



Flight Procedures Cover Page	Task Action: FLIGHT CHECK	Task Type: IAP	Estimated Chart Date: 04/22/2021	APWS Task ID: 09022730A88B46F395D3DFF68DB69A58	APWS Project ID: 647A569385F24F028BB8CFE00237A7F7
Procedure: RNAV (GPS) RWY 24R AMDT 1		Enroute: NO	Specialist: Baggett, Jay		Agreement Number:
Airport ID: KBKL			Airport City: CLEVELAND		State: OH
Facility ID:	Facility Type:	Flight Inspection Remark Type: New FC Slot			
<p>Procedure Comments: CANCELS T-NOTAM FDC 0/3590. AFS REVIEW DUE TO WAIVER REQUIREMENT. PENDING AIRPORT DATA WITH ESTIMATED CHART DATE 4/22/21. CONTACT JON DENTON (405) 954-5467.</p> <div style="text-align: right;">   </div>					

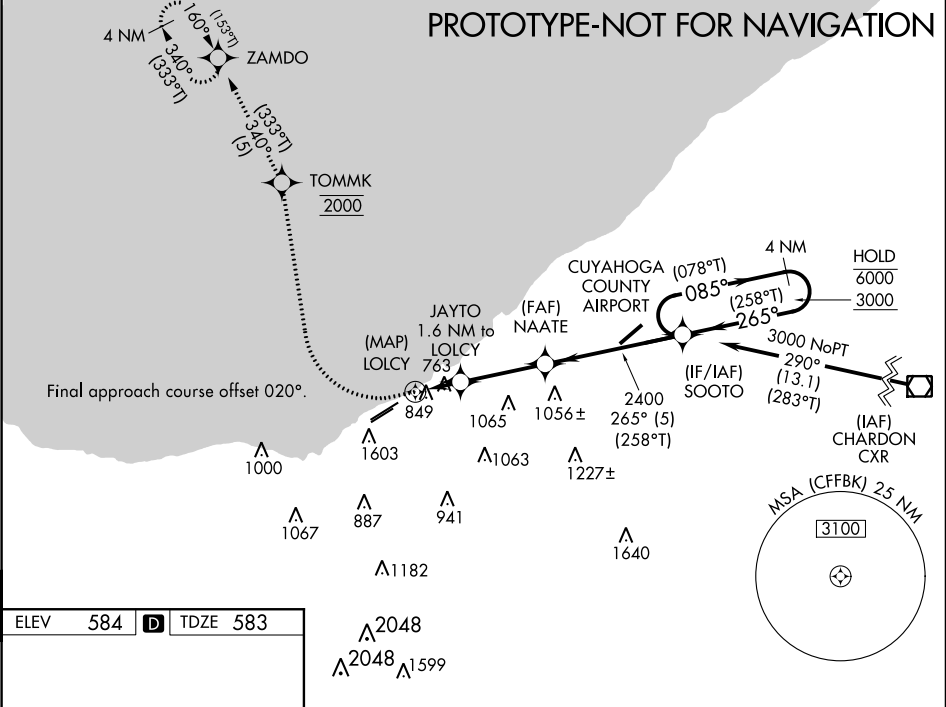
WAAS CH 77621 W24A	APP CRS 245°	Rwy Idg TDZE Apt Elev 583 584
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RNAV (GPS) RWY 24R

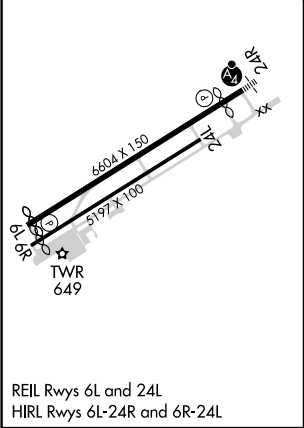
BURKE LAKEFRONT (BKL)

RNP APCH.		MALSF	MISSED APPROACH: Climbing right turn to 2000 direct TOMMK, then climb to 3000 on track 340° to ZAMDO and hold.
⚠ Circling Rwy 6R NA at night. Rwy 24R helicopter visibility reduction below ¾ SM NA. ⚠ Circling NA SE of Rwy 6R and 24L. ⚠ -23°C For inoperative ALS, increase LNAV Cat C/D visibility to 1¾ SM.		⚠	

