Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: STAR	Date Open: 10/05/2011	Task #: 20111005296308020001	Request #: 20111005296308
Procedure: STAR ALDAN (RNAV) ONE RALEIGH-DURHAM NC KRDU		Airport ID: KRDU	Airport: RALEIGH-DURHAM INTL		Reimbursable #:
City: RALEIGH/DURHAM	ST: NC	GPS #:		Estimated Chart Date: 01/10/2013	FICO #:
Fac ID:	Fac. Type: Ptsc. O		Specialist: PETER GUIMOND		

Procedure Review

	Rec'd	Rel'd	Full Name	Comments
Lead:	07/03/2012	08/24/2012	MARLON ROBINSON	DME / DME
QA:	08/24/2012	09/05/2012	STEVEN SZUKALA	
Liaison:	09/05/2012		Sparlin	DME/DME

P3

ESV REQUEST INCLUDED

pg 1 of 4

Procedure Comments: ENROUTE **Remark Type:** INFORMATION

RALEIGH/DURHAM, NC RALEIGH-DURHAM INTL (KRDU) ALDAN ONE (RNAV) (STAR) ENROUTE-YES FC: 11.13.12 PUB: 1.10.13

ATTACHED FORMS: ESV REPORTS; 7100-4; 7100-3; 8260-2(S): ALDAN-INT, REV 5; BILLA-INT, REV 4; BUTTS, ORIG; FAVKO, ORIG; GAZER, ORIG; HAFNR-INT, REV 4; HARSH, ORIG; HEAVE, ORIG; JEMMY, ORIG; KPASS, ORIG; LWUUD, ORIG; ROBLS, ORIG; TIVAE, ORIG; (INFO ONLY) BLNKR, ORIG; FOBAT, ORIG; FRAZI, ORIG; GABLR, ORIG; ROANOKE (ROA) VTAC, REV 10; SOUTH BOSTON (SBV) VTAC, REV 8; TABER-INT, REV 11.

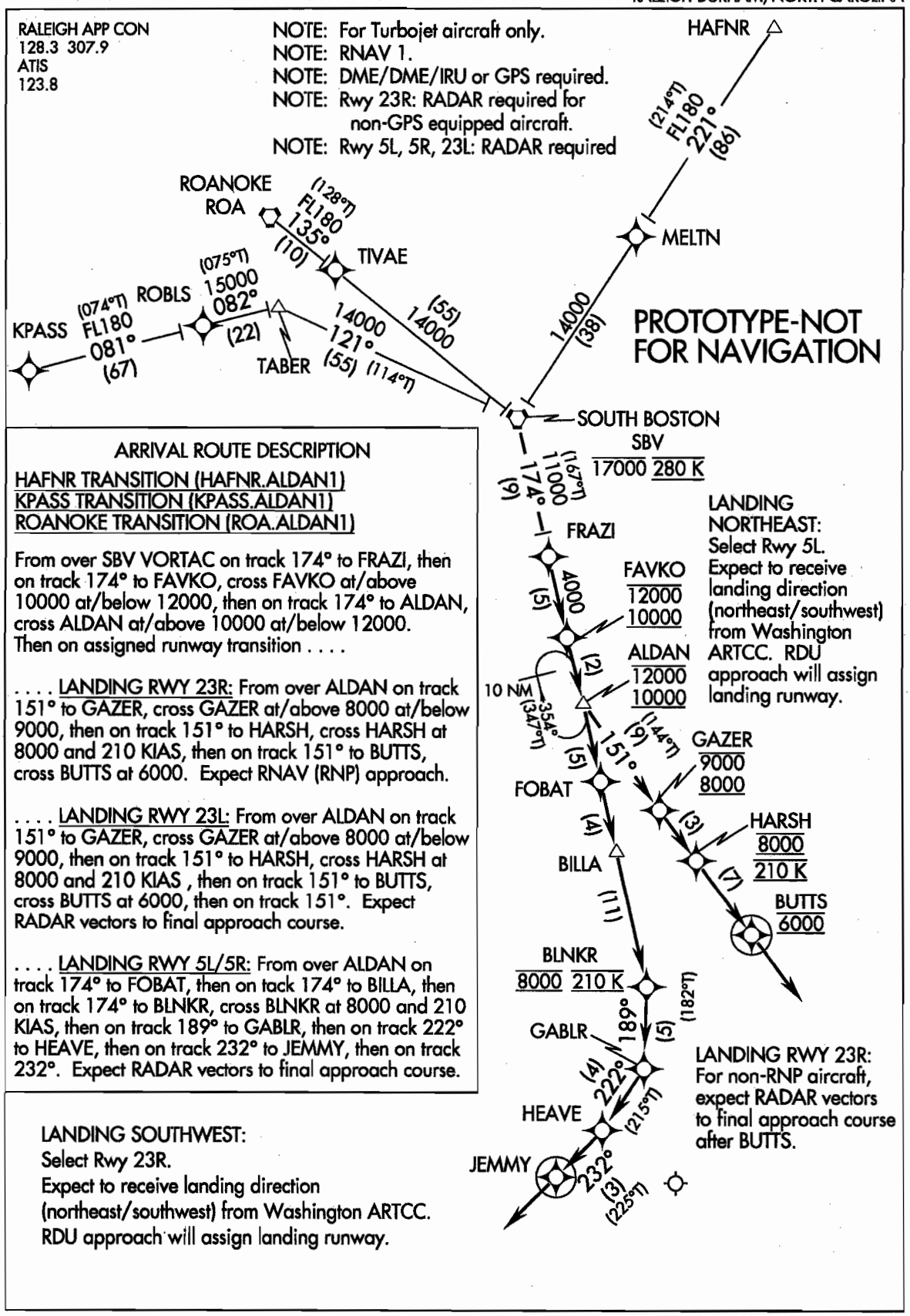
CONTACT: DON SMITH/MARLON ROBINSON-AJV-352 LEADS, 405.954.1036 / 405.954.3636.

ALDAN ONE ARRIVAL (RNAV)

RALEIGH-DURHAM INTL (RDU)
RALEIGH-DURHAM, NORTH CAROLINA

RALEIGH APP CON
128.3 307.9
ATIS
123.8

NOTE: For Turbojet aircraft only.
NOTE: RNAV 1.
NOTE: DME/DME/IRU or GPS required.
NOTE: Rwy 23R: RADAR required for non-GPS equipped aircraft.
NOTE: Rwy 5L, 5R, 23L: RADAR required



ARRIVAL ROUTE DESCRIPTION

HAFNR TRANSITION (HAFNR.ALDAN1)
KPASS TRANSITION (KPASS.ALDAN1)
ROANOKE TRANSITION (ROA.ALDAN1)

From over SBV VORTAC on track 174° to FRAZI, then on track 174° to FAVKO, cross FAVKO at/above 10000 at/below 12000, then on track 174° to ALDAN, cross ALDAN at/above 10000 at/below 12000. Then on assigned runway transition . . . .

. . . . LANDING RWY 23R: From over ALDAN on track 151° to GAZER, cross GAZER at/above 8000 at/below 9000, then on track 151° to HARSH, cross HARSH at 8000 and 210 KIAS, then on track 151° to BUTTS, cross BUTTS at 6000. Expect RNAV (RNP) approach.

. . . . LANDING RWY 23L: From over ALDAN on track 151° to GAZER, cross GAZER at/above 8000 at/below 9000, then on track 151° to HARSH, cross HARSH at 8000 and 210 KIAS , then on track 151° to BUTTS, cross BUTTS at 6000, then on track 151°. Expect RADAR vectors to final approach course.

. . . . LANDING RWY 5L/5R: From over ALDAN on track 174° to FOBAT, then on tack 174° to BILLA, then on track 174° to BLNKR, cross BLNKR at 8000 and 210 KIAS, then on track 189° to GABLR, then on track 222° to HEAVE, then on track 232° to JEMMY, then on track 232°. Expect RADAR vectors to final approach course.

LANDING NORTHEAST:
Select Rwy 5L.
Expect to receive landing direction (northeast/southwest) from Washington ARTCC. RDU approach will assign landing runway.

LANDING RWY 23R:
For non-RNP aircraft, expect RADAR vectors to final approach course after BUTTS.

LANDING SOUTHWEST:
Select Rwy 23R.
Expect to receive landing direction (northeast/southwest) from Washington ARTCC.
RDU approach will assign landing runway.

ROA: 3720.608/08004.224
SBV: 3640.502/07900.870
ALDAN: 3623.876/07856.048
BILLA: 3614.606/07853.374
BLNKR: 3603.387/07850.260
BUTTS: 3609.216/07842.775

FAVKO: 3626.021/07856.668
FOBAT: 3618.741/07854.565
FRAZI: 3631.371/07858.218
GABLR: 3558.599/07850.482
GAZER: 3616.856/07849.679
HAFNR: 3823.841/07733.983

HARSH: 3614.433/07847.486
HEAVE: 3555.354/07853.271
JEMMY: 3553.231/07855.896
KPASS: 3638.943/08149.971
MELTN: 3712.154/07834.739
ROBLS: 3657.311/08029.446

TABER: 3702.917/08002.928
TIVAE: 3714.441/07954.351

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish

Facility Data

Chart Name : FLAT ROCK	City : FLAT ROCK	Ident : FAK	State : VA
Type/Class : TACR	Frequency : M1167	Reference No.: 10029073	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 698146-007	228	251	84	140	240

Requirement: ESTABLISH ESV FOR FRAZI RNAV STAR

Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 02/26/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698146-007	228	251	84	140	240	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR FRAZI RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: Cassella Charles	Routing Symbol:	Date: 03/01/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698146-007	228	251	84	140	240	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR FRAZI RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 03/01/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698146-007	228	251				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : GREENSBORO	City : GREENSBORO	Ident : GSO	State : NC
Type/Class : TACR	Frequency : M1196	Reference No.: 09108061	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 698207-026	58	88	80	60	180

Requirement: ESTABLISH ESV FOR RDU, FRAZI RNAV STAR.

Signature: MCKENZIE JAMES	Routing Symbol:	Date: 10/21/2009

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698207-026	58	88	80	60	180	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR RDU, FRAZI RNAV STAR.Approved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: Cassella Charles	Routing Symbol:	Date: 10/22/2009

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698207-026	58	88	80	60	180	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR RDU, FRAZI RNAV STAR.Approved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 10/26/2009

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698207-026	58	88				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish

Facility Data

Chart Name : GREENSBORO	City : GREENSBORO	Ident : GSO	State : NC
Type/Class : TACR	Frequency : M1196	Reference No.: 12031045	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 698207-044	67	110	63	40	160

Requirement: ESTABLISH ESV FOR KRDU RNAV STARS

Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 03/16/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698207-044	67	110	63	40	160	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR KRDU RNAV STARSAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Cassella Charles	Routing Symbol:	Date: 03/19/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698207-044	67	110	63	40	160	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR KRDU RNAV STARSAPPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.

Signature: Hughes Dennis	Routing Symbol:	Date: 03/19/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698207-044	67	110				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : GORDONSVILLE	City : GORDONSVILLE	Ident : GVE	State : VA
Type/Class : TACR	Frequency : M1190	Reference No.: 10029071	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 698194-008	210	246	109	140	240

Requirement: ESTABLISH ESV FOR FRAZI RNAV STAR

Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 02/26/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698194-008	210	246	109	140	240	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR FRAZI RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: Cassella Charles	Routing Symbol:	Date: 03/01/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698194-008	210	246	109	140	240	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR FRAZI RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 03/01/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698194-008	210	246				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish

Facility Data

Chart Name : HOPEWELL	City : HOPEWELL	Ident : HPW	State : VA
Type/Class : TACR	Frequency : M1018	Reference No.: 10029068	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 698117-005	271	286	78	140	240

Requirement: ESTABLISH ESV FOR FRAZI RNAV STAR

Signature: Osterhage Dennis	Routing Symbol: AVJ-E2	Date: 02/26/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698117-005	271	286	78	140	240	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR FRAZI RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: Cassella Charles	Routing Symbol:	Date: 03/01/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698117-005	271	286	78	140	240	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR FRAZI RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 03/02/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698117-005	271	286				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : LIBERTY	City : LIBERTY	Ident : LIB	State : NC
Type/Class : TACR	Frequency : M1164	Reference No.: 10029072	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 871832-026	10	15	74	100	240

Requirement: ESTABLISH ESV FOR FRAZI RNAV STAR

Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 02/26/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 871832-026	10	15	74	100	240	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR FRAZI RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: Cassella Charles	Routing Symbol:	Date: 03/02/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 871832-026	10	15	74	100	240	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR FRAZI RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 03/02/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 871832-026	10	15				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : LIBERTY	City : LIBERTY	Ident : LIB	State : NC
Type/Class : TACR	Frequency : M1164	Reference No.: 10029070	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 871832-025	52	78	55	30	120

Requirement: ESTABLISH ESV FOR FRAZI RNAV STAR

Signature: Osterhage Dennis | Routing Symbol: AJV-E2 | Date: 02/26/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 871832-025	52	78	55	30	120	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR FRAZI RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: Cassella Charles | Routing Symbol: | Date: 03/02/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 871832-025	52	78	55	30	120	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR FRAZI RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: CHRISTEIN THOMAS | Routing Symbol: | Date: 03/02/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 871832-025	52	78				

Requirement/Remarks:

Signature: | Routing Symbol: | Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : LVL	City : LAWRENCEVILLE	Ident : LVL	State : VA
Type/Class : TACR	Frequency : M1163	Reference No.: 10029067	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 704121-004	258	326	60	140	240

Requirement: ESTABLISH ESV FOR FRAZI RNAV STAR

Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 02/26/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704121-004	258	326	60	140	240	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR FRAZI RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: Cassella Charles	Routing Symbol:	Date: 03/01/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704121-004	258	326	60	140	240	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR FRAZI RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 03/02/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704121-004	258	326				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : TAR RIVER	City : ROCKY MOUNT	Ident : TYI	State : NC
Type/Class : TACR	Frequency : M1212	Reference No.: 10029069	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 694155-025	264	287	68	30	120

Requirement: ESTABLISH ESV FOR FRAZI RNAV STAR

Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 02/26/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694155-025	264	287	68	30	120	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR FRAZI RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

Signature: Cassella Charles	Routing Symbol:	Date: 03/02/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694155-025	264	287	68	30	120	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR FRAZI RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.

