Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: SID	Date Open: 09/21/2010	Task #: 2010092125714102011	Request #: 20100921257141
Procedure: SID DANLS (RNAV) ONE NASHVILLE TN KBNA		Airport ID: KBNA	Airport: NASHVILLE INTL		Reimbursable #:
City: NASHVILLE	ST: TN	GPS #:		Estimated Chart Date: 11/15/2012	FICO #: 1090921
Fac ID: BNA	Fac. Type: Proc-D	Specialist: DAVID SAUER			

P1 DME / DME

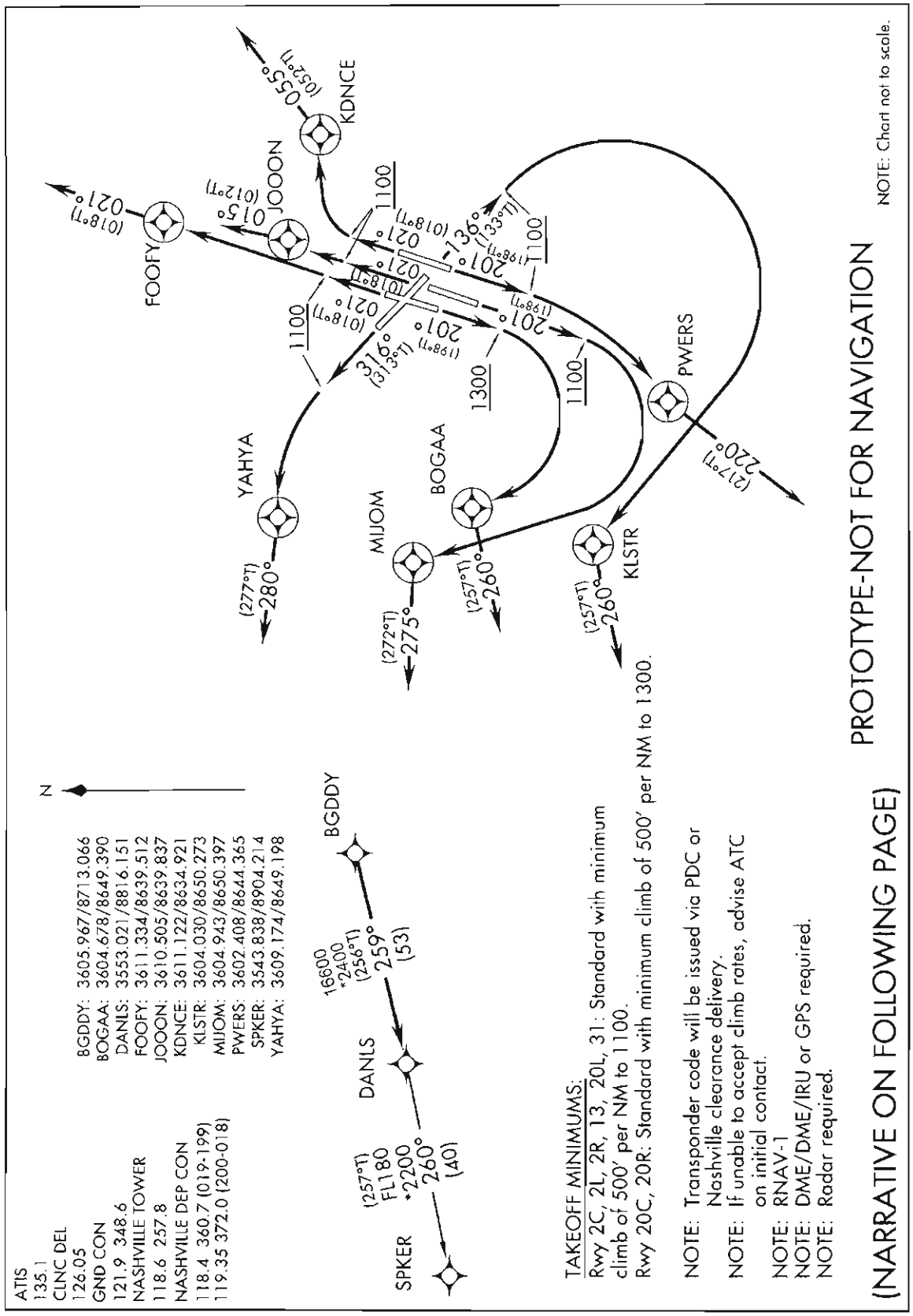
Procedure Review

	Rec'd	Rel'd	Full Name	Comments
Lead:	05/04/2012	07/20/2012	DONALD SMITH	
QA:	07/20/2012	07/20/2012	STEVEN SZUKALA	
Liaison:	07/20/2012		K. Spurlin	P1; ESV; DME/DME; REPLACEMENT 8/6/12 ESV REQUEST INCLUDED

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

NASHVILLE, TN; NASHVILLE INTL (KBNA); SID DANLS (RNAV) ONE; ENROUTE-YES; FC BY 9/18/12 PUB 11/15/12
ESV(S): (4): NASHVILLE (BNA) VTAC (1), BOWLING GREEN (BWG) VTAC (1), DYERSBURG (DYR) VTAC (1), SHELBYVILLE (SYI) VDME (1).
ATTACHED FORMS: 8260-15B, 8260-15C.
8260-2(S): BGDDY, ORIG; BOGAA, ORIG; DANLS, ORIG; FOOFY, ORIG; JOOON, ORIG; KDNCE, ORIG; KLSTR, ORIG; MIJOM, ORIG; PWERS, ORIG; SPKER INT; REV 6; YAHYA, ORIG.
REPLACEMENT 8/6/12: -15B
CONTACT: DON SMITH/MARLON ROBINSON-AJV-352 LEADS, 405.954.1036/405.954.3636.

DANLS ONE DEPARTURE (RNAV)



DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 2C: Climb heading 021° to 1100 MSL, then direct JOOON, then on heading 015°, thence. . . .
TAKEOFF RUNWAY 2L: Climb heading 021° to 1100 MSL, then direct FOOFY, then on heading 021°, thence. . . .
TAKEOFF RUNWAY 2R: Climb heading 021° to 1100 MSL, then right turn direct KDNCE, then on heading 055°, thence. . . .
TAKEOFF RUNWAY 13: Climb heading 136° to 1100 MSL, then right turn direct KLSTR, then on heading 260°, thence. . . .
TAKEOFF RUNWAY 20C: Climb heading 201° to 1100 MSL, then right turn direct MIJOM, then on heading 275°, thence. . . .
TAKEOFF RUNWAY 20L: Climb heading 201° to 1100 MSL, then right turn direct PWERS, then on heading 220°, thence. . . .
TAKEOFF RUNWAY 20R: Climb heading 201° to 1100 MSL, then right turn direct BOGAA, then on heading 260°, thence. . . .
TAKEOFF RUNWAY 31: Climb heading 316° to 1100 MSL, then left turn direct YAHYA, then on heading 280°, thence. . . .

. . . .Expect radar vectors to BGDDY, then on track 259° to DANLS, maintain 4000.
Expect clearance to filed altitude within 5 minutes after departure.

SPKER TRANSITION (DANLS1.SPKER):

TAKEOFF OBSTACLES:

Rwy 2L: Trees beginning 203′ from DER, 489′ right of centerline, up to 60′ AGL/576′ MSL.
Rwy 13: Blast fence obstruction light 335′ from DER, 64′ left of centerline, 6′ AGL/595′ MSL.
Trees beginning 2852′ from DER, 28′ right of centerline, up to 60′ AGL/685′ MSL.
Pole 3761′ from DER, 726′ right of centerline, 60′ AGL/689′ MSL.
Rwy 20C: Tree beginning 2089′ from DER, 934′ right of centerline, up to 60′ AGL/623′ MSL.
Rwy 20L: Trees beginning 1844′ from DER, 720′ left of centerline, up to 60′ AGL/639′ MSL.
Rwy 20R: Flagpole 1298′ from DER, 777′ right of centerline, 37′ AGL/636′ MSL.
Building 2183′ from DER, 1083′ right of centerline, 91′ AGL/680′ MSL.
Rwy 31: Ground 2′ from DER, 498′ left of centerline, 541′ MSL.
LOC obstruction light 303′ from DER, on centerline, 48′ AGL/547′ MSL.
Blast fence obstruction light 382′ from DER, 50′ left of centerline, 30′ AGL/569′ MSL.
Trees beginning 789′ from DER, 331′ right of centerline, up to 60′ AGL/602′ MSL.
Pole 1012′ from DER, 429′ left of centerline, 29′ AGL/578′ MSL.
Transmission tower 1882′ from DER, 219′ right of centerline, 61′ AGL/610′ MSL.
Pole 2037′ from DER, 422′ right of centerline, 47′ AGL/596′ MSL.
Transmission tower 2778′ from DER, 83′ left of centerline, 91′ AGL/630′ MSL.

PROTOTYPE-NOT FOR NAVIGATION

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : BOWLING GREEN	City : BOWLING GREEN	Ident : BWG	State : KY
Type/Class : TACR	Frequency : M1213	Reference No.: 12031145	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 704282-028	216	234	100	70	165

Requirement: ESTABLISH ESV FOR KBNA RNAV SIDS

Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 03/22/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704282-028	216	234	100	70	165	APPROVE

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

Signature: Cassella Charles	Routing Symbol:	Date: 03/26/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704282-028	216	234	100	70	165	APPROVE

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

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 03/26/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704282-028	216	234				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : DYERSBURY	City : DYERSBURG	Ident : DYR	State : TN
Type/Class : TACR	Frequency : M1202	Reference No.: 12031144	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 704252-015	91	108	58	150	240

Requirement: ESTABLISH ESV FOR KBNA RNAV SIDS

Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 03/22/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704252-015	91	108	58	150	240	APPROVE

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

Signature: Cassella Charles	Routing Symbol:	Date: 03/26/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704252-015	91	108	58	150	240	APPROVE

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

Signature: Hughes Dennis	Routing Symbol:	Date: 03/27/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 704252-015	91	108				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

ESV Details

Originating Office :	Airspace Docket Number :	Request Type : Establish	
Facility Data			
Chart Name : SHELBYVILLE	City : SHELBYVILLE	Ident : SYI	State : TN
Type/Class : DME	Frequency : M988	Reference No.: 12031179	

Expanded Service Volume Data: (Requesting Officer)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude
FAA 815725-005	295	310	68	60	240

Requirement: ESTABLISH ESV FOR KBNA RNAV SIDS

Signature: Osterhage Dennis	Routing Symbol: AJV-E2	Date: 03/22/2012

Expanded Service Volume Data: (FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 815725-005	295	310	68	60	240	APPROVE

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

Signature: Cassella Charles	Routing Symbol:	Date: 03/27/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 815725-005	295	310	68	60	175	RESTRICT

Requirement/Remarks: ESTABLISH ESV FOR KBNA RNAV SIDSRESTRICTED. CO-CHANNEL INTERFERENCE FROM BIB TACR MAX ALT FL=175

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 03/28/2012

Expanded Service Volume Data: (Super FMO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 815725-005	295	310	68	60	175	RESTRICT

Requirement/Remarks: ESTABLISH ESV FOR KBNA RNAV SIDSRESTRICTED. CO-CHANNEL INTERFERENCE FROM BIB TACR MAX ALT FL=175

Signature: CHRISTEIN THOMAS	Routing Symbol:	Date: 03/28/2012

Expanded Service Volume Data: (FIFO)

ESV ID	Radial 1	Radial 2	Distance	Minimum Altitude	Maximum Altitude	Action Type
FAA 815725-005	295	310				

Requirement/Remarks:

Signature:	Routing Symbol:	Date:

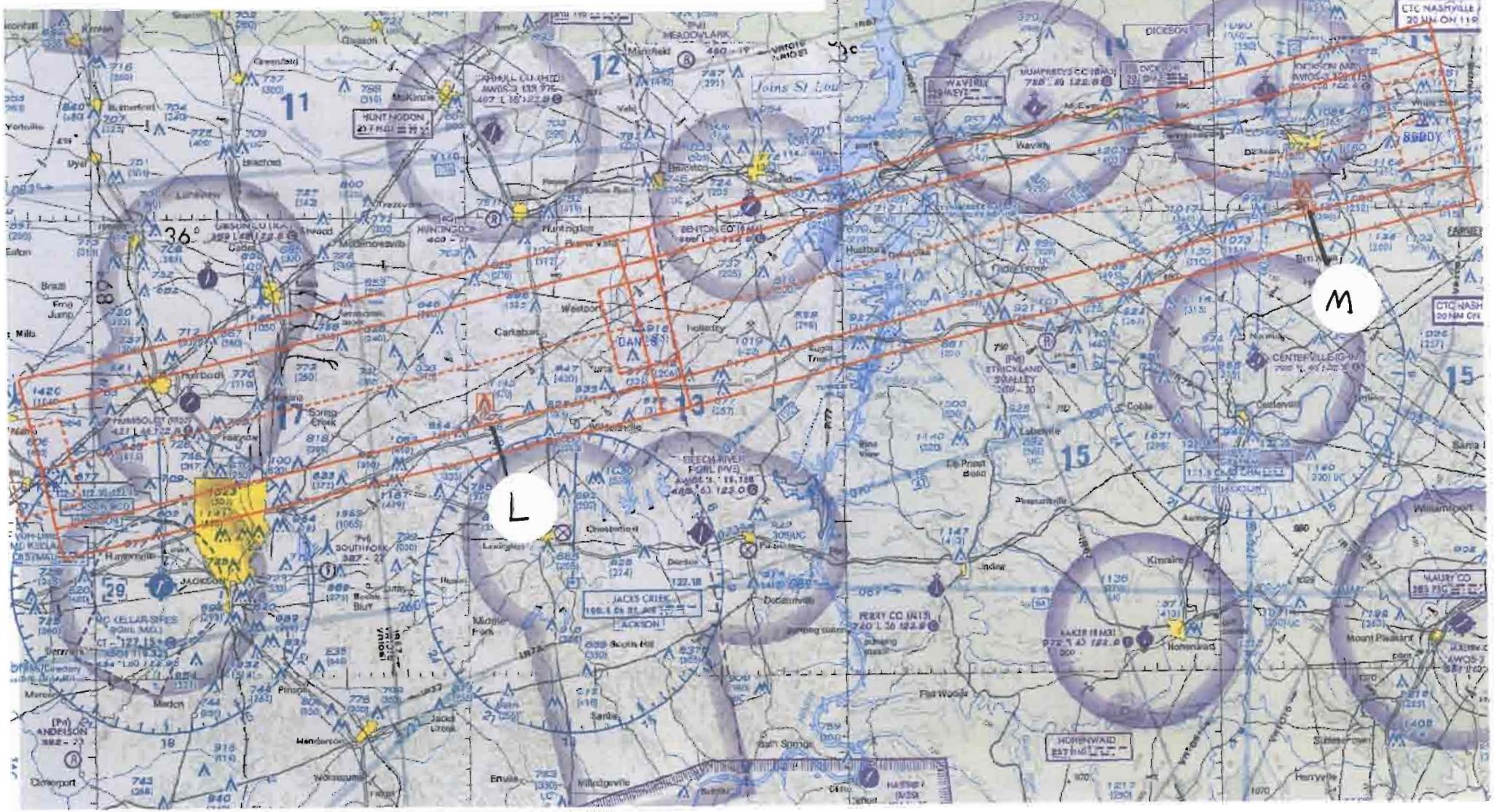
DANLS

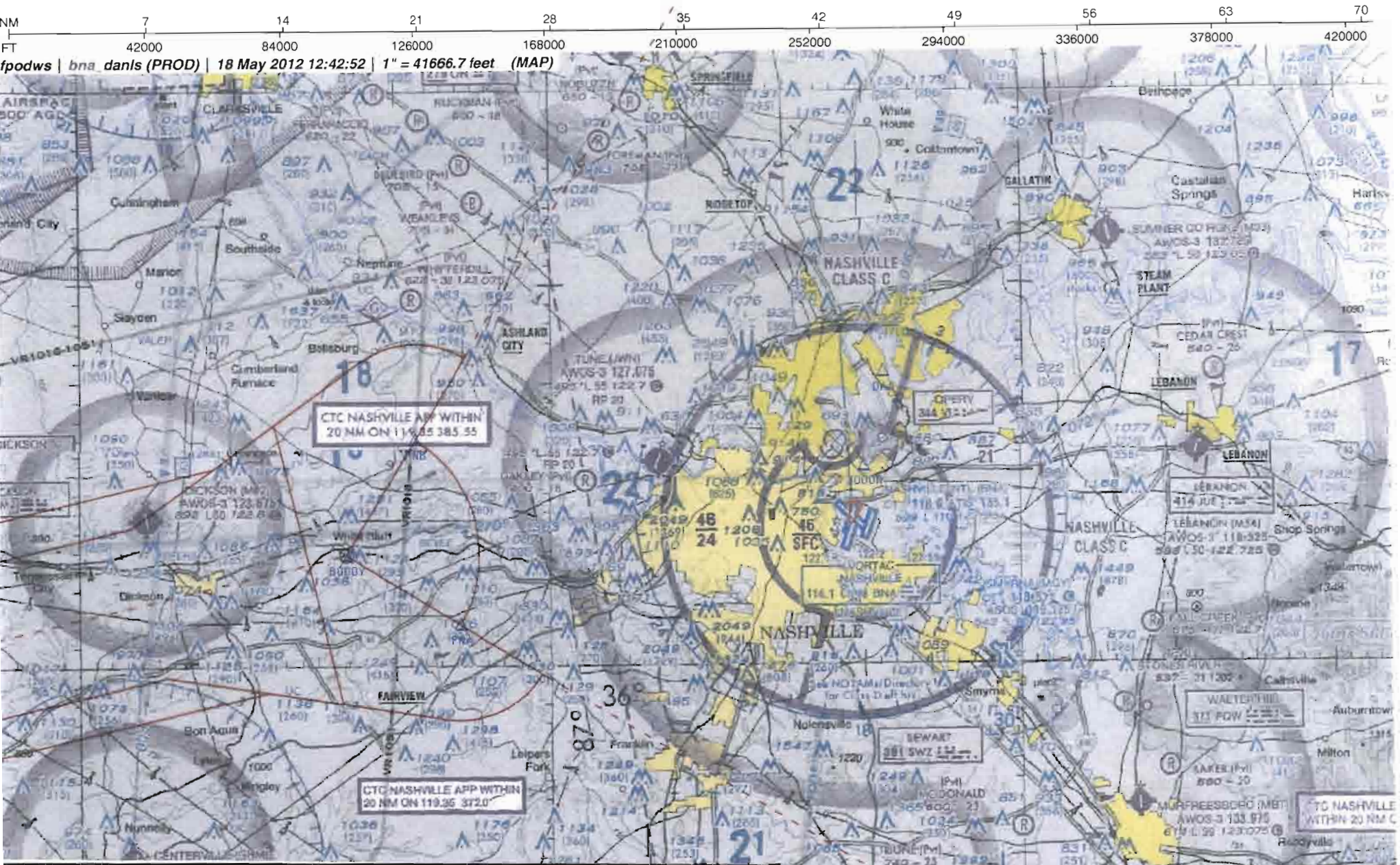
NM 9 18 27 36 45 54 63 72 81 90

FT 56000 112000 168000 224000 280000 336000 392000 448000 504000 560000

fpodws | bna_dan_c (PROD) | 18 May 2012 15:20:31 | 1" = 55666.7 feet (MAP)

Airport ID:	KBNA				
Apt Name:	NASHVILLE INTL	No.	SEGMENT	OBSTRUCTION	ELEV
City:	NASHVILL	L	BGDDY – DANLS MOCA	TOWER	1142
State:	TENNESSEE	M	DANLS - SPKER MOCA	AAO	1710
Proc ID:	DANLS (RNAV)				
Amdt #:	ONE				
Scale:	1: 500,000 (75% Scale)				



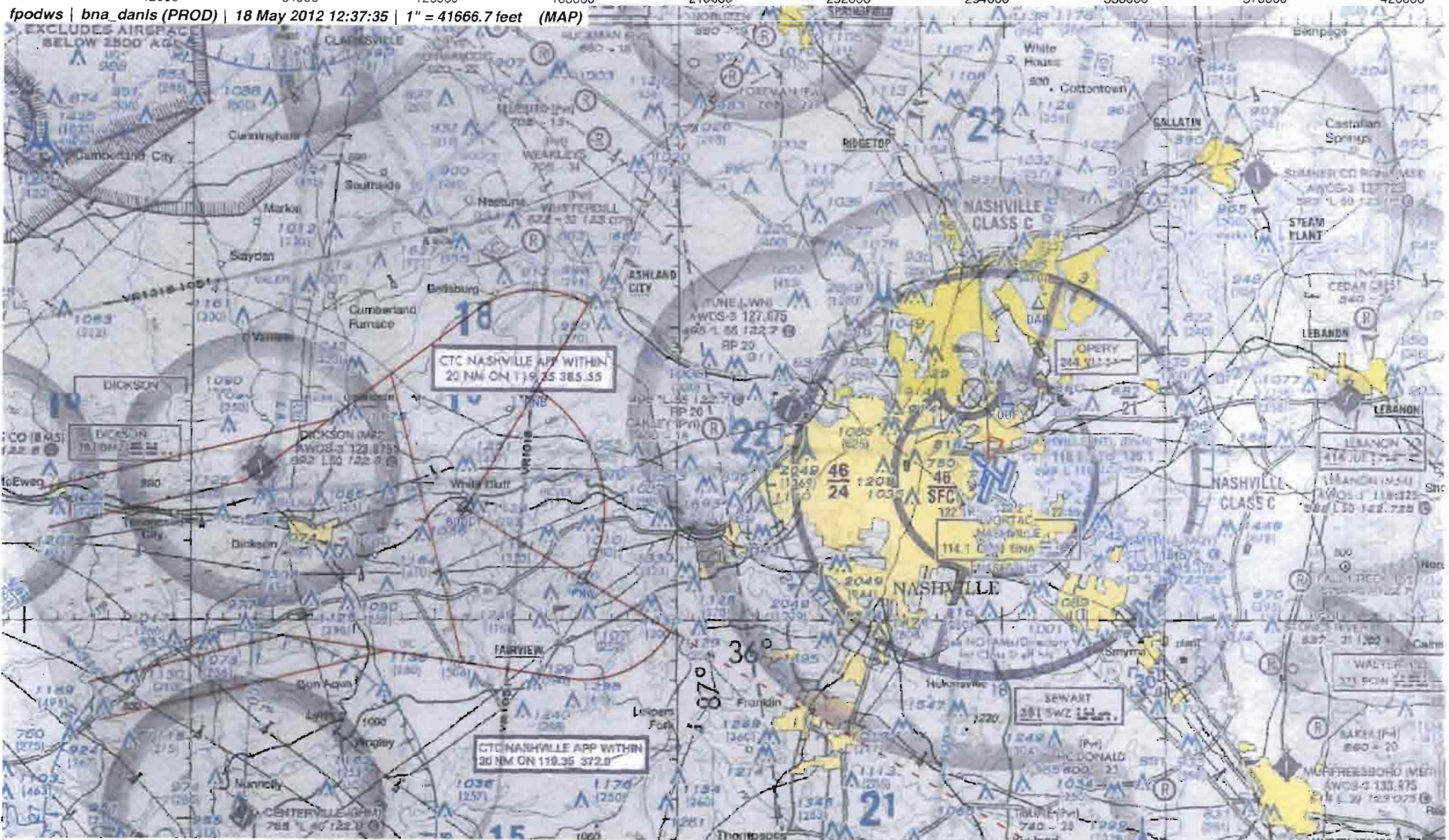


Airport ID:	KBNA				
Apt Name:	NASHVILLE INTL	No.	SEGMENT	OBSTRUCTION	ELEV
City:	NASHVILL		RWY 02C PNA		ASC
State:	TENNESSEE				
Proc ID:	DANLS (RNAV)				
Amdt #:	ONE				
Scale:	1: 500,000				

NM 7 14 21 28 35 42 49 56 63 70

FT 42000 84000 126000 168000 210000 252000 294000 336000 378000 420000

fpodws | bna_danls (PROD) | 18 May 2012 12:37:35 | 1" = 41666.7 feet (MAP)