ATIS 125.25	CLEVELAND APP CON 125.35 346.325	LAKEFRONT TOWER ★ 124.3 (CTAF) 0 339.8	GND CON 121.9 339.8	CLNC DEL 339.8	CLNC DEL 121.9 (when twr closed)	UNICOM 122.95
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ELEV	584	ⓓ	TDZE	583
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	2000	TOMMK	3000	ZAMDO	
			tr 340°		
*LNAV only.					
	(MAP) LOLCY	JAYTO 1.6 NM to LOLCY	NAATE	SOTO	4 NM Holding Pattern
		≤3.00° TCH 42		(078°T) 085°	6000
				265° (258°T)	3000
				2400	
		1.6 NM	3.1 NM	5 NM	
CATEGORY	A	B	C	D	
LPV DA	1020-¾	437 (500-¾)	1020-1	437 (500-1)	
LNAV MDA	1120-¾	517 (600-¾)	1120-1¼	517 (600-1¼)	
ⓐ CIRCLING	1100-1	516 (600-1)	1140-1½ 556 (600-1½)	1200-2 616 (700-2)	

Most Recent Approach Plate.



CLEVELAND, OHIO

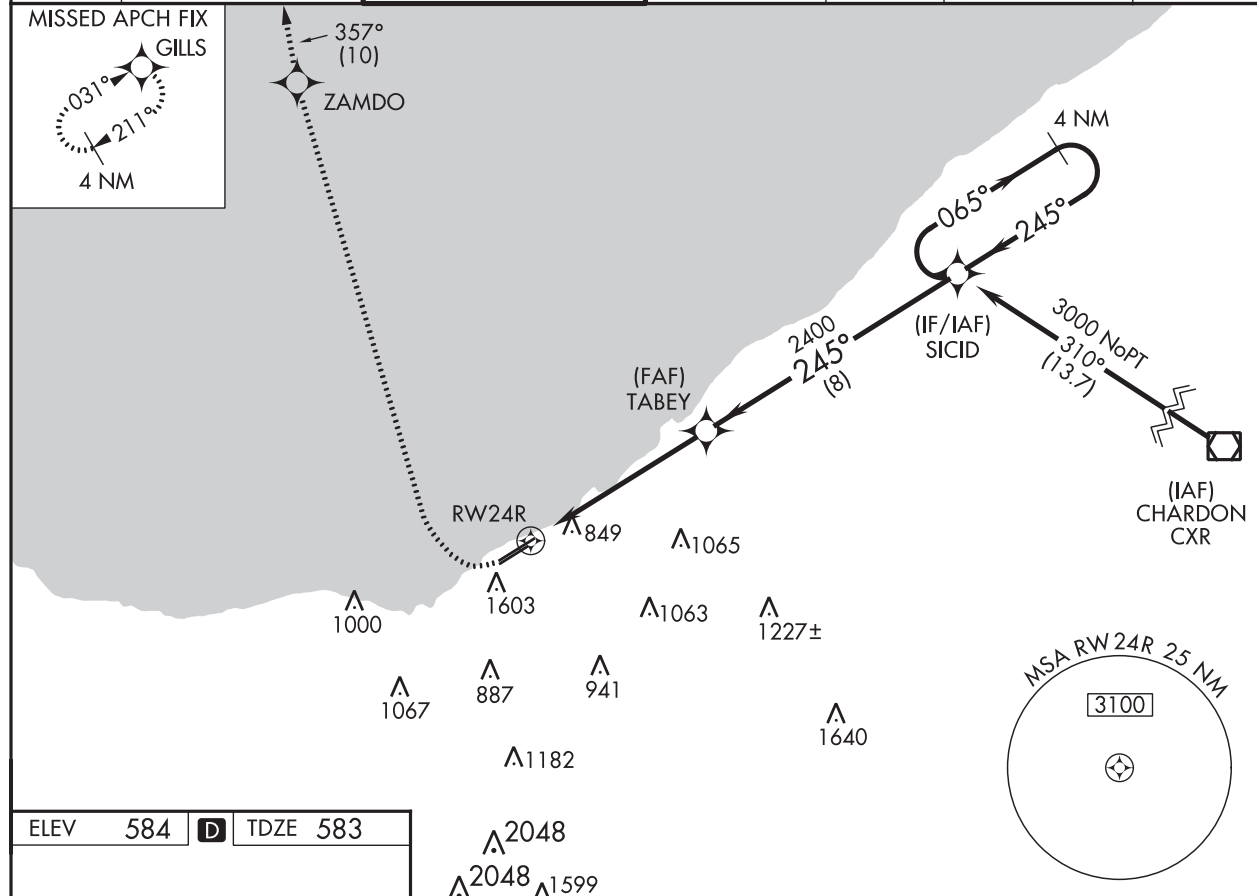
AL-5370 (FAA)

