside the cutoff point (10 flying miles from the runway) are prohibited except in the event of an emergency.

(f) The provisions of FAA JO 7110.65, Paragraph 7-2-1, Visual Separation, is not authorized when conducting opposite direction operations until standard lateral or longitudinal separation exists.

(g) Opposite direction departures will be turned away from opposing traffic inbound to the other parallel runway. Visual separation may be applied after the turn away from the opposing traffic has commenced.

(h) Memory aids (strip marking, placement of strips, display automation, or a physical reminder {ON/OFF puck or ODO strip}) must be used by both the TRACON and Tower.

2. Coordination

(a) Tower must verbally request opposite direction departures with TRACON on a recorded line and include call-sign, aircraft type, runway, and the phrase “OPPOSITE DIRECTION.”

(b) TRACON must verbally request opposite direction arrivals with Tower on a recorded line and include call-sign, aircraft type, runway, and the phrase “OPPOSITE DIRECTION.”

3. Cutoff Procedures:

For aircraft conducting same runway opposite direction operations:

(a) A departing aircraft, including an aircraft performing a touch-and-go or stop-and-go, or an aircraft conducting a go-around, low approach, or missed approach must be airborne and have commenced a turn to avoid conflict prior to an aircraft reaching:

i. A point10 flying miles from the threshold of the runway of intended landing:

or

ii. The base leg turn for an aircraft established in the traffic pattern.

(b) An arriving aircraft must cross the runway threshold prior to an aircraft reaching:

i. A point 10 flying miles from the threshold of the runway of intended landing:

or

ii. The base leg turn for an aircraft established in the traffic pattern.

(c) If the above conditions are not met, action must be taken to ensure control instructions are issued to protect the integrity of the cutoff points.

c. Procedures for VFR/VFR and VFR/IFR Operations:

1. Ensure VFR aircraft are issued a turn to avoid conflict with the opposing IFR/VFR traffic.

2. Tower/TRACON must use the phrase “OPPOSITE DIRECTION” during required coordination.

3. Tower must use a memory aid.

4. Tower and TRACON must issue traffic to both aircraft including the direction of turn of the departing aircraft.

2-1-3. VFR HELICOPTER ARRIVAL PROCEDURES

a. If a helicopter pilot indicates familiarity with a coded route , instruct the helicopter to fly the appropriate route. If the pilot is not familiar with the coded routes, and if feasible, direct the helicopter along the coded route. The local helicopters which have an LOA must use the arrival and departure route as per their letter of agreement.

b. Feeder controllers (RW, RE, RS) must ensure that helicopters inbound to ABIA have the appropriate coded route displayed in their scratch-pad prior to initiating a pointout to Final.

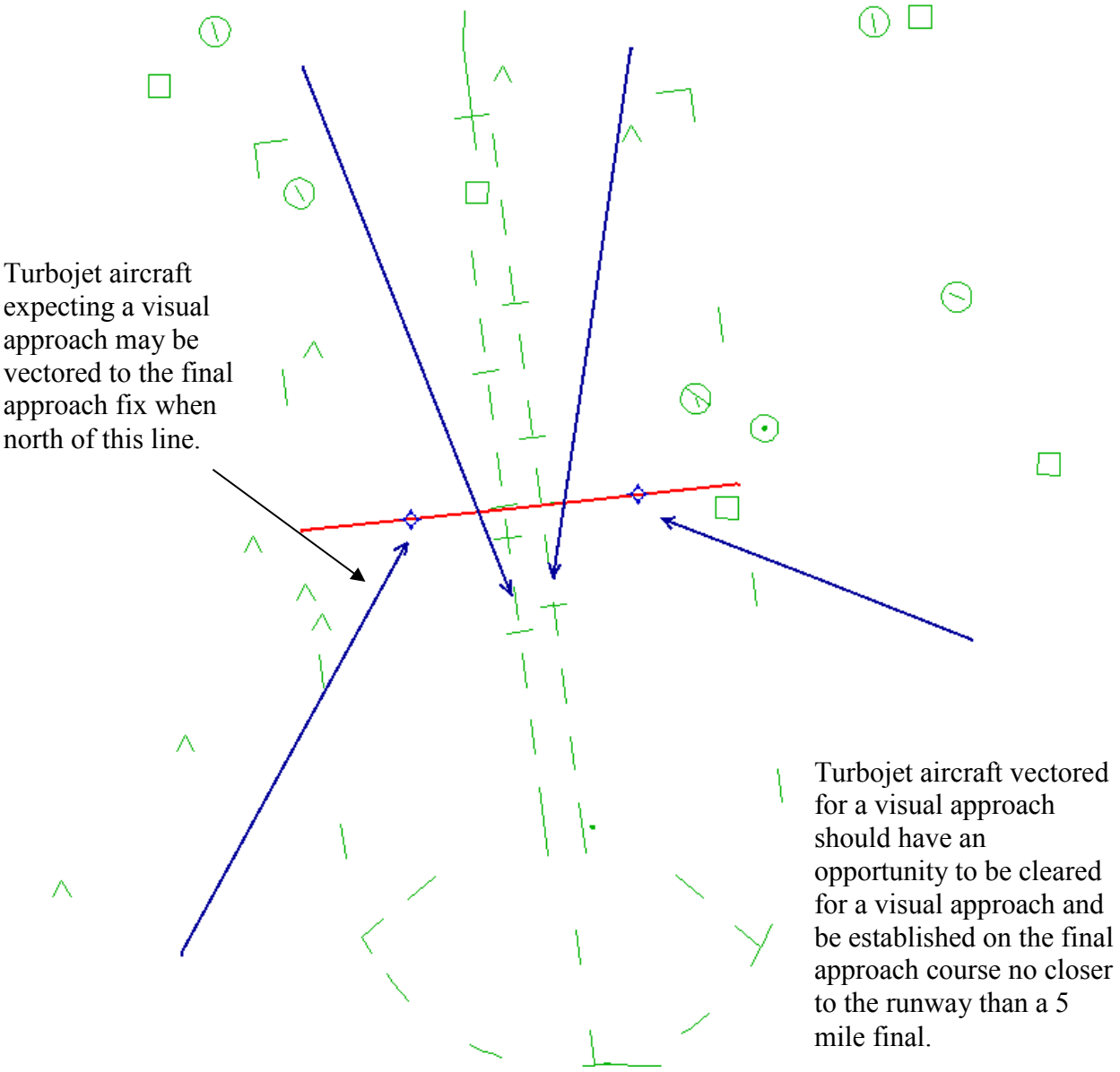
2-1-4. TURBOJET PROCEDURES

a. All turbojet arrivals to Austin-Bergstrom International Airport will be vectored to allow the aircraft to be established on final no closer to the runway than a five mile final

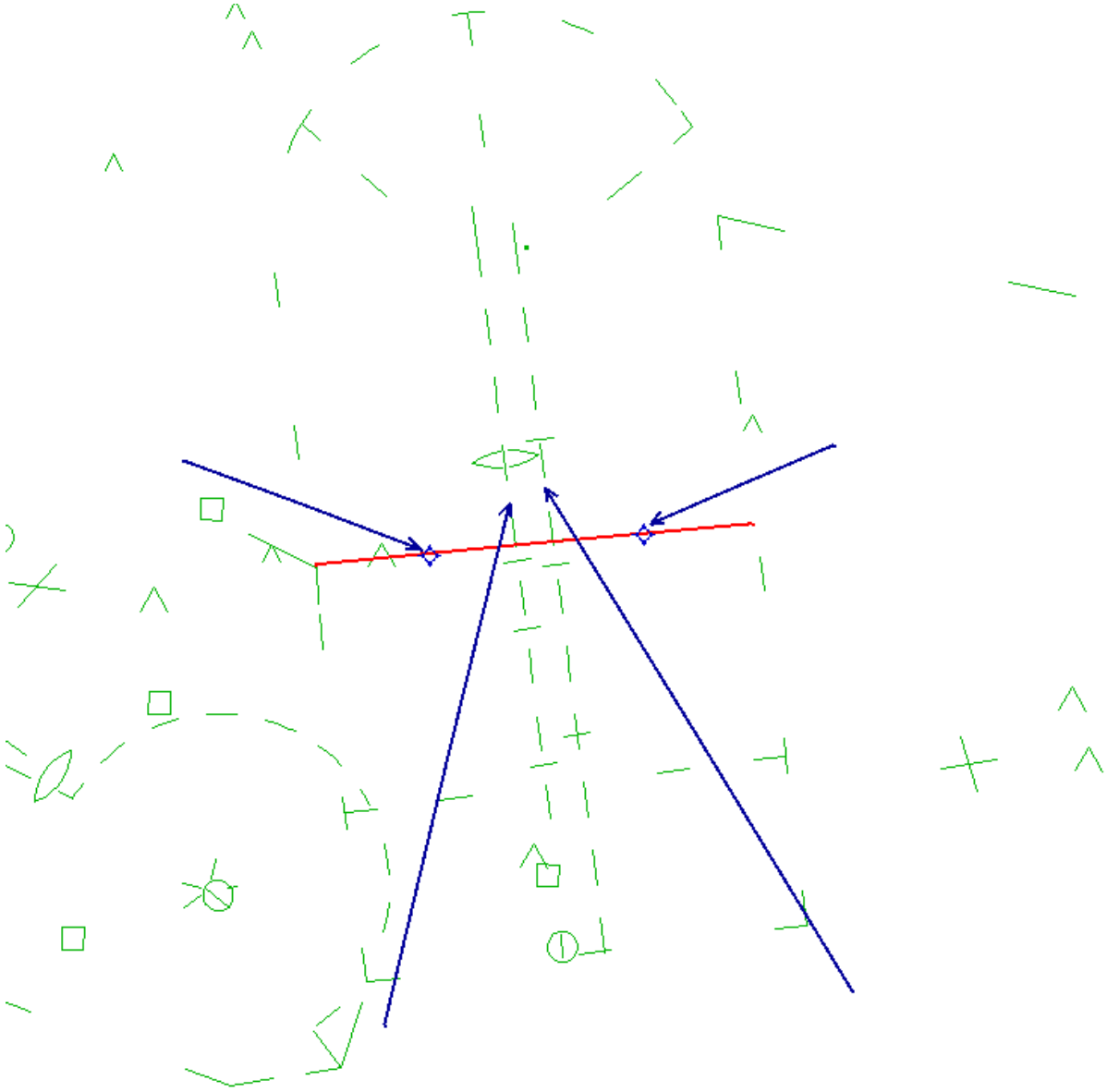
b. The attached maps for north and south flow indicate points to which aircraft should be vectored to depending the direction from which the aircraft are arriving from.

c. Blanket deviations from these procedures are not authorized and individual deviations must be coordinated on a recorded line

South Flow Arrivals



North Flow Arrivals



Turbojet aircraft vectored for a visual approach must have an opportunity to be cleared for a visual approach and be established on the final approach course no closer to the runway than a 5 mile final.

SECTION 2 – STARS

2-2-1 SCRATCH PAD DATA

Scratch pad entries may be used to transfer data via the STARS data block in lieu of verbal coordination. These are the only facility authorized coordination scratch pad entries. If other scratch pad entries are used, the entry must be removed prior to position relief or prior to a transfer of a STARS data tag.

a. Quick Function Keys. Aircraft inbound to AUS must be assigned a runway that conforms to the advertised direction of landing by the feeder controller. The feeder controller must enter the assigned runway into the STARS data block by either the "Quick Function" keys, or by manual scratch pad entries (**MULTI-FUNC, Y,** (**L** or **R**), **SLEW**).

"Δ" (**SLEW**) is the STARS entry for the "left" runway (Runway 17L for a south flow or Runway 35L for a north flow)

"•" (**SLEW**) is the STARS entry for the "right" runway (Runway 17R for a south flow or Runway 35R for a north flow)

b. Quick Function Key Combinations. Used in combination, the quick function keys will represent the runway and type of approach conducted (the order of the combination is not pertinent).

Δ / or / Δ	L V	Left runway cleared for visual approach
+ Δ or Δ +	L S	Left runway ILS approach
/ • or • /	R V	Right runway cleared for visual approach
+ • or • +	R S	Right runway ILS approach
Δ Δ	L G	Left runway GPS/RNAV approach
• •	R G	Right runway GPS/RNAV approach

NOTE –
For those aircraft conducting an RNAV Z approach "RNP" must be entered in the "+" scratchpad

c. AUS Planned Missed Approaches and Rerun Scratch Pad Data. The normal sequence of identifiers will indicate 1) Runway, 2) Type of Approach, and 3) Receiving Controller and Implied Departure Heading.

EXAMPLES-
RSE – Right Runway, ILS, Radar East
LGW – Left Runway, RNAV, Radar West
RLA – Right Runway, Localizer, Radar Finals
LST – Left Runway, ILS, Tower (aircraft will remain in the VFR traffic pattern)

NOTE –
The primary departure headings, depending on flow and type aircraft, will be assigned by a radar controller before the aircraft is switched to Tower and will conform to the standard headings as prescribed in paragraphs 2-1-1a and 3-2-4k.

d. Course Information. Course information must be entered into the STARS computer for VFR departures that do not have a flight plan already in the NAS. Headings must be entered into the STARS in the following format: ΔH01 where 'Δ' is the "DELTA" scratchpad key, 'H' is for "HEADING" and two digits indicate heading (rounded to the nearest ten degrees).

e. Aircraft Type. The aircraft type designator must be entered into the STARS. The aircraft type displayed in the STARS must comply with Appendix A of FAA JO 7110.65.

f. VFR Arrivals (Secondary Airports), VFR Departures, IFR and VFR Overflights. The following must be entered into the STARS:

1) Type of aircraft.

2) Identifier of destination, next fix, or heading.

g. Authorized Three-Letter Identifiers. The following three-letter identifiers may be used in either of the scratch pads:

SVR	Special VFR	CTY	Over the city
IFR	For point-outs from other facilities	VFR	For point-outs from other facilities
PAJ	Parachute operations	JMP	Parachute operations
GPS	Global Position System approach	OHD	Overhead approach to a full stop
T/G	Touch and Go	JFA	Just flying around
TOW	Banner tow	LEX	Lexington airport (TE75)
PNW	Training to the northwest	PNE	Training to the northeast
PSW	Training to the southwest	PSE	Training to the southeast
SIG	Signature Ramp	ATA	Atlantic Ramp
GFD	GARFIELD Arrival/Departure	MLK	MLK Arrival/Departure
I35	IH35 Arrival/Departure	MOY	MOYA Arrival/Departure
AHH	Austin Heart Hospital	DCH	Dell Children's Hospital
STD	St. David's Hospital	SET	Seton Hospital
SAM	South Austin Medical Center	BRK	Brackenridge
'D'2'D'	Where 'D' is direction (ex. E2W)	DRY	Dryden airport (TX05)
xxK	Assigned airspeed (21K means 210 knots		

h. Authorized Two-Letter Identifiers.

1) The following two-letter identifiers must be used in the secondary scratch-pad once an aircraft is cleared for a visual approach or is providing visual separation (as appropriate):

VF	Cleared for Visual Approach and/or providing visual separation with the preceding aircraft assigned to the same runway
VS	Cleared for Visual Approach and/or providing visual separation with an aircraft assigned to the parallel runway

2) The following two-letter identifiers may be used in the scratch-pads:

SR	State Ramp
MR	Maintenance Ramp
CR	Cargo Ramp
F1	At or over COTA (Formula One site)
HH	Austin Heart Hospital
BK	Brackenridge Hospital
VA	Cleared for Visual Approach
WR	Water Road

2-2-2 STARS HANDOFFS

a. San Antonio Approach. The entry for STARS handoff to SAT is "Δ **1 SLEW**".

b. Gray Approach. The entry for STARS handoff to GRK is "Δ **2 SLEW**".

c. Houston Approach. The entry for STARS handoff to I90 is "Δ **3 SLEW**".

2-2-3 GENERAL

a. Aircraft Status. The feeder controllers must ensure that aircraft landing at Austin-Bergstrom reflect arrival status in the STARS.

b. VFR Aircraft. All VFR aircraft must have a "V" in the SDS area or have the aircraft call sign prefixed with a "Z".

c. Pipe Line Aircraft. Aircraft performing pipeline patrol must be prefixed with "ZPL" to indicate that they are VFR on pipeline patrol.

d. VFR Helicopters. VFR general aviation helicopters will be prefixed with "ZH".

2-2-4 MINIMUM SAFE ALTITUDE WARNING PROCEDURES

a. When an alarm is activated controllers must comply with FAA JO 7110.65, para 2-1-6, Safety Alerts, which reads: Issue a safety alert to an aircraft if you are aware the aircraft is in a position/altitude which, in your judgment, places it in unsafe proximity to terrain, obstructions, or other aircraft. Once the pilot informs you action is being taken to resolve the situation, you may discontinue the issuance of further alerts. Do not assume that because someone else has responsibility for the aircraft that the unsafe situation has been observed and the safety alert issued; inform the appropriate controller.

NOTE−
The issuance of a safety alert is a first priority (see para 2−1−2, Duty Priority) once the controller observes and recognizes a situation of unsafe aircraft proximity to terrain, obstacles, or other aircraft.

b. The MSAW aural alarm area for the Tower is defined as a cylinder around Austin-Bergstrom International Airport with a 10 nautical mile radius from the surface to 4,500 feet MSL.

SECTION 3 - AUTOMATED INTRAFACILITY TRANSFER

2-3-1. TRANSFER OF RADAR IDENTIFICATION (POINTOUT)

All personnel shall use the following procedures when using automation capabilities (ARTS) to transfer radar identification between radar positions. When using these procedures, comply with the Standard Operating Practice (Transfer of Radar Identification and Silent Handoff). A Re-Direct is an authorized method of one controller accepting an intra-facility pointout and handing the aircraft to another controller as long as FAA JO 7110.65 paragraph 5-4-7, POINT OUT is applied.

NOTE-
A Re-Direct is a point-out.

a. Arrivals: IFR. Automated point-outs from Final to Austin Tower shall constitute an approval request (APREQ) for Final to descend prior to reaching the dump box. The aircraft must be established on the downwind heading prior to Final initiating the point-out. Upon acceptance of the point-out, Final may continue descent or issue a visual approach clearance and switch the aircraft to the Tower's frequency when appropriate.

b. Enroute Traffic (IFR/VFR):

1. These procedures must apply to all radar positions equally, regardless of which position initiates an automated point-out and which position accepts the point-out. This procedure must be applied in the same manner to both IFR and VFR operations.

2. The destination airport or an intermediate NAVAID must be displayed in one of the scratch pads of the ARTS.

3. The initiating controller must verify the MODE-C readout for accuracy prior to initiating the automated point-out. After a point-out has been accepted, the initiating controller must not change the assigned altitude of the aircraft until verbal coordination has been accomplished with the receiving controller. The only exception to this procedure must be for the descent of IFR traffic to conform to Letters of Agreement with adjacent facilities.

4. A change to the aircraft's route of flight may not be approved until verbal coordination has been accomplished with the receiving controller.

2-3-2. INTRAFACILITY TRANSFER OF CONTROL (HANDOFF)

The intrafacility transfer of control/communication transfer, other than airspace boundaries, must take place after a radar handoff is accepted in the transferring controller's airspace and under the following conditions:

a. The receiving controller must not issue any changes to an aircraft's heading which would permit a course reversal or which would prevent the aircraft from entering the receiving controller's area of jurisdiction in a normal manner.

b. The receiving controller shall not issue any changes to an aircraft's heading or altitude, which would conflict with the departure courses off the Austin-Bergstrom International Airport.

c. Transfer of communications of departing aircraft by Local Control East/West to Radar South authorizes the Radar South controller to vector the departing aircraft toward Radar South airspace.

2-3-3. SILENT HANDOFFS

Silent handoffs are authorized on all aircraft with an associated full data block if the handoff is in compliance with the following procedures:

a. Local Control must determine if the Certified Tower Radar Display (CTRD) is acceptable for use in accordance with FAA JO 7210.3.

b. Local Control must use the ARTS "Quick Look" function for the purpose of silent handoffs. Local Control must Quick-Look the Final and Feeder radar positions (AF, RW, RE, & RS).

c. Local Control must ensure departures acquire correctly on the appropriate departure position or complete coordination prior to communication transfer.

d. Final must remain clear of the departure corridor unless prior coordination has been accomplished.

e. Final must instruct all aircraft to contact Austin Tower in a manner that will indicate the approach sequence, not later than 5 flying miles from the runway, and no more than 10 miles from the airport unless coordinated.

2-3-4 TRANSFER OF VISUAL SEPARATION APPLICATION

The transfer of control of aircraft maintaining visual separation is authorized between positions/ sectors at Austin ATC Tower once coordination is completed, on an individual basis.

SECTION 4 - BEACON CODES

2-4-1. NON-DISCRETE BEACON CODES

When a flight progress strip is received that has been assigned a non-discrete beacon code contact the sector that will work the aircraft in Houston Center's airspace and request a discrete beacon code.

2-4-2. BEACON CODE ASSIGNMENT/MONITORING

a. When STARS is operational, beacon codes will be assigned by either the ARTCC or STARS computer.

b. The allocated facility code blocks have been distributed to accommodate the various statuses of flights as follows:

0201 – 0262	Assigned for VFR aircraft
0263 – 0266	Assigned for IFR aircraft
0267	Assigned for Stat Air aircraft
0270	Assigned for Alamo Tours aircraft
0271	Assigned for Star Flight aircraft
0272	Assigned for Star Flight aircraft
0273	Assigned for Star Flight aircraft
0274	Assigned for Star Flight aircraft
0275	Assigned for Austin Police Department aircraft
0276	Assigned for Texas Department of Public Safety aircraft
0277	Assigned for Austin Police Department aircraft

Codes 0201 – 0262 and 0267 – 0277 have the minimum safe altitude warning (MSAW) inhibited.

SECTION 5 - RADAR OPERATIONAL MODES

2-5-1. STARS OPERATIONAL MODE TRANSITION PROCEDURES

The normal operating mode to be utilized is FUSED. When FUSED is not operationally feasible or is unavailable, use the transition procedures for utilizing other operating modes as described below.

NOTE – *FUSED, Single Sensor, and Multi modes are all products of the STARS Radar Data Processors (RDP's). In the event that both RDP's fail, Direct Sensor Access (DSA) is the only backup available (FUSED, Single Sensor, and Multi will be unavailable) and should only be utilized for short term emergency transitioning procedures.*

a. Definitions.

1. FUSED – A "smoothed" display of targets that are generated from all available sensors, both ground based, Austin (AUS), Rogers (QYS), Morales (QNA), and satellite based (ADS-B). Target updates occur every second and with the aid of a computer calculated position provide a target which appears to be constantly moving (not "jumping'). FUSED is the normal operating mode to be used when available.

2. Single Sensor – A mode where the radar sensor can be selected on an individual basis. Targets will be displayed in a "top hat" configuration (primary displayed in blue and the associated secondary beacon slash in green). STARS will still be receiving data from the other available sensors. AUS radar in single sensor mode is the preferred mode when FUSED is not available.

3. Multi – A mode where all available sensors provide data to the STARS computer which then displays the target of highest confidence (requires 5 NM target and obstruction separation).

4. Direct Sensor Access (DSA) – DSA utilizes a raw radar feed from a single sensor (selectable) and displays only primary and secondary radar data with no automation interface (since there is no position symbol, targets cannot be tagged). DSA is a backup mode only to be used when both STARS Radar Data Processors fail. Radar data is sent directly to the displays, bypassing the RDP's (both altitude and beacon codes are available since that comes directly from the radar sensor).

b. Operational Modes.

1. Single Sensor:

(a) AUS radar in single sensor mode is the preferred mode when FUSED is not available. Apply standard lateral and vertical separation in accordance with national directives.

(b) When the single sensor selected is a Long Range Radar site (QYS or QNA), separation increases to 5 NM for aircraft, 5 NM for aircraft and obstructions, and 2 ½ NM for aircraft and adjacent airspace. Use the MVA-5 chart for the increased separation for obstructions. Passing and diverging procedures are not authorized.

(c) Non-radar criteria may be more advantageous for successive departures. Diverging headings issued by the tower must be coordinated with the radar controller. Radar controllers must use an appropriate form of radar identification for departure aircraft since the target may not be observed within one mile of the runway departure end.

2. Multi Mode:

(a) Apply 5 NM for aircraft, 5 NM for aircraft and obstructions, and 2 ½ NM for aircraft and adjacent airspace. Use the MVA-5 chart for the increased separation for obstructions. Passing and diverging procedures are not authorized.

(b) Non-radar criteria may be more advantageous for successive departures. Diverging headings issued by the tower must be coordinated with the radar controller. Radar controllers must use an appropriate form of radar identification for departure aircraft since the target may not be observed within one mile of the runway departure end.

3. Direct Sensor Access:

(a) When the AUS sensor is used, apply standard lateral and vertical separation minima in accordance with national directives.

(b) When either the QYS or QNA sensors are used, apply 5 NM separation as in Single Sensor or Multi Mode operations above.

(c) Limitations:

(1) There is no automation interface available when in DSA Mode. All handoffs must be manually coordinated.

(2) Full data blocks that were on the display prior to entering DSA mode will remain displayed and continue to track with the associated target. All subsequent aircraft will be displayed only with associated altitude and beacon code. There will be no position symbols and therefore controllers will not have the ability to initiate any new tracks or display/modify any data on existing tracks.

(3) Departure messages (DM's) must be sent via FDIO.

(d) Best Practices

(1) Display the beacon codes (MULTI FUNC, B)

(2) Use the CYAN color highlight to identify targets under your control (center button associated with trackball slew).

c. Responsibilities. The OSIC/OCIC is responsible for ensuring all transition procedures are initiated and terminated in accordance with this Order.

1. When aware of any radar sensors that are or will be out of service, notify TechOps. Any sensor not in service must be disabled to prevent erroneous data from being processed. TechOps will disable the appropriate sensor after coordinating with Air Traffic. If TechOps is unavailable, the OSIC/OCIC must disable the sensor via a STARS keyboard entry as follows:

(a) To disable a sensor – MULTI FUNC, 2, S, T, {RADAR ID}, *, D, ENTER

(b) To enable a sensor – MULTI FUNC, 2, S, T, {RADAR ID}, E, ENTER

NOTE – *RADAR ID's are "A" for AUS, "R" for QYS, "N" for QNA*

2. Normal operations are conducted in "MODE FSL" and "SITE FUSED". When FUSED is not available, Single Sensor with AUS selected is the next preferred "SITE" configuration. Next best SITE selection would be MULTI, which would provide data from all available sensors. Then single sensor for QYS or QNA. And finally, ADS-B.

