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MN ND SD

10 NOV 16 to 05 JAN 17



Federal Aviation  
Administration

TM

# U.S. Terminal Procedures Publication

North Central (NC) Vol 1 of 3

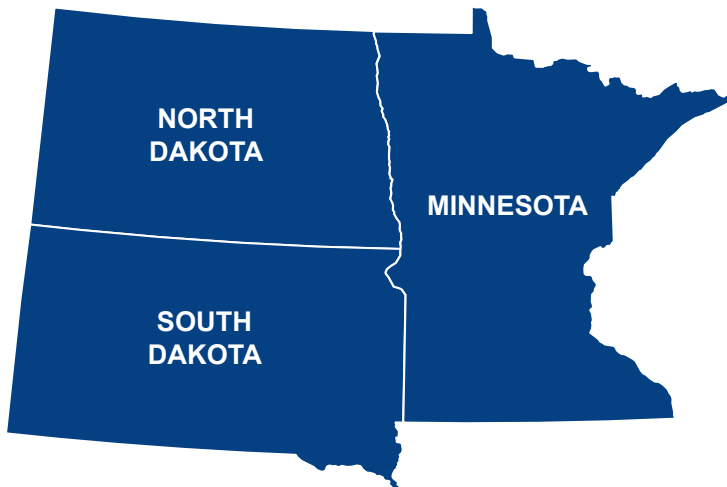
Effective: 0901Z

**10 NOV 2016**

to: 0901Z

**05 JAN 2017**

Consult the Change Notice  
(CN) effective 08 DEC 2016 for  
revised Instrument Procedure  
Charts for this volume



Consult NOTAMs for latest information

Consult/Subscribe to FAA Safety Alerts and Charting Notices at:

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### CORRECTIONS, COMMENTS AND/OR PROCUREMENT

**FOR CHARTING ERRORS,  
OR FOR CHANGES, ADDITIONS,  
RECOMMENDATIONS ON  
PROCEDURAL ASPECTS CONTACT:**

FAA, Aeronautical Information Services  
Customer Operations Team  
1305 East-West Highway  
SSMC 4, Suite 4400  
Silver Spring, MD 20910-3281  
Telephone 1-800-638-8972  
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**FOR PROCUREMENT:**

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aeronav/digital\\_products/](http://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/)

Frequently asked questions (FAQ) are answered on our website at <http://www.faa.gov/go/ais>.  
See the FAQs prior to contact via toll free number or email.

Request for the creation or revisions to Airport Diagrams should be in accordance with FAA Order 7910.4.

## INOP COMPONENTS

## INOPERATIVE COMPONENTS OR VISUAL AIDS TABLE

Landing minimums published on instrument approach procedure charts are based upon full operation of all components and visual aids associated with the particular instrument approach chart being used. Higher minimums are required with inoperative components or visual aids as indicated below. If more than one component is inoperative, each minimum is raised to the highest minimum required by any single component that is inoperative. ILS glide slope inoperative minimums are published on the instrument approach charts as localizer minimums. This table may be amended by notes on the approach chart. Such notes apply only to the particular approach category(ies) as stated. See legend page for description of components indicated below.

## (1) ILS, PAR, RNAV (LPV line of minima) and GLS

Inoperative Component or Aid	Approach Category	Increase Visibility
ALSF 1 & 2, MALSR, & SSALR	ABCD	¼ mile

## (2) ILS with visibility minimum of 1,800 RVR

ALSF 1 & 2, MALSR, & SSALR	ABCD	To 4000 RVR
TDZL RCLS	ABCD	To 2400 RVR*
RVR	ABCD	To ½ mile

\*1800 RVR authorized with the use of FD or AP or HUD to DA.

## (3) VOR, VOR/DME, TACAN, LOC, LOC/DME, LDA, LDA/DME, SDF, SDF/DME, GPS, ASR, RNAV (LNAV/VNAV, LP, LNAV lines of minima) and RNP

Inoperative Visual Aid	Approach Category	Increase Visibility
ALSF 1 & 2, MALSR, & SSALR	ABCD	½ mile
SSALS, MALS, & ODALS	ABC	¼ mile

## (4) NDB

ALSF 1 & 2, MALSR, & SSALR	C	½ mile
MALS, SSALS, ODALS	ABD	¼ mile
	ABC	¼ mile

# TERMS/LANDING MINIMA DATA

## IFR LANDING MINIMA

The United States Standard for Terminal Instrument Procedures (TERPS) is the approved criteria for formulating instrument approach procedures. Landing minima are established for six aircraft approach categories (ABCDE and COPTER). In the absence of COPTER MINIMA, helicopters may use the CAT A minimums of other procedures.

### LANDING MINIMA FORMAT

In this example airport elevation is 1179, and runway touchdown zone elevation is 1152.

CATEGORY	A		B	C	D
	DA	Visibility (RVR 100's of feet)	Aircraft Approach Category	HAT/HATH	D
S-ILS 27		1352/24		200	(200-½)
S-LOC 27		1440/24	288	(300-½)	1440/50 288 (300-1)
CIRCLING	1540-1 361 (400-1)	MDA	1640-1 461 (500-1)	1640-1½ 461 (500-1½)	1740-2 561 (600-2)

Labels: DA, Visibility (RVR 100's of feet), Aircraft Approach Category, HAT/HATH, D, MDA, HAA, Visibility in Statute Miles.

Annotations: Straight-in ILS to Runway 27, Straight-in with Glide Slope Inoperative or not used to Runway 27, All weather minimums in parentheses not applicable to Civil Pilots, Military Pilots refer to appropriate regulations.

### COPTER MINIMA ONLY

CATEGORY	COPTER
H-176°	680-½ 363 (400-½)

Copter Approach Direction, Height of MDA/DA Above Landing Area (HAL), No circling minimums are provided

NOTE: The **W** symbol indicates outages of the WAAS vertical guidance may occur daily at this location due to initial system limitations. WAAS NOTAMS for vertical outages are not provided for this approach. Use LNAV minima for flight planning at these locations, whether as a destination or alternate. For flight operations at these locations, when the WAAS avionics indicate that LNAV/VNAV or LPV service is available, then vertical guidance may be used to complete the approach using the displayed level of service. Should an outage occur during the procedure, reversion to LNAV minima may be required. As the WAAS coverage is expanded, the **W** will be removed.

RNAV minimums are dependent on navigation equipment capability, as stated in the applicable AFM, AFMS, or other FAA approved document. See AIM paragraph 5-4-5, AC 90-105 and AC 90-107 for detailed requirements for each line of minima.

### COLD TEMPERATURE RESTRICTED AIRPORTS

NOTE: A **⊗** -12°C/10°F symbol and associated temperature indicates a cold temperature altitude correction is required at this airport when reported temperature is at or below the published restricted temperature. Advise ATC when altitude correction is made in the intermediate and/or missed approach segment. Reporting correction to ATC in final segment is not required. See following Cold Temperature Error Table to make manual corrections. See Notices to Airman Publication (NTAP) Graphic Notices General for complete list of published airports, temperature/s, segments and procedure information. [www.faa.gov/air\\_traffic/publications/notices](http://www.faa.gov/air_traffic/publications/notices)

### COLD TEMPERATURE ERROR TABLE

HEIGHT ABOVE AIRPORT IN FEET

REPORTED TEMP °C	200	300	400	500	600	700	800	900	1000	1500	2000	3000	4000	5000
+10	10	10	10	10	20	20	20	20	20	30	40	60	80	90
0	20	20	30	30	40	40	50	50	60	90	120	170	230	280
-10	20	30	40	50	60	70	80	90	100	150	200	290	390	490
-20	30	50	60	70	90	100	120	130	140	210	280	420	570	710
-30	40	60	80	100	120	140	150	170	190	280	380	570	760	950
-40	50	80	100	120	150	170	190	220	240	360	480	720	970	1210
-50	60	90	120	150	180	210	240	270	300	450	590	890	1190	1500

### AIRCRAFT APPROACH CATEGORIES

Aircraft approach category indicates a grouping of aircraft based on a speed of VREF, if specified, or if VREF not specified, 1.3 VSO at the maximum certificated landing weight. VREF, VSO, and the maximum certificated landing weight are those values as established for the aircraft by the certification authority of the country of registry. Helicopters are Category A aircraft. An aircraft shall fit in only one category. However, if it is necessary to operate at a speed in excess of the upper limit of the speed range for an aircraft's category, the minimums for the category for that speed shall be used. For example, an airplane which fits into Category B, but is circling to land at a speed of 145 knots, shall use the approach Category D minimums. As an additional example, a Category A airplane (or helicopter) which is operating at 130 knots on a straight-in approach shall use the approach Category C minimums. See following category limits:

### MANEUVERING TABLE

Approach Category	A	B	C	D	E
Speed (Knots)	0-90	91-120	121-140	141-165	Abv 165

# TERMS/LANDING MINIMA DATA

# TERMS/LANDING MINIMA DATA

## CIRCLING APPROACH OBSTACLE PROTECTED AIRSPACE

The circling MDA provides vertical obstacle clearance during a circle-to-land maneuver. The circling MDA protected area extends from the threshold of each runway authorized for landing following a circle-to-land maneuver for a distance as shown in the tables below. The resultant arcs are then connected tangentially to define the protected area.

### STANDARD CIRCLING APPROACH MANEUVERING RADIUS

Circling approach protected areas developed prior to late 2012 used the radius distances shown in the following table, expressed in nautical miles (NM), dependent on aircraft approach category. The approaches using standard circling approach areas can be identified by the absence of the **C** symbol on the circling line of minima.

Circling MDA in feet MSL	Approach Category and Circling Radius (NM)				
	CAT A	CAT B	CAT C	CAT D	CAT E
All Altitudes	1.3	1.5	1.7	2.3	4.5

### **C** EXPANDED CIRCLING APPROACH MANEUVERING AIRSPACE RADIUS

Circling approach protected areas developed after late 2012 use the radius distance shown in the following table, expressed in nautical miles (NM), dependent on aircraft approach category, and the altitude of the circling MDA, which accounts for true airspeed increase with altitude. The approaches using expanded circling approach areas can be identified by the presence of the **C** symbol on the circling line of minima.

Circling MDA in feet MSL	Approach Category and Circling Radius (NM)				
	CAT A	CAT B	CAT C	CAT D	CAT E
1000 or less	1.3	1.7	2.7	3.6	4.5
1001-3000	1.3	1.8	2.8	3.7	4.6
3001-5000	1.3	1.8	2.9	3.8	4.8
5001-7000	1.3	1.9	3.0	4.0	5.0
7001-9000	1.4	2.0	3.2	4.2	5.3
9001 and above	1.4	2.1	3.3	4.4	5.5

### Comparable Values of RVR and Visibility

The following table shall be used for converting RVR to ground or flight visibility. For converting RVR values that fall between listed values, use the next higher RVR value; do not interpolate. For example, when converting 1800 RVR, use 2400 RVR with the resultant visibility of ½ mile.