20142

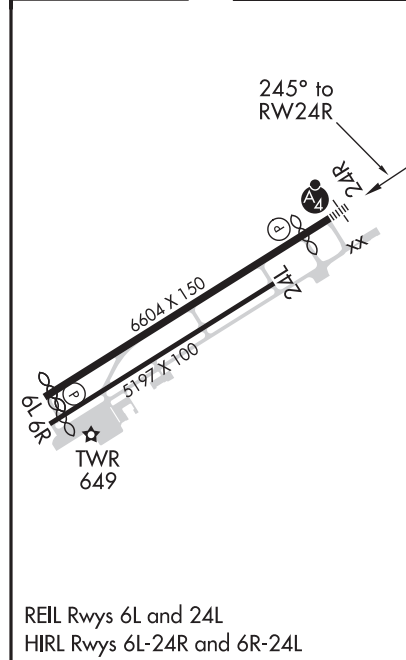
WAAS CH 77621 W24A	APP CRS 245°	Rwy Idg TDZE Apt Elev	6003 583 584
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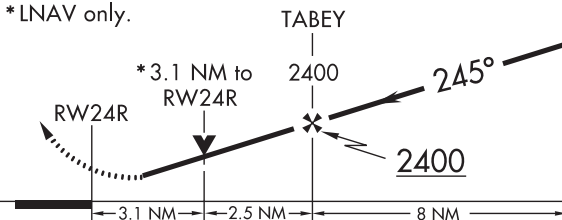
RNAV (GPS) RWY 24R BURKE LAKEFRONT (BKL)

RNP APCH.				MALSF 	MISSED APPROACH: Climbing right turn to 2000 direct ZAMDO then climb to 4000 on track 357° to GILLS and hold. # Missed approach requires minimum climb of 421 feet per NM to 1900.		
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 40°C (104°F). Circling Rwy 6R NA at night. Rwy 24R helicopter visibility reduction below ¾ SM NA. Circling NA southeast of Rwy 6R and 24L. For inop ALS, increase LNAV Cat C and D visibility to 3 SM. -23°C							
ATIS 125.25	CLEVELAND APP CON 125.35 346.325	LAKEFRONT TOWER ★ 124.3 (CTAF)  339.8	GND CON 121.9 339.8	CLNC DEL 339.8	CLNC DEL 121.9 (when twr closed)	UNICOM 122.95	



ELEV	584	D	TDZE	583
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2000 		ZAMDO 	4000  tr 357°	GILLS 	VGS1 and RNAV glidepath not coincident (VGS1 Angle 3.00/TCH 42).							
*LNAV only.					SICID							
					4 NM Holding Pattern							
CATEGORY					A		B		C		D	
LPV DA					1401-2½				818 (900-2½)			
LPV DA #					NA				1249-1⅞ 666 (700-1⅞)			
LNAV/ VNAV DA					1324-2½				741 (800-2½)			
LNAV MDA					1620-1 1037 (1100-1)		1620-1¼ 1037 (1100-1¼)		1620-2½		1037 (1100-2½)	
CIRCLING					1620-1¼ 1036 (1100-1¼)				1620-3		1036 (1100-3)	

CLEVELAND, OHIO

Orig-B 24MAY18

41°31'N-81°41'W

BURKE LAKEFRONT (BKL)

RNAV (GPS) RWY 24R

EC-2, 08 OCT 2020 to 05 NOV 2020

EC-2, 08 OCT 2020 to 05 NOV 2020

1. FLIGHT PROCEDURE IDENTIFICATION:

Cleveland, OH
Burke Lakefront (BKL)
RNAV (GPS) RWY 24R

2. WAIVER REQUIRED AND APPLICABLE STANDARD:

The missed approach incorporates a maximum altitude restriction that is lower than the clearance limit altitude. Order 8260.3D paragraph 2-8-1. "The missed approach must be simple, specify a charted missed approach altitude (altitude at clearance limit), and a clearance limit fix/facility. When required by obstacles or deemed operationally advantageous, the missed approach may also specify an interim "climb-to" altitude to identify a turn point. Any other interim altitude restriction is not permitted".