NOTE – *From the DCB select "SITE", the appropriate sensor, "DONE". This entry must be made at each individual operating position. The entries may be made through the keyboard as well by pressing: "SITE", {RADAR ID}, ENTER.*

3. If it becomes necessary to change to DSA Mode; from the DCB select "MODE" and "DSA", "ACCEPT". The keyboard entry is a toggle between FSL mode and DSA mode. The entry is the simultaneous pressing of the "F16" and "D" keys.

4. Notify adjacent facilities as necessary.

5. Make an entry on FAA Form 7230-4, Daily Record of Facility Operation, stating an explanation for operational mode transition.

EXAMPLE – *MULTI SENSOR MODE IN USE, AUS RADAR OTS*

2-5-2. NON-RADAR TRANSITION PROCEDURES

In the event that AUS loses the ability to provide RADAR service, use the following procedure:

a. Inform aircraft that radar service is not available.

b. Establish appropriate non-radar separation.

c. Advise VFR aircraft inbound to AUS to contact AUS tower.

d. Implement the provisions of contingency plan ATC Limited.

1. Coordinate with adjacent/overlying facilities.

2. Stop departures.

3. Stop inbounds not already in AUS airspace.

4. Transfer control of airborne IFR aircraft to Houston Center.

5. Release Austin TRACON airspace to Houston Center.

6. Transition to VFR Tower operations.

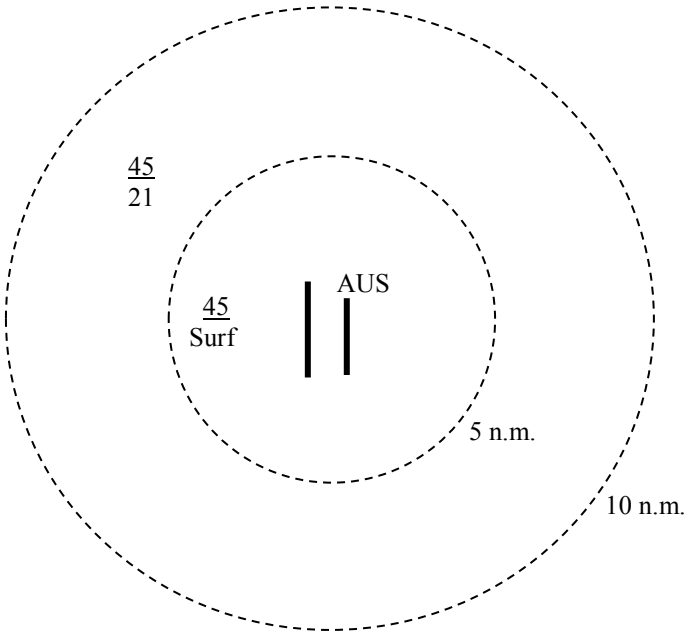
SECTION 6 - CLASS C SERVICE

2-6-1. CLASS C AIRSPACE

a. Areas defined

1. The Austin Class C airspace extends upward from the surface up to and including 4500 feet MSL within a 5 N.M. radius of the Austin-Bergstrom International Airport and extends upward from 2100 feet MSL to 4500 feet MSL within a 10 N.M. radius of Austin-Bergstrom International Airport.

2. The outer area airspace extends outward from the airport to 20 N.M. and extends from the lower limits of radar/radio coverage up to the ceiling of Austin Approach Control's delegated airspace excluding the Class C airspace.



b. Flight Data/ Clearance Delivery:

1. Must obtain destination/special requests, headings and proposed cruising altitude on all VFR departures, then issue the next transponder code in sequence from the Tower block of codes and the appropriate departure control frequency. VFR departures will be assigned the departure control frequency according to departure course, regardless of flow: If the departure frequency is questionable, place a "W", "E" or "S" on the flight progress strip to indicate which radar position the aircraft is assigned.

2. Prepare the data on a flight progress strip showing aircraft call sign, initial outbound heading or destination. If the destination airport is unknown the on course heading should be solicited and entered on the strip.

3. Advise aircraft requesting touch and goes to remain on tower frequency while in the local traffic pattern to contact Ground Control on the appropriate frequency and prepare a flight progress strip with the aircraft identification, type, and symbol "T/G" only.

4. Must enter the flight plan information (call sign, type aircraft, requested altitude, and destination airport or departure heading) into the ARTS IIE or the NAS via the FDIO on all proposed VFR aircraft departing the Austin-Bergstrom International Airport.

5. Forward the strip to the Ground Controller when all actions are complete.

c. If an IFR cardinal altitude is delegated to a position of operation, the VFR altitude associated 500" below the cardinal altitude is also delegated to the same position of operation unless otherwise designated.

d. Local Control (T- Local East, X - Local West) must:

1. Restrict VFR departures to a heading within the departure course as defined in Chapter 2 of this manual.

2. Provide conflict resolution between successive departures. If other than visual separation is applied, coordination must be effected with the appropriate controller.

3. Provide the initial separation between successive departures and other aircraft in the surface area.

e. TRACON Operational Position Responsibilities.

1. Radar West (RW), Radar East (RE) and Radar South (RS):

(a) Provides the required Class C services to all aircraft being worked within their area of responsibility.

(b) After coordination with the final controller, allow departures to proceed on course as soon as possible.

2. Final (AF) must provide the required Class C services to all aircraft operating within their area of jurisdiction.

3. All radar positions must avoid the departure course unless approved by Local Control except for helicopters on coded routes.

SECTION 7 - FLIGHT PROGRESS STRIPS

2-7-1. VFR

a. VFR departure strips shall contain as a minimum the following information:

Box 1	Aircraft identification
Box 2A	Aircraft location when offered by the pilot
Box 3	Aircraft type
Box 5	Beacon Code
Box 7	Proposed altitude
Box 8	Departure airport
Box 8A	Large “A” to indicate VFR aircraft
Box 8B	Runway and intersection assignment if other than the approach end of the runway
Box 9A	Proposed initial departure heading or destination airport within the Austin terminal airspace. Include special requests. (Example: ILS @ HYI)
Box 9B	ATIS information letter, when offered by the pilot

b. VFR overflight strips must contain as a minimum the following information:

Box 1	Aircraft Identification
Box 3	Aircraft type
Box 5,6,7	Large “V” to indicate overflight
Box 8A	Large “A” to indicate VFR aircraft
Box 9	Altitude
Box 9A	Destination

c. Practice Approaches. For aircraft making practice approaches, the radar controller may either make a strip for each countable operation or place marks on the strip for each countable operation with a circle around the marks. When the marks are used to indicate the number of countable operations, only the marks and not the strip will be counted. If you work an aircraft for three practice approaches to an airport, the strip should have three marks circled on the strip.

2-7-2. IFR

a. IFR departure strips must contain as a minimum the following information:

Box 1	Aircraft identification
Box 2A	Aircraft location when offered by the pilot
Box 3	Aircraft type
Box 5	Beacon Code
Box 7	Requested altitude
Box 8	Departure airport
Box 8B	Runway and intersection assignment if other than the approach end of the runway
Box 9	Clearance limit, route, destination, and departure restrictions if appropriate
Box 9A	Enroute Spacing Program (ESP) and time released (Example: ESP 1815)
Box 9B	ATIS information letter when offered by the pilot Check mark to indicate that the clearance was issued to the pilot
Box 10	ATIS Code
Box 11	*Not defined*
Box 12	*Not defined*
Box 13	(Flow control) Time aircraft will be at the runway, ready for departure
Box 14	(Flow control) Actual departure time
Box 15	(Flow control) Total terminal delay
Box 16	(Flow control) Reason for locally caused delay if other than ESP (Example: WX)
Box 18	*Not defined*

b. IFR arrival strips shall contain as a minimum the following information:

Box 1	Aircraft identification
Box 3	Aircraft type
Box 5	Beacon code (interfacility only)
Box 7	Coordination fix (interfacility only)
Box 8	ETA of fix or airport (interfacility only)
Box 9	Altitude
Box 9A	Destination airport
Box 9C	Type instrument approach if other than the advertised approach in use. Using abbreviations found in Chapter 4, Section 2, ARTS IIE of this manual may indicate type approach, type landing intentions, etc., if other than full stop

c. IFR overflight strips shall contain as a minimum the following information:

Box 1	Aircraft identification
Box 3	Aircraft type
Box 5	Beacon code
Box 6	Coordination fix
Box 5,6,7	Large "V"
Box 8	ETA of coordination fix
Box 9	Altitude and route

1 2	2A	5	8	9	9B	10	11	12
3		6	8A			13	14	15
4		7	8B	9A	9C	16	17	18

SAMPLE FLIGHT PROGRESS STRIP

2-7-3. IDENTIFIERS / ABBREVIATIONS

Identifiers / Abbreviations to be used for strip marking purposes.

HELICOPTER – H

PRACTICE AREA - (Pxx) (to be used for aircraft destined to the practice areas northeast, southeast, and southwest of the Austin-Bergstrom International Airport)

GA	General Aviation Ramp
SR	State Ramp
#_	Air Carrier gate number
MR	Maintenance Ramp
CR	Cargo Ramp

SECTION 8 - LOCAL FLOW MANAGEMENT

2-8-1. TRAFFIC MANAGEMENT

These traffic management procedures must be used for Austin-Bergstrom International Airport except when traffic, weather, or other conditions dictate otherwise. The standard arrival routes are depicted in Appendices A-12 and A-13.

a. The feeder positions (Radar West, Radar East and Radar South) must establish the initial sequence for aircraft entering the terminal area on arrival routes within the positions' area of operation and as traffic dictates should vector arriving aircraft to a downwind flow for handoff to the Final Position. Radar East should sequence to an east downwind. Radar West should sequence to the west downwind. When Radar East sequences to the west downwind, Radar East is responsible for sequencing Radar East's traffic with Radar West. When Radar West sequences to the east downwind, Radar West is responsible for sequencing Radar West's traffic with Radar East's traffic.

1. This procedure applies only to IFR aircraft.

2. South Flow

(a) Arrivals from Radar East airspace must be assigned 6,000 feet.

(b) Arrivals from Radar West must be assigned 5,000 feet.

(c) Arrivals from Radar South must be assigned 5,000 feet.

3. North Flow

(a) Arrivals from Radar East airspace must be assigned 6,000 feet.

(b) Arrivals from Radar West must be assigned 6,000 feet.

(c) Arrivals from Radar South must be assigned 5,000 feet.

4. Vertical separation must be ensured until the aircraft are established on the final approach course or another approved form of separation is ensured. (e.g.) visual, lateral, one is cleared for visual approach and flight paths do not intersect, etc.

b. Balancing Traffic

1. If an opportunity exists to balance the volume of traffic to the parallel runways, change the aircraft runway assignment and make use of sequencing to the other downwind. This can be accomplished early on in the sequence, or make use of an "over the top" maneuver where

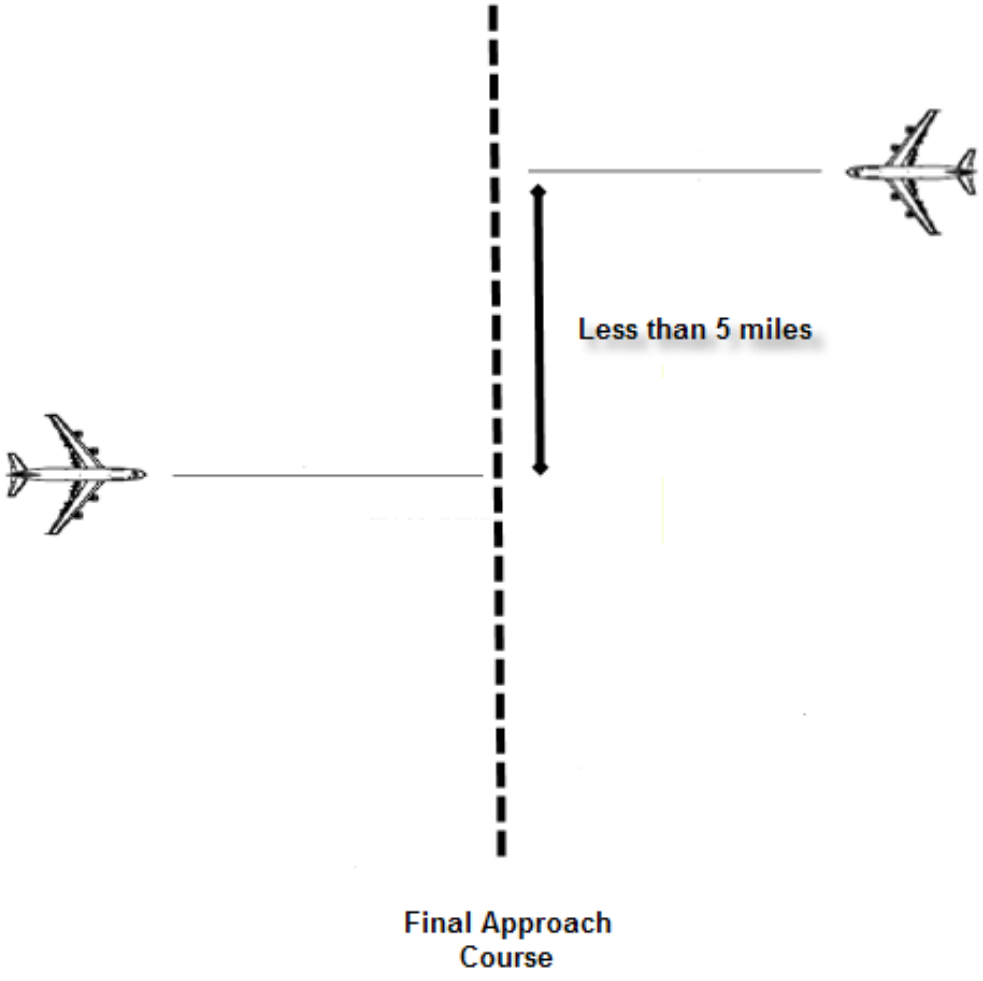
you come over the airport above Final airspace and join the other downwind. Hand Off or Point Out to others as appropriate.

2. Sequencing an aircraft to a runway that more closely conforms to the aircraft's parking area is not always advantageous to the pilot or the controllers. Be aware that balancing the flow of arrivals to the runways will likely be more efficient.

3. These practices facilitate the use of simultaneous visual approaches and staggered ILS approaches to AUS.

c. Definitions**.**

Opposing Bases. Opposite direction flight paths toward the final approach course where the distance between the two paths that intersect the final approach course is less than 5 miles.



d. When visual approaches are in use and traffic conditions permit, make maximum utilization of uninterrupted descent at "pilot's discretion".

e. These procedures are designed to provide for maximum use of fuel-efficient descents from cruising altitudes to approach gates for all turbojet and turboprop aircraft weighing more than 12,500 pounds.

2-8-2. FLOW MANAGEMENT

In order to prevent saturation of the system, flow management must be implemented as necessary to control the flow of traffic. The flow control phases may be implemented for the total facility or for a specific position of function.

a. Phase I (Arrival).

1. Avoid coordinating for deviations from letters of agreement, low activity procedures must not be used.

2. Feeder positions should establish arrivals to the ABIA on downwind flows. Parking location should not be considered for runway assignment and sequencing.

3. Arriving high performance aircraft landing at the ABIA should be reduced to 210 knots reaching or prior to downwind leg.

4. South Flow - FLM/CIC should instruct Houston Center to issue speed control. (Turbojet arrivals will cross the SEWZY / KALLA outer arrival fixes at 250K and WLEEE at 280K).

5. North Flow - FLM/CIC should instruct Houston Center to issue speed control. (Turbojet arrivals will cross the WLEEE at 280K and PINCH at 250K).

6. Practice approaches to ABIA should be limited.

b. Phase I (Departure).

1. Tower should avoid coordinating for deviations from Standard Operating Procedures.

2. VFR departures: Like type aircraft must be spaced at least 2 miles in trail.

3. IFR departures: Like type aircraft must be spaced at least 5 miles in trail.

c. Phase II. (Arrivals)

1. Includes all procedures under Phase I.

2. Feeder positions must establish ABIA arrivals on a sequenced downwind flow and assign a speed not to exceed 210 knots. Straight-in and base leg entries will not be used.

3. South Flow - FLM/CIC must instruct Houston Center to issue speed control / in-trail restrictions. Turbojet arrivals will cross SEWZY / KALLA at 250K and WLEEE at 280K with 10 miles in trail between like types at all fixes.

4. North Flow - FLM/CIC must instruct Houston Center to issue speed control / in-trail restrictions. Turbojet arrivals will cross WLEEE at 280K and PINCH at 250K with 10 miles in trail between like types at all fixes.

5. VFR arrivals will be vectored and sequenced to the downwind as necessary and vertically separated from IFR arrivals, or held outside of Class C Airspace.

6. Practice approaches to ABIA must be discontinued.

7. Overflights must be assigned 7000 feet or above or remain clear of the ABIA arrival pattern (lateral limits of Final's airspace).

d. Phase II (Departures)

1. VFR departures: Like type aircraft must be spaced at least 4 miles in trail.

2. IFR departures: Like type aircraft must be spaced at least 10 miles in trail.

e. Phase III.

1. Stop all ABIA arrivals (notify Houston ARTCC, San Antonio Approach, Gray Approach and Houston TRACON).

2. Stop all ABIA departures.

3. Phase III flow control should be used for brief periods to allow time to determine the next phase of flow control or during below minimum weather conditions, equipment failures, or airport emergencies / closures.

f. Arrival / enroute delays shall be logged by:

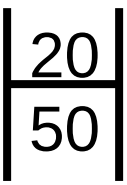
1. Placing an "H" in Box 8 of the flight progress strip.

2. Entering the time the aircraft begins holding (top part of the "H").

3. Entering the time the aircraft is cleared from the holding pattern (bottom of the "H").

4. The total delay is computed and forwarded to Flight Data.

Example:



SECTION 9 – PRACTICE APPROACHES (RERUN)

2-9-1. PRACTICE INSTRUMENT APPROACHES FOR VFR AIRCRAFT

Approach Control feeder positions (RW, RE and RS) must be responsible for issuing climbout to aircraft executing a missed approach or rerun at satellite airports.

a. IFR separation in accordance with FAA JO 7110.65 must be provided to VFR aircraft conducting practice instrument approaches at:

Austin-Bergstrom International Airport
San Marcos Municipal Airport
Georgetown Municipal Airport

b. IFR separation will not be provided to aircraft operating under VFR that practice instrument approaches to other satellite airports within the Austin terminal area.

CHAPTER 3 - TOWER OPERATIONS

SECTION 1 - TOWER STANDARD OPERATING PROCEDURES (SOP)

3-1-1. RUNWAYS

a. For the application of separation criteria, the parallel runways (17L and 17R, 35L and 35R) are 6,700 feet apart, centerline-to-centerline.

b. Traffic Patterns for all runways are at or below 2,000 MSL.

3-1-2. TAXIWAYS

a. All taxiways are at least 75 feet wide and have no weight restrictions.

b. Taxiways with in-pavement lighting: “B”, “F”, “M”, “G” east of taxiway “C”; taxiway “H”, ”G1”,”G2”,”G3”; and taxiways “K” and “L” from runway to taxiway “B”.

c. Taxiways without in-pavement lighting: ”A”, “N”,”J”, "C", "E", "R" "S", "T", "V", "W"; taxiways “K” and “L” west of taxiway “B” and taxiway "G" west of taxiway "C".

3-1-3. PRECISION APPROACH CRITICAL AREAS (ILS)

The ILS Critical Areas are depicted in Appendices B-8 through B-11. Restrict the operation of aircraft and vehicles within the following ILS critical areas as specified in FAA JO 7110.65, paragraph 3-7-5.

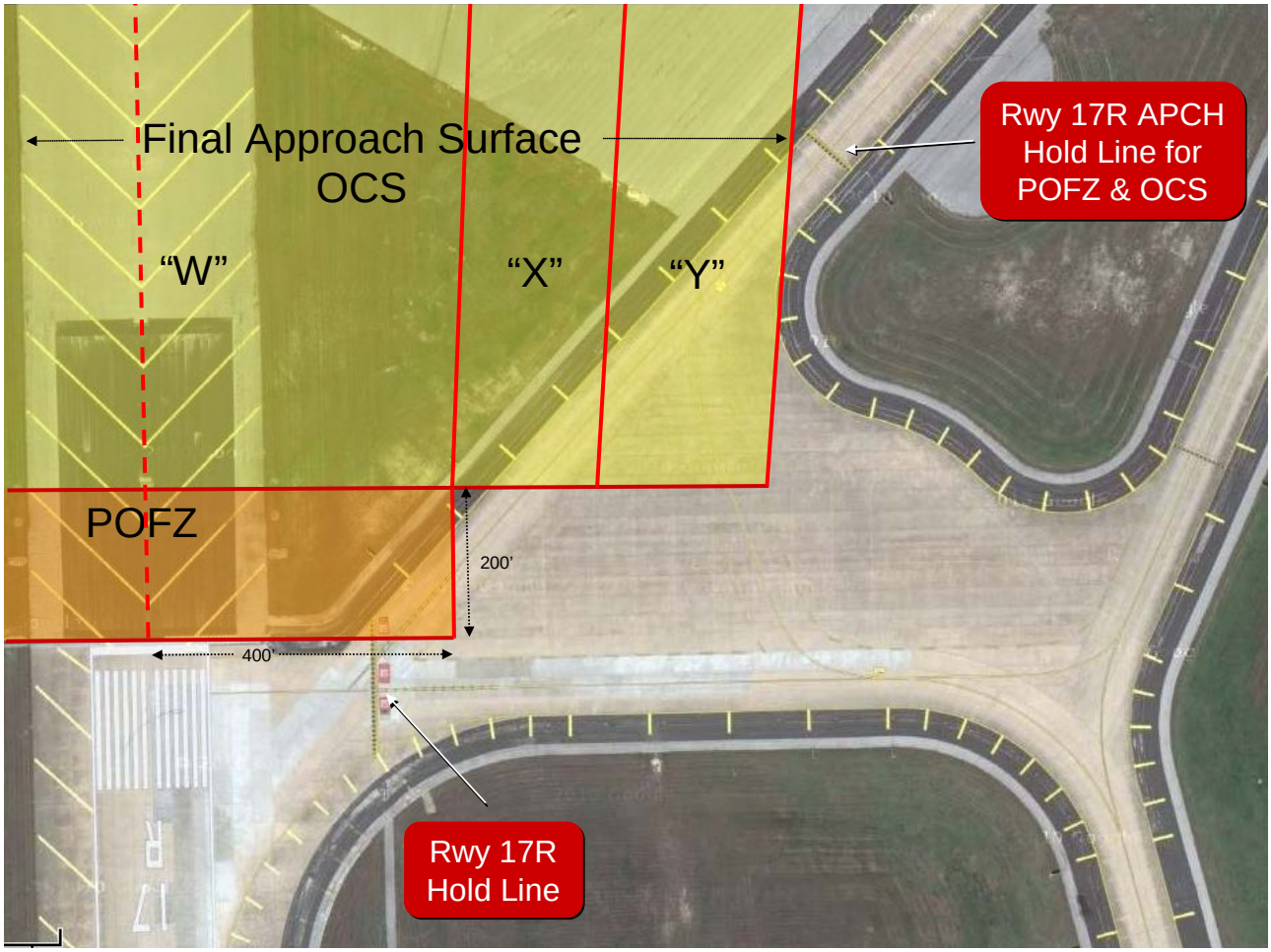
a. LOCALIZER CRITICAL AREA.

b. GLIDESLOPE CRITICAL AREA

3-1-4. PRECISION OBSTACLE FREE ZONE (POFZ) and OBSTACLE CLEARANCE SURFACES (OCS).

The POFZ and OCS at Austin-Bergstrom International Airport apply to runway 17R are depicted below. Restrict the operation of aircraft and vehicles within the following obstacle critical areas as specified in FAA JO 7110.65, paragraph 3-7-6.

(Illustrated in a graphic on the following page…)



3-1-5. INTERSECTION DISTANCES

The intersection departure distances for each runway are depicted in Appendices B-12 and B-13.

3-1-6. MOVEMENT/NON-MOVEMENT AREAS

The movement/non-movement areas are depicted in Appendix B-14.

SECTION 2 - TOWER POSITIONS

After giving the required position relief briefing, the controller being relieved must remain plugged in for a minimum of two minutes with the relieving controller to make sure all pertinent information and traffic situations are communicated and understood. At the end of the two minute overlap, the controller being relieved must record their initials. The controller being relieved must ensure the appropriate entries are made in CRU-ART. This does not mean you have to make the entry; you just have to ensure it is done.

3-2-1. FLIGHT DATA (FD)

a. Prepares, updates and monitors the ATIS as required by FAA JO 7110.65. When the ATIS code is changed, FD must transmit the new code to the TRACON via the IDS-4 utilizing the immediate page display function.

b. Must ensure that the IDS-4 is updated:

1. Upon receiving new weather, runway changes or when the ATIS code changes.

2. When dictated by weather conditions specified in FAA JO 7110.65, enter "PIREPS REQ" in the information area.

3. Enter, update, or remove NOTAMS, flow restrictions and special activities on the Tower IDS-4, as appropriate.

c. Must record PIREP's on AUS ATCT Form #017, PIREP log.

d. Must make visibility observations when either tower visibility or visibility at the usual point of reference is less than four miles and forward the report to Clearance Delivery. Tower visibility values must then be entered into the ASOS OID. The tower visibility charts are contained in Appendices B-2 through B-5.

e. SIGMET / CWA Information

1. Coordinate with the OSIC/CCIC to determine if the area of the hazardous weather is within 50nm of Austin Approach Control airspace.

2. Prepare form AUS ATCT 020 for SIGMET / CWA distribution.

3. Forward form AUS ATCT 020 to the specialists for broadcast.

NOTE-
The OSIC/CCIC must determine which SIGMET / CWA's are to be broadcast. Each specialist must enter the transmittal time on form AUS ATCT 020.

3-2-2. CLEARANCE DELIVERY (CD)

a. Primary frequencies: 125.5 / 263.0

b. Must issue clearances as prescribed in current directives and letters of agreement.

c. Must copy clearances verbatim on flight progress strips and issue ATC manual clearances when the FDIO is out of service.

d. Pre-Departure Clearance (PDC): Upon receipt of a flight plan on the Tower Data Link System (TDLS) screen, CD must utilize the following PDC procedures to process the flight plan with the option fields.

1. Option fields 1 through 4 are mandatory and cannot be sent empty. Therefore, these fields have been populated as shown in the table below.

2. Option fields 5 and 6 are not mandatory, but should be utilized in the following circumstances:

(a) For those aircraft that do not have a SID in their route of flight, Field 5 (from the table below) is mandatory.

