Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: STAR	Date Open: 09/21/2009	Task #: 2009092115639508003	Request #: 20090921156395
Procedure: STAR FRIZN (RNAV) ONE LOUISVILLE KY KSDF		Airport ID: KSDF	Airport: LOUISVILLE INTL-STANDIFORD FLD		Reimbursable #:
City: LOUISVILLE	**ST:** KY	GPS #:		Estimated Chart Date: 07/26/2012	FICO #: 1073442
Fac ID:	**Fac. Type:** Proc D		**Specialist:** MICHAEL CURRAN		

Procedure Review

	Rec'd	Rel'd	Full Name	Comments
Lead:	01/13/2012	04/19/2012	JAMES DUBOIS	DME / DME
QA:	04/19/2012	04/19/2012	STEVEN SZUKALA	
Liaison:	04/19/2012	Alfonso	DME/DME	ESV REQUEST INCLUDED

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

Pkg 3 of 5

LOUISVILLE, KY LOUISVILLE INTL-STANDIFORD FLD (KSDF) FRIZN ONE (RNAV) (STAR) ENROUTE-YES FC: 5.29.12 PUB: 7.26.12

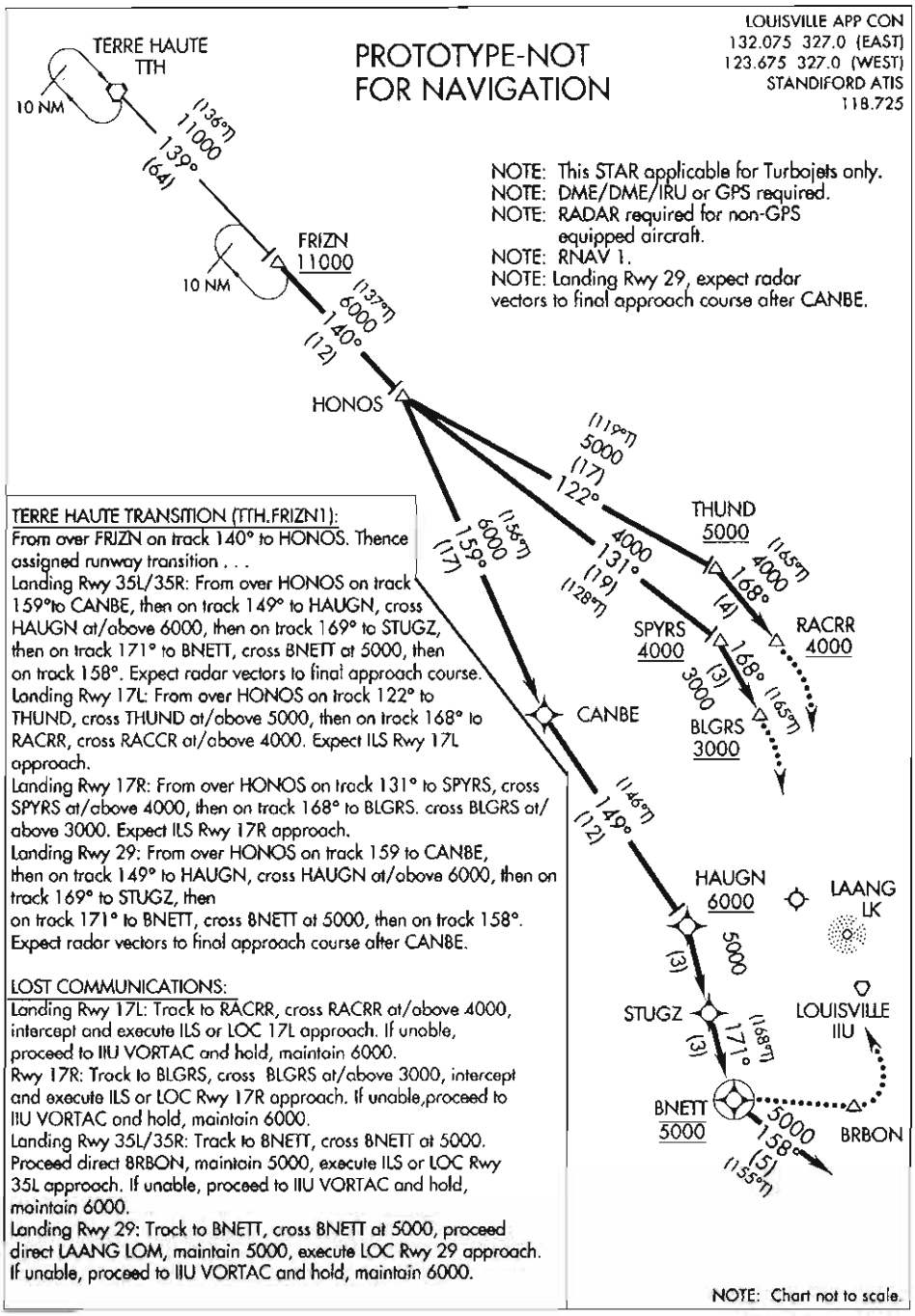
ATTACHED FORMS: ESV REPORTS; 7100-4; 7100-3; 8260-2(S): BNETT, ORIG; BRBON-INT, REV 3; CANBE, ORIG; FRIZN-INT, REV 3; HAUGN, ORIG; LAANG (LK) LOM, REV 9; SPYRS-INT, REV 2; STUGZ, ORIG; TERRE HAUTE (TTH) VTAC, REV 12; THUND-INT, REV 3; (INFO ONLY) BLGRS-INT, REV 3; HONOS-INT, REV 7; LOUISVILLE (IIU) VTAC, REV 9; RACRR-INT, REV 4.

CONTACT: DON SMITH, AJV-352 LEAD, 405.954.1036:

(FRIZN.FRIZN1) ST-239 (FAA)

FRIZN ONE ARRIVAL (RNAV)

LOUISVILLE, KENTUCKY



FRIZN ONE ARRIVAL (RNAV)

LOUISVILLE, KENTUCKY

(FRIZN.FRIZN1)

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : HUNTINGBURG	City : HUNTINGBURG	Ident : HNB	State : IN
Type/Class : DME	Frequency : M990	Reference No.: 10123387	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
NG 941644-006	45	65	48	90	160

Requirement: ESTABLISH ESV FOR SDF FRIZN RNAV STAR

Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 12/20/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
NG 941644-006	45	65	48	90	160	APPROVE

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

Signature: NASSR NASHAAT	Routing Symbol:	Date: 12/21/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
NG 941644-006	45	65	48	90	160	APPROVE

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

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 12/21/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
NG 941644-006	45	65				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : HUNTINGBURG	City : HUNTINGBURG	Ident : HNB	State : IN
Type/Class : DME	Frequency : M990	Reference No.: 10123386	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
NG 941644-005	80	92	52	50	120

Requirement: ESTABLISH ESV FOR SDF FRIZN RNAV STAR		
Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 12/20/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
NG 941644-005	80	92	52	50	120	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR SDF FRIZN RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.		
Signature: NASSR NASHAAT	Routing Symbol:	Date: 12/21/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
NG 941644-005	80	92	52	50	120	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR SDF FRIZN RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.		
Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 12/21/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
NG 941644-005	80	92				

Requirement/Remarks:		
Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : TERRE HAUTE	City : TERRE HAUTE	Ident : TTH	State : IN
Type/Class : TACR	Frequency : M1187	Reference No.: 10123383	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 850889-016	130	138	78	95	160

Requirement: ESTABLISH ESV FOR SDF FRIZN RNAV STAR		
Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 12/20/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 850889-016	130	138	78	95	160	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR SDF FRIZN RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.		
Signature: NASSR NASHAAT	Routing Symbol:	Date: 12/21/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 850889-016	130	138	78	95	160	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR SDF FRIZN RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.		
Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 12/21/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 850889-016	130	138				

Requirement/Remarks:		
Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : INDIANAPOLIS	City : INDIANAPOLIS	Ident : VHP	State : IN
Type/Class : TACR	Frequency : M1197	Reference No.: 10123385	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 698209-033	168	177	78	95	160

Requirement: ESTABLISH ESV FOR SDF FRIZN RNAV STAR		
Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 12/20/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698209-033	168	177	78	95	160	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR SDF FRIZN RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.		
Signature: NASSR NASHAAT	Routing Symbol:	Date: 12/21/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698209-033	168	177	78	95	160	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR SDF FRIZN RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.		
Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 12/22/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698209-033	168	177				

Requirement/Remarks:		
Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : INDIANAPOLIS	City : INDIANAPOLIS	Ident : VHP	State : IN
Type/Class : TACR	Frequency : M1197	Reference No.: 10123384	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 698209-032	208	249	50	95	160

Requirement: ESTABLISH ESV FOR SDF FRIZN RNAV STAR		
Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 12/20/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698209-032	208	249	50	95	160	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR SDF FRIZN RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.		
Signature: NASSR NASHAAT	Routing Symbol:	Date: 12/21/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698209-032	208	249	50	95	160	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR SDF FRIZN RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.		
Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 12/22/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 698209-032	208	249				

Requirement/Remarks:		
Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : POCKET CITY	City : EVANSVILLE	Ident : PXV	State : IN
Type/Class : TACR	Frequency : M1167	Reference No.: 10123381	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 704134-030	11	62	98	95	150

Requirement: ESTABLISH ESV FOR SDF FRIZN RNAV STAR		
Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 12/20/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704134-030	11	62	98	95	150	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR SDF FRIZN RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.		
Signature: NASSR NASHAAT	Routing Symbol:	Date: 12/21/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704134-030	11	62	98	95	150	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR SDF FRIZN RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.		
Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 12/21/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704134-030	11	62				

Requirement/Remarks:		
Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : FORT KNOX	City : FT KNOX	Ident : FTK	State : KY
Type/Class : NONE	Frequency : M109.6	Reference No.: 12041646	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
AR 641893-001	106	0	17	127	175

Requirement: FIX BRBON. EXISTING FIX ON V5-513.		
Signature: Curran Michael	Routing Symbol:	Date: 04/09/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
AR 641893-001	106	0	17	127	175	APPROVE

Requirement/Remarks: FIX BRBON. EXISTING FIX ON V5-513.APPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.		
Signature: Cassella Charles	Routing Symbol:	Date: 04/09/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
AR 641893-001	106	0	17	127	175	APPROVE

Requirement/Remarks: FIX BRBON. EXISTING FIX ON V5-513.APPROVED. PEND. FLIGHT CHK/INSPECT @ THE REQ. DIST. AND MIN ALT.		
Signature: Hughes Dennis	Routing Symbol:	Date: 04/09/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
AR 641893-001	106	0				

Requirement/Remarks:		
Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : LOUISVILLE	City : LOUISVILLE	Ident : IIU	State : KY
Type/Class : TACR	Frequency : M1182	Reference No.: 10123382	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 704184-036	309	319	98	95	165

Requirement: ESTABLISH ESV FOR SDF FRIZN RNAV STAR		
Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 12/20/2010

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704184-036	309	319	98	95	165	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR SDF FRIZN RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.		
Signature: Cassella Charles	Routing Symbol:	Date: 12/21/2010

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704184-036	309	319	98	95	165	APPROVE

Requirement/Remarks: ESTABLISH ESV FOR SDF FRIZN RNAV STARApproved. Pend. Flight Chk/Inspect @ the req. dist. and MIN ALT.		
Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 12/22/2010

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704184-036	309	319				

Requirement/Remarks:		
Signature:	Routing Symbol:	Date:

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
TERRE HAUTE	TTH.FRIZN1	***TTH VORTAC***	FRIZN	139.12/64.21	11000			AT/ABOVE 11000

(2) Arrival Route Description: FROM OVER FRIZN ON TRACK 139.70/11.61 NM TO HONOS(MEA 6000), THENCE ON ASSIGNED RUNWAY TRANSITION...

LANDING RWY 35L/35R: FROM OVER HONOS ON TRACK 158.88/16.51 NM TO CANBE(MEA 6000), THEN ON TRACK 148.88/12.10 NM TO HAUGN, CROSS HAUGN AT/ABOVE 6000(MEA 6000), THEN ON TRACK 169.07/3.40 NM TO STUGZ (MEA 5000), THEN ON TRACK 171.16/2.88 NM TO BNETT, CROSS BNETT AT 5000 (MEA 5000), THEN ON TRACK 158.00/5.00 NM (MEA 5000). EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

Continued on block 16...

(3) Procedural Data Notes: CHART NOTES: DME/DME/IRU OR GPS REQUIRED. RADAR REQUIRED FOR NON GPS EQUIPPED AIRCRAFT. RNAV 1. THIS STAR APPLICABLE FOR TURBOJETS ONLY.
LANDING RWY 29: EXPECT RADAR VECTORS TO FINAL APPROACH COURSE AFTER CANBE.
CROSS FRIZN AT/ABOVE 11000. CROSS HAUGN AT/ABOVE 6000. CROSS BNETT AT 5000. CROSS THUND AT/ABOVE 5000. CROSS SPYRS AT/ABOVE 4000. CROSS RACRR AT/ABOVE 4000. CROSS BLGRS AT/ABOVE 3000.