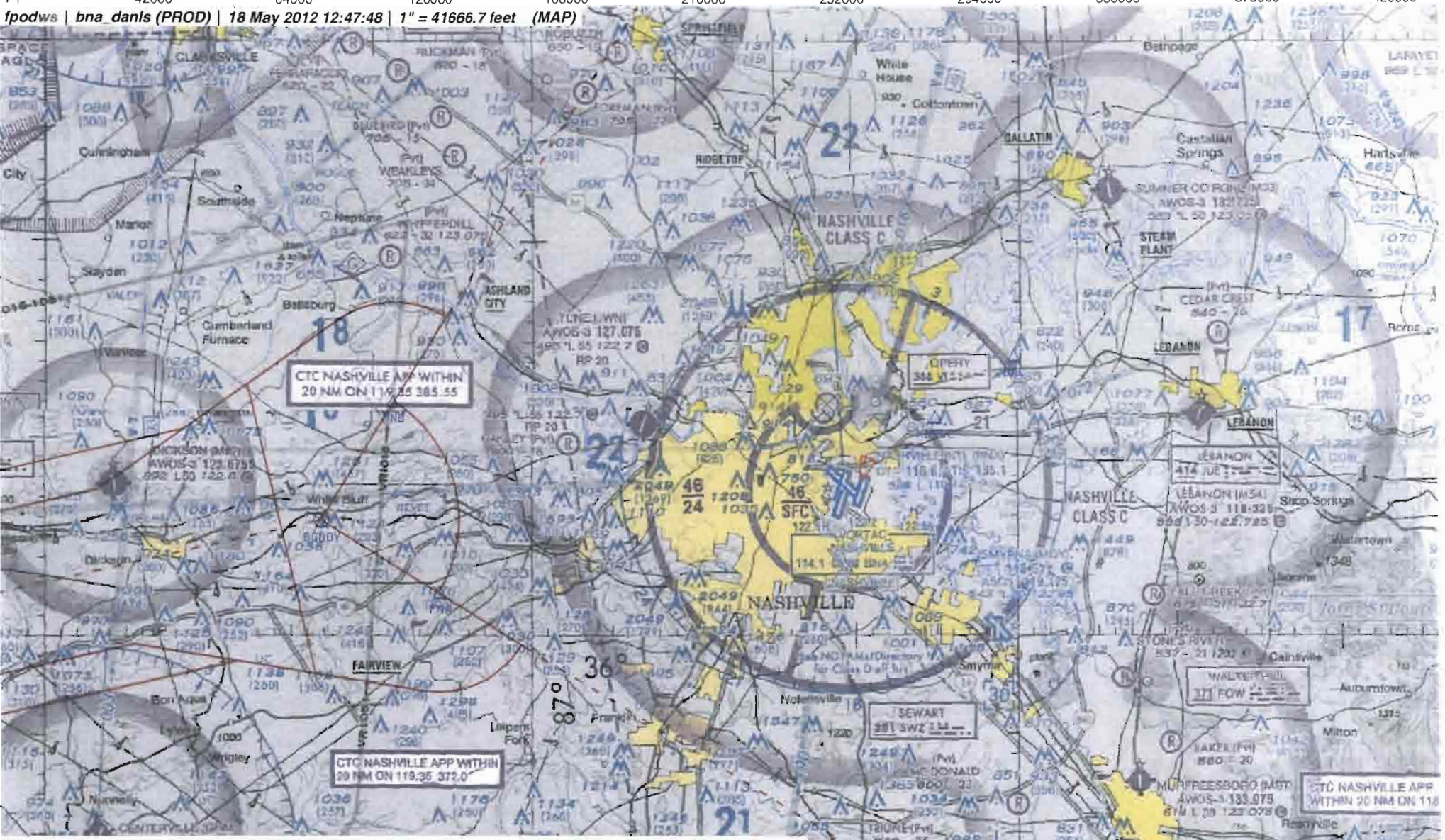
Airport ID:	KBNA				
Apt Name:	NASHVILLE INTL	No.	SEGMENT	OBSTRUCTION	ELEV
City:	NASHVILL		RWY 02L PNA		ASC
State:	TENNESSEE				
Proc ID:	DANLS (RNAV)				
Amdt #:	ONE				
Scale:	1: 500,000				

2R

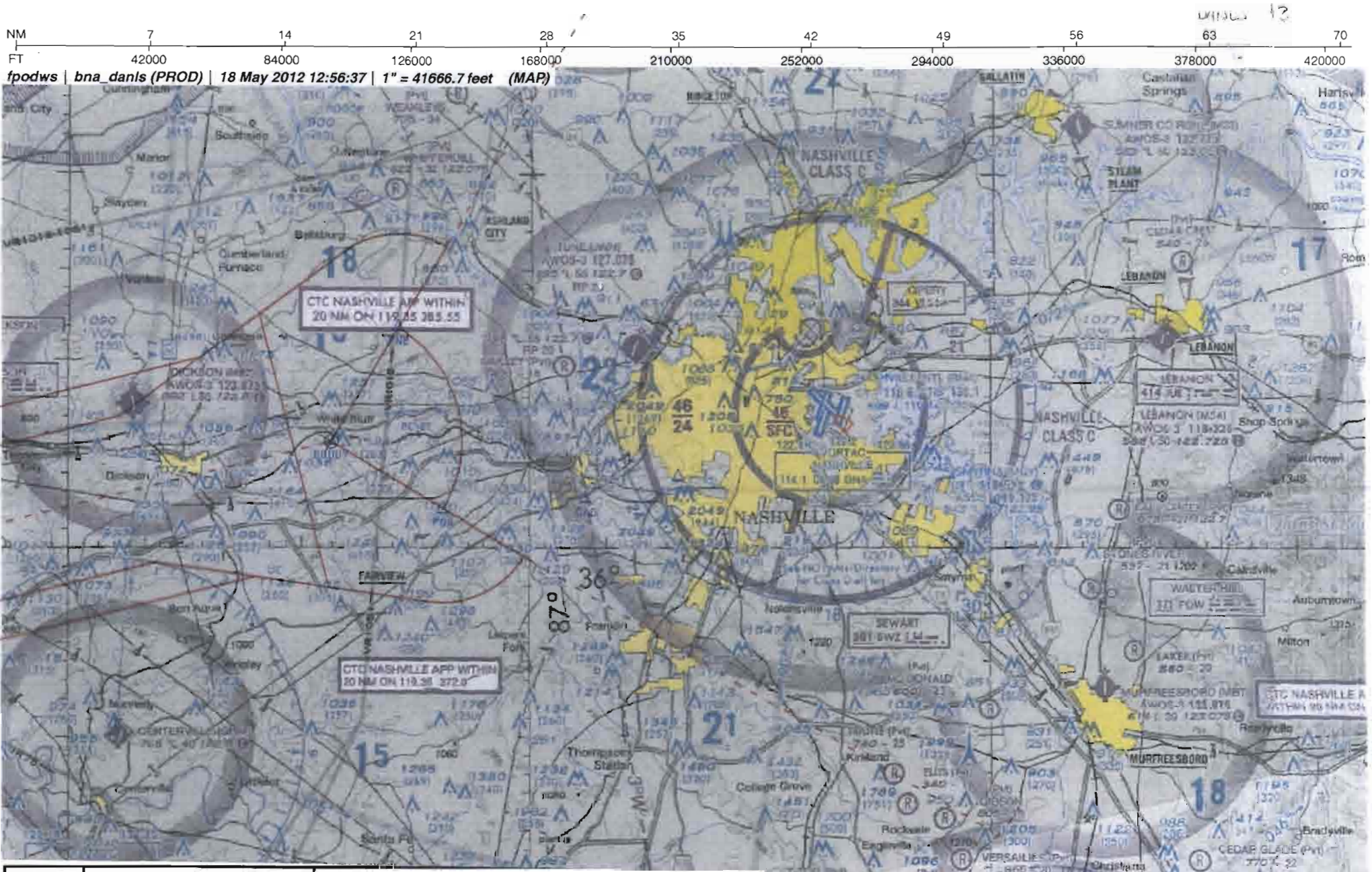
NM 7 14 21 28 35 42 49 56 63 70

FT 42000 84000 126000 168000 210000 252000 294000 336000 378000 420000

fpodws | bna_danls (PROD) | 18 May 2012 12:47:48 | 1" = 41666.7 feet (MAP)



Airport ID:	KBNA				
Apt Name:	NASHVILLE INTL	No.	SEGMENT	OBSTRUCTION	ELEV
City:	NASHVILL		RWY 02R PNA		ASC
State:	TENNESSEE				
Proc ID:	DANLS (RNAV)				
Amdt #:	ONE				
Scale:	1: 500,000				



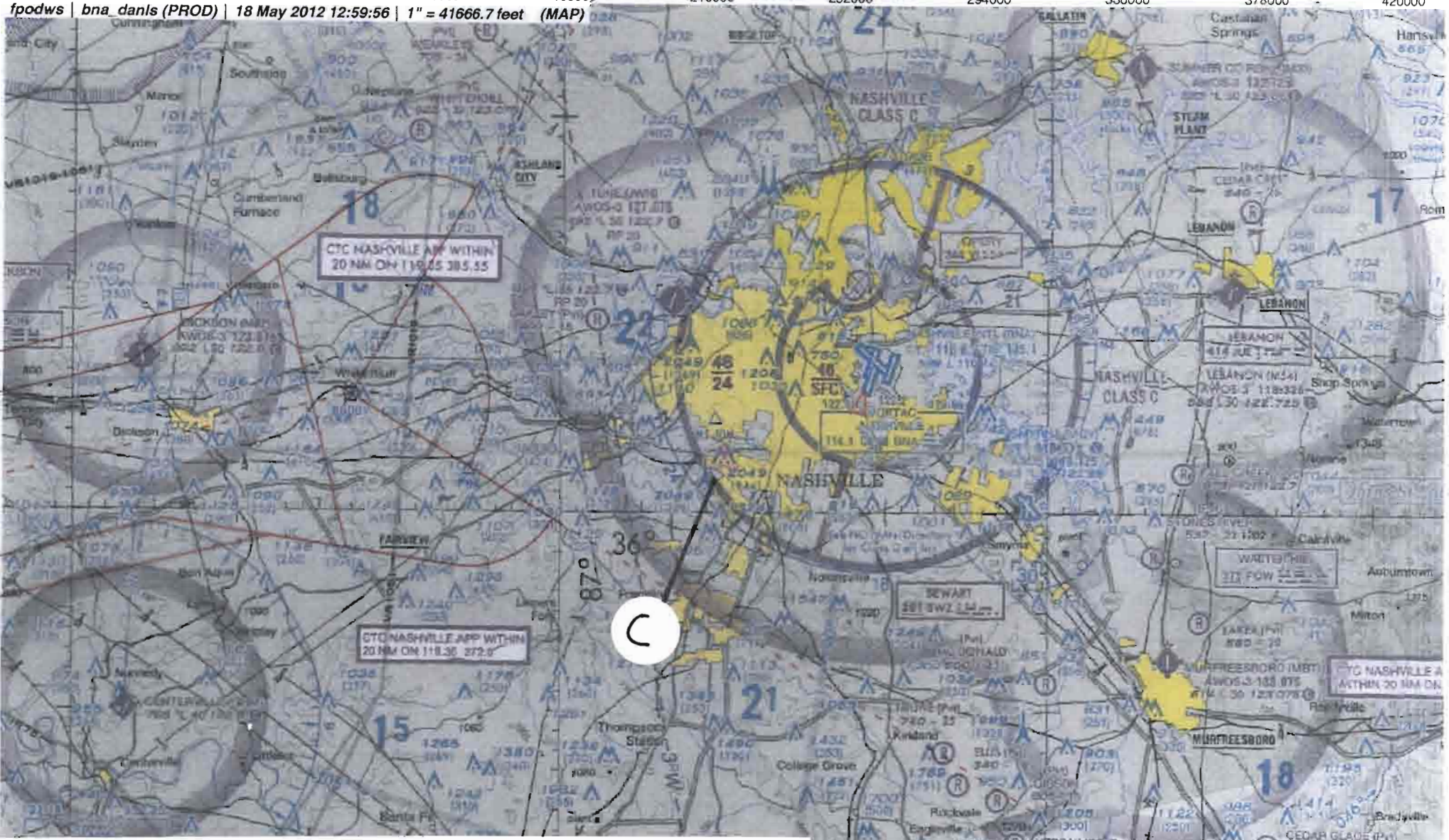
Airport ID:	KBNA				
Apt Name:	NASHVILLE INTL	No.	SEGMENT	OBSTRUCTION	ELEV
City:	NASHVILL		RWY 13 PNA		ASC
State:	TENNESSEE				
Proc ID:	DANLS (RNAV)				
Amdt #:	ONE				
Scale:	1: 500,000				

20C

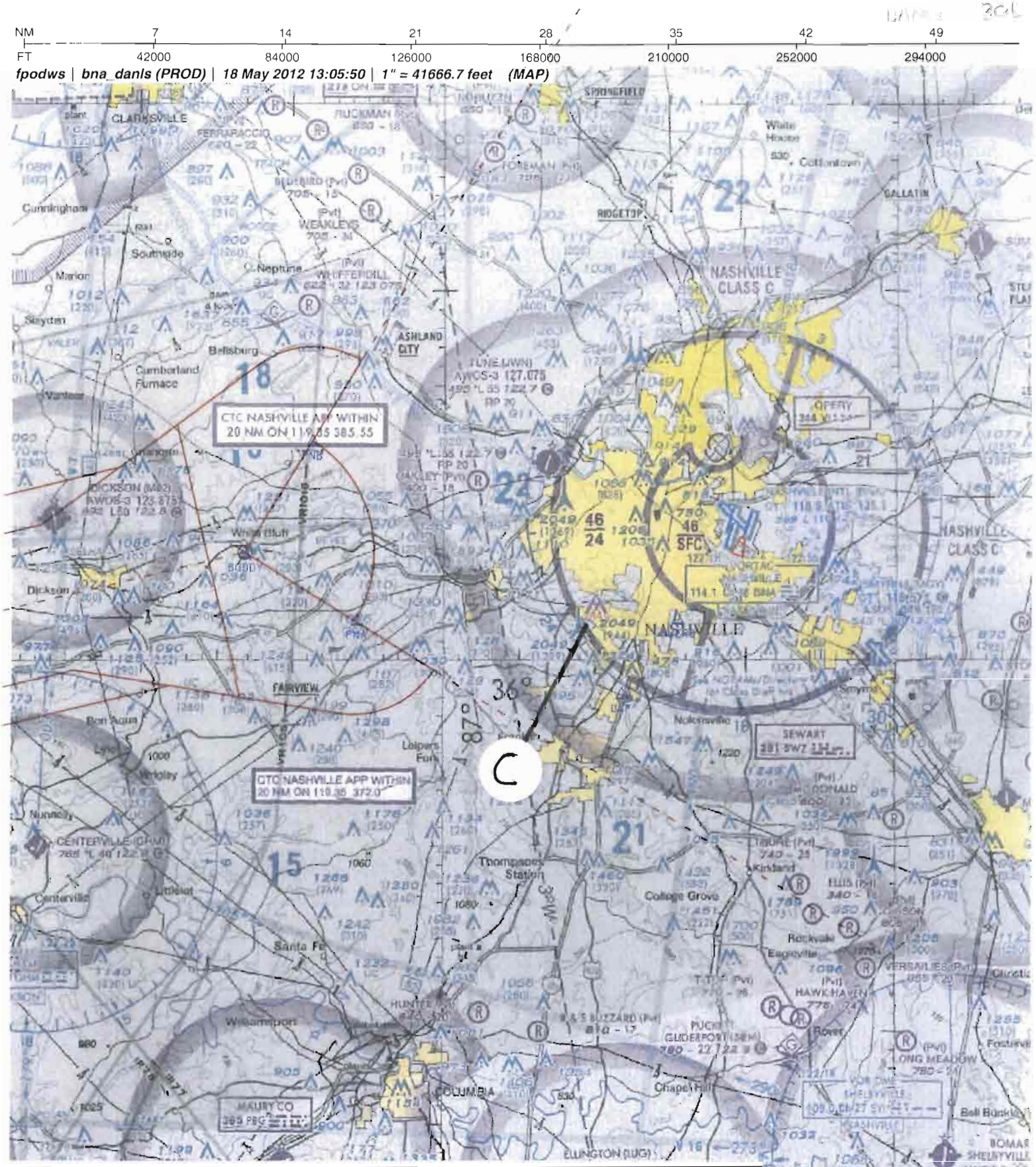
NM 7 14 21 28 35 42 49 56 63 70

FT 42000 84000 126000 168000 210000 252000 294000 336000 378000 420000

fpodws | bna_danls (PROD) | 18 May 2012 12:59:56 | 1" = 41666.7 feet (MAP)



Airport ID:	KBNA				
Apt Name:	NASHVILLE INTL	No.	SEGMENT	OBSTRUCTION	ELEV
City:	NASHVILL	C	RWY 20C PEN	TOWER	2049
State:	TENNESSEE				
Proc ID:	DANLS (RNAV)				
Amdt #:	ONE				
Scale:	1: 500,000				



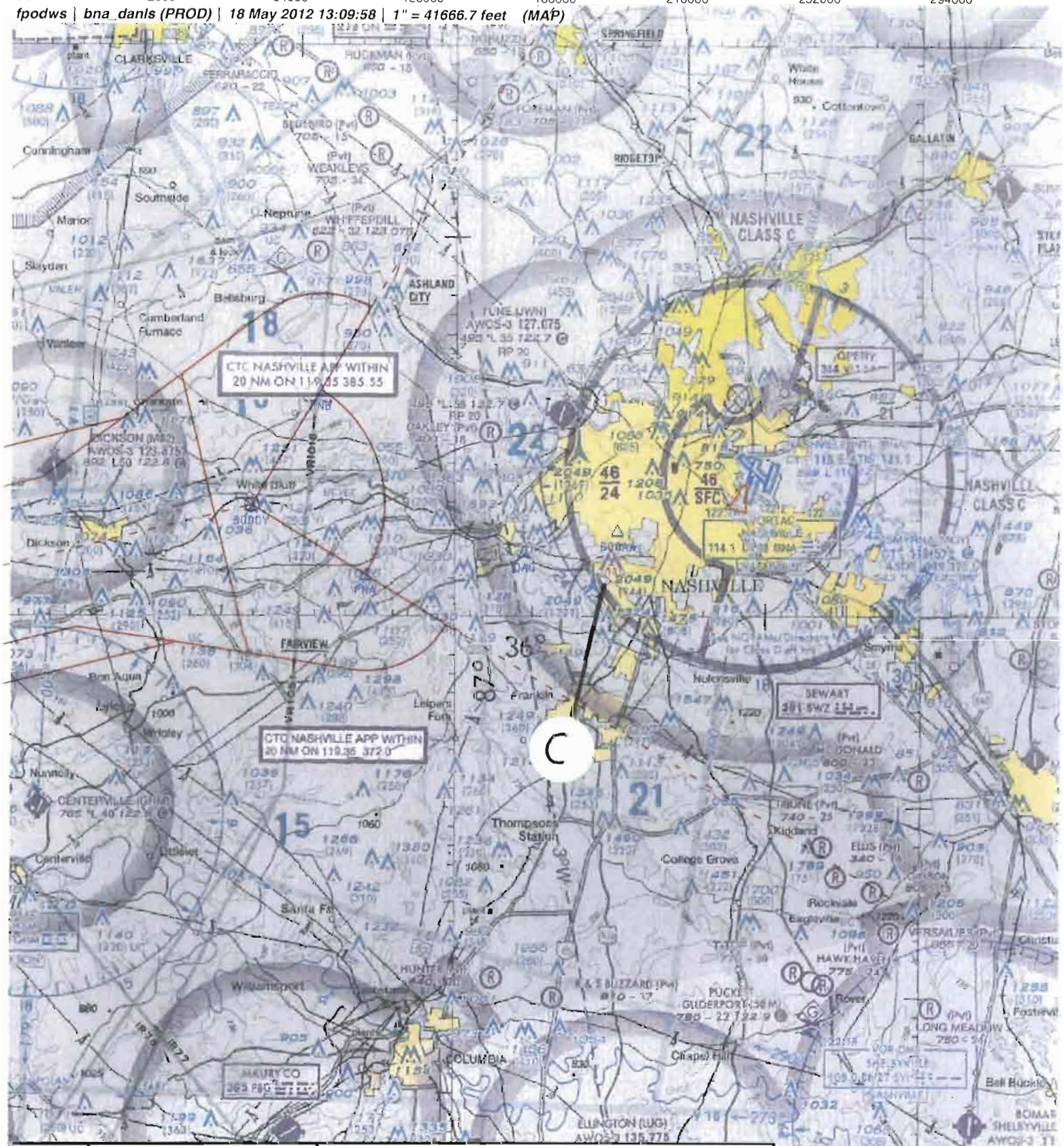
Airport ID:	KBNA				
Apt Name:	NASHVILLE INTL	No.	SEGMENT	OBSTRUCTION	ELEV
City:	NASHVILL	C	RWY 20L PEN	TOWER	2049
State:	TENNESSEE				
Proc ID:	DANLS (RNAV)				
Amdt #:	ONE				
Scale:	1: 500,000				

UNRS 70R

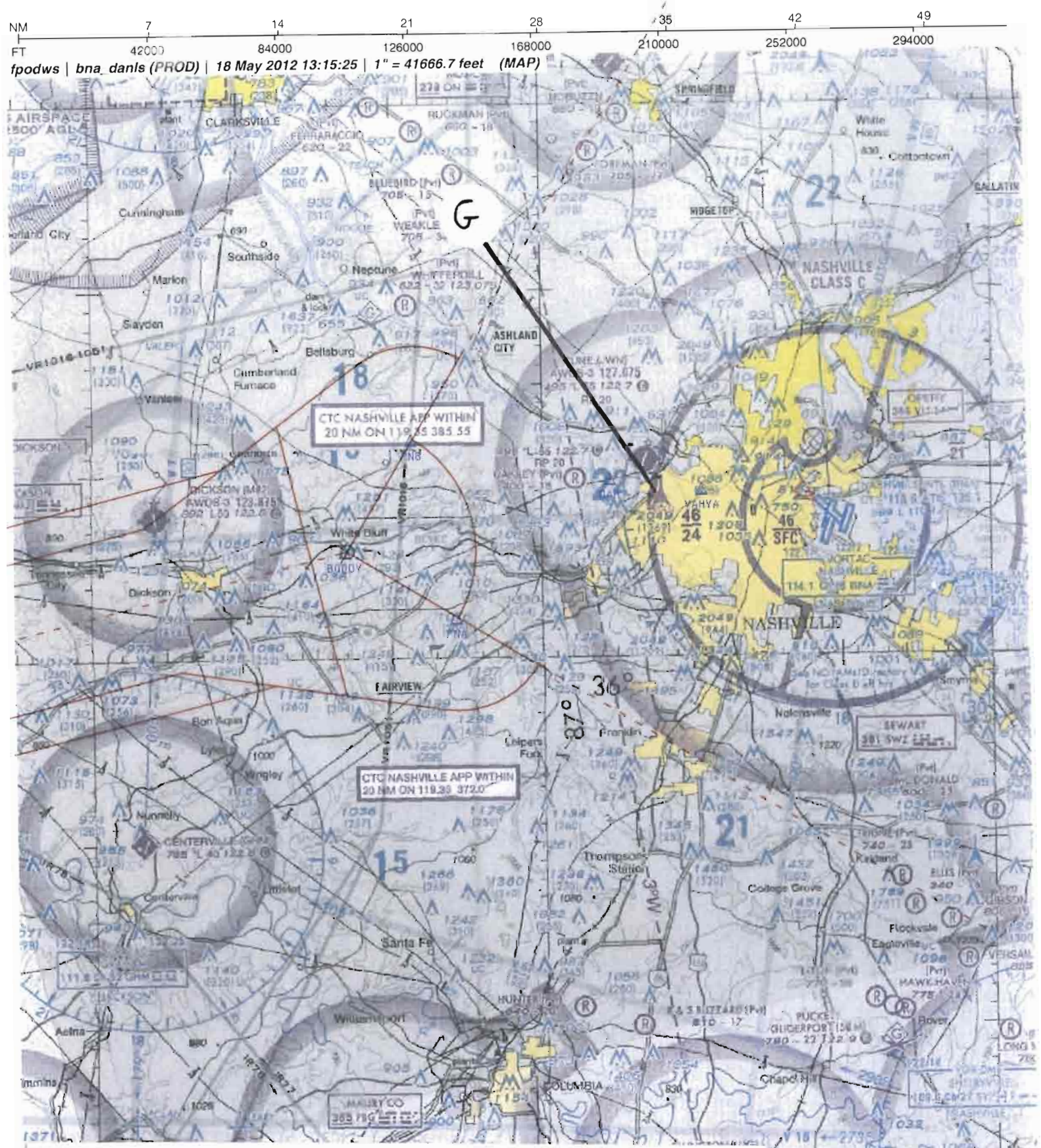
NM 7 14 21 28 35 42 49

FT 42000 84000 126000 168000 210000 252000 294000

fpodws | bna_danls (PROD) | 18 May 2012 13:09:58 | 1" = 41666.7 feet (MAP)