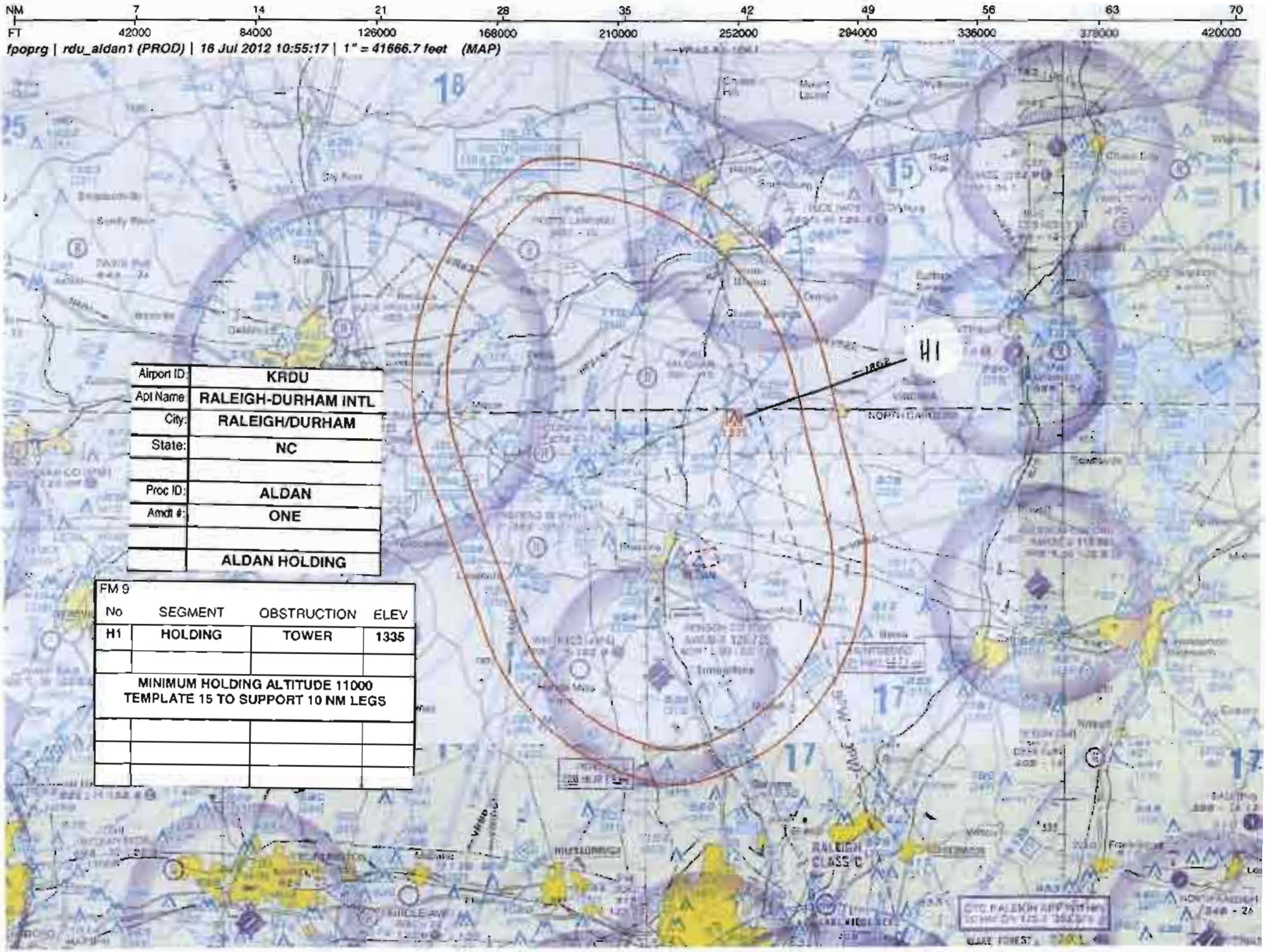
Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 03/03/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 694155-025	264	287				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:



Airport ID:	KRDU
Apt Name	RALEIGH-DURHAM INTL
City:	RALEIGH/DURHAM
State:	NC
Proc ID:	ALDAN
Amdt #:	ONE
	ALDAN HOLDING

FM 9

No	SEGMENT	OBSTRUCTION	ELEV
H1	HOLDING	TOWER	1335
MINIMUM HOLDING ALTITUDE 11000 TEMPLATE 15 TO SUPPORT 10 NM LEGS			

US Department of Transportation
Federal Aviation Administration

STAR - Standard Terminal Arrival

1. Bearings, headings, courses and radials are listed to the nearest hundredth (e.g. 360.00)
2. Distances are in nautical miles to nearest hundredth (e.g. 00.00)
3. Altitudes are minimum altitudes unless otherwise indicated

(1) Transition Routes

(a) Transition Name	(b) Transition Computer Codes	(c) From RNAV WP / FIX / NAVAID	(d) To RNAV WP / FIX / NAVAID	(e) Mag Course / Distance	(f) MEA	(g) MOCA	(h) MAA	(i) Crossing Altitudes / Fixes
HAFNR	HAFNR.ALDAN1	HAFNR	MELTN	221.23/86.29	FL180			
		MELTN	SBV VORTAC	220.66/37.92	14000			AT/BELOW 17000
KPASS	KPASS.ALDAN1	KPASS	ROBLS	80.76/67.22	FL180			
		ROBLS	TABER	82.10/21.97	15000			
		TABER	SBV VORTAC	120.89/54.60	14000			AT/BELOW 17000
ROANOKE	ROA.ALDAN1	ROA VORTAC	TIVAE	134.97/10.00	FL180			
		TIVAE	SBV VORTAC	135.07/54.65	14000			AT/BELOW 17000

(2) Arrival Route Description: FROM OVER SBV VORTAC ON TRACK 173.81/9.37 NM TO FRAZI (MEA 11,000), THEN ON TRACK 173.82/5.49 NM TO FAVKO, CROSS FAVKO AT/ABOVE 10000 AT/BELOW 12000 (MEA 4000), THEN ON TRACK 173.84/2.20 NM TO ALDAN, CROSS ALDAN AT/ABOVE 10000 AT/BELOW 12000 (MEA 4000). THEN ON ASSIGNED RUNWAY TRANSITION...

...LANDING RWY 23R: FROM OVER ALDAN ON TRACK 150.69/8.70 NM TO GAZER, CROSS GAZER AT/ABOVE 8000 AT/BELOW 9000 (MEA 4000), THEN ON TRACK 150.75/3.00 NM TO HARSH, CROSS HARSH AT 8000 AND 210 KIAS (MEA 4000), THEN ON TRACK 150.77/6.46 NM TO BUTTS, CROSS BUTTS AT 6000 (MEA 4000). EXPECT
Continued on block 16...

(3) Procedural Data Notes: CHART: FOR TURBOJET AIRCRAFT ONLY. RNAV 1. DME/DME/IRU OR GPS REQUIRED. RWY 23R, RADAR REQUIRED FOR NON-GPS EQUIPPED AIRCRAFT; RWY 5L, 5R, 23L, RADAR REQUIRED. LANDING NORTHEAST: SELECT RWY 5L. LANDING SOUTHWEST: SELECT RWY 23R. EXPECT TO RECEIVE LANDING DIRECTION (NORTHEAST/SOUTHWEST) FROM WASHINGTON ARTCC; RDU APPROACH WILL ASSIGN LANDING RUNWAY.

CROSS SBV VORTAC AT/BELOW 17000 AT 280 KTS. CROSS FAVKO AT/ABOVE 10000 AT/BELOW 12000. CROSS ALDAN AT/ABOVE 10,000 AT/BELOW 12000. CROSS GAZER AT/ABOVE 8000 AT/BELOW 9000. CROSS HARSH AT 8000 AT 210 KTS. CROSS BLNKR AT 8,000 AT 210 KTS. CROSS BUTTS AT 6000.

Continued on block 16...

(4) Fixes and/or Holding Patterns: CHART HOLDING AT ALDAN: HOLD N, RT, 173.84 INBOUND, 10 NM LEGS.

(5) Communications: RALEIGH APP CON
ATIS

QUALITY CHECKED 4

(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
ALDAN RNAV	ONE	SBV.ALDAN1	NONE		

(12) Airports Served	
Airport Name RALEIGH-DURHAM INTERNATIONAL AIRPORT	City/State RALEIGH-DURHAM, NC
Airport Name	City/State
Airport Name	City/State
Airport Name	City/State
Airport Name	City/State
Airport Name	City/State

(13) Lost Communications Procedure:

(14) Remarks:

(15) Additional Flight Data: REFERENCE MAG VAR: KRDU 07W/1985.
DME/DME ASSESSMENT: SAT RNP (2.0).

QUALITY 4 CHECKED

(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
ALDAN RNAV	ONE	SBV.ALDAN1	NONE		

(16) Continuation:

(2) Arrival Route Description:
RNAV (RNP) APPROACH.

...LANDING RWY 23L: FROM OVER ALDAN ON TRACK 150.69/8.70 NM TO GAZER, CROSS GAZER AT/ABOVE 8000 AT/BELOW 9000 (MEA 4000), THEN ON TRACK 150.75/3.00 NM TO HARSH, CROSS HARSH AT 8000 AND 210 KIAS (MEA 4000), THEN ON TRACK 150.77/6.46 NM TO BUTTS, CROSS BUTTS AT 6000 (MEA 4000), THEN ON TRACK 150.77/5.00 NM. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

...LANDING RWY 5L/5R: FROM OVER ALDAN ON TRACK 173.85/5.27 NM TO FOBAT (MEA 4000), THEN ON TRACK 173.86/4.24 NM TO BILLA (MEA 4000), THEN ON TRACK 174.30/11.48 NM TO BLNKR, CROSS BLNKR AT 8000 AND 210 KIAS (MEA 4000), THEN ON TRACK 189.15/4.78 NM TO GABLR (MEA 4000), THEN ON TRACK 221.96/3.95 NM TO HEAVE (MEA 4000), THEN ON TRACK 232.18/3.01 NM TO JEMMY (MEA 4000), THEN ON TRACK 232.18/5.00 NM. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

(3) Procedural Data Notes:
LANDING RWY 23R: FOR NON-RNP AIRCRAFT, EXPECT RADAR VECTORS TO FINAL APPROACH COURSE AFTER BUTTS.

(17) Changes: ORIGINAL.

(18) Reasons for Changes: REQUESTED BY ATC.

11/08/2012: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 06/22/2012.
1. CHANGES ALL INSTANCES OF LWUUD TO MELTN. FLIGHT CHECK REQUESTED NAME CHANGE DUE TO SIMILAR SOUNDING FIX NAME LWOOD USED FOR DEPARTURE PROCEDURES AT RDU.
2. AMENDED BUTTS FROM FLYOVER (FO) TO FLYBY (FB) FOR RWY 23R PER FLIGHT INSPECTION REQUEST.
3. MOVED JEMMY 38.16 FEET SOUTHWEST TO MEET ALIGNMENT CRITERIA FOR RNAV (RNP) Z RWY 5L. UPDATED HEAVE TO JEMMY SEGMENT COURSE/DISTANCE FROM 232.14/3.00 TO 232.18/3.01.

	Name (Typed and Signed), Title and Organization		DATE
Developed By	JOE KEIMIG, SUPPORT MANAGER, AIRSPACE AND PROCEDURES, WASHINGTON ARTCC		22 JUN 2012
Approved	**AJV-352**	DARRYEL ADAMS, MANAGER	
	Reg. ATD		

QUALITY CHECKED 4

(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
ALDAN RNAV	ONE	SBV.ALDAN1	NONE		

US Department of Transportation
Federal Aviation Administration

RNAV STAR (Data Record)

(1) FIX/NAVAID	(2) LAT/LONG	(3) C	(4) FO/FB	(5) LEG	(6) TC	(7) DIST	(8) ALTITUDE	(9) SPEED	(10) REMARKS
En Route Transition									
HAFNR	382350.46N / 0773358.95W	Y		IF					HAFNR.ALDAN1
MELTN	371209.22N / 0783444.33W	Y	FB	TF	214.23	86.29			
SBV VORTAC	364030.15N / 0790052.21W	Y	FB	TF	213.66	37.92	-17000	280K	
En Route Transition									
KPASS	363856.56N / 0814958.27W	Y		IF					KPASS.ALDAN1
ROBLS	365718.64N / 0802926.74W	Y	FB	TF	073.76	67.22			
TABER	370255.04N / 0800255.66W	Y	FB	TF	075.10	21.97			
SBV VORTAC	364030.15N / 0790052.21W	Y	FB	TF	113.89	54.60	-17000	280K	
En Route Transition									
ROA VORTAC	372036.47N / 0800413.43W	Y		IF					ROA.ALDAN1
TIVAE	371426.48N / 0795421.05W	Y	FB	TF	127.97	10.00			
SBV VORTAC	364030.15N / 0790052.21W	Y	FB	TF	128.07	54.65	-17000	280K	

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
ALDAN RNAV	ONE	SBV.ALDAN1	NONE		

QUALITY CHECKED

FAA Form 7100-3 (9/02)

US Department of Transportation
Federal Aviation Administration

RNAV STAR (Data Record)