(4) Fixes and/or Holding Patterns: CHART HOLDING AT TTH VORTAC (HOLD NW, RT, 139.12 INBOUND, 10 NM LEGS).
CHART HOLDING AT FRIZN (HOLD NW, RT, 139.70 INBOUND, 10 NM LEGS).
CHART BRBON, IIU VORTAC AND LAANG LOM AS STAND ALONE FIXES.

(5) Communications: LOUISVILLE APP CON
STANDIFORD ATIS

QUALITY CHECKED

(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
FRIZN RNAV	ONE	FRIZN.FRIZN1	NONE		

(12) Airports Served

Airport Name LOUISVILLE INTL AIRPORT-STANDIFORD FIELD	**City/State** LOUISVILLE, KY
Airport Name	**City/State**
Airport Name	**City/State**
Airport Name	**City/State**
Airport Name	**City/State**
Airport Name	**City/State**

(13) Lost Communications Procedure: LANDING RWY 17L: TRACK TO RACRR, CROSS RACRR AT/ABOVE 4000, INTERCEPT AND EXECUTE ILS OR LOC RWY 17L APPROACH. IF UNABLE, PROCEED TO IIU VORTAC AND HOLD MAINTAIN 6000.

LANDING RWY 17R: TRACK TO BLGRS, CROSS BLGRS AT/ABOVE 3000, INTERCEPT AND EXECUTE ILS OR LOC RWY 17R APPROACH. IF UNABLE, PROCEED TO IIU VORTAC AND HOLD, MAINTAIN 6000.

LANDING RWY RW35L/35R: TRACK TO BNETT, CROSS BNETT AT 5000; PROCEED DIRECT BRBON, MAINTAIN 5000, EXECUTE ILS OR LOC RW35L APPROACH, IF UNABLE, PROCEED TO IIU VORTAC AND HOLD, MAINTAIN 6000.

Continued on block 16...

(14) Remarks: BLGRS, RACRR, SPYRS AND THUND DEPICTED AT LOCATIONS TO BE PUBLISHED PRIOR TO PROCEDURE PUBLICATION, INDICATED BY UNDERSCORE (_).
TTH VORTAC DEPICTED AT NFDC COORDINATES. TARGETS DATABASE GIVES ERRONEOUS AVNIS LOCATION.

(15) Additional Flight Data: REFERENCE MAG VAR: KSDF 03W/95.
DME/DME ASSESSMENT: SAT (RNP 2.0).

QUALITY CHECKED

(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
FRIZN RNAV	ONE	FRIZN.FRIZN1	NONE		

(16) Continuation:

(2) Arrival Route Description:
LANDING RWY 17L: FROM OVER HONOS ON TRACK 121.86/17.01 NM TO THUND, CROSS THUND AT/ABOVE 5000 (MEA 5000), THEN ON TRACK 167.86/3.53 NM TO RACRR, CROSS RACRR AT/ABOVE 4000 (MEA 4000). EXPECT ILS RWY 17L APPROACH.

LANDING RWY 17R: FROM OVER HONOS ON TRACK 130.57/19.07 NM TO SPYRS, CROSS SPYRS AT/ABOVE 4000 (MEA 4000), THEN ON TRACK 168.37/3.49 NM TO BLGRS, CROSS BLGRS AT/ABOVE 3000 (MEA 3000). EXPECT ILS RWY 17R APPROACH.

LANDING RWY 29: FROM OVER HONOS ON TRACK 158.88/16.51 NM TO CANBE(MEA 6000), THEN ON TRACK 148.88/12.10 NM TO HAUGN, CROSS HAUGN AT/ABOVE 6000(MEA 6000), THEN ON TRACK 169.07/3.40 NM TO STUGZ (MEA 5000), THEN ON TRACK 171.16/2.88 NM TO BNETT, CROSS BNETT AT 5000 (MEA 5000), THEN ON TRACK 158.00/5.00 NM (MEA 5000). EXPECT RADAR VECTORS TO FINAL APPROACH COURSE AFTER CANBE.

(13) Lost Communications Procedure:
LANDING RWY 29: TRACK TO BNETT, CROSS BNETT AT 5000; PROCEED DIRECT LAANG LOM, MAINTAIN 5000, EXECUTE LOC RWY 29 APPROACH, IF UNABLE PROCEED TO IIU VORTAC AND HOLD, MAINTAIN 6000.

(17) Changes: ORIGINAL

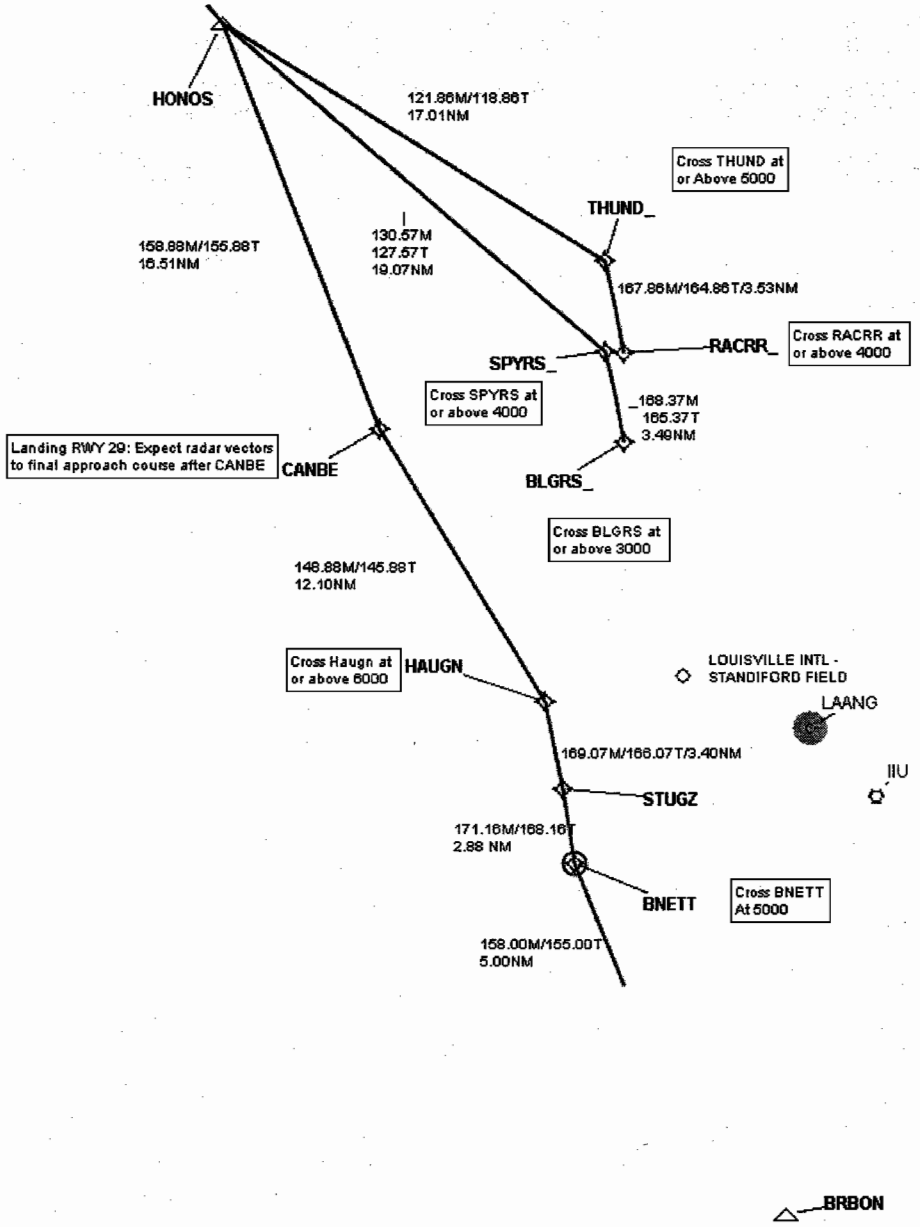
(18) Reasons for Changes: REQUESTED BY ATC.

	Name (Typed and Signed), Title and Organization		DATE
Developed By	THOMAS DURY, SUPPORT MANAGER FOR OPERATIONS, INDIANAPOLIS ARTCC		
Approved	**NFPG**		
	Reg. ATD		

QUALITY CHECKED

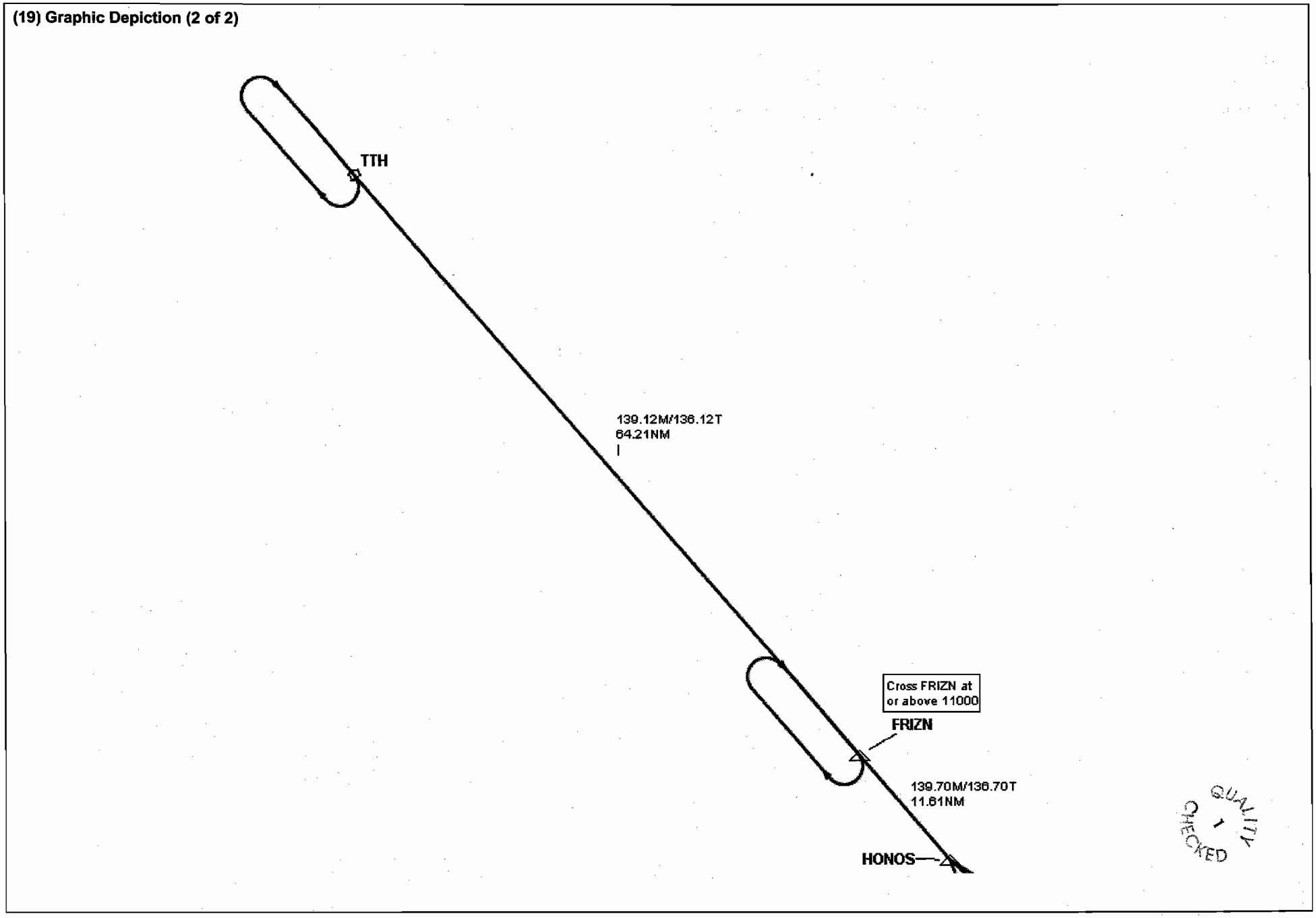
(6) Arrival Name	(7) Number	(8) STAR Computer Code	(9) Superseded Nr.	(10) Dated	(11) Effective Date
FRIZN RNAV	ONE	FRIZN.FRIZN1	NONE		

(19) Graphic Depiction (1 of 2)



QUALITY CHECKED

(19) Graphic Depiction (2 of 2)



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									
TTH VORTAC	392920.19N / 0871456.47W	Y		IF					TTH.FRIZN1 HOLDING - RIGHT TURNS
FRIZN	384247.04N / 0861804.78W	Y	FB	TF	136.12	64.21	AT/ABOVE 11000		HOLDING - RIGHT TURNS
Common Route									
FRIZN	384247.04N / 0861804.78W	Y		IF			AT/ABOVE 11000		HOLDING RIGHT TURNS
HONOS	383419.24N / 0860755.74W	Y	FB	TF	136.70	11.61			
Runway Transition									
HONOS	383419.24N / 0860755.74W	Y		IF					
THUND_	382604.54N / 0854858.05W	Y	FB	TF	118.86	17.01	AT/ABOVE 5000		
RACRR_	382239.71N / 0854747.64W	Y	FB	TF	164.86	03.53	AT/ABOVE 4000		
RW17L									
Runway Transition									
HONOS	383419.24N / 0860755.74W	Y		IF					RW17R.FRIZN1