RVR (feet)	Visibility (statute miles)	RVR (feet)	Visibility (statute miles)
1600	¼	4500	⅝
2400	½	5000	1
3200	⅝	6000	1¼
4000	¾		

## RADAR MINIMA

	RWY	GP/TCH/RPI	CAT	DA/ MDA-VIS	HAT/ HATH/ HAA	CEIL-VIS	CAT	DA/ MDA-VIS	HAT/ HATH/ HAA	CEIL-VIS
PAR	10	2.5°/42/1000	ABCDE	195/16	100	(100-¼)				
	28	2.5°/48/1068	ABCDE	187/16	100	(100-¼)				
ASR	10		ABC	560/40	463	(500-¾)	DE	560/50	463	(500-1)
	28		AB	600/50	513	(600-1)	CDE	600/60	513	(600-1¼)
CIR	10		AB	560-1¼	463	(500-1¼)	CDE	560-1½	463	(500-1½)
	28		AB	600-1¼	503	(600-1¼)	CDE	600-1½	503	(600-1½)

Visibility in Statute Miles ↙

↘ All minima in parentheses not applicable to Civil Pilots. Military Pilots refer to appropriate regulations.

Radars Minima:

1. Minima shown are the lowest permitted by established criteria. Pilots should consult applicable directives for their category of aircraft.
2. The circling MDA and weather minima to be used are those for the runway to which the final approach is flown- not the landing runway. In the above RADAR MINIMA example, a category C aircraft flying a radar approach to runway 10, circling to land on runway 28, must use an MDA of 560 feet with weather minima of 500-1½.

NOTE: Military RADAR MINIMA may be shown with communications symbology that indicates emergency frequency monitoring capability by the radar facility as follows:

(E) VHF and UHF emergency frequencies monitored

(M) VHF emergency frequency (121.5) monitored

(U) UHF emergency frequency (243.0) monitored

Additionally, unmonitored frequencies which are available on request from the controlling agency may be annotated with an "x".

⚠ Alternate Minimums not standard. Civil users refer to tabulation. USA/USN/USAF pilots refer to appropriate regulations.

⚠ NA Alternate minimums are Not Authorized due to unmonitored facility or absence of weather reporting service.

⚠ Takeoff Minimums not standard and/or Departure Procedures are published. Refer to tabulation.

# TERMS/LANDING MINIMA DATA

## GENERAL INFO

## GENERAL INFORMATION

This publication is issued every 56 days and includes Standard Instrument Approach Procedures (SIAPs), Standard Instrument Departures (SIDs), Standard Terminal Arrivals (STARs), IFR Takeoff Minimums and (Obstacle) Departure Procedures (ODPs), IFR Alternate Minimums, and Radar Instrument Approach Minimums for use by civil and military aviation. The organization responsible for SIAPs, Radar Minimums, SIDs, STARs and graphic ODPs is identified in parentheses in the top margin of the procedure; e.g., (FAA), (FAA-O), (USA), (USAF), (USN). SIAPs with the (FAA) and (FAA-O) designation are regulated under 14 CFR, Part 97. SIAPs with the (FAA-O) designation have been developed under Other Transaction Agreement (OTA) by private providers and have been certified by the FAA. See 14 CFR, Part 91.175 (a) and the AIM for further details. 14 CFR, Part 91.175 (g) and the Special Notices section of the Chart Supplement contains information on civil operations at military airports.

STANDARD TERMINAL ARRIVALS AND DEPARTURE PROCEDURES

The use of the associated codified STAR/DP and transition identifiers are requested of users when filing flight plans via teletype and are required for users filing flight plans via computer interface. It must be noted that when filing a STAR/DP with a transition, the first three coded characters of the STAR and the last three coded characters of the DP are replaced by the transition code. Examples: ACTON SIX ARRIVAL, file (AQN.AQN6); ACTON SIX ARRIVAL, EDNAS TRANSITION, file (EDNAS.AQN6). FREEHOLD THREE DEPARTURE, file (FREQ3.RBV), FREEHOLD THREE DEPARTURE, ELWOOD CITY TRANSITION, file (FREQ3.EWC).

**RNAV DP and STAR.** Effective March 15, 2007, these procedures, formerly identified as Type-A and Type-B, will be designated as RNAV 1 in accordance with amended Advisory Circular (AC) and ICAO terminology.

Refer to AC 90-100A U.S. TERMINAL AND EN ROUTE AREA NAVIGATION (RNAV) OPERATIONS and the Aeronautical Information Manual for additional guidance regarding these procedures.

**Standard RNAV 1 Procedure Chart Notes**

NOTE: RNAV 1

NOTE: DME/DME/IRU or GPS required

Some procedures may require use of GPS and will be identified by a "GPS required" note.

**RNAV 1 Procedure Characteristics and Operations**

1. Require use of an RNAV system with DME/DME/IRU, and/or GPS inputs.
2. Require use of a CDI, flight director, and/or autopilot, in lateral navigation mode, for flight guidance while operating on RNAV paths (track, course, or direct leg). Other methods providing an equivalent level of performance may be acceptable.
3. RNAV paths may start as low as 500 feet above airport elevation.

## GENERAL INFO

## GENERAL INFO

PILOT CONTROLLED AIRPORT LIGHTING SYSTEMS

Available pilot controlled lighting (PCL) systems are indicated as follows:

1. Approach lighting systems that bear a system identification are symbolized using negative symbology, e.g.,  $\ominus$ ,  $\ominus$ ,  $\ominus$ .
2. Approach lighting systems that do not bear a system identification are indicated with a negative "L" beside the name. A star (\*) indicates non-standard PCL, consult Chart Supplement, e.g.,  $\ominus^*$ .

To activate lights, use frequency indicated in the communication section of the chart with a  $\ominus$  or the appropriate lighting system identification e.g., UNICOM 122.8  $\ominus$ ,  $\ominus$ ,  $\ominus$ .

KEY MIKE	FUNCTION
7 times within 5 seconds	Highest intensity available
5 times within 5 seconds	Medium or lower intensity (Lower REIL or REIL-off)
3 times within 5 seconds	Lowest intensity available (Lower REIL or REIL-off)

CHART CURRENCY INFORMATION

Date of Latest Revision                      09365

The Date of Latest Revision identifies the Julian date the chart was added or last revised for any reason. The first two digits indicate the year, the last three digits indicate the day of the year (001 to 365/6) in which the latest revision of any kind has been made to the chart.



The FAA Procedure Amendment Number represents the most current amendment of a given procedure. The Procedure Amendment Effective Date represents the AIRAC cycle date on which the procedure amendment was incorporated into the chart. Updates to the amendment number & effective date represent procedural/criteria revisions to the charted procedure, e.g., course, fix, altitude, minima, etc.

NOTE: Inclusion of the "Procedure Amendment Effective Date" will be phased in as procedures are amended. As this occurs, the Julian date will be relocated to the upper right corner of the chart.

MISCELLANEOUS

- ★ Indicates a non-continuously operating facility, see Chart Supplement.
- For Civil (FAA) instrument procedures, "RADAR REQUIRED" in the planview of the chart indicates that ATC radar must be available to assist the pilot when transitioning from the en route environment. "Radar required" in the pilot briefing portion of the chart indicates that ATC radar is required on portions of the procedure outside the final approach segment, including the missed approach. Some military procedures also have equipment requirements such as "Radar Required", but do not conform to the same charting application standards used by the FAA. Distances in nautical miles (except visibility in statute miles and Runway Visual Range in hundreds of feet). Runway Dimensions in feet. Elevations in feet. Mean Sea Level (MSL). Ceilings in feet above airport elevation. Radials/bearings/headings/courses are magnetic. Horizontal Datum: Unless otherwise noted on the chart, all coordinates are referenced to North American Datum 1983 (NAD 83), which for charting purposes is considered equivalent to World Geodetic System 1984 (WGS 84).

Terrain is scaled within the neat lines (planview boundaries) and does not accurately underlie not-to-scale distance depictions or symbols.

## GENERAL INFO

## GENERAL INFO

## ABBREVIATIONS

AAUP.....	Attention All Users Page	HAA.....	Height above Airport
ADF.....	Automatic Direction Finder	HAL.....	Height above Landing
ADIZ.....	Air Defense Identification Zone	HAT.....	Height above Touchdown
AFIS.....	Automatic Flight Information Service	HATH.....	Height Above Threshold
ALS.....	Approach Light System	HGS.....	Head-up Guidance System
ALSF.....	Approach Light System with Sequenced Flashing Lights	HIRL.....	High Intensity Runway Lights
AP.....	Autopilot System	HUD.....	Head-up Display
APCH.....	Approach	IAF.....	Initial Approach Fix
APP CON.....	Approach Control	ICAO.....	International Civil Aviation Organization
ARR.....	Arrival	IF.....	Intermediate Fix
ASOS.....	Automated Surface Observing System	IM.....	Inner Marker
ASR/PAR.....	Published Radar Minimums at this Airport	INOP.....	Inoperative
ASSC.....	Airport Surface Surveillance Systems	INT.....	Intersection
ATIS.....	Automatic Terminal Information Service	K.....	Knots
AUNICOM.....	Automated UNICOM	KLAS.....	Knots Indicated Airspeed
AWOS.....	Automated Weather Observing System	LAAS.....	Local Area Augmentation System
AZ.....	Azimuth	LDA.....	Localizer Type Directional Aid
BC.....	Back Course	Ldg.....	Landing
BND.....	Bound	LRL.....	Low Intensity Runway Lights
C.....	Circling	LNAV.....	Lateral Navigation
CAT.....	Category	LOC.....	Localizer
CCW.....	Counter Clockwise	LP.....	Localizer Performance
CDI.....	Course Deviation Indicator	LPV.....	Localizer Performance with Vertical Guidance
Chan.....	Channel	LR.....	Lead Radial. Provides at least 2 NM (Copter 1 NM) of lead to assist in turning onto the intermediate/final course.
CIFP.....	Coded Instrument Flight Procedures	MAA.....	Maximum Authorized Altitude
CIR.....	Circling	MALS.....	Medium Intensity Approach Light System
CLNC DEL.....	Clearance Delivery	MALSR.....	Medium Intensity Approach Light System with RAIL
CNF.....	Computer Navigation Fix	MAP.....	Missed Approach Point
CTAF.....	Common Traffic Advisory Frequency	MDA.....	Minimum Descent Altitude
CW.....	Clockwise	MIRL.....	Medium Intensity Runway Lights
DA.....	Decision Altitude	MM.....	Middle Marker
DER.....	Departure End of Runway	MRA.....	Minimum Reception Altitude
DH.....	Decision Height	N/A.....	Not Applicable
DME.....	Distance Measuring Equipment	NA.....	Not Authorized
DTHR.....	Displaced Threshold	NDB.....	Non-directional Radio Beacon
DVA.....	Diverse Vector Area	NFD.....	National Flight Database
ELEV.....	Elevation	NM.....	Nautical Mile
EMAS.....	Engineered Material Arresting System	NoPT.....	No Procedure Turn Required (Procedure Turn shall not be executed without ATC clearance)
FAF.....	Final Approach Fix	ODALS.....	Omnidirectional Approach Light System
FD.....	Flight Director System	ODP.....	Obstacle Departure Procedure
FM.....	Fan Marker	OM.....	Outer Marker
FMS.....	Flight Management System	PRM.....	Precision Runway Monitor
GBAS.....	Ground Based Augmentation System		
GCO.....	Ground Communications Outlet		
GLS.....	Ground Based Augmentation System Landing System		
GP.....	Glidepath		
GPI.....	Ground Point of Interception		
GPS.....	Global Positioning System		
GS.....	Glide Slope		