(b) Field 6 may be used to pass non-control instructions/information.

FIELD	ALLOWABLE DATA FOR AUSTIN
1	.
2	.
3	***"MAINTAIN 4,000"***
4	***"EXPECT FILED ALT 10 MINUTES AFTER DEP"***
5	***"DEP CONTROL (FREQUENCY)"***
6	**NON-CONTROL INSTRUCTIONS/INFORMATION**

3. The PDC will then be sent to the user. After acknowledgement by the user, a check mark indicating that the information was forwarded will be put in Box 9B on the strip.

4. Revised flight plans must be issued verbally to the pilot.

5. If a reroute or revision occurs after the clearance has been issued, CD must mark on the old strip "**REV**" in red and leave the old strip at the GC position. CD needs to keep the new strip.

e. Must assign an initial altitude of 4,000 feet to all IFR departures exiting AUS airspace.

f. Must issue a 3,500 foot initial altitude restriction to all departing VFR aircraft.

g. All aircraft, both IFR and VFR, departing AUS via the east runway, to GTU must be assigned to Radar East.

h. All aircraft, both IFR and VFR, departing AUS via the west runway enroute to GTU must be assigned to Radar West.

i. All aircraft, both IFR and VFR, departing AUS enroute to 50R must be assigned to Radar South.

j. For departure messages, must acknowledge Local Control and forward an ARTS Force Message (RF) before entering the Departure Message (DM).

k. After obtaining sufficient information, must issue local IFR clearances to aircraft requesting local IFR service as follows:

1. An airport within Austin ATC airspace:

(a) Clearance limit - destination airport

(b) Route of Flight - Radar vectors

(c) Altitude - 3,000 feet

2. VFR-On-Top (OTP) clearance which has not filed an IFR flight plan and will cancel IFR within AUS airspace:

(a) Clearance Limit - CWK or as coordinated.

(b) Route of Flight - Radar vectors

(c) Altitude - 4,000 feet

3. Obtain a computer generated beacon code by entering the appropriate information into the ARTSIIE computer, including the use of the IFR key, and relay the clearance to Data TRACON.

l. Special VFR aircraft will be assigned a VFR code. The first scratch-pad must show "SVR" and the second scratch-pad must show direction, "NW, NE, SE, SW, etc." CD will then relay the information to DI.

m. All local VFRs (AUS airspace only) MUST be prefixed with a "Z" followed by the last three digits of the callsign. If this leads to a duplicate abbreviated callsign then use the Z followed by the full callsign.

n. Must prepare flight progress strips in accordance with current strip marking procedures and forward the strip to the appropriate Ground Controller when the clearance is issued.

1. If the pilot states an ATIS code to Clearance Delivery, Clearance Delivery must write the ATIS code on the flight progress strip in Box 9b.

2. If provided by the pilot, Clearance Delivery must indicate the location of the aircraft on the airport in Box 2A of the departure strip by marking:

SIG	Signature Ramp
SR	State Ramp
ATA	Atlantic Ramp
#_	Terminal Gate Number
CR	Cargo Ramp
MR	Maintenance Ramp
GR	Guard Ramp

o. When Houston Center implements an Enroute Spacing Program (ESP) mark the affected flight plan with "**ESP** _____" in red in block 9A of the flight progress strip.

p. When requested by Ground Control, obtain a release time from Houston Center for the ESP and mark the appropriate time on the flight progress strip.

q. Must update the ARTS IIE altimeter setting when the ARTS IIE is not receiving automatic input (altimeter must be within two hundredths of the altimeter supplied by weather service).

r. Must assume the duties of the Flight Data position when Flight Data is not staffed.

3-2-3. GROUND CONTROL (GC)

a. Primary frequencies are: Ground Control East 121.9 / 348.6
Ground Control West 121.7

b. Normally worked from GE position.

c. If traffic conditions require, GC may be split into two positions, Ground Control East position (GCE) and Ground Control West position (GCW). When GC is split, GCE assumes GC responsibilities for Taxiway Golf 2 and all operations east of Taxiway Golf 2 while GCW assumes GC responsibilities for all operations west of Taxiway Golf 2.

d. Must adhere to Airport policy for vehicular operations.

1. All authorized vehicles are to utilize the perimeter roads unless it is absolutely necessary to cross runways (i.e., emergencies, airfield maintenance). GC must closely monitor vehicular crossings to assure adherence to this policy.

2. GC must instruct all vehicles, other than ARFF and emergency vehicles that must operate on an active runway, to operate in a direction opposite to the aircraft traffic flow. GC must instruct these vehicles to contact LC on the appropriate tower frequency for clearance onto the runway and to remain on the appropriate Tower frequency while on the runway.

e. Controls aircraft and vehicles operating on the movement areas (including WATER ROAD) other than runways.

f. Must have traffic on taxiway ALPHA give way to aircraft exiting the active runway

g. Must use the Maintenance Ramp, or any other area designated by Airport authority, for engine run-ups, hazardous cargo, bomb threat, or general aircraft searches.

h. Assists the Local Controller in observing traffic.

i. Review the flight progress strip to ensure the accuracy of appropriate departure instructions/restrictions.

j. Must write the assigned runway / intersection on the strip in red in Box 8B and post the strip at the Local Control position as the aircraft taxis.

k. Must assign air carriers taxiing from the terminal ramp the runway that coincides with their direction of flight. Pilot requests for a different runway, other than the one assigned, will be assigned for safety/operational need only.

l. Advise general aviation aircraft requesting to proceed to the main terminal ramp that "GENERAL AVIATION AIRCRAFT OPERATIONS ARE PROHIBITED" and request the pilot's intentions.

NOTE-
Department of Aviation security procedures prohibit general aviation parking and passenger loading / unloading on the main terminal ramp. The one exception is any general aviation aircraft charter or owned by an airline or its employee that wishes to deliver personnel, parts, or cargo directly to the terminal or RON area. Airport Operations will advise the Tower of any exceptions.

m. Push / power back operations that do not infringe upon the movement area or impede ingress thereto require only an acknowledgement. When other traffic is a factor, an instruction (advisory) to hold and approving the push / power back after the traffic is clear would be appropriate for any gate.

n. Must request a pilot report (PIREP) each hour from an aircraft taxiing out for departure to fulfill the requirement of FAA JO 7110.65, Paragraph 2-6-3.

3-2-4. LOCAL CONTROL (LC)

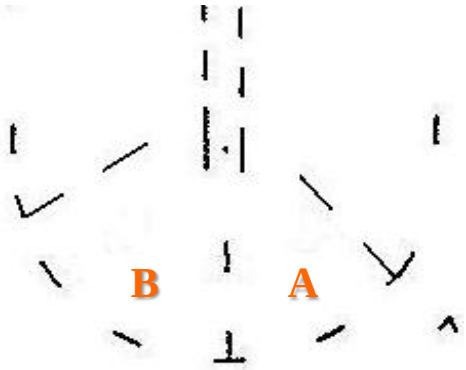
a. Primary frequencies are: Local Control East 121.0 / 281.5
Local Control West 118.225 / 254.25

b. Normally worked from LE position.

c. If traffic conditions require, LC may be split into two positions, Local Control East position (LCE) and Local Control West position (LCW). When LC is split, LCE assumes LC responsibilities for RWY 17L/35R and LCW assumes LC responsibilities for RWY 17R/35L.

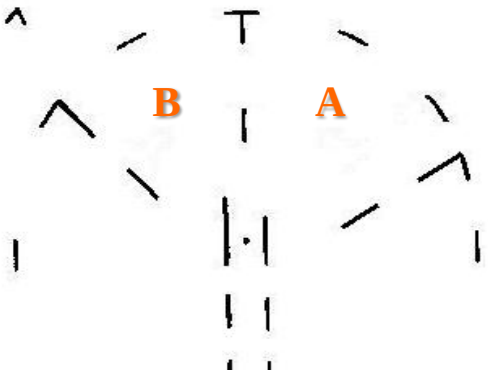
d. Areas of operation: Surface to 4,000 feet MSL

NOTE-
Local has not been delegated airspace but will utilize the below listed areas of operations for departures.



South Flow

A- Local Control-East
B - Local Control-West



North Flow

A - Local Control-East
B - Local Control-West

e. Ensures separation as required in the FAA JO 7110.65 for the:

1. Initial separation between successive departures.

2. Separation between arrivals and departures.

f. Must determine if the Certified Tower Radar Display (CTRD) is acceptable for use in accordance with FAA JO 7110.65 to provide:

1. "Silent handoff" and "quick look" procedures as specified in the CTRD Silent Handoff Procedures.

2. Radar separation of IFR aircraft operating in the vicinity of the Austin-Bergstrom International Airport.

g. Is authorized to conduct Touch and Go operations.

1. The touch and go traffic has a full data block including a scratch pad entry with "T/G".

2. LC must sequence touch and go traffic with aircraft on final and must coordinate with Final to obtain a sequence for the VFR aircraft if it will affect the established sequence.

3. All touch and go traffic will operate at or below 2,000 MSL. (ref. AUS ATCT 7110.3, Prearranged Coordination)

h. May change the landing runway assignment of any aircraft without coordination if the sequence is unaffected.

i. Is authorized to conduct helicopter operations.

1. If a helicopter pilot indicates familiarity with a coded route, instruct the helicopter to fly the appropriate route. If the pilot is not familiar with the coded routes, and if feasible, direct the helicopter along the coded route. Helicopters with applicable Letters of Agreement must use the arrival and departure route as depicted in their LOA. LC may only approve direct routes because of operational necessity and/or as traffic safety dictates.

2. Taxiing helicopters should be issued instructions to remain over paved surfaces to minimize blowing debris.

3. LC must coordinate with GC for helicopter operations on other than runways.

4. Procedures for events at Circuit of the Americas (COTA) are contained in Appendix D.

j. Must have automatic releases on all departures except:

1. During periods when the CTRD is inoperative.

2. When there is an opposite flow.

3. When a runway change occurs.

4. When Approach Control cancels all or any portion of the release.

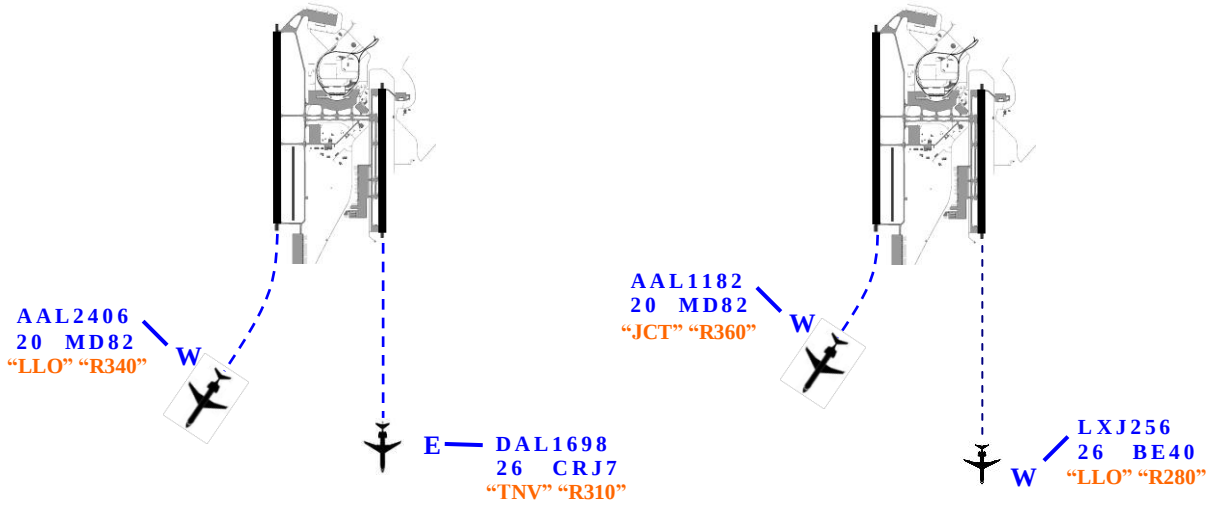
k. Review the flight progress strip to ensure the accuracy of appropriate departure instructions/restrictions prior to issuing take-off clearance. The following headings are authorized to be assigned without coordination:

Radar East/South	**RWY 17R**	**IFR**	**VFR**	**RWY 17L**	**IFR**	**VFR**
Turbojets	Primary	170°	170°	Primary	170°	170°
	Secondary	*n/a*	*n/a*	Secondary	150°	150°
Turboprop/Prop	Primary	150°	130° thru 170°	Primary	150°	130° thru 170°
	Secondary	130°	*n/a*	Secondary	130°	*n/a*
Radar West	**RWY 17R**	**IFR**	**VFR**	**RWY 17L**	**IFR**	**VFR**
Turbojets	Primary	190°	190°	Primary	170°	170°
	Secondary	*n/a*	*n/a*	Secondary	*n/a*	*n/a*
Turboprop/Prop	Primary	210°	190° thru 230°	Primary	210°	190° thru 230°
	Secondary	230°	*n/a*	Secondary	230°	*n/a*
Radar East/South	**RWY 35L**	**IFR**	**VFR**	**RWY 35R**	**IFR**	**VFR**
Turbojets	Primary	350°	350°	Primary	010°	010°
	Secondary	*n/a*	*n/a*	Secondary	030°	030°
Turboprop/Prop	Primary	030°	010° thru 050°	Primary	030°	010° thru 050°
	Secondary	050°	*n/a*	Secondary	050°	*n/a*
Radar West	**RWY 35L**	**IFR**	**VFR**	**RWY 35R**	**IFR**	**VFR**
Turbojets	Primary	350°	350°	Primary	350°	350°
	Secondary	330°	330°	Secondary	*n/a*	*n/a*
Turboprop/Prop	Primary	330°	310° thru 350°	Primary	330°	310° thru 350°
	Secondary	310°	*n/a*	Secondary	310°	*n/a*

l. If degree divergence separation is being applied, LC must retain communications with both aircraft until both aircraft are acquired by ARTS and established on the assigned heading.

NOTE-
It is the intent that the primary heading will be used for all aircraft unless there is an operational or safety reason to use the secondary heading. This will provide the departure controller a consistent feed thus providing the departure controller a safer environment. Using a secondary heading just to get an aircraft on course sooner should not be considered operationally advantageous.

NOTE-
1. Designated initial departure headings provide separation using degrees of divergence. It is not necessary to retain communications with both aircraft in the example where AAL2406 departs runway 17R heading 190 degrees going out over LLO and DAL1698 departs runway 17L heading 170 degrees going out over TNV.
2. The intent of this paragraph is for departures heading into the same sector at the same time. For example, LXJ256 departs runway 17L heading 170 degrees going out over LLO then AAL1182 departs runway 17R heading 190 degrees going out over JCT. In this case it becomes necessary for Local Control to retain communications until both targets have acquired so that the departure controller does not turn, in this example, LXJ256 in such a way as to be in conflict with AAL1182.



m. Local must provide visual separation between successive arrivals established on final within 5 miles of the airport. Must inform Final when visual separation cannot be provided.

n. Although it is the responsibility of Final to ensure separation of arrivals, this does not relieve the LCs of the responsibility of assisting Final by maintaining standard separation between successive arrivals released to the LC frequency.

o. Must inform Final when 2.5 mile in-trail separation is not available due to runway turn-off points not visible.

p. Must ensure that reruns execute their turn within the airport boundary unless prior coordination has been effected. In the event of an unplanned go-around/missed approach, Local Control, after establishing standard separation, should normally issue the headings from the table in paragraph k. (above) and an altitude of 3,000 feet MSL and then coordinate with Finals. (Finals may issue alternate instructions.)

q. Must use the following runway exiting procedures:

1. Instruct the aircraft where to turn-off the runway after landing when appropriate.

2. Due to reverse high speed taxiways not being designated for normal runway exiting, in a north flow, do not assign taxiway K or taxiway L as exit for aircraft landing runway 35R.

NOTE-
Pilots can exit K or L at their own discretion.

3. Taxi instructions must be provided to aircraft by either Local Controller when coordination with GC has been accomplished. An acknowledgement to comply with ATC instructions will be required before the aircraft can change to the GC frequency.

r. To the extent possible, must assist GC in observing ground traffic.

s. Must inform Flight Data to enter a departure message on aircraft that require a manual FDIO entry.

t. Must ensure the operation of runway lights, approach lights and airport lighting systems as required.

u. LC will provide an electronic boundary report by verifying the auto acquisition of the ARTS data tag with the correct aircraft information. If the information is incorrect or the ARTS data tag does not acquire before the aircraft is one mile from the runway, the local controller will provide a verbal position report prior to switching the aircraft to departure control..

v. Must employ the following memory aids:

Runway Status (CLOSED/INACTIVE)	NIDS RED/GREEN toggle indicator
Runway crossing	NIDS RED/GREEN toggle indicator
Vehicle, personnel or equipment on active runway(s)	STARS runway incursion prevention device
Land and Hold Short Operations (LAHSO)	Not applicable
Line Up and Wait (LUAW) availability	NIDS RED/GREEN toggle indicator
Landing clearance	Note pad with callsign written and checked (✓) or using the STARS function to change the color of the data block to cyan (blue)

w. Must ensure that local operations are counted and logged hourly on the Hourly Local Traffic Count form. Aircraft on a discrete beacon code (per subparagraph g above) will be automatically counted by CountOps, but all others must be logged on the local form. Log each low approach, touch and go, or stop and go with a single mark (not two) on the form.

x. Must request a release from the other LC for IFR/VFR aircraft on a runway opposite to the direction of departure (i.e. west bound departures from the east runway). The releasing local controller must issue a departure heading and release instructions. Point-out procedures must be applied.

y. Must coordinate with GC prior to using the water road.

3-2-5. CAB COORDINATOR (CC)

a. Should be associated with cab-controller-in-charge (CCIC).

b. Performs intra-facility coordination and exchanges pertinent traffic information between the tower positions and the TRACON positions and issues traffic unknown to Approach Control as necessary to ensure safe, orderly and expeditious flow of traffic.

c. Preplans and regulates the flow of traffic in the surface area, the distribution of traffic, and the equal distribution of arrival / departure delays.

d. Provides and receives manual handoffs or point-outs with the TRACON on aircraft arriving, departing and overflying the surface area and forwards all handoffs or point-outs to the appropriate LC.

e. Must assist LC in providing separation to aircraft operating within the local traffic pattern.

f. Assists the LC in maintaining an orderly flow of traffic by visually spotting traffic entering the traffic pattern and observing traffic in the local traffic pattern.

g. Obtains release and issues boundary / departure roll reports to the TRACON when required.

CHAPTER 4 - TRACON OPERATIONS

SECTION 1 - TRACON POSITIONS

After giving the required position relief briefing, the controller being relieved must remain plugged in for a minimum of two minutes with the relieving controller to make sure all pertinent information and traffic situations are communicated and understood. At the end of the two minute overlap, the controller being relieved must record their initials. The controller being relieved must ensure the appropriate entries are made in CRU-ART. This does not mean you have to make the entry; you just have to ensure it is done.

4-1-1. DATA TRACON (DI)

a. FDIO Strips.

1. When an overflight strip is received with only the rerouting between the plus (+) signs and no filed route is indicated, request a full route printout and place together with the original strip.

2. Perforated (half) strips must be used for all operations. Boxes 10 - 18 are used for flow control delay procedures. If pertinent data extends beyond the perforation, fold the strip at the perforation.

3. Prepare departure and arrival strips for local practice approaches.

b. Departures from satellite airports. When release instructions are requested for a departure off a satellite airport, the following applies:

1. Data TRACON will issue the IFR clearance and insert the departure control instructions as prescribed in the JO 7110.65 Paragraph 4-3-4.

2. When the San Marcos Call-Up Area is open Data TRACON must issue frequency 118.15 to all IFR departures off San Marcos (HYI).

3. After ascertaining when the aircraft will be ready for departure, Data TRACON will inform the appropriate radar controller of the airport and departing runway. The departure controller must formulate the departure control instructions and release time.

c. General.

1. Relay clearances and/or instructions as directed by the controller or facility directive.

2. Relay clearances to satellite airports via the Remote Transmitter/ Receiver Outlet (RTRO) or land line.

3. Place appropriate amended information into the NAS via the FDIO.

4. The data positions must amend requested altitudes for proposals in the computer only as required to conform to a letter of agreement.

5. Do the hourly arrival and departure count and enter the data on to the ATCSCC OIS SYSTEM ADTN website.

6. Disseminate PIREP's to AUS Tower and Federal Contract Flight Service Station (FCFSS).

7. Record PIREP's on AUS ATCT Form #017, PIREP log, located at the flight data position.

d. Flight Plan Processing when Radar / FDIO Outages Occur. During periods when a facility's FDIO / computer equipment or radar is not operational and "silent clearances" are not authorized, the following procedures must be used:

1. Obtain clearances from the Houston ARTCC on aircraft departing a satellite airport.

2. If unable to amend the flight plan via the FDIO, call the appropriate facility with the information.

e. IDS-4 entries.

1. Enter, update or remove NOTAMs, flow restrictions and special activities on the IDS-4 as appropriate.

2. Post on the IDS-4 any changes to the Houston ARTCC positions (i.e. frequencies, dial codes, combining/decombining, etc.).

3. When the IDS-4 is non-operational, make copies of weather and distribute them to the control positions.

f. SIGMET / CWA information.

1. Coordinate with the OSIC / CIC to determine if the area of the hazardous weather is within 50nm of Austin Approach Control Airspace.

2. Prepare form AUS ATCT 020 for SIGMET / CWA distribution.

3. Forward form AUS ATCT 020 to the specialists for broadcast.

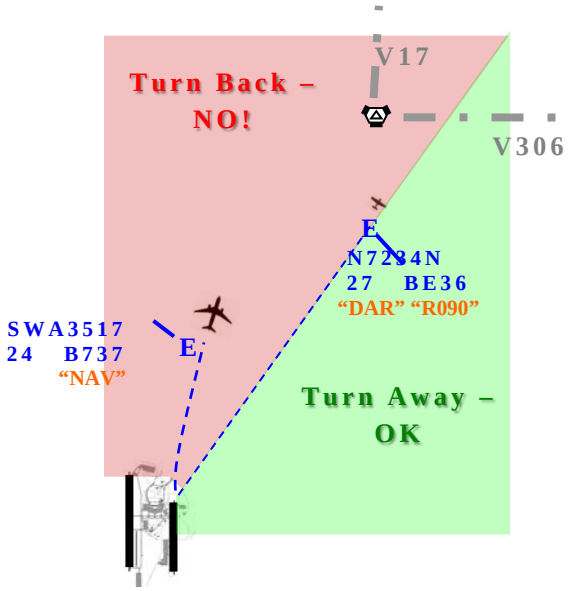
NOTE-
The OSIC / CIC must determine which SIGMET / CWA's are to be broadcast. Each specialist shall enter the transmittal time on form AUS ATCT 020.

4-1-2. RADAR POSTIONS

a. The TRACON radar positions have common operational responsibilities. Radar West (RW), Radar East (RE), Radar South (RS), and Final (F):

1. Are responsible for the required separation of arrivals, departures and overflights and protects the departure courses (where applicable) within the area of operation.

NOTE-
Protection of departure courses means that the departure will only be turned away from the extended centerline of the departure runway and further into the departure controller's (RE or RW) airspace.)



2. Provides approach control, departure control and VFR radar services in the area of operation.

3. Ensure arrivals are in an orderly sequence and at an airspeed compatible with the traffic flow and demand.

4. Performs coordination and radar handoffs to other positions and facilities as necessary.

5. Provides approach / departure control services and releases aircraft from airports within the area of operation.

6. Before an aircraft is instructed to contact AUS Tower, the tower controller must be informed when visual separation is being applied to a preceding aircraft, either verbally or via Scratch Pad Data entry.

b. Radar West (RW).

1. Frequencies: 119.0 / 370.85

2. Altitude Filter Limits: 005150

NOTE-
These are minimum settings; they may be expanded.

3. San Marcos Call-Up area (as depicted in Appendices A-12 and A-13).

(a) Primary Frequency 118.15 / 350.25

(b) This is an area that can be activated by the OSIC/CIC to relieve the workload off of the Radar West position.

(c) Responsible for working aircraft into and out of the San Marcos Airport.

c. Radar East (RE).

1. Frequencies: 122.75 / 317.65

2. Altitude Filter Limits: 005150

NOTE-
These are minimum settings; they may be expanded.

d. Radar South (RS).

1. Frequencies: 120.875 / 270.25

2. Altitude Filter Limits: 005150

NOTE-
These are minimum settings; they may be expanded.

e. Final (F).

1. Frequencies: 125.32 / 279.55

2. Altitude Filter Limits: 005060

NOTE-
These are minimum settings; they may be expanded

3. Transfer of communications to AUS Tower will be accomplished not less than five (5) flying miles from the airport and not more than ten (10) miles from the airport.

4. For aircraft crossing over the airport to enter a downwind, Final may make an automated hand-off to the Tower. If the Tower does not accept the hand-off by five (5) flying miles from the airport, Final will either vector the aircraft through the west/east final traffic or verbally coordinate with the Tower. If the Tower accepts the hand-off, this constitutes approval to allow the aircraft to cross over the airport at/or above 2500 MSL for a downwind. Final will provide a space in the sequence for the aircraft crossing over the airport (e.g., 5NM gap between arrivals). The aircraft must be switched to Tower prior to crossing over the airport.

5. During an opposite direction flow, Final must issue releases after coordination with the affected position(s).

6. Must coordinate each "planned" IFR missed approach at the Austin-Bergstrom International Airport with the appropriate controller if the aircraft will enter that controller's airspace.

7. Should be combined to Radar West during periods of light traffic.

4-1-3. RADAR COORDINATOR POSITIONS (WC/EC/SC)

a. The Radar Coordinator must:

1. Perform all landline coordination.

2. Perform all "intra-facility" and "inter-facility" point-outs.

3. Initiate all outbound hand-offs.

4. Manage flow restrictions; i.e., metering, in-trail restrictions, stopping departures and / or arrivals.

5. Assist the radar controller in maintaining surveillance of the radar controller's traffic and determine / resolve potential traffic conflicts.

b. The Radar Coordinator must, at the direction of the Radar Controller:

1. Accept inbound handoffs.

2. Make SDS and Scratch Pad entries.

3. Obtain VFR codes and write VFR arrival and pop-up IFR traffic strips.

4-1-4. TRACON COORDINATOR (TC)

a. Coordinates with the Tower Cab Coordinator position to assure a smooth changeover of aircraft from the TRACON to the Tower when necessary.

b. Assists Final by coordinating and releasing traffic when in an opposite direction flow at the Austin-Bergstrom International Airport.