QUALITY CHECKED

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
FRIZN RNAV	ONE	FRIZN.FRIZN1	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
SPYRS_	382239.30N / 0854842.51W	Y	FB	TF	127.57	19.07	AT/ABOVE 4000		
BLGRS_	381916.28N / 0854735.24W	Y	FB	TF	165.37	03.49	AT/ABOVE 3000		
RW17R									
Runway Transition									
HONOS	383419.24N / 0860755.74W	Y		IF					
CANBE	381913.92N / 0855921.27W	Y	FB	TF	155.88	16.51			
HAUGN	380911.74N / 0855044.80W	Y	FB	TF	145.88	12.10	AT/ABOVE 6000		
STUGZ	380553.50N / 0854942.56W	Y	FB	TF	166.07	03.40			
BNETT	380304.00N / 0854857.63W		FO	TF	168.16	02.88	AT 5000		
RW29				FM	155.00	05.00			
Runway Transition									
HONOS	383419.24N / 0860755.74W	Y		IF					
CANBE	381913.92N / 0855921.27W	Y	FB	TF	155.88	16.51			
HAUGN	380911.74N / 0855044.80W	Y	FB	TF	145.88	12.10	AT/ABOVE 6000		

QUALITY CHECKED

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
FRIZN RNAV	ONE	FRIZN.FRIZN1	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
STUGZ	380553.50N / 0854942.56W	Y	FB	TF	166.07	03.40			
BNETT	380304.00N / 0854857.63W		FO	TF	168.16	02.88	AT 5000		
RW35L				FM	155.00	05.00			
Runway Transition									
HONOS	383419.24N / 0860755.74W	Y		IF					
CANBE	381913.92N / 0855921.27W	Y	FB	TF	155.88	16.51			
HAUGN	380911.74N / 0855044.80W	Y	FB	TF	145.88	12.10	AT/ABOVE 6000		
STUGZ	380553.50N / 0854942.56W	Y	FB	TF	166.07	03.40			
BNETT	380304.00N / 0854857.63W		FO	TF	168.16	02.88	AT 5000		
RW35R				FM	155.00	05.00			

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
FRIZN RNAV	ONE	FRIZN.FRIZN1	NONE		

QUALITY CHECKED

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  12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAD        LOZ   K5011610VTLA N37015934W084063627    N37015934W084063627W0030012451     NARLONDON
        SUSAD        TTH   K5011530VTHA N39292019W087145647    N39292019W087145647E0020006062     NARTERRE HAUTE

                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   BLGRS K50    C     N38191628W085473524                    W0044     NAR          BLGRS
        SUSAEAENRT   BNETT K50    W     N38030400W085485763                    W0044     NAR          BNETT
        SUSAEAENRT   CANBE K50    W     N38191392W085592127                    W0043     NAR          CANBE
        SUSAEAENRT   FRIZN K50    C   L N38424704W086180478                    W0041     NAR          FRIZN
        SUSAEAENRT   HAUGN K50    W     N38091174W085504480                    W0044     NAR          HAUGN
        SUSAEAENRT   HONOS K50    C   L N38341924W086075574                    W0042     NAR          HONOS
        SUSAEAENRT   RACRR K50    C     N38223971W085474764                    W0044     NAR          RACRR
        SUSAEAENRT   SPYRS K50    C     N38223930W085484251                    W0044     NAR          SPYRS
        SUSAEAENRT   STUGZ K50    W     N38055350W085494256                    W0044     NAR          STUGZ
        SUSAEAENRT   THUND K50    C     N38260454W085485805                    W0044     NAR          THUND

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSDFK5ASDF     0     118YHN38102671W085441140W003000501         1800018000C    MNAR    LOUISVILLE INTL-STANDIFORD FIE

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------
        SUSAP KSDFK5EFRIZN14TTH   010TTH  K5D 0V  H    IF                                                  18000
        SUSAP KSDFK5EFRIZN14TTH   020FRIZNK5EA0EE H 010TF                  13910642    + 11000
        SUSAP KSDFK5EFRIZN15      010FRIZNK5EA0E  H    IF                              + 11000     18000
        SUSAP KSDFK5EFRIZN15      020HONOSK5EA0EE   010TF                 13970116
        SUSAP KSDFK5EFRIZN16RW17L 010HONOSK5EA0E      IF                                          18000
        SUSAP KSDFK5EFRIZN16RW17L 020THUNDK5EA0E    010TF                  12190170    + 05000
        SUSAP KSDFK5EFRIZN16RW17L 030RACRRK5EA0EE   010TF                  16790035    + 04000
        SUSAP KSDFK5EFRIZN16RW17R 010HONOSK5EA0E      IF                                          18000
        SUSAP KSDFK5EFRIZN16RW17R 020SPYRSK5EA0E    010TF                  13060191    + 04000
        SUSAP KSDFK5EFRIZN16RW17R 030BLGRSK5EA0EE   010TF                  16840035    + 03000
        SUSAP KSDFK5EFRIZN16RW29  010HONOSK5EA0E      IF                                          18000
        SUSAP KSDFK5EFRIZN16RW29  020CANBEK5EA0E    010TF                  15890165
```

QUALITY 1 CHECKED

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
FRIZN RNAV	ONE	FRIZN.FRIZN1	NONE		

FAA Form 7100-3 (9/02)

US Department of Transportation
Federal Aviation Administration

STAR (Data Record)

```
SUSAP KSDFK5EFRIZN16RW29  030HAUGNK5EA0E    010TF                    14890121    + 06000
SUSAP KSDFK5EFRIZN16RW29  040STUGZK5EA0E    010TF                    16910034
SUSAP KSDFK5EFRIZN16RW29  050BNETTK5EA0EY   010TF                    17120029      05000
SUSAP KSDFK5EFRIZN16RW29  060BNETTK5EA0EE      FM LOZ K5      310410171580    D     05000
SUSAP KSDFK5EFRIZN16RW35B 010HONOSK5EA0E       IF                                          18000
SUSAP KSDFK5EFRIZN16RW35B 020CANBEK5EA0E    010TF                    15890165
SUSAP KSDFK5EFRIZN16RW35B 030HAUGNK5EA0E    010TF                    14890121    + 06000
SUSAP KSDFK5EFRIZN16RW35B 040STUGZK5EA0E    010TF                    16910034
SUSAP KSDFK5EFRIZN16RW35B 050BNETTK5EA0EY   010TF                    17120029      05000
SUSAP KSDFK5EFRIZN16RW35B 060BNETTK5EA0EE      FM LOZ K5      310410171580    D     05000
```