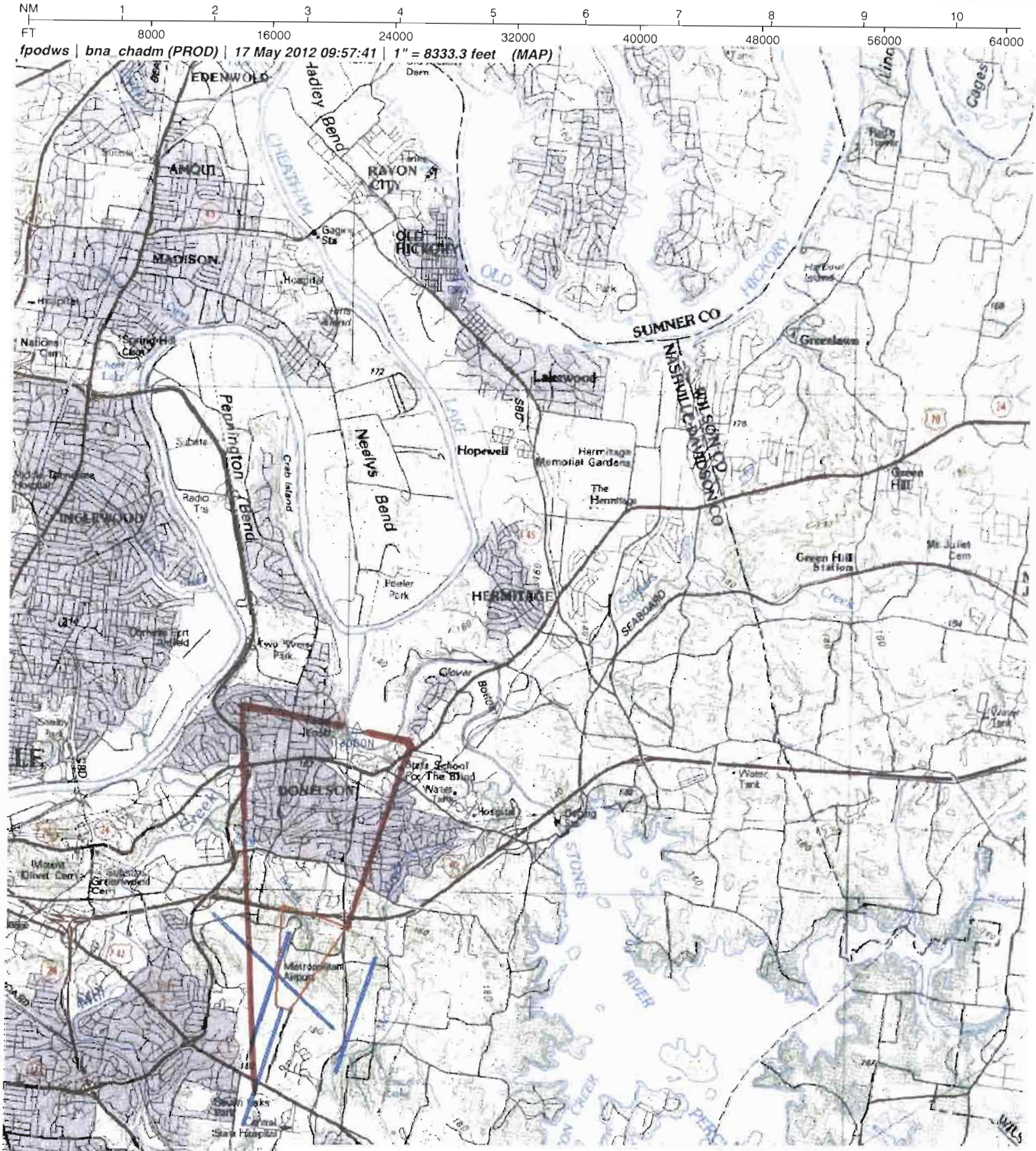


Airport ID:	KBNA				
Apt Name:	NASHVILLE INTL	No.	SEGMENT	OBSTRUCTION	ELEV
City:	NASHVILL	C	RWY 20R PEN	TOWER	2049
State:	TENNESSEE				
Proc ID:	DANLS (RNAV)				
Amdt #:	ONE				
Scale:	1: 500,000				



Airport ID:	KBNA				
Apt Name:	NASHVILLE INTL	No.	SEGMENT	OBSTRUCTION	ELEV
City:	NASHVILL	G	RWY 31 PEN	ANT	2049
State:	TENNESSEE				
Proc ID:	DANLS (RNAV)				
Amdt #:	ONE				
Scale:	1: 500,000				

DANLS 2C



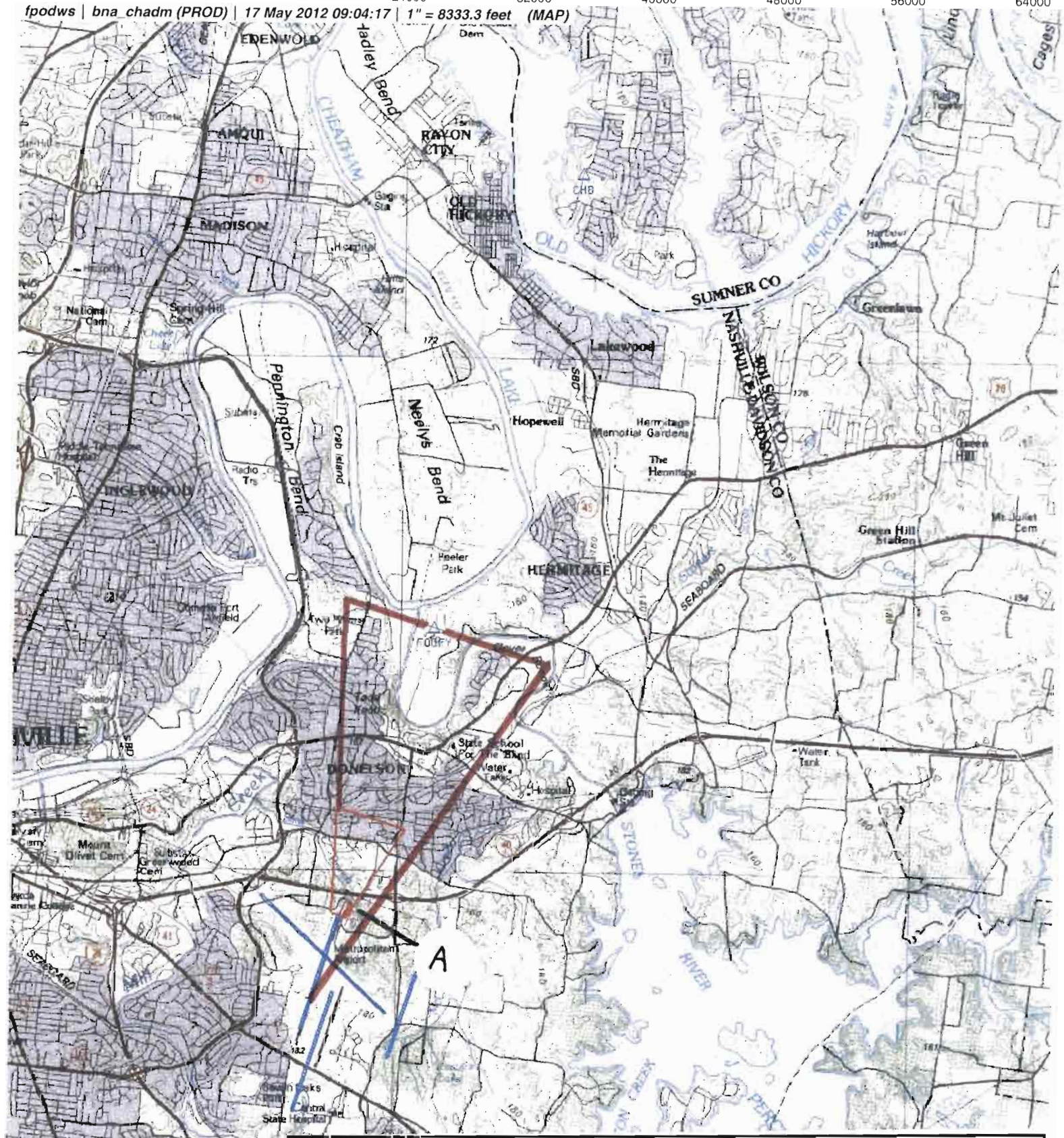
Airport ID:	KBNA	No.	SEGMENT	OBSTRUCTION	ELEV
Apt Name:	NASHVILLE INTL				
City:	NASHVILL		RWY 02C ICA		ASC
State:	TENNESSEE				
Proc ID:	DANLS (RNAV)				
Amdt #:	ONE				
Scale:	1: 100,000				

DANLS 2L

NM 1 2 3 4 5 6 7 8 9 10

FT 8000 16000 24000 32000 40000 48000 56000 64000

fpodws | bna_chadm (PROD) | 17 May 2012 09:04:17 | 1" = 8333.3 feet (MAP)

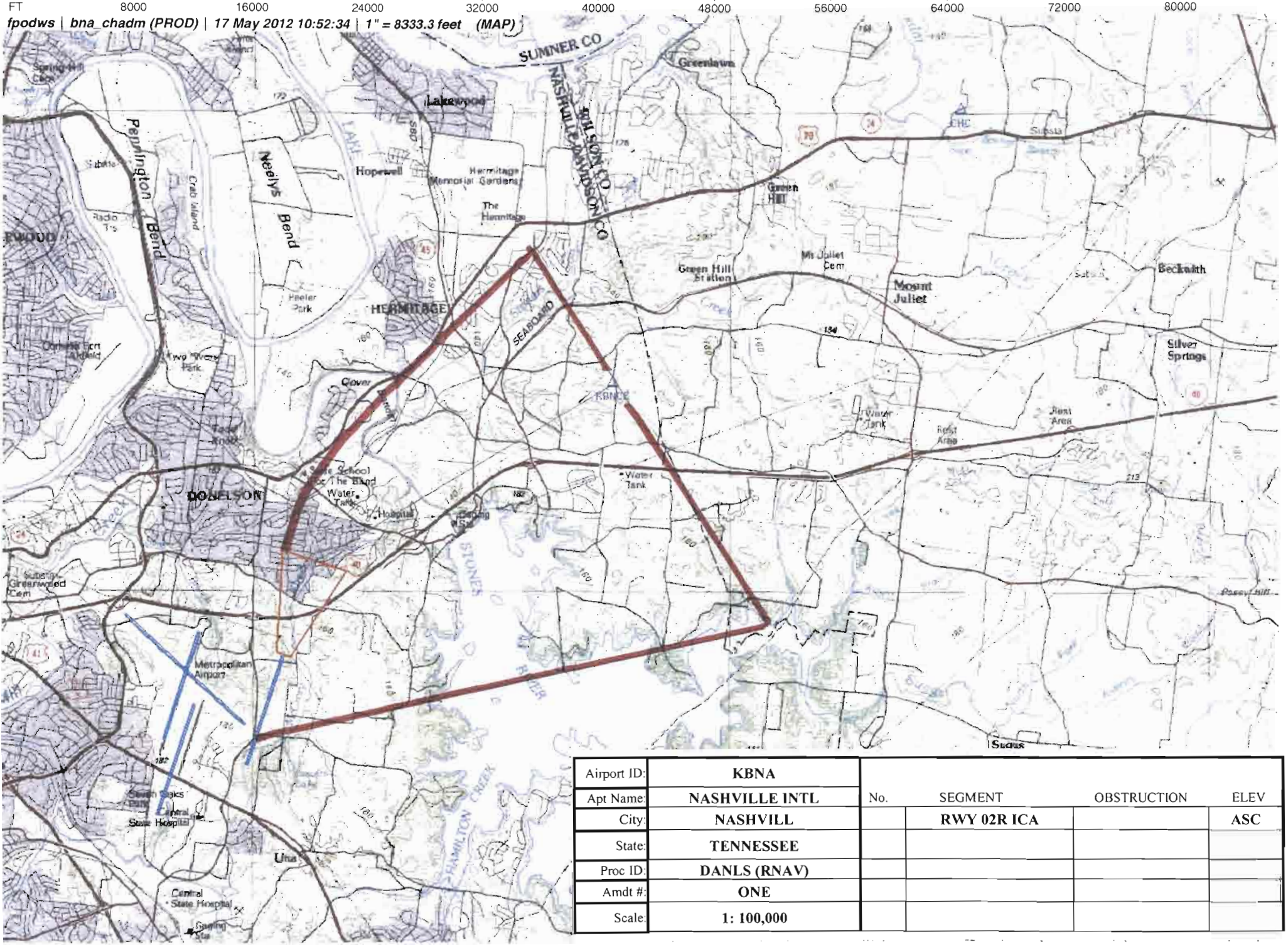


Airport ID:	KBNA				
Apt Name:	NASHVILLE INTL	No.	SEGMENT	OBSTRUCTION	ELEV
City:	NASHVILL	A	R02L ICA	TREE	576
State:	TENNESSEE				
Proc ID:	DANLS (RNAV)				
Amdt #:	ONE				
Scale:	1: 100,000				

NM 1 2 3 4 5 6 7 8 9 10 11 12 13 14

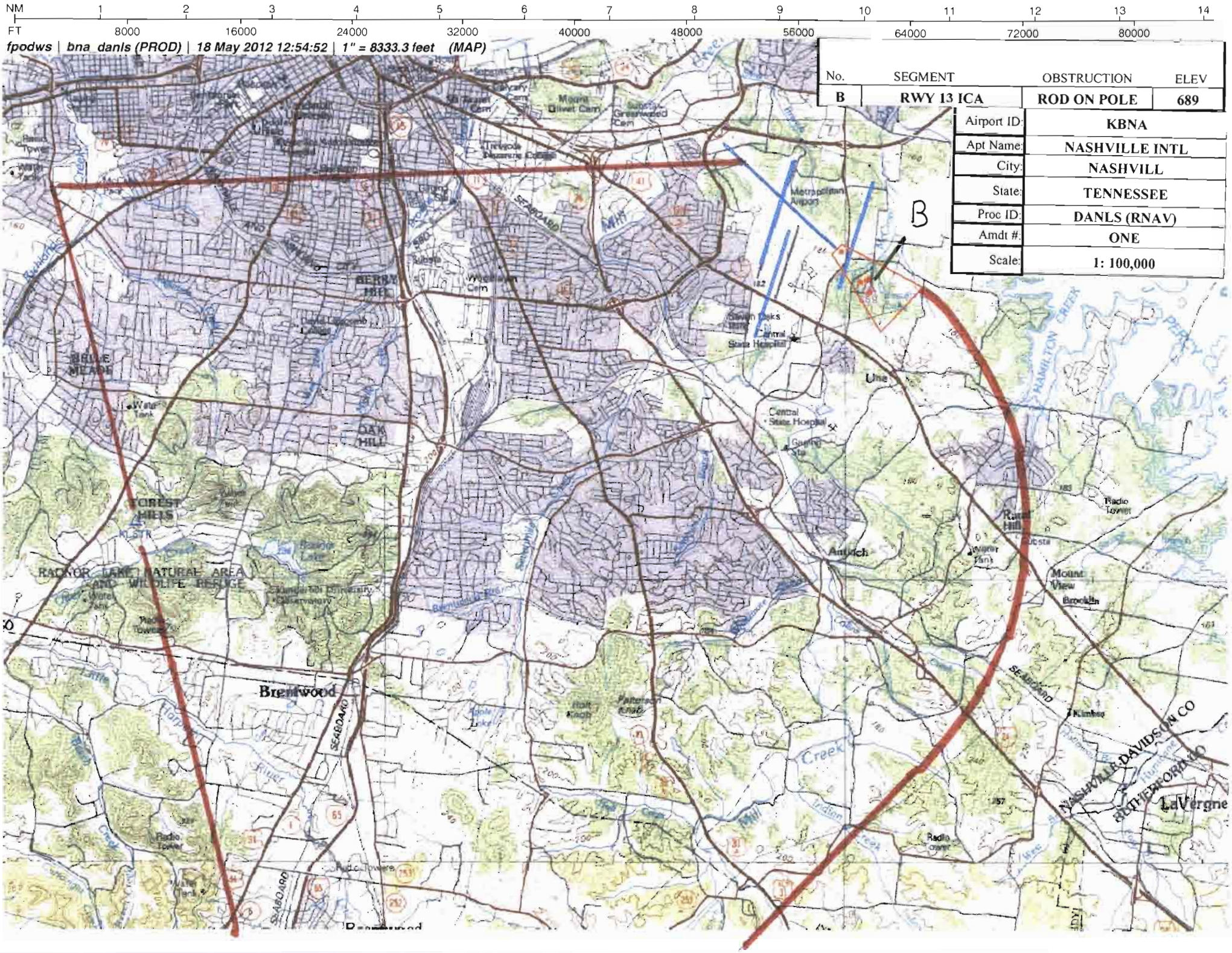
FT 8000 16000 24000 32000 40000 48000 56000 64000 72000 80000

fpodws | bna_chadm (PROD) | 17 May 2012 10:52:34 | 1" = 8333.3 feet (MAP)



Airport ID:	KBNA				
Apt Name:	NASHVILLE INTL	No.	SEGMENT	OBSTRUCTION	ELEV
City:	NASHVILL		RWY 02R ICA		ASC
State:	TENNESSEE				
Proc ID:	DANLS (RNAV)				
Amdt #:	ONE				
Scale:	1: 100,000				

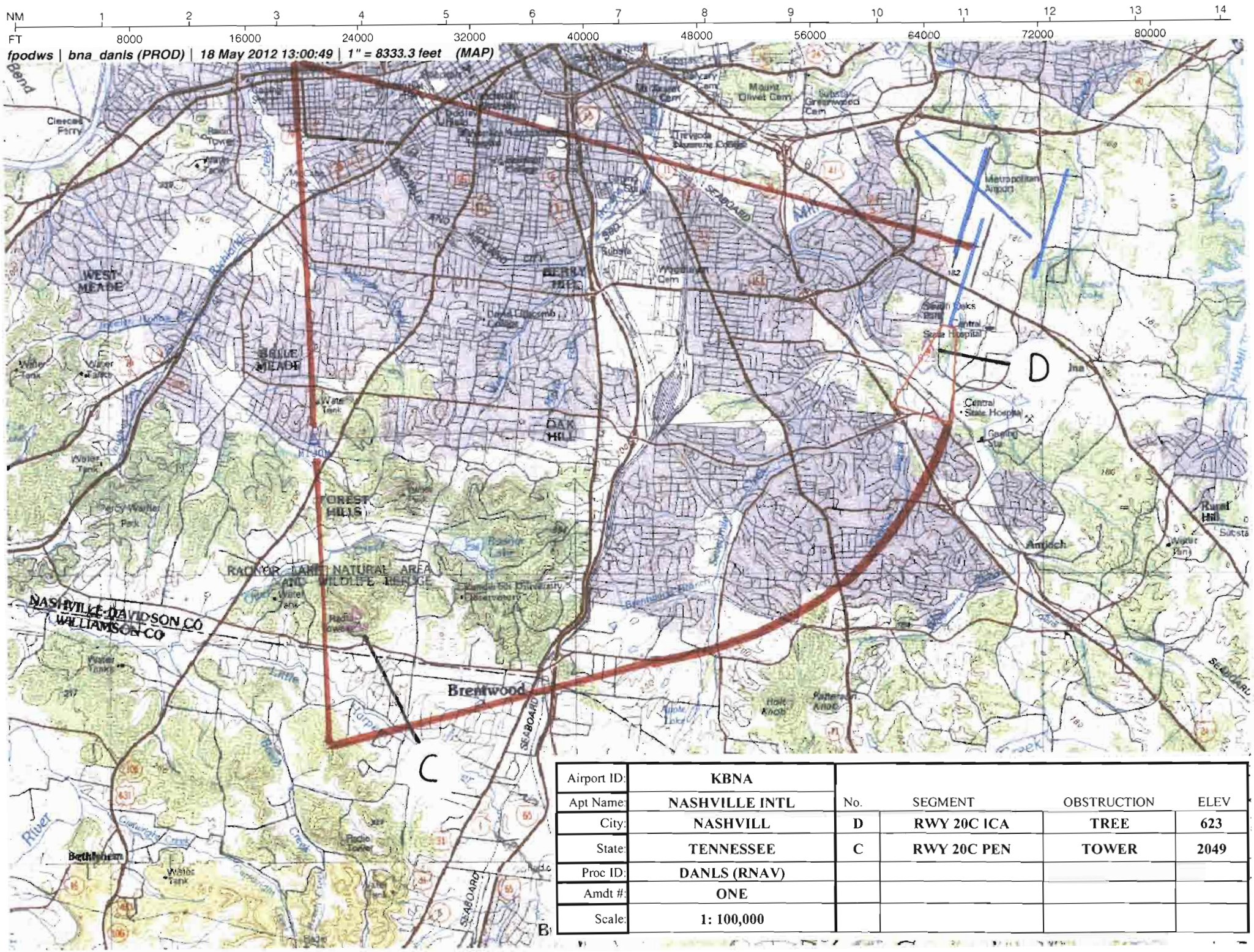
fpodws | bna_danls (PROD) | 18 May 2012 12:54:52 | 1" = 8333.3 feet (MAP)



No.	SEGMENT	OBSTRUCTION	ELEV
B	RWY 13 ICA	ROD ON POLE	689

Airport ID:	KBNA
Apt Name:	NASHVILLE INTL
City:	NASHVILL
State:	TENNESSEE
Proc ID:	DANLS (RNAV)
Amdt #:	ONE
Scale:	1: 100,000

DANLS 20C



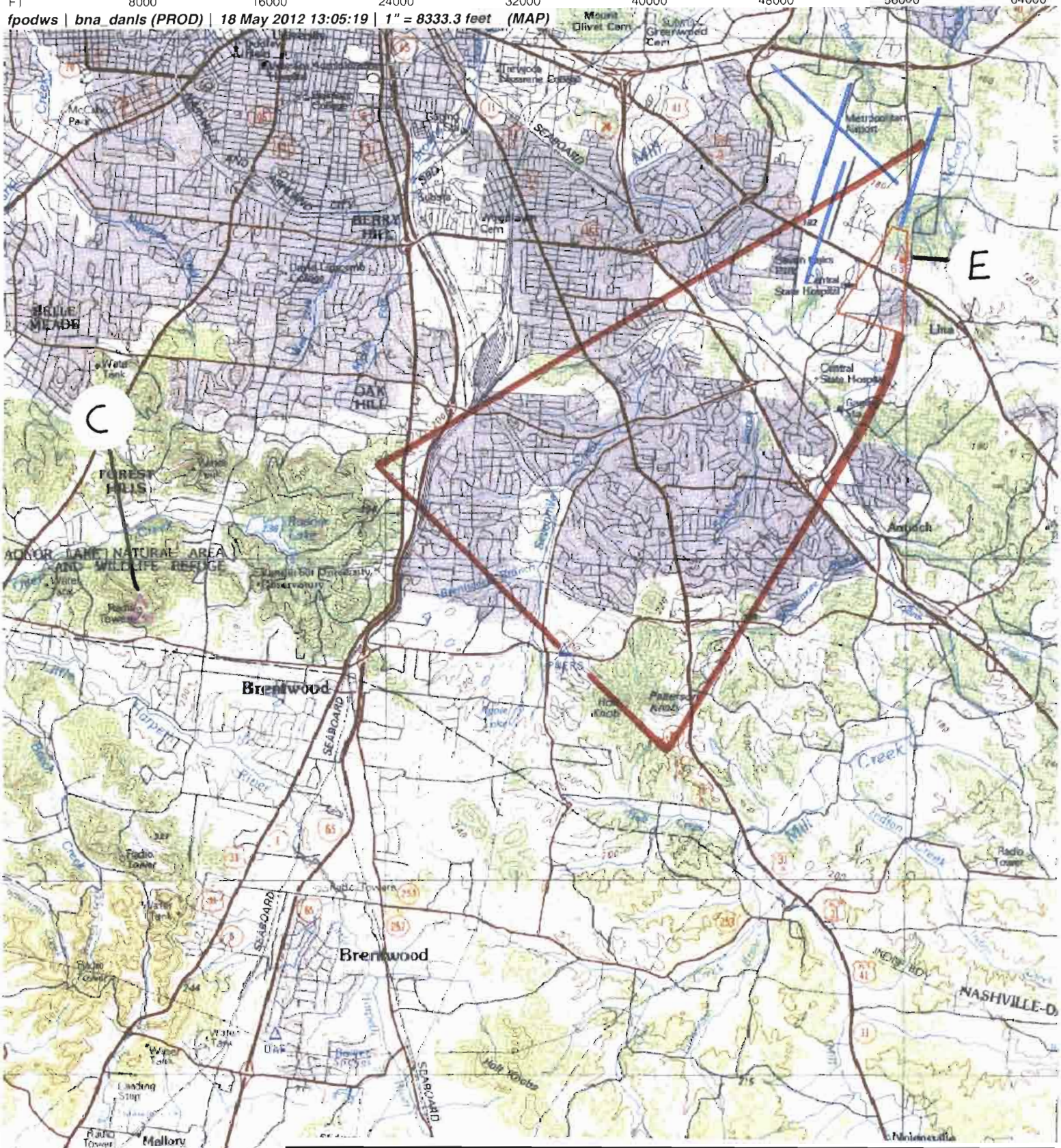
Airport ID:	KBNA				
Apt Name:	NASHVILLE INTL	No.	SEGMENT	OBSTRUCTION	ELEV
City:	NASHVILL	D	RWY 20C ICA	TREE	623
State:	TENNESSEE	C	RWY 20C PEN	TOWER	2049
Proc ID:	DANLS (RNAV)				
Amdt #:	ONE				
Scale:	1: 100,000				

DANLS 20L

NM 1 2 3 4 5 6 7 8 9 10

FT 8000 16000 24000 32000 40000 48000 56000 64000

fpodws | bna_danls (PROD) | 18 May 2012 13:05:19 | 1" = 8333.3 feet (MAP)