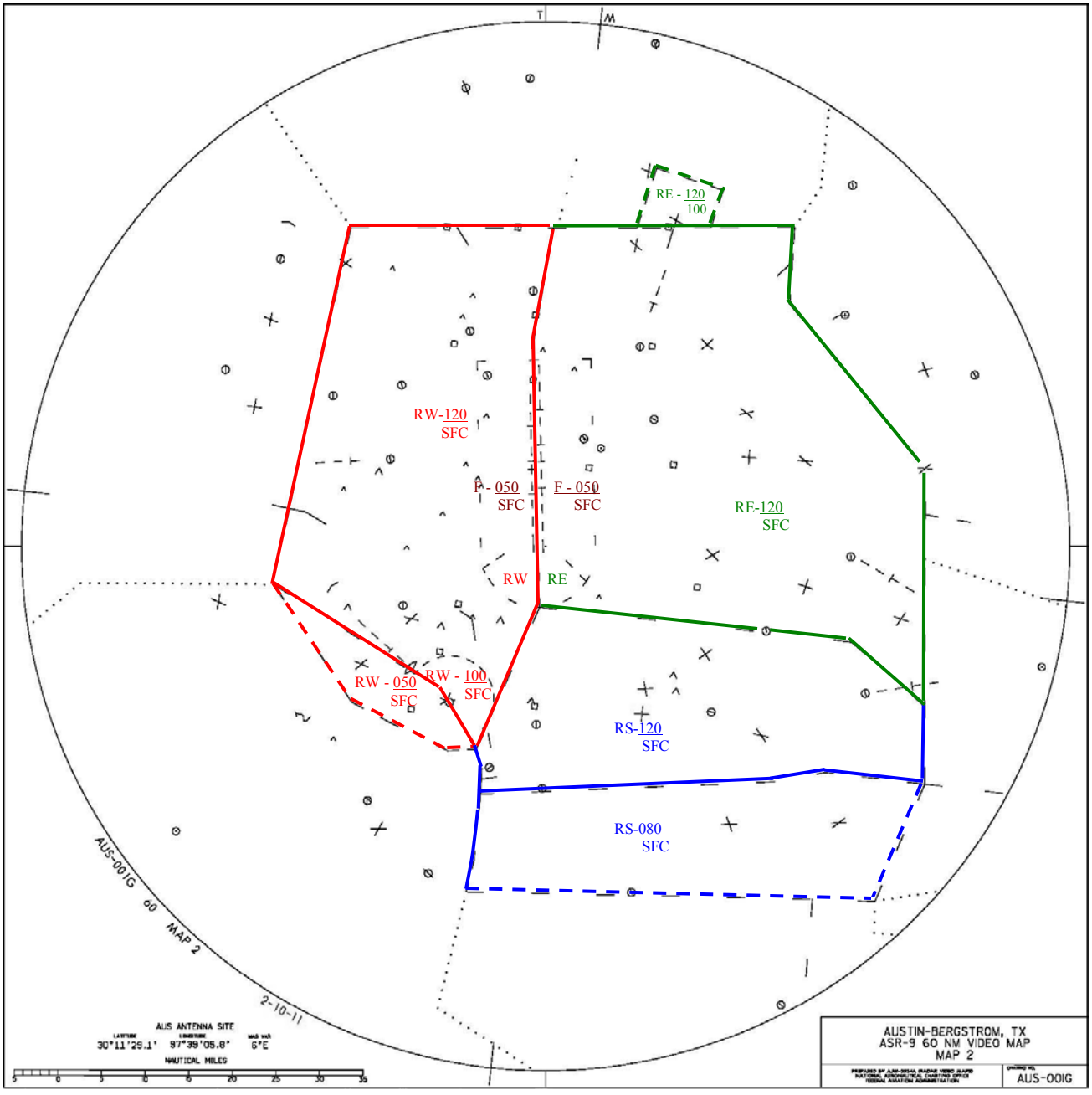
c. In the event of an incident, have CD call the weather observers for a special weather report.

d. Notify all facilities concerned about outages of equipment that will affect their operation.