(1) FIX/NAVAID	(2) LAT/LONG	(3) C	(4) FO/FB	(5) LEG	(6) TC	(7) DIST	(8) ALTITUDE	(9) SPEED	(10) REMARKS
Common Route									
SBV VORTAC	364030.15N / 0790052.21W	Y		IF			-17000	280K	
FRAZI	363122.25N / 0785813.08W	Y	FB	TF	166.81	09.37			
FAVKO	362601.27N / 0785640.09W	Y	FB	TF	166.82	05.49	+10000, -12000		
ALDAN	362352.56N / 0785602.86W	Y	FB	TF	166.84	02.20	+10000, -12000		HOLDING - RIGHT TURNS
Runway Transition									
ALDAN	362352.56N / 0785602.86W	Y		IF			+10000, -12000		HOLDING - RIGHT TURNS
FOBAT	361844.45N / 0785433.92W	Y	FB	TF	166.85	05.27			
BILLA	361436.35N / 0785322.44W	Y	FB	TF	166.86	04.24			
BLNKR	360323.22N / 0785015.60W	Y	FB	TF	167.30	11.48	8000	210K	
GABLR	355835.93N / 0785028.89W	Y	FB	TF	182.15	04.78			
HEAVE	355521.22N / 0785316.24W	Y	FB	TF	214.96	03.95			
JEMMY	355313.85N / 0785553.74W	Y	FO	TF	225.18	03.01			
KRDU:RW05L				FM	225.18	05.00			

QUALITY CHECKED

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
ALDAN RNAV	ONE	SBV.ALDAN1	NONE		

FAA Form 7100-3 (9/02)

US Department of Transportation
Federal Aviation Administration

RNAV STAR (Data Record)

(1) FIX/NAVAID	(2) LAT/LONG	(3) C	(4) FO/FB	(5) LEG	(6) TC	(7) DIST	(8) ALTITUDE	(9) SPEED	(10) REMARKS
Runway Transition									
ALDAN	362352.56N / 0785602.86W	Y		IF			+10000, -12000		HOLDING - RIGHT TURNS
FOBAT	361844.45N / 0785433.92W	Y	FB	TF	166.85	05.27			
BILLA	361436.35N / 0785322.44W	Y	FB	TF	166.86	04.24			
BLNKR	360323.22N / 0785015.60W	Y	FB	TF	167.30	11.48	8000	210K	
GABLR	355835.93N / 0785028.89W	Y	FB	TF	182.15	04.78			
HEAVE	355521.22N / 0785316.24W	Y	FB	TF	214.96	03.95			
JEMMY	355313.85N / 0785553.74W	Y	FO	TF	225.18	03.01			
KRDU:RW05R				FM	225.18	05.00			
Runway Transition									
ALDAN	362352.56N / 0785602.86W	Y		IF			+10000, -12000		HOLDING - RIGHT TURNS
GAZER	361651.38N / 0784940.75W	Y	FB	TF	143.69	08.70	+8000, -9000		
HARSH	361425.98N / 0784729.18W	Y	FB	TF	143.75	03.00	8000	210K	
BUTTS	360912.97N / 0784246.51W	Y	FO	TF	143.77	06.46	6000		
KRDU:RW23L				FM	143.77	05.00			

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
ALDAN RNAV	ONE	SBV.ALDAN1	NONE		

QUALITY CHECKED

FAA Form 7100-3 (9/02)

US Department of Transportation
Federal Aviation Administration

RNAV STAR (Data Record)

Runway Transition									
ALDAN	362352.56N / 0785602.86W	Y		IF			+10000, -12000		
GAZER	361651.38N / 0784940.75W	Y	FB	TF	143.69	08.70	+8000, -9000		HOLDING - RIGHT TURNS
HARSH	361425.98N / 0784729.18W	Y	FB	TF	143.75	03.00	8000	210K	
BUTTS	360912.97N / 0784246.51W	Y	FB	TF	143.77	06.46	6000		
KRDU:RW23R									

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
ALDAN RNAV	ONE	SBV.ALDAN1	NONE		

QUALITY 4 CHECKED

FAA Form 7100-3 (9/02)

US Department of Transportation
Federal Aviation Administration

STAR (Data Record)

ARINC PACKET - 424-18 - STAR

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
NAVAID  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAD        POB   K7011380 TLW                     POB N35100655W079011081W0070002401     NARPOPE
        SUSAD        ROA   K6010940VTL  N37203647W080041343    N37203647W080041343W0040030721     NARROANOKE
        SUSAD        SBV   K6011040VTL  N36403015W079005221    N36403015W079005221W0050005301     NARSOUTH BOSTON

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   ALDAN K70    C   L N36235256W078560286                     W0090     NAR           ALDAN
        SUSAEAENRT   BILLA K70    C   L N36143635W078532244                     W0090     NAR           BILLA
        SUSAEAENRT   BLNKR K70    W     N36032322W078501560                     W0090     NAR           BLNKR
        SUSAEAENRT   BUTTS K70    W     N36091297W078424651                     W0091     NAR           BUTTS
        SUSAEAENRT   FAVKO K70    W     N36260127W078564009                     W0090     NAR           FAVKO
        SUSAEAENRT   FOBAT K70    W     N36184445W078543392                     W0090     NAR           FOBAT
        SUSAEAENRT   FRAZI K70    W     N36312225W078581308                     W0090     NAR           FRAZI
        SUSAEAENRT   GABLR K70    W     N35583593W078502889                     W0090     NAR           GABLR
        SUSAEAENRT   GAZER K70    W     N36165138W078494075                     W0091     NAR           GAZER
        SUSAEAENRT   HAFNR K60    C   B N38235046W077335895                     W0104     NAR           HAFNR
        SUSAEAENRT   HARSH K70    W     N36142598W078472918                     W0091     NAR           HARSH
        SUSAEAENRT   HEAVE K70    W     N35552122W078531624                     W0090     NAR           HEAVE
        SUSAEAENRT   JEMMY K70    W     N35531385W078555374                     W0089     NAR           JEMMY
        SUSAEAENRT   KPASS K60    W     N36385656W081495827                     W0071     NAR           KPASS
        SUSAEAENRT   MELTN K60    W     N37120922W078344433                     W0094     NAR           MELTN
        SUSAEAENRT   ROBLS K60    W     N36571864W080292674                     W0081     NAR           ROBLS
        SUSAEAENRT   TABER K60    C   L N37025504W080025566                     W0084     NAR           TABER
        SUSAEAENRT   TIVAE K60    W     N37142648W079542105                     W0086     NAR           TIVAE

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KRDUK7ARDU     0     100YHN35523950W078471490W007000435         1800018000C    MNAR    RALEIGH-DURHAM INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KRDUK7EALDAN14HAFNR 010HAFNRK6EA0E       IF                                          18000
        SUSAP KRDUK7EALDAN14HAFNR 020MELTNK6EA0E    010TF                     22120863
        SUSAP KRDUK7EALDAN14HAFNR 030SBV  K6D 0VE   010TF                     22070379    - 17000          280
```

QUALITY CHECKED 1

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
ALDAN RNAV	ONE	SBV.ALDAN1	NONE		

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```
SUSAP KRDUK7EALDAN14KPASS 010KPASSK6EA0E       IF                                          18000
SUSAP KRDUK7EALDAN14KPASS 020ROBLSK6EA0E    010TF                    08080672
SUSAP KRDUK7EALDAN14KPASS 030TABERK6EA0E    010TF                    08210220
SUSAP KRDUK7EALDAN14KPASS 040SBV  K6D 0VE   010TF                    12090546    - 17000          280
SUSAP KRDUK7EALDAN14ROA   010ROA  K6D 0V       IF                                          18000
SUSAP KRDUK7EALDAN14ROA   020TIVAEK6EA0E    010TF                    13500100
SUSAP KRDUK7EALDAN14ROA   030SBV  K6D 0VE   010TF                    13510547    - 17000          280
SUSAP KRDUK7EALDAN15      010SBV  K6D 0V       IF                                - 17000     18000280
SUSAP KRDUK7EALDAN15      020FRAZIK7EA0E    010TF                    17380094
SUSAP KRDUK7EALDAN15      030FAVKOK7EA0E    010TF                    17380055    B 1200010000
SUSAP KRDUK7EALDAN15      040ALDANK7EA0EE H 010TF                    17380022    B 1200010000
SUSAP KRDUK7EALDAN16RW05B 010ALDANK7EA0E  H    IF                                B 120001000018000
SUSAP KRDUK7EALDAN16RW05B 020FOBATK7EA0E    010TF                    17390053
SUSAP KRDUK7EALDAN16RW05B 030BILLAK7EA0E    010TF                    17390042
SUSAP KRDUK7EALDAN16RW05B 040BLNKRK7EA0E    010TF                    17430115      08000          210
SUSAP KRDUK7EALDAN16RW05B 050GABLRK7EA0E    010TF                    18920048
SUSAP KRDUK7EALDAN16RW05B 060HEAVEK7EA0E    010TF                    22200040
SUSAP KRDUK7EALDAN16RW05B 070JEMMYK7EA0EY   010TF                    23220030
SUSAP KRDUK7EALDAN16RW05B 080JEMMYK7EA0EE      FM POB K7      012704332322    D
SUSAP KRDUK7EALDAN16RW23L 010ALDANK7EA0E  H    IF                                B 120001000018000
SUSAP KRDUK7EALDAN16RW23L 020GAZERK7EA0E    010TF                    15070087    B 0900008000
SUSAP KRDUK7EALDAN16RW23L 030HARSHK7EA0E    010TF                    15080030      08000          210
SUSAP KRDUK7EALDAN16RW23L 040BUTTSK7EA0EY   010TF                    15080065      06000
SUSAP KRDUK7EALDAN16RW23L 050BUTTSK7EA0EE      FM POB K7      021206091508    D
SUSAP KRDUK7EALDAN16RW23R 010ALDANK7EA0E  H    IF                                B 120001000018000
SUSAP KRDUK7EALDAN16RW23R 020GAZERK7EA0E    010TF                    15070087    B 0900008000
SUSAP KRDUK7EALDAN16RW23R 030HARSHK7EA0E    010TF                    15080030      08000          210
SUSAP KRDUK7EALDAN16RW23R 040BUTTSK7EA0EE   010TF                    15080065      06000
```