## GENERAL INFO



## GENERAL INFO

## ABBREVIATIONS

R.....	Radial
RA.....	Radio Altimeter setting height
RAIL.....	Runway Alignment Indicator Lights
RCLS.....	Runway Centerline Light System
REIL.....	Runway End Identifier Lights
RF.....	Radius-to-Fix
RLLS.....	Runway Lead-in Light System
RNAV.....	Area Navigation
RNP.....	Required Navigation Performance
RPI.....	Runway Point of Intercept(ion)
RRL.....	Runway Remaining Lights
Rwy.....	Runway
RVR.....	Runway Visual Range
S.....	Straight-in
SALS.....	Short Approach Light System
SSALR.....	Simplified Short Approach Light System with RAIL
SDF.....	Simplified Directional Facility
SM.....	Statute Mile
SOIA.....	Simultaneous Offset Instrument Approach
TAA.....	Terminal Arrival Area
TAC.....	TACAN
TCH.....	Threshold Crossing Height (height in feet Above Ground level)
TDZ.....	Touchdown Zone
TDZE.....	Touchdown Zone Elevation
TDZ/CL.....	Touchdown Zone and Runway Centerline Lighting
TDZL.....	Touchdown Zone Lights
THR.....	Threshold
THRE.....	Threshold Elevation
TODA.....	Takeoff Distance Available
TORA.....	Takeoff Run Available
TR.....	Track
VASI.....	Visual Approach Slope Indicator
VCOA.....	Visual Climb Over Airport
VDP.....	Visual Descent Point
VGSI.....	Visual Glide Slope Indicator
VNAV.....	Vertical Navigation
WAAS.....	Wide Area Augmentation System
WP/WPT.....	Waypoint (RNAV)

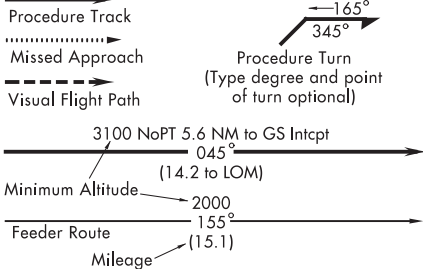
## GENERAL INFO

# LEGEND

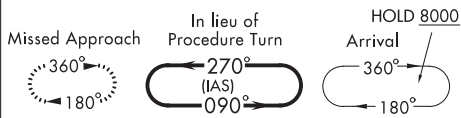
## INSTRUMENT APPROACH PROCEDURES (CHARTS)

### PLANVIEW SYMBOLS

#### TERMINAL ROUTES



#### HOLDING PATTERNS

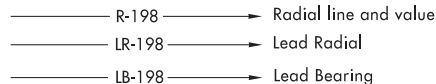
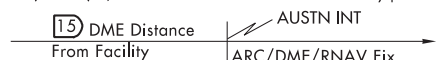


Holding pattern with max. restricted airspeed: (175K) applies to all altitudes. (210K) applies to altitudes above 6000' to and including 14000'. Arrival Holding Pattern altitude restrictions will be indicated when they deviate from the adjacent leg. Limits will only be specified when they deviate from the standard. DME fixes may be shown.

#### FIXES/ATC REPORTING REQUIREMENTS



Computer Navigation Fix (CNF)  
x (NAME) ("x" omitted when it conflicts with runway pattern)



#### ALTITUDES

<u>5500</u> Mandatory Altitude	3000 Recommended Altitude
<u>2500</u> Minimum Altitude	<u>5000</u> Mandatory Block Altitude
<u>4300</u> Maximum Altitude	<u>3000</u> Altitude

#### INDICATED AIRSPEED

<u>175K</u>	120K	250K	180K
Mandatory Airspeed	Minimum Airspeed	Maximum Airspeed	Recommended Airspeed

#### RADIO AIDS TO NAVIGATION

110.1 Underline indicates No Voice transmitted on this frequency

Compulsory:



Non-Compulsory:



LOM/LMM (Compass locator at Outer Marker/Middle Marker)

Marker Beacon

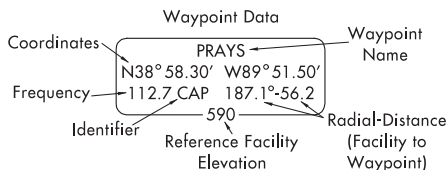
Marker beacons that are not specifically part of the procedure but underlie the final approach course are shown in screened color.

Localizer (LOC/LDA) Course  
Right side shading- Front course; Left side shading- Back Course

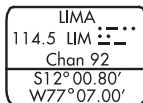
SDF Course

LOC/DME

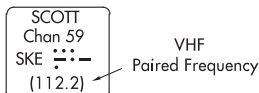
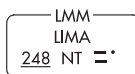
LOC/LDA/SDF Transmitter  
(shown when installation is offset from its normal position off the end of the runway.)



Primary Navaid with Coordinate Values



Secondary Navaid



# LEGEND

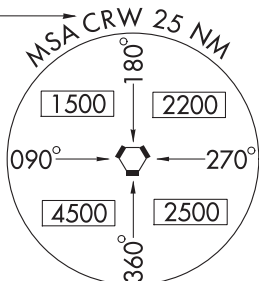
**LEGEND**

INSTRUMENT APPROACH PROCEDURES (CHARTS)

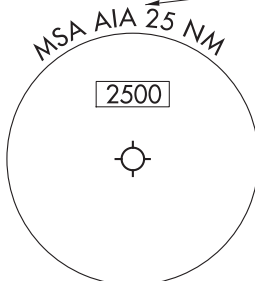
PLANVIEW SYMBOLS

MINIMUM SAFE ALTITUDE (MSA)

Facility Identifier

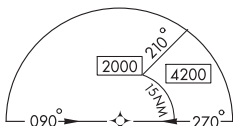


Airport Identifier

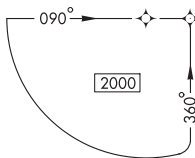


(arrows on distance circle identify sectors)

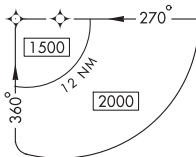
TERMINAL ARRIVAL AREA (TAA)



Straight-in Area

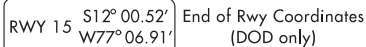


Right Base Area



Left Base Area

MISCELLANEOUS



AIRPORTS



SPECIAL USE AIRSPACE



R-Restricted

P-Prohibited

W-Warning

A-Alert

OBSTACLES



**LEGEND**

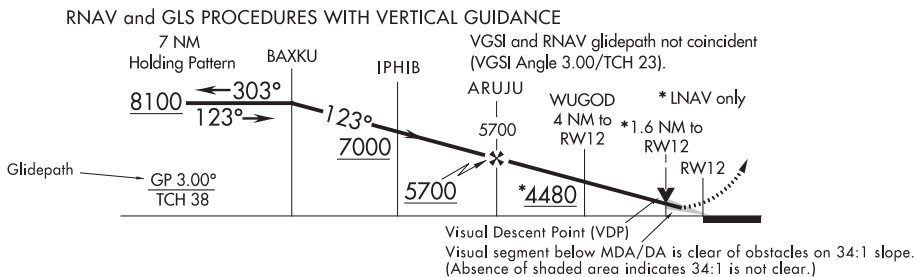
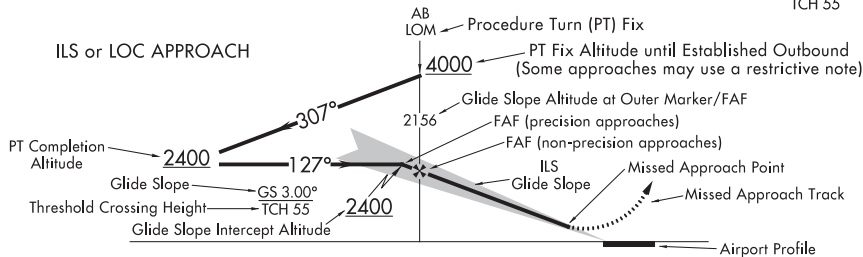
**PROFILE VIEW**

Three different methods are used to depict either electronic or vertical guidance: "GS", "GP", or "VDA".

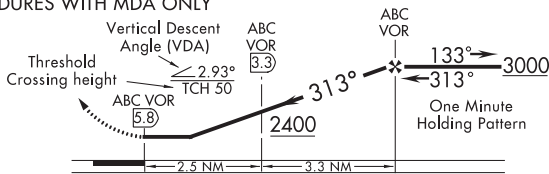
1. "GS" indicates that an Instrument Landing System (ILS) electronic glide slope (a ground antenna) provides vertical guidance. The profile section of ILS procedures depict a GS angle and TCH in the following format:  $GS\ 3.00^\circ$ .  
TCH 55

2. "GP" on GLS and RNAV procedures indicates that either electronic vertical guidance (via Wide Area Augmentation System - WAAS or Ground Based Augmentation System - GBAS) or barometric vertical guidance is provided. GLS and RNAV procedures with a published decision altitude (DA/H) depict a GP angle and TCH in the following format:  $GP\ 3.00^\circ$ .  
TCH 50

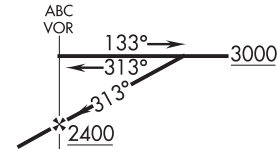
3. An advisory vertical descent angle (VDA) is provided on non-vertically guided conventional procedures and RNAV procedures with only a minimum descent altitude (MDA) to assist in preventing controlled flight into terrain. On Civil (FAA) procedures, this information is placed above or below the procedure track following the fix it is based on. Absence of a VDA or a note that the VDA is not authorized indicates that the prescribed obstacle clearance surface is not clear and the VDA must not be used below MDA. VDA is depicted in the following format:  $\leq 3.00^\circ$ .  
TCH 55



**NON-VERTICALLY GUIDED CONVENTIONAL PROCEDURES AND RNAV PROCEDURES WITH MDA ONLY**



**DESCENT FROM HOLDING PATTERN**



ALTITUDES	
5500 Mandatory Altitude	3000 Recommended Altitude
2500 Minimum Altitude	5000 Mandatory Block Altitude
4300 Maximum Altitude	3000

PROFILE SYMBOLS	
	Glide Slope/Glidepath Intercept Altitude and final approach fix for vertically guided approach procedures.
	Visual Descent Point (VDP)
	Visual Flight Path
	Note: Facilities and waypoints are depicted as a solid vertical line while fixes and intersections are depicted as a dashed vertical line.

# LEGEND

## LEGEND STANDARD TERMINAL ARRIVAL (STAR) CHARTS DEPARTURE PROCEDURE (DP) CHARTS

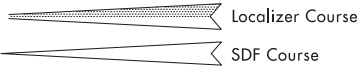
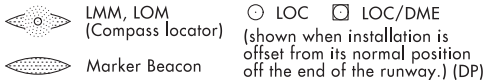
Applies to both STAR and DP Charts unless otherwise noted.