3. REASON FOR WAIVER (JUSTIFICATION FOR NONSTANDARD TREATMENT):

Air traffic control requests a maximum altitude restriction/hold-down altitude of 2000 feet MSL at TOMMK to ensure separation from possible overhead traffic landing at CLEVELAND-HOPKINS INTL (CLE) runway 24L/R descending to 3000 feet over the IFs ALOMR and SHERK. After passing TOMMK continue climb to 3000 feet MSL to hold at ZAMDO.

4. EQUIVALENT LEVEL OF SAFETY PROVIDED:

1. No penetrations of the 40:1 surface exist between the MAP and ZAMDO at the hold down altitude of 2000 feet.
2. The controlling obstacle for the hold-down segment is a BUILDING (39-000977) 413019.03N/0814119.26W with a height of 1194 feet MSL and is located 2260 ft inside the secondary boundary. When applying a 1000 feet of ROC; the minimum altitude required is $1000 - (111) SA + 1194 \text{ feet} = 2083 \sim 2100 \text{ feet}$. At 2000 ft hold-down altitude 917 ft of ROC is achieved, which is sufficient obstacle clearance based on the analysis in line 5 of this block.
3. Course diverge can be applied once the aircraft has established on a track to ZAMDO, it will then be allowed to climb to the holding altitude of 3000 ft.
4. If no overhead Cleveland-Hopkins Intl traffic exist, aircraft will be allowed to climb to holding altitude of 3000 ft.
5. Obstacle clearance sufficiency is based on using vertical error budget (VEB) calculations as described within Order 8260.58A and the conditions specific to BKL and this procedure versus a standard level surface value of 1000 feet. The following assumptions were used:

Body geometry= 29 feet (see note 1 below)
Cold temperature error= 100 feet (see note 2 below)
anpe = 0
wpr= 0
vae = 0
fte = 75 feet
ase = 63 feet
atis = 20 feet

Note 1. Based on narrow body using 25 degrees of bank even though this is a straight segment.

Note 2. Based on AIM/TPP cold temperature error table using -10°C @ 1000 feet AGL (record low is -8°C). This is conservative compared to ISAD calculation which yields 35 feet of error.

Application of the VEB formula yields 360 feet.

To this value we add: Allowable altimeter difference from field elevation = 75 feet

Practical test standard for maintaining appropriate altitude= 100 feet

Final value equals 535 feet ($360+75+100$) which is less than the protected 917 feet.

5. ALTERNATIVE ACTIONS DEEMED NOT FEASIBLE:

Air traffic control metering of traffic into Cleveland-Hopkins Intl airport would result in excessive arrival and departure delays and a reduction in capacity to the airport.