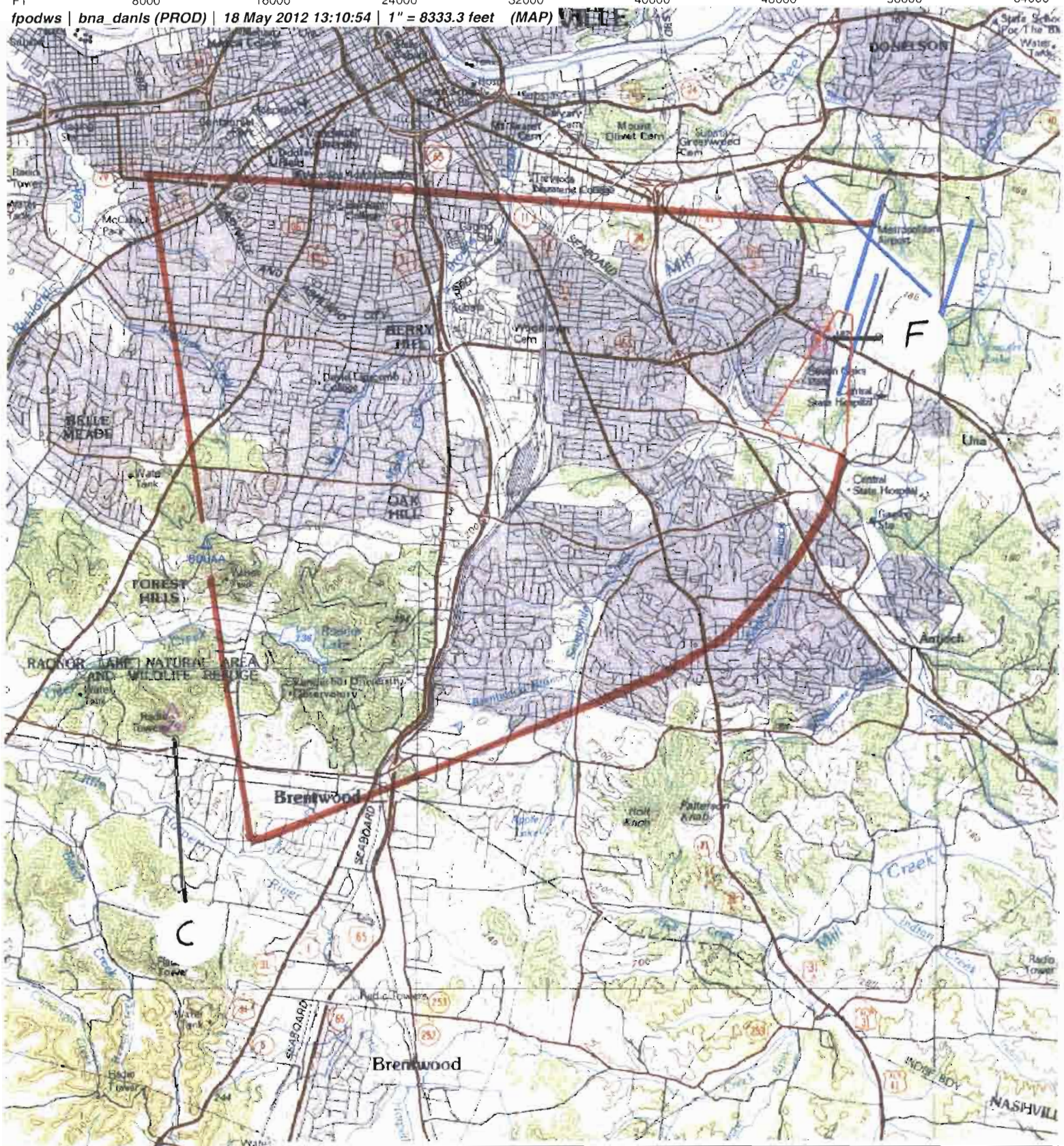
Airport ID:	KBNA				
Apt Name:	NASHVILLE INTL	No.	SEGMENT	OBSTRUCTION	ELEV
City:	NASHVILL	E	RWY 20L ICA	TREE	639
State:	TENNESSEE	C	RWY 20L PEN	TOWER	2049
Proc ID:	DANLS (RNAV)				
Amdt #:	ONE				
Scale:	1: 100,000				

DANLS 20R

NM 1 2 3 4 5 6 7 8 9 10

FT 8000 16000 24000 32000 40000 48000 56000 64000

fpodws | bna_danls (PROD) | 18 May 2012 13:10:54 | 1" = 8333.3 feet (MAP)



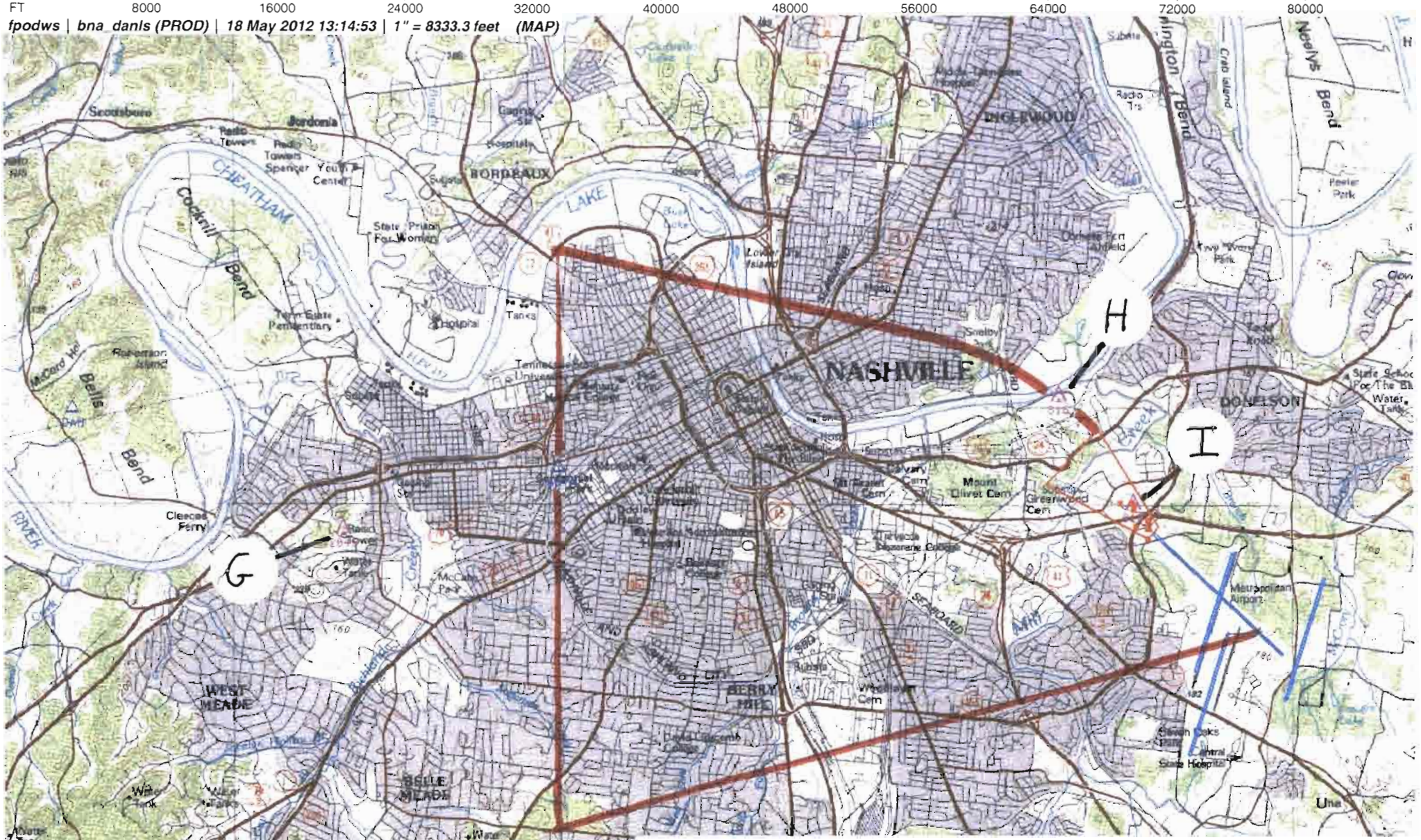
Airport ID:	KBNA				
Apt Name:	NASHVILLE INTL	No.	SEGMENT	OBSTRUCTION	ELEV
City:	NASHVILL	F	RWY 20R ICA	BLDG	680
State:	TENNESSEE	C	RWY 20R PEN	TOWER	2049
Proc ID:	DANLS (RNAV)				
Amdt #:	ONE				
Scale:	1: 100,000				

DANLS 31

NM 1 2 3 4 5 6 7 8 9 10 11 12 13 14

FT 8000 16000 24000 32000 40000 48000 56000 64000 72000 80000

fpodws | bna_danls (PROD) | 18 May 2012 13:14:53 | 1" = 8333.3 feet (MAP)



Airport ID:	KBNA
Apt Name:	NASHVILLE INTL
City:	NASHVILL
State:	TENNESSEE
Proc ID:	DANLS (RNAV)
Amdt #:	ONE
Scale:	1: 100,000

No.	SEGMENT	OBSTRUCTION	ELEV
G	RWY 31 PEN	ANT	2049
H	RWY 31 PEN	TOWER	816
I	RWY 31 ICA	T-L TWR	610

U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION

GRAPHIC DEPARTURE PROCEDURE (DP)

Bearings, headings, courses, tracks, and radials are magnetic. Elevation and altitudes are in feet MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated. Graphic depictions attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
DANLS (RNAV)	ONE	DANLS1.DANLS	NONE		

TYPE: RNAV SID

DP ROUTE DESCRIPTION:

TAKEOFF RWY 02C: CLIMB HEADING 020.98 TO 1100, THEN DIRECT JOOON, THEN ON HEADING 015.00 THENCE...
TAKEOFF RWY 02L: CLIMB HEADING 020.65 TO 1100, THEN DIRECT FOOFY, THEN ON HEADING 020.65 THENCE...
TAKEOFF RWY 02R: CLIMB HEADING 020.99 TO 1100, THEN RIGHT TURN DIRECT KDNCE, THEN ON HEADING 055.00 THENCE...
TAKEOFF RWY 13: CLIMB HEADING 136.30 TO 1100, THEN RIGHT TURN DIRECT KLSTR, THEN ON HEADING 260.00 THENCE...
TAKEOFF RWY 20C: CLIMB HEADING 200.99 TO 1100, THEN RIGHT TURN DIRECT MIJOM, THEN ON HEADING 275.00 THENCE...
TAKEOFF RWY 20L: CLIMB HEADING 201.00 TO 1100, THEN RIGHT TURN DIRECT PWERS, THEN ON HEADING 220.00 THENCE...
TAKEOFF RWY 20R: CLIMB HEADING 200.65 TO 1300, THEN RIGHT TURN DIRECT BOGAA, THEN ON HEADING 260.00 THENCE...
TAKEOFF RWY 31: CLIMB HEADING 316.32 TO 1100, THEN LEFT TURN DIRECT YAHYA, THEN ON HEADING 280.00 THENCE...

...EXPECT RADAR VECTORS TO BGDDY, THEN ON TRACK 259.14 TO DANLS (MEA16600/MOCA 2400), MAINTAIN 4000. EXPECT CLEARANCE TO FILED ALTITUDE WITHIN 5 MINUTES AFTER DEPARTURE.

TRANSITION ROUTES (GRAPHIC DEPICTION ONLY):

Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	Crossing Altitudes/Fixes
SPKER	DANLS1.SPKER	DANLS	SPKER	260.03	40.15	18000	2200	

PROCEDURAL DATA NOTES/TAKEOFF MINIMUMS:

NOTE: TRANSPONDER CODE WILL BE ISSUED VIA PDC OR NASHVILLE CLEARANCE DELIVERY.
NOTE: IF UNABLE TO ACCEPT CLIMB RATES, ADVISE ATC ON INITIAL CONTACT.
NOTE: RNAV-1.
NOTE: DME/DME/IRU OR GPS REQUIRED.
NOTE: RADAR REQUIRED.

TAKEOFF MINIMUMS:
RWY 02C, 02L, 02R, 13, 20L, 31, STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 1100.
RWY 20C, 20R, STANDARD WITH MINIMUM CLIMB OF 500 FT PER NM TO 1300.

TAKEOFF OBSTACLES NOTES:

RWY 02L, TREES BEGINNING 203 FT FROM DER, 489 FT RIGHT OF CENTERLINE, UP TO 60 FT AGL/576 FT MSL.
RWY 13, BLAST FENCE OBSTRUCTION LIGHT 335 FT FROM DER, 64 FT LEFT OF CENTERLINE, 6 FT AGL/595 FT MSL. TREES BEGINNING 2852 FT FROM DER, 28 FT RIGHT OF CENTERLINE, UP TO 60 FT AGL/685 FT MSL. POLE 3761 FT FROM DER, 726 FT RIGHT OF CENTERLINE, 60 FT AGL/689 FT MSL.
RWY 20C, TREES BEGINNING 2089 FT FROM DER, 934 FT RIGHT OF CENTERLINE, UP TO 60 FT AGL/623 FT MSL.
RWY 20L, TREES BEGINNING 1844 FT FROM DER, 720 LEFT OF CENTERLINE, UP TO 60 FT AGL/639 FT MSL.
RWY 20R, FLAGPOLE 1298 FT FROM DER, 777 FT RIGHT OF CENTERLINE, 37 FT AGL/636 FT MSL. BLDG 2183 FT FROM DER, 1083 FT RIGHT OF CENTERLINE, 91 FT AGL/630 FT MSL.

GRAPHIC DEPARTURE PROCEDURE (DP)

Bearings, headings, courses, tracks, and radials are magnetic. Elevation and altitudes are in feet MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated. Graphic depictions attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
DANLS (RNAV)	ONE	DANLS1.DANLS	NONE		

RWY 31, GROUND 2 FT FROM DER, 498 FT LEFT OF CENTERLINE, 541 FT MSL. LOC OBSTRUCTION LIGHT 303 FT FROM DER, ON CENTERLINE, 48 FT AGL/547 FT MSL. BLAST FENCE OBSTRUCTION LIGHT 382 FT FROM DER, 50 FT LEFT OF CENTERLINE, 30 FT AGL/569 FT MSL. TREES BEGINNING 789 FT FROM DER, 331 FT RIGHT OF CENTERLINE, UP TO 60 FT AGL/602 FT MSL. POLE 1012 FT FROM DER, 429 FT LEFT OF CENTERLINE, 29 FT AGL/578 FT MSL. TRANSMISSION TOWER 1882 FT FROM DER, 219 FT RIGHT OF CENTERLINE, 61 FT AGL/610 FT MSL. POLE 2037 FT FROM DER, 422 FT RIGHT OF CENTERLINE, 47 FT AGL/596 FT MSL. TRANSMISSION TOWER 2778 FT FROM DER, 83 FT LEFT OF CENTERLINE, 91 FT AGL/630 FT MSL.

CONTROLLING OBSTACLES:

RWY 31, 816 FT MSL TOWER (47-000499) 360949.00N/0864254.00W.

OBSTACLES MANDATING ODP ROUTE DEVELOPMENT: RWY 20C, RWY 20L, RWY 20R – 2049 FT MSL TOWER (47-002263) 360250.42N/0864948.93W. RWY 31 – 2049 FT MSL ANT (KJWNT0151) 360827.45N/0865156.48W,

LOST COMMUNICATIONS PROCEDURES:

ADDITIONAL FLIGHT DATA:

REFERENCE MAG VAR: KBNA 3W EPOCH YEAR: 2010.
DME/DME ASSESSMENT: SAT (RNP 2.0).

PILOT NAVIGATION AREA:
7NM ARC CENTERED ON BGDDY (IF), CW
FROM: POINT A (BEARING 214.14 TO DANLS)
TO: POINT B (BEARING 304.14 TO DANLS)
MINIMUM ALTITUDE - 6000

AIRPORTS SERVED:

NASHVILLE INTL – NASHVILLE, TN.

COMMUNICATIONS:

ATIS CLEARANCE DELIVERY, GROUND CONTROL, TOWER, DEPARTURE CONTROL.

FIXES AND/OR NAVAIDS:

U.S. DEPARTMENT of TRANSPORTATION – FEDERAL AVIATION ADMINISTRATION

GRAPHIC DEPARTURE PROCEDURE (DP)

Bearings, headings, courses, tracks, and radials are magnetic. Elevation and altitudes are in feet MSL. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statue miles or feet RVR unless otherwise indicated. Graphic depictions attached.

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
DANLS (RNAV)	ONE	DANLS1.DANLS	NONE		

REMARKS:

FLIGHT INSPECTED BY:

Thomas Page 8/23/12

REQUIRED EFFECTIVE DATE:

ROUTINE

DEVELOPED BY:

DAVID SAUER AJV-352 5/18/12

APPROVED BY:

DARRYEL ADAMS AJV-352

COORDINATED WITH:

ALPA, AOPA, ATA, NBAA, ZME, ZID, BNA ATCT, BNA APP CON, BNA AMGR.

CHANGES:

REASONS:

8/3/12: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 5/18/12.

1. CHANGED DP ROUTE DESCRIPTION ALTITUDES FROM "...TURBOJETS MAINTAIN 4000, PROPELLER AIRCRAFT MAINTAIN 3000" TO "...TURBOJETS MAINTAIN 5000, PROPELLER AIRCRAFT MAINTAIN 4000"

8/28/12: THIS IS AN UPDATED COPY OF THE FORM DEVELOPED ON 5/18/12.

1. CHANGED DP ROUTE DESCRIPTION ALTITUDES FROM "...TURBOJETS MAINTAIN 5000, PROPELLER AIRCRAFT MAINTAIN 4000" TO "MAINTAIN 4000".

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
DANLS RNAV	ONE	DANLS1.DANLS	NONE		

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RW02C (AER)	360611.99N/0864116.66W	N	-	-	-	-			
1100 MSL	-	-	-	VA	017.98	-			CG 500 FT/NM TO 1100
JOOON	361030.30N/0863950.22W	Y	FO	DF	-	-			
	-	-	-	VM	012.00	-			
BGDDY	360558.01N/0871303.98W	Y	FB	DF	-	-			
DANLS	355301.25N/0881609.06W	Y	FB	TF	256.14	52.80			
RW02L (AER)	360703.64N/0864111.31W	N	-	-	-	-			
1100 MSL	-	-	-	VA	017.65	-			CG 500 FT/NM TO 1100
FOOFY	361120.01N/0863930.71W	Y	FO	DF	-	-			
	-	-	-	VM	017.65	-			
BGDDY	360558.01N/0871303.98W	Y	FB	DF	-	-			
DANLS	355301.25N/0881609.06W	Y	FB	TF	256.14	52.80			
RW02R (AER)	360645.77N/0864003.52W	N	-	-	-	-			
1100 MSL	-	-	-	VA	017.99	-			CG 500 FT/NM TO 1100
KDNCE	361107.30N/0863455.24W	Y	FO	DF	-	-			RIGHT TURN
	-	-	-	VM	052.00	-			
BGDDY	360558.01N/0871303.98W	Y	FB	DF	-	-			
DANLS	355301.25N/0881609.06W	Y	FB	TF	256.14	52.80			

3

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
DANLS RNAV	ONE	DANLS1.DANLS	NONE		

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RW13 (AER)*	360823.16N/0864136.17W*	N	-	-	-	-			*DISPL THLD (801 FT)
1100 MSL	-	-	-	VA	133.30	-			CG 500 FT/NM TO 1100
KLSTR	360401.80N/0865016.36W	Y	FO	DF	-	-			RIGHT TURN
	-	-	-	VM	257.00	-			
BGDDY	360558.01N/0871303.98W	Y	FB	DF	-	-			
DANLS	355301.25N/0881609.06W	Y	FB	TF	256.14	52.80			
RW20C (AER)	360727.24N/0864046.55W	N	-	-	-	-			
1100 MSL	-	-	-	VA	197.99	-			CG 500 FT/NM TO 1300
MIJOM	360456.58N/0865023.82W	Y	FO	DF	-	-			RIGHT TURN
	-	-	-	VM	272.00	-			
BGDDY	360558.01N/0871303.98W	Y	FB	DF	-	-			
DANLS	355301.25N/0881609.06W	Y	FB	TF	256.14	52.80			
RW20L (AER)	360801.01N/0863933.40W	N	-	-	-	-			
1100 MSL	-	-	-	VA	198.00	-			CG 500 FT/NM TO 1100
PWERS	360224.47N/0864421.88W	Y	FO	DF	-	-			RIGHT TURN
	-	-	-	VM	217.00	-			
BGDDY	360558.01N/0871303.98W	Y	FB	DF	-	-			
DANLS	355301.25N/0881609.06W	Y	FB	TF	256.14	52.80			

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
DANLS RNAV	ONE	DANLS1.DANLS	NONE		

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RW20R (AER)	360816.23N/0864042.84W	N	-	-	-	-			
1300 MSL	-	-	-	VA	197.65	-			CG 500 FT/NM TO 1300
BOGAA	360440.70N/0864923.38W	Y	FO	DF	-	-			RIGHT TURN
	-	-	-	VM	257.00	-			
BGDDY	360558.01N/0871303.98W	Y	FB	DF	-	-			
DANLS	355301.25N/0881609.06W	Y	FB	TF	256.14	52.80			
RW31 (AER)*	360718.81N/0864012.01W*	N	-	-	-	-			*DISPL THLD (741 FT)
1100 MSL	-	-	-	VA	313.32	-			CG 500 FT/NM TO 1100
YAHYA	360910.44N/0864911.86W	Y	FO	DF	-	-			LEFT TURN
	-	-	-	VM	277.00	-			
BGDDY	360558.01N/0871303.98W	Y	FB	DF	-	-			
DANLS	355301.25N/0881609.06W	Y	FB	TF	256.14	52.80			
DANLS	355301.25N/0881609.06W	Y	-	IF	-	-			DANLS1.SPKER
SPKER	354350.25N/0890412.82W	Y	FB	TF	257.03	40.15			

QUALITY 3 CHECKED

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
DANLS RNAV	ONE	DANLS1.DANLS	NONE		

ARINC PACKET - 424-18 - SID

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   BGDDY K70    W     N36055801W087130398                      W0030     NAR           BGDDY
        SUSAEAENRT   BOGAA K70    W     N36044070W086492338                      W0033     NAR           BOGAA
        SUSAEAENRT   DANLS K70    W     N35530125W088160906                      W0022     NAR           DANLS
        SUSAEAENRT   FOOFY K70    W     N36112001W086393071                      W0035     NAR           FOOFY
        SUSAEAENRT   JOOON K70    W     N36103030W086395022                      W0035     NAR           JOOON
        SUSAEAENRT   KDNCE K70    W     N36110730W086345524                      W0035     NAR           KDNCE
        SUSAEAENRT   KLSTR K70    W     N36040180W086501636                      W0033     NAR           KLSTR
        SUSAEAENRT   MIJOM K70    W     N36045658W086502382                      W0033     NAR           MIJOM
        SUSAEAENRT   PWERS K70    W     N36022447W086442188                      W0034     NAR           PWERS
        SUSAEAENRT   SPKER K70    C   B N35435025W089041282                      W0016     NAR           SPKER
        SUSAEAENRT   YAHYA K70    W     N36091044W086491186                      W0033     NAR           YAHYA

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KBNAK7ABNA     0     110YHN36072810W086404150W003000599         1800018000C    MNAR    NASHVILLE INTL

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KBNAK7DDANLS14RW02C 010         0        VA                       0210        + 01100     18000
        SUSAP KBNAK7DDANLS14RW02C 020JOOONK7EA0EY   010DF
        SUSAP KBNAK7DDANLS14RW02C 030         0        VM                       0150
        SUSAP KBNAK7DDANLS14RW02C 040BGDDYK7EA0E    010DF
        SUSAP KBNAK7DDANLS14RW02C 050DANLSK7EA0EE   010TF                       25910528
        SUSAP KBNAK7DDANLS14RW02L 010         0        VA                       0207        + 01100     18000
        SUSAP KBNAK7DDANLS14RW02L 020FOOFYK7EA0EY   010DF
        SUSAP KBNAK7DDANLS14RW02L 030         0        VM                       0207
        SUSAP KBNAK7DDANLS14RW02L 040BGDDYK7EA0E    010DF
        SUSAP KBNAK7DDANLS14RW02L 050DANLSK7EA0EE   010TF                       25910528
        SUSAP KBNAK7DDANLS14RW02R 010         0        VA                       0210        + 01100     18000
        SUSAP KBNAK7DDANLS14RW02R 020KDNCEK7EA0EY   010DF
        SUSAP KBNAK7DDANLS14RW02R 030         0        VM                       0550
        SUSAP KBNAK7DDANLS14RW02R 040BGDDYK7EA0E    010DF
        SUSAP KBNAK7DDANLS14RW02R 050DANLSK7EA0EE   010TF                       25910528
        SUSAP KBNAK7DDANLS14RW13  010         0        VA                       1363        + 01100     18000
        SUSAP KBNAK7DDANLS14RW13  020KLSTRK7EA0EY  R010DF
        SUSAP KBNAK7DDANLS14RW13  030         0        VM                       2600
        SUSAP KBNAK7DDANLS14RW13  040BGDDYK7EA0E    010DF
        SUSAP KBNAK7DDANLS14RW13  050DANLSK7EA0EE   010TF                       25910528
        SUSAP KBNAK7DDANLS14RW20C 010         0        VA                       2010        + 01100     18000
```

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
DANLS RNAV	ONE	DANLS1.DANLS	NONE		