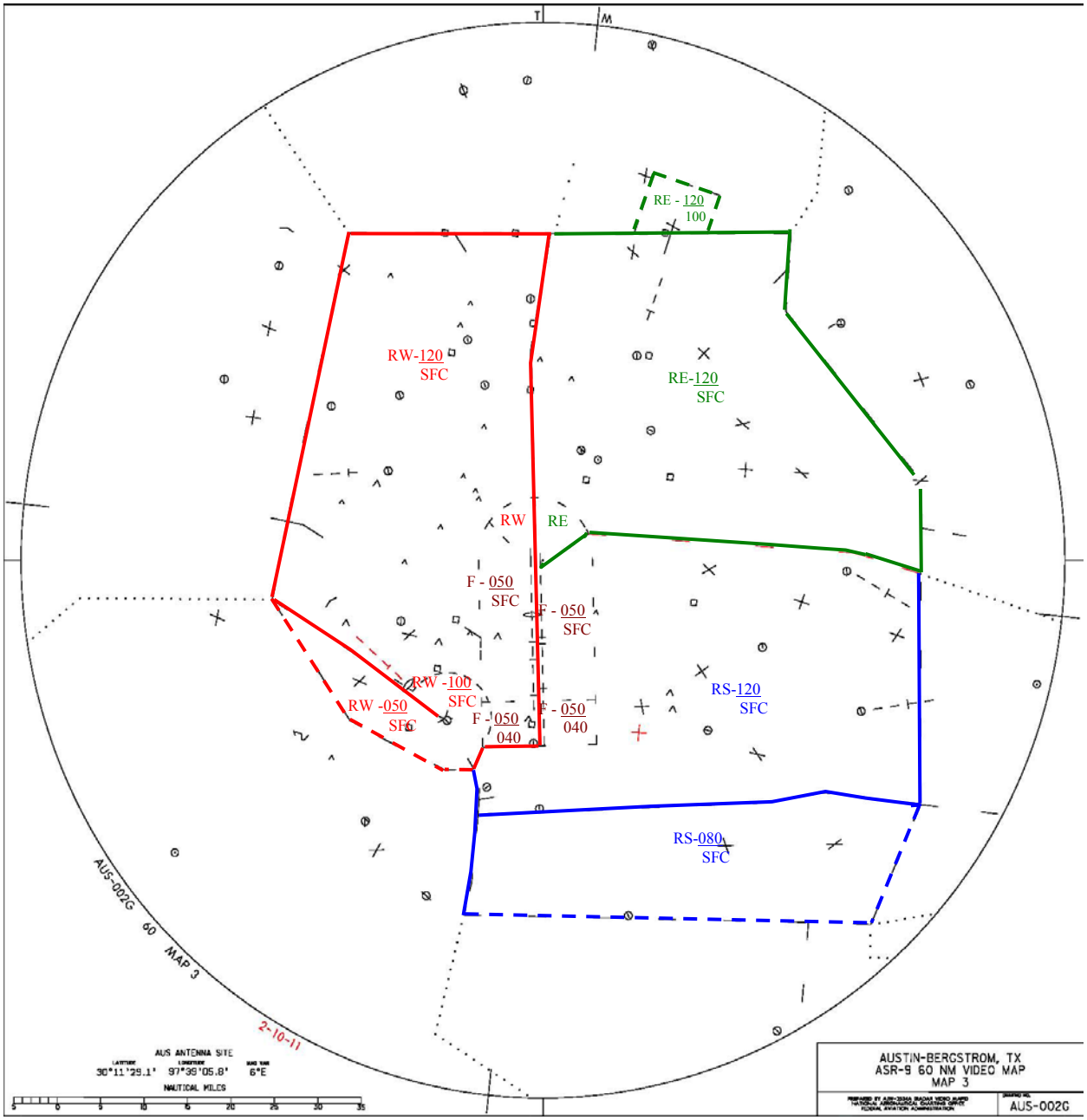
APPENDIX A

GENERAL OPERATIONS

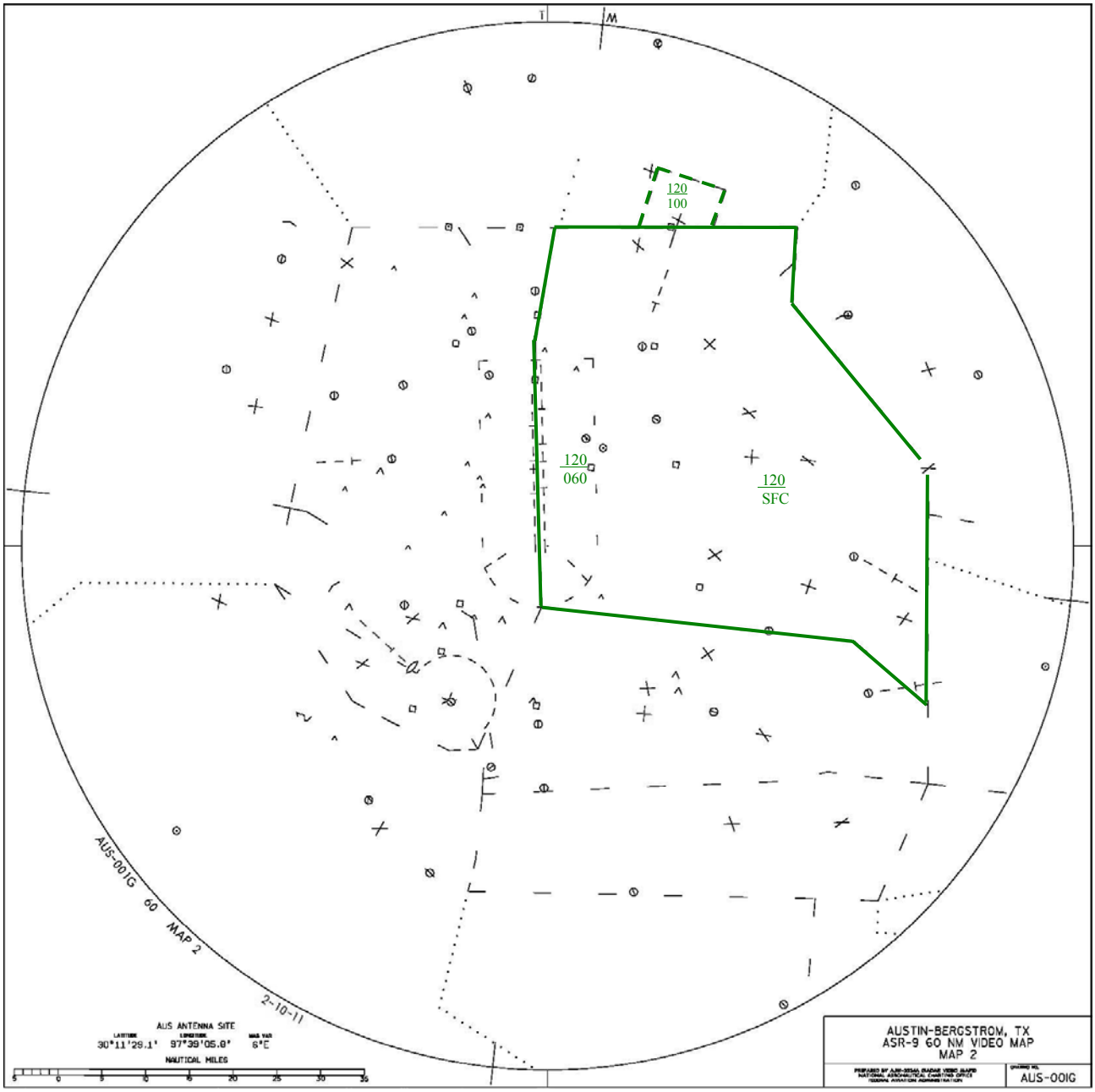
AIRSPACE
SOUTH FLOW



AIRSPACE
NORTH FLOW

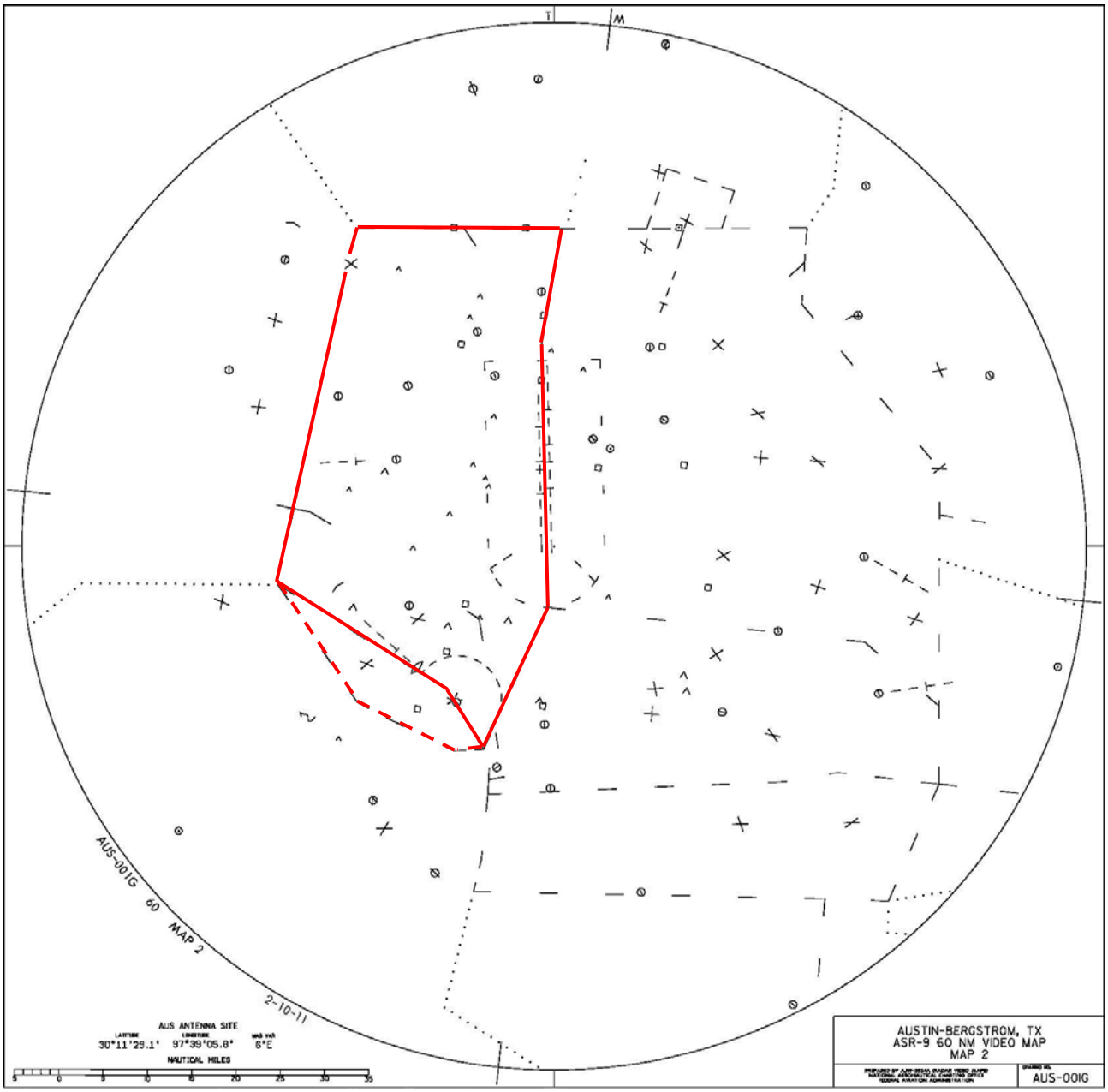


RADAR EAST AIRSPACE
SOUTH FLOW

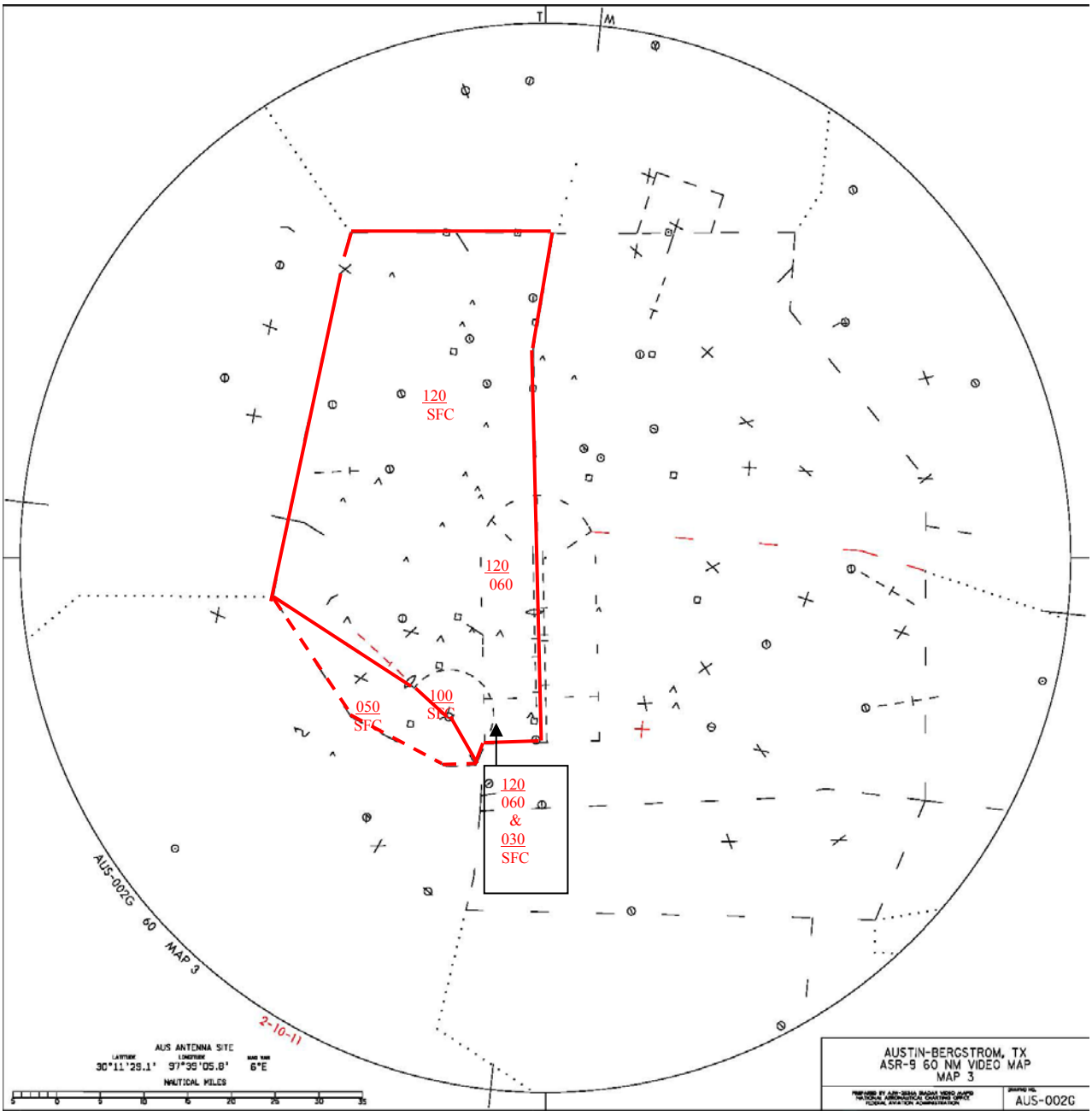


RADAR EAST AIRSPACE
NORTH FLOW

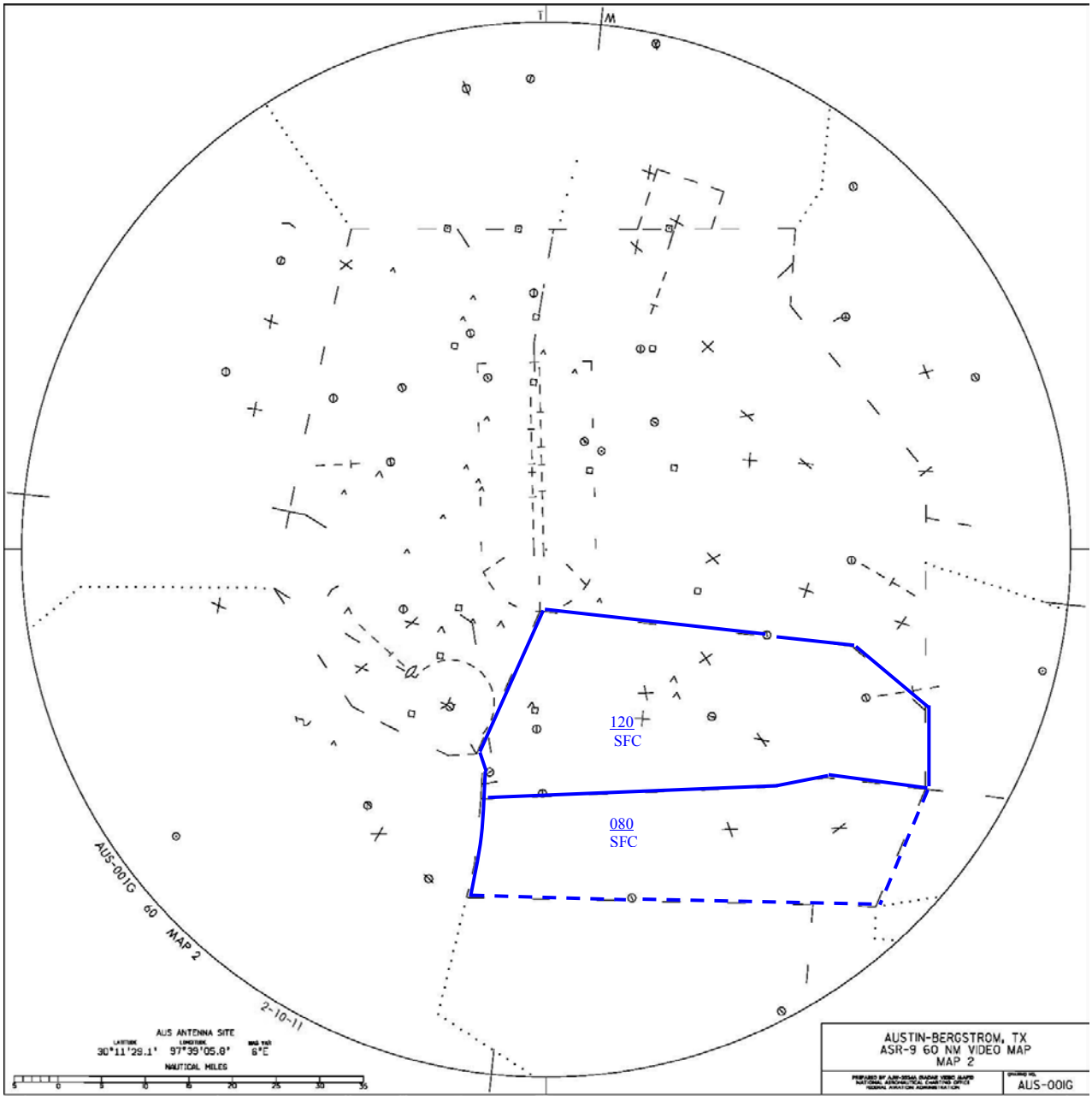
RADAR WEST AIRSPACE
SOUTH FLOW



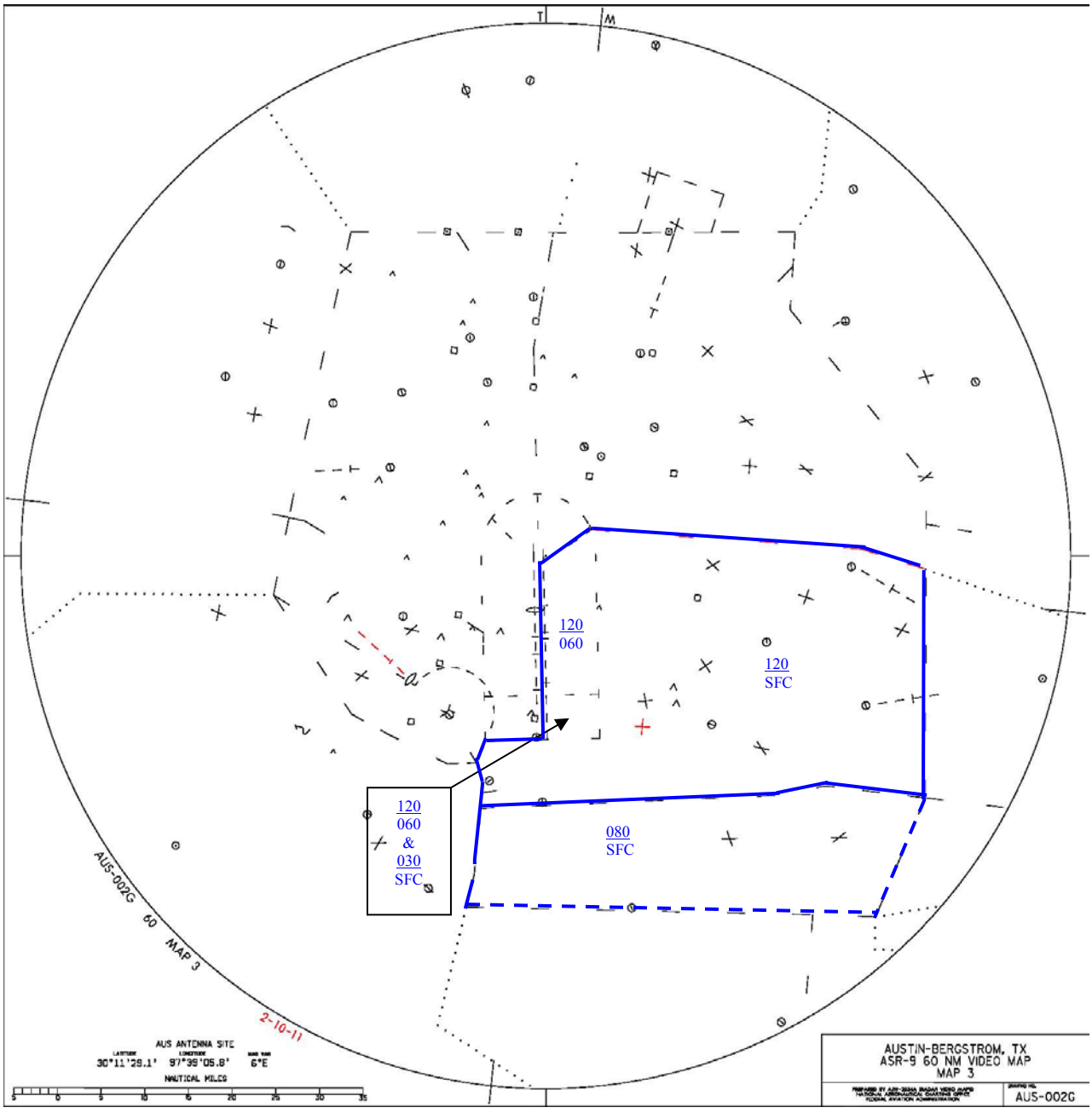
RADAR WEST AIRSPACE
NORTH FLOW



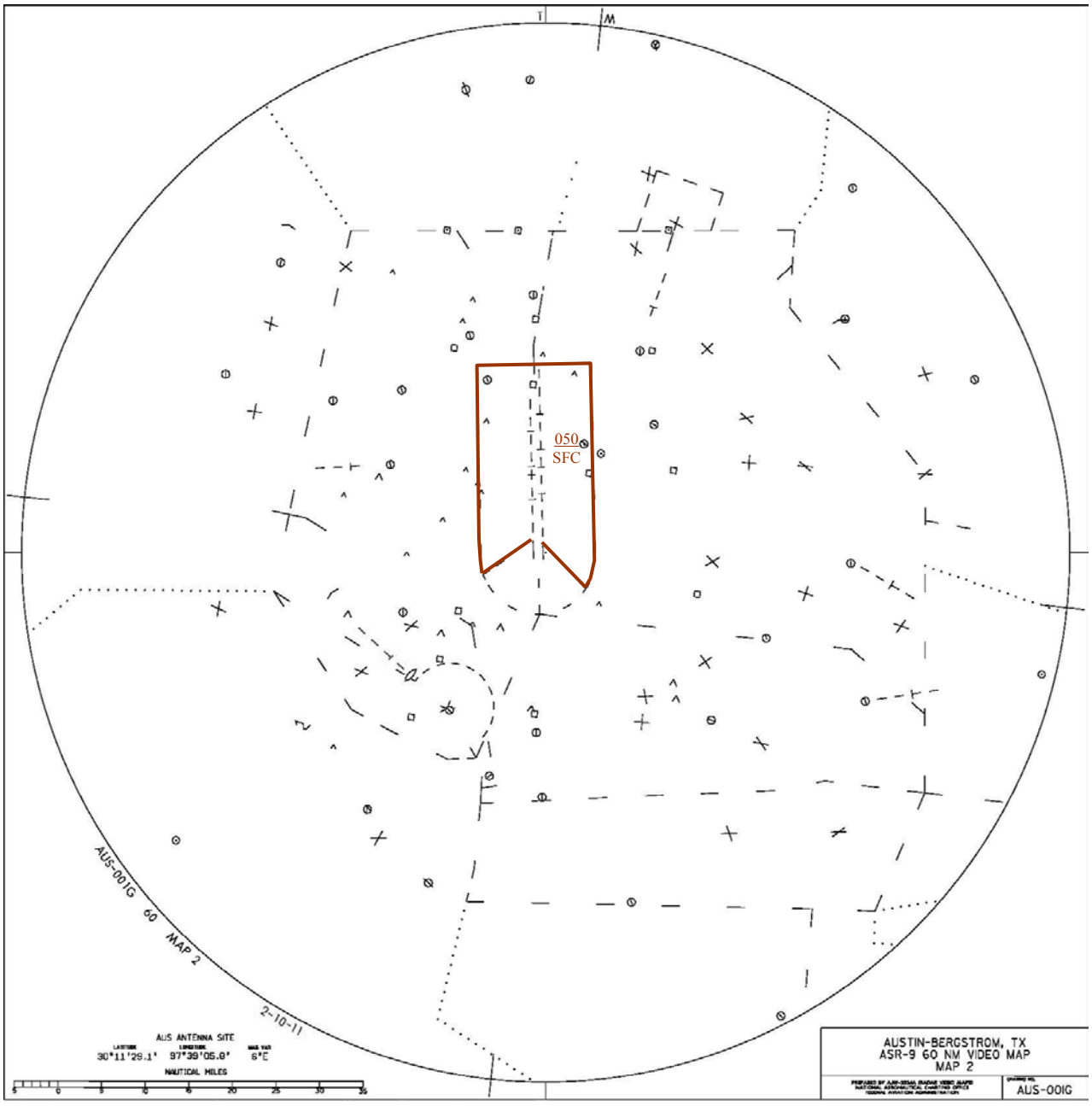
RADAR SOUTH AIRSPACE
SOUTH FLOW



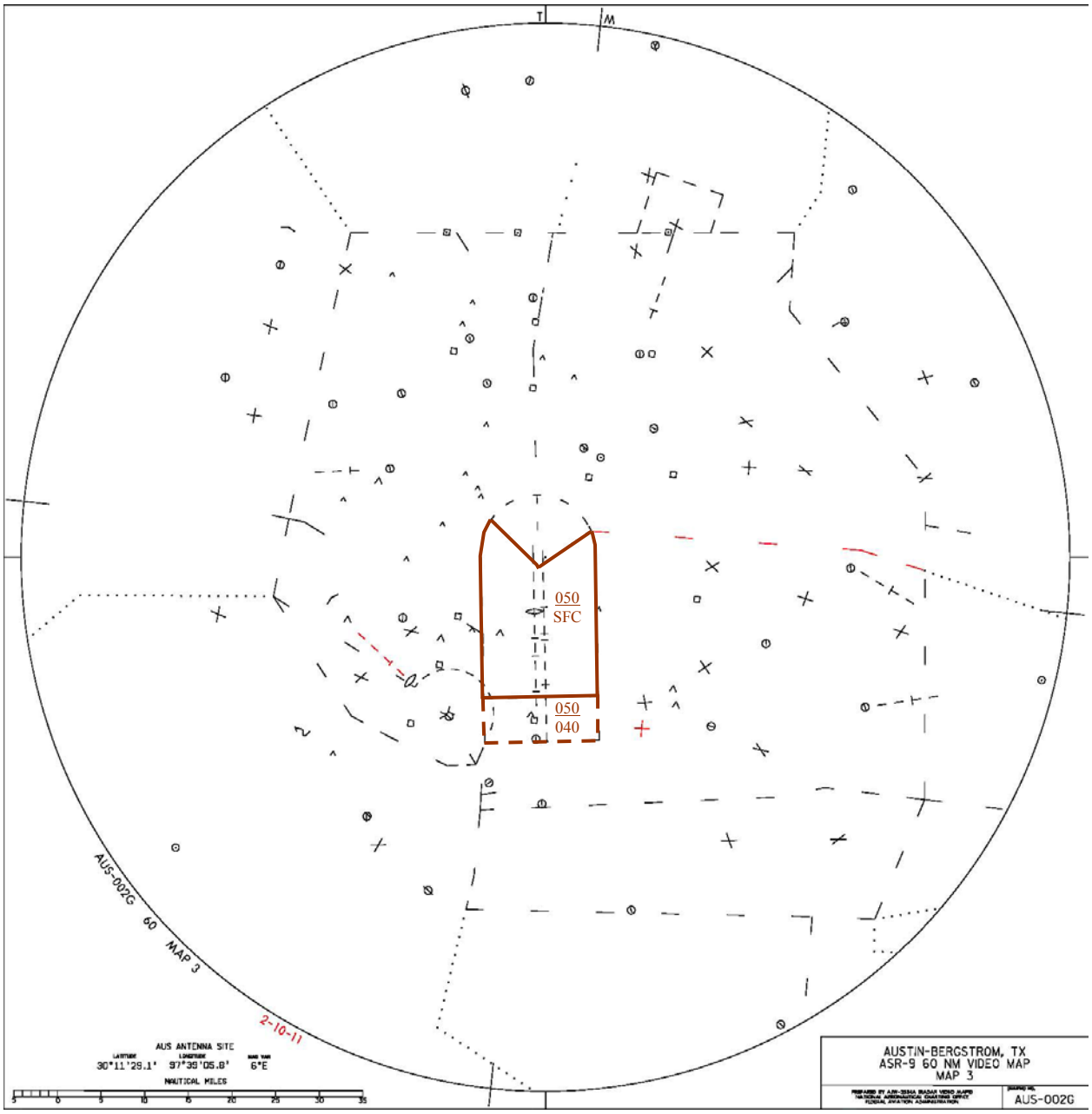
RADAR SOUTH AIRSPACE
NORTH FLOW



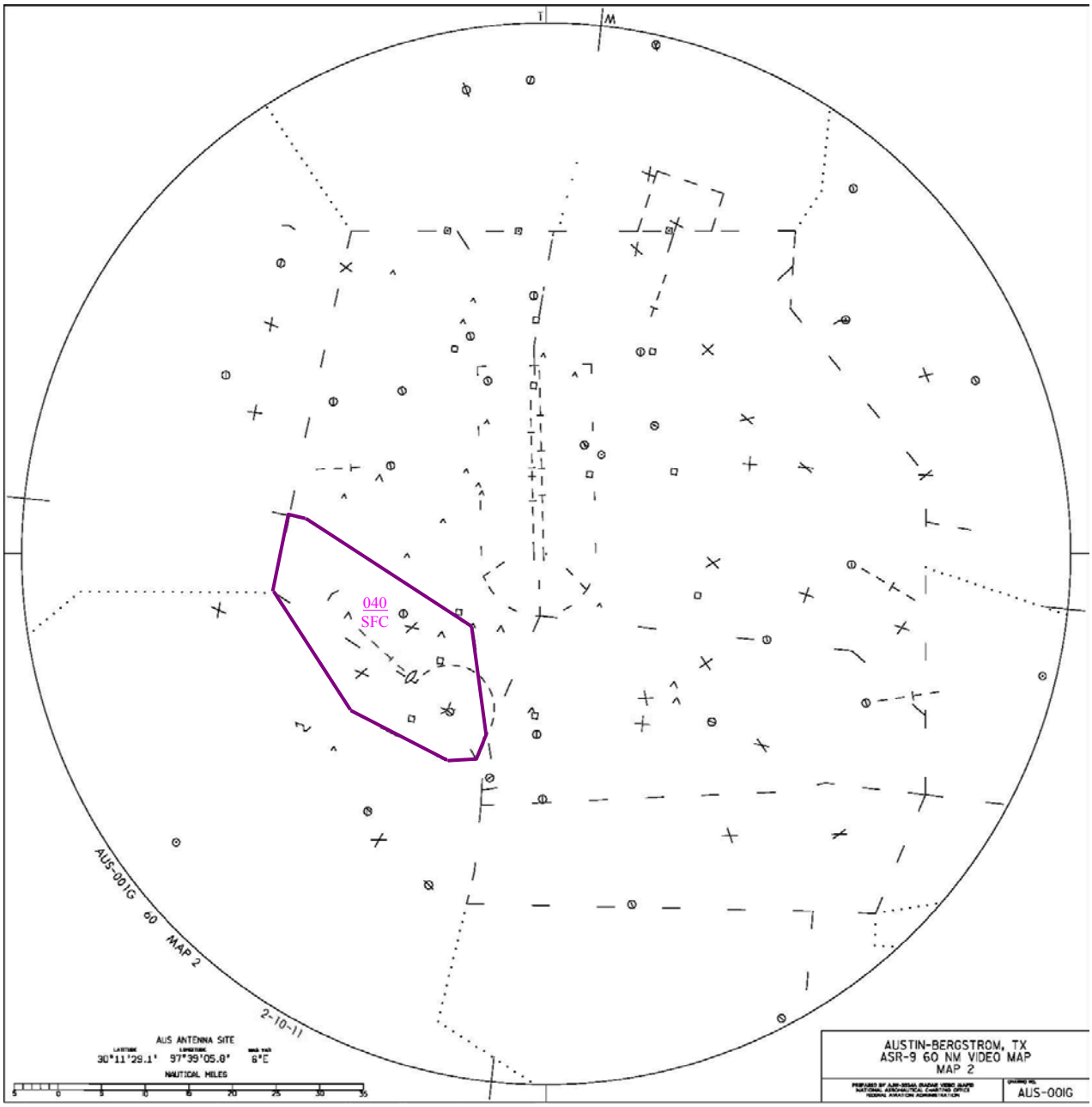
FINALS AIRSPACE
SOUTH FLOW



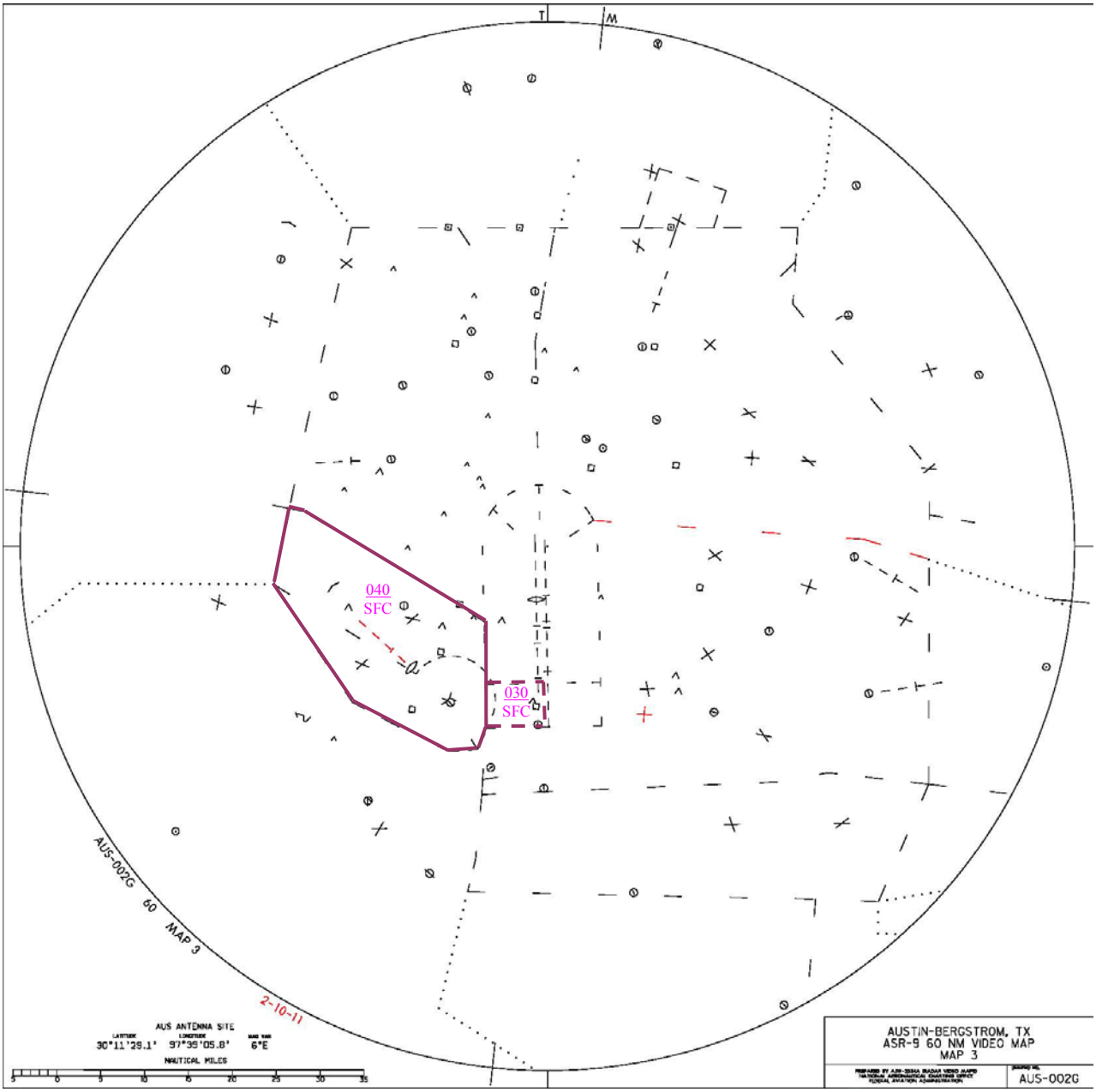
FINALS AIRSPACE
NORTH FLOW



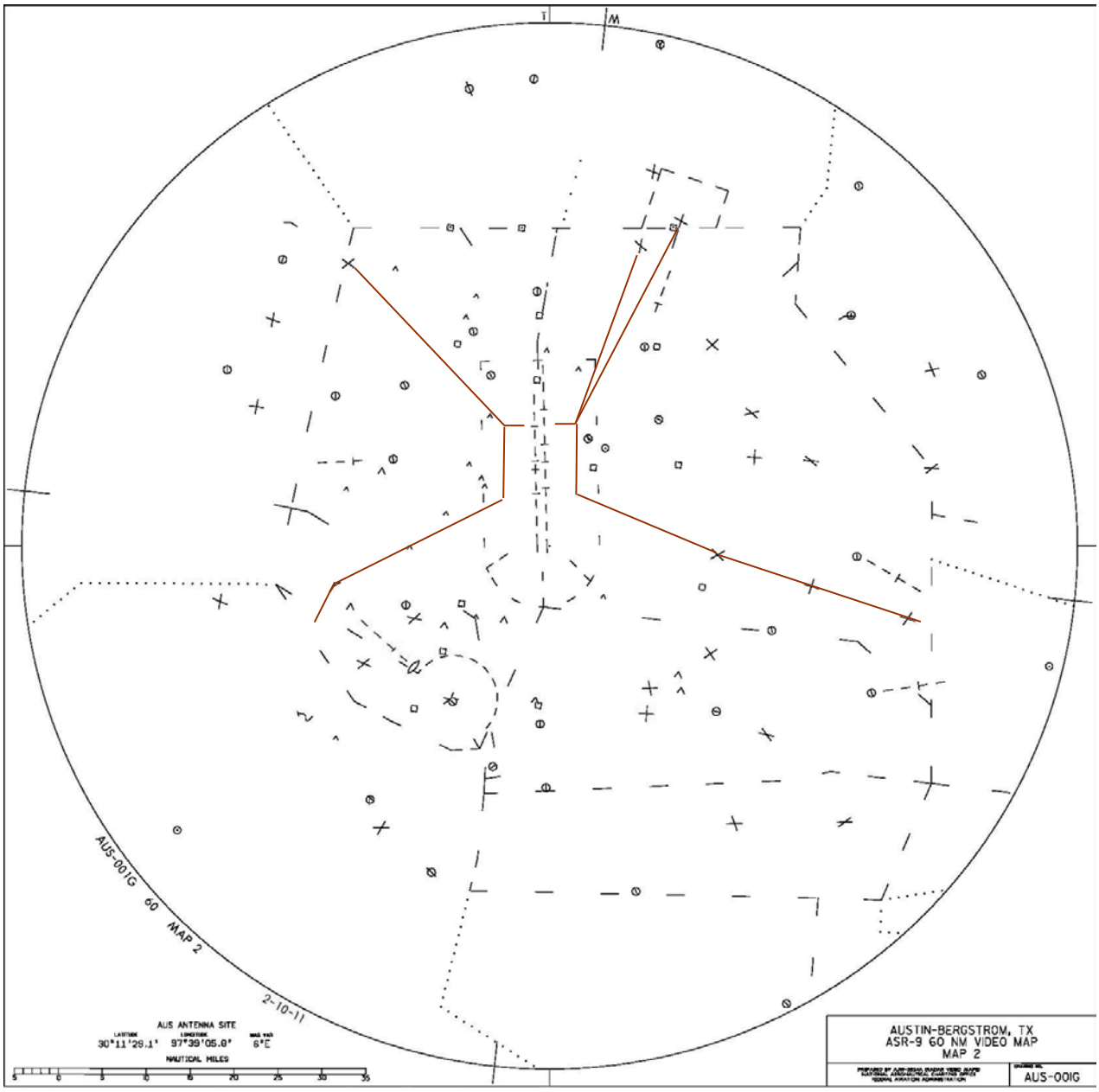
HYI CALL-UP AIRSPACE
SOUTH FLOW



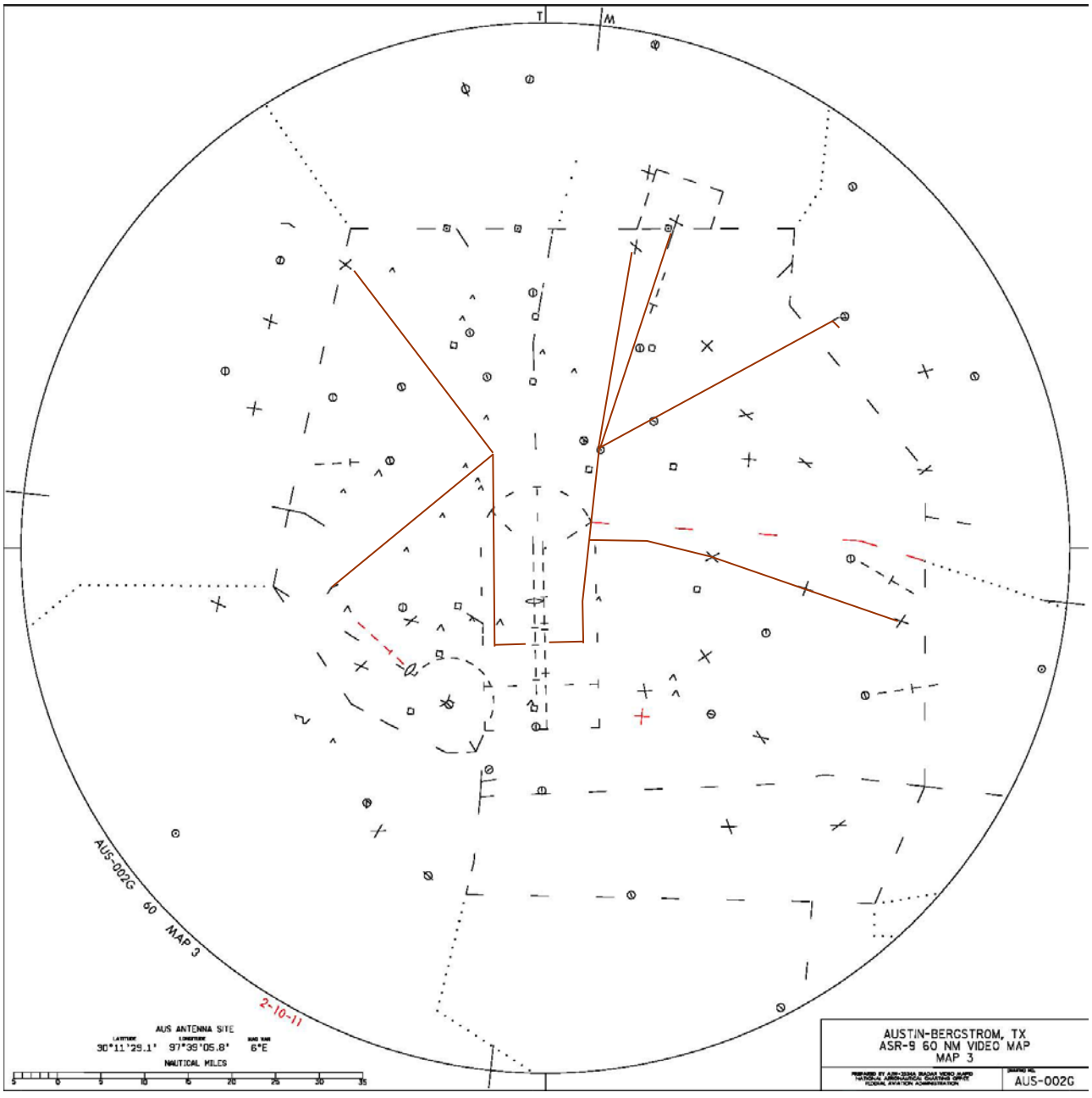
HYI CALL-UP AIRSPACE
NORTH FLOW



ARRIVAL FLOW CHART
SOUTH FLOW



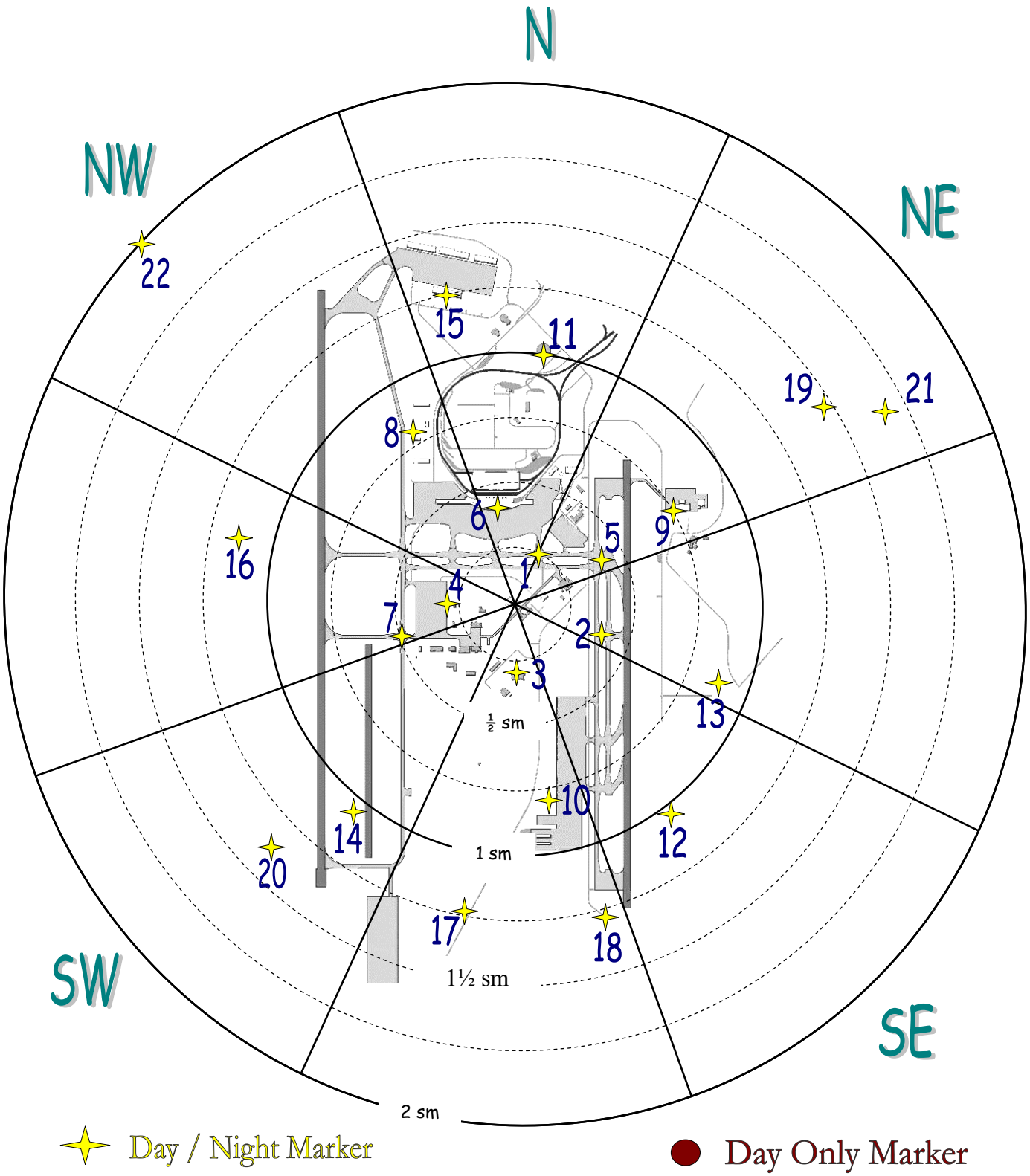
ARRIVAL FLOW CHART
NORTH FLOW



APPENDIX B

TOWER OPERATIONS

Tower Visibility Markers ~ 0 to 2 Miles



TOWER VISIBILITY MARKERS
0 TO 2 MILES

	Distance	Direction	Marker
1	¼	NE	Intersection of Taxiway G @ G1
2	¼	E	Intersection of Taxiways A, B & J
3	¼	S	Solid Waste Services Building
4	¼	W	East Edge of Maintenance Ramp
5	½	NE	Intersection of Taxiways A, B & H
6	½	N	Terminal Building
7	½	W	Intersection of Taxiways T @ C
8	3/4	NW	Fuel Farm Tanks
9	3/4	NE	State Ramp Hangar
10	3/4	S	Signature Terminal Building
11	1	N	Hilton Hotel
12	1	SE	Runway 35R Glideslope Building
13	1	E	ASR-9 Radar Antenna
14	1	SW	Runway 35L Wind Sock
15	1¼	N	Air Cargo Ramp
16	1¼	W	Billboard
17	1¼	S	Rotating Beacon
18	1¼	S	Runway 17L Localizer Building
19	1½	NE	Sonic Drive-In Sign
20	1½	SW	Southwest Remote Transmitter/Receiver (RTR) Site
21	1½	NE	Cell Tower (White Strobe Day/ Red Light Night)
22	2	NW	La Quinta Hotel