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                1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KRDUK7GRW05L   0100000521 N35522802W078480707+0400    +0079800367000057150IIGKK1
        SUSAP KRDUK7GRW05R   0075000521 N35515267W078475042+0400    +0089100397000059150IIRDU1
        SUSAP KRDUK7GRW23L   0075002322 N35524498W078464582-0400    +0099200431000056150IILEI1
        SUSAP KRDUK7GRW23R   0100002322 N35533776W078464092-0400    +0092500409000056150IIDMP3
```

QUALITY CHECKED 1

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
ALDAN RNAV	ONE	SBV.ALDAN1	NONE		

US Department of Transportation
Federal Aviation Administration

STAR (Data Record)

ARINC SUMMARY - 424-18 - STAR

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	HAFNR	HAFNR	010		IF		FB					
	HAFNR	MELTN	020		TF		FB	1.0	221.2()	086.3		
	HAFNR	SBV	030		TF		FB	1.0	220.7()	037.9	AB 17000	AT 280
	KPASS	KPASS	010		IF		FB					
	KPASS	ROBLS	020		TF		FB	1.0	080.8()	067.2		
	KPASS	TABER	030		TF		FB	1.0	082.1()	022.0		
	KPASS	SBV	040		TF		FB	1.0	120.9()	054.6	AB 17000	AT 280
	ROA	ROA	010		IF		FB					
	ROA	TIVAE	020		TF		FB	1.0	135.0()	010.0		
	ROA	SBV	030		TF		FB	1.0	135.1()	054.7	AB 17000	AT 280
		SBV	010		IF		FB				AB 17000	AT 280
		FRAZI	020		TF		FB	1.0	173.8()	009.4		
		FAVKO	030		TF		FB	1.0	173.8()	005.5	BT 1200010000	
		ALDAN	040		TF		FB	1.0	173.8()	002.2	BT 1200010000	
	RW05B	ALDAN	010		IF		FB				BT 1200010000	
	RW05B	FOBAT	020		TF		FB	1.0	173.9()	005.3		
	RW05B	BILLA	030		TF		FB	1.0	173.9()	004.2		
	RW05B	BLNKR	040		TF		FB	1.0	174.3()	011.5	AT 08000	AT 210
	RW05B	GABLR	050		TF		FB	1.0	189.2()	004.8		
	RW05B	HEAVE	060		TF		FB	1.0	222.0()	004.0		
	RW05B	JEMMY	070		TF		FO	1.0	232.2()	003.0		
	RW05B	JEMMY	080		FM		FB		232.2()			
	RW23L	ALDAN	010		IF		FB				BT 1200010000	
	RW23L	GAZER	020		TF		FB	1.0	150.7()	008.7	BT 0900008000	
	RW23L	HARSH	030		TF		FB	1.0	150.8()	003.0	AT 08000	AT 210
	RW23L	BUTTS	040		TF		FO	1.0	150.8()	006.5	AT 06000	
	RW23L	BUTTS	050		FM		FB		150.8()			
	RW23R	ALDAN	010		IF		FB				BT 1200010000	
	RW23R	GAZER	020		TF		FB	1.0	150.7()	008.7	BT 0900008000	
	RW23R	HARSH	030		TF		FB	1.0	150.8()	003.0	AT 08000	AT 210
	RW23R	BUTTS	040		TF		FB	1.0	150.8()	006.5	AT 06000	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	POB (DME)	N351006.55	W0790110.81	N3510.109	W07901.180
	ROA	N372036.47	W0800413.43	N3720.608	W08004.224
	SBV	N364030.15	W0790052.21	N3640.503	W07900.870
	ALDAN	N362352.56	W0785602.86	N3623.876	W07856.048

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
ALDAN RNAV	ONE	SBV.ALDAN1	NONE		

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BILLA	N361436.35	W0785322.44	N3614.606	W07853.374
BLNKR	N360323.22	W0785015.60	N3603.387	W07850.260
BUTTS	N360912.97	W0784246.51	N3609.216	W07842.775
FAVKO	N362601.27	W0785640.09	N3626.021	W07856.668
FOBAT	N361844.45	W0785433.92	N3618.741	W07854.565
FRAZI	N363122.25	W0785813.08	N3631.371	W07858.218
GABLR	N355835.93	W0785028.89	N3558.599	W07850.482
GAZER	N361651.38	W0784940.75	N3616.856	W07849.679
HAFNR	N382350.46	W0773358.95	N3823.841	W07733.983
HARSH	N361425.98	W0784729.18	N3614.433	W07847.486
HEAVE	N355521.22	W0785316.24	N3555.354	W07853.271
JEMMY	N355313.85	W0785553.74	N3553.231	W07855.896
KPASS	N363856.56	W0814958.27	N3638.943	W08149.971
MELTN	N371209.22	W0783444.33	N3712.154	W07834.739
ROBLS	N365718.64	W0802926.74	N3657.311	W08029.446
TABER	N370255.04	W0800255.66	N3702.917	W08002.928
TIVAE	N371426.48	W0795421.05	N3714.441	W07954.351
RW05L	N355228.02	W0784807.07	N3552.467	W07848.118
RW05R	N355152.67	W0784750.42	N3551.878	W07847.840
RW23L	N355244.98	W0784645.82	N3552.750	W07846.764
RW23R	N355337.76	W0784640.92	N3553.629	W07846.682

RUNWAY DATA

RWY	THRESHOLD ELEVATION	TCH
RW05L	00367	57
RW05R	00397	59
RW23L	00431	56
RW23R	00409	56

QUALITY CHECKED 1

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
ALDAN RNAV	ONE	SBV.ALDAN1	NONE		

RADIO FIX AND HOLDING DATA RECORD

NAME: ALDAN **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 362352.56N/0785602.86W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	SOUTH BOSTON	SBV	VORTAC	L	171.80	166.80		17.05		2600	17500
2	LIBERTY	LIB	VORTAC	L	046.00	043.00		48.19		3000	17500
3	RALEIGH/DURHAM	RDU	VORTAC	H	350.94	346.94	32.32	32.32		2600	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
LIB	VORTAC	R-046	49	3000	17500

FIX RESTRICTIONS:
MRA V136 3000

HOLDING: **HOLDING TYPE OF ACTION:** MODIFY

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	N	RDU	VORTAC	350.94	170.94	R	1		3000	14000	6	15
2	N		WP	353.85	173.85	R		10	8000	17500	15	17
3	N		WP	353.84	173.84	R		10	4000	24000	15	20

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (37-002453)	362257.00N/0785937.00W	1229	2C
1	310	STACK (37-000731)	363141.00N/0785330.00W	1335	5D
2	230	STACK (37-000731)	363141.00N/0785330.00W	1335	5D
3	200	STACK (37-000731)	363141.00N/0785330.00W	1335	5D

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	ILS OR LOC RWY 6	KTDF	ROXBORO	NC (US)

REMARKS:
SOUTH BOSTON (FAC 1) AND LIBERTY (FAC 2) USED TO ESTABLISH FIX COORDINATES
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
10 NM HOLDING LEGS FOR PAT 2 AND PAT 3 PER ATC REQUEST.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V136	1, 2				(US)
IAP	ILS OR LOC RWY 6	2, 3	1	KTDF	ROXBORO	NC (US)
IAP	RNAV (GPS) RWY 04			KW63	CLARKSVILLE	VA (US)
IAP	RNAV (GPS) RWY 1			KW78	SOUTH BOSTON	VA (US)
STAR	SOUTH BOSTON	1, 2, 3	1	KIGX	CHAPEL HILL	NC (US)
STAR	SOUTH BOSTON	1, 2, 3	1	K1A5	FRANKLIN	NC (US)
STAR	SOUTH BOSTON	1, 2, 3	1	KHNZ	OXFORD	NC (US)
STAR	ALDAN (RNAV)		3	KRDU	RALEIGH/DURHAM	NC (US)
STAR	FRAZI (RNAV)		2	KRDU	RALEIGH/DURHAM	NC (US)
STAR	SOUTH BOSTON	1, 2, 3	1	KRDU	RALEIGH/DURHAM	NC (US)
STAR	SOUTH BOSTON	1, 2, 3	1	KTDF	ROXBORO	NC (US)
STAR	SOUTH BOSTON	1, 2, 3	1	KTTA	SANFORD	NC (US)
STAR	SOUTH BOSTON	1, 2, 3	1	KJNX	SMITHFIELD	NC (US)

REQUIRED CHARTING: STAR, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 5 **DATE OF REVISION:** 01/10/2013

REASON FOR REVISION:
1. ADDED PAT 3 TO SUPPORT ALDAN STAR.
2. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 07/16/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

QUALITY 3 CHECKED

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: BILLA **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 361436.35N/0785322.44W **TYPE:** WP, INT, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	RALEIGH/DURHAM	RDU	VORTAC	H	350.94	346.94	22.82	22.82		2600	17500
2	LIBERTY	LIB	VORTAC	L	056.46	053.46		43.67		6000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
LIB	VORTAC	R-056	44	60	175

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
RALEIGH/DURHAM (FAC 1) AND LIBERTY (FAC 2) USED TO ESTABLISH FIX COORDINATES

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V136	1				(US)
EN ROUTE	V454	2				(US)
IAP	RNAV (GPS) RWY 9			KIGX	CHAPEL HILL	NC (US)
STAR	SOUTH BOSTON	1, 2		KIGX	CHAPEL HILL	NC (US)
STAR	SOUTH BOSTON	1, 2		K1A5	FRANKLIN	NC (US)
STAR	SOUTH BOSTON	1, 2		KHNZ	OXFORD	NC (US)
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	FRAZI (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	SOUTH BOSTON	1, 2		KRDU	RALEIGH/DURHAM	NC (US)
STAR	SOUTH BOSTON	1, 2		KTDF	ROXBORO	NC (US)
STAR	SOUTH BOSTON	1, 2		KTTA	SANFORD	NC (US)
STAR	SOUTH BOSTON	1, 2		KJNX	SMITHFIELD	NC (US)

REQUIRED CHARTING: STAR, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4 **DATE OF REVISION:** 01/10/2013

REASON FOR REVISION:
1. ADDED REMARK THAT FAC 1 AND FAC 2 USED TO ESTBLISH FIX COORDINATES.
2. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 07/16/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: BUTTS **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 360912.97N/0784246.51W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 23R			KRDU	RALEIGH/DURHAM	NC (US)
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/16/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

QUALITY 3

RADIO FIX AND HOLDING DATA RECORD

NAME: FAVKO **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 362601.27N/0785640.09W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/16/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

QUALITY 3

RADIO FIX AND HOLDING DATA RECORD

NAME: GAZER **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 361651.38N/0784940.75W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/16/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