```
SUSAP KBNAK7DDANLS14RW20C 020MIJOMK7EA0EY   010DF
SUSAP KBNAK7DDANLS14RW20C 030         0       VM                    2750
SUSAP KBNAK7DDANLS14RW20C 040BGDDYK7EA0E    010DF
SUSAP KBNAK7DDANLS14RW20C 050DANLSK7EA0EE   010TF                    25910528
SUSAP KBNAK7DDANLS14RW20L 010         0       VA                    2010        + 01100     18000
SUSAP KBNAK7DDANLS14RW20L 020PWERSK7EA0EY   010DF
SUSAP KBNAK7DDANLS14RW20L 030         0       VM                    2200
SUSAP KBNAK7DDANLS14RW20L 040BGDDYK7EA0E    010DF
SUSAP KBNAK7DDANLS14RW20L 050DANLSK7EA0EE   010TF                    25910528
SUSAP KBNAK7DDANLS14RW20R 010         0       VA                    2007        + 01300     18000
SUSAP KBNAK7DDANLS14RW20R 020BOGAAK7EA0EY   010DF
SUSAP KBNAK7DDANLS14RW20R 030         0       VM                    2600
SUSAP KBNAK7DDANLS14RW20R 040BGDDYK7EA0E    010DF
SUSAP KBNAK7DDANLS14RW20R 050DANLSK7EA0EE   010TF                    25910528
SUSAP KBNAK7DDANLS14RW31  010         0       VA                    3163        + 01100     18000
SUSAP KBNAK7DDANLS14RW31  020YAHYAK7EA0EY   010DF
SUSAP KBNAK7DDANLS14RW31  030         0       VM                    2800
SUSAP KBNAK7DDANLS14RW31  040BGDDYK7EA0E    010DF
SUSAP KBNAK7DDANLS14RW31  050DANLSK7EA0EE   010TF                    25910528
SUSAP KBNAK7DDANLS16SPKER 010DANLSK7EA0E       IF                                            18000
SUSAP KBNAK7DDANLS16SPKER 020SPKERK7EA0EE   010TF                    26000402
```

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                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KBNAK7GRW02C   0080010210 N36061199W086411666+0000    +014430056900006015 0IIEZN1
        SUSAP KBNAK7GRW02L   0077030207 N36070364W086411131-0600    +015320059900005515 0IIBNA3
        SUSAP KBNAK7GRW02R   0080000210 N36064577W086400352-0600    +015060059000005915 0IIUQU3
        SUSAP KBNAK7GRW13    0110301363 N36082316W086413617+0400    +013640054308015515 0R
        SUSAP KBNAK7GRW20C   0080012010 N36072724W086404655+0000    +014510057200005015 0R
        SUSAP KBNAK7GRW20L   0080002010 N36080101W086393340+0600    +013530054000004715 0IISSX1
        SUSAP KBNAK7GRW20R   0077032007 N36081623W086404284+0600    +014010055500005915 0IIVIY1
        SUSAP KBNAK7GRW31    0110303163 N36071881W086401201-0400    +014680057707415215 0IIPNO1
```

QUALITY CHECKED 1

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
DANLS RNAV	ONE	DANLS1.DANLS	NONE		

ARINC SUMMARY - 424-18 - SID

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	RW02C		010		VA		FB		021.0()		AA 01100	
	RW02C	JOOON	020		DF		FO	1.0				
	RW02C		030		VM		FB		015.0()			
	RW02C	BGDDY	040		DF		FB	1.0				
	RW02C	DANLS	050		TF		FB	1.0	259.1()	052.8		
	RW02L		010		VA		FB		020.7()		AA 01100	
	RW02L	FOOFY	020		DF		FO	1.0				
	RW02L		030		VM		FB		020.7()			
	RW02L	BGDDY	040		DF		FB	1.0				
	RW02L	DANLS	050		TF		FB	1.0	259.1()	052.8		
	RW02R		010		VA		FB		021.0()		AA 01100	
	RW02R	KDNCE	020		DF		FO	1.0				
	RW02R		030		VM		FB		055.0()			
	RW02R	BGDDY	040		DF		FB	1.0				
	RW02R	DANLS	050		TF		FB	1.0	259.1()	052.8		
	RW13		010		VA		FB		136.3()		AA 01100	
	RW13	KLSTR	020		DF	R	FO	1.0				
	RW13		030		VM		FB		260.0()			
	RW13	BGDDY	040		DF		FB	1.0				
	RW13	DANLS	050		TF		FB	1.0	259.1()	052.8		
	RW20C		010		VA		FB		201.0()		AA 01100	
	RW20C	MIJOM	020		DF		FO	1.0				
	RW20C		030		VM		FB		275.0()			
	RW20C	BGDDY	040		DF		FB	1.0				
	RW20C	DANLS	050		TF		FB	1.0	259.1()	052.8		
	RW20L		010		VA		FB		201.0()		AA 01100	
	RW20L	PWERS	020		DF		FO	1.0				
	RW20L		030		VM		FB		220.0()			
	RW20L	BGDDY	040		DF		FB	1.0				
	RW20L	DANLS	050		TF		FB	1.0	259.1()	052.8		
	RW20R		010		VA		FB		200.7()		AA 01300	
	RW20R	BOGAA	020		DF		FO	1.0				
	RW20R		030		VM		FB		260.0()			
	RW20R	BGDDY	040		DF		FB	1.0				
	RW20R	DANLS	050		TF		FB	1.0	259.1()	052.8		
	RW31		010		VA		FB		316.3()		AA 01100	
	RW31	YAHYA	020		DF		FO	1.0				
	RW31		030		VM		FB		280.0()			
	RW31	BGDDY	040		DF		FB	1.0				
	RW31	DANLS	050		TF		FB	1.0	259.1()	052.8		
	SPKER	DANLS	010		IF		FB					
	SPKER	SPKER	020		TF		FB	1.0	260.0()	040.2		

DEPARTURE (DATA RECORD)

DP Name	Number	DP Computer Code	Superseded Number	Dated	Effective Date
DANLS RNAV	ONE	DANLS1.DANLS	NONE		

POINT DATA

WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
BGDDY	N360558.01	W0871303.98	N3605.967	W08713.066
BOGAA	N360440.70	W0864923.38	N3604.678	W08649.390
DANLS	N355301.25	W0881609.06	N3553.021	W08816.151
FOOFY	N361120.01	W0863930.71	N3611.334	W08639.512
JOOON	N361030.30	W0863950.22	N3610.505	W08639.837
KDNCE	N361107.30	W0863455.24	N3611.122	W08634.921
KLSTR	N360401.80	W0865016.36	N3604.030	W08650.273
MIJOM	N360456.58	W0865023.82	N3604.943	W08650.397
PWERS	N360224.47	W0864421.88	N3602.408	W08644.365
SPKER	N354350.25	W0890412.82	N3543.838	W08904.214
YAHYA	N360910.44	W0864911.86	N3609.174	W08649.198
RW02C	N360611.99	W0864116.66	N3606.200	W08641.278
RW02L	N360703.64	W0864111.31	N3607.061	W08641.189
RW02R	N360645.77	W0864003.52	N3606.763	W08640.059
RW13	N360823.16	W0864136.17	N3608.386	W08641.603
RW20C	N360727.24	W0864046.55	N3607.454	W08640.776
RW20L	N360801.01	W0863933.40	N3608.017	W08639.557
RW20R	N360816.23	W0864042.84	N3608.271	W08640.714
RW31	N360718.81	W0864012.01	N3607.314	W08640.200

RUNWAY DATA

RWY	THRESHOLD ELEVATION	TCH
RW02C	00569	60
RW02L	00599	55
RW02R	00590	59
RW13	00543	55
RW20C	00572	50
RW20L	00540	47
RW20R	00555	59
RW31	00577	52

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: BGDDY **STATE:** TN **COUNTRY:** US

LATITUDE/LONGITUDE: 360558.01N/0871303.98W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	DANLS (RNAV)			KBNA	NASHVILLE	TN (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 05/14/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZME
ATC FACILITY: BNA APP CON
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: BOGAA **STATE:** TN **COUNTRY:** US

LATITUDE/LONGITUDE: 360440.70N/0864923.38W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	DANLS (RNAV)			KBNA	NASHVILLE	TN (US)
DP	GDOGG (RNAV)			KBNA	NASHVILLE	TN (US)
DP	HGGRD (RNAV)			KBNA	NASHVILLE	TN (US)
DP	KRSTA (RNAV)			KBNA	NASHVILLE	TN (US)
DP	PARDN (RNAV)			KBNA	NASHVILLE	TN (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 05/14/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZME
ATC FACILITY: BNA APP CON
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: DANLS **STATE:** TN **COUNTRY:** US

LATITUDE/LONGITUDE: 355301.25N/0881609.06W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	DANLS (RNAV)			KBNA	NASHVILLE	TN (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 05/14/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZME
ATC FACILITY: BNA APP CON
OTHER:

QUALITY 3

RADIO FIX AND HOLDING DATA RECORD

NAME: FOOFY **STATE:** TN **COUNTRY:** US

LATITUDE/LONGITUDE: 361120.01N/0863930.71W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	CHADM (RNAV)			KBNA	NASHVILLE	TN (US)
DP	DANLS (RNAV)			KBNA	NASHVILLE	TN (US)
DP	DRURY (RNAV)			KBNA	NASHVILLE	TN (US)
DP	EVVAN (RNAV)			KBNA	NASHVILLE	TN (US)
DP	FLAME (RNAV)			KBNA	NASHVILLE	TN (US)
DP	GDOGG (RNAV)			KBNA	NASHVILLE	TN (US)
DP	HGGRD (RNAV)			KBNA	NASHVILLE	TN (US)
DP	KRSTA (RNAV)			KBNA	NASHVILLE	TN (US)
DP	PARDN (RNAV)			KBNA	NASHVILLE	TN (US)
DP	PREDS (RNAV)			KBNA	NASHVILLE	TN (US)
DP	TAZMO (RNAV)			KBNA	NASHVILLE	TN (US)
DP	TIPPN (RNAV)			KBNA	NASHVILLE	TN (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 05/11/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZME
ATC FACILITY: BNA APP CON
OTHER:

RADIO FIX AND HOLDING DATA RECORD

NAME: JOOON **STATE:** TN **COUNTRY:** US

LATITUDE/LONGITUDE: 361030.30N/0863950.22W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	CHADM (RNAV)			KBNA	NASHVILLE	TN (US)
DP	DANLS (RNAV)			KBNA	NASHVILLE	TN (US)
DP	DRURY (RNAV)			KBNA	NASHVILLE	TN (US)
DP	EVVAN (RNAV)			KBNA	NASHVILLE	TN (US)
DP	FLAME (RNAV)			KBNA	NASHVILLE	TN (US)
DP	GDOGG (RNAV)			KBNA	NASHVILLE	TN (US)
DP	HGGRD (RNAV)			KBNA	NASHVILLE	TN (US)
DP	KRSTA (RNAV)			KBNA	NASHVILLE	TN (US)
DP	PARDN (RNAV)			KBNA	NASHVILLE	TN (US)
DP	PREDS (RNAV)			KBNA	NASHVILLE	TN (US)
DP	TAZMO (RNAV)			KBNA	NASHVILLE	TN (US)
DP	TIPPN (RNAV)			KBNA	NASHVILLE	TN (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 05/11/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZME
ATC FACILITY: BNA APP CON
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: KDNCE **STATE:** TN **COUNTRY:** US

LATITUDE/LONGITUDE: 361107.30N/0863455.24W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	CHADM (RNAV)			KBNA	NASHVILLE	TN (US)
DP	DANLS (RNAV)			KBNA	NASHVILLE	TN (US)
DP	DRURY (RNAV)			KBNA	NASHVILLE	TN (US)
DP	EVVAN (RNAV)			KBNA	NASHVILLE	TN (US)
DP	FLAME (RNAV)			KBNA	NASHVILLE	TN (US)
DP	GDOGG (RNAV)			KBNA	NASHVILLE	TN (US)
DP	HGGRD (RNAV)			KBNA	NASHVILLE	TN (US)
DP	KRSTA (RNAV)			KBNA	NASHVILLE	TN (US)
DP	PARDN (RNAV)			KBNA	NASHVILLE	TN (US)
DP	PREDS (RNAV)			KBNA	NASHVILLE	TN (US)
DP	TAZMO (RNAV)			KBNA	NASHVILLE	TN (US)
DP	TIPPN (RNAV)			KBNA	NASHVILLE	TN (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 05/11/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZME
ATC FACILITY: BNA APP CON
OTHER:

QUALITY CHECK 3

RADIO FIX AND HOLDING DATA RECORD

NAME: KLSTR **STATE:** TN **COUNTRY:** US

LATITUDE/LONGITUDE: 360401.80N/0865016.36W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	DANLS (RNAV)			KBNA	NASHVILLE	TN (US)
DP	GDOGG (RNAV)			KBNA	NASHVILLE	TN (US)
DP	HGGRD (RNAV)			KBNA	NASHVILLE	TN (US)
DP	KRSTA (RNAV)			KBNA	NASHVILLE	TN (US)
DP	PARDN (RNAV)			KBNA	NASHVILLE	TN (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 05/14/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZME
ATC FACILITY: BNA APP CON
OTHER:

QUALITY CHECK 3

RADIO FIX AND HOLDING DATA RECORD

NAME: MIJOM **STATE:** TN **COUNTRY:** US

LATITUDE/LONGITUDE: 360456.58N/0865023.82W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	DANLS (RNAV)			KBNA	NASHVILLE	TN (US)
DP	GDOGG (RNAV)			KBNA	NASHVILLE	TN (US)
DP	HGGRD (RNAV)			KBNA	NASHVILLE	TN (US)
DP	KRSTA (RNAV)			KBNA	NASHVILLE	TN (US)
DP	PARDN (RNAV)			KBNA	NASHVILLE	TN (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 05/14/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZME
ATC FACILITY: BNA APP CON
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: PWERS **STATE:** TN **COUNTRY:** US

LATITUDE/LONGITUDE: 360224.47N/0864421.88W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	DANLS (RNAV)			KBNA	NASHVILLE	TN (US)
DP	DRURY (RNAV)			KBNA	NASHVILLE	TN (US)
DP	GDOGG (RNAV)			KBNA	NASHVILLE	TN (US)
DP	HGGRD (RNAV)			KBNA	NASHVILLE	TN (US)
DP	PARDN (RNAV)			KBNA	NASHVILLE	TN (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 05/14/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZME
ATC FACILITY: BNA APP CON
OTHER:

QUALITY 3 CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: SPKER **STATE:** TN **COUNTRY:** US

LATITUDE/LONGITUDE: 354350.25N/0890412.82W **TYPE:** WP, 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	MEMPHIS	MEM	VORTAC	H	045.00	046.00	62.00	62.00		5000	45000
2	NASHVILLE	BNA	VORTAC	H	260.87	258.87	118.75	118.75		10000	45000
3	BOWLING GREEN	BWG	VORTAC	H	239.37	241.37	146.18	146.18		22000	45000
4	POCKET CITY	PXV	VORTAC	H	202.96	205.96	145.98	145.98		22000	45000

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
BNA	VORTAC	R-261	119	10000	20000
MEM	VORTAC	R-045	62	5000	14900
BWG	VORTAC	R-239	147	22000	45000
PXV	VORTAC	R-203	146	22000	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	NE		WP	045.53	225.53	L		12	10000	24000	20	20

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	230	TOWER (47-000702)	355405.00N/0884651.00W	1462	3C

REASON FOR NONSTANDARD HOLDING:
PAT 1 ATC REQUEST. 12 NM LEG LENGTHS ATC REQUEST.

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
MEMPHIS (FAC 1) USED TO ESTABLISH FIX COORDINATES
CHART FAC 1 AND PAT 1 ON ENROUTE LOW/HIGH PER ATC REQUEST.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	DANLS (RNAV)			KBNA	NASHVILLE	TN (US)
STAR	LTOWN (RNAV)		1	KMEM	MEMPHIS	TN (US)
STAR	WLDER	1, 2, 3, 4		KMEM	MEMPHIS	TN (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 6 **DATE OF REVISION:** 11/15/2012

REASON FOR REVISION:
1. ADDED DP TO REQUIRED CHARTING.
2. UPDATED FIX USE.

DEVELOPED BY: **DATE:** 05/14/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION: **NFDC**
FPO: EST
ARTCC: ZME
ATC FACILITY: MEM APP CON, BNA APP CON
OTHER:

QUALITY CHECKED 3

RADIO FIX AND HOLDING DATA RECORD

NAME: YAHYA **STATE:** TN **COUNTRY:** US

LATITUDE/LONGITUDE: 360910.44N/0864911.86W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	DANLS (RNAV)			KBNA	NASHVILLE	TN (US)
DP	DRURY (RNAV)			KBNA	NASHVILLE	TN (US)
DP	GDOGG (RNAV)			KBNA	NASHVILLE	TN (US)
DP	HGGRD (RNAV)			KBNA	NASHVILLE	TN (US)
DP	KRSTA (RNAV)			KBNA	NASHVILLE	TN (US)
DP	PARDN (RNAV)			KBNA	NASHVILLE	TN (US)

REQUIRED CHARTING: DP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 11/15/2012

DEVELOPED BY: **DATE:** 05/14/2012 **OFFICE:** AJV-352 **NAME:** DAVID SAUER

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

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: EST
ARTCC: ZME
ATC FACILITY: BNA APP CON
OTHER:

QUALITY CHECKED 3

Name:	Dennis Osterhage
Project Name:	KBNA DANLS1 SID PNA BGDDY SPKER 20120329
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	3/29/2012 10:22:26 AM
Input File:	KBNA DANLS1 SID_PNA_...
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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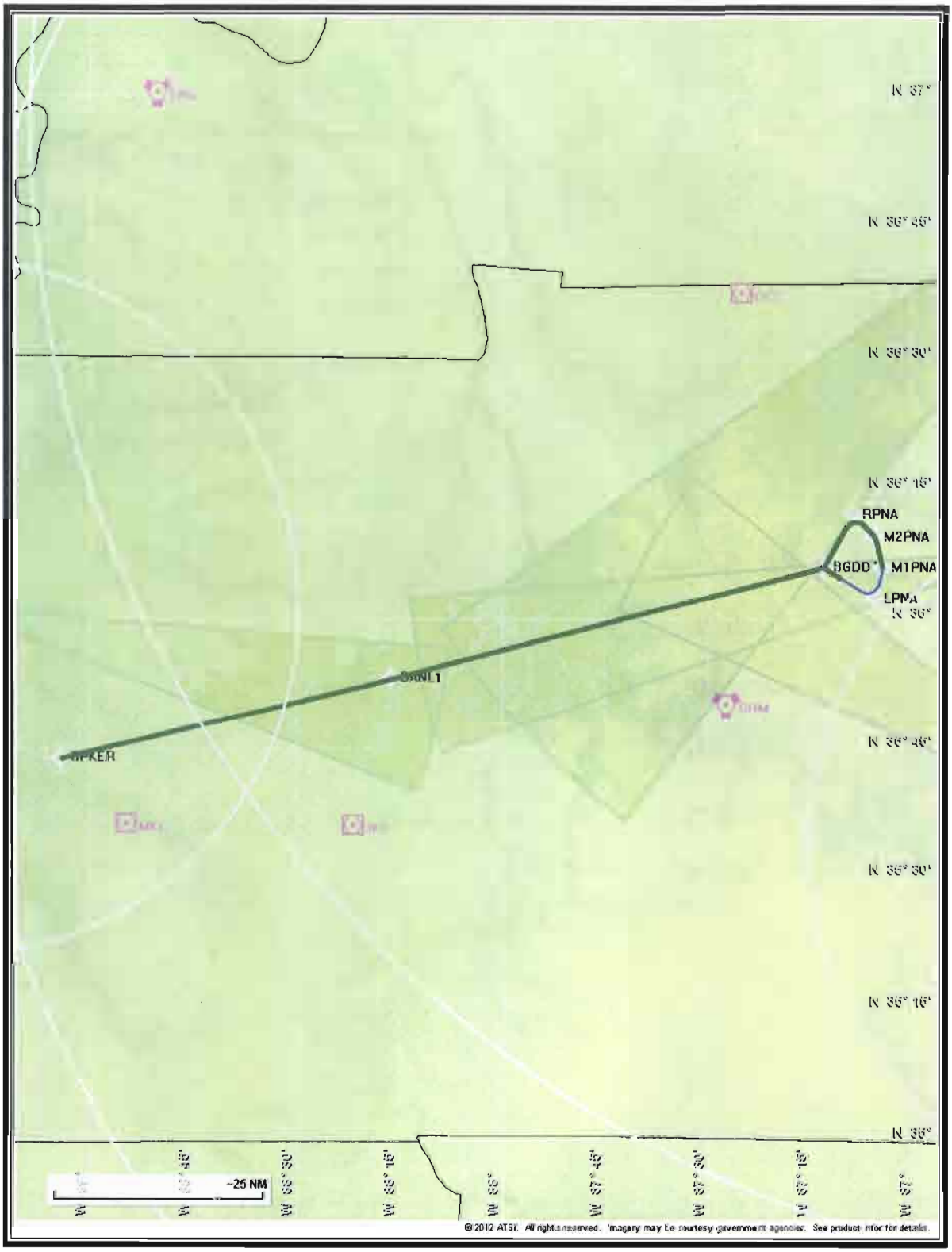
N 37°
N 36° 45'
N 36° 30'
N 36° 15'
RPNA
M2PNA
BGDD
M1PNA
LPNA
N 36°
DANL1
SPKER
N 35° 45'
N 35° 30'
N 35° 15'
N 35°
~25 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
BGDD1	WP	N 36° 5' 58.01" W 87° 13' 3.98"	6000.0	VNAV	180.0	Fly Over	TF
LPNA	WP	N 36° 2' 24.18" W 87° 5' 37.85"	6000.0	VNAV	180.0	Fly By	TF
M1PNA	WP	N 36° 5' 53.89" W 87° 4' 25.74"	6000.0	VNAV	180.0	Fly By	TF
M2PNA	WP	N 36° 9' 24.76" W 87° 5' 32.49"	6000.0	VNAV	180.0	Fly By	TF
RPNA	WP	N 36° 12' 0.26" W 87° 8' 40.45"	6000.0	VNAV	180.0	Fly By	TF
BGDD11	WP	N 36° 5' 58.01" W 87° 13' 3.98"	6000.0	VNAV	180.0	Fly By	TF
DANL1	WP	N 35° 53' 1.25" W 88° 16' 9.06"	16559.9	VNAV	210.0	Fly By	TF
SPKER	WP	N 35° 43' 50.25" W 89° 4' 12.82"	18000.0	VNAV	240.0	Fly Over	TF

Flyability

Return To Summary

Settings:

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

Table:

200.0 Kts up to **29000.0 Ft.**
280.0 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:

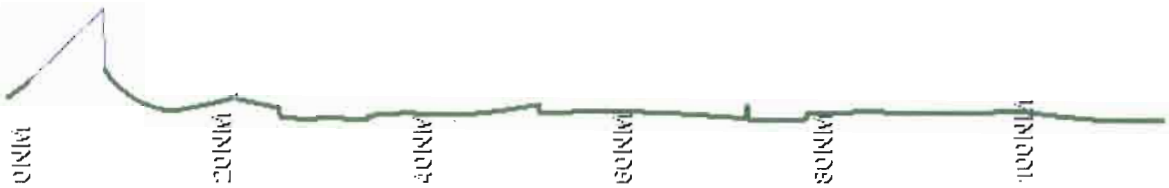
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.558 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: 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: 7

Maximum DME Error: 0.736 NM.

No Critical DMEs were found.

Available DMEs: BNA, GHM, SYI, BWG, JKS, DYR, MEM, ARG



DME/DME (Continued.)