### RADIO AIDS TO NAVIGATION

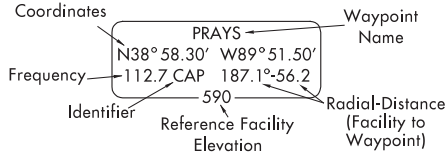
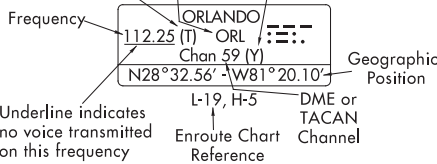
Compulsory:



Non-Compulsory:



(T) indicates frequency protection range (STAR)   Identifier   (Y) TACAN must be placed in "Y" mode to receive distance information



### FIXES/ATC REPORTING REQUIREMENTS

Reporting Points  
N00°00.00'   W00°00.00'

(75) → DME Mileage (when not obvious)

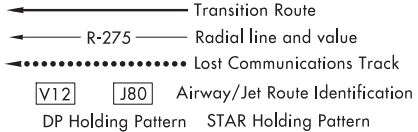
▲ Fix-Compulsory and  
△ Non-Compulsory Position Report



X Computer Navigation Fix (CNF)  
N00°00.00'   W00°00.00'

### ROUTES

4500 MEA-Minimum Enroute Altitude  
\*3500 MOCA-Minimum Obstruction Clearance Altitude  
270° → Departure Route - Arrival Route  
(65) Mileage between Radio Aids, Reporting Points, and Route Breaks



Holding pattern with max. restricted airspeed (175K) applies to all altitudes (210K) applies to altitudes above 6000' to and including 14000'

### SPECIAL USE AIRSPACE



### ALTITUDES

5500   2300   4800  
Mandatory Altitude (Cross at)   Minimum Altitude (Cross at or above)   Maximum Altitude (Cross at or below)

15000  
12000  
Block Altitude

→ Altitude change at other than Radio Aids (STAR)

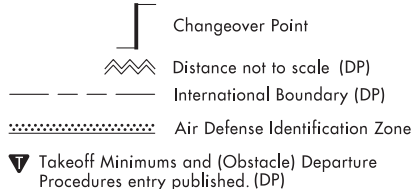
### INDICATED AIRSPEED

175K   120K   250K  
Mandatory Airspeed   Minimum Airspeed   Maximum Airspeed

### AIRPORTS



### MISCELLANEOUS



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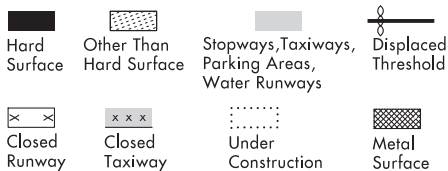
# LEGEND

# LEGEND

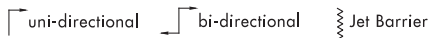
## INSTRUMENT APPROACH PROCEDURES (CHARTS)

### AIRPORT DIAGRAM/AIRPORT SKETCH

#### Runways

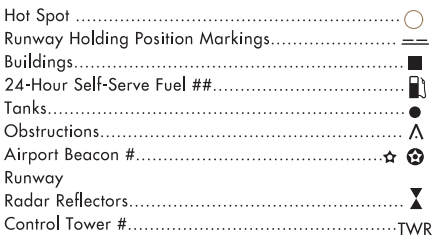


ARRESTING GEAR: Specific arresting gear systems; e.g., BAK12, MA-1A etc., shown on airport diagrams, not applicable to Civil Pilots. Military Pilots refer to appropriate DOD publications.



ARRESTING SYSTEM (EMAS)

#### REFERENCE FEATURES



# When Control Tower and Rotating Beacon are co-located, Beacon symbol will be used and further identified as TWR.

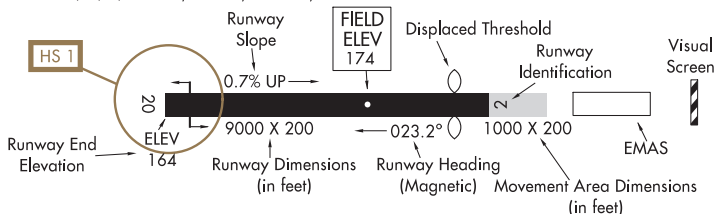
## A fuel symbol is shown to indicate 24-hour self-serve fuel available, see appropriate Chart Supplement for information.

Runway length depicted is the physical length of the runway (end-to-end, including displaced thresholds if any) but excluding areas designated as stopways.

A symbol is shown to indicate runway declared distance information available, see appropriate Chart Supplement for distance information.

Runway Weight Bearing Capacity/ or PCN Pavement Classification Number is shown as a codified expression.

Refer to the appropriate Supplement/Directory for applicable codes e.g., RWY 14-32 PCN 80 F/D/X/U S-75, D-185, 2S-175, 2D-325



#### SCOPE

Airport diagrams are specifically designed to assist in the movement of ground traffic at locations with complex runway/taxiway configurations. Airport diagrams are not intended to be used for approach and landing or departure operations. For revisions to Airport Diagrams: Consult FAA Order 7910.4.

Helicopter Alighting Areas Negative Symbols used to identify Copter Procedures landing point.....

Runway Threshold elevation.....THRE 123  
Runway TDZ elevation.....TDZE 123  
Runway Slope.....0.8% UP →  
(shown when runway slope is greater than or equal to 0.3%)  
← 0.3% DOWN

NOTE:  
Runway Slope measured to midpoint on runways 8000 feet or longer.

U.S. Navy Optical Landing System (OLS) "OLS" location is shown because of its height of approximately 7 feet and proximity to edge of runway may create an obstruction for some types of aircraft.

Approach light symbols are shown in the Flight Information Handbook.

Airport diagram scales are variable.

True/magnetic North orientation may vary from diagram to diagram

Coordinate values are shown in 1 or 1/2 minute increments. They are further broken down into 6 second ticks, within each 1 minute increments.

Positional accuracy within ±600 feet unless otherwise noted on the chart.

NOTE:  
All new and revised airport diagrams are shown referenced to the World Geodetic System (WGS) (noted on appropriate diagram), and may not be compatible with local coordinates published in FLIP. (Foreign Only)

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# LEGEND

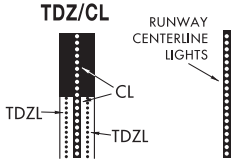
15344  
**LEGEND**

INSTRUMENT APPROACH PROCEDURES (CHARTS)  
APPROACH LIGHTING SYSTEM - UNITED STATES

Approach lighting and visual glide slope systems are indicated on the airport sketch by an identifier, e.g., (A2), (V), etc.

A dot "•" portrayed with approach lighting letter identifier indicates sequenced flashing lights (F) installed with the approach lighting system e.g., (A1). Negative symbology, e.g., (A3), (V) indicates Pilot Controlled Lighting (PCL).

**RUNWAY TOUCHDOWN ZONE AND CENTERLINE LIGHTING SYSTEMS**



AVAILABILITY of TDZ/CL will be shown by NOTE in SKETCH e.g. "TDZ/CL Rwy 15"

**SHORT APPROACH LIGHTING SYSTEM**

(A2)

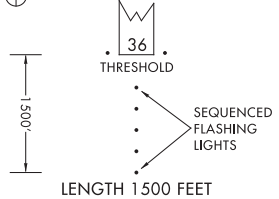
**SALS/SALSF**  
(High Intensity)

SAME AS INNER 1500' OF ALSF-1

**OMNIDIRECTIONAL APPROACH LIGHTING SYSTEM**

(V)

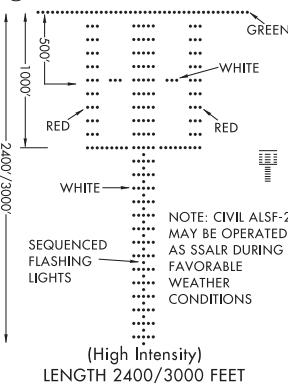
**ODALS**



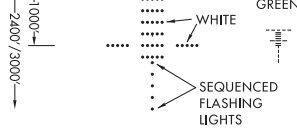
**APPROACH LIGHTING SYSTEM**

(A)

**ALSF-2**



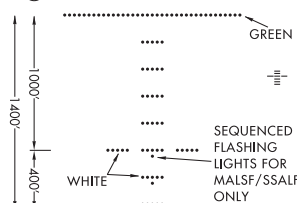
(A3)



(High Intensity)  
LENGTH 2400/3000 FEET

**MEDIUM INTENSITY (MALS and MALSF) OR SIMPLIFIED SHORT (SSALS and SSALF) APPROACH LIGHTING SYSTEMS**

(A4)



LENGTH 1400 FEET

**MEDIUM INTENSITY APPROACH LIGHTING SYSTEM with Runway Alignment Indicator Lights**

(A5)

**MALSR**

SAME LIGHT CONFIGURATION AS SSALR.

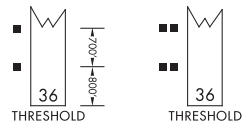
**VISUAL APPROACH SLOPE INDICATOR**

**VASI**

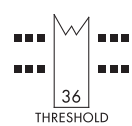
VISUAL APPROACH SLOPE INDICATOR WITH STANDARD THRESHOLD CLEARANCE PROVIDED.  
ALL LIGHTS WHITE — TOO HIGH  
FAR LIGHTS RED — ON GLIDE SLOPE  
NEAR LIGHTS WHITE — TOO LOW  
ALL LIGHTS RED — TOO LOW

VASI 2

VASI 4



VASI 12



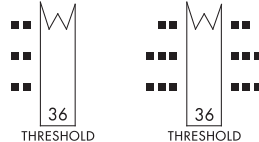
**VISUAL APPROACH SLOPE INDICATOR**

**VASI**

3-BAR, 6 OR 16 BOX, VISUAL APPROACH SLOPE INDICATOR THAT PROVIDES 2 GLIDE ANGLES AND 2 THRESHOLD CROSSING HEIGHTS.

VASI 6

VASI 16



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**LEGEND**

04330  
**LEGEND**

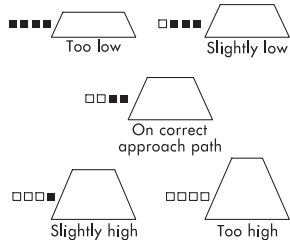
INSTRUMENT APPROACH PROCEDURES (CHARTS)  
APPROACH LIGHTING SYSTEM - UNITED STATES

Approach lighting and visual glide slope systems are indicated on the airport sketch by an identifier, (A<sub>2</sub>), (V) etc.

A dot "●" portrayed with approach lighting letter identifier indicates sequenced flashing lights (F) installed with the approach lighting system e.g., (A<sub>1</sub>). Negative symbology, e.g., (A<sub>1</sub>), (V) indicates Pilot Controlled Lighting (PCL).

(P) **PRECISION APPROACH PATH INDICATOR**

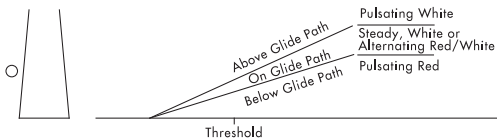
**PAPI**



Legend: □ White ■ Red

(V<sub>2</sub>) **PULSATING VISUAL APPROACH SLOPE INDICATOR**

**PVASI**



CAUTION: When viewing the pulsating visual approach slope indicators in the pulsating white or pulsating red sectors, it is possible to mistake this lighting aid for another aircraft or a ground vehicle. Pilots should exercise caution when using this type of system.