0 to 2 Miles Tower Visibility Markers

#1 ¼ NE – Intersection of TWYs G @ G1 (Day/Night)

#2 ¼ E – Intersection of TWYs A, B & J (Day/Night)

0 to 2 Miles Tower Visibility Markers

#3 ¼ S – Nearest Edge of Solid Waste Services Building (Day/Night)

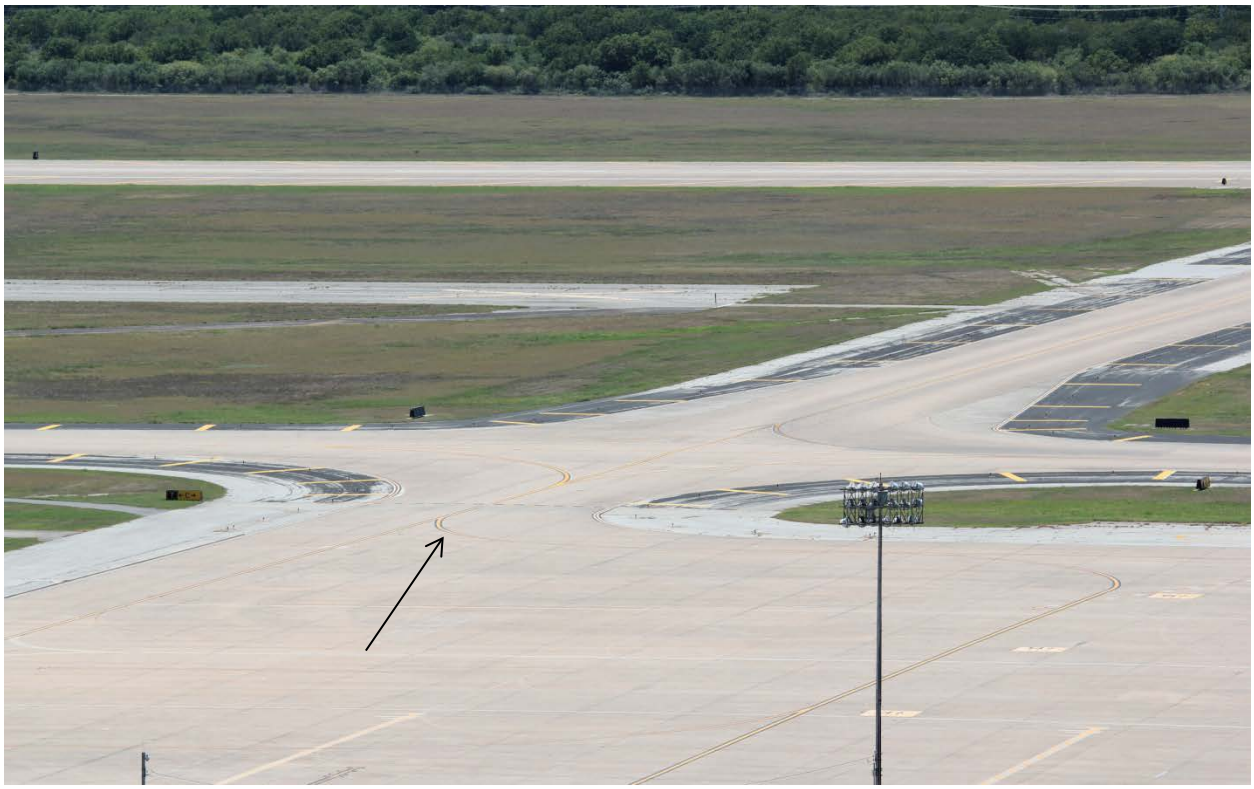
#4 ¼ W – Nearest Edge of Maintenance Ramp (Day) / Lights (Night)

0 to 2 Miles Tower Visibility Markers

#5 ½ NE – "Green Ring" @ Intersection of TWYs A, B & H (Day/Night)

#6 ½ N – Nearest Side of Terminal Building, NOT Gates (Day/Night)

0 to 2 Miles Tower Visibility Markers



#7 ½ W – Intersection of TWYs T @ C (Day/Night)

#8 ¾ NW – Fuel Farm Tanks (Day/Night)

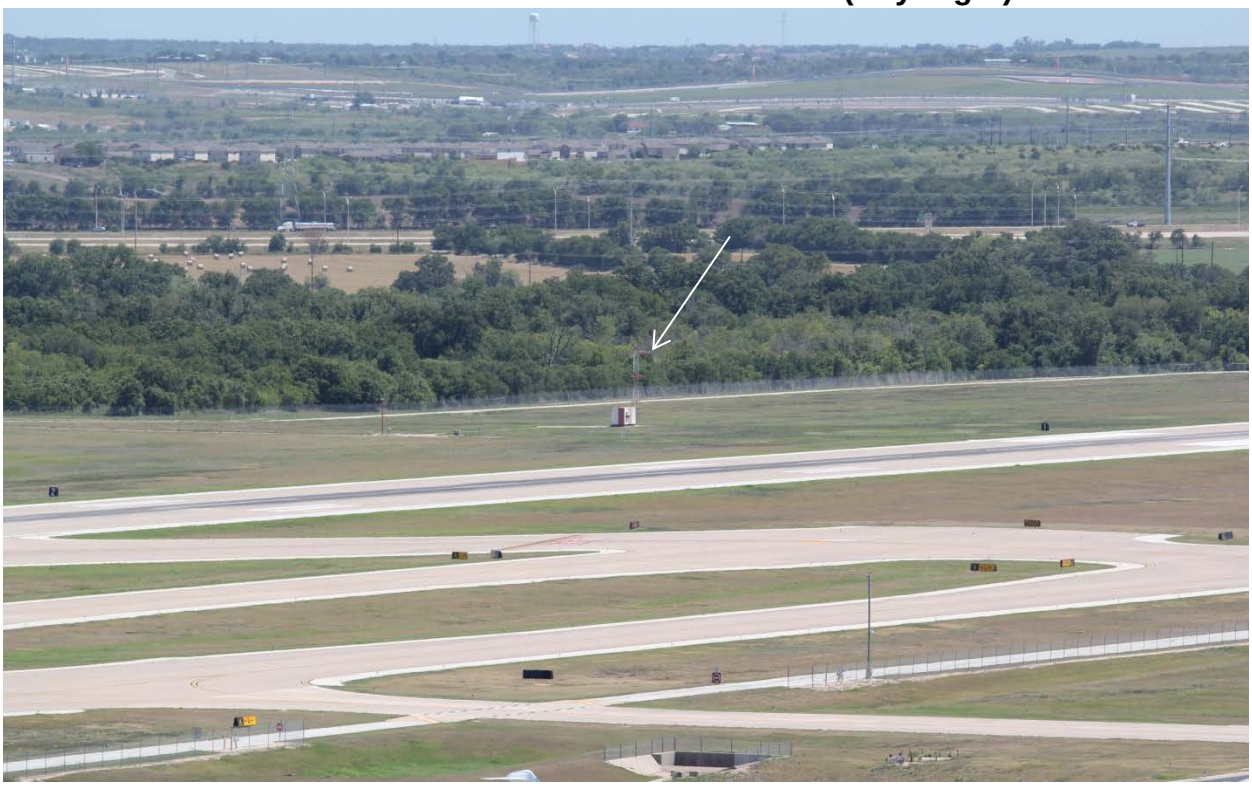
0 to 2 Miles Tower Visibility Markers

#9 ¾ NE – Nearest Corner of State Ramp Hanger (Day/Night)

#10 ¾ S – Nearest Wall of Signature Terminal Building (Day/Night)

0 to 2 Miles Tower Visibility Markers

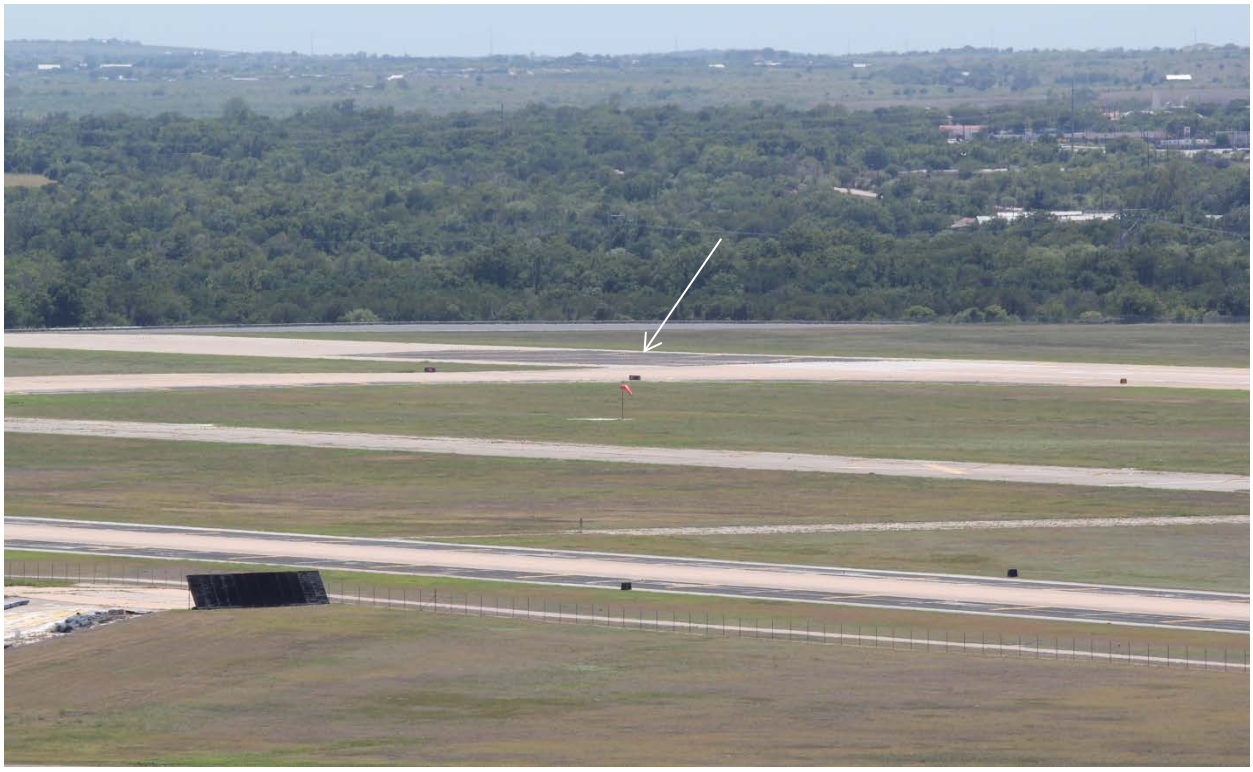
#11 1 N – Nearest Side of Hilton Hotel (Day/Night)



#12 1 SE – RWY 35R Glideslope Building (Day/Night)

0 to 2 Miles Tower Visibility Markers

#13 1 E – ASR-9 Radar Antenna (Day/Night)



#14 1 SW – RWY 35L Wind Sock (Day/Night)

0 to 2 Miles Tower Visibility Markers

#15 1¼ N – Nearest Building on Air Cargo Ramp (Day/Night)

#16 1¼ W – Billboard (Day/Night)

0 to 2 Miles Tower Visibility Markers

#17 1¼ S – Rotating Beacon, NOT Cell Tower (Day/Night)

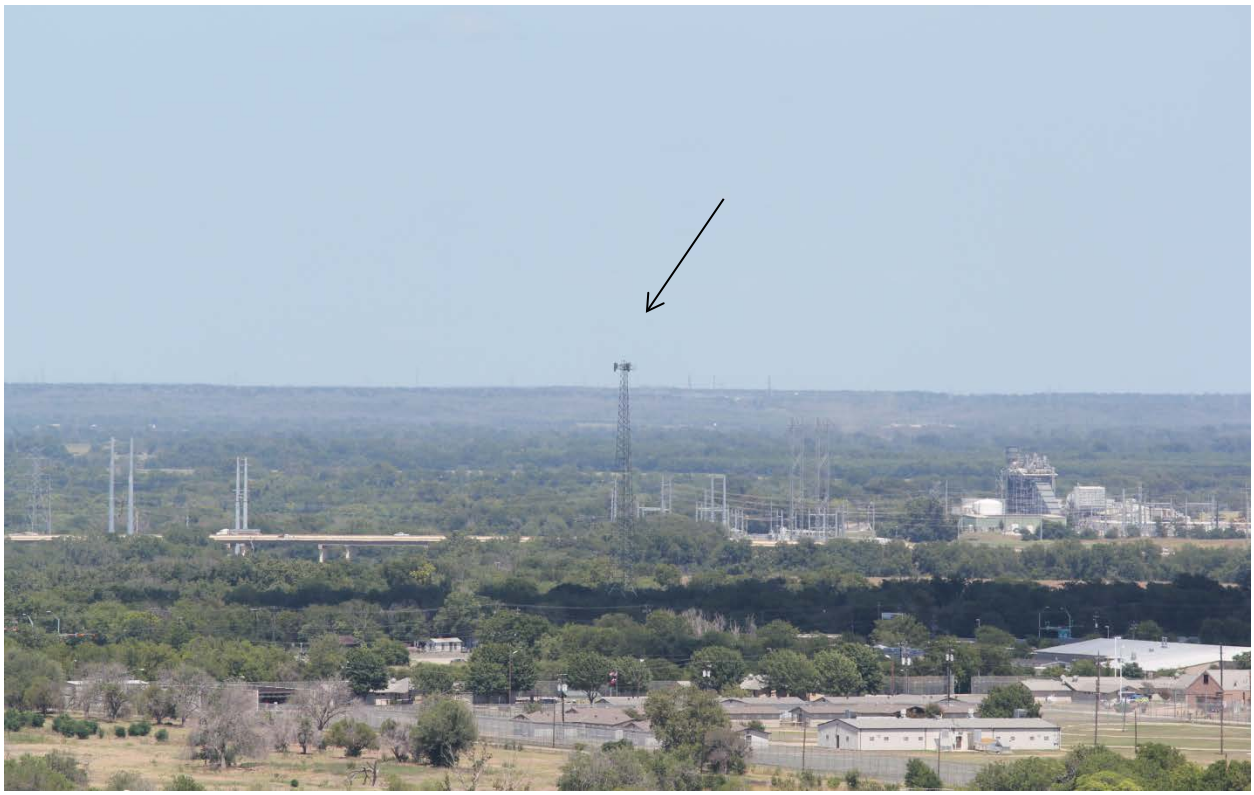
#18 1¼ S – RWY 17L Localizer Building (Day/Night)

0 to 2 Miles Tower Visibility Markers

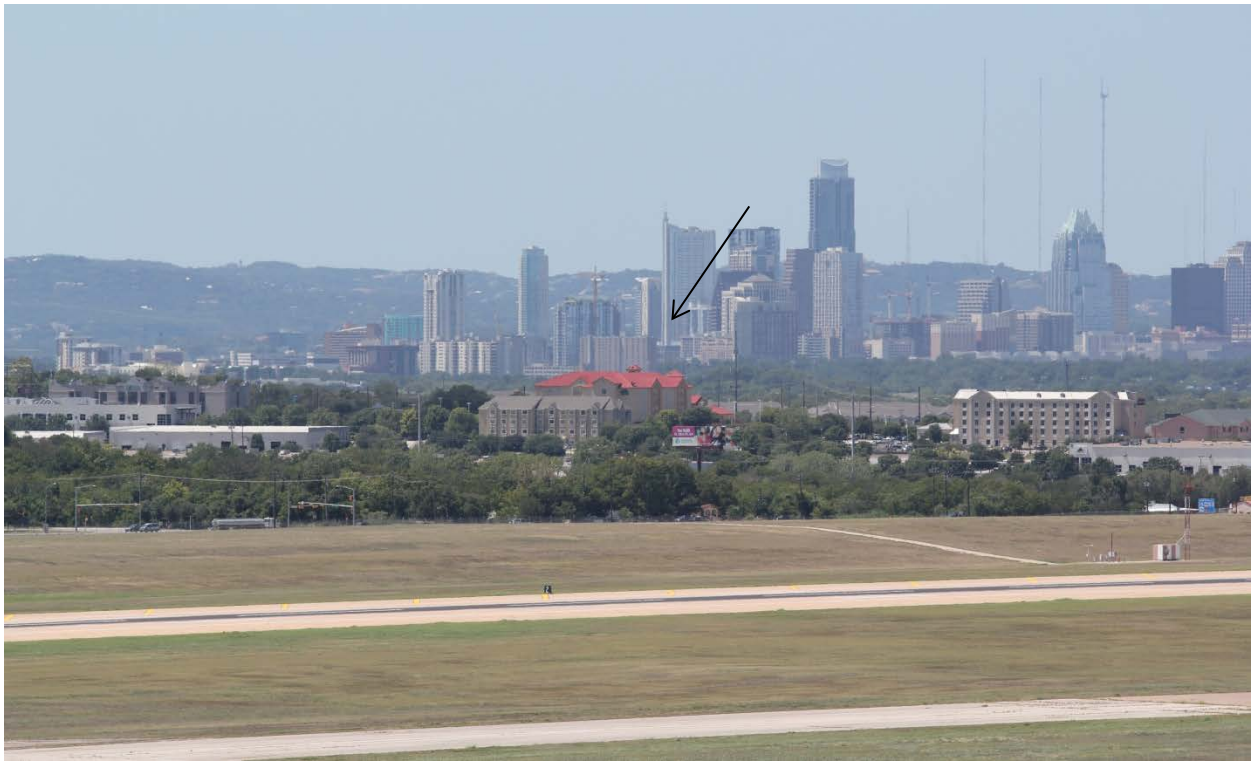
#19 1½ NE – Sonic Drive-In Sign (Day/Night)

#20 1½ SW – Southwest Remote Transmitter/Receiver (RTR) Site (Day/Night)

0 to 2 Miles Tower Visibility Markers



#21 1½ NE – Cell Tower (Day/Night)



#22 2 NW – Red Roof of La Quinta Hotel (Day/Night)

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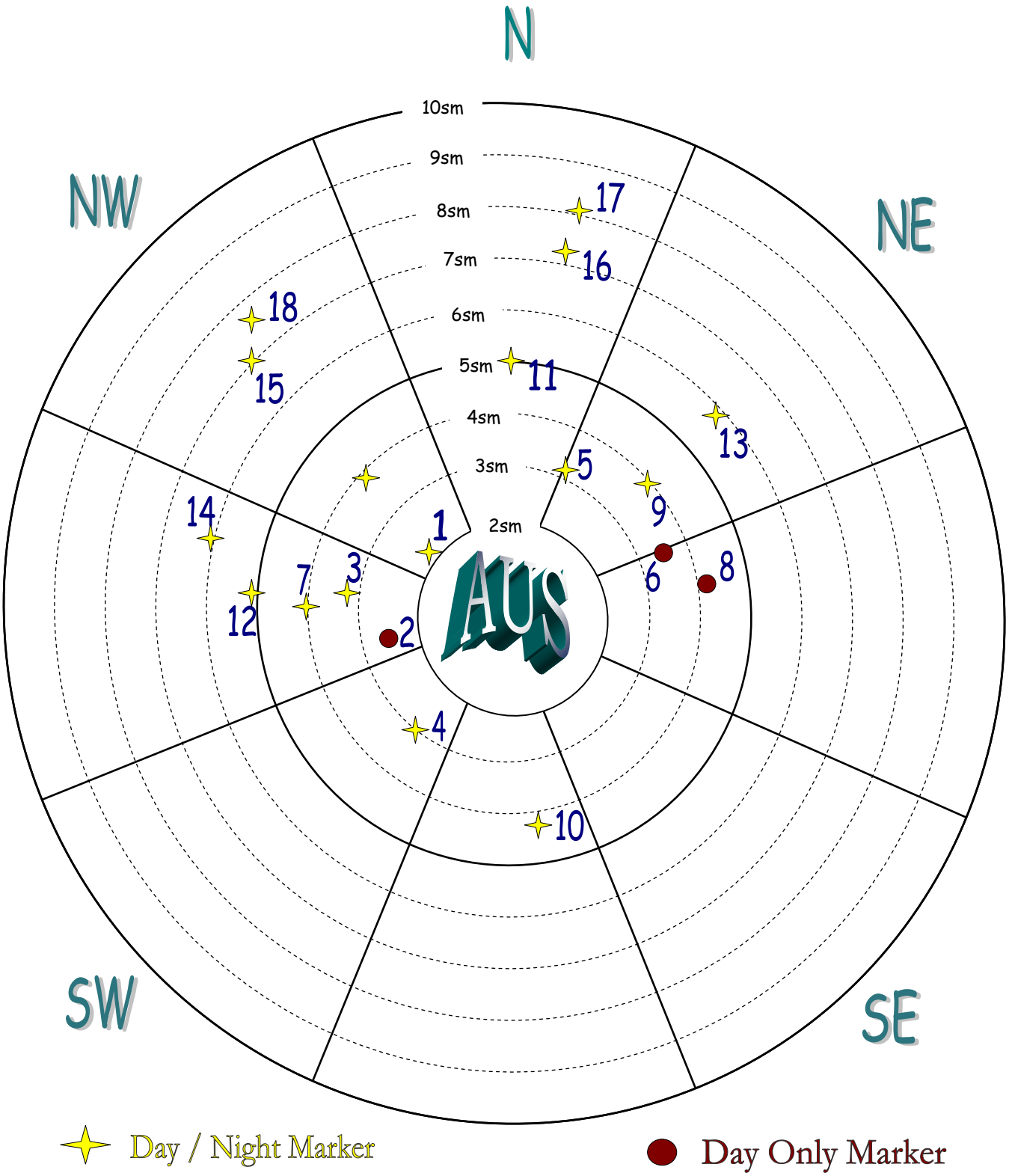
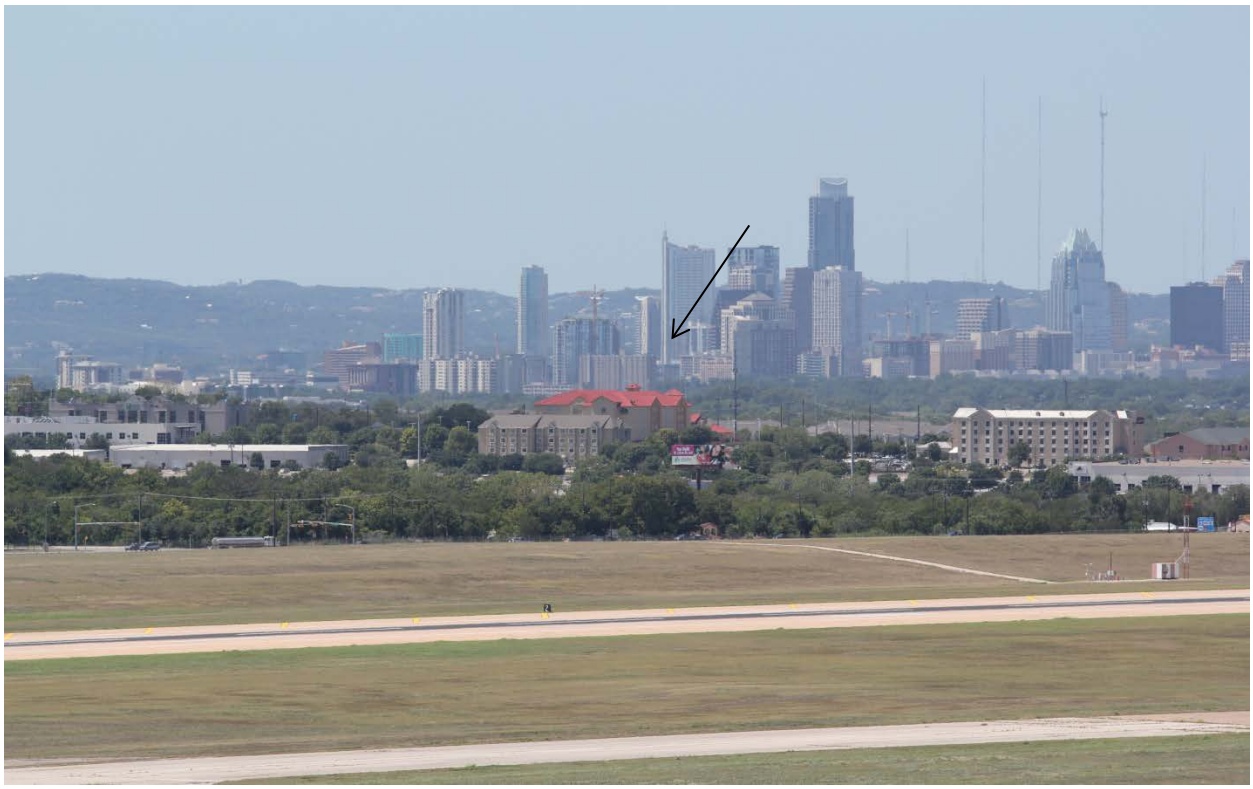
Tower Visibility Markers ~ 2 to 10 Miles