Return To Summary

DMEs Used

#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	BNA	N 36° 8' 13.06" W 86° 41' 5.18"	H + ESV	User	NO	1.649	Enabled	24.4 %	24.4 %
2	GHM	N 35° 50' 2.12" W 87° 27' 6.35"	L	Database	NO	1.649	Enabled	49.2 %	49.2 %
3	SYI	N 35° 33' 43.12" W 86° 26' 20.95"	L + ESV	User	NO	0.736	Enabled	9.0 %	9.0 %
4	BWG	N 36° 55' 43.47" W 86° 26' 36.36"	H + ESV	User	NO	0.736	Enabled	18.8 %	18.8 %
5	JKS	N 35° 35' 56.36" W 88° 21' 31.96"	L	Database	NO	0.877	Enabled	41.5 %	41.6 %
6	DYR	N 36° 1' 6.78" W 89° 19' 3.69"	L + ESV	User	NO	0.736	Enabled	17.5 %	17.6 %
7	MEM	N 35° 0' 54.42" W 89° 58' 59.55"	H	Database	NO	1.067	Enabled	25.4 %	25.4 %

Flight Check DME Selection

Distance [NM]	Selected DMEs					Alternate
0.0	BNA	GHM				
5.1	BNA	GHM				
8.9	BNA	GHM				
12.6	BNA	GHM				
14.8	BNA	GHM				
21.9	BNA	GHM	BWG	SYI		
48.9	BNA	GHM	BWG	JKS	DYR	
75.3	BNA	MEM	ARG	JKS	DYR	

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 36° 4' 48.41" W 87° 10' 38.55"	N 36° 6' 5.72" W 87° 4' 31.17"	7.4
	VOR: BNA	Available from N 36° 4' 48.41" W 87° 10' 38.55" to N 36° 6' 5.72" W 87° 4' 31.17"	
	VOR: CKV	Available from N 36° 4' 48.41" W 87° 10' 38.55" to N 36° 6' 5.72" W 87° 4' 31.17"	
	VOR: GHM	Available from N 36° 4' 48.41" W 87° 10' 38.55" to N 36° 6' 5.72" W 87° 4' 31.17"	

DME/DME (Continued.)

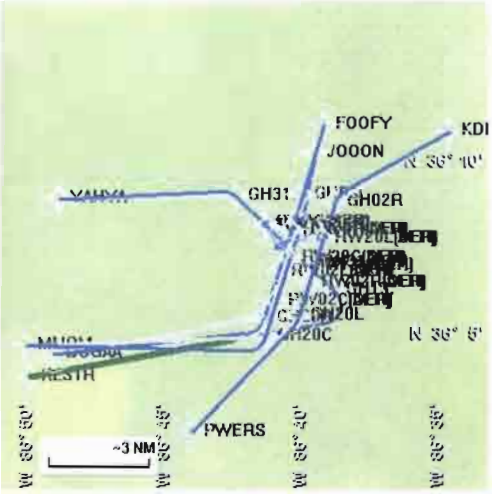
Return To Summary

Inertial Drift Segments (Continued.)

#	Start Location	End Location	Length [NM]
2	N 36° 6' 8.40" W 87° 13' 2.57"	N 36° 5' 51.57" W 87° 13' 37.78"	0.6
	VOR: BNA	Available from N 36° 6' 8.40" W 87° 13' 2.57" to N 36° 5' 51.57" W 87° 13' 37.78"	
	VOR: CKV	Available from N 36° 6' 8.40" W 87° 13' 2.57" to N 36° 5' 51.57" W 87° 13' 37.78"	
	VOR: GHM	Available from N 36° 6' 8.40" W 87° 13' 2.57" to N 36° 5' 51.57" W 87° 13' 37.78"	

User DMEs

#	Name	Lat/Lon	Range	Elevation [Ft]	Frequency	Replaces:	Status
1	BNA	N 36° 8' 13.06" W 86° 41' 5.18"	H	565.8	114.10	BNA	Used
		ESV: Bearing [True]: 252.0° to 266.0° Bearing [Mag]: 254.0° to 268.0°			Arc Distance: Out to 75.0 NM Altitude: 7000.0 to 16000.0 Ft.		
2	DYR	N 36° 1' 6.78" W 89° 19' 3.69"	L	388.7	116.80	DYR	Used
		ESV: Bearing [True]: 94.0° to 111.0° Bearing [Mag]: 91.0° to 108.0°			Arc Distance: Out to 58.0 NM Altitude: 15000.0 to 24000.0 Ft.		
3	BWG	N 36° 55' 43.47" W 86° 26' 36.36"	H	565.0	117.90	BWG	Used
		ESV: Bearing [True]: 218.0° to 236.0° Bearing [Mag]: 216.0° to 234.0°			Arc Distance: Out to 100.0 NM Altitude: 7000.0 to 16500.0 Ft.		
4	SYI	N 35° 33' 43.12" W 86° 26' 20.95"	L	814.0	109.00	SYI	Used
		ESV: Bearing [True]: 294.0° to 309.0° Bearing [Mag]: 295.0° to 310.0°			Arc Distance: Out to 68.0 NM Altitude: 6000.0 to 17500.0 Ft.		



Name:	Dennis Osterhage
Project Name:	KBNA DANLS1 SID ALL RWYS FIRST WP 20120404
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/4/2012 8:25:13 AM
Input File:	KBNA DANLS1 SID RW20...
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

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

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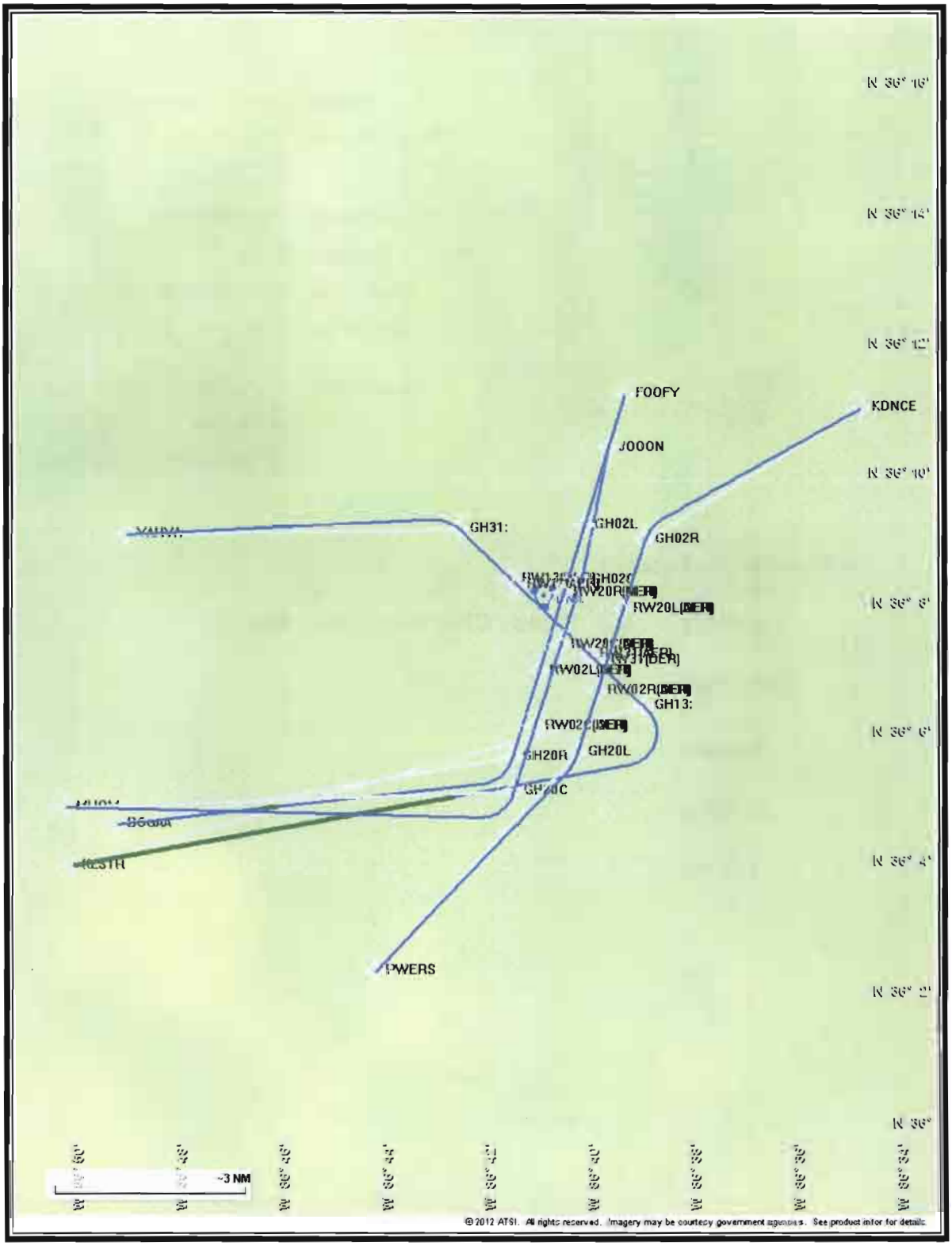
N 36° 16'
N 36° 14'
N 36° 12'
N 36° 10'
N 36° 8'
N 36° 6'
N 36° 4'
N 36° 2'
N 36°
FOOFY
KDNCE
JOOON
GH31:
GH02L
GH02R
RW20L(DER)
RW31(DER)
GH13:
GH20R
GH20L
PWERS
~3 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW20C(...	WP	N 36° 7' 27.24" W 86° 40' 46.55"	571.8	VNAV	0.0	Fly Over	TF
RW02C(...	WP	N 36° 6' 11.99" W 86° 41' 16.66"	604.0	VNAV	130.0	Fly Over	VA
GH20C	WP	N 36° 5' 11.30" W 86° 41' 40.93"	1100.0	VNAV	145.0	Fly Over	DF
MIJOM	WP	N 36° 4' 56.58" W 86° 50' 23.82"	2513.6	VNAV	180.0	Fly Over	DF

Climb Gradient: 500.0 Ft/NM up to 1100.0 Ft MSL

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KBNA
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1100.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -39.02 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

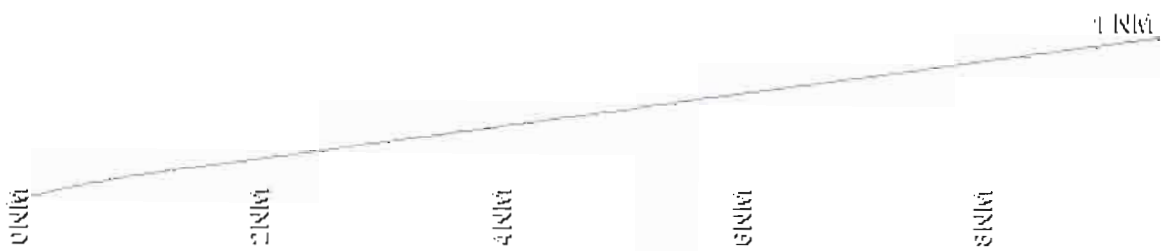
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: 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: 0

Maximum DME Error Could not be Derived with < 2 DMEs.

No Critical DMEs were found.

Available DMEs: BNA, GHM



DME/DME (Continued.)

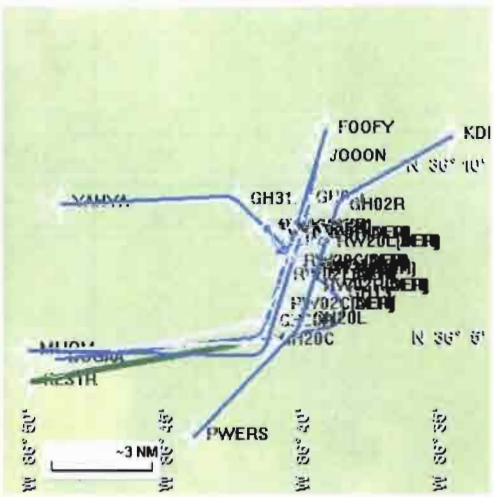
Return To Summary

Flight Check DME Selection

Distance [NM]	Selected DMEs		Alternate
0.0			
1.3			
2.4	BNA	GHM	

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 36° 7' 27.24" W 86° 40' 46.55"	N 36° 4' 56.56" W 86° 50' 22.92"	9.6
	VOR: BNA	Available from N 36° 7' 27.24" W 86° 40' 46.55" to N 36° 4' 56.56" W 86° 50' 22.92"	
	VOR: SYI	Available from N 36° 7' 27.24" W 86° 40' 46.55" to N 36° 4' 56.56" W 86° 50' 22.92"	
	VOR: GHM	Available from N 36° 5' 22.19" W 86° 41' 36.56" to N 36° 4' 56.56" W 86° 50' 22.92"	



Name:	Dennis Osterhage
Project Name:	KBNA DANLS1 SID ALL RWYS FIRST WP 20120404
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/4/2012 8:22:43 AM
Input File:	KBNA DANLS1 SID RW31...
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

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

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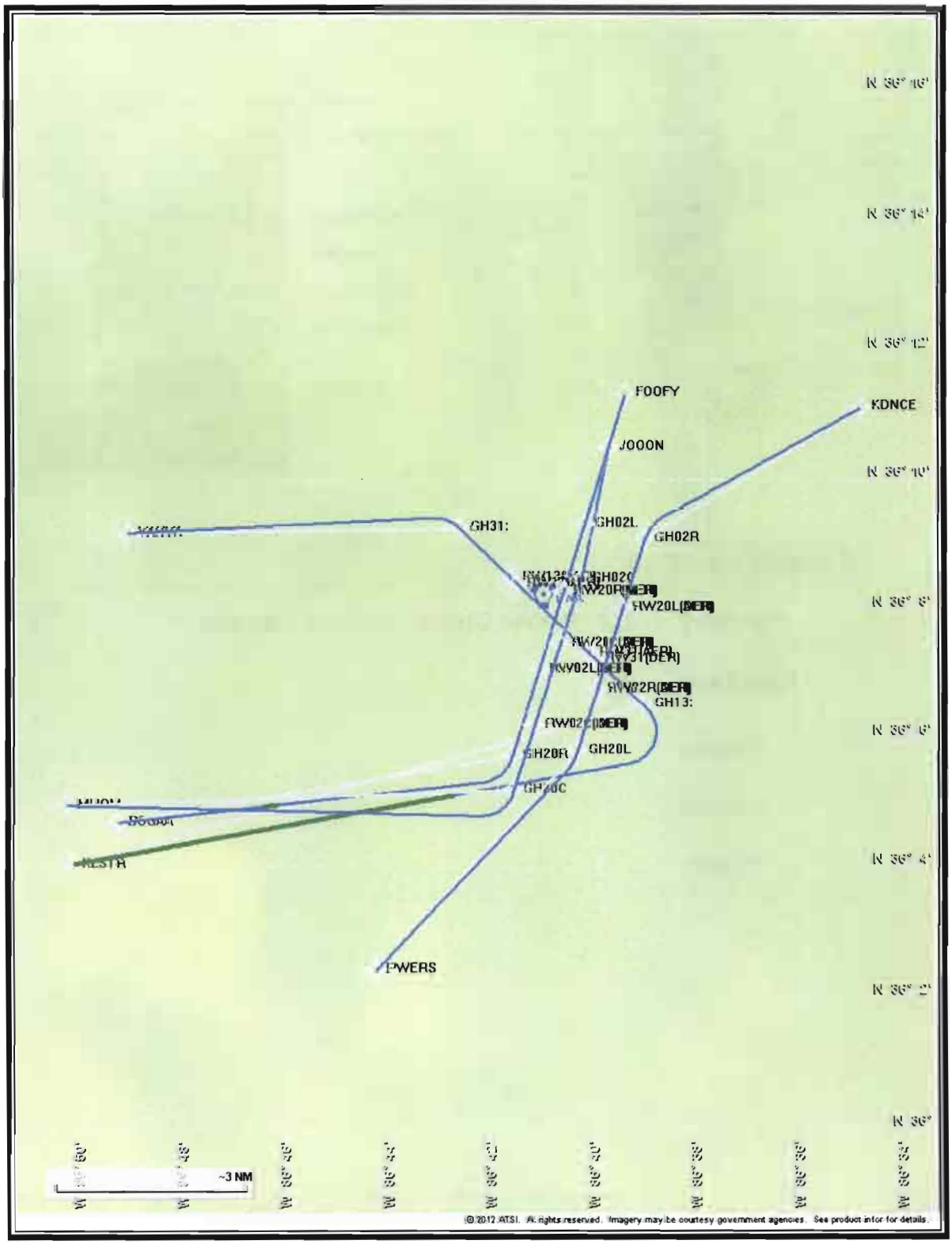
N 36° 16'
N 36° 14'
N 36° 12'
N 36° 10'
N 36° 8'
N 36° 6'
N 36° 4'
N 36° 2'
N 36°
FOOFY
KDNCE
JOOON
GH31:
GH02L
GH02R
RW20L(DER)
RW02L(DER)
GH13:
GH20R
GH20L
PWERS
~3 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW31(A...	WP	N 36° 7' 18.81" W 86° 40' 12.01"	582.2	VNAV	0.0	Fly Over	TF
RW13(D...	WP	N 36° 8' 28.60" W 86° 41' 43.28"	570.8	VNAV	130.0	Fly Over	VA
GH31:	WP	N 36° 9' 15.09" W 86° 42' 44.12"	1100.0	VNAV	145.0	Fly Over	DF
YAHYA	WP	N 36° 9' 10.44" W 86° 49' 11.86"	2146.8	VNAV	180.0	Fly Over	DF

Climb Gradient: 500.0 Ft/NM up to 1100.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KBNA
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1100.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -23.28 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

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: 0.165 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: 0

Maximum DME Error Could not be Derived with < 2 DMEs

No Critical DMEs were found.

Available DMEs: BNA

DME/DME (Continued.)

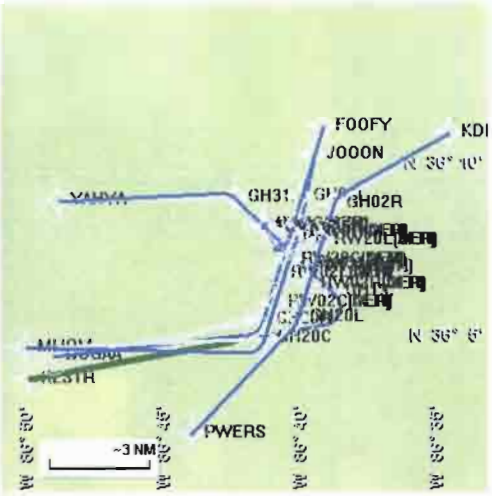
Return To Summary

Flight Check DME Selection

Distance [NM]	Selected DMEs	Alternate
0.0		
1.7		
2.8	BNA	

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 36° 7' 18.81" W 86° 40' 12.01"	N 36° 9' 10.47" W 86° 49' 11.12"	8.1
	VOR: BNA	Available from N 36° 7' 18.81" W 86° 40' 12.01" to N 36° 9' 10.47" W 86° 49' 11.12"	
	VOR: SYI	Available from N 36° 7' 18.81" W 86° 40' 12.01" to N 36° 9' 10.47" W 86° 49' 11.12"	
	VOR: GHM	Available from N 36° 9' 22.67" W 86° 43' 57.83" to N 36° 9' 10.47" W 86° 49' 11.12"	



Name:	Dennis Osterhage
Project Name:	KBNA DANLS1 SID ALL RWYS FIRST WP 20120404
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/4/2012 8:23:31 AM
Input File:	KBNA DANLS1 SID RW02..
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

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

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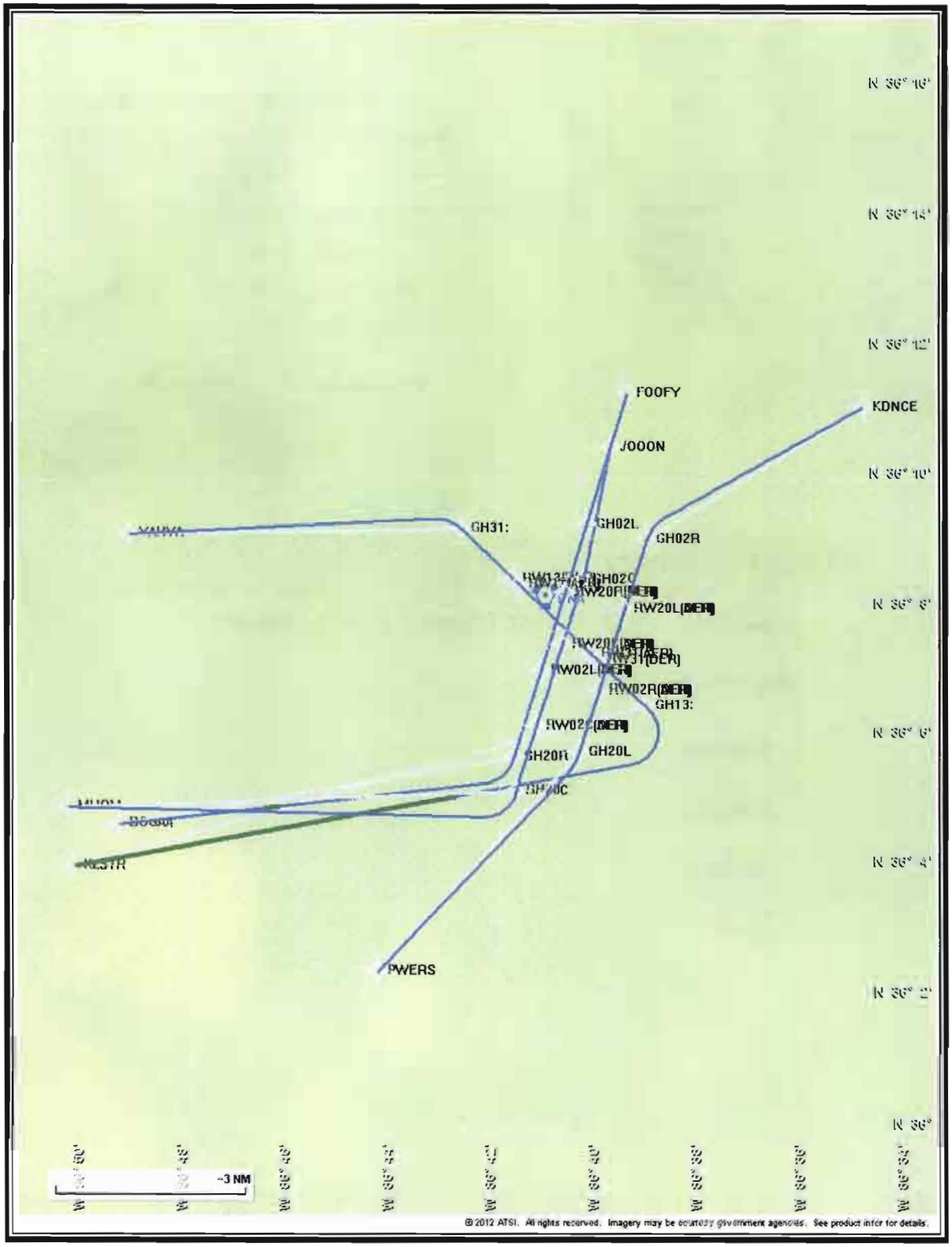
FOOFY
KDNCE
JOOON
GH31:
GH02L
GH02R
RW20L
GH13:
GH20R
GH20L
PWERS
~3 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW02L(...	WP	N 36° 7' 3.64" W 86° 41' 11.31"	598.5	VNAV	0.0	Fly Over	TF
RW20R(...	WP	N 36° 8' 16.23" W 86° 40' 42.84"	590.4	VNAV	130.0	Fly Over	VA
GH02L	WP	N 36° 9' 18.59" W 86° 40' 18.36"	1100.0	VNAV	145.0	Fly Over	DF
FOOFY	WP	N 36° 11' 20.01" W 86° 39' 30.71"	1524.1	VNAV	180.0	Fly Over	DF

Climb Gradient: 500.0 Ft/NM up to 1100.0 Ft MSL

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KBNA
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1100.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -16.08 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

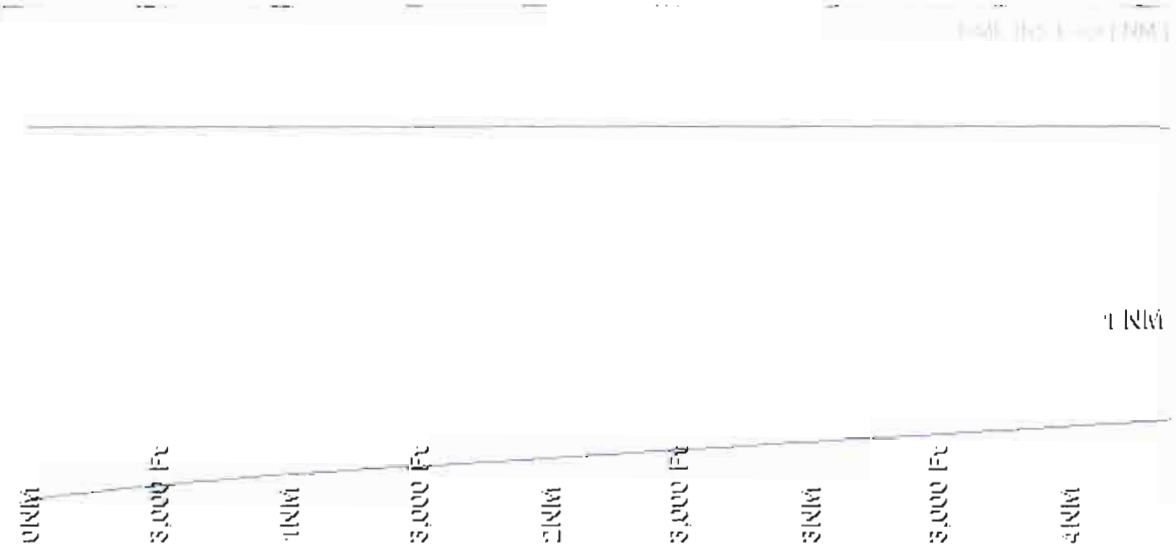
Settings:

RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 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: 0

Maximum DME Error Could not be Derived with < 2 DMEs.