(V<sub>1</sub>) **"T"-VISUAL APPROACH SLOPE INDICATOR**

**"T"-VASI**

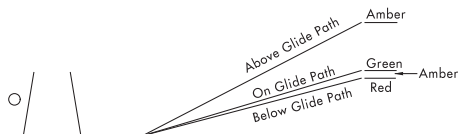


"T" ON BOTH SIDES OF RWY  
ALL LIGHTS VARIABLE WHITE.  
CORRECT APPROACH SLOPE-  
ONLY CROSS BAR VISIBLE.  
UPRIGHT "T"- FLY UP.  
INVERTED "T"- FLY DOWN.  
RED "T"- GROSS  
UNDERSHOOT.



(V<sub>4</sub>) **TRI-COLOR VISUAL APPROACH SLOPE INDICATOR**

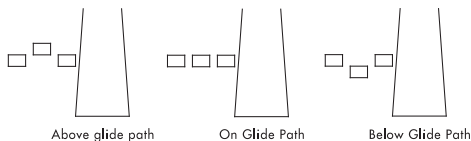
**TRCV**



CAUTION: When the aircraft descends from green to red, the pilot may see a dark amber color during the transition from green to red.

(V<sub>5</sub>) **ALIGNMENT OF ELEMENTS SYSTEMS**

**APAP**



Painted panels which may be lighted at night.  
To use the system the pilot positions the aircraft  
so the elements are in alignment.

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**LEGEND**



## FREQ PAIRING

## FREQUENCY PAIRING TABLE

TACAN CHANNEL	VHF FREQUENCY	TACAN CHANNEL	VHF FREQUENCY	TACAN CHANNEL	VHF FREQUENCY
17Y	108.05	40X	110.30	88Y	114.15
18X	108.10	40Y	110.35	89Y	114.25
18Y	108.15	41Y	110.45	90Y	114.35
19Y	108.25	42X	110.50	91Y	114.45
20X	108.30	42Y	110.55	92Y	114.55
20Y	108.35	43Y	110.65	93Y	114.65
21Y	108.45	44X	110.70	94Y	114.75
22X	108.50	44Y	110.75	95Y	114.85
22Y	108.55	45Y	110.85	96Y	114.95
23Y	108.65	46X	110.90	97Y	115.05
24X	108.70	46Y	110.95	98Y	115.15
24Y	108.75	47Y	111.05	99Y	115.25
25Y	108.85	48X	111.10	100Y	115.35
26X	108.90	48Y	111.15	101Y	115.45
26Y	108.95	49Y	111.25	102Y	115.55
27Y	109.05	50X	111.30	103Y	115.65
28X	109.10	50Y	111.35	104Y	115.75
28Y	109.15	51Y	111.45	105Y	115.85
29Y	109.25	52X	111.50	106Y	115.95
30X	109.30	52Y	111.55	107Y	116.05
30Y	109.35	53Y	111.65	108Y	116.15
31Y	109.45	54X	111.70	109Y	116.25
32X	109.50	54Y	111.75	110Y	116.35
32Y	109.55	55Y	111.85	111Y	116.45
33Y	109.65	56X	111.90	112Y	116.55
34X	109.70	56Y	111.95	113Y	116.65
34Y	109.75	80Y	113.35	114Y	116.75
35Y	109.85	81Y	113.45	115Y	116.85
36X	109.90	82Y	113.55	116Y	116.95
36Y	109.95	83Y	113.65	117Y	117.05
37Y	110.05	84Y	113.75	118Y	117.15
38X	110.10	85Y	113.85	119Y	117.25
38Y	110.15	86Y	113.95		
39Y	110.25	87Y	114.05		

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## FREQ PAIRING

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INDEX OF TERMINAL CHARTS AND MINIMUMS

NAME	PROC	SECT PG	NAME	PROC	SECT PG
<b>ABERDEEN, SD</b>			<b>AUSTIN, MN</b>		
<b>ABERDEEN RGNL(ABR)</b>			<b>AUSTIN MUNI(AUM)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
ALTERNATE MINIMUMS		M	ALTERNATE MINIMUMS		M
IAPS	ILS RWY 31	1	IAPS	ILS OR LOC RWY 35	22
	RNAV (GPS) RWY 13	2		RNAV (GPS) RWY 17	23
	RNAV (GPS) RWY 31	3		RNAV (GPS) RWY 35	24
	RNAV (GPS) RWY 35	4		VOR RWY 17	25
	VOR/DME RWY 13	5	<b>BARNES COUNTY MUNI</b>		
	VOR RWY 31	6	<b>---SEE VALLEY CITY, ND</b>		
AIRPORT DIAGRAM		7	<b>BAUDETTE, MN</b>		
<b>ADA/TWIN VALLEY, MN</b>			<b>BAUDETTE INTL(BDE)</b>		
<b>NORMAN COUNTY ADA/TWIN VALLEY(D00)</b>			TAKEOFF MINIMUMS		
TAKEOFF MINIMUMS		L	ALTERNATE MINIMUMS		
IAPS	RNAV (GPS) RWY 33	8	IAPS		
<b>AIRLAKE</b>			ILS OR LOC/DME RWY 30		
<b>---SEE MINNEAPOLIS, MN</b>			RNAV (GPS) RWY 12		
<b>AITKIN, MN</b>			RNAV (GPS) RWY 30		
<b>AITKIN MUNI-STEVE KURTZ FIELD(AIT)</b>			VOR/DME RWY 12		
TAKEOFF MINIMUMS		L	<b>BEACH, ND</b>		
ALTERNATE MINIMUMS		M	<b>BEACH(20U)</b>		
IAPS	RNAV (GPS) RWY 16	9	TAKEOFF MINIMUMS		
	RNAV (GPS) RWY 34	10	IAPS		
	NDB RWY 16	11	RNAV (GPS) RWY 12		
<b>ALBERT LEA, MN</b>			RNAV (GPS) RWY 30		
<b>ALBERT LEA MUNI(AEL)</b>			<b>BELLE FOURCHE, SD</b>		
TAKEOFF MINIMUMS		L	<b>BELLE FOURCHE MUNI(EFC)</b>		
ALTERNATE MINIMUMS		M	TAKEOFF MINIMUMS		
IAPS	RNAV (GPS) RWY 17	12	IAPS		
	RNAV (GPS) RWY 35	13	RNAV (GPS) RWY 32		
	VOR/DME RWY 35	14	<b>BEMIDJI, MN</b>		
	VOR RWY 17	15	<b>BEMIDJI RGNL(BJI)</b>		
<b>ALEXANDRIA, MN</b>			TAKEOFF MINIMUMS		
<b>CHANDLER FIELD(AXN)</b>			ALTERNATE MINIMUMS		
TAKEOFF MINIMUMS		L	IAPS		
ALTERNATE MINIMUMS		M	ILS OR LOC RWY 31		
IAPS	ILS OR LOC RWY 31	16	ILS OR LOC/DME RWY 25		
	RNAV (GPS) RWY 22	17	RNAV (GPS) RWY 13		
	RNAV (GPS) RWY 31	18	RNAV (GPS) RWY 25		
	VOR RWY 22	19	RNAV (GPS) RWY 31		
<b>ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD)</b>			VOR/DME RWY 13		
<b>---SEE MINNEAPOLIS, MN</b>			AIRPORT DIAGRAM		
<b>APPLETON, MN</b>			<b>BENSON, MN</b>		
<b>APPLETON MUNI(AQP)</b>			<b>BENSON MUNI(BBB)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		
ALTERNATE MINIMUMS		M	ALTERNATE MINIMUMS		
IAPS	RNAV (GPS) RWY 13	20	IAPS		
	NDB RWY 13	21	RNAV (GPS) RWY 14		
<b>INDEX</b>			RNAV (GPS) RWY 32		
<b>16315</b>			NDB RWY 14		

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**INDEX OF TERMINAL CHARTS AND MINIMUMS**