```
            1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  1234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------------------
SUSAP KSDFK5GRW17L   0085791679 N38111114W085435176-0300    +011890049903295515OIIPKI1
SUSAP KSDFK5GRW17R   0118901684 N38110506W085445293-0200    +011470048608505015OIISNU1
SUSAP KSDFK5GRW29    0072502941 N38102299W085432577+0000    +011310048000005515ORILKS0
SUSAP KSDFK5GRW35L   0118903484 N38092940W085442137+0200    +010740046110405915OIIRLI3
SUSAP KSDFK5GRW35R   0085793479 N38095670W085432634+0300    +011040047204506015OIIJJM3
```

QUALITY CHECKED

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
FRIZN RNAV	ONE	FRIZN.FRIZN1	NONE		

FAA Form 7100-3 (9/02)

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
	TTH	TTH	010		IF		FB					
	TTH	FRIZN	020		TF		FB	1.0	139.1()	064.2	AA 11000	
		FRIZN	010		IF		FB				AA 11000	
		HONOS	020		TF		FB	1.0	139.7()	011.6		
	RW17L	HONOS	010		IF		FB					
	RW17L	THUND	020		TF		FB	1.0	121.9()	017.0	AA 05000	
	RW17L	RACRR	030		TF		FB	1.0	167.9()	003.5	AA 04000	
	RW17R	HONOS	010		IF		FB					
	RW17R	SPYRS	020		TF		FB	1.0	130.6()	019.1	AA 04000	
	RW17R	BLGRS	030		TF		FB	1.0	168.4()	003.5	AA 03000	
	RW29	HONOS	010		IF		FB					
	RW29	CANBE	020		TF		FB	1.0	158.9()	016.5		
	RW29	HAUGN	030		TF		FB	1.0	148.9()	012.1	AA 06000	
	RW29	STUGZ	040		TF		FB	1.0	169.1()	003.4		
	RW29	BNETT	050		TF		FO	1.0	171.2()	002.9	AT 05000	
	RW29	BNETT	060		FM		FB		158.0()		AT 05000	
	RW35B	HONOS	010		IF		FB					
	RW35B	CANBE	020		TF		FB	1.0	158.9()	016.5		
	RW35B	HAUGN	030		TF		FB	1.0	148.9()	012.1	AA 06000	
	RW35B	STUGZ	040		TF		FB	1.0	169.1()	003.4		
	RW35B	BNETT	050		TF		FO	1.0	171.2()	002.9	AT 05000	
	RW35B	BNETT	060		FM		FB		158.0()		AT 05000	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	LOZ	N370159.34	W0840636.27	N3701.989	W08406.605
	TTH	N392920.19	W0871456.47	N3929.337	W08714.941
	BLGRS	N381916.28	W0854735.24	N3819.271	W08547.587
	BNETT	N380304.00	W0854857.63	N3803.067	W08548.961
	CANBE	N381913.92	W0855921.27	N3819.232	W08559.355
	FRIZN	N384247.04	W0861804.78	N3842.784	W08618.080
	HAUGN	N380911.74	W0855044.80	N3809.196	W08550.747
	HONOS	N383419.24	W0860755.74	N3834.321	W08607.929
	RACRR	N382239.71	W0854747.64	N3822.662	W08547.794
	SPYRS	N382239.30	W0854842.51	N3822.655	W08548.709
	STUGZ	N380553.50	W0854942.56	N3805.892	W08549.709
	THUND	N382604.54	W0854858.05	N3826.076	W08548.968
	RW17L	N381111.14	W0854351.76	N3811.186	W08543.863

QUALITY 1 CHECKED

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
FRIZN RNAV	ONE	FRIZN.FRIZN1	NONE		

FAA Form 7100-3 (9/02)

RW17R	N381105.06	W0854452.93	N3811.084	W08544.882
RW29	N381022.99	W0854325.77	N3810.383	W08543.430
RW35L	N380929.40	W0854421.37	N3809.490	W08544.356
RW35R	N380956.70	W0854326.34	N3809.945	W08543.439

RUNWAY DATA

RWY	THRESHOLD ELEVATION	TCH
RW17L	00499	55
RW17R	00486	50
RW29	00480	55
RW35L	00461	59
RW35R	00472	60

QUALITY 1 CHECKED

(11) Arrival Name	(12) Number	(13) STAR Computer Code	(14) Superseded Nr.	(15) Dated	(16) Effective Date
FRIZN RNAV	ONE	FRIZN.FRIZN1	NONE		

RADIO FIX AND HOLDING DATA RECORD

NAME: BNETT **STATE:** KY **COUNTRY:** US

LATITUDE/LONGITUDE: 380304.00N/0854857.63W **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 35L			KSDF	LOUISVILLE	KY (US)
IAP	RNAV (RNP) Z RWY 35R			KSDF	LOUISVILLE	KY (US)
STAR	DAMEN (RNAV)			KSDF	LOUISVILLE	KY (US)
STAR	FRIZN (RNAV)			KSDF	LOUISVILLE	KY (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 07/26/2012

DEVELOPED BY: **DATE:** 02/13/2012 **OFFICE:** AJV-352 **NAME:** MICHAEL CURRAN

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZID
ATC FACILITY: SDF/SDF
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: BRBON **STATE:** KY **COUNTRY:** US

LATITUDE/LONGITUDE: 375009.94N/0853800.33W **TYPE:** WP, RADAR, 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	LOUISVILLE	I-RLI	LOC/DME		169.39	165.39	21.79	21.80		5000	6000
2	FORT KNOX	FTK	VOR/DME	T	105.71	104.71		16.67		2700	17500
3	LOUISVILLE	IIU	VORTAC	H	188.43	189.43	16.24	16.24		2700	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-RLI	LOC/DME	R-169	22	5000	6000
FTK	VOR/DME	R-106	17	12700	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	IIU	VORTAC	188.43	008.43	R	1		4000	6000	5	6
2	S		WP	188.43	008.43	R		4	3000	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (21-001503)	374304.00N/0854231.00W	1249	5E
2	200	TOWER (21-001503)	374304.00N/0854231.00W	1249	5E

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
I-RLI DME COORDINATES: 381117.18N / 0854453.38W
KSDF RWY 35L DISPLACED THRESHOLD COORDINATES: 380929.40N / 0854421.37W
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
I-RLI (FAC 1) AND IIU (FAC 3) USED TO ESTABLISH FIX COORDINATES.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V5-513					(US)
IAP	ILS OR LOC RWY 35L	1, 2, 3	1	KSDF	LOUISVILLE	KY (US)
IAP	ILS OR LOC RWY 35R	2, 3	1	KSDF	LOUISVILLE	KY (US)
IAP	ILS RWY 35L (CAT II)	1, 2, 3	1	KSDF	LOUISVILLE	KY (US)
IAP	ILS RWY 35L (CAT III)	1, 2, 3	1	KSDF	LOUISVILLE	KY (US)
IAP	ILS RWY 35R (CAT II)	2, 3	1	KSDF	LOUISVILLE	KY (US)
IAP	ILS RWY 35R (CAT III)	2, 3	1	KSDF	LOUISVILLE	KY (US)
IAP	ILS RWY 35R (SA CAT I)	2, 3	1	KSDF	LOUISVILLE	KY (US)
IAP	RNAV (GPS) Y RWY 35L		2	KSDF	LOUISVILLE	KY (US)
IAP	RNAV (GPS) Y RWY 35R		2	KSDF	LOUISVILLE	KY (US)
IAP	RNAV (RNP) Z RWY 35L		2	KSDF	LOUISVILLE	KY (US)
IAP	RNAV (RNP) Z RWY 35R		2	KSDF	LOUISVILLE	KY (US)
STAR	DAMEN (RNAV)			KSDF	LOUISVILLE	KY (US)
STAR	DLAMP (RNAV)			KSDF	LOUISVILLE	KY (US)
STAR	FRIZN (RNAV)			KSDF	LOUISVILLE	KY (US)
STAR	MBELL (RNAV)			KSDF	LOUISVILLE	KY (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
ADDED ESV FOR FTK VOR/DME (TERMINAL FACILITY).

DEVELOPED BY: **DATE:** 04/06/2012 **OFFICE:** AJV-352 **NAME:** MICHAEL CURRAN

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

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZID

QUALITY CHECKED

ATC FACILITY: SDF ATCT/APP CON
OTHER: SDF AIRPORT MANAGER

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: CANBE **STATE:** IN **COUNTRY:** US

LATITUDE/LONGITUDE: 381913.92N/0855921.27W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	STREP (RNAV)			KSDF	LOUISVILLE	KY (US)
STAR	FRIZN (RNAV)			KSDF	LOUISVILLE	KY (US)

REQUIRED CHARTING: DP, STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 12/15/2011

DEVELOPED BY: **DATE:** 08/01/2011 **OFFICE:** AJV-352 **NAME:** RONALD SALPINO

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZID
ATC FACILITY: SDF APP CON
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: FRIZN **STATE:** IN **COUNTRY:** US

LATITUDE/LONGITUDE: 384247.04N/0861804.78W **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	LOUISVILLE	IIU	VORTAC	H	316.17	317.17	50.01			10000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
IIU	VORTAC	R-316	51	10000	15000

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	NW	IIU	VORTAC	316.17	136.17	R	1-1 1/2		10000	17500	11	18
2	NW		WP	319.70	139.70	R		10	11000	18000	16	18

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	TOWER (18-002608)	384405.00N/0863443.00W	1222	5D
2	230	TOWER (18-001426)	383902.35N/0860817.62W	1290	5D

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
LOUISVILLE KY - LOUISVILLE INTL-STANDIFORD FIELD - ARRIVAL FIX.
PAT 2 - 10 NM LEGS REQUESTED BY ATC FOR RNAV STAR HOLDING.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V171	1	1			(US)
STAR	FRIZN RNAV		2	KSDF	LOUISVILLE	KY (US)

REQUIRED CHARTING: STAR, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 12/15/2011

REASON FOR REVISION:
ADDED WP TO FIX TYPE.
ADDED PAT 2 DATA.
UPDATED ESV DATA.
MOVED HOLDING NOTE FROM REMARKS SECTION TO HOLDING RESTRICTIONS BLOCK.
ADDED STAR TO REQUIRED CHARTING.
ADDED REMARK: PAT 2 - 10 NM LEGS REQUESTED BY ATC FOR RNAV STAR HOLDING.