No Critical DMEs were found.



DME/DME (Continued.)

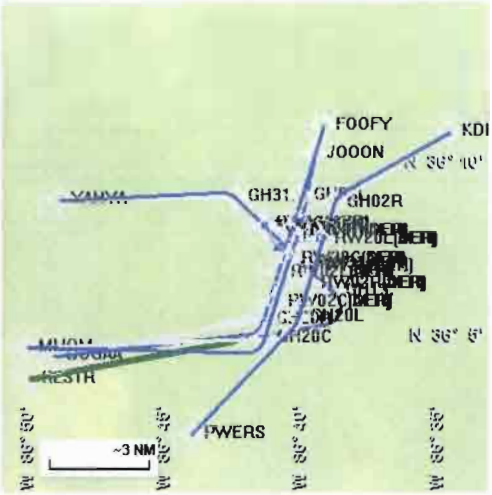
Return To Summary

Flight Check DME Selection

Distance [NM]	Selected DMEs	Alternate
0.0		
1.3		
2.3		

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 36° 7' 3.64" W 86° 41' 11.31"	N 36° 11' 18.73" W 86° 39' 31.21"	4.5
	VOR: BNA	Available from N 36° 7' 3.64" W 86° 41' 11.31" to N 36° 11' 18.73" W 86° 39' 31.21"	
	VOR: SYI	Available from N 36° 7' 3.64" W 86° 41' 11.31" to N 36° 11' 18.73" W 86° 39' 31.21"	



Name:	Dennis Osterhage
Project Name:	KBNA DANLS1 SID ALL RWYS FIRST WP 20120404
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/4/2012 8:25:37 AM
Input File:	KBNA DANLS1 SID RW20...
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

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

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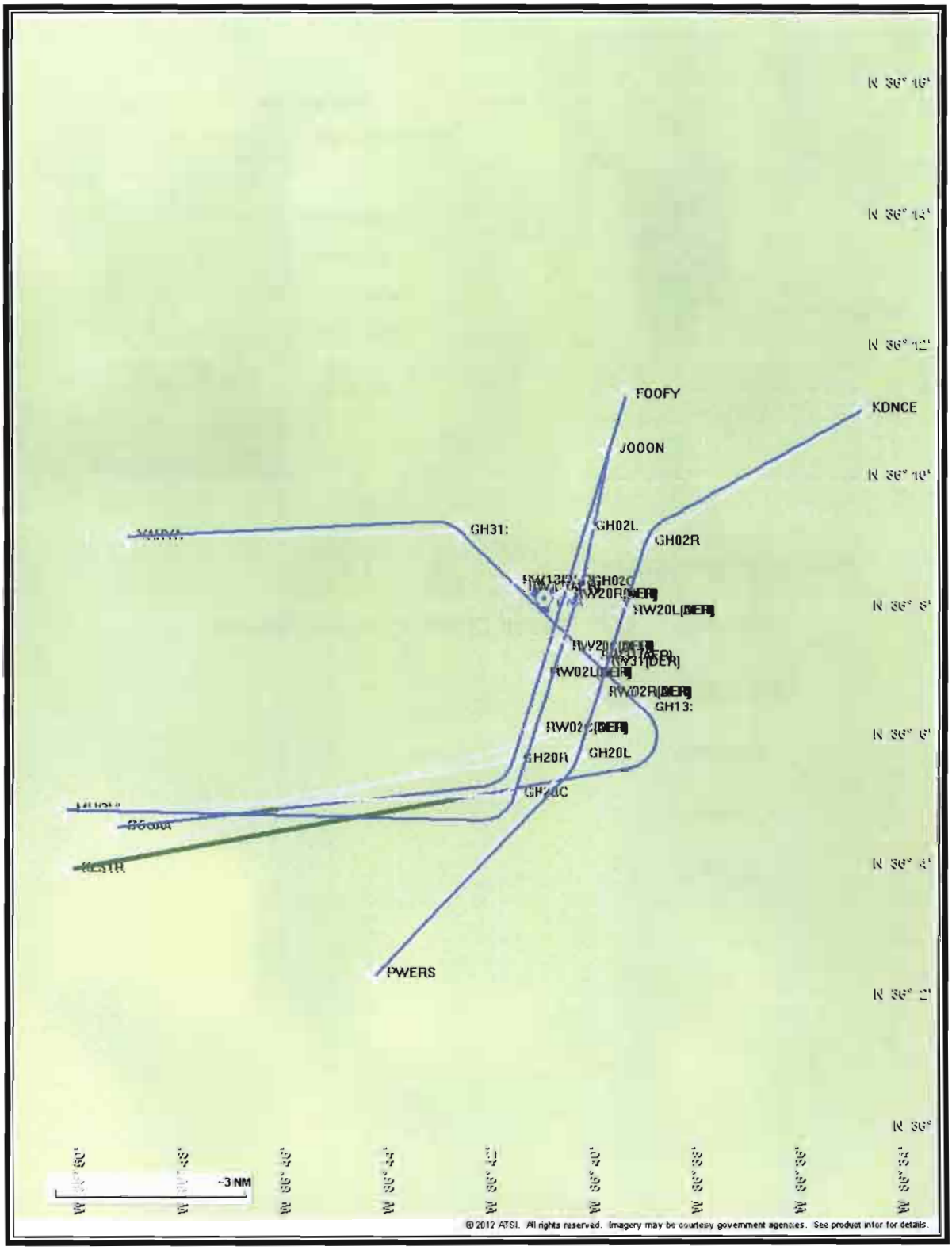
FOOFY
KDNCE
JOOON
GH31:
GH02L
GH02R
RW20L
GH13:
GH20R
GH20L
PWERS
~3 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW20L(...	WP	N 36° 8' 1.01" W 86° 39' 33.40"	539.9	VNAV	0.0	Fly Over	TF
RW02R(...	WP	N 36° 6' 45.77" W 86° 40' 3.52"	624.7	VNAV	130.0	Fly Over	VA
GH20L	WP	N 36° 5' 47.44" W 86° 40' 26.85"	1100.0	VNAV	145.0	Fly Over	DF
PWERS	WP	N 36° 2' 24.47" W 86° 44' 21.88"	2027.3	VNAV	180.0	Fly Over	DF

Climb Gradient: 500.0 Ft/NM up to 1100.0 Ft MSL

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KBNA
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1100.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -60.22 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

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: 0.165 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: 0

Maximum DME Error Could not be Derived with < 2 DMEs.

No Critical DMEs were found.

Available DMEs: BNA

DME/DME (Continued.)

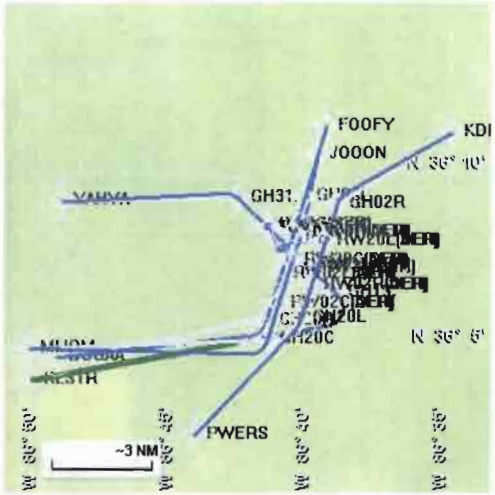
Return To Summary

Flight Check DME Selection

Distance [NM]	Selected DMEs	Alternate
0.0		
1.3		
2.3	BNA	

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 36° 8' 1.01" W 86° 39' 33.40"	N 36° 2' 24.52" W 86° 44' 21.82"	7.0
	VOR: BNA	Available from N 36° 8' 1.01" W 86° 39' 33.40" to N 36° 2' 24.52" W 86° 44' 21.82"	
	VOR: SYI	Available from N 36° 8' 1.01" W 86° 39' 33.40" to N 36° 2' 24.52" W 86° 44' 21.82"	
	VOR: GHM	Available from N 36° 4' 53.10" W 86° 41' 22.01" to N 36° 2' 24.52" W 86° 44' 21.82"	



Name:	Dennis Osterhage
Project Name:	KBNA DANLS1 SID ALL RWYS FIRST WP 20120404
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/4/2012 8:23:55 AM
Input File:	KBNA DANLS1 SID RW02...
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

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

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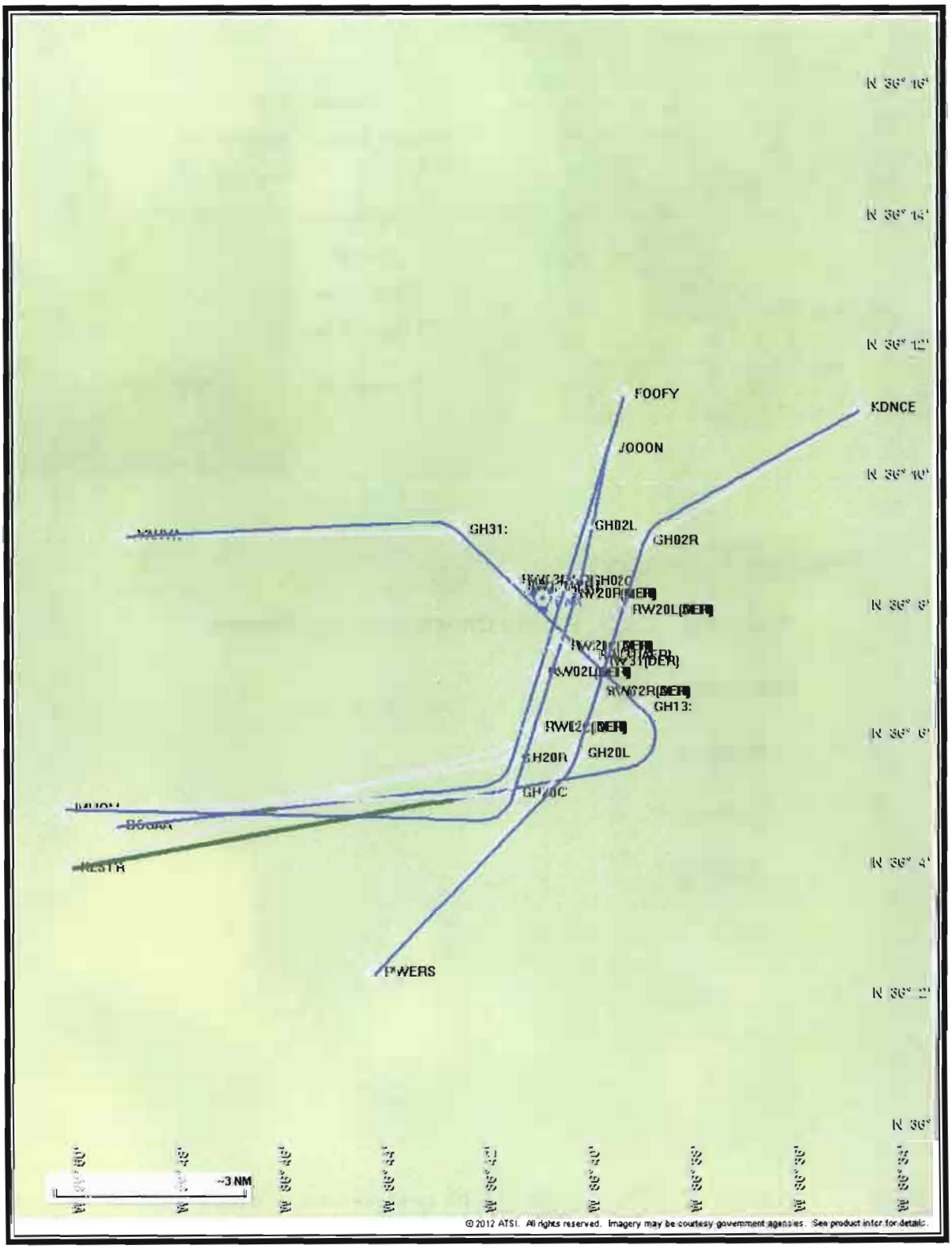
FOOFY
KDNCE
JOOON
GH31:
GH02L
GH02R
RW20L(DER)
GH13:
GH20L
GH20R
PWERS
~3 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW02R(...	WP	N 36° 6' 45.77" W 86° 40' 3.52"	589.7	VNAV	0.0	Fly Over	TF
RW20L(...	WP	N 36° 8' 1.01" W 86° 39' 33.40"	574.9	VNAV	130.0	Fly Over	VA
GH02R	WP	N 36° 9' 5.03" W 86° 39' 7.77"	1100.0	VNAV	145.0	Fly Over	DF
KDNCE	WP	N 36° 11' 7.30" W 86° 34' 55.24"	1893.8	VNAV	180.0	Fly Over	DF

Climb Gradient: 500.0 Ft/NM up to 1100.0 Ft MSL

Climb Gradient: 200 Ft/NM after next to last waypoint up to 18000.0 Ft

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KBNA
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1100.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -34.40 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

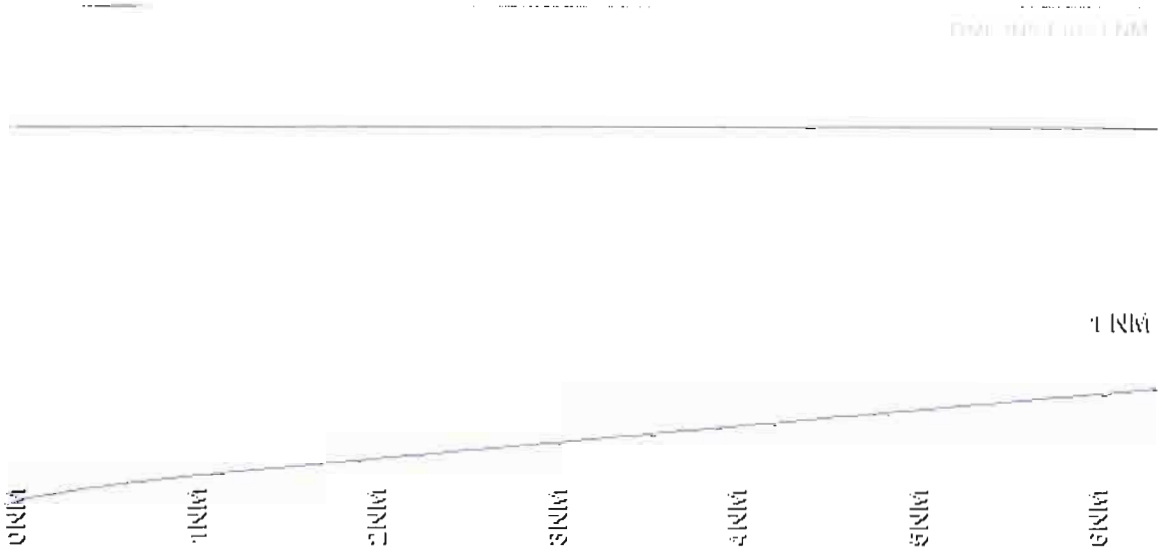
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: 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: 0

Maximum DME Error Could not be Derived with < 2 DMEs.

No Critical DMEs were found.

Available DMEs: BNA



DME/DME (Continued.)

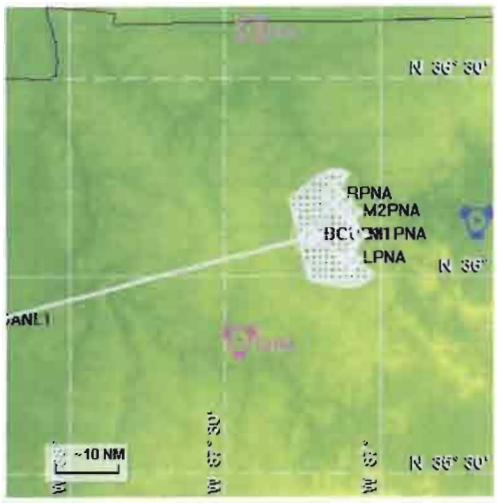
Return To Summary

Flight Check DME Selection

Distance [NM]	Selected DMEs	Alternate
0.0		
1.3		
2.4	BNA	

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 36° 6' 45.77" W 86° 40' 3.52"	N 36° 11' 6.75" W 86° 34' 56.50"	6.4
	VOR: BNA	Available from N 36° 6' 45.77" W 86° 40' 3.52" to N 36° 11' 6.75" W 86° 34' 56.50"	
	VOR: SYI	Available from N 36° 6' 45.77" W 86° 40' 3.52" to N 36° 11' 6.75" W 86° 34' 56.50"	



Name:	Dennis Osterhage
Project Name:	KBNA DANLS1 SID PNA GRID ASSESSMENT 20120319
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	3/19/2012 9:56:50 AM
Input File:	Grid Area Assessment
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

Grid	✔	DME/DME Grid Analysis

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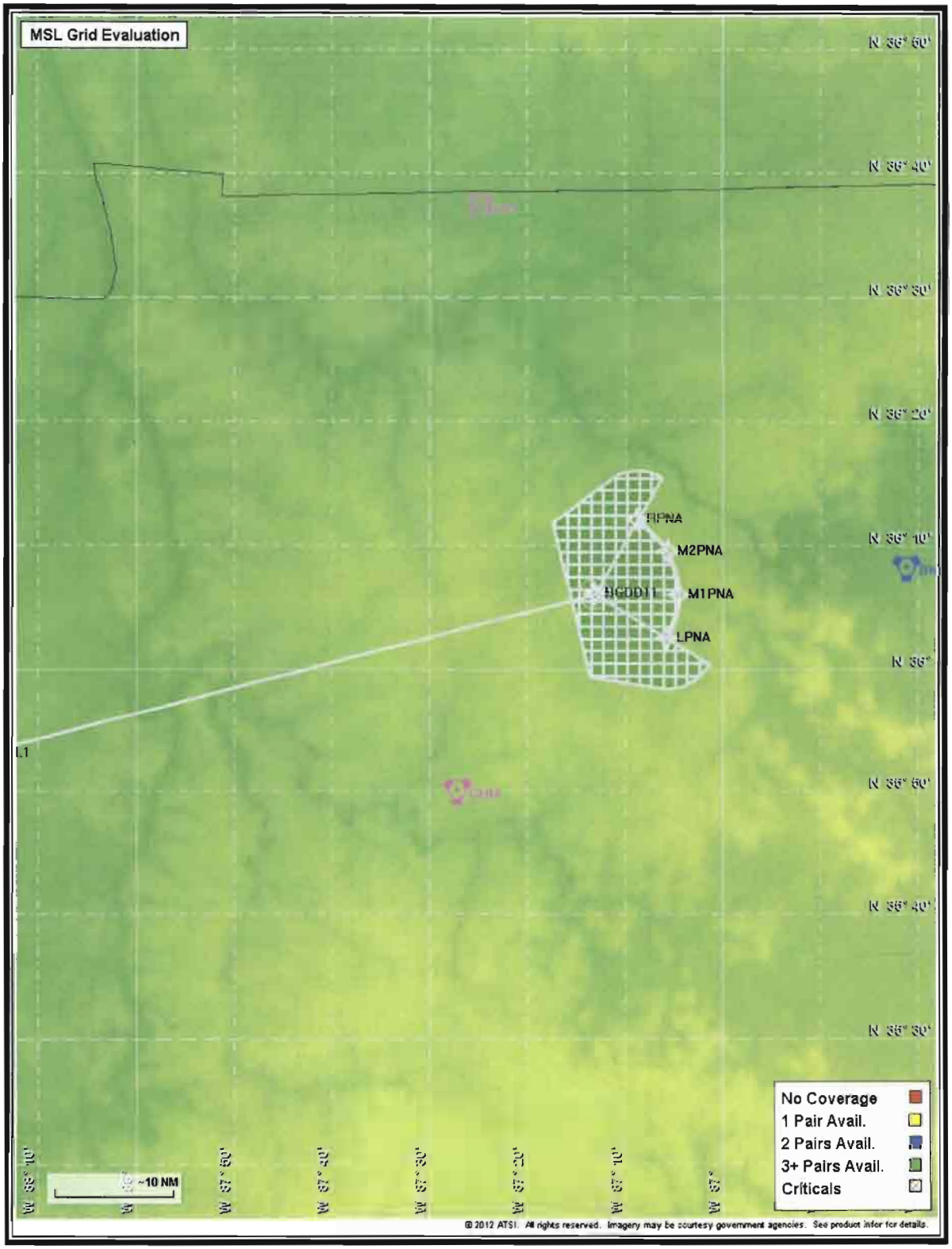
MSL Grid Evaluation
N 36° 50'
N 36° 40'
N 36° 30'
N 36° 20'
N 36° 10'
N 36°
N 35° 50'
N 35° 40'
N 35° 30'
M2PNA
M1PNA
LPNA
L1
~10 NM
No Coverage
1 Pair Avail.
2 Pairs Avail.
3+ Pairs Avail.
Criticals
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DME/DME Grid Analysis

Return To Summary

Coverage Exists

Settings:

Polygon Grid Definition:

1	Lat: N 36° 2' 24.33" Lon: W 87° 5' 37.74"	21	Lat: N 36° 15' 59.77" Lon: W 87° 8' 14.79"
2	Lat: N 36° 0' 22.28" Lon: W 87° 1' 22.86"	22	Lat: N 36° 15' 55.43" Lon: W 87° 7' 38.95"
3	Lat: N 35° 59' 57.97" Lon: W 87° 1' 43.07"	23	Lat: N 36° 15' 47.58" Lon: W 87° 7' 4.03"
4	Lat: N 35° 59' 35.83" Lon: W 87° 2' 6.78"	24	Lat: N 36° 15' 36.35" Lon: W 87° 6' 30.56"
5	Lat: N 35° 59' 16.20" Lon: W 87° 2' 33.63"	25	Lat: N 36° 15' 27.41" Lon: W 87° 6' 10.04"
6	Lat: N 35° 58' 59.38" Lon: W 87° 3' 3.21"	26	Lat: N 36° 12' 0.34" Lon: W 87° 8' 40.63"
7	Lat: N 35° 58' 45.61" Lon: W 87° 3' 35.10"	27	Lat: N 36° 12' 0.34" Lon: W 87° 8' 40.63"
8	Lat: N 35° 58' 35.10" Lon: W 87° 4' 8.81"	28	Lat: N 36° 11' 31.59" Lon: W 87° 7' 48.13"
9	Lat: N 35° 58' 28.01" Lon: W 87° 4' 43.84"	29	Lat: N 36° 10' 57.87" Lon: W 87° 7' 0.36"
10	Lat: N 35° 58' 24.43" Lon: W 87° 5' 19.67"	30	Lat: N 36° 10' 19.67" Lon: W 87° 6' 18.03"
11	Lat: N 35° 58' 24.43" Lon: W 87° 5' 55.77"	31	Lat: N 36° 9' 37.57" Lon: W 87° 5' 41.76"
12	Lat: N 35° 58' 26.32" Lon: W 87° 6' 18.87"	32	Lat: N 36° 8' 52.20" Lon: W 87° 5' 12.10"
13	Lat: N 35° 59' 20.01" Lon: W 87° 13' 35.63"	33	Lat: N 36° 8' 4.23" Lon: W 87° 4' 49.49"
14	Lat: N 36° 11' 47.08" Lon: W 87° 17' 22.79"	34	Lat: N 36° 7' 14.39" Lon: W 87° 4' 34.26"
15	Lat: N 36° 15' 12.24" Lon: W 87° 11' 39.23"	35	Lat: N 36° 6' 23.41" Lon: W 87° 4' 26.63"
16	Lat: N 36° 15' 28.45" Lon: W 87° 11' 9.02"	36	Lat: N 36° 5' 32.05" Lon: W 87° 4' 26.72"
17	Lat: N 36° 15' 41.55" Lon: W 87° 10' 36.61"	37	Lat: N 36° 4' 41.09" Lon: W 87° 4' 34.52"

DME/DME Grid Analysis (Continued.)

Return To Summary

Coverage Exists

Settings:

Polygon Grid Definition:

18	Lat: N 36° 15' 51.36" Lon: W 87° 10' 2.45"	**38**	Lat: N 36° 3' 51.28" Lon: W 87° 4' 49.91"
19	Lat: N 36° 15' 57.72" Lon: W 87° 9' 27.08"	**39**	Lat: N 36° 3' 3.36" Lon: W 87° 5' 12.65"
20	Lat: N 36° 16' 0.54" Lon: W 87° 8' 51.01"	**40**	Lat: N 36° 2' 24.33" Lon: W 87° 5' 37.74"

Lat Step: 1 NM
Lon Step: 1 NM
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Co-Frequencies: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: VOR/DME and VORTAC
DME Include Angles: 30 to 150
DoD Facilities: Not included
Foreign Facilities: Not included
Low & Terminal DMEs: Included
Maximum Possible ESVs Used
Altitude: 6000.0 Ft. MSL
PNA Import from RDVA-Pro: KBNA PNA BGDDY DANLS

DME/DME Grid Analysis (Continued.)