QUALITY CHECKED 3

RADIO FIX AND HOLDING DATA RECORD

NAME: HAFNR **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 382350.46N/0773358.95W **TYPE:** WP, DME

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	GORDONSVILLE	GVE	VORTAC	H	056.16	050.16	36.04	36.04		3000	45000
2	ARMEL	AML	VOR/DME	L	196.31	188.31	32.54	32.54		3000	45000
3	WASHINGTON	DCA	VOR/DME	L	231.14	222.14	37.26	37.26		4500	45000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
AML	VOR/DME	R-196	33	18000	45000
DCA	VOR/DME	R-231	38	18000	45000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

REMARKS:
WASHINGTON (FAC 3) USED TO ESTABLISH FIX COORDINATES
ENROUTE USE IS FOR ZDC CENTER.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	LAZIR (RNAV)			KDCA	WASHINGTON	DC (US)
DP	NATIONAL			KDCA	WASHINGTON	DC (US)
DP	CAPITAL	3		KIAD	WASHINGTON	DC (US)
DP	TERPZ (RNAV)			KBWI	BALTIMORE	MD (US)
EN ROUTE	WASHINGTON METRO DEPARTURE ROUTE FIX	1, 2, 3				(US)
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: DP, STAR, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4 **DATE OF REVISION:** 01/10/2013

REASON FOR REVISION:
1. AMENDED ALL INSTANCES OF AML VORTAC (FAC 2) TO READ AML VOR/DME.
2. ADDED STAR TO REQUIRED CHARTING.
3. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 07/16/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZDC
ATC FACILITY: POTOMAC APP CON
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: HARSH **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 361425.98N/0784729.18W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/17/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: HEAVE **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 355521.22N/0785316.24W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 5L			KRDU	RALEIGH/DURHAM	NC (US)
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/17/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: JEMMY **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 355313.85N/0785553.74W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (RNP) Z RWY 5L			KRDU	RALEIGH/DURHAM	NC (US)
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

REASON FOR REVISION:
11/08/2012: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 07/17/2012.
MOVED FIX 38.16 FEET SOUTHWEST TO MEET ALIGNMENT CRITERIA FOR RNAV (RNP) Z RWY 5L.

DEVELOPED BY: **DATE:** 07/17/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: KPASS **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 363856.56N/0814958.27W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/17/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

QUALITY 3

RADIO FIX AND HOLDING DATA RECORD

NAME: MELTN **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 371209.22N/0783444.33W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

REASON FOR REVISION:
11/08/2012: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 07/17/2012.
CHANGED FIX NAME FROM LWUUD TO MELTN. FLIGHT CHECK REQUESTED NAME CHANGE DUE TO SIMILAR SOUNDING FIX NAME LWOOD USED FOR RDU DEPARTURE PROCEDURES.

DEVELOPED BY: **DATE:** 07/17/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: ROBLS **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 365718.64N/0802926.74W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/17/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: TIVAE **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 371426.48N/0795421.05W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 01/10/2013

DEVELOPED BY: **DATE:** 07/17/2012 **OFFICE:** AJV-352 **NAME:** PETER GUIMOND

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

QUALITY 3 Quality

RADIO FIX AND HOLDING DATA RECORD

NAME: BLNKR **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 360323.22N/0785015.60W **TYPE:** WP

INFO ONLY

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	FRAZI (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/23/2010

DEVELOPED BY: **DATE:** 02/04/2010 **OFFICE:** AVN-110 **NAME:** JILL OLSON

APPROVED BY: **DATE:** 08/09/2010 **OFFICE:** AVN-110 **NAME:** GEORGE DAVIS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

QUALITY

RADIO FIX AND HOLDING DATA RECORD

NAME: FOBAT **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 361844.45N/0785433.92W **TYPE:** WP

INFO ONLY

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	FRAZI (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/23/2010

DEVELOPED BY: **DATE:** 02/04/2010 **OFFICE:** AVN-110 **NAME:** JILL OLSON

APPROVED BY: **DATE:** 08/09/2010 **OFFICE:** AVN-110 **NAME:** GEORGE DAVIS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: FRAZI **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 363122.25N/0785813.08W **TYPE:** WP

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

INFO ONLY

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	FRAZI (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/23/2010

DEVELOPED BY: **DATE:** 02/04/2010 **OFFICE:** AVN-110 **NAME:** JILL OLSON

APPROVED BY: **DATE:** 08/09/2010 **OFFICE:** AVN-110 **NAME:** GEORGE DAVIS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

QUALITY 3 QUALITY

RADIO FIX AND HOLDING DATA RECORD

NAME: GABLR **STATE:** NC **COUNTRY:** US

LATITUDE/LONGITUDE: 355835.93N/0785028.89W **TYPE:** WP

INFO ONLY

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** ESTABLISH

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	FRAZI (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 09/23/2010

DEVELOPED BY: **DATE:** 02/04/2010 **OFFICE:** AVN-110 **NAME:** JILL OLSON

APPROVED BY: **DATE:** 08/09/2010 **OFFICE:** AVN-110 **NAME:** GEORGE DAVIS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: RDU APP CON
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: ROANOKE VORTAC **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 372036.47N/0800413.43W **TYPE:**

INFO ONLY

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	ROANOKE	ROA	VORTAC	L							45000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
ROA	VORTAC	R-180	15	24000	45000

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	S	ROA	VORTAC	180.00	360.00	L		15	24000	45000	18	29

REASON FOR NONSTANDARD HOLDING:
PAT 1 ATC REQUEST

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
NAVAID IS CHARTED ON HIGH ENROUTE FOR REFERENCE ONLY.
HOLD PAT 1 USED FOR HIGH ALTITUDE FLOW CONTROL/ATC REQUEST.
HOLDING 15 NM LEGS PER ATC REQUEST. MIN HOLDING TEMPLATE AMENDED FROM 16 TO 18 TO ENSURE CONTAINMENT OF 15 NM LEGS.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	QUAKER			KGSO	GREENSBORO	NC (US)
DP	HIKORY			KHKY	HICKORY	NC (US)
DP	LWOOD (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
DP	PACKK			KRDU	RALEIGH/DURHAM	NC (US)
DP	WLFFF (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
DP	QUAKER			KINT	WINSTON-SALEM	NC (US)
DP	WINSTON			KINT	WINSTON-SALEM	NC (US)
DP	BEMAR (RNAV)			KBCB	BLACKSBURG	VA (US)
DP	SETHY (RNAV)			KBCB	BLACKSBURG	VA (US)
DP	TAKEOFF MINIMUMS			KROA	ROANOKE	VA (US)
EN ROUTE	V103					(US)
EN ROUTE	V16					(US)
EN ROUTE	V258					(US)
EN ROUTE	V260					(US)
EN ROUTE	V375					(US)
EN ROUTE	V473					(US)
IAP	LOC/DME RWY 12			KBCB	BLACKSBURG	VA (US)
IAP	NDB-A			KBCB	BLACKSBURG	VA (US)
IAP	RNAV (GPS) RWY 24			KPSK	DUBLIN	VA (US)
IAP	ILS OR LOC RWY 25			KHSP	HOT SPRINGS	VA (US)
IAP	ILS OR LOC RWY 34			KROA	ROANOKE	VA (US)
IAP	LDA RWY 6			KROA	ROANOKE	VA (US)
IAP	VOR/NDB RWY 34			KROA	ROANOKE	VA (US)
IAP	ILS OR LOC RWY 4			KLWB	LEWISBURG	WV (US)
IAP	VOR RWY 22			KLWB	LEWISBURG	WV (US)
IAP	VOR RWY 4			KLWB	LEWISBURG	WV (US)
STAR	NASCR			KVUJ	ALBEMARLE	NC (US)
STAR	SOUTH BOSTON			KIGX	CHAPEL HILL	NC (US)
STAR	MAJIC			KCLT	CHARLOTTE	NC (US)
STAR	SUDSY (RNAV)			KCLT	CHARLOTTE	NC (US)
STAR	NASCR			KJQF	CONCORD	NC (US)
STAR	SOUTH BOSTON			K1A5	FRANKLIN	NC (US)
STAR	MAJIC			KAKH	GASTONIA	NC (US)
STAR	HENBY			KGSO	GREENSBORO	NC (US)
STAR	MAJIC			KIPJ	LINCOLNTON	NC (US)
STAR	MAJIC			KEQY	MONROE	NC (US)
STAR	SOUTH BOSTON			KHNZ	OXFORD	NC (US)
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	FRAZI (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	SOUTH BOSTON			KRDU	RALEIGH/DURHAM	NC (US)
STAR	SOUTH BOSTON			KTDF	ROXBORO	NC (US)
STAR	NASCR			KRUQ	SALISBURY	NC (US)