NAME	PROC	SECT PG	NAME	PROC	SECT PG
<b>BISMARCK, ND</b>			<b>BUFFALO, MN</b>		
<b>BISMARCK MUNI(BIS)</b>			<b>BUFFALO MUNI(CFE)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
ALTERNATE MINIMUMS		M	ALTERNATE MINIMUMS		M
RADAR MINIMUMS		N	STARS	AGUDE FOUR	Z1
IAPS	ILS OR LOC RWY 13	46	IAPS	RNAV (GPS) RWY 36	70
	ILS OR LOC RWY 31	47		VOR-A	71
	RNAV (GPS) RWY 03	48	<b>CALEDONIA, MN</b>		
	RNAV (GPS) RWY 13	49	<b>HOUSTON COUNTY(CHU)</b>		
	RNAV (GPS) RWY 21	50	IAPS	VOR/DME OR GPS-A	72
	RNAV (GPS) RWY 31	51	<b>CAMBRIDGE, MN</b>		
	VOR-A	52	<b>CAMBRIDGE MUNI(CBG)</b>		
AIRPORT DIAGRAM		53	TAKEOFF MINIMUMS		L
<b>BLACK HILLS-CLYDE ICE FIELD</b>			ALTERNATE MINIMUMS		M
<b>---SEE SPEARFISH, SD</b>			IAPS	RNAV (GPS) RWY 16	73
<b>BLUE EARTH, MN</b>				RNAV (GPS) RWY 34	74
<b>BLUE EARTH MUNI(SBU)</b>				NDB RWY 34	75
TAKEOFF MINIMUMS		L	<b>CAMP RIPLEY, MN</b>		
IAPS	RNAV (GPS) RWY 34	54	<b>---SEE RAY S. MILLER AAF</b>		
<b>BOTTINEAU, ND</b>			<b>CANBY, MN</b>		
<b>BOTTINEAU MUNI(D09)</b>			<b>MYERS FIELD(CNB)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
IAPS	RNAV (GPS) RWY 31	55	ALTERNATE MINIMUMS		M
<b>BOWMAN, ND</b>			IAPS	RNAV (GPS) RWY 12	76
<b>BOWMAN RGNL(BWW)</b>				RNAV (GPS) RWY 30	77
TAKEOFF MINIMUMS		L	<b>CANDO, ND</b>		
ALTERNATE MINIMUMS		M	<b>CANDO MUNI(9D7)</b>		
IAPS	RNAV (GPS) RWY 13	56	TAKEOFF MINIMUMS		L
	RNAV (GPS) RWY 31	57	IAPS	RNAV (GPS) RWY 16	78
<b>BRAINERD, MN</b>				RNAV (GPS) RWY 34	79
<b>BRAINERD LAKES RGNL(BRD)</b>			<b>CARRINGTON, ND</b>		
TAKEOFF MINIMUMS		L	<b>CARRINGTON MUNI(46D)</b>		
ALTERNATE MINIMUMS		M	TAKEOFF MINIMUMS		L
IAPS	ILS OR LOC RWY 23	58	IAPS	RNAV (GPS) RWY 31	80
	ILS OR LOC/DME RWY 34	59	<b>CASSELTON, ND</b>		
	RNAV (GPS) RWY 05	60	<b>CASSELTON ROBERT MILLER RGNL(5N8)</b>		
	RNAV (GPS) RWY 23	61	TAKEOFF MINIMUMS		L
	RNAV (GPS) RWY 34	62	IAPS	RNAV (GPS) RWY 13	81
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<b>BRITTON, SD</b>				VOR/DME RWY 31	83
<b>BRITTON MUNI(BTN)</b>			<b>CAVALIER, ND</b>		
TAKEOFF MINIMUMS		L	<b>CAVALIER MUNI(2C8)</b>		
IAPS	RNAV (GPS) RWY 13	64	TAKEOFF MINIMUMS		L
	RNAV (GPS) RWY 31	65	ALTERNATE MINIMUMS		M
<b>BROOKINGS, SD</b>			IAPS	RNAV (GPS) RWY 34	84
<b>BROOKINGS RGNL(BKX)</b>			<b>CHAMBERLAIN, SD</b>		
TAKEOFF MINIMUMS		L	<b>CHAMBERLAIN MUNI(9V9)</b>		
ALTERNATE MINIMUMS		M	TAKEOFF MINIMUMS		L
IAPS	ILS OR LOC RWY 12	66	IAPS	RNAV (GPS) RWY 13	85
	RNAV (GPS) RWY 12	67		RNAV (GPS) RWY 31	86
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---SEE YANKTON, SD			<b>DEVILS LAKE RGNL(DVL)</b>		
<b>CHANDLER FIELD</b>			TAKEOFF MINIMUMS .....	L	
---SEE ALEXANDRIA, MN			ALTERNATE MINIMUMS .....	M	
<b>CHEYENNE EAGLE BUTTE</b>			IAPS .....	ILS OR LOC/DME RWY 31	104
---SEE EAGLE BUTTE, SD			RNAV (GPS) RWY 03 .....	105	
<b>CLOQUET, MN</b>			RNAV (GPS) RWY 13 .....	106	
<b>CLOQUET CARLTON COUNTY(COQ)</b>			RNAV (GPS) RWY 21 .....	107	
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IAPS .....	RNAV (GPS) RWY 17	87	VOR RWY 13 .....	110	
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<b>COOK, MN</b>			<b>DICKINSON, ND</b>		
<b>COOK MUNI(CQM)</b>			<b>DICKINSON-THEODORE ROOSEVELT RGNL(DIK)</b>		
TAKEOFF MINIMUMS .....	L		TAKEOFF MINIMUMS .....	L	
ALTERNATE MINIMUMS .....	M		ALTERNATE MINIMUMS .....	M	
IAPS .....	RNAV (GPS) RWY 13	91	IAPS .....	ILS OR LOC RWY 32	113
	RNAV (GPS) RWY 31	92		RNAV (GPS) RWY 14	114
				RNAV (GPS) RWY 25	115
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				VOR-A	117
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<b>COOPERSTOWN MUNI(S32)</b>			<b>DODGE CENTER(TOB)</b>		
TAKEOFF MINIMUMS .....	L		TAKEOFF MINIMUMS .....	L	
ALTERNATE MINIMUMS .....	M		ALTERNATE MINIMUMS .....	M	
IAPS .....	RNAV (GPS) RWY 13	93	IAPS .....	RNAV (GPS) RWY 16	119
	RNAV (GPS) RWY 31	94		RNAV (GPS) RWY 34	120
				VOR-A	121
<b>CROOKSTON, MN</b>			<b>DULUTH, MN</b>		
<b>CROOKSTON MUNI-KIRKWOOD FIELD(CKN)</b>			<b>DULUTH INTL(DLH)</b>		
TAKEOFF MINIMUMS .....	L		TAKEOFF MINIMUMS .....	L	
ALTERNATE MINIMUMS .....	M		ALTERNATE MINIMUMS .....	M	
IAPS .....	RNAV (GPS) RWY 13	95	LAHSO .....	O	
	RNAV (GPS) RWY 31	96	HOT SPOT .....	P	
	VOR/DME RWY 13	97	IAPS .....	ILS OR LOC RWY 09	122
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				ILS RWY 09 (SA CAT I)	124
				ILS RWY 09 (CAT II)	125
<b>CROSBY, ND</b>				RNAV (GPS) RWY 03	126
<b>CROSBY MUNI(D50)</b>				RNAV (GPS) RWY 09	127
TAKEOFF MINIMUMS .....	L			RNAV (GPS) RWY 21	128
IAPS .....	RNAV (GPS) RWY 30	99		RNAV (GPS) RWY 27	129
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ALTERNATE MINIMUMS .....	M		TAKEOFF MINIMUMS .....	L	
IAPS .....	RNAV (GPS) RWY 13	100	IAPS .....	RNAV (GPS) RWY 31	135
	RNAV (GPS) RWY 31	101			
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<b>EDGELEY MUNI(51D)</b>			<b>HECTOR INTL(FAR)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
IAPS	RNAV (GPS) RWY 14	136	ALTERNATE MINIMUMS		M
	RNAV (GPS) RWY 32	137	LAHSO		O
<b>ELBOW LAKE, MN</b>			IAPS		
<b>ELBOW LAKE MUNI-PRIDE OF THE PRAIRIE(Y63)</b>			ILS OR LOC RWY 18		
TAKEOFF MINIMUMS		L	ILS OR LOC RWY 36		160
IAPS	RNAV (GPS) RWY 14	138	RNAV (GPS) RWY 09		161
	RNAV (GPS) RWY 32	139	RNAV (GPS) RWY 18		162
<b>ELLSWORTH AFB(KRCA)</b>			RNAV (GPS) RWY 27		
<b>RAPID CITY, SD</b>			RNAV (GPS) RWY 36		
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IAPS	ILS OR LOC Y RWY 13	140	AIRPORT DIAGRAM		166
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<b>ELY, MN</b>			RNAV (GPS) RWY 30		
<b>ELY MUNI(ELO)</b>			VOR-A		
TAKEOFF MINIMUMS		L	FERGUS FALLS, MN		
ALTERNATE MINIMUMS		M	<b>FERGUS FALLS MUNI-EINAR MICKELSON FIELD (FFM)</b>		
IAPS	RNAV (GPS) RWY 12	147	TAKEOFF MINIMUMS		L
	RNAV (GPS) RWY 30	148	ALTERNATE MINIMUMS		M
	VOR/DME RWY 12	149	IAPS	ILS OR LOC RWY 31	170
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<b>EVELETH, MN</b>			RNAV (GPS) RWY 31		
<b>EVELETH-VIRGINIA MUNI(EVM)</b>			RNAV (GPS) RWY 35		
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ALTERNATE MINIMUMS		M	<b>FIELD OF DREAMS</b>		
IAPS	RNAV (GPS) RWY 27	151	<b>---SEE HINCKLEY, MN</b>		
	VOR/DME-A	152	<b>FILLMORE COUNTY</b>		
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<b>FAIRMONT, MN</b>			<b>FLYING CLOUD</b>		
<b>FAIRMONT MUNI(FRM)</b>			<b>---SEE MINNEAPOLIS, MN</b>		
TAKEOFF MINIMUMS		L	<b>FOSSTON, MN</b>		
ALTERNATE MINIMUMS		M	<b>FOSSTON MUNI(FSE)</b>		
IAPS	ILS OR LOC RWY 31	154	TAKEOFF MINIMUMS		L
	RNAV (GPS) RWY 13	155	ALTERNATE MINIMUMS		M
	RNAV (GPS) RWY 31	156	IAPS	RNAV (GPS) RWY 16	175
	VOR/DME RWY 13	157		RNAV (GPS) RWY 34	176
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<b>---SEE INTERNATIONAL FALLS, MN</b>			<b>GARRISON MUNI(D05)</b>		
			TAKEOFF MINIMUMS		L
			IAPS	RNAV (GPS) RWY 13	178
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<b>GETTYSBURG MUNI(0D8)</b>		
TAKEOFF MINIMUMS .....	L	
IAPS .....	RNAV (GPS) RWY 13	180
	RNAV (GPS) RWY 31	181

**GLENCOE, MN**

<b>GLENCOE MUNI(GYL)</b>		
TAKEOFF MINIMUMS .....	L	
ALTERNATE MINIMUMS .....	M	
STARS .....	AGUDE FOUR	21
IAPS .....	RNAV (GPS) RWY 13	182
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**GLENWOOD, MN**

<b>GLENWOOD MUNI(GHW)</b>		
TAKEOFF MINIMUMS .....	L	
ALTERNATE MINIMUMS .....	M	
IAPS .....	RNAV (GPS) RWY 15	185
	RNAV (GPS) RWY 33	186
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**GRAFTON, ND**

<b>HUTSON FIELD(GAF)</b>		
TAKEOFF MINIMUMS .....	L	
IAPS .....	RNAV (GPS) RWY 17	188
	RNAV (GPS) RWY 35	189

**GRAND FORKS, ND**

<b>GRAND FORKS INTL(GFK)</b>		
TAKEOFF MINIMUMS .....	L	
ALTERNATE MINIMUMS .....	M	
LAHSO .....	O	
HOT SPOT .....	P	
IAPS .....	ILS OR LOC RWY 35L	190
	RNAV (GPS) RWY 09L	191
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**GRAND FORKS AFB(KRDR)**

<b>GRAND FORKS, ND</b>		
IAPS .....	ILS OR LOC RWY 17	199
	ILS OR LOC RWY 35	200
	RNAV (GPS) RWY 17	201
	RNAV (GPS) RWY 35	202
	TACAN RWY 17	203
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**GRAND MARAIS, MN**

<b>GRAND MARAIS/COOK COUNTY(CKC)</b>		
TAKEOFF MINIMUMS .....	L	
ALTERNATE MINIMUMS .....	M	
IAPS .....	RNAV (GPS) RWY 09	206
	RNAV (GPS) RWY 27	207
	NDB RWY 27	208

**GRAND RAPIDS, MN**

<b>GRAND RAPIDS/ITASCA COUNTY-GORDON NEW-STROM FIELD(GPZ)</b>		
TAKEOFF MINIMUMS .....	L	
ALTERNATE MINIMUMS .....	M	
IAPS .....	ILS OR LOC RWY 34	209
	RNAV (GPS) RWY 16	210
	RNAV (GPS) RWY 34	211
	VOR RWY 34	212

**GRANITE FALLS, MN**

<b>GRANITE FALLS MUNI/LENZEN-ROE-FAGEN MEMORIAL FIELD(GDB)</b>		
TAKEOFF MINIMUMS .....	L	
ALTERNATE MINIMUMS .....	M	
IAPS .....	RNAV (GPS) RWY 33	213
	VOR/DME RWY 33	214

**GREGORY, SD**

<b>GREGORY MUNI-FLYNN FIELD(9D1)</b>		
TAKEOFF MINIMUMS .....	L	
IAPS .....	RNAV (GPS) RWY 13	215
	RNAV (GPS) RWY 31	216

**GWINNER, ND**

<b>GWINNER-ROGER MELROE FIELD(GWR)</b>		
TAKEOFF MINIMUMS .....	L	
ALTERNATE MINIMUMS .....	M	
IAPS .....	RNAV (GPS) RWY 16	217
	RNAV (GPS) RWY 34	218

**HALLOCK, MN**

<b>HALLOCK MUNI(HCO)</b>		
TAKEOFF MINIMUMS .....	L	
ALTERNATE MINIMUMS .....	M	
IAPS .....	RNAV (GPS) RWY 13	219
	RNAV (GPS) RWY 31	220
	VOR/DME RWY 31	221