Return To Summary

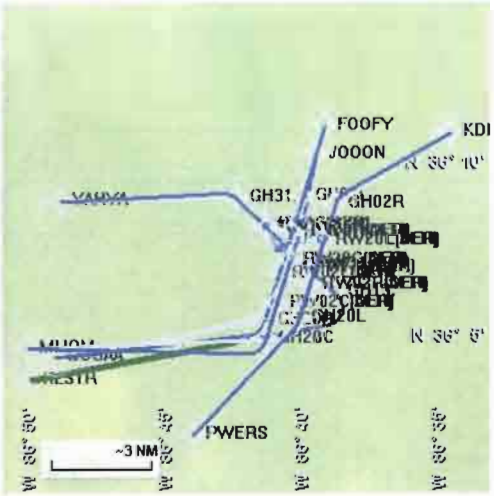
Maximum Gap: 0.0 NM

Maximum Critical Gap: 0.0 NM

	AGL Altitudes
Min Cell Altitude	5,104.3 Ft.
Max Cell Altitude	5,393.0 Ft.
Mean Cell Altitude	5,225.4 Ft.
Std. Dev. Cell Altitude	62.9 Ft.

Statistics based only on passing cells.

Most Used DMEs: SYI (169), RQZ (169), JKS (169), HCH (169), GHM (169), CKV (169), CCT (169), BWG (169), BNA (169), and MSL (116).



Name:	Dennis Osterhage
Project Name:	KBNA DANLS1 SID ALL RWYS FIRST WP 20120404
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/4/2012 8:24:49 AM
Input File:	KBNA DANLS1 SID RW20...
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

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

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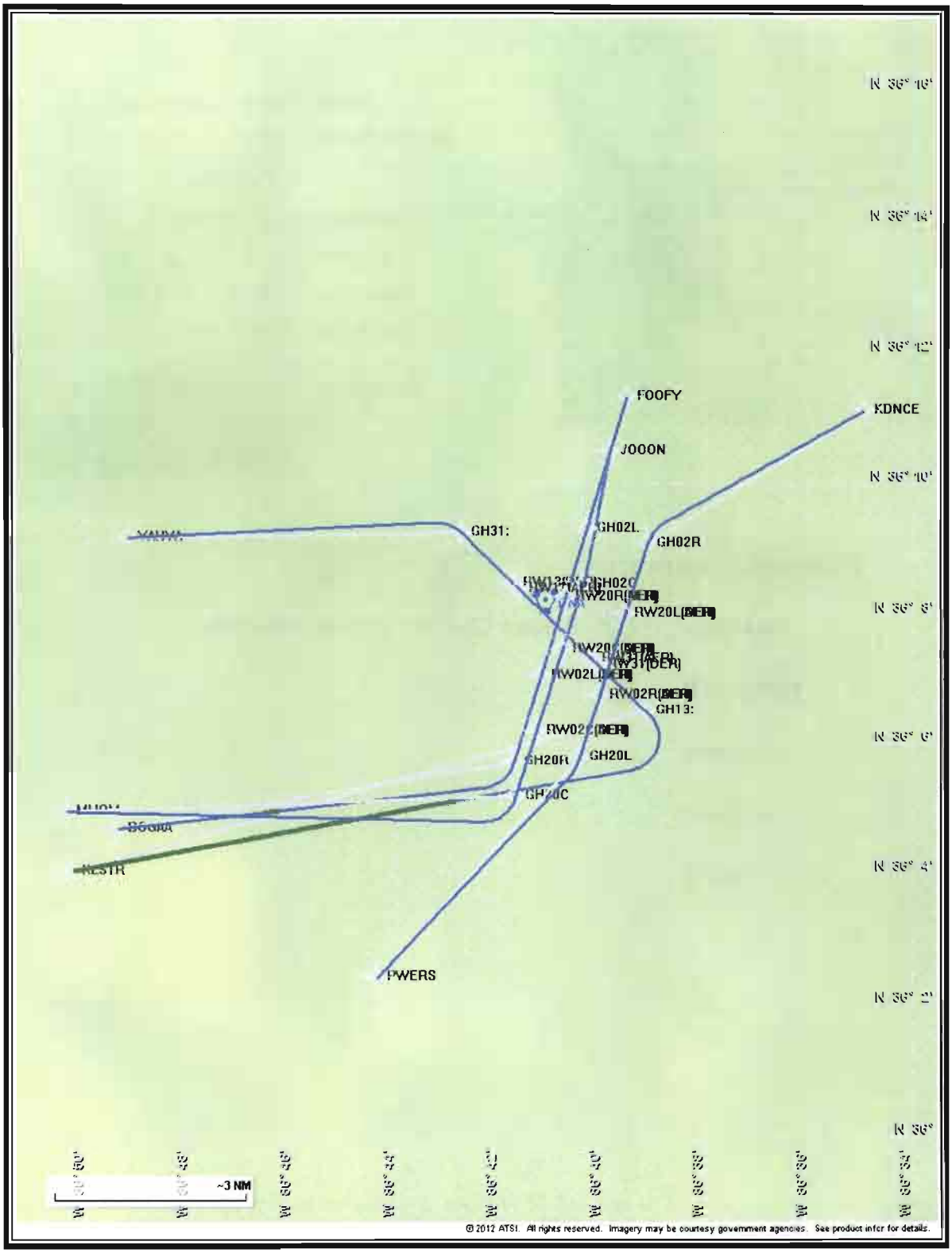
FOOFY
KDNCE
JOOON
GH31:
GH02L
GH02R
RW20L(DER)
RW02L(DER)
RW02R(DER)
GH13:
GH20L
GH20R
PWERS
~3 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW20R(...	WP	N 36° 8' 16.23" W 86° 40' 42.84"	555.4	VNAV	0.0	Fly Over	TF
RW02L(...	WP	N 36° 7' 3.64" W 86° 41' 11.31"	633.5	VNAV	130.0	Fly Over	VA
GH20R	WP	N 36° 5' 43.31" W 86° 41' 42.80"	1300.0	VNAV	145.0	Fly Over	DF
BOGAA	WP	N 36° 4' 40.70" W 86° 49' 23.38"	2561.7	VNAV	180.0	Fly Over	DF

Climb Gradient: 500.0 Ft/NM up to 1300.0 Ft MSL

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KBNA
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1300.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -25.32 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

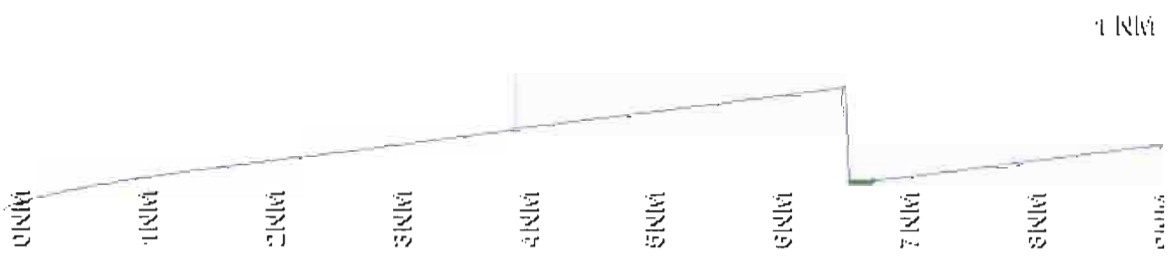
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: 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
Minimum MSL DMEs Avail: 2562 Ft.

Total Number of DMEs Used: 2

Maximum DME Error: 0.669 NM

No Critical DMEs were found.

Available DMEs: BNA, SYI, GHM



DME/DME (Continued.)

Return To Summary

DMEs Used

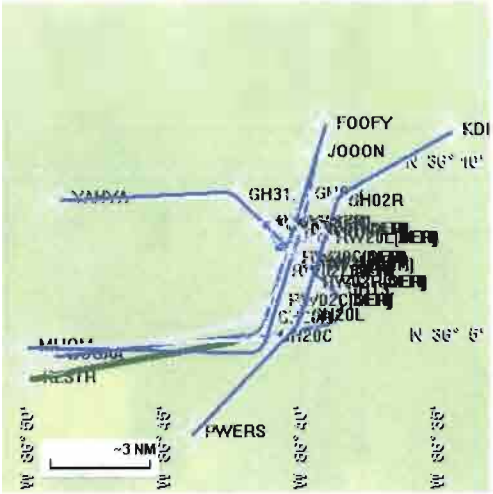
#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	BNA	N 36° 8' 13.06" W 86° 41' 5.18"	H	Database	NO	0.838	Enabled	2.0 %	2.2 %
2	SYI	N 35° 33' 43.12" W 86° 26' 20.95"	L	Database	NO	0.838	Enabled	2.0 %	2.2 %

Flight Check DME Selection

Distance [NM]	Selected DMEs			Alternate
0.0				
1.3				
2.7	BNA	SYI	GHM	

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 36° 8' 16.23" W 86° 40' 42.84"	N 36° 4' 57.24" W 86° 46' 16.63"	6.6
	VOR: BNA	Available from N 36° 8' 16.23" W 86° 40' 42.84" to N 36° 4' 57.24" W 86° 46' 16.63"	
	VOR: SYI	Available from N 36° 8' 16.23" W 86° 40' 42.84" to N 36° 4' 57.24" W 86° 46' 16.63"	
	VOR: GHM	Available from N 36° 5' 38.53" W 86° 41' 44.86" to N 36° 4' 57.24" W 86° 46' 16.63"	
2	N 36° 4' 55.73" W 86° 46' 33.80"	N 36° 4' 40.72" W 86° 49' 23.11"	2.3
	VOR: BNA	Available from N 36° 4' 55.73" W 86° 46' 33.80" to N 36° 4' 40.72" W 86° 49' 23.11"	
	VOR: GHM	Available from N 36° 4' 55.73" W 86° 46' 33.80" to N 36° 4' 40.72" W 86° 49' 23.11"	
	VOR: SYI	Available from N 36° 4' 55.73" W 86° 46' 33.80" to N 36° 4' 40.72" W 86° 49' 23.11"	



Name:	Dennis Osterhage
Project Name:	KBNA DANLS1 SID ALL RWYS FIRST WP 20120404
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/4/2012 8:24:21 AM
Input File:	KBNA DANLS1 SID RW13...
Databases:	AVNIS Date: 08/26/2011
	NFD Date: 07/02/2009
	DTED® (MAX) Date: 2002

Results Summary:

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

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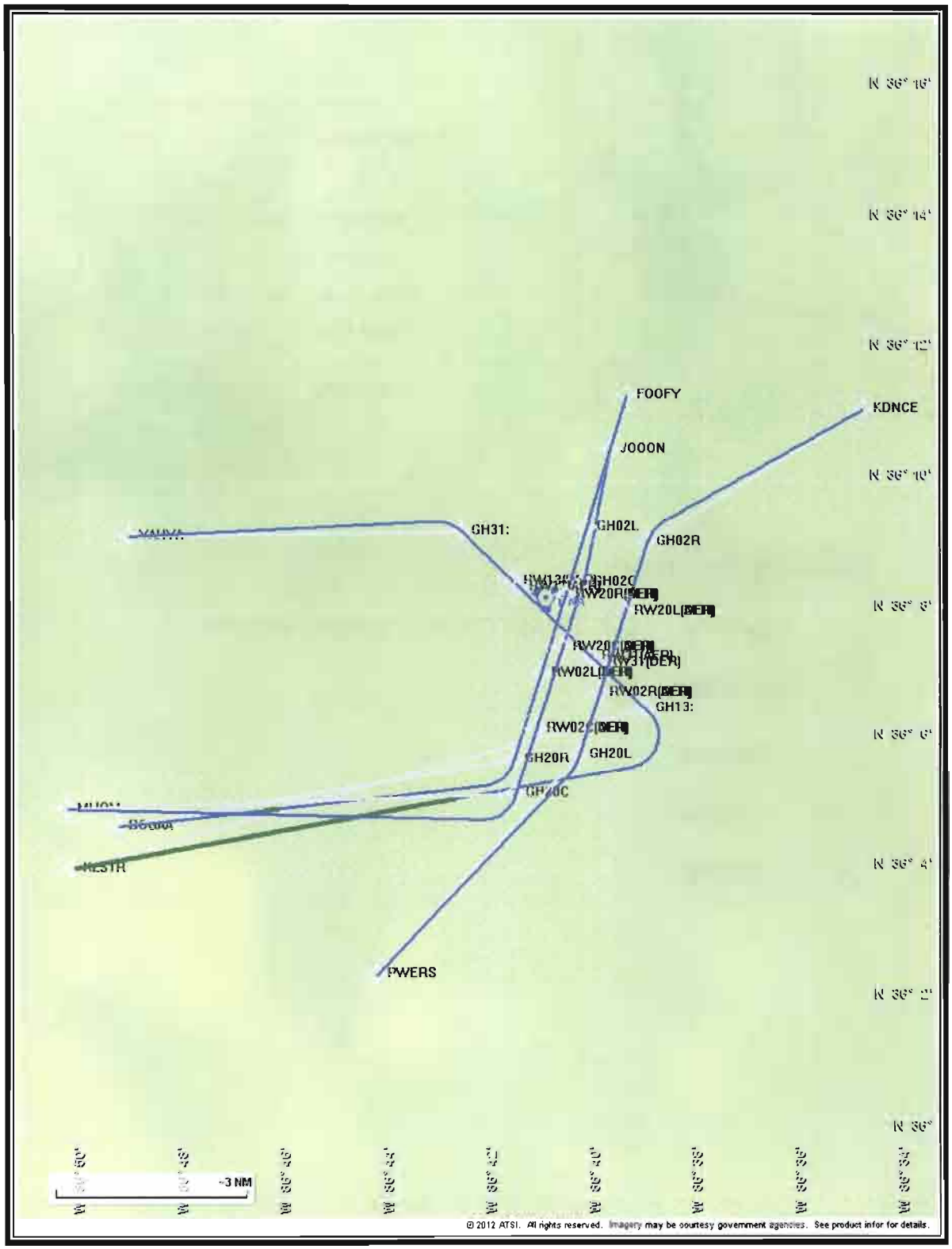
FOOFY
KDNCE
JOOON
GH31:
GH02L
GH02R
RW20L(DER)
RW31(DER)
RW02L(DER)
RW02R(DER)
GH13:
GH20R
GH20L
PWERS
3 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW13(A...	WP	N 36° 8' 23.16" W 86° 41' 36.17"	535.8	VNAV	0.0	Fly Over	TF
RW31(D...	WP	N 36° 7' 13.79" W 86° 40' 5.44"	617.2	VNAV	130.0	Fly Over	VA
GH13:	WP	N 36° 6' 31.09" W 86° 39' 9.65"	1100.0	VNAV	145.0	Fly Over	DF
KLSTR	WP	N 36° 4' 1.80" W 86° 50' 16.36"	2968.5	VNAV	180.0	Fly Over	DF

Climb Gradient: 500.0 Ft/NM up to 1100.0 Ft MSL

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KBNA
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1100.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -55.12 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

DME/DME

Return To Summary

Settings:

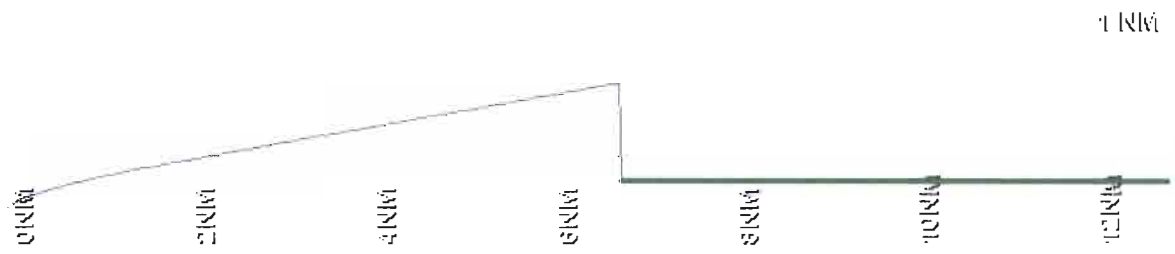
RNP: 2.0
Flight Mode: Manual
Line of Sight (DTED Level 0 Max): Evaluated
DME Restrictions: Evaluated
Inertial Drift: Enabled
Initial Drift: 0.165 NM
INS Drift Rate: 8.000 NM/Hour
Range Mode: OSV
Co-Frequencies: Evaluated
RNP Edges: Evaluated
Min DME Range: 3.0 NM
Allowed Gap Length: 4.0 NM
DME Types: 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
Minimum MSL DMEs Avail: 2969 Ft.

Total Number of DMEs Used: 3

Maximum DME Error: 0.678 NM.

No Critical DMEs were found.

Available DMEs: SYI, GHM, BNA



DME/DME (Continued.)

Return To Summary

DMEs Used

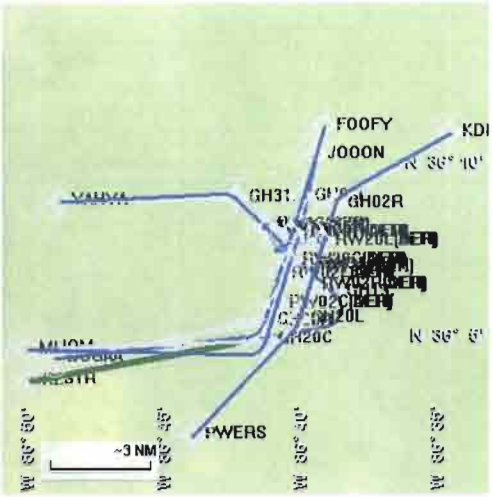
#	Name	Lat/Lon	Range	Source	Critical	Err. [NM]	Status	Time	Distance
1	GHM	N 35° 50' 2.12" W 87° 27' 6.35"	L	Database	NO	0.732	Enabled	29.3 %	31.3 %
2	SYI	N 35° 33' 43.12" W 86° 26' 20.95"	L	Database	NO	0.880	Enabled	43.4 %	47.5 %
3	BNA	N 36° 8' 13.06" W 86° 41' 5.18"	H	Database	NO	0.678	Enabled	14.1 %	16.2 %

Flight Check DME Selection

Distance [NM]	Selected DMEs			Alternate
0.0				
1.7				
2.7	GHM	SYI	BNA	

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 36° 8' 23.16" W 86° 41' 36.17"	N 36° 5' 6.37" W 86° 42' 51.13"	6.7
	VOR: BNA	Available from N 36° 8' 23.16" W 86° 41' 36.17" to N 36° 5' 6.37" W 86° 42' 51.13"	
	VOR: SYI	Available from N 36° 8' 23.16" W 86° 41' 36.17" to N 36° 5' 6.37" W 86° 42' 51.13"	
	VOR: GHM	Available from N 36° 5' 17.59" W 86° 41' 33.39" to N 36° 5' 6.37" W 86° 42' 51.13"	



Name:	Dennis Osterhage
Project Name:	KBNA DANLS1 SID ALL RWYS FIRST WP 20120404
Software:	RNAV-Pro™
Version:	2.35
Date/Time:	4/4/2012 8:23:06 AM
Input File:	KBNA DANLS1 SID RW02...
Databases:	AVNIS Date: 08/26/2011 NFD Date: 07/02/2009 DTED® (MAX) Date: 2002

Results Summary:

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

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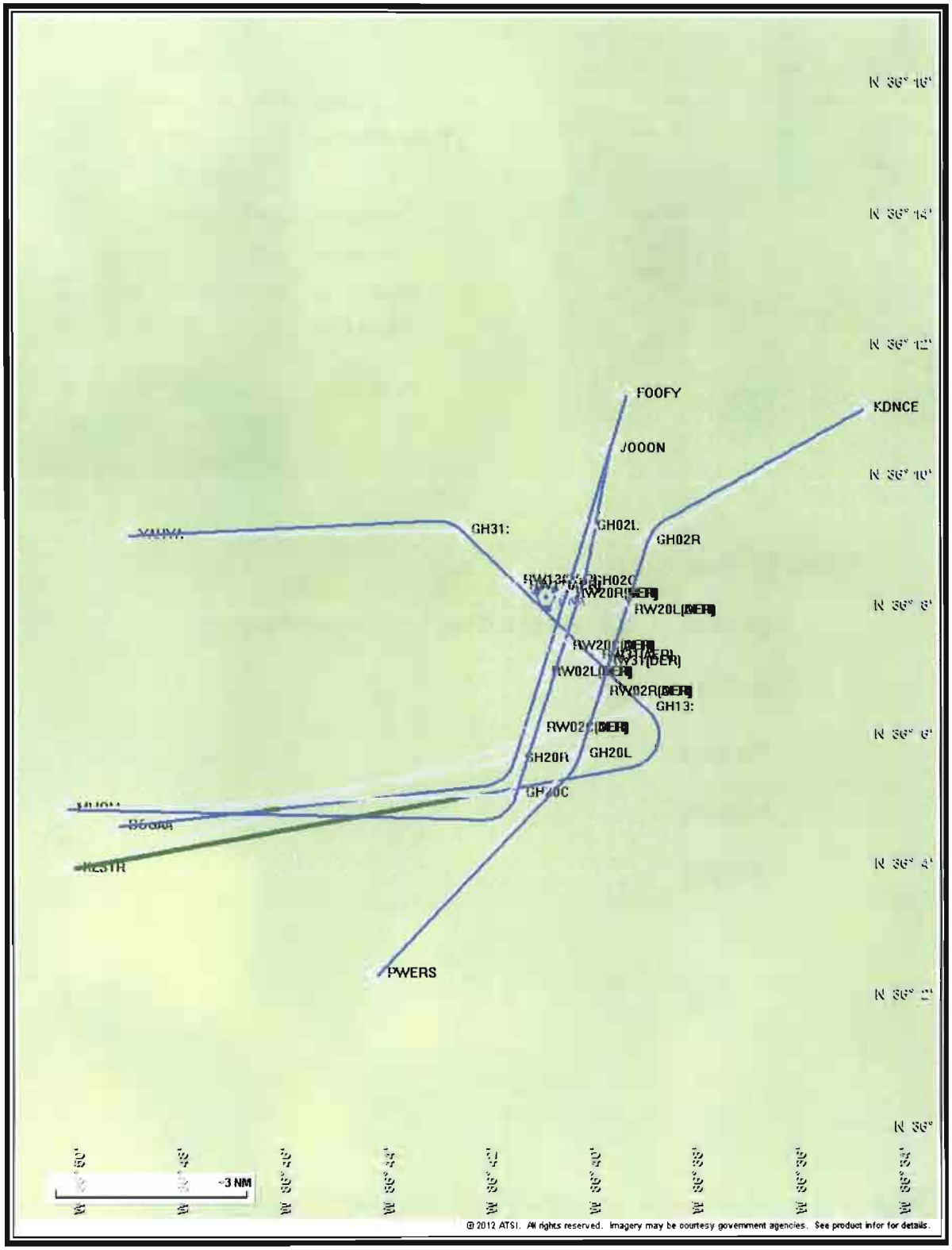
FOOFY
KDNCE
JOOON
GH31:
GH02L
GH02R
RW20L(DER)
RW31(DER)
RW02L(DER)
RW02R(DER)
GH13:
GH20R
GH20L
PWERS
~3 NM
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Flight Plan

Return To Summary

Name	Type	Lat/Lon	Alt [Ft]	VNAV Mode	IAS [Kts]	Turn Type	Leg Type
RW02C(...	WP	N 36° 6' 11.99" W 86° 41' 16.66"	569.0	VNAV	0.0	Fly Over	TF
RW20C(...	WP	N 36° 7' 27.24" W 86° 40' 46.55"	606.8	VNAV	130.0	Fly Over	VA
GH02C	WP	N 36° 8' 27.61" W 86° 40' 22.38"	1100.0	VNAV	145.0	Fly Over	DF
JOOON	WP	N 36° 10' 30.30" W 86° 39' 50.22"	1517.5	VNAV	180.0	Fly Over	DF

Climb Gradient: 500.0 Ft/NM up to 1100.0 Ft MSL

Flyability

Return To Summary

Settings:

Flight Type: Departure
Selected Airport: KBNA
Aircraft Category: Cat D
Climb Gradient: 500.0 Ft/NM up to 1100.0 Ft MSL
Ground Speeds:
Departure: **120.0 Kts** out to **10.0 NM**
Table:
200.0 Kts up to **29000.0 Ft.**
280.0 Kts up to **99900.0 Ft.**
Wind Settings: *None assigned*
Descent During a Turn: Allowed
VNAV Mode: Flight Plan

Flight Track comes into contact with terrain. Minimum AGL along route was -43.35 Ft.
Flight Track contacted terrain (DTED lvl 0 max) between AER and DER or within 2/3 NM of DER.

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: 0.165 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: 0

Maximum DME Error Could not be Derived with < 2 DMEs.

No Critical DMEs were found.

DME/DME (Continued.)

Return To Summary

Flight Check DME Selection

Distance [NM]	Selected DMEs	Alternate
0.0		
1.3		
2.4		

Inertial Drift Segments

#	Start Location	End Location	Length [NM]
1	N 36° 6' 11.99" W 86° 41' 16.66"	N 36° 10' 29.93" W 86° 39' 50.31"	4.5
	VOR: BNA	Available from N 36° 6' 11.99" W 86° 41' 16.66" to N 36° 10' 29.93" W 86° 39' 50.31"	
	VOR: SYI	Available from N 36° 6' 11.99" W 86° 41' 16.66" to N 36° 10' 29.93" W 86° 39' 50.31"	