STAR	SOUTH BOSTON			KTTA	SANFORD	NC (US)
STAR	MAJIC			KEHO	SHELBY	NC (US)

QUALITY

STAR	SOUTH BOSTON	KJNX	SMITHFIELD	NC (US)
STAR	MAJIC	KAFP	WADESBORO	NC (US)
STAR	MAJIC	KN52	WAXHAW	NC (US)
STAR	MAJIC	KDCM	CHESTER	SC (US)
STAR	MAJIC	KLKR	LANCASTER	SC (US)
STAR	MAJIC	KUZA	ROCK HILL	SC (US)

REQUIRED CHARTING: DP, STAR, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 10 **DATE OF REVISION:** 08/25/2011

REASON FOR REVISION:
1. UPDATED LAT/LONG AVNIS DATA.
2. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 11/19/2010 **OFFICE:** AJV-352 **NAME:** DONALD SMITH (ROBERT DAVIS)

APPROVED BY: **DATE:** 09/07/2011 **OFFICE:** AJV-352 **NAME:** DONALD SMITH

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: ROA APP CON, ROA ATCT
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SOUTH BOSTON VORTAC **STATE:** VA **COUNTRY:** US

INFO ONLY

LATITUDE/LONGITUDE: 364030.15N/0790052.21W **TYPE:**

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	SOUTH BOSTON	SBV	VORTAC	L							17500

HOLDING: **HOLDING TYPE OF ACTION:** MODIFY

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	NE	SBV	VORTAC	032.00	212.00	R	1		10000	14000	9	10
2	W	SBV	VORTAC	260.55	080.55	R	1		3000	6000	4	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	TOWER (51-001114)	364359.20N/0785601.90W	980	2C
2	200	AAO	364218.00N/0790836.00W	804	4E

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETE.
HOLDING PAT 1 FOR ATC.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	QUAKER			KGSO	GREENSBORO	NC (US)
DP	HICKORY			KHKY	HICKORY	NC (US)
DP	RALEIGH			KRDU	RALEIGH/DURHAM	NC (US)
DP	QUAKER			KINT	WINSTON SALEM	NC (US)
DP	WINSTON			KINT	WINSTON SALEM	NC (US)
EN ROUTE	V136					(US)
EN ROUTE	V20					(US)
EN ROUTE	V266					(US)
EN ROUTE	V39					(US)
IAP	VOR/DME RWY 27			KIGX	CHAPEL HILL	NC (US)
IAP	ILS OR LOC RWY 5L			KGSO	GREENSBORO	NC (US)
IAP	ILS OR LOC RWY 5R			KGSO	GREENSBORO	NC (US)
IAP	ILS RWY 5L (CAT II)			KGSO	GREENSBORO	NC (US)
IAP	ILS RWY 5L (CAT III)			KGSO	GREENSBORO	NC (US)
IAP	ILS RWY 5R (CAT II)			KGSO	GREENSBORO	NC (US)
IAP	VOR RWY 5R			KGSO	GREENSBORO	NC (US)
IAP	ILS OR LOC RWY 5			KLHZ	LOUISBURG	NC (US)
IAP	LOC RWY 6			KHNZ	OXFORD	NC (US)
IAP	NDB RWY 6			KHNZ	OXFORD	NC (US)
IAP	ILS OR LOC RWY 23L			KRDU	RALEIGH/DURHAM	NC (US)
IAP	ILS OR LOC RWY 23R			KRDU	RALEIGH/DURHAM	NC (US)
IAP	ILS OR LOC RWY 5R			KRDU	RALEIGH/DURHAM	NC (US)
IAP	ILS RWY 23R (CAT II)			KRDU	RALEIGH/DURHAM	NC (US)
IAP	ILS RWY 23R (CAT III)			KRDU	RALEIGH/DURHAM	NC (US)
IAP	VOR RWY 23L			KRDU	RALEIGH/DURHAM	NC (US)
IAP	VOR RWY 5R			KRDU	RALEIGH/DURHAM	NC (US)
IAP	RNAV (GPS) RWY 18			KCXE	CHASE CITY	VA (US)
IAP	RNAV (GPS) RWY 36			KCXE	CHASE CITY	VA (US)
IAP	VOR/DME A			KW63	CLARKSVILLE	VA (US)
IAP	ILS OR LOC RWY 2		2	KDAN	DANVILLE	VA (US)
IAP	RNAV (GPS) RWY 2			KDAN	DANVILLE	VA (US)
IAP	RNAV (GPS) RWY 20			KDAN	DANVILLE	VA (US)
IAP	VOR RWY 2			KDAN	DANVILLE	VA (US)
IAP	VOR RWY 20			KDAN	DANVILLE	VA (US)
IAP	ILS OR LOC RWY 4			KLYH	LYNCHBURG	VA (US)
IAP	VOR RWY 4			KLYH	LYNCHBURG	VA (US)
IAP	RNAV (GPS) RWY 1			KW78	SOUTH BOSTON	VA (US)
IAP	VOR-A		2	KW78	SOUTH BOSTON	VA (US)
STAR	SOUTH BOSTON			KIGX	CHAPEL HILL	NC (US)
STAR	MAJIC			KCLT	CHARLOTTE	NC (US)
STAR	SOUTH BOSTON			K1A5	FRANKLIN	NC (US)
STAR	MAJIC			KAKH	GASTONIA	NC (US)
STAR	MAJIC			KIPJ	LINCOLNTON	NC (US)
STAR	MAJIC			KEQY	MONROE	NC (US)
STAR	SOUTH BOSTON			KHNZ	OXFORD	NC (US)
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	FRAZI (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	SOUTH BOSTON			KRDU	RALEIGH/DURHAM	NC (US)
STAR	SOUTH BOSTON			KTDF	ROXBORO	NC (US)

QUALITY CHECKED 3

STAR	SOUTH BOSTON	KTTA	SANFORD	NC (US)
STAR	MAJIC	KEHO	SHELBY	NC (US)
STAR	SOUTH BOSTON	KJNX	SMITHFIELD	NC (US)
STAR	MAJIC	KAFP	WADESBORO	NC (US)
STAR	MAJIC	KN52	WAXHAW	NC (US)
STAR	MAJIC	KDCM	CHESTER	SC (US)
STAR	MAJIC	KLKR	LANCASTER	SC (US)
STAR	MAJIC	KUZA	ROCK HILL	SC (US)

REQUIRED CHARTING: DP, STAR, IAP, CONTROLLER, EN ROUTE LOW, EN ROUTE HIGH

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 8 **DATE OF REVISION:** 04/08/2010

REASON FOR REVISION:
UPDATED HOLDING PAT 2 OBS.

DEVELOPED BY: **DATE:** 10/15/2009 **OFFICE:** AVN-110 **NAME:** PETER GETZ (ROBERT HAMILTON)

APPROVED BY: **DATE:** 02/12/2010 **OFFICE:** AVN-110 **NAME:** PETER GETZ

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZDC
ATC FACILITY: GSO APP CON/ATCT
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: TABER **STATE:** VA **COUNTRY:** US

LATITUDE/LONGITUDE: 370255.04N/0800255.66W **TYPE:** WP, INT, DME

INFO ONLY

AIRSPACE DOCKET: **FIX TYPE OF ACTION:** NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	DIST FROM FAC FEET	MRA	MAA
1	ROANOKE	ROA	VORTAC	L	180.63	176.63	17.70	17.70		5600	17500
2	PULASKI	PSK	VORTAC	H	100.00	094.00	31.98	31.98		5500	17500

HOLDING: **HOLDING TYPE OF ACTION:** NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	S	ROA	VORTAC	180.63	000.63	R	1		5500	14000	6	11
2	W		WP	280.00	100.00	R		5	5500	14000	6	11
3	W	PSK	VORTAC	280.00	100.00	R	1		5500	14000	7	12

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	370709.50N/0800054.60W	3771	6C
2	200	AAO	370627.00N/0800724.00W	3504	4E
3	200	AAO	370709.50N/0800054.60W	3771	6C

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
ROANOKE (FAC 1) AND PULASKI (FAC 2) USED TO ESTABLISH FIX COORDINATES
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
ROA APP CON COORDINATION HANDOFF FIX (PAT 1 AND 3).

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	BEMAR (RNAV)			KBCB	BLACKSBURG	VA (US)
DP	SETHY (RNAV)			KBCB	BLACKSBURG	VA (US)
EN ROUTE	V103	1, 2				(US)
EN ROUTE	V136/V470	1, 2				(US)
EN ROUTE	V470	1, 2				(US)
IAP	LOC/DME RWY 12	1, 2		KBCB	BLACKSBURG	VA (US)
IAP	RNAV (GPS) RWY 12		2	KBCB	BLACKSBURG	VA (US)
IAP	RNAV (GPS) RWY 30			KBCB	BLACKSBURG	VA (US)
IAP	RNAV (GPS) RWY 34			KROA	ROANOKE	VA (US)
STAR	SOUTH BOSTON	1, 2		KIGX	CHAPEL HILL	NC (US)
STAR	SOUTH BOSTON	1, 2		K1A5	FRANKLIN	NC (US)
STAR	SOUTH BOSTON	1, 2		KHNZ	OXFORD	NC (US)
STAR	ALDAN (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	FRAZI (RNAV)			KRDU	RALEIGH/DURHAM	NC (US)
STAR	SOUTH BOSTON	1, 2		KRDU	RALEIGH/DURHAM	NC (US)
STAR	SOUTH BOSTON	1, 2		KTDF	ROXBORO	NC (US)
STAR	SOUTH BOSTON	1, 2		KTTA	SANFORD	NC (US)
STAR	SOUTH BOSTON	1, 2		KJNX	SMITHFIELD	NC (US)

REQUIRED CHARTING: DP, STAR, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 11 **DATE OF REVISION:** 06/30/2011

REASON FOR REVISION:
1. ADDED DP TO REQUIRED CHARTING.
2. UPDATED PAT 1 AND 3 CONTROLLING OBSTRUCTION DESCRIPTION FROM SPOT+AAO TO AAO.
3. UPDATED PAT 1 AND 3 CONTROLLING OBSTRUCTION ACCURACY CODE FROM 6A TO 6C.

DEVELOPED BY: **DATE:** 12/02/2010 **OFFICE:** AVN-110 **NAME:** DONALD SMITH (DAVID SAUER)

APPROVED BY: **DATE:** 03/28/2011 **OFFICE:** AVN-110 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZDC
ATC FACILITY: ROA APP CON
OTHER:

QUALITY CHECKED 3

Name:	Dennis Osterhage
Project Name:	KRDU RNAV STARS
Output File:	KRDU ALDAN1 STAR KPASS BUTTS 20120516_1607
Procedure Name:	KRDU ALDAN1
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	5/16/2012 4:07:46 PM
Input File:	KRDU ALDAN1 STAR KPASS BUTTS 20120516_1427.txt
Databases:	AVNIS Date: 02/07/2012
	Obstacle Date: 08/26/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔ Please Check Flyability Results
DME/DME	✔
Radars	?
Comms	?
TERPS	?

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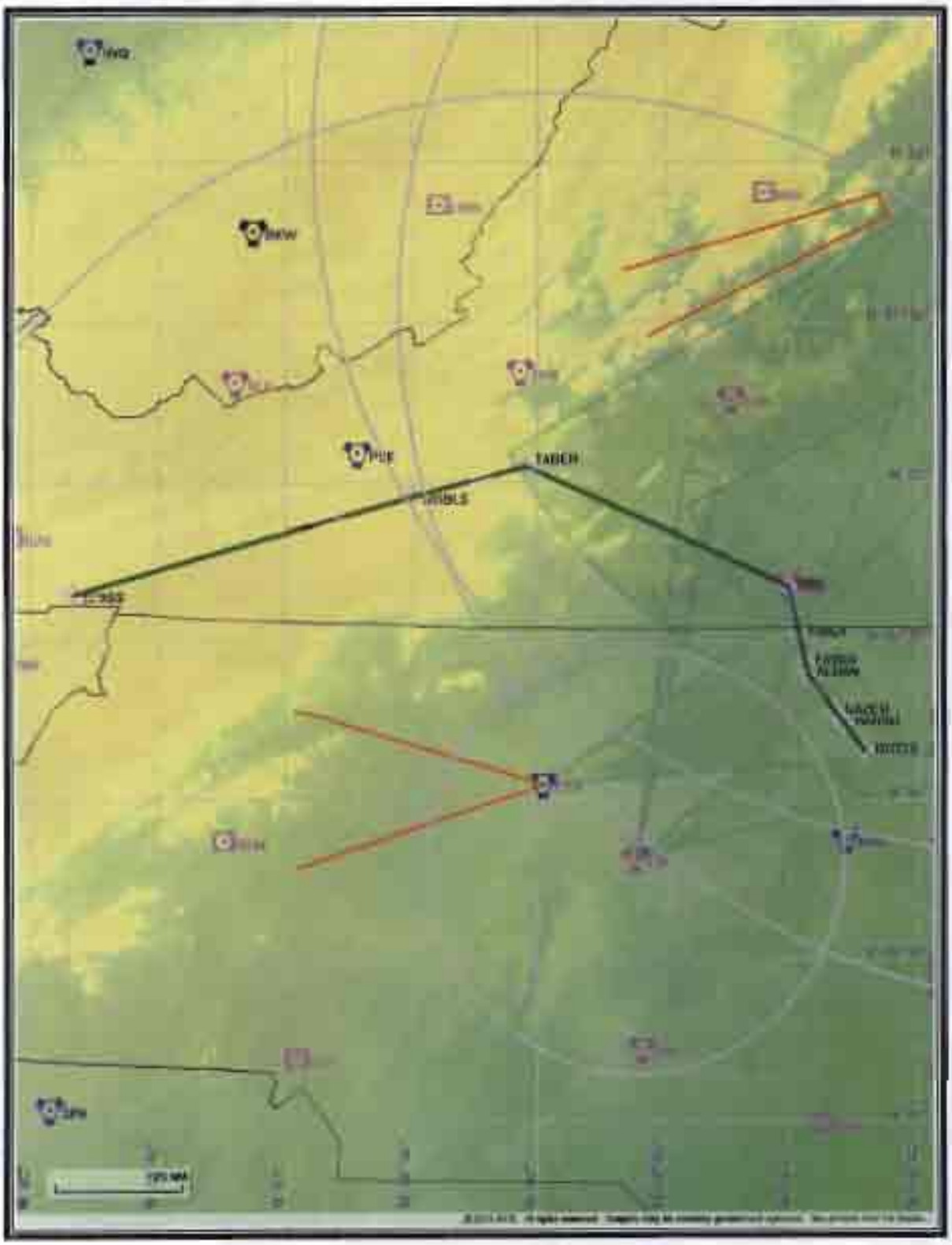

TADCH
BUTTS

Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
KPASS	WP	N 36° 38' 56.56" W 81° 49' 58.27"	18000.0	Step	240.0	Fly By	TF
ROBLS	WP	N 36° 57' 18.64" W 80° 29' 26.74"	18000.0	Step	210.0	Fly By	TF
TABER	WP	N 37° 2' 55.04" W 80° 2' 55.66"	15000.0	Step	210.0	Fly By	TF
SBV	WP	N 36° 40' 30.15" W 79° 0' 52.21"	14000.0	Step	210.0	Fly By	TF
FRAZI	WP	N 36° 31' 22.25" W 78° 58' 13.08"	11000.0	Step	210.0	Fly By	TF
FAVKO	WP	N 36° 26' 1.27" W 78° 56' 40.09"	4000.0	Step	180.0	Fly By	TF
ALDAN	WP	N 36° 23' 52.56" W 78° 56' 2.86"	4000.0	Step	180.0	Fly By	TF
GAZER	WP	N 36° 16' 51.38" W 78° 49' 40.75"	4000.0	Step	180.0	Fly By	TF
HARSH	WP	N 36° 14' 25.98" W 78° 47' 29.18"	4000.0	Step	210.0	Fly By	TF
BUTTS	WP	N 36° 9' 12.97" W 78° 42' 46.51"	4000.0	Step	180.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Aircraft ALTITUDE at Fly-By WP FAVKO too high