**HAROLD DAVIDSON FIELD**

---SEE VERMILLION, SD

**HARRY STERN**

---SEE WAHPETON, ND

**HARVEY, ND**

<b>HARVEY MUNI(5H4)</b>		
TAKEOFF MINIMUMS .....	L	
IAPS .....	RNAV (GPS) RWY 11	222
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<b>HAWLEY MUNI(04Y)</b>			<b>---SEE CALEDONIA, MN</b>		
TAKEOFF MINIMUMS		L			
IAPS	RNAV (GPS) RWY 34	224			
	VOR/DME-A	225			
<b>HAZEN, ND</b>			<b>HURON, SD</b>		
<b>MERCER COUNTY RGNL(HZE)</b>			<b>HURON RGNL(HON)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
IAPS	RNAV (GPS) RWY 14	226	ALTERNATE MINIMUMS		M
	RNAV (GPS) RWY 32	227	IAPS	ILS OR LOC RWY 12	247
				RNAV (GPS) RWY 12	248
				RNAV (GPS) RWY 30	249
				LOC/DME BC RWY 30	250
				VOR RWY 12	251
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<b>HECTOR INTL</b>			<b>HUTCHINSON, MN</b>		
<b>---SEE FARGO, ND</b>			<b>HUTCHINSON MUNI-BUTLER FIELD(HCD)</b>		
			TAKEOFF MINIMUMS		L
			ALTERNATE MINIMUMS		M
			IAPS	RNAV (GPS) RWY 15	253
				RNAV (GPS) RWY 33	254
				VOR/DME RWY 33	255
<b>HETTINGER, ND</b>			<b>HUTSON FIELD</b>		
<b>HETTINGER MUNI(HEI)</b>			<b>---SEE GRAFTON, ND</b>		
TAKEOFF MINIMUMS		L			
ALTERNATE MINIMUMS		M			
IAPS	RNAV (GPS) RWY 12	228			
	RNAV (GPS) RWY 30	229			
<b>HIBBING, MN</b>			<b>INTERNATIONAL FALLS, MN</b>		
<b>RANGE RGNL(HIB)</b>			<b>FALLS INTL-EINARSON FIELD(INL)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
ALTERNATE MINIMUMS		M	ALTERNATE MINIMUMS		M
IAPS	ILS OR LOC RWY 31	230	IAPS	ILS OR LOC RWY 31	256
	ILS OR LOC/DME RWY 13	231		ILS OR LOC/DME RWY 13	257
	RNAV (GPS) RWY 04	232		RNAV (GPS) RWY 13	258
	RNAV (GPS) RWY 13	233		RNAV (GPS) RWY 31	259
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<b>HIGHMORE MUNI(9D0)</b>			<b>---SEE MC GREGOR, MN</b>		
TAKEOFF MINIMUMS		L			
IAPS	RNAV (GPS) RWY 13	237			
	RNAV (GPS) RWY 31	238			
<b>HILLSBORO, ND</b>			<b>JACKSON, MN</b>		
<b>HILLSBORO MUNI(3H4)</b>			<b>JACKSON MUNI(MJQ)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
IAPS	RNAV (GPS) RWY 16	239	ALTERNATE MINIMUMS		M
	RNAV (GPS) RWY 34	240	IAPS	RNAV (GPS) RWY 13	264
				RNAV (GPS) RWY 31	265
<b>HINCKLEY, MN</b>					
<b>FIELD OF DREAMS(04W)</b>					
TAKEOFF MINIMUMS		L			
IAPS	RNAV (GPS) RWY 06	241			
	RNAV (GPS) RWY 24	242			
<b>HOT SPRINGS, SD</b>					
<b>HOT SPRINGS MUNI(HSR)</b>					
TAKEOFF MINIMUMS		L			
IAPS	RNAV (GPS) RWY 01	243			
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<b>JAMESTOWN RGNL(JMS)</b>			<b>LITCHFIELD MUNI(LJF)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
ALTERNATE MINIMUMS		M	ALTERNATE MINIMUMS		M
IAPS	ILS OR LOC RWY 31	266	IAPS	RNAV (GPS) RWY 13	283
	RNAV (GPS) RWY 04	267		RNAV (GPS) RWY 31	284
	RNAV (GPS) RWY 13	268		VOR-A	285
	RNAV (GPS) RWY 22	269			
	RNAV (GPS) RWY 31	270			
	LOC/DME BC RWY 13	271	<b>LITTLE FALLS, MN</b>		
	VOR RWY 13	272	<b>LITTLE FALLS/MORRISON COUNTY-LINDBERGH</b>		
	VOR RWY 31	273	<b>FIELD(LXL)</b>		
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			ALTERNATE MINIMUMS		M
			IAPS	RNAV (GPS) RWY 31	286
				NDB RWY 31	287
<b>JOE FOSS FIELD</b>			<b>LONG PRAIRIE, MN</b>		
<b>---SEE SIOUX FALLS, SD</b>			<b>TODD FIELD(14Y)</b>		
			TAKEOFF MINIMUMS		L
			IAPS	RNAV (GPS) RWY 34	288
<b>KENMARE, ND</b>			<b>LONGVILLE, MN</b>		
<b>KENMARE MUNI(7K5)</b>			<b>LONGVILLE MUNI(XVG)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
IAPS	RNAV (GPS) RWY 26	275	IAPS	RNAV (GPS) RWY 31	289
				NDB RWY 31	290
<b>KINDRED, ND</b>			<b>LUVERNE, MN</b>		
<b>ROBERT ODEGAARD FIELD(K74)</b>			<b>QUENTIN AANENSON FIELD(LYV)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
IAPS	RNAV (GPS) RWY 11	276	IAPS	RNAV (GPS) RWY 18	291
	RNAV (GPS) RWY 29	277		RNAV (GPS) RWY 36	292
<b>LAC QUI PARLE COUNTY</b>			<b>MADISON, MN</b>		
<b>---SEE MADISON, MN</b>			<b>LAC QUI PARLE COUNTY(DXX)</b>		
			TAKEOFF MINIMUMS		L
			ALTERNATE MINIMUMS		M
			IAPS	RNAV (GPS) RWY 14	293
				RNAV (GPS) RWY 32	294
				NDB RWY 32	295
<b>LAKE ELMO</b>			<b>MADISON, SD</b>		
<b>---SEE ST PAUL, MN</b>			<b>MADISON MUNI(MDS)</b>		
			TAKEOFF MINIMUMS		L
			ALTERNATE MINIMUMS		M
			IAPS	RNAV (GPS) RWY 15	296
				RNAV (GPS) RWY 33	297
<b>LANGDON, ND</b>			<b>MADISON, MN</b>		
<b>ROBERTSON FIELD(D55)</b>			<b>MADISON MUNI(MDS)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
ALTERNATE MINIMUMS		M	ALTERNATE MINIMUMS		M
IAPS	RNAV (GPS) RWY 14	278	IAPS	RNAV (GPS) RWY 17	298
	RNAV (GPS) RWY 32	279		RNAV (GPS) RWY 35	299
<b>LEMMON, SD</b>			<b>MAHNOMEN, MN</b>		
<b>LEMMON MUNI(LEM)</b>			<b>MAHNOMEN MUNI(3N8)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
IAPS	RNAV (GPS) RWY 29	280	ALTERNATE MINIMUMS		M
			IAPS	RNAV (GPS) RWY 17	298
				RNAV (GPS) RWY 35	299
<b>LINTON, ND</b>					
<b>LINTON MUNI(7L2)</b>					
TAKEOFF MINIMUMS		L			
ALTERNATE MINIMUMS		M			
IAPS	RNAV (GPS) RWY 09	281			
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<b>MANDAN MUNI(Y19)</b>			<b>MILLER MUNI(MKA)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
ALTERNATE MINIMUMS		M	IAPS ..... RNAV (GPS) RWY 15		322
RADAR MINIMUMS		N	RNAV (GPS) RWY 33		323
IAPS ..... RNAV (GPS) RWY 13		300	<b>MINNEAPOLIS, MN</b>		
RNAV (GPS) RWY 31		301	<b>AIRLAKE(LVN)</b>		
VOR-A		302	TAKEOFF MINIMUMS		L
<b>MANKATO, MN</b>			ALTERNATE MINIMUMS		M
<b>MANKATO RGNL(MKT)</b>			STARS .... AGUDE FOUR		Z1
TAKEOFF MINIMUMS		L	ENCEE ONE (RNAV)		Z7
ALTERNATE MINIMUMS		M	GOPHER NINE		Z8
IAPS ..... ILS OR LOC RWY 33		303	TWOLF TWO		Z20
RNAV (GPS) RWY 04		304	IAPS ..... ILS OR LOC RWY 30		324
RNAV (GPS) RWY 15		305	RNAV (GPS) RWY 12		325
RNAV (GPS) RWY 22		306	RNAV (GPS) RWY 30		326
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VOR RWY 15		308	<b>ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD)(ANE)</b>		
COPTER ILS OR LOC RWY 33		309	TAKEOFF MINIMUMS		L
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<b>MAPLE LAKE, MN</b>			STARS .... AGUDE FOUR		Z1
<b>MAPLE LAKE MUNI-BILL MAVENCAMP SR FIELD (MGG)</b>			ENCEE ONE (RNAV)		Z7
ALTERNATE MINIMUMS		M	GOPHER NINE		Z8
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<b>MILBANK, SD</b>			IAPS ..... RNAV (GPS) RWY 14L		344
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<b>FLYING CLOUD(FCM)</b>			<b>MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN(MSP)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
ALTERNATE MINIMUMS		M	ALTERNATE MINIMUMS		M
HOT SPOT		P	LAHSO		O
STARS	AGUDE FOUR	Z1	HOT SPOT		P
	ENCEE ONE (RNAV)	Z7	STARS	BAINY TWO (RNAV)	Z2
	GOPHER NINE	Z8		BLUEM TWO (RNAV)	Z4
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IAPS	ILS OR LOC RWY 10R	347		GOPHER NINE	Z8
	RNAV (GPS) RWY 10L	348		KASPR SIX	Z9
	RNAV (GPS) RWY 10R	349		KKILR TWO (RNAV)	Z10
	RNAV (GPS) RWY 28L	350		MUSCL TWO (RNAV)	Z12
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<b>MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN(MSP)(CON'T)</b>			<b>MOBRIDGE MUNI(MBG)</b>		
DPS	COULT SIX	398	TAKEOFF MINIMUMS		L
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	HESTIN THREE (RNAV)	402	IAPS	RNAV (GPS) RWY 12	447
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	MEADOW LAKE THREE	407	<b>MOHALL MUNI(HBC)</b>		
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	SLAYER THREE (RNAV)	416	<b>MONTEVIDEO-CHIPPEWA COUNTY(MVE)</b>		
	SMERF SIX (RNAV)	417	TAKEOFF MINIMUMS		L
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	ZMBRO SIX	421	IAPS	RNAV (GPS) RWY 14	451
				RNAV (GPS) RWY 32	452
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<b>---SEE MINNEAPOLIS, MN</b>			<b>MOORHEAD MUNI(JKJ)</b>		
<b>MINOT, ND</b>			TAKEOFF MINIMUMS		L
<b>MINOT INTL(MOT)</b>			ALTERNATE MINIMUMS		M
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	RNAV (GPS) RWY 13	425	IAPS	RNAV (GPS) RWY 04	456
	RNAV (GPS) RWY 26	426		NDB RWY 04	457
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	VOR RWY 13	430	ALTERNATE MINIMUMS		M
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<b>MINOT AFB(KMIB)</b>			TAKEOFF MINIMUMS		L
<b>MINOT, ND</b>			ALTERNATE MINIMUMS		M
IAPS	ILS OR LOC Y RWY 12	434	IAPS	RNAV (GPS) RWY 14	459
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	TACAN Y RWY 12	436		VOR RWY 14	461
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<b>MITCHELL MUNI(MHE)</b>			TAKEOFF MINIMUMS		L
TAKEOFF MINIMUMS		L	ALTERNATE MINIMUMS		M
ALTERNATE MINIMUMS		M	IAPS	RNAV (GPS) RWY 15	463
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<b>NORTHWOOD MUNI-VINCE FIELD(4V4)</b>			ALTERNATE MINIMUMS .....M		
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IAPS ..... RNAV (GPS) RWY 30 .....466			IAPS ..... RNAV (GPS) RWY 33 .....485		
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<b>RUSH CITY, MN</b>			<b>ST PAUL, MN</b>		
<b>RUSH CITY RGNL(ROS)</b>			<b>LAKE ELMO(21D)</b>		
TAKEOFF MINIMUMS .....		L	TAKEOFF MINIMUMS .....		L
ALTERNATE MINIMUMS .....		M	ALTERNATE MINIMUMS .....		M
IAPS ..... RNAV (GPS) RWY 34 .....		547	STARS ..... AGUDE FOUR .....		Z1
NDB RWY 34 .....		548	IAPS ..... RNAV (GPS) RWY 32 .....		562
			NDB RWY 04 .....		563
<b>RUSHFORD, MN</b>			<b>ST PAUL DOWNTOWN HOLMAN FIELD(STP)</b>		
<b>RUSHFORD MUNI(55Y)</b>			TAKEOFF MINIMUMS .....		
TAKEOFF MINIMUMS .....		L	ALTERNATE MINIMUMS .....		M
IAPS ..... RNAV (GPS) RWY 34 .....		549	HOT SPOT .....		P
VOR/DME-A .....		550	STARS ..... AGUDE FOUR .....		Z1
			ENCEE ONE (RNAV) .....		Z7
			GOPHER NINE .....		Z8
			IAPS ..... ILS OR LOC RWY 14 .....		564
			ILS OR LOC RWY 32 .....		565
			RNAV (GPS) RWY 14 .....		566
			RNAV (GPS) RWY 32 .....		567
			NDB RWY 31 .....		568
			AIRPORT DIAGRAM .....		569
			DPS ..... COULT SIX .....		570
			DARWIN SIX .....		572
			KBREW EIGHT .....		574
			ORSKY NINE .....		576
			ROCHESTER EIGHT .....		578
			SCHEP EIGHT .....		580
			WLSTN SIX .....		582
			ZMBRO SIX .....		584
			STARS ..... TWOLF TWO .....		Z20
<b>ST CLOUD, MN</b>			<b>SAUK CENTRE, MN</b>		
<b>ST CLOUD RGNL(STC)</b>			<b>SAUK CENTRE MUNI(D39)</b>		
TAKEOFF MINIMUMS .....		L	TAKEOFF MINIMUMS .....		L
ALTERNATE MINIMUMS .....		M	ALTERNATE MINIMUMS .....		M
IAPS ..... ILS OR LOC RWY 31 .....		551	IAPS ..... RNAV (GPS) RWY 14 .....		586
ILS OR LOC/DME RWY 13 .....		552	RNAV (GPS) RWY 32 .....		587
RNAV (GPS) RWY 05 .....		553			
RNAV (GPS) RWY 13 .....		554			
RNAV (GPS) RWY 23 .....		555			
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VOR RWY 31 .....		557			
AIRPORT DIAGRAM .....		558			
<b>ST JAMES, MN</b>			<b>SILVER BAY, MN</b>		
<b>ST. JAMES MUNI(JYG)</b>			<b>SILVER BAY MUNI(BFW)</b>		
TAKEOFF MINIMUMS .....		L	TAKEOFF MINIMUMS .....		L
ALTERNATE MINIMUMS .....		M	ALTERNATE MINIMUMS .....		M
IAPS ..... RNAV (GPS) RWY 15 .....		559	IAPS ..... RNAV (GPS) RWY 25 .....		588
RNAV (GPS) RWY 33 .....		560	NDB RWY 25 .....		589
NDB RWY 33 .....		561			
<b>ST. JAMES MUNI</b>					
<b>---SEE ST JAMES, MN</b>					