TOWER VISIBILITY MARKERS
2 TO 10 MILES

	Distance	Direction	Marker
1	2	NW	La Quinta Hotel
2	2½	W	Fire Training Tower (Day Only)
3	3	W	LCRA Micro Wave Antenna
4	3	SW	Pilot Knob Water Tank
5	3	NE	KLBJ Radio Antennas
6	3	E	Water Tower (Day Only)
7	4	W	AMD Building (Large Brown Building)
8	4	E	Church (Day Only)
9	4	NE	Texas Industries (White Structure Near Sand Pits)
10	4	S	COTA Race Tower
11	5	N	Travis County Corrections Water Tower
12	5	W	Omni Hotel
13	6	NE	Austin Colony (White Water Tower)
14	6	W	St Edward's University
15	7	NW	Capitol Building Dome
16	7	N	Travis County Exposition Center
17	8	N	Decker Creek Power Plant
18	8	NW	UT Tower

2 to 10 Miles Tower Visibility Markers

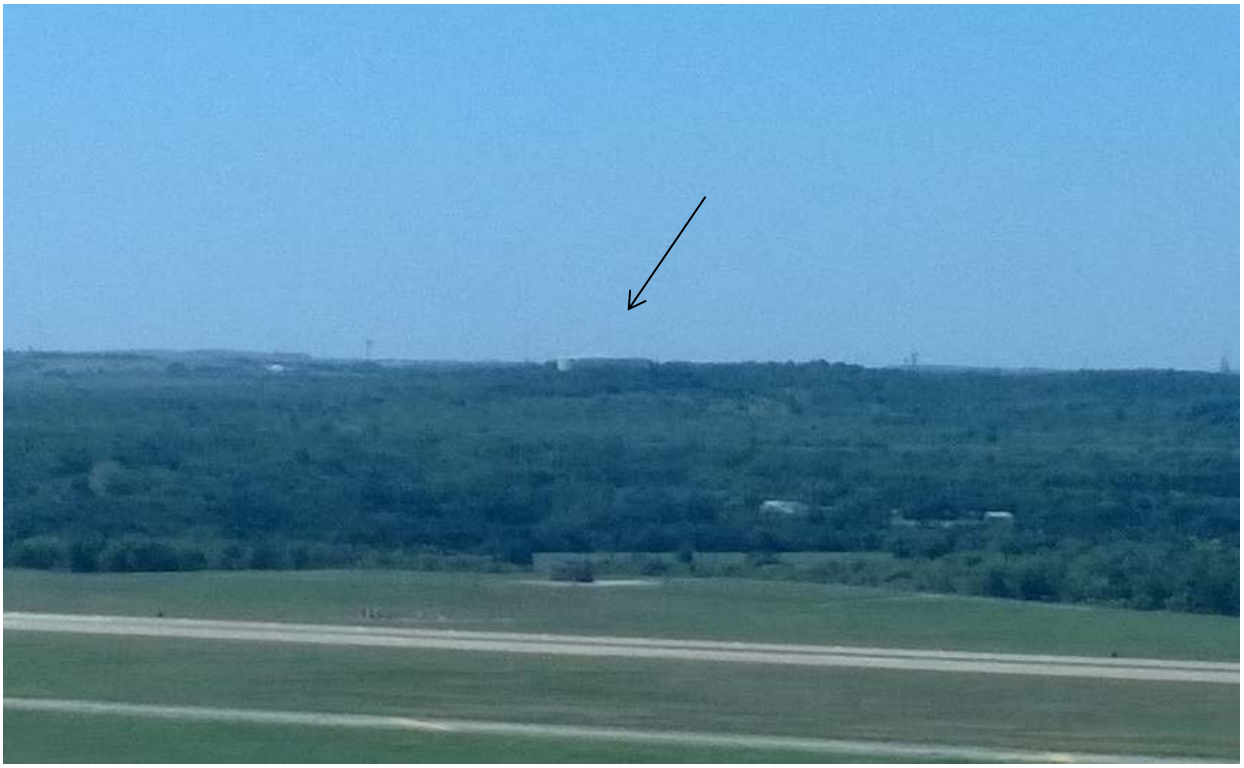


#1 2 NW – Red Roof of La Quinta Hotel (Day/Night)

#2 2½ W – Fire Training Tower (Day ONLY)

2 to 10 Miles Tower Visibility Markers

#3 3 W – LCRA Microwave Antenna (Day/Night)



#4 3 SW – Pilot Knob Water Tank (Day/Night)

2 to 10 Miles Tower Visibility Markers

#5 3 NE – KLBJ Antenna Buildings (Day) / Lights (Night)

#6 3 E – Water Tower (Day ONLY)

2 to 10 Miles Tower Visibility Markers

#7 4 W – Darkest Brown Portion of AMD Building (Day/Night)

#8 4 E – Church on Hwy 71 (Day ONLY)

2 to 10 Miles Tower Visibility Markers

#9 4 NE – Block Building of Texas Industries (Day/Night)

#10 4 S – COTA Race Tower (Day/Night)

2 to 10 Miles Tower Visibility Markers

#11 5 N – Travis Co. Corrections (many-legged) Water Tower (Day/Night)

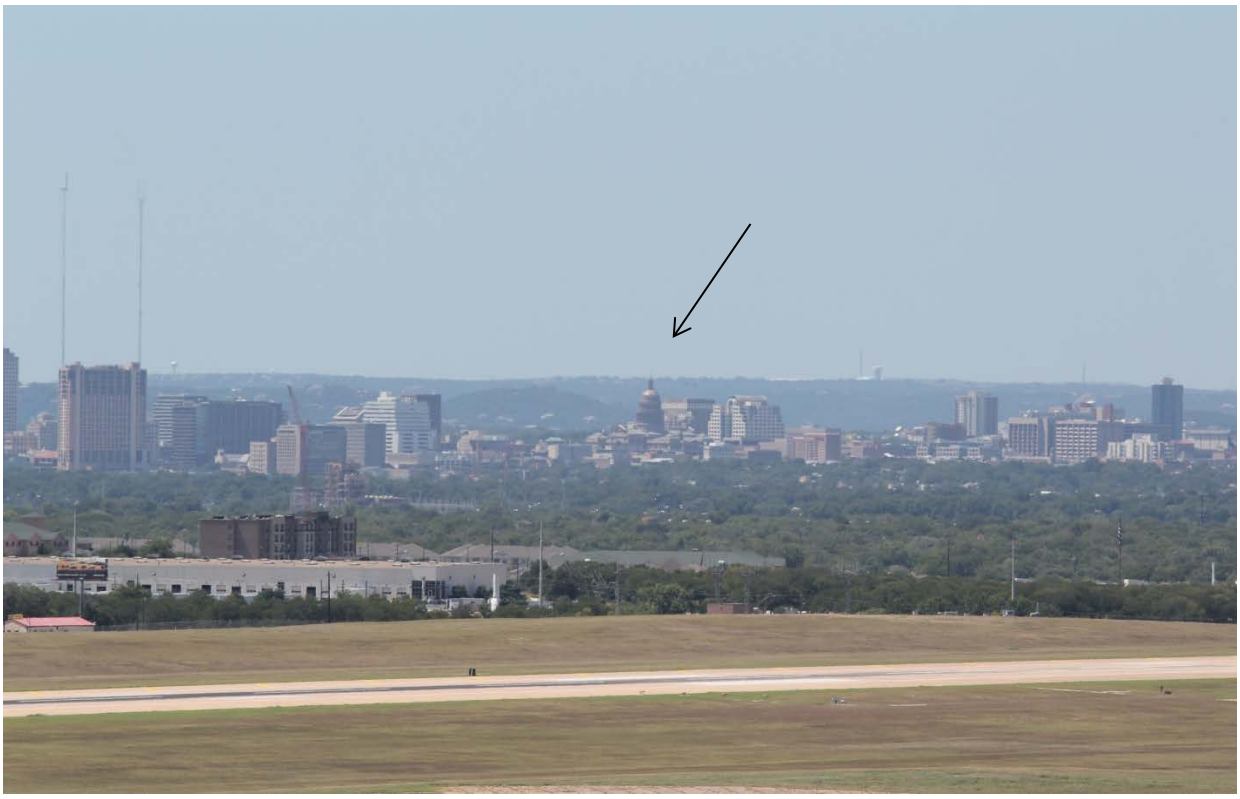
#12 5 W – Omni Hotel, just South of I-35 Flyover (Day/Night)

2 to 10 Miles Tower Visibility Markers

#13 6 NE – Austin Colony Water Tower (Day/Night)

#14 6 W – St. Edward's University on Horizon (Day/Night)

2 to 10 Miles Tower Visibility Markers



#15 7 NW – Capitol Building Dome (Day/Night)

#16 7 N – Travis County Expo Center (Day/Night)

2 to 10 Miles Tower Visibility Markers

#17 8 N – Decker Creek Power Plant (Day/Night)

#18 8 NW – UT Tower (Day/Night)

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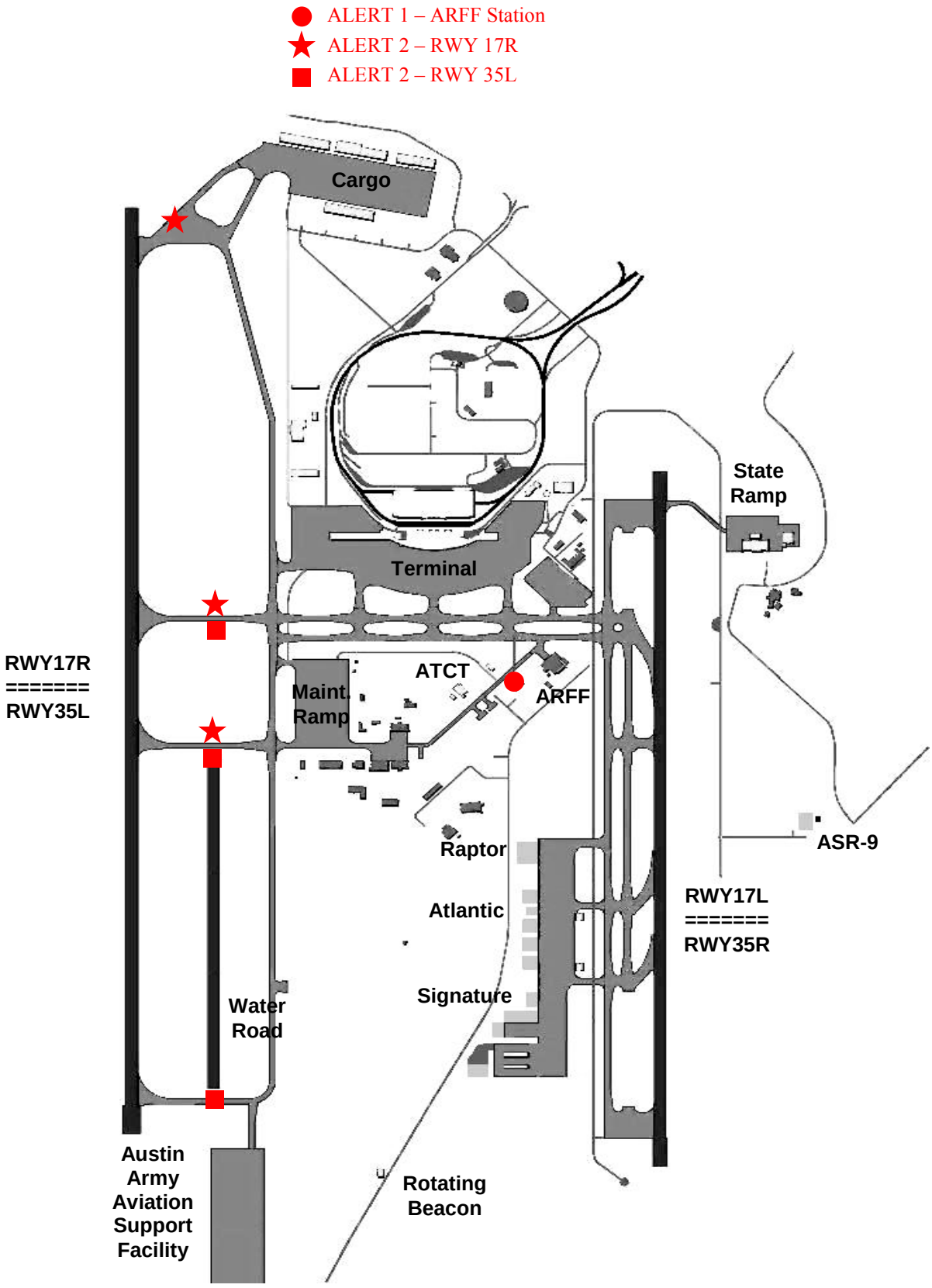
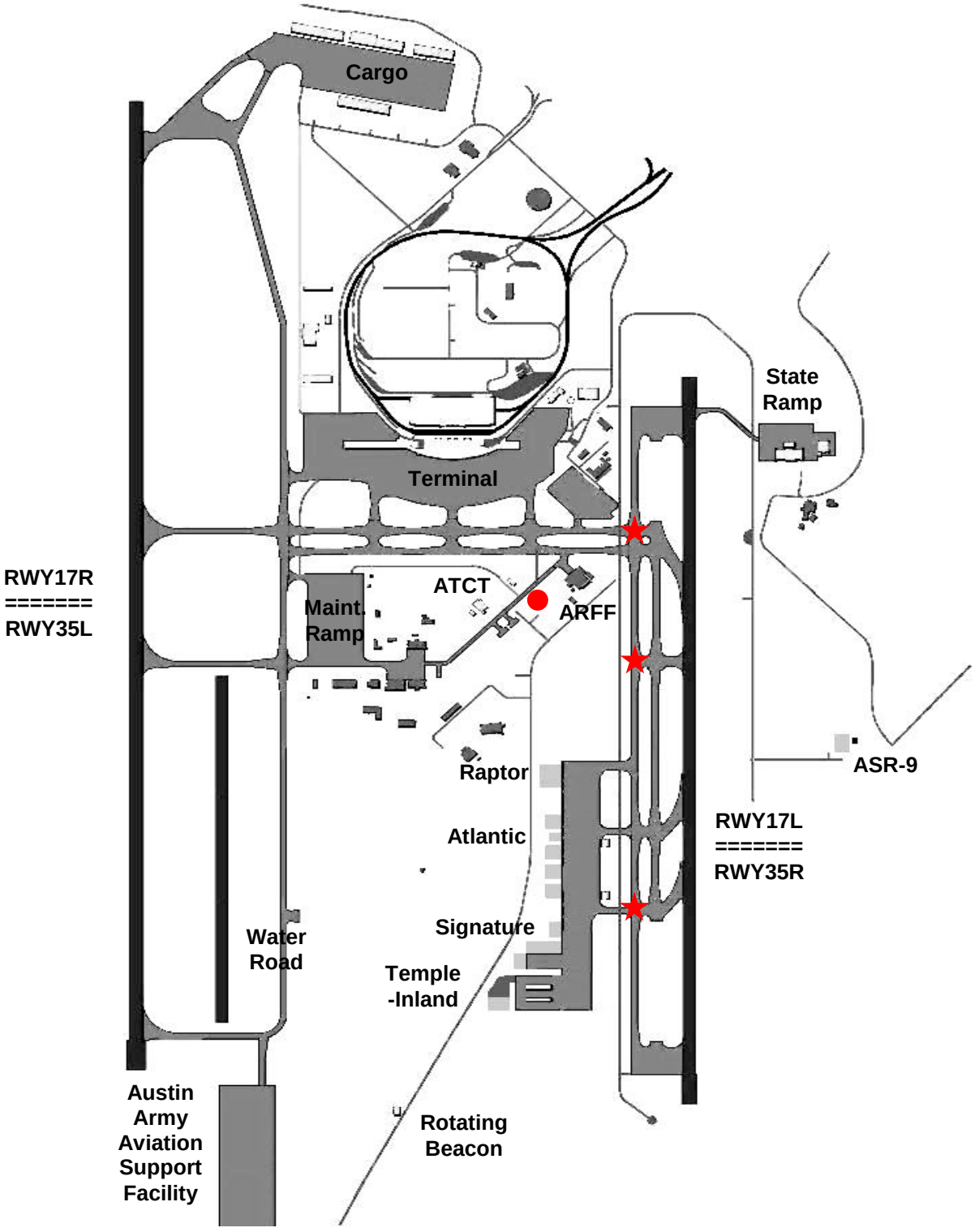
RUNWAY 17R/35L ARFF STANDBY POSITIONS