Aircraft ALTITUDE at Fly-By WP ALDAN too high

DME/DME

Return To Summary

Settings:

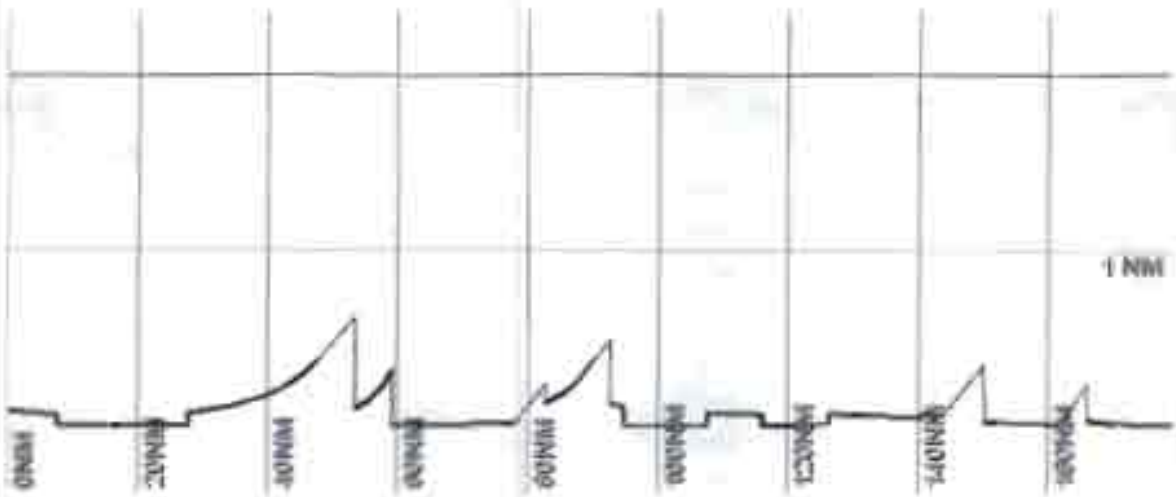
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 12

Maximum DME Error: 0.724 NM

No Critical DMEs were found

Available DMEs: GSO, BKW, GZG, HMV, BLF, PSK, ROA, RDU, GVE, LYH, SBV, LIB, FAK



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	GSO	N 36° 2' 44.48" W 79° 58' 34.95" W 3	H + ESV	User	NO	1.149	Enabled	21.4 %	21.6 %
2	BKW	N 37° 46' 49.08" W 81° 7' 24.44" W 6	H	Database	NO	0.926	Enabled	24.0 %	26.0 %
3	GZG	N 36° 49' 30.38" W 82° 4' 44.32" W 2	L	Database	NO	0.724	Enabled	10.4 %	11.3 %
4	BLF	N 37° 18' 23.19" W 81° 11' 39.37" W 3	L	Database	NO	0.724	Enabled	5.1 %	5.5 %
5	PSK	N 37° 5' 15.74" W 80° 42' 46.44" W 6	H	Database	NO	0.899	Enabled	11.2 %	11.6 %
6	ROA	N 37° 20' 36.47" W 80° 4' 13.43" W 4	L	Database	NO	1.414	Enabled	27.0 %	27.4 %
7	RDU	N 35° 52' 21.08" W 78° 47' 0.03" W 4	H	Database	NO	0.783	Enabled	7.5 %	6.9 %
8	GVE	N 36° 0' 46.80" W 78° 9' 10.61" W 6	H + ESV	User	NO	0.724	Enabled	14.0 %	13.9 %
9	LYH	N 37° 15' 16.70" W 79° 14' 11.30" W 5	L	Database	NO	0.724	Enabled	14.7 %	14.7 %
10	SBV	N 38° 40' 30.15" W 79° 0' 52.21" W 5	L	Database	NO	0.910	Enabled	26.3 %	24.5 %
11	FAK	N 37° 31' 42.63" W 77° 49' 41.59" W 6	H + ESV	User	NO	0.724	Enabled	1.7 %	1.7 %
12	LIB	N 35° 48' 41.84" W 79° 36' 45.35" W 3	L + ESV	User	NO	0.965	Enabled	8.6 %	7.1 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	GSO	BKW	GZG	HMV	BLF	
27.6	GSO	BKW	ROA	PSK	BLF	
67.2	GSO	BKW	ROA	PSK	RDU	
88.3	SBV	GVE	ROA	LYH	RDU	
116.9	SBV	GVE	LIB	LYH	FAK	
142.6	SBV	GVE	GSO	LYH	FAK	
152.9	SBV	RDU	GSO			
156.4	SBV	RDU	GSO			
160.1	SBV	RDU	GSO	LIB		
169.3	SBV	RDU	LIB			
172.3	SBV	RDU	LIB			

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 36° 51' 54.47" W 80° 53' 37.55"	N 36° 53' 31.54" W 80° 46' 25.85"	6.0
	VOR: BLF	Available from N 36° 51' 54.47" W 80° 53' 37.55" to N 36° 53' 31.54" W 80° 46' 25.85"	
	VOR: PSK	Available from N 36° 51' 54.47" W 80° 53' 37.55" to N 36° 53' 31.54" W 80° 46' 25.85"	
2	N 36° 55' 3.52" W 80° 39' 34.68"	N 36° 55' 3.52" W 80° 39' 34.68"	0.0
	VOR: BLF	Available from N 36° 55' 3.52" W 80° 39' 34.68" to N 36° 55' 3.52" W 80° 39' 34.68"	
	VOR: PSK	Available from N 36° 55' 3.52" W 80° 39' 34.68" to N 36° 55' 3.52" W 80° 39' 34.68"	
	VOR: ROA	Available from N 36° 55' 3.52" W 80° 39' 34.68" to N 36° 55' 3.52" W 80° 39' 34.68"	
3	N 36° 59' 58.65" W 80° 16' 54.47"	N 37° 1' 14.05" W 80° 10' 57.06"	4.9
	VOR: ODR	Available from N 36° 59' 58.65" W 80° 16' 54.47" to N 37° 1' 14.05" W 80° 10' 57.06"	
	VOR: PSK	Available from N 36° 59' 58.65" W 80° 16' 54.47" to N 37° 1' 14.05" W 80° 10' 57.06"	
	VOR: ROA	Available from N 36° 59' 58.65" W 80° 16' 54.47" to N 37° 1' 14.05" W 80° 10' 57.06"	
4	N 37° 2' 44.43" W 80° 2' 32.74"	N 37° 1' 33.73" W 79° 59' 6.12"	3.0
	VOR: ODR	Available from N 37° 2' 44.43" W 80° 2' 32.74" to N 37° 1' 33.73" W 79° 59' 6.12"	
	VOR: PSK	Available from N 37° 2' 44.43" W 80° 2' 32.74" to N 37° 1' 33.73" W 79° 59' 6.12"	
	VOR: ROA	Available from N 37° 2' 44.43" W 80° 2' 32.74" to N 37° 1' 33.73" W 79° 59' 6.12"	
	VOR: LYH	Available from N 37° 2' 25.70" W 80° 1' 32.26" to N 37° 1' 33.73" W 79° 59' 6.12"	

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
5	N 36° 40' 17.31" W 79° 1' 1.56"	N 36° 34' 22.34" W 78° 59' 5.10"	6.1
	VOR: DAN	Available from N 36° 40' 17.31" W 79° 1' 1.56" to N 36° 34' 22.34" W 78° 59' 5.10"	
	VOR: LYH	Available from N 36° 40' 17.31" W 79° 1' 1.56" to N 36° 36' 58.35" W 78° 59' 50.29"	
	VOR: SBV	Available from N 36° 40' 17.31" W 79° 1' 1.56" to N 36° 34' 22.34" W 78° 59' 5.10"	
6	N 36° 23' 1.41" W 78° 55' 16.62"	N 36° 19' 34.28" W 78° 52' 8.48"	4.3
	VOR: DAN	Available from N 36° 23' 1.41" W 78° 55' 16.62" to N 36° 19' 34.28" W 78° 52' 8.48"	
	VOR: RDU	Available from N 36° 23' 1.41" W 78° 55' 16.62" to N 36° 19' 34.28" W 78° 52' 8.48"	
	VOR: SBV	Available from N 36° 23' 1.41" W 78° 55' 16.62" to N 36° 19' 34.28" W 78° 52' 8.48"	

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	GVE	N 38° 0' 48.80" W 78° 9' 10.61" W 6	H	380.0	115.60	GVE	Used
	Restriction:	Bearing [True]: 244.0° to 254.0° Bearing [Mag]: 250.0° to 260.0°			Distance: Beyond 25.0 NM Altitude: Below 7000.0 Ft.		
	ESV:	Bearing [True]: 204.0° to 240.0° Bearing [Mag]: 210.0° to 246.0°			Arc Distance: Out to 109.0 NM Altitude: 14000.0 to 24000.0 Ft.		
2	GSO	N 36° 2' 44.49" W 79° 58' 34.95" W 3	H	909.0	116.20	GSO	Used
	Restriction:	Bearing [True]: 252.0° to 287.0° Bearing [Mag]: 255.0° to 290.0°			Distance: Beyond 0.0 NM Altitude: Below 6000.0 Ft.		
	ESV:	Bearing [True]: 55.0° to 85.0° Bearing [Mag]: 58.0° to 88.0°			Arc Distance: Out to 80.0 NM Altitude: 6000.0 to 18000.0 Ft.		
3	FAK	N 37° 31' 42.63" W 77° 49' 41.59" W 6	H	460.0	113.30	FAK	Used
	Restriction:	Bearing [True]: 332.0° to 354.0° Bearing [Mag]: 338.0° to 0.0°			Distance: Beyond 0.0 NM Altitude: Below 99999.0 Ft.		
	ESV:	Bearing [True]: 222.0° to 245.0° Bearing [Mag]: 228.0° to 251.0°			Arc Distance: Out to 84.0 NM Altitude: 14000.0 to 24000.0 Ft.		

DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
4	LIB	N 35° 48' 41.84" W 79° 36' 45.35" W 3	L	830.0	113.00	LIB	Used
		ESV:	Bearing [True]: 7.0° to 12.0° Bearing [Mag]: 10.0° to 15.0°		Arc Distance: Out to 74.0 NM Altitude: 10000.0 to 24000.0 Ft.		
		ESV:	Bearing [True]: 49.0° to 75.0° Bearing [Mag]: 52.0° to 78.0°		Arc Distance: Out to 55.0 NM Altitude: 3000.0 to 12000.0 Ft.		

Name:	Dennis Osterhage
Project Name:	KRDU RNAV STARS
Output File:	KRDU ALDAN1 STAR HAFNR JEMMY 20120723_1332
Procedure Name:	KRDU ALDAN1
Software:	RNAV-Pro™
Version:	2.36
Date/Time:	7/23/2012 1:32:44 PM
Input File:	KRDU ALDAN1 STAR HAFNR JEMMY 20120723_1262.txt
Databases:	AVNIS Date: 02/07/2012
	Obstacle Date: 08/26/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔ **Please Check Flyability Results**
DME/DME	✔
Radars	?
Comms	?
TERPS	?

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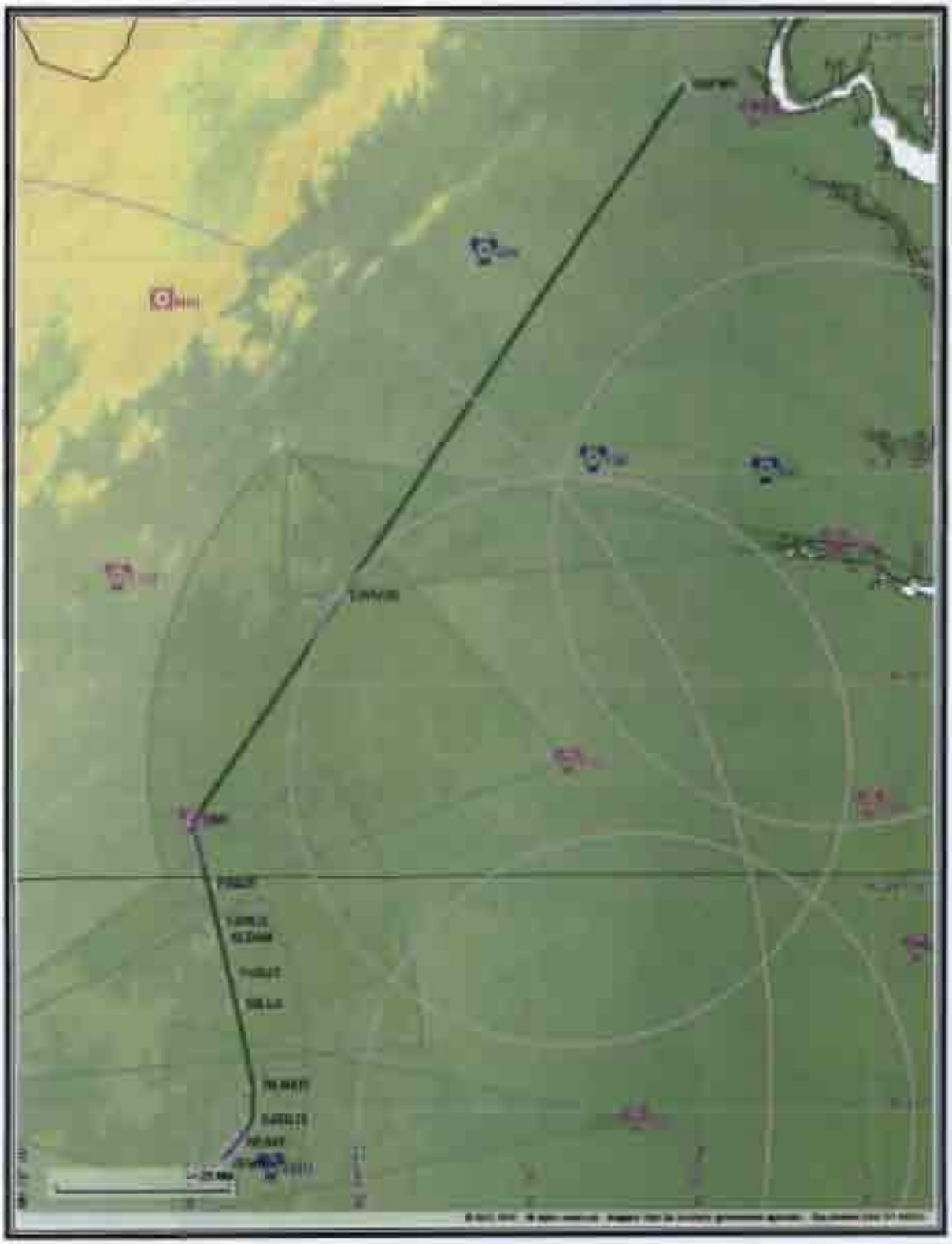


Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
HAFNR	WP	N 38° 23' 50.46" W 77° 33' 58.95"	18000.0	Step	240.0	Fly By	TF
LWUUD	WP	N 37° 12' 9.22" W 78° 34' 44.33"	18000.0	Step	240.0	Fly By	TF
SBV	WP	N 36° 40' 30.15" W 79° 0' 52.21"	14000.0	Step	280.0	Fly By	TF
FRAZI	WP	N 36° 31' 22.25" W 78° 58' 13.08"	11000.0	Step	210.0	Fly By	TF
FAVKO	WP	N 36° 26' 1.27" W 78° 56' 40.09"	4000.0	Step	180.0	Fly By	TF
ALDAN	WP	N 36° 23' 52.56" W 78° 56' 2.86"	4000.0	Step	180.0	Fly By	TF
FOBAT	WP	N 36° 18' 44.45" W 78° 54' 33.92"	4000.0	Step	180.0	Fly By	TF
BILLA	WP	N 36° 14' 36.35" W 78° 53' 22.44"	4000.0	Step	180.0	Fly By	TF
BLNKR	WP	N 36° 3' 23.22" W 78° 50' 15.60"	4000.0	Step	210.0	Fly By	TF
GABLR	WP	N 35° 58' 35.93" W 78° 50' 28.89"	4000.0	Step	180.0	Fly By	TF
HEAVE	WP	N 35° 55' 21.22" W 78° 53' 16.24"	4000.0	Step	180.0	Fly By	TF
JEMMY	WP	N 35° 53' 14.01" W 78° 55' 53.32"	4000.0	Step	180.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Aircraft ALTITUDE at Fly-By WP FAVKO too high

Aircraft ALTITUDE at Fly-By WP ALDAN too high

DME/DME

Return To Summary

Settings:

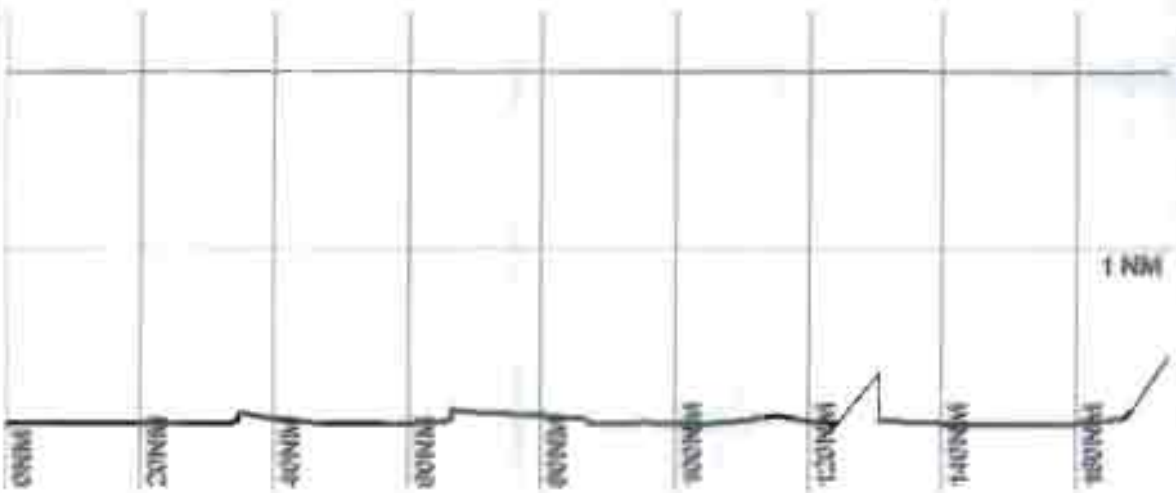
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Altitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 12

Maximum DME Error: 0.560 NM

No Critical DMEs were found.

Available DMEs: AML, BRV, CSN, DCA, EMI, FAK, GVE, RIC, RDU, HPW, LYH, LVL, GSO, SBV, TYI, LIB



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	CSN	N 38° 38' 28.29" W 77° 51' 56.70" W 6	H	Database	NO	0.560	Enabled	16.6 %	18.0 %
2	GVE	N 38° 0' 48.96" W 78° 9' 10.89" W 6	H	Database	NO	0.560	Enabled	13.0 %	14.1 %
3	BRV	N 38° 20' 10.62" W 77° 21' 10.45" W 9	L	Database	NO	0.560	Enabled	13.0 %	14.2 %
4	FAK	N 37° 31' 42.63" W 77° 49' 41.59" W 6	H	Database	NO	0.560	Enabled	2.4 %	2.6 %
5	RIC	N 37° 30' 8.46" W 77° 19' 13.00" W 9	H	Database	NO	0.560	Enabled	26.6 %	29.1 %
6	RDU	N 35° 52' 21.08" W 78° 47' 0.03" W 4	H	Database	NO	0.724	Enabled	18.7 %	18.4 %
7	HPW	N 37° 19' 43.93" W 77° 6' 57.40" W 6	L + ESV	User	NO	0.560	Enabled	7.0 %	7.6 %
8	LYH	N 37° 15' 16.70" W 79° 14' 11.30" W 5	L	Database	NO	0.865	Enabled	20.0 %	20.5 %
9	LVL	N 36° 49' 4.93" W 77° 54' 10.69" W 8	L + ESV	User	NO	0.785	Enabled	9.7 %	9.8 %
10	SBV	N 36° 40' 30.15" W 79° 0' 52.21" W 5	L	Database	NO	0.672	Enabled	32.7 %	30.3 %