6. COORDINATION WITH USER ORGANIZATIONS (SPECIFY):

7. SUBMITTED BY:

Digitally signed by

JON DENTON

Feb 05, 2021

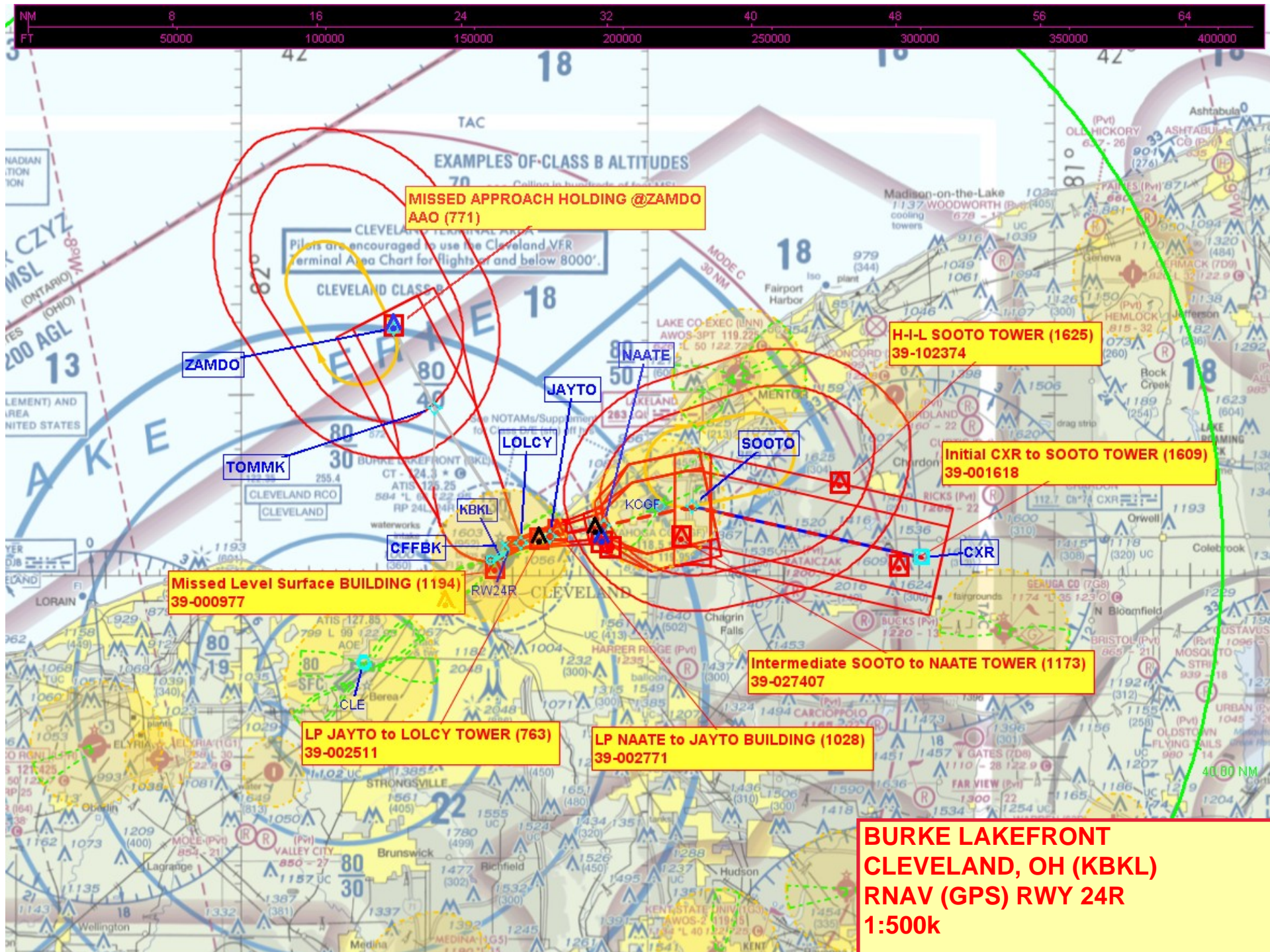
DATE	OFFICE IDENTIFICATION	TITLE	SIGNATURE
	AJV-A400	Manager, Instrument Flight Procedures Group	Steve Szukala