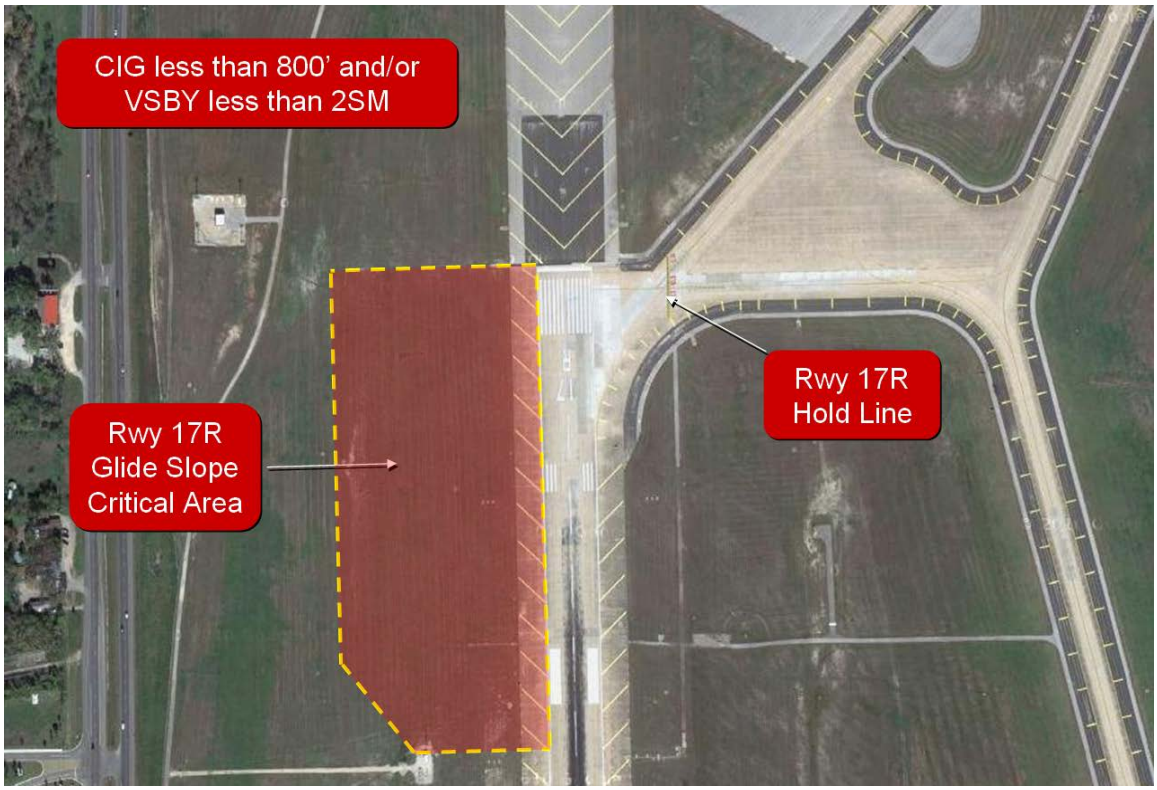
RUNWAY 17L/35R ARFF STANDBY POSITIONS

● ALERT 1 – ARFF Station
★ ALERT 2 – RWY 17L / 35R

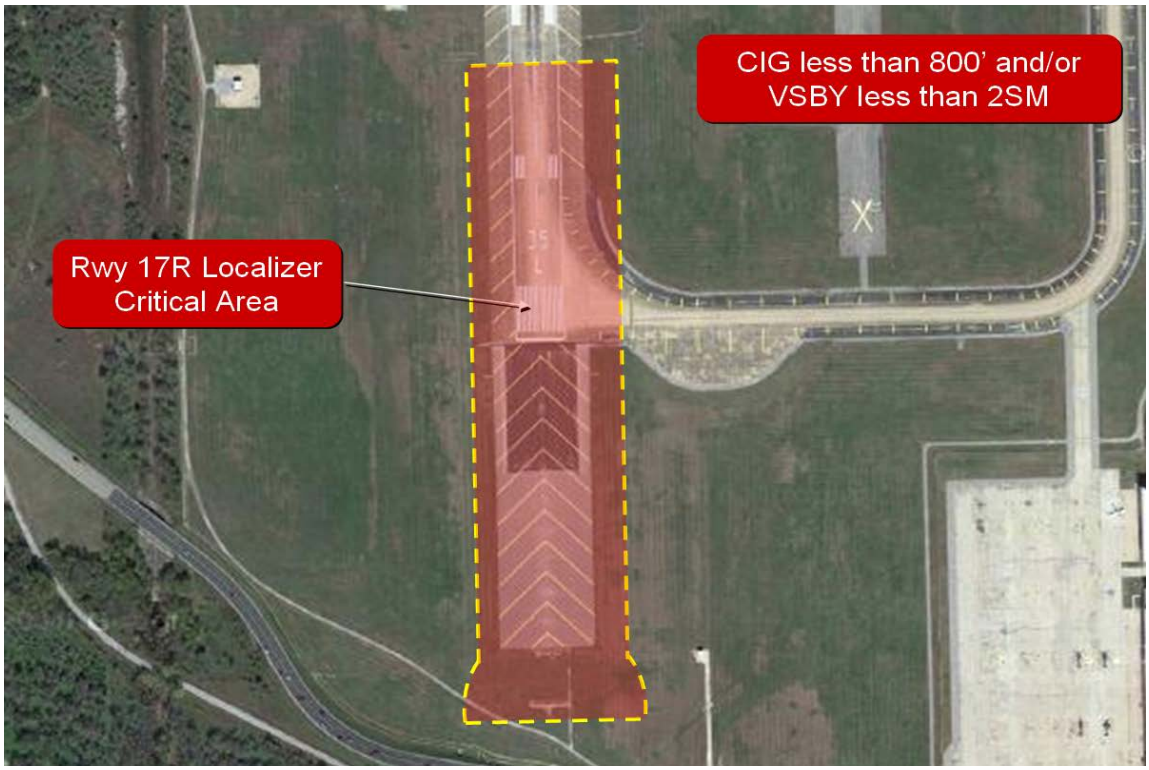


RUNWAY 17R CRITICAL AREAS

Runway 17R Glideslope Critical Area

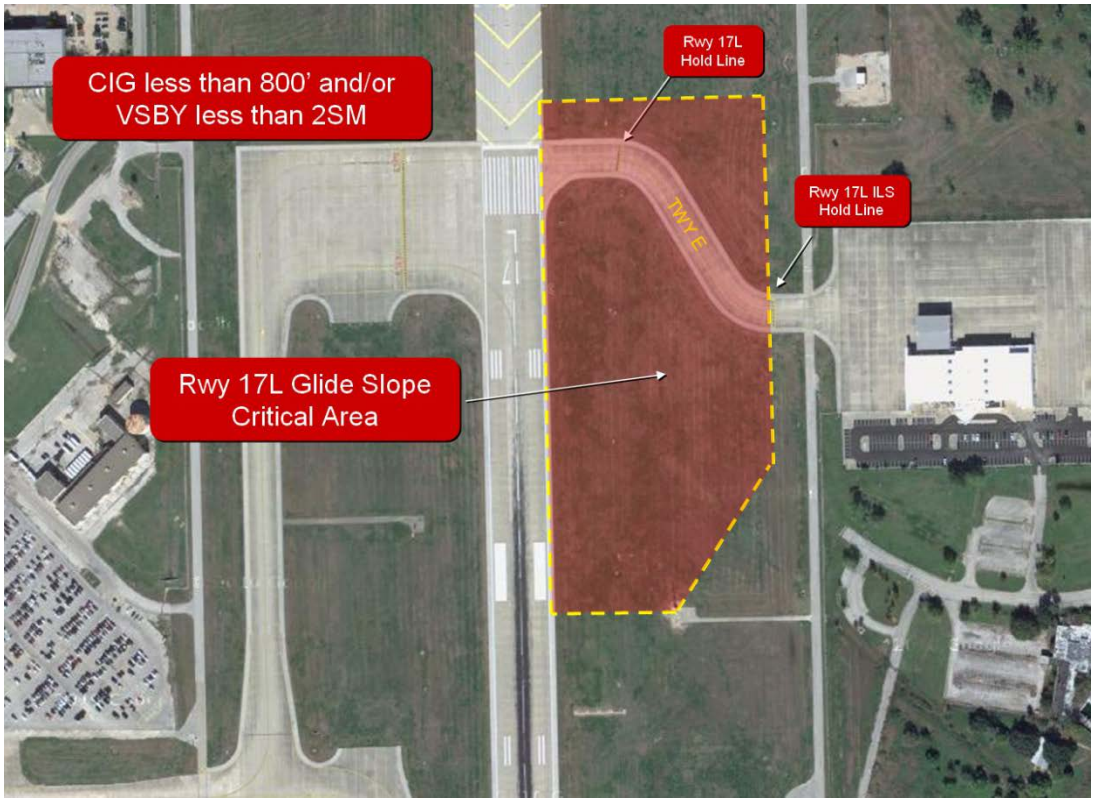


Runway 17R Localizer Critical Area

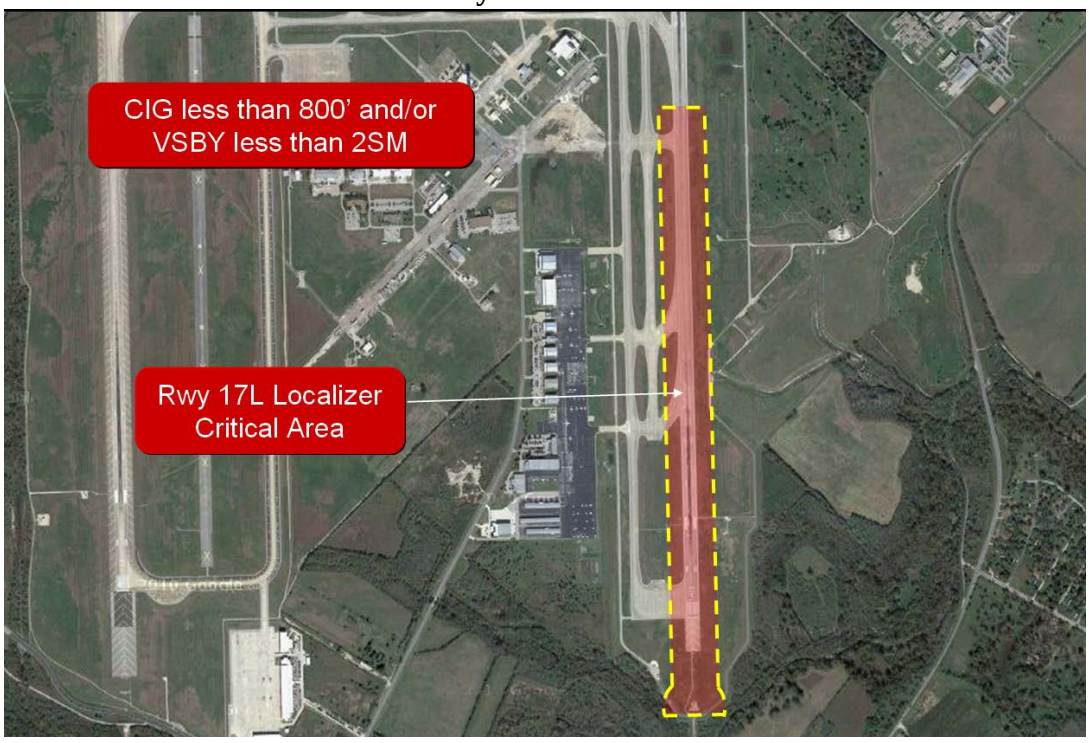


RUNWAY 17L CRITICAL AREAS

Runway 17L Glideslope Critical Area



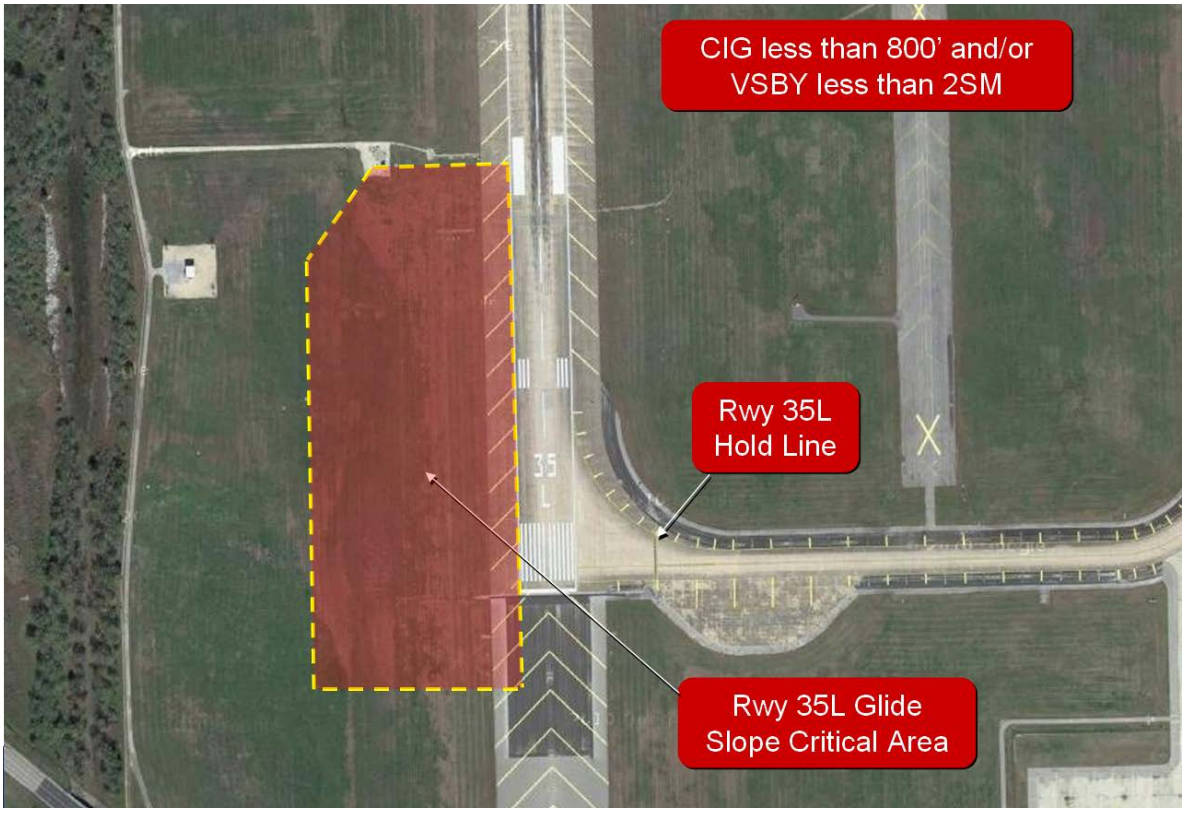
Runway 17L Localizer Critical Area



RUNWAY 35L CRITICAL AREAS

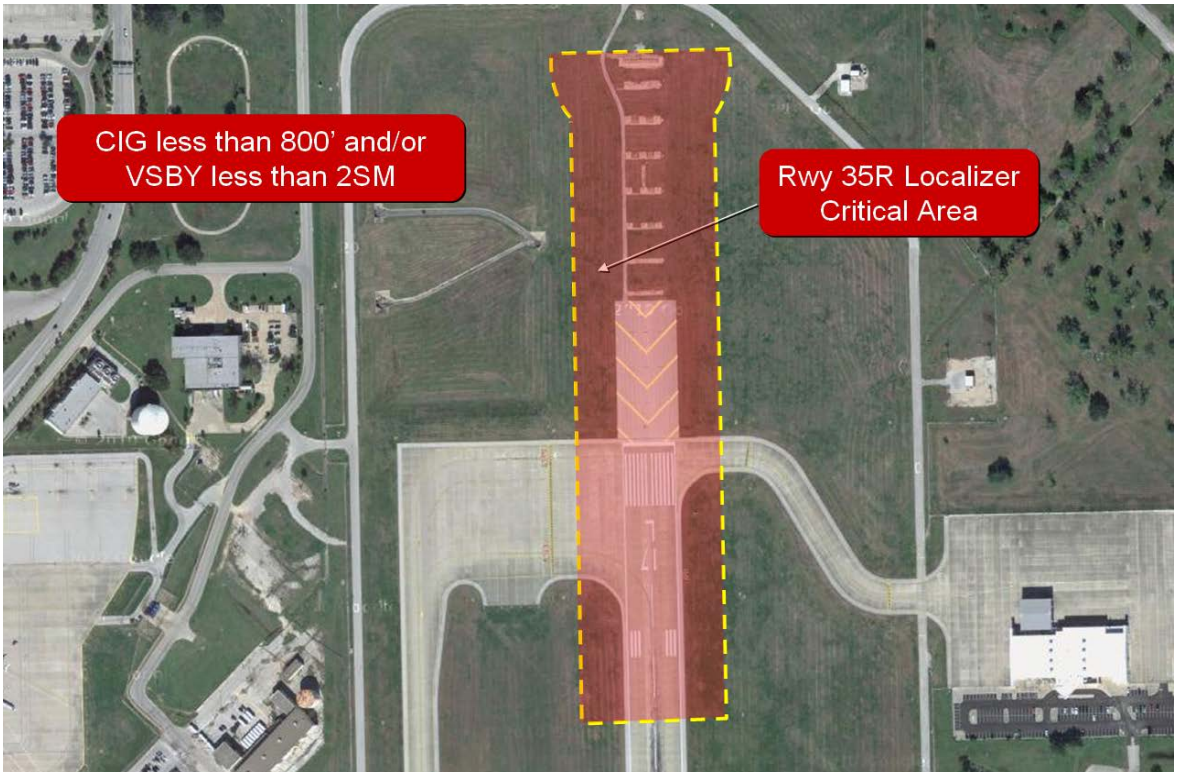
Runway 35L Localizer Critical Area

Runway 35R Localizer Critical Area



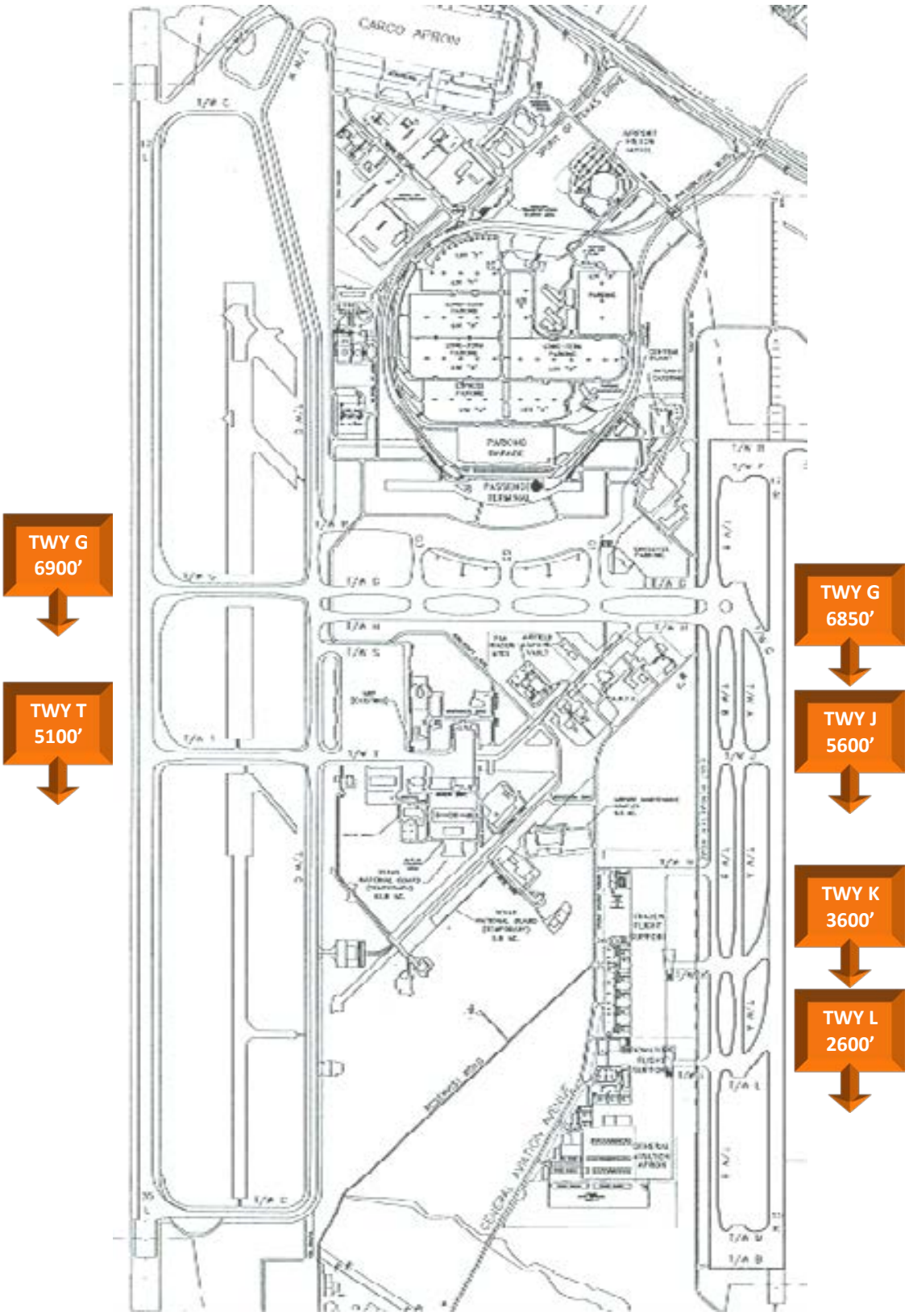
RUNWAY 35R CRITICAL AREAS

Runway 35R Localizer Critical Area

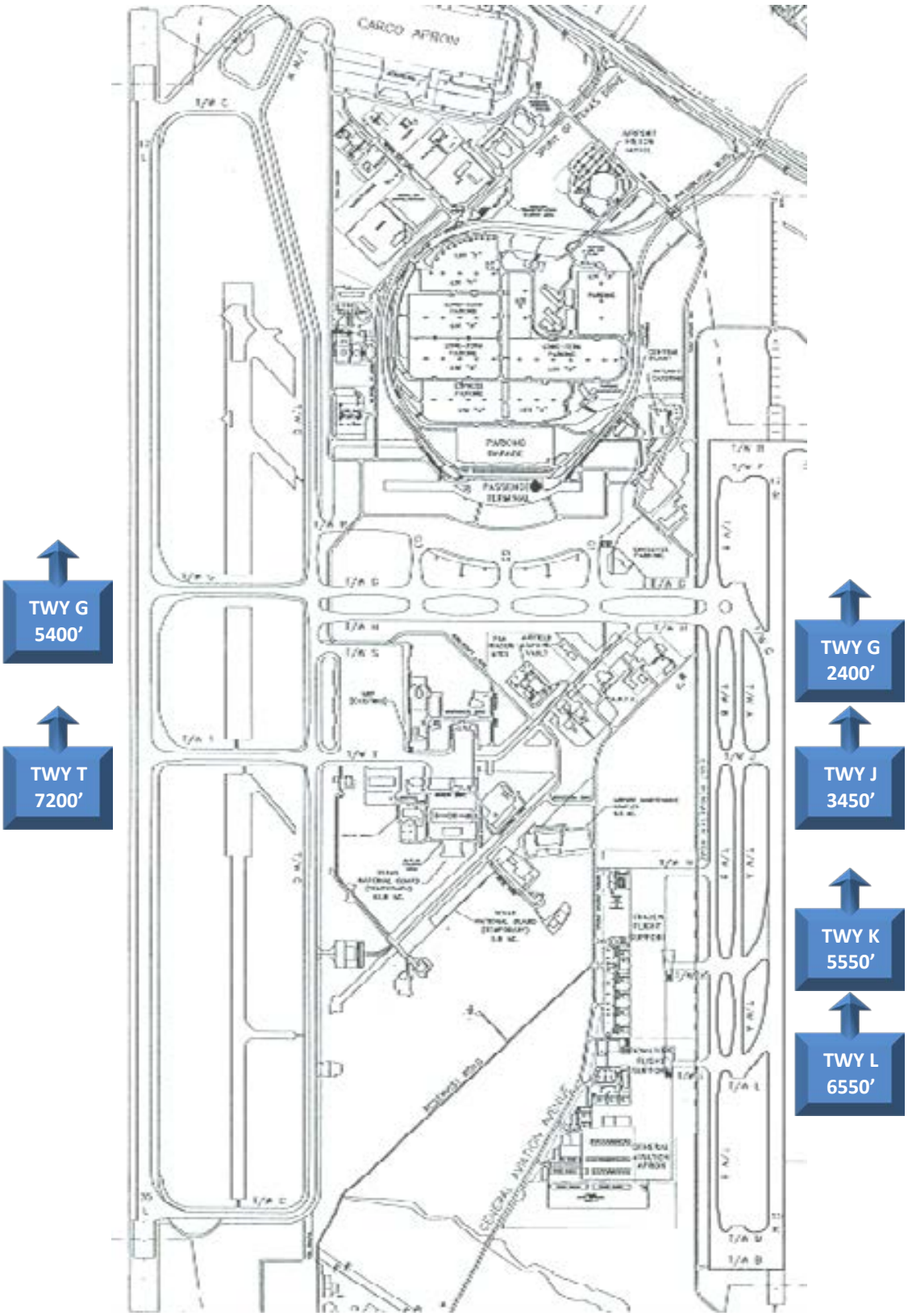


Runway 35R Glideslope Critical Area

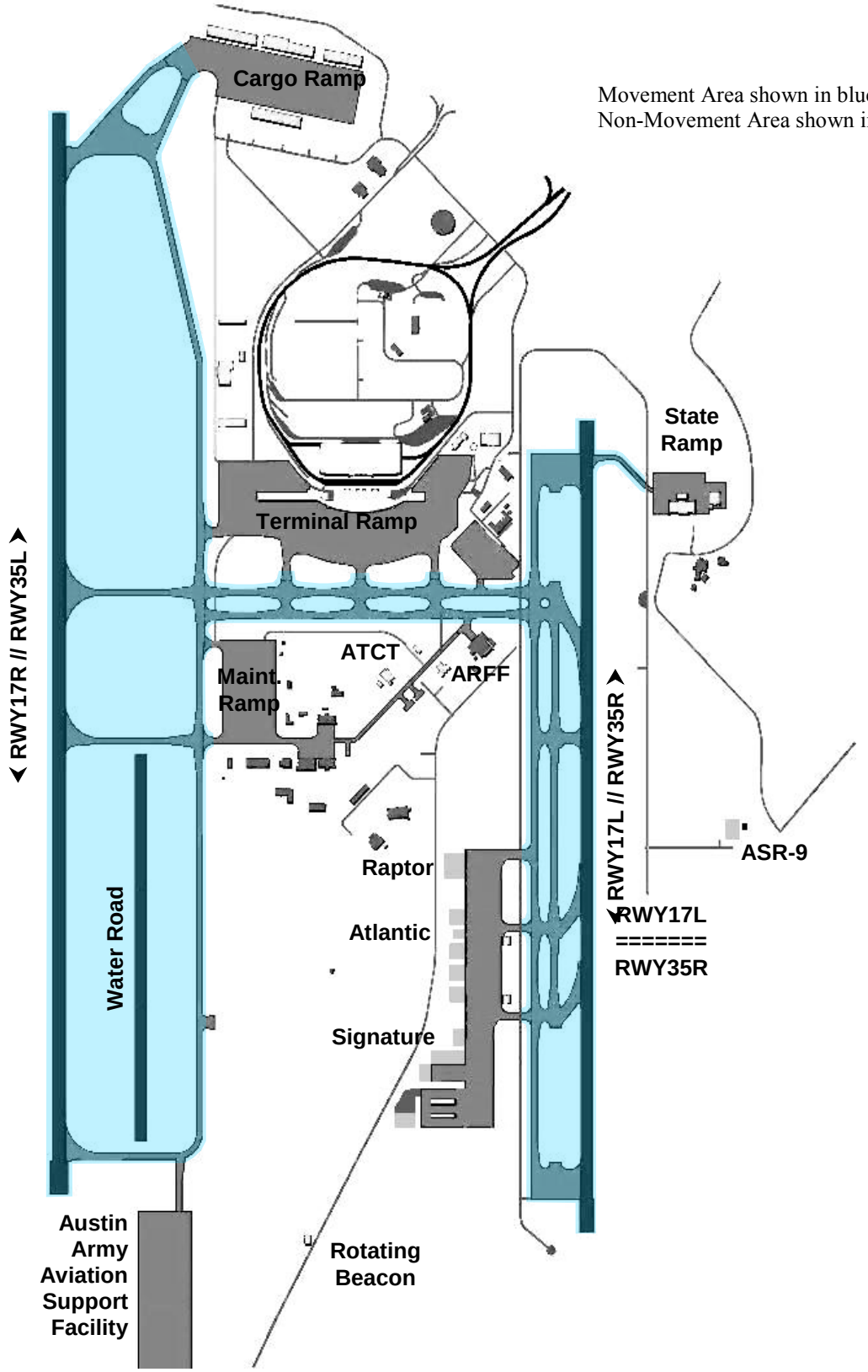
Intersection Departure Distances
South Flow



Intersection Departure Distances
North Flow



MOVEMENT AREAS



STARS GEO VIDEO MAPS LIST

Map #	Title	Description
1	SOUTH	South Flow
2	NORTH	North Flow
3	MONITOR	Map 1
4	MVA	MVA
5	ROADS	Roads & Rivers
6	RNV_SF	RNAV STARS South Flow Waypoints
7	STARS_S	STARS South Flow
8	STARS_N	STARS North Flow
9	RNV_NF	RNAV STARS North Flow Waypoints
10	ALIGN	
11	AIRWAYS	Air Routes
12	GPS_SF	GPS South Flow
13	GPS_NF	GPS North Flow
14	SECTORS	Center Sectors
15	COUNTY	County BDRYS
18	MVA_5NM	MVA 5NM
19	MTR	Military Training Routes
21	GTU_FNL	GTU Finals
22	GTU_RDS	GTU Roads & Lakes
23	GTU_RNG	GTU Range Rings
24	G_ARPTS	GTU Airports
25	GTU_LBL	GTU ARPT Identifiers
36	HYI_FNL	HYI Finals
37	HYI_LBL	HYI ARPTS
100	AUS_FTM	Fixed Targets
110	CLASS_C	Class C
120	ADSB_40	ADS-B 40NM
121	ADSB_60	ADS-B 60NM
122	SF_OPD	SF OPD Restrictions
123	NF_OPD	NF OPD Restrictions
124	SF_RNP	SF RNP Track
148	IR148	IR 148

APPENDIX C

CIRCUIT OF THE AMERICAS (COTA) OPERATIONS

1. HELICOPTER CONTROL ("RACEOPS")

a. Procedures contained in paragraph 3-2-4, LOCAL CONTROL, of this order govern this position of operation.

b. The primary frequency is normally 118.225.

c. Normally worked by a CPC from the LCW position.

d. RACEOPS will assume responsibilities for ALL helicopter traffic within 10nm of the Austin Bergstrom International Airport from the surface to 2,000 feet MSL.

e. The following routes are authorized to be assigned without coordination:

1) GARFIELD and/or BALLPARKS

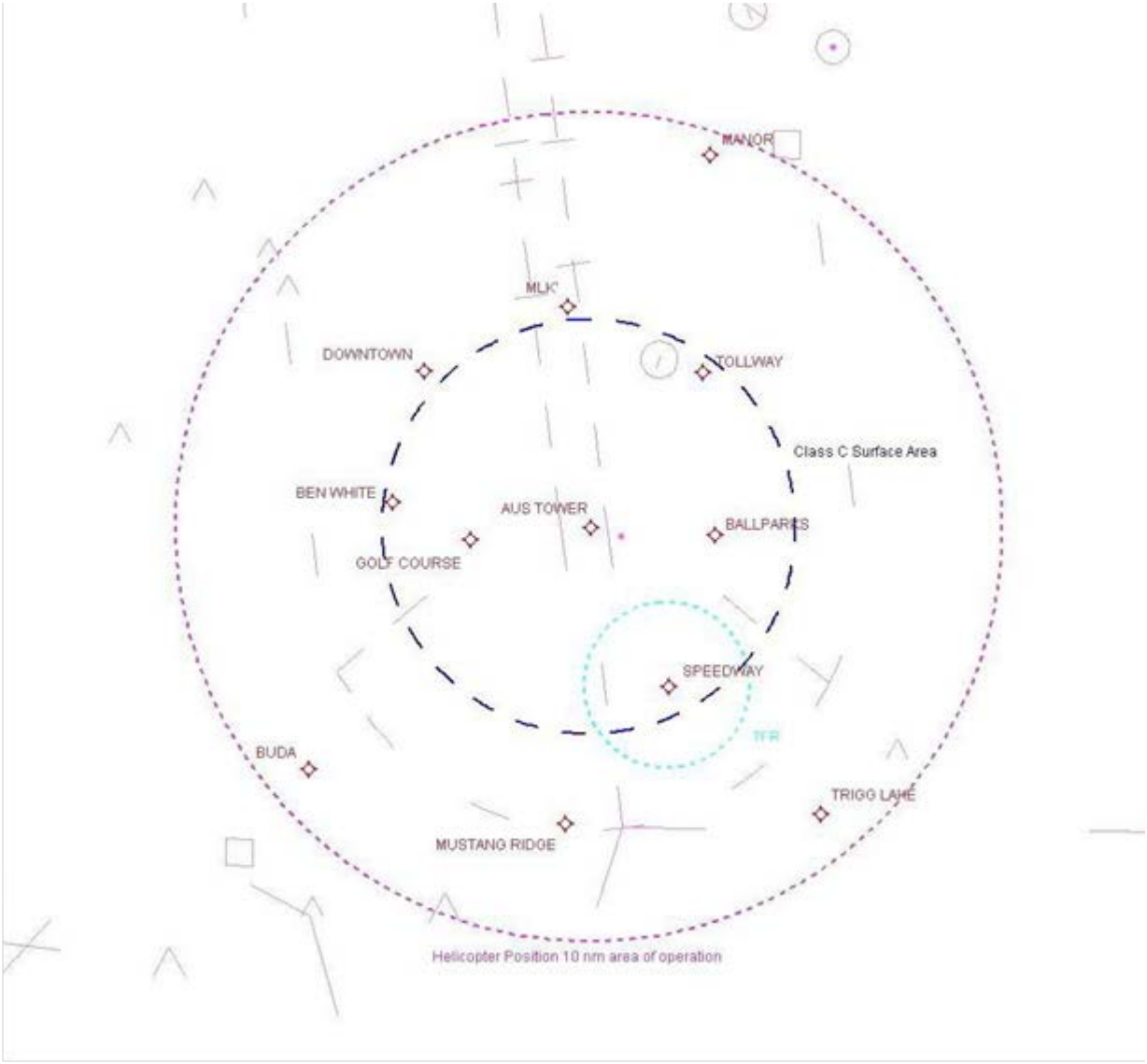
2) I-35 and/or BEN WHITE

f. The MLK and MOYA routes require verbal coordination.

g. Unless otherwise coordinated, RACEOPS will provide and maintain separation from all traffic being worked by LC and GC.

h. To the maximum extent possible, itinerant ABIA traffic should not be delayed by helicopter operations.

i. Circuit of the Americas (COTA) [*"SPEEDWAY"*] must coordinate with RACEOPS for all SVFR departures. RACEOPS must coordinate all SVFR helicopters landing COTA. SPEEDWAY must provide an "On Deck" notification to verify that the SVFR is cancelled. Separation standards/requirements are defined in the COTA Letter of Agreement and FAA JO 7110.65.



RACEOPS AREA with FIXES

APPENDIX D

OPERATIONAL DISTRACTIONS AND ADMINISTRATIVE TASKS

Watch supervisors (FLM/CIC) are responsible for the management of the operational environment with a goal toward eliminating distractions created by:

1. non-operationally related activities or tasks such as controller schedule or leave bidding, preparation of future schedules, training report completion, etc.

2. non-operationally needed items that contribute to conversations or interactions between personnel, or produce noise at levels that can create distractions to controllers working at an operational position.