11	GSO	N 36° 2' 44.48" W 79° 56' 34.95" W 3	H + ESV	User	NO	1.519	Enabled	22.9 %	19.6 %
12	TYI	N 35° 58' 36.20" W 77° 42' 13.43" W 5	L + ESV	User	NO	0.590	Enabled	2.4 %	2.0 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	CSN	GVE	BRV	RIC	FAK	EMI
66.4	HPW	GVE	RDU	RIC	LYH	CSN
86.2	LVL	GVE	RDU	SBV	LYH	RIC
123.2	LVL	LYH	GSO	SBV		
133.5	RDU	SBV	GSO			
138.9	RDU	SBV	GSO			
141.2	RDU	SBV	GSO			
146.4	RDU	SBV	GSO			
150.7	RDU	SBV	GSO	TYI		
161.7	RDU	SBV	GSO	TYI		
166.3	RDU	LIB	GSO	TYI		

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection (Continued.)

Distance [NM]	Selected DMEs					Alternate
170.5	RDU	LIB	GSO	TVI		

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 36° 40' 21.06" W 79° 0' 40.30"	N 36° 34' 21.45" W 78° 59' 5.21"	6.1
	VOR: DAN	Available from N 36° 40' 21.06" W 79° 0' 40.30" to N 36° 34' 21.45" W 78° 59' 5.21"	
	VOR: LYH	Available from N 36° 40' 21.06" W 79° 0' 40.30" to N 36° 36' 57.42" W 78° 59' 50.81"	
	VOR: SBV	Available from N 36° 40' 21.06" W 79° 0' 40.30" to N 36° 34' 21.45" W 78° 59' 5.21"	
2	N 35° 57' 36.67" W 78° 51' 19.68"	N 35° 53' 15.21" W 78° 55' 51.83"	5.7
	VOR: LIB	Available from N 35° 57' 36.67" W 78° 51' 19.68" to N 35° 53' 15.21" W 78° 55' 51.83"	
	VOR: RDU	Available from N 35° 57' 36.67" W 78° 51' 19.68" to N 35° 53' 15.21" W 78° 55' 51.83"	

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	GSO	N 36° 2' 44.49" W 79° 58' 34.95" W 3	H	909.0	116.20	GSO	Used
	Restriction:	Bearing [True]: 252.0° to 267.0° Bearing [Mag]: 255.0° to 290.0°			Distance: Beyond 0.0 NM Altitude: Below 6000.0 Ft.		
	ESV:	Bearing [True]: 55.0° to 85.0° Bearing [Mag]: 58.0° to 88.0°			Arc Distance: Out to 80.0 NM Altitude: 6000.0 to 18000.0 Ft.		
	ESV:	Bearing [True]: 84.0° to 107.0° Bearing [Mag]: 87.0° to 110.0°			Arc Distance: Out to 63.0 NM Altitude: 4000.0 to 16000.0 Ft.		
2	LVL	N 36° 49' 4.93" W 77° 54' 10.69" W 8	L	360.0	112.90	LVL	Used
	ESV:	Bearing [True]: 250.0° to 318.0° Bearing [Mag]: 258.0° to 326.0°			Arc Distance: Out to 60.0 NM Altitude: 14000.0 to 24000.0 Ft.		
3	HPW	N 37° 19' 43.93" W 77° 6' 57.40" W 6	L	70.0	112.00	HPW	Used
	ESV:	Bearing [True]: 265.0° to 280.0° Bearing [Mag]: 271.0° to 286.0°			Arc Distance: Out to 78.0 NM Altitude: 14000.0 to 24000.0 Ft.		

DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
4	TYI	N 35° 58' 36.20" W 77° 42' 13.43" W 5	L	70.0	117.80	TYI	Used

ESV: Bearing [True]: 259.0° to 282.0°
Bearing [Mag]: 264.0° to 287.0°

Arc Distance: Out to 68.0 NM
Altitude: 3000.0 to 12000.0 Ft

Name:	Dennis Osterhage
Project Name:	KRDU RNAV STARS
Output File:	KRDU ALDAN1 STAR ROA BUTTS 20120605_1454
Procedure Name:	KRDU ALDAN1
Software:	RNAV-Pro™
Version:	2.38
Date/Time:	6/5/2012 2:54:45 PM
Input File:	KRDU ALDAN1 STAR ROA BUTTS 20120605_1405.txt
Databases:	AVNIS Date: 02/07/2012
	Obstacle Date: 08/26/2011
	NFD Date: 09/30/2010
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔ **Please Check Flyability Results**
DME/DME	✔
Radars	?
Comms	?
TERPS	?

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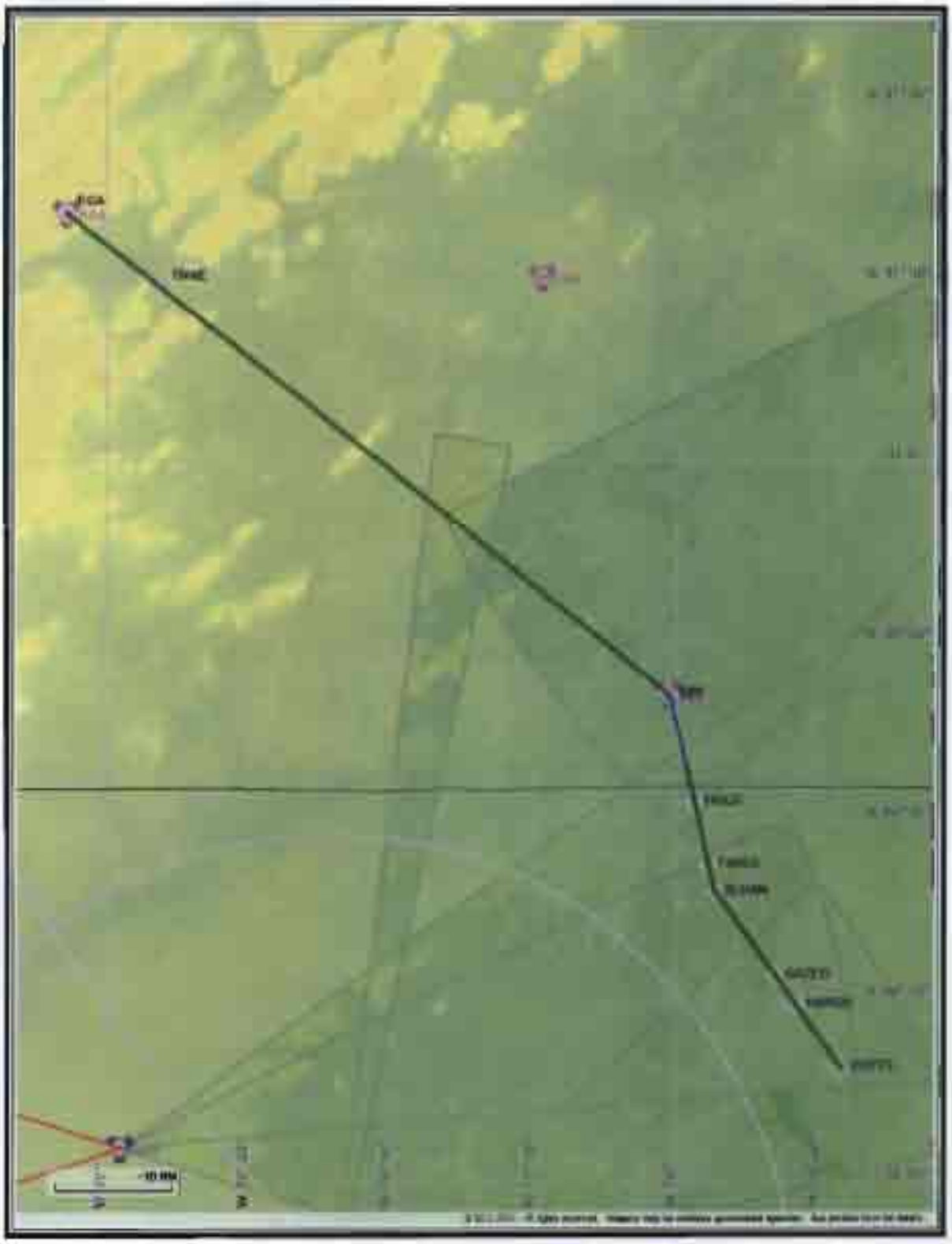


Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
ROA	WP	N 37° 20' 36.47" W 80° 4' 13.43"	18000.0	Step	240.0	Fly By	TF
TIVAE	WP	N 37° 14' 26.48" W 79° 54' 21.05"	18000.0	Step	240.0	Fly By	TF
SBV	WP	N 36° 40' 30.15" W 79° 0' 52.21"	14000.0	Step	210.0	Fly By	TF
FRAZI	WP	N 36° 31' 22.25" W 78° 58' 13.06"	11000.0	Step	210.0	Fly By	TF
FAVKO	WP	N 36° 26' 1.27" W 78° 56' 40.09"	4000.0	Step	180.0	Fly By	TF
ALDAN	WP	N 36° 23' 52.56" W 78° 56' 2.86"	4000.0	Step	180.0	Fly By	TF
GAZER	WP	N 36° 16' 51.38" W 78° 49' 40.75"	4000.0	Step	180.0	Fly By	TF
HARSH	WP	N 36° 14' 25.98" W 78° 47' 29.18"	4000.0	Step	210.0	Fly By	TF
BUTTS	WP	N 36° 9' 12.97" W 78° 42' 46.51"	4000.0	Step	180.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival
Aircraft Category: Cat D
Climb Gradient: *None assigned*
Ground Speeds:

Table:

200.0 Kts up to **11000.0 Ft.**
240.0 Kts up to **18000.0 Ft.**
260.0 Kts up to **24000.0 Ft.**
340.0 Kts up to **99900.0 Ft.**

Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Aircraft ALTITUDE at Fly-By WP FAVKO too high.

Aircraft ALTITUDE at Fly-By WP ALDAN too high.

DME/DME

Return To Summary

Settings:

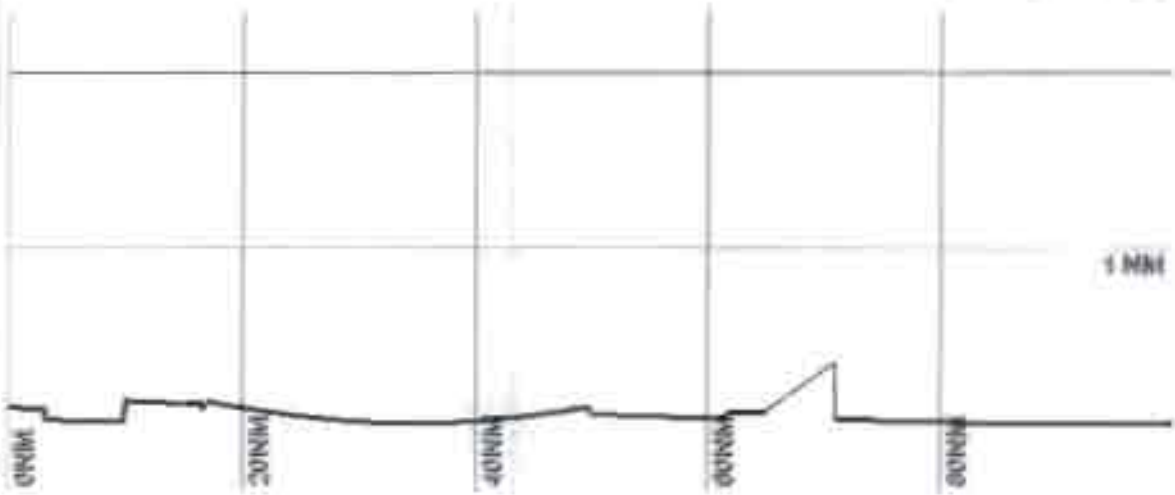
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME , VORTAC , TACAN , and User
DME Include Angles: 30 to 150
Critical DMEs: Allowed
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Flight Check DMEs: Selected
Higher Attitudes: Evaluated
Near Maximum Altitude: Evaluated

Total Number of DMEs Used: 9

Maximum DME Error: 0.531 NM

No Critical DMEs were found.

Available DMEs: GSO, BKW, LWB, LYH, ROA, GVE, RDU, FAK, SBV, LIB



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon/MAGVAR	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	GSO	N 36° 2' 44.49" W 79° 58' 34.95" W 3	H + ESV	User	NO	1.149	Enabled	34.0 %	32.4 %
2	BKW	N 37° 46' 49.08" W 81° 7' 24.44" W 6	H	Database	NO	0.651	Enabled	2.8 %	3.0 %
3	LYH	N 37° 19' 18.70" W 79° 14' 11.30" W 5	L	Database	NO	1.150	Enabled	40.6 %	42.8 %
4	GVE	N 38° 0' 48.96" W 78° 9' 10.89" W 6	H	Database	NO	0.531	Enabled	6.3 %	6.7 %
5	RDU	N 35° 52' 21.08" W 78° 47' 0.03" W 4	H	Database	NO	0.531	Enabled	14.2 %	13.6 %
6	ROA	N 37° 20' 36.47" W 80° 4' 13.43" W 4	L	Database	NO	0.635	Enabled	12.5 %	13.0 %
7	SBV	N 36° 40' 30.15" W 79° 0' 52.21" W 5	L	Database	NO	0.640	Enabled	54.6 %	53.2 %
8	FAK	N 37° 31' 42.63" W 77° 49' 41.59" W 6	H + ESV	User	NO	1.029	Enabled	13.8 %	14.4 %
9	LIB	N 35° 48' 41.64" W 79° 36' 45.35" W 3	L + ESV	User	NO	0.531	Enabled	7.4 %	6.5 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	GSO	BKW	LYH	ROA	LWB	GVE
10.0	GSO	RDU	LYH	ROA	GVE	BKW
20.1	SBV	ROA	LYH			
39.8	SBV	FAK	LYH	LIB		
53.7	SBV	FAK	LYH	GSO		
73.9	SBV	GSO	RDU			
79.4	SBV	GSO	RDU			
81.1	SBV	GSO	RDU	LIB		
90.3	SBV	GSO	RDU	LIB		
93.3	SBV	GSO	RDU	LIB		

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 37° 10' 21.28" W 79° 47' 50.07"	N 37° 10' 6.45" W 79° 47' 26.45"	0.4
	VOR: LYH	Available from N 37° 10' 21.28" W 79° 47' 50.07" to N 37° 10' 6.45" W 79° 47' 26.45"	
	VOR: ODR	Available from N 37° 10' 21.28" W 79° 47' 50.07" to N 37° 10' 6.45" W 79° 47' 26.45"	
	VOR: ROA	Available from N 37° 10' 21.28" W 79° 47' 50.07" to N 37° 10' 6.45" W 79° 47' 26.45"	
2	N 36° 42' 38.67" W 79° 4' 12.14"	N 36° 42' 23.68" W 79° 3' 46.81"	0.4
	VOR: DAN	Available from N 36° 42' 38.67" W 79° 4' 12.14" to N 36° 42' 23.68" W 79° 3' 46.81"	
	VOR: LYH	Available from N 36° 42' 38.67" W 79° 4' 12.14" to N 36° 42' 23.68" W 79° 3' 46.81"	
	VOR: SBV	Available from N 36° 42' 38.67" W 79° 4' 12.14" to N 36° 42' 23.68" W 79° 3' 46.81"	
3	N 36° 40' 19.21" W 79° 0' 55.16"	N 36° 34' 22.00" W 78° 59' 5.07"	6.1
	VOR: DAN	Available from N 36° 40' 19.21" W 79° 0' 55.16" to N 36° 34' 22.00" W 78° 59' 5.07"	
	VOR: LYH	Available from N 36° 40' 19.21" W 79° 0' 55.16" to N 36° 36' 58.01" W 78° 59' 50.29"	
	VOR: SBV	Available from N 36° 40' 19.21" W 79° 0' 55.16" to N 36° 34' 22.00" W 78° 59' 5.07"	

User DMEs

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	GSO	N 36° 2' 44.49" W 79° 58' 34.95" W 3	H	909.0	116.20	GSO	Used

Restriction:	Bearing [True]: 252.0° to 287.0° Bearing [Mag]: 255.0° to 290.0°	Distance: Beyond 0.0 NM Altitude: Below 6000.0 Ft
ESV	Bearing [True]: 55.0° to 65.0° Bearing [Mag]: 58.0° to 68.0°	Arc Distance: Out to 80.0 NM Altitude: 6000.0 to 16000.0 Ft
ESV	Bearing [True]: 64.0° to 107.0° Bearing [Mag]: 67.0° to 110.0°	Arc Distance: Out to 53.0 NM Altitude: 4000.0 to 16000.0 Ft

DME/DME (Continued.)

Return To Summary

User DMEs (Continued.)

#	Name	Lat/Lon/MAGVAR	Range	Elevation [Ft]	Frequency	Replaces:	Status
2	FAK	N 37° 31' 42.63" W 77° 49' 41.59" W 6	H	460.0	113.30	FAK	Used
		Restriction:	Bearing [True]: 332.0° to 354.0° Bearing [Mag]: 338.0° to 0.0°		Distance: Beyond 0.0 NM Altitude: Below 99999.0 Ft.		
		ESV:	Bearing [True]: 222.0° to 245.0° Bearing [Mag]: 228.0° to 251.0°		Arc Distance: Out to 84.0 NM Altitude: 14000.0 to 24000.0 Ft.		
3	LIB	N 35° 48' 41.64" W 79° 36' 45.35" W 3	L	830.0	113.00	LIB	Used
		ESV:	Bearing [True]: 7.0° to 12.0° Bearing [Mag]: 10.0° to 15.0°		Arc Distance: Out to 74.0 NM Altitude: 10000.0 to 24000.0 Ft.		
		ESV:	Bearing [True]: 49.0° to 75.0° Bearing [Mag]: 52.0° to 78.0°		Arc Distance: Out to 55.0 NM Altitude: 3000.0 to 12000.0 Ft.		