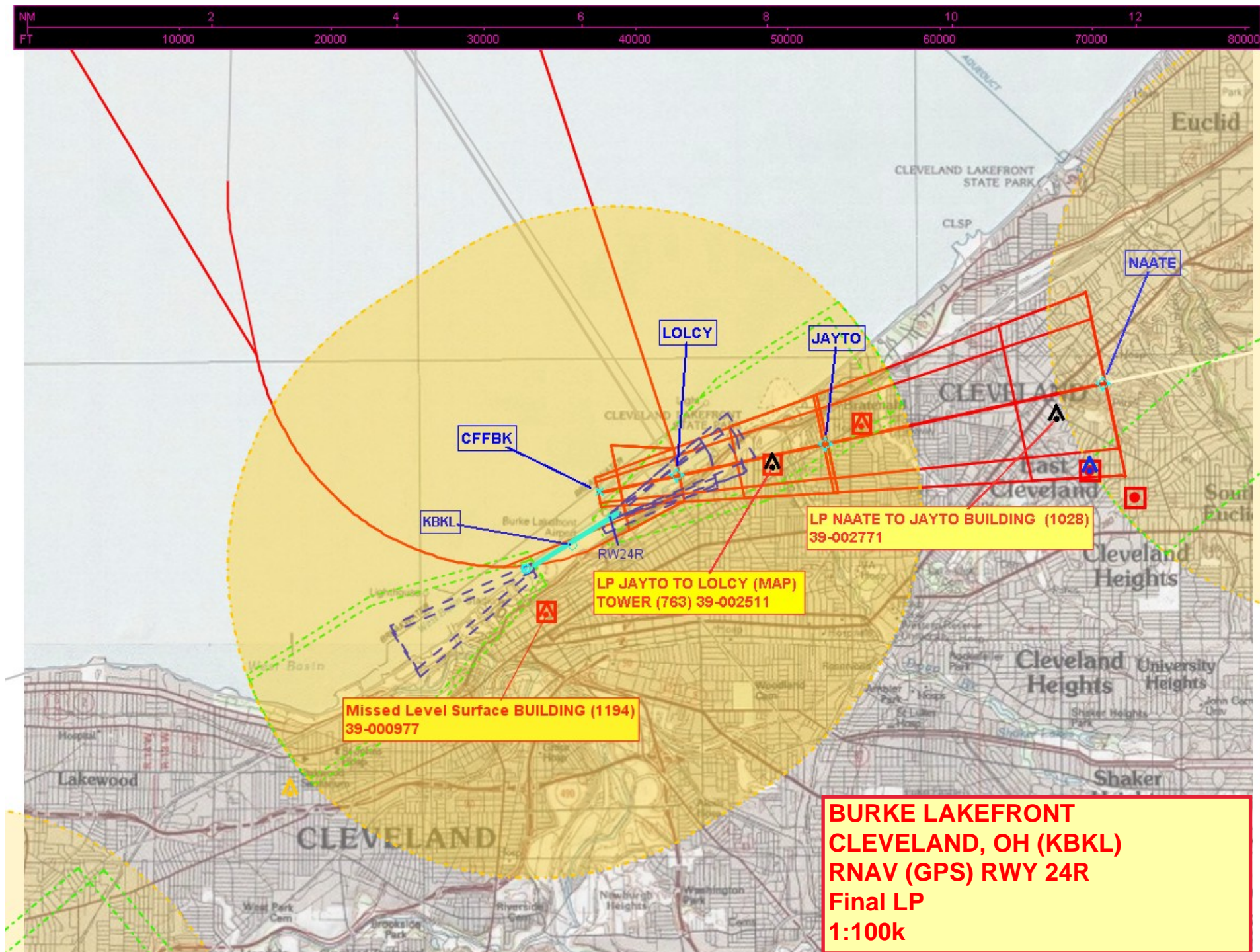
8. AFS ACTIONS:

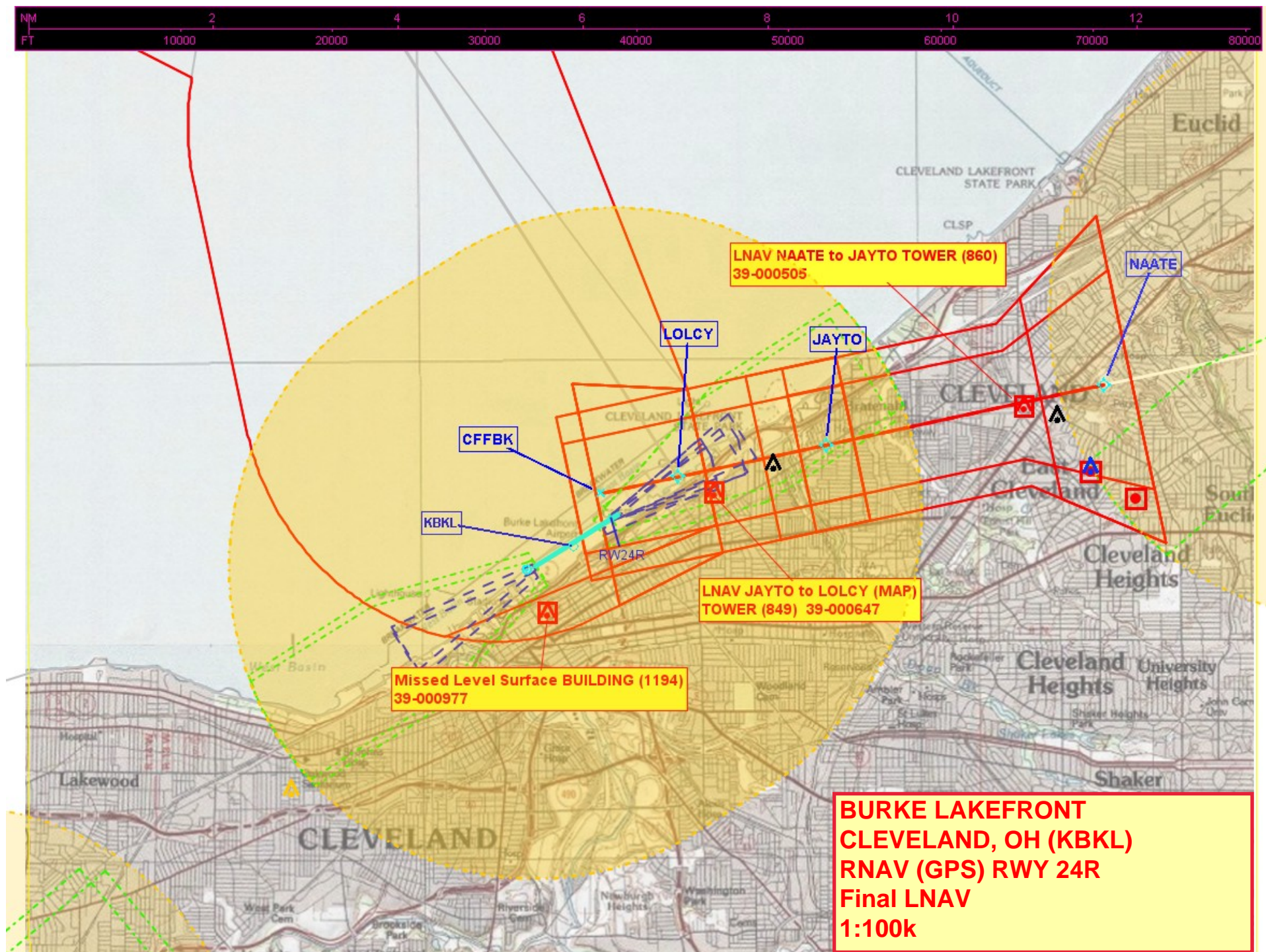
☐ APPROVED ☐ DISAPPROVED ☐ NOT REQUIRED

COMMENTS:

DATE	ROUTING SYMBOL	SIGNATURE
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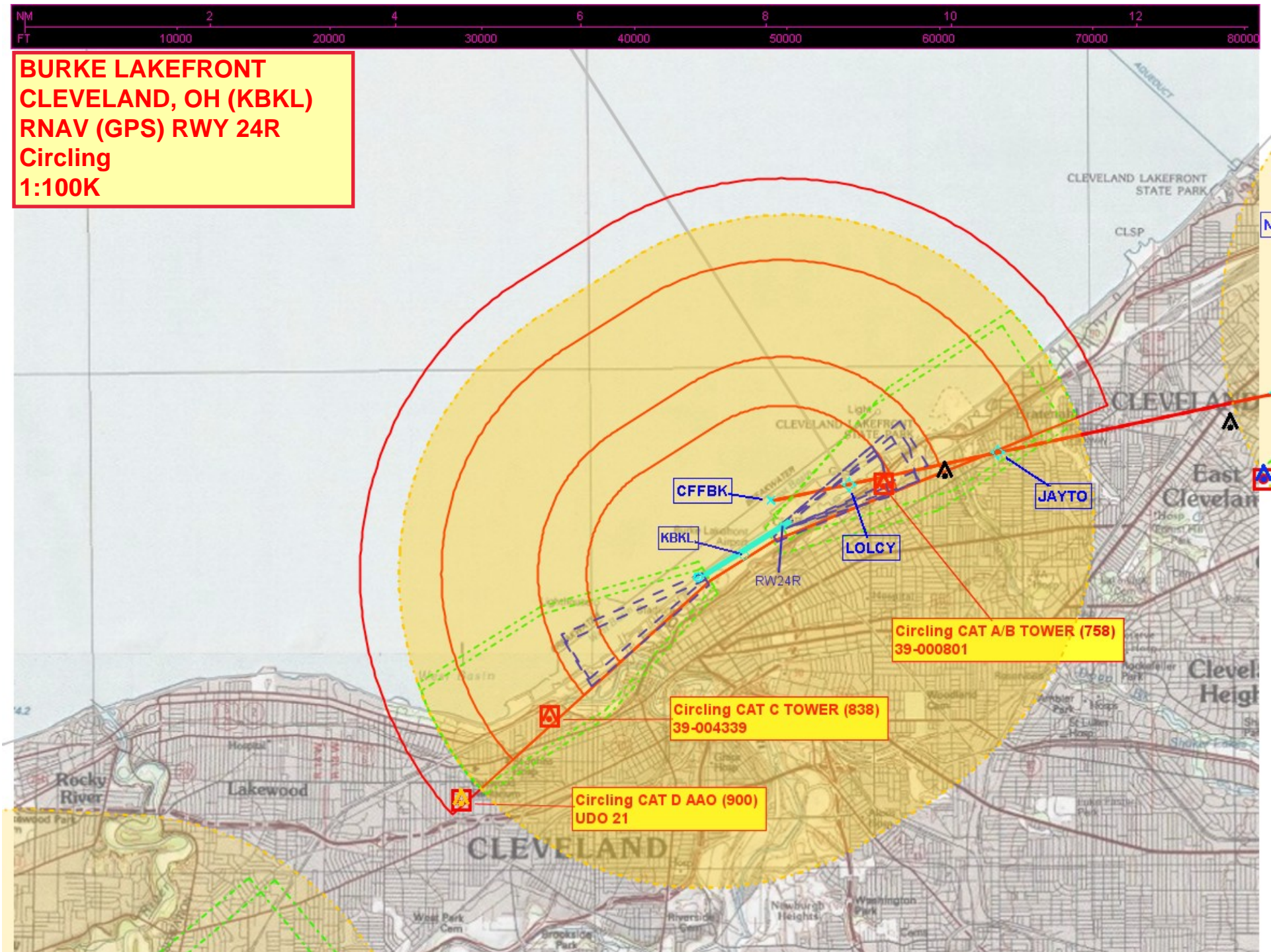