ADDED REMARK: PRECIPITOUS TERRAIN EVALUATION COMPLETED.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 06/28/2011 **OFFICE:** AJV-352 **NAME:** MICHAEL CURRAN

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZID
ATC FACILITY:
OTHER:

QUALITY 4 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: HAUGN **STATE:** KY **COUNTRY:** US

LATITUDE/LONGITUDE: 380911.74N/0855044.80W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
STAR	DAMEN (RNAV)			KSDF	LOUISVILLE	KY (US)
STAR	FRIZN (RNAV)			KSDF	LOUISVILLE	KY (US)
STAR	MBELL (RNAV)			KSDF	LOUISVILLE	KY (US)

REQUIRED CHARTING: STAR

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 12/15/2011

DEVELOPED BY: **DATE:** 06/07/2011 **OFFICE:** AJV-352 **NAME:** MICHAEL CURRAN

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZID
ATC FACILITY: SDF/SDF
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: LAANG LOM **STATE:** KY **COUNTRY:** US

LATITUDE/LONGITUDE: 380843.24N/0853759.15W **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	LAANG	LK	LOM-NDB								17500
2	LOUISVILLE	I-LKS	LOC		114.13	111.13		5.91	35925	2200	4900

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	SE	I-LKS	LOC	114.13	294.13	R	1		2300	4900	4	5
2	S	LK	NDB	168.20	348.20	R	1		2500	6000	4	5

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (21-000115)	381135.00N/0853114.00W	1229	4D
2	200	TOWER (21-020059)	380615.81N/0853401.36W	1021	5D

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
COORDINATES REFLECT LOCATION ON LOC/AZ CENTERLINE ABEAM THE LAANG LOM.
ACTUAL FACILITY LOCATION IS 380841.43N/0853759.89W.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	NDB RWY 33	1	2	KLOU	LOUISVILLE	KY (US)
IAP	LOC RWY 29	1, 2	1	KSDF	LOUISVILLE	KY (US)
STAR	DAMEN (RNAV)			KSDF	LOUISVILLE	KY (US)
STAR	DLAMP (RNAV)			KSDF	LOUISVILLE	KY (US)
STAR	FRIZN (RNAV)			KSDF	LOUISVILLE	KY (US)
STAR	MAUDD (RNAV)			KSDF	LOUISVILLE	KY (US)
STAR	MBELL (RNAV)			KSDF	LOUISVILLE	KY (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 9 **DATE OF REVISION:** 07/26/2012

REASON FOR REVISION:
ADDED STAR TO REQUIRED CHARTING.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 02/16/2012 **OFFICE:** AJV-352 **NAME:** MICHAEL CURRAN

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZID
ATC FACILITY: SDF APP CON, SDF ATCT, LOU ATCT
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: SPYRS **STATE:** IN **COUNTRY:** US

LATITUDE/LONGITUDE: 382239.30N/0854842.51W **TYPE:** WP, RADAR, 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	LOUISVILLE	I-SNU	LOC/DME		348.41	345.41	13.85	13.85		4000	5000

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

REMARKS:
I-SNU DME COORDINATES: 380915.18N/0854411.51W

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 17R	1		KSDF	LOUISVILLE	KY (US)
IAP	RNAV (GPS) Y RWY 17R			KSDF	LOUISVILLE	KY (US)
IAP	RNAV (RNP) Z RWY 17R			KSDF	LOUISVILLE	KY (US)
STAR	FRIZN (RNAV)			KSDF	LOUISVILLE	KY (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 2 **DATE OF REVISION:** 12/15/2011

REASON FOR REVISION:
UPDATED FIX USE
UPDATED LAT LONG : MOVED 1.17 NORTH
DELETED FAC 2
UPDATED DME DIST FAC 1 FROM 12.96 TO 13.85 AND ADDED DIST FROM FAC NM
ADDED STAR TO REQ CHARTING

DEVELOPED BY: **DATE:** 07/18/2011 **OFFICE:** AJV-352 **NAME:** DONALD SMITH (CHRISTOPHER COX)

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZID
ATC FACILITY: SDF ATCT/APP CON
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: STUGZ **STATE:** KY **COUNTRY:** US

LATITUDE/LONGITUDE: 380553.50N/0854942.56W **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 35L			KSDF	LOUISVILLE	KY (US)
IAP	RNAV (RNP) Z RWY 35R			KSDF	LOUISVILLE	KY (US)
STAR	DAMEN (RNAV)			KSDF	LOUISVILLE	KY (US)
STAR	FRIZN (RNAV)			KSDF	LOUISVILLE	KY (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 07/26/2012

DEVELOPED BY: **DATE:** 02/13/2012 **OFFICE:** AJV-352 **NAME:** MICHAEL CURRAN

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZID
ATC FACILITY: SDF/SDF
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: TERRE HAUTE VORTAC **STATE:** IN **COUNTRY:** US

LATITUDE/LONGITUDE: 392920.19N/0871456.47W **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	TERRE HAUTE	TTH	VORTAC	H							45000

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	TTH	VORTAC	049.00	229.00	R	1		2300	6000	4	5
2	NW		WP	319.12	139.12	R		10	18000	31000	16	24

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	265	TOWER (18-000456)	391355.00N/0872341.00W	1551	5D
1	200	TOWER (18-001906)	393223.56N/0870719.76W	993	2C
1	310	TOWER (18-000890)	393014.00N/0872637.00W	1249	3C

HOLDING RESTRICTIONS:
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 2600.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	ILS OR LOC RWY 5	KHUF	TERRE HAUTE	IN (US)
1	VOR/DME RWY 5	KHUF	TERRE HAUTE	IN (US)

REMARKS:
PAT 1 EVALUATED AT 265 KTS FOR CAT E MINIMUMS ON LOC BC RWY 23 AT KHUF.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.
PAT 2 - 10 NM LEGS REQUESTED BY ATC FOR RNAV STAR HOLDING.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	GATEWAY			KALN	ALTON/ST LOUIS	IL (US)
DP	GATEWAY			KBLV	BELLEVILLE	IL (US)
DP	GATEWAY			KCPS	CAHOKIA/ST LOUIS	IL (US)
DP	ROCKY			KEYE	INDIANAPOLIS	IN (US)
DP	ROCKY			KHFY	INDIANAPOLIS	IN (US)
DP	INDY			KIND	INDIANAPOLIS	IN (US)
DP	ROCKY			KIND	INDIANAPOLIS	IN (US)
DP	ROCKY			KMQJ	INDIANAPOLIS	IN (US)
DP	ROCKY			KTYQ	INDIANAPOLIS	IN (US)
DP	ROCKY			KUMP	INDIANAPOLIS	IN (US)
DP	ROCKY			KGEZ	SHELBYVILLE	IN (US)
DP	LOVEY (RNAV)			KCVG	COVINGTON	KY (US)
DP	WHITEWATER			KCVG	COVINGTON	KY (US)
DP	GATEWAY			KSTL	ST LOUIS	MO (US)
DP	GATEWAY			KSUS	ST LOUIS	MO (US)
DP	TITAN (OBSTACLE)			KBNA	NASHVILLE	TN (US)
EN ROUTE	V14					(US)
EN ROUTE	V171					(US)
EN ROUTE	V192					(US)
EN ROUTE	V243					(US)
EN ROUTE	V50					(US)
EN ROUTE	V7					(US)
IAP	RNAV (GPS) RWY 22			K1H8	CASEY	IL (US)
IAP	RNAV (GPS) RWY 27			KPRG	PARIS	IL (US)
IAP	VOR/DME-A			KPRG	PARIS	IL (US)
IAP	RNAV (GPS) RWY 27			K0I2	BRAZIL	IN (US)
IAP	VOR OR GPS RWY 9			K0I2	BRAZIL	IN (US)
IAP	RNAV (GPS) RWY 36			K4I7	GREENCASTLE	IN (US)
IAP	ILS OR LOC RWY 23R			KIND	INDIANAPOLIS	IN (US)
IAP	ILS OR LOC RWY 5L			KIND	INDIANAPOLIS	IN (US)
IAP	ILS RWY 5L (CAT II)			KIND	INDIANAPOLIS	IN (US)
IAP	ILS RWY 5L (CAT III)			KIND	INDIANAPOLIS	IN (US)
IAP	NDB RWY 36			KSIV	SULLIVAN	IN (US)
IAP	VOR/DME-A			KSIV	SULLIVAN	IN (US)
IAP	VOR OR GPS-A			K3I3	TERRE HAUTE	IN (US)
IAP	VOR-B			K3I3	TERRE HAUTE	IN (US)
IAP	ILS OR LOC RWY 5		1	KHUF	TERRE HAUTE	IN (US)
IAP	LOC BC RWY 23		1	KHUF	TERRE HAUTE	IN (US)
IAP	RNAV (GPS) RWY 23			KHUF	TERRE HAUTE	IN (US)
IAP	RNAV (GPS) RWY 5			KHUF	TERRE HAUTE	IN (US)
IAP	VOR RWY 23		1	KHUF	TERRE HAUTE	IN (US)

QUALITY CHECKED

IAP	VOR/DME RWY 5	1	KHUF	TERRE HAUTE	IN (US)
STAR	RACYR		KIND	INDIANAPOLIS	IN (US)
STAR	CHERI		KSDF	LOUISVILLE	KY (US)
STAR	DAMEN (RNAV)		KSDF	LOUISVILLE	KY (US)
STAR	FRIZN (RNAV)	2	KSDF	LOUISVILLE	KY (US)
STAR	HEHAW		KBNA	NASHVILLE	TN (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 12 **DATE OF REVISION:** 12/15/2011

REASON FOR REVISION:
ADDED PAT 2 DATA.
ADDED NOTE TO REMARKS SECTION: PAT 2 - 10 NM LEGS REQUESTED BY ATC FOR RNAV STAR HOLDING.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 06/27/2011 **OFFICE:** AJV-352 **NAME:** MICHAEL CURRAN

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZID
ATC FACILITY: HUF APP CON
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: THUND **STATE:** IN **COUNTRY:** US

LATITUDE/LONGITUDE: 382604.54N/0854858.05W **TYPE:** WP, RADAR, 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	LOUISVILLE	I-PKI	LOC/DME		347.91	344.91	16.85	16.85		5000	6000
2	NABB	ABB	VORTAC	L	221.60	222.60	12.55	12.55		5000	6000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
I-PKI	LOC/DME	R-348	17	5000	6000