NM 2 4 6 8 10 12
FT 10000 20000 30000 40000 50000 60000 70000 80000

**BURKE LAKEFRONT
CLEVELAND, OH (KBKL)
RNAV (GPS) RWY 24R
Circling
1:100K**



Federal Aviation Administration Categorical Exclusion Declaration

Date: 10/08/20

IFP: Maxfield, Jacob (Jacob.Maxfield@faa.gov)

Airport Contact: -

Request ID: KBKL_20817

Single or Multiple Procedure: Single

Procedure Name(s): RNAV (GPS) RWY 24R

Procedure Request Description:

FINAL - approach course has been offset clockwise 20 degrees (265.00 M) from RCL. FAF altitude 2400. Distance 5.58 NM

INTERMEDIATE – On same track as final (offset clockwise 20 degrees (265.00 M) from RCL) - IF Altitude 3000 with Hold-in-Lieu. Distance 5 NM.

INITIAL – CXR VOR/DME to IF at 3000 NM. Distance 13.07 NM

Missed approach: CLIMB TO 1000, THEN CLIMBING RIGHT TURN TO 2000 DIRECT TOMMK (413914.98N/0814546.92W) THEN CLIMB TO 3000 ON TRACK 339.88 TO ZAMDO AND HOLD.

This amendment may result in the lower MDA and will be determined by AIS.

Declaration of Exclusion:

The FAA has reviewed the above referenced proposed action and it has been determined, by the undersigned, to be categorically excluded from further environmental documentation according to FAA Order 1050.1, "Environmental Impacts: Policies and Procedures." The implementation of this action will not result in any extraordinary circumstances in accordance with FAA Order 1050.1.

Basis for this Determination:

This review was conducted in accordance with policies and procedures in Department of Transportation Order 5610.1, "Procedures for Considering Environmental Impacts" and FAA Order 1050.1.

The applicable Categorical Exclusion is:

5-6.5.k: Publication of existing air traffic control procedures that do not essentially change existing tracks, create new tracks, change altitude, or change concentration of aircraft on these tracks. (ATO, AVS)

The above flight procedure has been developed within the accepted parameters.

Concurrence/Reviewed By: **GREGORY L HINES** Digitally signed by GREGORY L HINES
Date: 2020.10.08 08:29:06 -05'00' Date: _____

Title: Gregory L. Hines
Environmental Protection Specialist, Operations Support Group, Central Service Central AJV-C25

Approved By: **CHRISTOPHER L SOUTHERLAND** Digitally signed by CHRISTOPHER L SOUTHERLAND
Date: 2020.10.08 14:25:12 -05'00' Date: _____

Title: Christopher L. Southerland
Manager, Operations Support Group, ATO Center Service Center, AJV-C2