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

REMARKS:
I-PKI DME COORDINATES: 380946.88N / 0854326.86W.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 17L	1, 2		KSDF	LOUISVILLE	KY (US)
IAP	RNAV (GPS) Y RWY 17L			KSDF	LOUISVILLE	KY (US)
STAR	FRIZN (RNAV)			KSDF	LOUISVILLE	KY (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 12/15/2011

REASON FOR REVISION:
UPDATED FIX LOCATION/COORDINATES UPDATED: MOVED 1.55 NM NORTH
CHANGED FAC 1 DISTANCES FROM 15.30 NM TO 16.85 NM
CHANGED FAC 2 T/M BEARING FROM 217.01/216.01 TO 222.60/221.60
CHANGED FAC 2 DISTANCES FROM 13.44 TO 12.55
REMOVED FAC 3
CHANGED ESV FROM 348/16/5000-6000 TO 348/17/5000-6000
UPDATED FIX USE
REMOVED REMARK REFERENCING DISPLACED THRESHOLD
ADDED STAR TO REQ CHARTING

DEVELOPED BY: **DATE:** 06/22/2011 **OFFICE:** AJV-352 **NAME:** DONALD SMITH (CHRISTOPHER COX)

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZID
ATC FACILITY: SDF ATCT/APP CON
OTHER: SDF AIRPORT MGR

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: BLGRS **STATE:** IN **COUNTRY:** US

LATITUDE/LONGITUDE: 381916.28N/0854735.24W **TYPE:** WP, RADAR, 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	LOUISVILLE	I-SNU	LOC/DME		348.41	345.41	10.36	10.36		3000	5000

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

REMARKS:
I-SNU DME 380915.18N/0854411.51W

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 17R	1		KSDF	LOUISVILLE	KY (US)
IAP	RNAV (GPS) Y RWY 17R			KSDF	LOUISVILLE	KY (US)
IAP	RNAV (RNP) Z RWY 17R			KSDF	LOUISVILLE	KY (US)
STAR	FRIZN (RNAV)			KSDF	LOUISVILLE	KY (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 3 **DATE OF REVISION:** 12/15/2011

REASON FOR REVISION:
UPDATED FIX USE
UPDATED LAT LONG : MOVED 4945.05FT NORTH
DELETED FAC 2 (RWY THLD REF)
UPDATED FAC 1 DME DIST FROM 9.55 TO 10.36 AND ADDED DIST FROM FAC NM
ADDED STAR TO REQ CHARTING

DEVELOPED BY: **DATE:** 07/18/2011 **OFFICE:** AJV-352 **NAME:** DONALD SMITH (CHRISTOPHER COX)

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZID
ATC FACILITY: SDF ATCT/APP CON
OTHER:

INFO ONLY

RADIO FIX AND HOLDING DATA RECORD

NAME: HONOS **STATE:** IN **COUNTRY:** US

LATITUDE/LONGITUDE: 383419.24N/0860755.74W **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	LOUISVILLE	IIU	VORTAC	H	316.17	317.17	38.40	38.40		10000	17500
2	NABB	ABB	VORTAC	L	266.68	267.68	23.37	23.37		3000	17500
3	HOOSIER	OOM	VORTAC	L	149.00	147.00	41.02	41.02		3000	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
OOM	VORTAC	R-149	42	3000	17500

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

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
UPN	200	TOWER (18-002353)	383830.00N/0855914.00W	1325	5D

HOLDING RESTRICTIONS:
UNPLANNED HOLDING AUTHORIZED AT OR ABOVE 3000

REMARKS:
LOUISVILLE (FAC 1) AND NABB (FAC 2) USED TO ESTABLISH FIX COORDINATES
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
EN ROUTE	V171	1, 2				(US)
EN ROUTE	V44	1, 2				(US)
IAP	LOC/NDB RWY 5			KSER	SEYMOUR	IN (US)
IAP	NDB RWY 5			KSER	SEYMOUR	IN (US)
IAP	RNAV (GPS) RWY 5			KSER	SEYMOUR	IN (US)
IAP	RNAV (GPS) Y RWY 17L			KSDF	LOUISVILLE	KY (US)
IAP	RNAV (GPS) Y RWY 17R			KSDF	LOUISVILLE	KY (US)
STAR	FRIZN RNAV			KSDF	LOUISVILLE	KY (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 7 **DATE OF REVISION:** 05/31/2012

REASON FOR REVISION:
DELETED FAC 3 - JIRIP.
ADDED FAC 3 HOOSIER
ADDED DIST FROM FAC TO FAC 1 AND 2.
UPDATED PAT 1 CONTROLLING OBSTACLE ID.
ADDED REMARK: PRECIPITOUS TERRAIN EVALUATION COMPLETED.
ADDED STAR TO REQUIRED CHARTING.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 02/15/2012 **OFFICE:** AJV-311 **NAME:** CHARLES BROOKS (TOBY HUFF)

APPROVED BY: **DATE:** **OFFICE:** AJV-311 **NAME:** RAY NUSSEAR

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZID
ATC FACILITY:
OTHER:

INFO ONLY

QUALITY CHECKED

INFO ONLY

RADIO FIX AND HOLDING DATA RECORD

NAME: LOUISVILLE VORTAC **STATE:** KY **COUNTRY:** US

LATITUDE/LONGITUDE: 380612.47N/0853438.77W **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	LOUISVILLE	IIU	VORTAC	H							45000

FIX RESTRICTIONS:
SPECIAL RNAV (GPS) Y RWY 17L, KSDF, LOUISVILLE, KY
VOR UNUSABLE 285 - 093 BELOW 10000.

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	SE	IIU	VORTAC	120.00	300.00	R	1		3000	6000	4	5
2	SE		WP	120.00	300.00	R		4	3000	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (21-000719)	380853.00N/0852942.00W	1089	5D
1	310	TOWER (21-000115)	381135.00N/0853114.00W	1229	2C
2	200	TOWER (21-000719)	380853.00N/0852942.00W	1089	5D
2	310	TOWER (21-000115)	381135.00N/0853114.00W	1229	2C

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	ILS OR LOC RWY 17L	KSDF	LOUISVILLE	KY (US)
2	RNAV (GPS) Y RWY 17L	KSDF	LOUISVILLE	KY (US)

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	BLUES			KALN	ALTON/ST LOUIS	IL (US)
DP	BLUES			KBLV	BELLEVILLE	IL (US)
DP	BLUES			KCPS	CAHOKIA/ST LOUIS	IL (US)
DP	DAWNN			KIND	INDIANAPOLIS	IN (US)
DP	FOYTT (RNAV)			KIND	INDIANAPOLIS	IN (US)
DP	BLUEGRASS			KCVG	COVINGTON	KY (US)
DP	CHCLL (RNAV)			KCVG	COVINGTON	KY (US)
DP	CINCINNATI			KCVG	COVINGTON	KY (US)
DP	DERBY CITY			KSDF	LOUISVILLE	KY (US)
DP	BLUES			KSTL	ST LOUIS	MO (US)
DP	BLUES			KSUS	ST LOUIS	MO (US)
DP	CHATANOOGA			KCHA	CHATTANOOGA	TN (US)
DP	KNOXVILLE			KTYS	KNOXVILLE	TN (US)
DP	TITAN			KBNA	NASHVILLE	TN (US)
EN ROUTE	J112					(US)
EN ROUTE	J39					(US)
EN ROUTE	J526					(US)
EN ROUTE	J78					(US)
EN ROUTE	J8					(US)
EN ROUTE	J89					(US)
EN ROUTE	J99					(US)
EN ROUTE	T213					(US)
EN ROUTE	V171					(US)
EN ROUTE	V310					(US)
EN ROUTE	V4					(US)
EN ROUTE	V5					(US)
EN ROUTE	V51					(US)
EN ROUTE	V512					(US)
EN ROUTE	V513					(US)
EN ROUTE	V53					(US)
IAP	BLUES			KALN	ALTON/ST LOUIS	IL (US)
IAP	LOC/DME RWY 30			KDVK	DANVILLE	KY (US)
IAP	VOR-A			KEKX	ELIZABETHTOWN	KY (US)
IAP	RNAV (GPS) RWY 18			KFTK	FORT KNOX	KY (US)
IAP	RNAV (GPS) RWY 24			KLOU	LOUISVILLE	KY (US)
IAP	VOR RWY 24		1	KLOU	LOUISVILLE	KY (US)
IAP	ILS OR LOC RWY 17L		1	KSDF	LOUISVILLE	KY (US)
IAP	ILS OR LOC RWY 17R			KSDF	LOUISVILLE	KY (US)

QUALITY 4 CHECKED

IAP	ILS OR LOC RWY 35L		KSDF	LOUISVILLE	KY (US)
IAP	ILS OR LOC RWY 35R		KSDF	LOUISVILLE	KY (US)
IAP	ILS RWY 35L (CAT II, III)		KSDF	LOUISVILLE	KY (US)
IAP	ILS RWY 35R (CAT II, III)		KSDF	LOUISVILLE	KY (US)
IAP	LOC RWY 29		KSDF	LOUISVILLE	KY (US)
IAP	RNAV (GPS) Y RWY 17L	2	KSDF	LOUISVILLE	KY (US)
STAR	DECEE		KIND	INDIANAPOLIS	IN (US)
STAR	SARGO (RNAV)		KCVG	COVINGTON	KY (US)
STAR	CLEGG		KLEX	LEXINGTON	KY (US)
STAR	CHERI		KSDF	LOUISVILLE	KY (US)
STAR	DAMEN (RNAV)		KSDF	LOUISVILLE	KY (US)
STAR	DARBY		KSDF	LOUISVILLE	KY (US)
STAR	DLAMP (RNAV)		KSDF	LOUISVILLE	KY (US)
STAR	FRIZN (RNAV)		KSDF	LOUISVILLE	KY (US)
STAR	MAUDD (RNAV)		KSDF	LOUISVILLE	KY (US)
STAR	MBELL (RNAV)		KSDF	LOUISVILLE	KY (US)
STAR	REDSTONE		KSDF	LOUISVILLE	KY (US)
STAR	GENUS		KLUK	CINCINNATI	OH (US)
STAR	ZABER		KBKL	CLEVELAND	OH (US)
STAR	ZABER		KCGF	CLEVELAND	OH (US)
STAR	ZABER		KCLE	CLEVELAND	OH (US)
STAR	GAILL (RNAV)		KCMH	COLUMBUS	OH (US)
STAR	ZABER		K1G1	ELYRIA	OH (US)
STAR	ZABER		KLPR	LORAIN/ELYRIA	OH (US)
STAR	ZABER		K1G5	MEDINA	OH (US)
STAR	ZABER		K7G8	MIDDLEFIELD	OH (US)
STAR	ZABER		K2G1	PAINESVILLE	OH (US)
STAR	ZABER		KLNN	WILLOUGHBY	OH (US)
STAR	GUITR		KBNA	NASHVILLE	TN (US)
STAR	HEHAW		KBNA	NASHVILLE	TN (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 9 **DATE OF REVISION:** 10/22/2009

REASON FOR REVISION:
UPDATED HOLDING OBSTACLE DATA ID'S.
ADDED PRECIPITOUS TERRAIN STATEMENT.
UPDATED FIX USE.

DEVELOPED BY: **DATE:** 04/20/2009 **OFFICE:** AVN-120 **NAME:** JON DENTON

APPROVED BY: **DATE:** 08/11/2009 **OFFICE:** AVN-120 **NAME:** SUE CRUMB

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZID
ATC FACILITY: SDF APP CON/ATCT
OTHER:

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: RACRR **STATE:** IN **COUNTRY:** US

LATITUDE/LONGITUDE: 382239.71N/0854747.64W **TYPE:** WP, RADAR, 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	LOUISVILLE	I-PKI	LOC/DME		347.91	344.91	13.31	13.32		4000	4900

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

REMARKS:
I-PKI DME COORDINATES: 380946.88N / 0854326.86W.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	ILS OR LOC RWY 17L	1		KSDF	LOUISVILLE	KY (US)
IAP	RNAV (GPS) Y RWY 17L			KSDF	LOUISVILLE	KY (US)
IAP	RNAV (RNP) Z RWY 17L			KSDF	LOUISVILLE	KY (US)
STAR	FRIZN (RNAV)			KSDF	LOUISVILLE	KY (US)

REQUIRED CHARTING: STAR, IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 4 **DATE OF REVISION:** 12/15/2011

REASON FOR REVISION:
MOVED FIX 1.16 NM NORTH
ADDED FAC 1 DIST FROM FAC NM TO FACILITY 1
CHANGED FAC 1 DME DISTANCE FROM 12.16 TO 13.31
REMOVED FAC 2
REMOVED REMARKS REFERENCING DRWT AND HOW FIX WAS ESTABLISHED
UPDATED FIX USE FORMAT
ADDED STAR TO REQ CHARTING

DEVELOPED BY: **DATE:** 06/22/2011 **OFFICE:** AJV-352 **NAME:** DONALD SMITH (CHRISTOPHER COX)

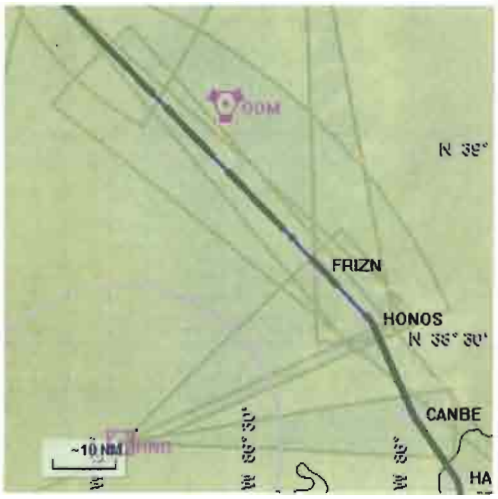
APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** DARRYEL ADAMS

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZID
ATC FACILITY: SDF ATCT/APP CON
OTHER: SDF AIRPORT MGR

INFO ONLY

QUALITY 4 CHECKED



Name:	Dennis Osterhage
Project Name:	KSDF FRIZN1 STAR TTH BNETT 20120216
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	2/16/2012 9:30:58 AM
Input File:	KSDF FRIZN1 STAR TTH...
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓
DME/DME	✓
Radars	
Comms	
TERPS	

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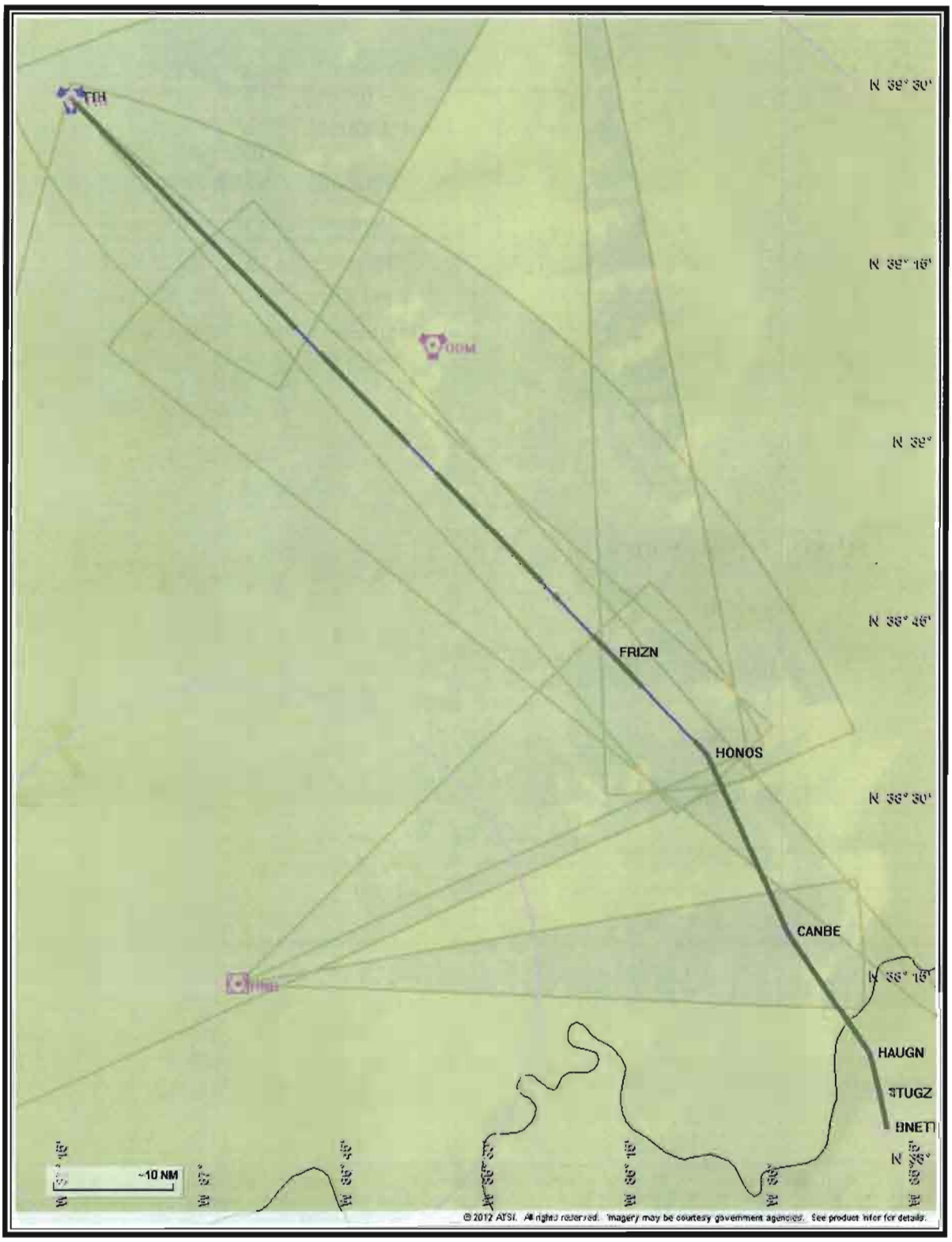
TTH
N 38° 30'
N 38° 15'
N 38°
N 37° 45'
FRIZN
HONOS
N 37° 30'
CANBE
N 37° 15'
HAUGN
STUGZ
BNETT
~10 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
TTH	WP	N 39° 29' 20.19" W 87° 14' 56.47"	18000.0	Step	220.0	Fly By	TF
FRIZN	WP	N 38° 42' 47.04" W 86° 18' 4.78"	11000.0	Step	210.0	Fly By	TF
HONOS	WP	N 38° 34' 19.24" W 86° 7' 55.74"	6000.0	Step	180.0	Fly By	TF
CANBE	WP	N 38° 19' 13.92" W 85° 59' 21.27"	6000.0	Step	180.0	Fly By	TF
HAUGN	WP	N 38° 9' 11.74" W 85° 50' 44.80"	6000.0	Step	180.0	Fly By	TF
STUGZ	WP	N 38° 5' 53.50" W 85° 49' 42.56"	5000.0	Step	180.0	Fly By	TF
BNETT	WP	N 38° 3' 4.00" W 85° 48' 57.63"	5000.0	Step	180.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival/Approach
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

Entire track is fly-able

DME/DME

Return To Summary

Settings:

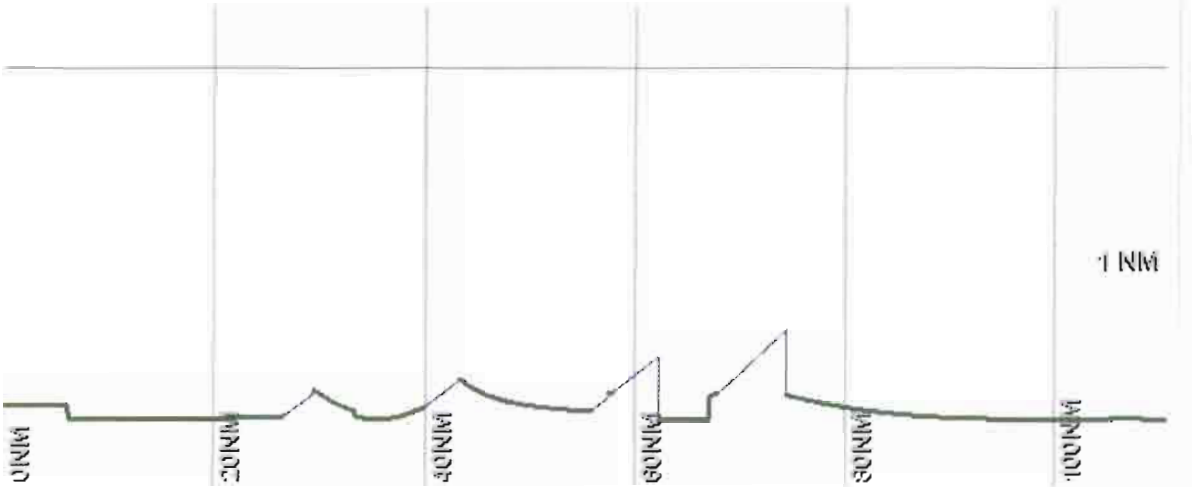
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: 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: 11

Maximum DME Error: 0.648 NM.

No Critical DMEs were found.

Available DMEs: VHP, AXC, BVT, OKK, PXV, TTH, OOM, IIU, ABB, HNB, BQM, EWO



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	AXC	N 39° 44' 15.08" W 88° 51' 23.15"	H	Database	NO	0.648	Enabled	5.0 %	5.4 %
2	BVT	N 40° 33' 22.03" W 87° 4' 9.55"	H	Database	NO	0.648	Enabled	0.1 %	0.0 %
3	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H + ESV	User	NO	0.914	Enabled	15.4 %	16.7 %
4	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H + ESV	User	NO	0.731	Enabled	26.9 %	28.7 %
5	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H + ESV	User	NO	1.047	Enabled	17.1 %	18.5 %
6	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H + ESV	User	NO	1.037	Enabled	37.7 %	34.6 %
7	OOM	N 39° 8' 37.76" W 86° 36' 46.87"	L	Database	NO	1.481	Enabled	19.5 %	21.1 %
8	ABB	N 38° 35' 19.82" W 85° 38' 9.57"	L	Database	NO	1.185	Enabled	32.0 %	28.9 %
9	HNB	N 38° 15' 1.76" W 86° 57' 22.30"	T + ESV	User	NO	1.005	Enabled	5.2 %	5.1 %
10	BQM	N 38° 13' 48.79" W 85° 39' 53.08"	T	Database	NO	0.648	Enabled	1.9 %	1.8 %
11	EWO	N 37° 37' 54.52" W 85° 40' 33.16"	L	Database	NO	0.648	Enabled	5.5 %	5.0 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	VHP	TTH	AXC	BVT	PXV	OKK
10.1	VHP	TTH	IIU	OOM		
33.4	ABB	TTH	PXV	OOM	HNB	
64.2	ABB	TTH	IIU	HNB		
75.3	ABB	BQM	IIU	HNB		
92.0	ABB	BQM	IIU	HNB	EWO	
103.9	ABB	BQM	IIU	EWO		
107.7	ABB	BQM	IIU	EWO		

DME/DME (Continued.)

Return To Summary

Inertial Drift Segments

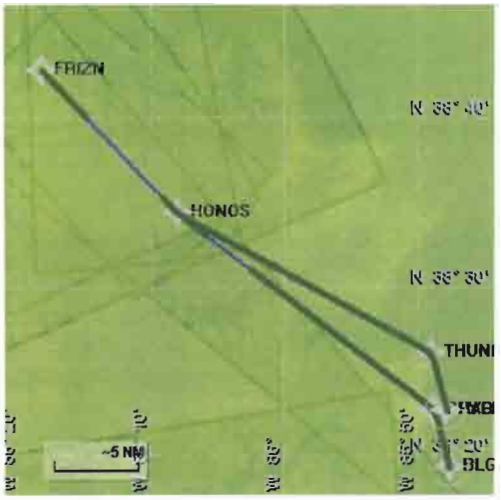
#	Start Location	End Location	Length [NM]
1	N 39° 10' 10.10" W 86° 51' 18.23"	N 39° 8' 8.37" W 86° 48' 49.25"	2.8
	VOR: OOM	Available from N 39° 10' 10.10" W 86° 51' 18.23" to N 39° 8' 8.37" W 86° 48' 49.25"	
	VOR: RSV	Available from N 39° 10' 10.10" W 86° 51' 18.23" to N 39° 8' 8.37" W 86° 48' 49.25"	
	VOR: TTH	Available from N 39° 10' 10.10" W 86° 51' 18.23" to N 39° 8' 8.37" W 86° 48' 49.25"	
2	N 39° 0' 29.94" W 86° 39' 30.05"	N 38° 58' 1.80" W 86° 36' 29.98"	3.4
	VOR: OOM	Available from N 39° 0' 29.94" W 86° 39' 30.05" to N 38° 58' 1.80" W 86° 36' 29.98"	
	VOR: TTH	Available from N 39° 0' 29.94" W 86° 39' 30.05" to N 39° 0' 24.13" W 86° 39' 22.99"	
3	N 38° 48' 52.14" W 86° 25' 24.48"	N 38° 47' 45.17" W 86° 24' 3.69"	1.5
	VOR: ABB	Available from N 38° 48' 52.14" W 86° 25' 24.48" to N 38° 47' 45.17" W 86° 24' 3.69"	
	VOR: OOM	Available from N 38° 48' 52.14" W 86° 25' 24.48" to N 38° 47' 45.17" W 86° 24' 3.69"	
4	N 38° 47' 24.79" W 86° 23' 39.11"	N 38° 44' 15.44" W 86° 19' 51.06"	4.3
	VOR: ABB	Available from N 38° 47' 24.79" W 86° 23' 39.11" to N 38° 44' 15.44" W 86° 19' 51.06"	
	VOR: OOM	Available from N 38° 47' 24.79" W 86° 23' 39.11" to N 38° 44' 15.44" W 86° 19' 51.06"	
5	N 38° 40' 4.34" W 86° 14' 49.32"	N 38° 35' 22.40" W 86° 9' 11.27"	6.4
	VOR: ABB	Available from N 38° 40' 4.34" W 86° 14' 49.32" to N 38° 35' 22.40" W 86° 9' 11.27"	
	VOR: BQM	Available from N 38° 40' 4.34" W 86° 14' 49.32" to N 38° 35' 22.40" W 86° 9' 11.27"	
	VOR: OOM	Available from N 38° 40' 4.34" W 86° 14' 49.32" to N 38° 35' 22.40" W 86° 9' 11.27"	
	VOR: IIU	Available from N 38° 35' 27.26" W 86° 9' 17.09" to N 38° 35' 22.40" W 86° 9' 11.27"	

DME/DME (Continued.)

Return To Summary

User DMEs

#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	HNB	N 38° 15' 1.76" W 86° 57' 22.30"	T	516.7	109.20	HNB	Used
		ESV: Bearing [True]: 45.0° to 65.0° Bearing [Mag]: 45.0° to 65.0°			Arc Distance: Out to 48.0 NM Altitude: 9000.0 to 16000.0 Ft.		
		ESV: Bearing [True]: 80.0° to 92.0° Bearing [Mag]: 80.0° to 92.0°			Arc Distance: Out to 52.0 NM Altitude: 5000.0 to 12000.0 Ft.		
2	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H	720.0	114.80	IIU	Used
		ESV: Bearing [True]: 310.0° to 320.0° Bearing [Mag]: 309.0° to 319.0°			Arc Distance: Out to 98.0 NM Altitude: 9500.0 to 16500.0 Ft.		
3	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	384.3	113.30	PXV	Used
		ESV: Bearing [True]: 14.0° to 65.0° Bearing [Mag]: 11.0° to 62.0°			Arc Distance: Out to 98.0 NM Altitude: 9500.0 to 15000.0 Ft.		
4	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	606.1	115.30	TTH	Used
		ESV: Bearing [True]: 132.0° to 140.0° Bearing [Mag]: 130.0° to 138.0°			Arc Distance: Out to 78.0 NM Altitude: 9500.0 to 16000.0 Ft.		
5	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	823.0	116.30	VHP	Used
		Restriction: Bearing [True]: 313.0° to 347.0° Bearing [Mag]: 312.0° to 346.0°			Distance: Beyond 25.0 NM Altitude: Below 4000.0 Ft.		
		ESV: Bearing [True]: 169.0° to 178.0° Bearing [Mag]: 168.0° to 177.0°			Arc Distance: Out to 78.0 NM Altitude: 9500.0 to 16000.0 Ft.		
		ESV: Bearing [True]: 209.0° to 250.0° Bearing [Mag]: 208.0° to 249.0°			Arc Distance: Out to 50.0 NM Altitude: 9500.0 to 16000.0 Ft.		



Name:	Dennis Osterhage
Project Name:	KSDF FRIZN STAR FRIZN BLGRS 20111216
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	12/16/2011 12:34:28 PM
Input File:	KSDF FRIZN STAR FRIZ...
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✓
DME/DME	✓
Radars	
Comms	
TERPS	

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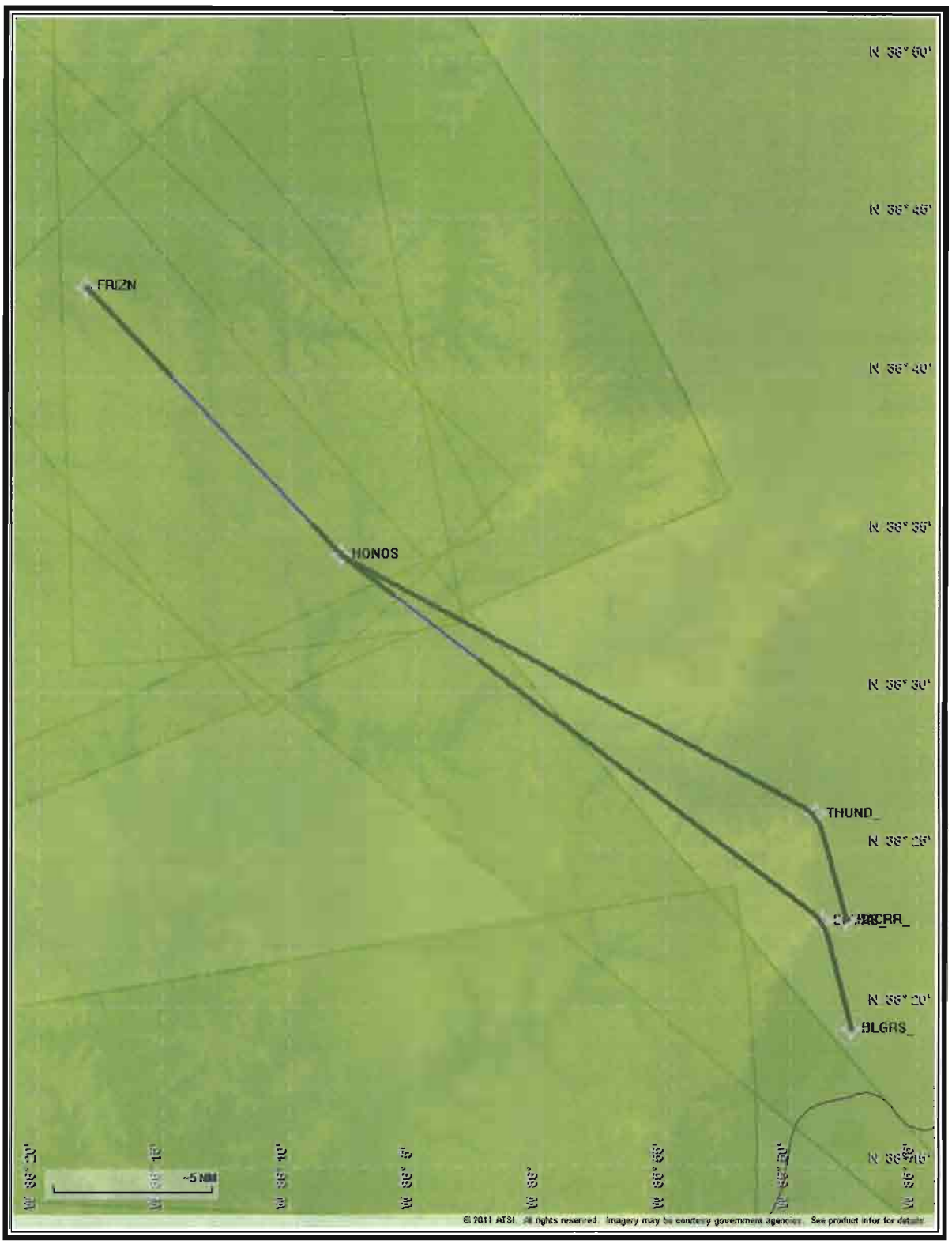
FRIZN
HONOS
THUND_
BLGRS_
~5 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
FRIZN	WP	N 38° 42' 47.04" W 86° 18' 4.78"	11000.0	Step	210.0	Fly By	TF
HONOS	WP	N 38° 34' 19.24" W 86° 7' 55.74"	5000.0	Step	180.0	Fly By	TF
SPYRS_	WP	N 38° 22' 39.30" W 85° 48' 42.51"	4000.0	Step	180.0	Fly By	TF
BLGRS_	WP	N 38° 19' 16.28" W 85° 47' 35.24"	3000.0	Step	180.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival/Approach
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

Entire track is fly-able

DME/DME

Return To Summary

Settings:

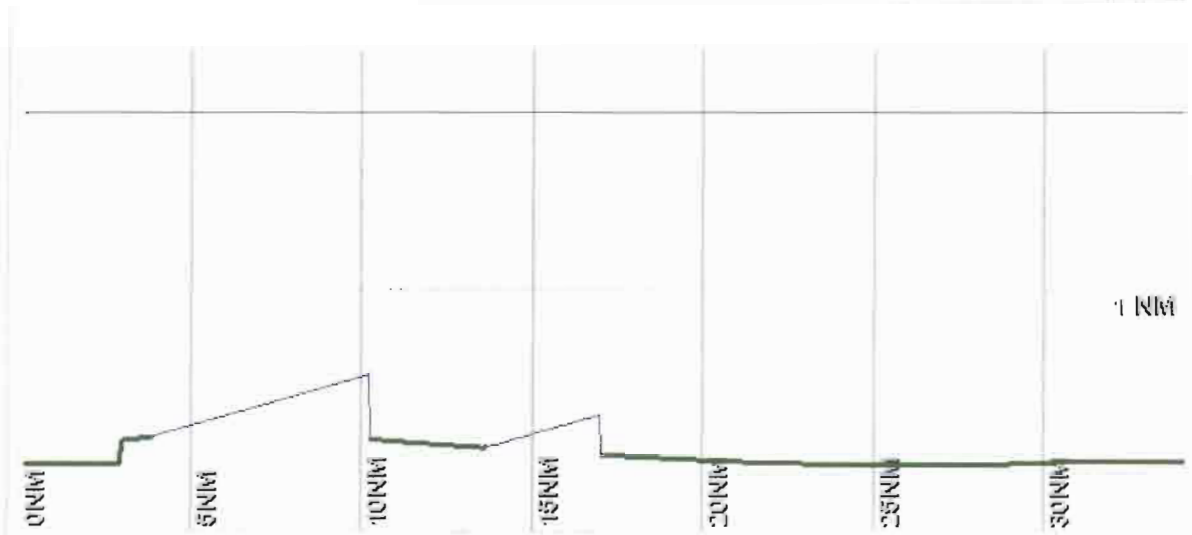
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: 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: 5

Maximum DME Error: 0.647 NM.

No Critical DMEs were found.

Available DMEs: HNB, TTH, ABB, IIU, BQM



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	HNB	N 38° 15' 1.76" W 86° 57' 22.30"	T + ESV	User	NO	0.960	Enabled	10.8 %	11.0 %
2	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H + ESV	User	NO	0.647	Enabled	8.3 %	8.5 %
3	ABB	N 38° 35' 19.82" W 85° 38' 9.57"	L	Database	NO	1.527	Enabled	62.7 %	62.6 %
4	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H + ESV	User	NO	0.939	Enabled	36.9 %	36.8 %
5	BQM	N 38° 13' 48.79" W 85° 39' 53.08"	T	Database	NO	0.647	Enabled	23.4 %	23.3 %

Flight Check DME Selection

Distance [NM]	Selected DMEs				Alternate
0.0	HNB	ABB	IIU	TTH	
11.2	BQM	ABB	IIU		
30.0	BQM	ABB	IIU		

Inertial Drift Segments

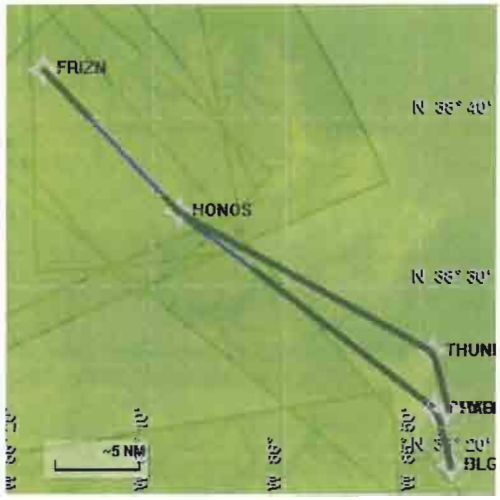
#	Start Location	End Location	Length [NM]
1	N 38° 40' 0.70" W 86° 14' 44.84"	N 38° 35' 21.21" W 86° 9' 9.85"	6.4
	VOR: ABB	Available from N 38° 40' 0.70" W 86° 14' 44.84" to N 38° 35' 21.21" W 86° 9' 9.85"	
	VOR: BQM	Available from N 38° 40' 0.70" W 86° 14' 44.84" to N 38° 35' 21.21" W 86° 9' 9.85"	
	VOR: OOM	Available from N 38° 40' 0.70" W 86° 14' 44.84" to N 38° 35' 21.21" W 86° 9' 9.85"	
	VOR: IIU	Available from N 38° 35' 28.51" W 86° 9' 18.58" to N 38° 35' 21.21" W 86° 9' 9.85"	
2	N 38° 33' 4.58" W 86° 5' 52.92"	N 38° 31' 2.44" W 86° 2' 30.83"	3.3
	VOR: ABB	Available from N 38° 33' 4.58" W 86° 5' 52.92" to N 38° 31' 2.44" W 86° 2' 30.83"	
	VOR: BQM	Available from N 38° 33' 4.58" W 86° 5' 52.92" to N 38° 31' 2.44" W 86° 2' 30.83"	
	VOR: FTK	Available from N 38° 33' 4.58" W 86° 5' 52.92" to N 38° 31' 2.44" W 86° 2' 30.83"	
	VOR: IIU	Available from N 38° 33' 4.58" W 86° 5' 52.92" to N 38° 31' 2.44" W 86° 2' 30.83"	
	VOR: MYS	Available from N 38° 33' 4.58" W 86° 5' 52.92" to N 38° 31' 2.44" W 86° 2' 30.83"	

DME/DME (Continued.)

Return To Summary

User DMEs

#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	HNB	N 38° 15' 1.76" W 86° 57' 22.30"	T	516.7	109.20	HNB	Used
	ESV:	Bearing [True]: 45.0° to 65.0° Bearing [Mag]: 45.0° to 65.0°		Arc Distance: Out to 48.0 NM Altitude: 9000.0 to 16000.0 Ft.			
	ESV:	Bearing [True]: 80.0° to 92.0° Bearing [Mag]: 80.0° to 92.0°		Arc Distance: Out to 52.0 NM Altitude: 5000.0 to 12000.0 Ft.			
2	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H	720.0	114.80	IIU	Used
	ESV:	Bearing [True]: 310.0° to 320.0° Bearing [Mag]: 309.0° to 319.0°		Arc Distance: Out to 98.0 NM Altitude: 9500.0 to 16500.0 Ft.			
3	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	384.3	113.30	PXV	Not Used
	ESV:	Bearing [True]: 14.0° to 65.0° Bearing [Mag]: 11.0° to 62.0°		Arc Distance: Out to 98.0 NM Altitude: 9500.0 to 15000.0 Ft.			
4	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	606.1	115.30	TTH	Used
	ESV:	Bearing [True]: 132.0° to 140.0° Bearing [Mag]: 130.0° to 138.0°		Arc Distance: Out to 78.0 NM Altitude: 9500.0 to 16000.0 Ft.			
5	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	823.0	116.30	VHP	Not Used
	Restriction:	Bearing [True]: 313.0° to 347.0° Bearing [Mag]: 312.0° to 346.0°		Distance: Beyond 25.0 NM Altitude: Below 4000.0 Ft.			
	ESV:	Bearing [True]: 169.0° to 178.0° Bearing [Mag]: 168.0° to 177.0°		Arc Distance: Out to 78.0 NM Altitude: 9500.0 to 16000.0 Ft.			



Name:	Dennis Osterhage
Project Name:	KSDF FRIZN STAR FRIZN RACRR 20111216
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	12/16/2011 12:36:27 PM
Input File:	KSDF FRIZN STAR FRZN...
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Flyability	✔
DME/DME	✔
Radars	
Comms	
TERPS	

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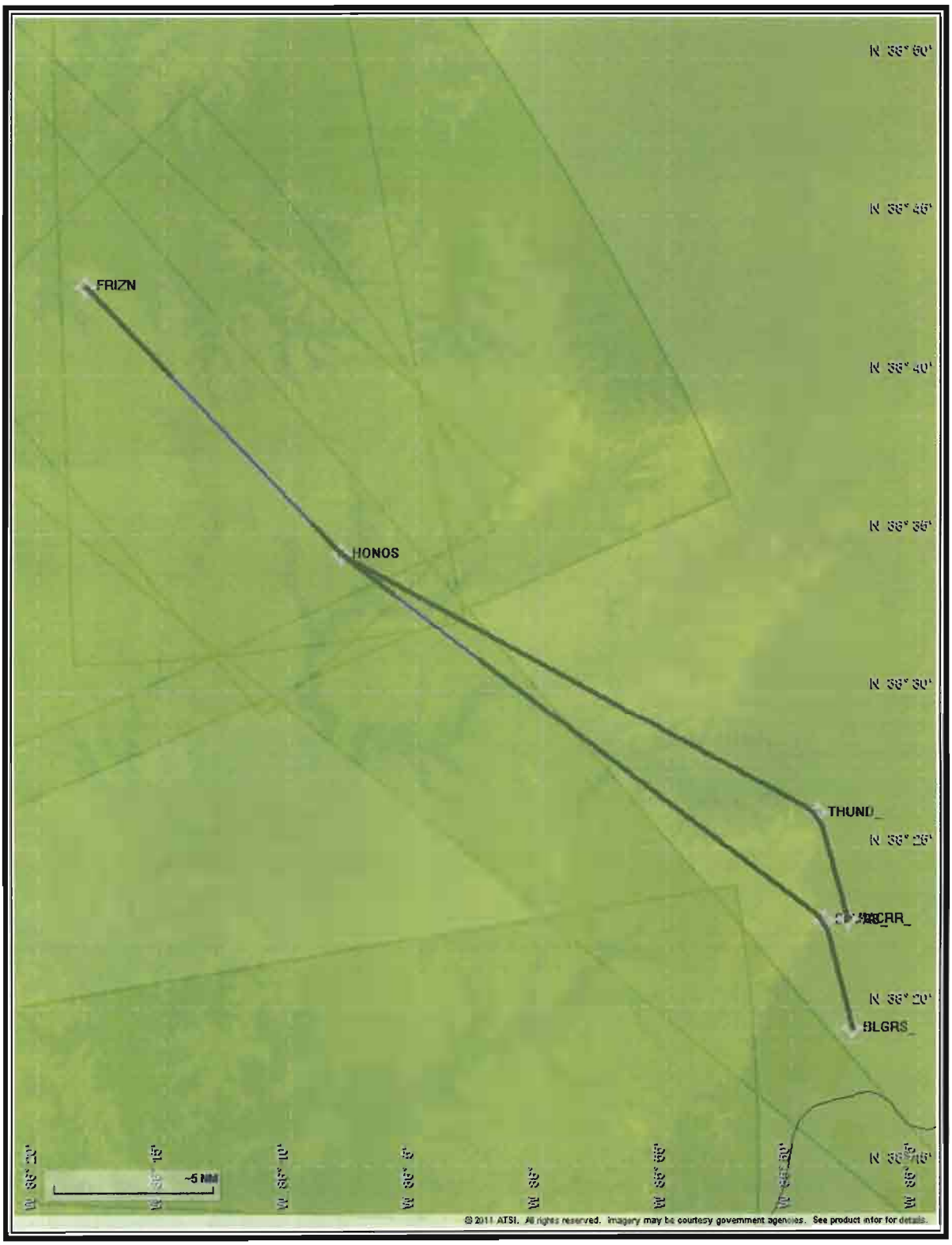
N 38° 50'
N 38° 45'
FRIZN
N 38° 40'
HONOS
N 38° 35'
N 38° 30'
THUND_
N 38° 25'
RACRR_
N 38° 20'
BLGRS_
~5 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
FRIZN	WP	N 38° 42' 47.04" W 86° 18' 4.78"	11000.0	Step	210.0	Fly By	TF
HONOS	WP	N 38° 34' 19.24" W 86° 7' 55.74"	5000.0	Step	180.0	Fly By	TF
THUND_	WP	N 38° 26' 4.54" W 85° 48' 58.05"	5000.0	Step	180.0	Fly By	TF
RACRR_	WP	N 38° 22' 39.71" W 85° 47' 47.64"	4000.0	Step	180.0	Fly Over	TF

Flyability

Return To Summary

Settings:

Flight Type: Arrival/Approach
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

Entire track is fly-able

DME/DME

Return To Summary

Settings:

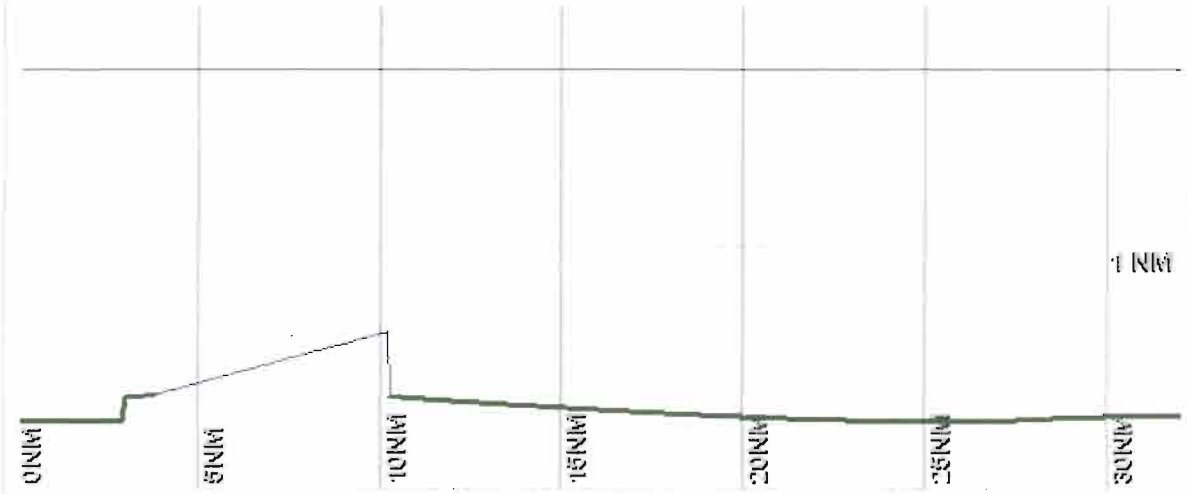
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: 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: 5

Maximum DME Error: 0.647 NM.

No Critical DMEs were found.

Available DMEs: HNB, TTH, ABB, IIU, BQM



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	HNB	N 38° 15' 1.76" W 86° 57' 22.30"	T + ESV	User	NO	0.960	Enabled	11.5 %	11.7 %
2	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H + ESV	User	NO	0.647	Enabled	8.9 %	9.1 %
3	ABB	N 38° 35' 19.82" W 85° 38' 9.57"	L	Database	NO	1.445	Enabled	71.0 %	70.8 %
4	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H + ESV	User	NO	0.979	Enabled	47.7 %	47.5 %
5	BQM	N 38° 13' 48.79" W 85° 39' 53.08"	T	Database	NO	0.647	Enabled	20.7 %	20.6 %

Flight Check DME Selection

Distance [NM]	Selected DMEs				Alternate
0.0	HNB	ABB	IIU	TTH	
11.1	BQM	ABB	IIU		
27.9	BQM	ABB	IIU		

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 38° 40' 0.70" W 86° 14' 44.84"	N 38° 35' 21.21" W 86° 9' 9.85"	6.4
	VOR: ABB	Available from N 38° 40' 0.70" W 86° 14' 44.84" to N 38° 35' 21.21" W 86° 9' 9.85"	
	VOR: BQM	Available from N 38° 40' 0.70" W 86° 14' 44.84" to N 38° 35' 21.21" W 86° 9' 9.85"	
	VOR: OOM	Available from N 38° 40' 0.70" W 86° 14' 44.84" to N 38° 35' 21.21" W 86° 9' 9.85"	
	VOR: IIU	Available from N 38° 35' 28.51" W 86° 9' 18.58" to N 38° 35' 21.21" W 86° 9' 9.85"	

DME/DME (Continued.)

Return To Summary

User DMEs

#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	HNB	N 38° 15' 1.76" W 86° 57' 22.30"	T	516.7	109.20	HNB	Used
	ESV:	Bearing [True]: 45.0° to 65.0° Bearing [Mag]: 45.0° to 65.0°			Arc Distance: Out to 48.0 NM Altitude: 9000.0 to 16000.0 Ft.		
	ESV:	Bearing [True]: 80.0° to 92.0° Bearing [Mag]: 80.0° to 92.0°			Arc Distance: Out to 52.0 NM Altitude: 5000.0 to 12000.0 Ft.		
2	IIU	N 38° 6' 12.47" W 85° 34' 38.77"	H	720.0	114.80	IIU	Used
	ESV:	Bearing [True]: 310.0° to 320.0° Bearing [Mag]: 309.0° to 319.0°			Arc Distance: Out to 98.0 NM Altitude: 9500.0 to 16500.0 Ft.		
3	PXV	N 37° 55' 41.95" W 87° 45' 44.56"	H	384.3	113.30	PXV	Not Used
	ESV:	Bearing [True]: 14.0° to 65.0° Bearing [Mag]: 11.0° to 62.0°			Arc Distance: Out to 98.0 NM Altitude: 9500.0 to 15000.0 Ft.		
4	TTH	N 39° 29' 20.19" W 87° 14' 56.47"	H	606.1	115.30	TTH	Used
	ESV:	Bearing [True]: 132.0° to 140.0° Bearing [Mag]: 130.0° to 138.0°			Arc Distance: Out to 78.0 NM Altitude: 9500.0 to 16000.0 Ft.		
5	VHP	N 39° 48' 53.02" W 86° 22' 2.88"	H	823.0	116.30	VHP	Not Used
	Restriction:	Bearing [True]: 313.0° to 347.0° Bearing [Mag]: 312.0° to 346.0°			Distance: Beyond 25.0 NM Altitude: Below 4000.0 Ft.		
	ESV:	Bearing [True]: 169.0° to 178.0° Bearing [Mag]: 168.0° to 177.0°			Arc Distance: Out to 78.0 NM Altitude: 9500.0 to 16000.0 Ft.		