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<b>JOE FOSS FIELD(FSD)</b>			<b>SPRINGFIELD MUNI(D42)</b>		
TAKEOFF MINIMUMS .....	L		TAKEOFF MINIMUMS .....	L	
ALTERNATE MINIMUMS .....	M		IAPS .....	RNAV (GPS) RWY 13 .....	611
RADAR MINIMUMS .....	N			RNAV (GPS) RWY 31 .....	612
HOT SPOT .....	P			VOR/DME RWY 13 .....	613
IAPS .....	ILS OR LOC RWY 03 .....	590	<b>STANLEY, ND</b>		
	ILS OR LOC RWY 21 .....	591	<b>STANLEY MUNI(08D)</b>		
	RNAV (GPS) RWY 03 .....	592	TAKEOFF MINIMUMS .....	L	
	RNAV (GPS) RWY 09 .....	593	IAPS .....	RNAV (GPS) RWY 27 .....	614
	RNAV (GPS) RWY 15 .....	594	<b>STAPLES, MN</b>		
	RNAV (GPS) RWY 21 .....	595	<b>STAPLES MUNI(SAZ)</b>		
	RNAV (GPS) RWY 27 .....	596	TAKEOFF MINIMUMS .....	L	
	RNAV (GPS) RWY 33 .....	597	ALTERNATE MINIMUMS .....	M	
	VOR/DME OR TACAN RWY 33 .....	598	IAPS .....	RNAV (GPS) RWY 14 .....	615
	VOR OR TACAN RWY 15 .....	599		RNAV (GPS) RWY 32 .....	616
AIRPORT DIAGRAM .....		600		NDB RWY 14 .....	617
<b>SISETON, SD</b>			<b>STURGIS, SD</b>		
<b>SISETON MUNI(8D3)</b>			<b>STURGIS MUNI(49B)</b>		
TAKEOFF MINIMUMS .....	L		TAKEOFF MINIMUMS .....	L	
IAPS .....	RNAV (GPS) RWY 16 .....	601	IAPS .....	RNAV (GPS) RWY 11 .....	618
	RNAV (GPS) RWY 34 .....	602		RNAV (GPS) RWY 29 .....	619
<b>SLAYTON, MN</b>			<b>THIEF RIVER FALLS, MN</b>		
<b>SLAYTON MUNI(DVP)</b>			<b>THIEF RIVER FALLS RGNL(TVF)</b>		
TAKEOFF MINIMUMS .....	L		TAKEOFF MINIMUMS .....	L	
ALTERNATE MINIMUMS .....	M		ALTERNATE MINIMUMS .....	M	
IAPS .....	RNAV (GPS) RWY 17 .....	603	IAPS .....	ILS OR LOC RWY 31 .....	620
	RNAV (GPS) RWY 35 .....	604		RNAV (GPS) RWY 04 .....	621
<b>SLOULIN FIELD INTL</b>				RNAV (GPS) RWY 13 .....	622
<b>---SEE WILLISTON, ND</b>				RNAV (GPS) RWY 22 .....	623
<b>SOUTH ST. PAUL, MN</b>				RNAV (GPS) RWY 31 .....	624
<b>SOUTH ST PAUL MUNI-RICHARD E FLEMING</b>				VOR/DME RWY 13 .....	625
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ALTERNATE MINIMUMS .....	M		AIRPORT DIAGRAM .....		628
STARS .....	AGUDE FOUR .....	Z1	<b>TIOGA, ND</b>		
IAPS .....	RNAV (GPS) RWY 34 .....	605	<b>TIOGA MUNI(D60)</b>		
	LOC RWY 34 .....	606	TAKEOFF MINIMUMS .....	L	
	NDB-B .....	607	ALTERNATE MINIMUMS .....	M	
<b>SOUTHWEST MINNESOTA RGNL MARSHALL/</b>			IAPS .....	RNAV (GPS) RWY 12 .....	629
<b>RYAN FIELD</b>				RNAV (GPS) RWY 30 .....	630
<b>---SEE MARSHALL, MN</b>			<b>TODD FIELD</b>		
<b>SPEARFISH, SD</b>			<b>---SEE LONG PRAIRIE, MN</b>		
<b>BLACK HILLS-CLYDE ICE FIELD(SPF)</b>			<b>TOWER, MN</b>		
TAKEOFF MINIMUMS .....	L		<b>TOWER MUNI(12D)</b>		
ALTERNATE MINIMUMS .....	M		TAKEOFF MINIMUMS .....	L	
IAPS .....	RNAV (GPS) RWY 13 .....	608	IAPS .....	RNAV (GPS) RWY 08 .....	631
	RNAV (GPS) RWY 31 .....	609		RNAV (GPS) RWY 26 .....	632
	NDB-A .....	610			

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<b>TRACY MUNI(TKC)</b>			<b>WARREN MUNI(D37)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
IAPS	RNAV (GPS) RWY 11	633	IAPS	RNAV (GPS) RWY 30	650
	RNAV (GPS) RWY 29	634			
<b>TWO HARBORS, MN</b>			<b>WARROD, MN</b>		
<b>RICHARD B HELGESON(TWM)</b>			<b>WARROD INTL MEMORIAL(RRT)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
ALTERNATE MINIMUMS		M	ALTERNATE MINIMUMS		M
IAPS	RNAV (GPS) RWY 06	635	IAPS	ILS OR LOC RWY 31	651
	RNAV (GPS) RWY 24	636		RNAV (GPS) RWY 13	652
				RNAV (GPS) RWY 31	653
				NDB RWY 31	654
<b>VALLEY CITY, ND</b>			<b>WASECA, MN</b>		
<b>BARNES COUNTY MUNI(BAC)</b>			<b>WASECA MUNI(ACQ)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
IAPS	RNAV (GPS) RWY 13	637	ALTERNATE MINIMUMS		M
	RNAV (GPS) RWY 31	638	IAPS	RNAV (GPS) RWY 15	655
				RNAV (GPS) RWY 33	656
				VOR-A	657
<b>VERMILLION, SD</b>			<b>WATERTOWN, SD</b>		
<b>HAROLD DAVIDSON FIELD(VMR)</b>			ALTERNATE MINIMUMS		
TAKEOFF MINIMUMS		L			M
ALTERNATE MINIMUMS		M	<b>WATERTOWN RGNL(ATY)</b>		
IAPS	RNAV (GPS) RWY 12	639	TAKEOFF MINIMUMS		L
	RNAV (GPS) RWY 30	640	IAPS	ILS OR LOC RWY 35	658
				RNAV (GPS) RWY 12	659
				RNAV (GPS) RWY 17	660
				RNAV (GPS) RWY 30	661
				RNAV (GPS) RWY 35	662
				LOC/DME BC RWY 17	663
				VOR OR TACAN RWY 17	664
				AIRPORT DIAGRAM	665
<b>WADENA, MN</b>			<b>WATFORD CITY, ND</b>		
<b>WADENA MUNI(ADC)</b>			<b>WATFORD CITY MUNI(S25)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
ALTERNATE MINIMUMS		M	IAPS	RNAV (GPS) RWY 12	666
IAPS	RNAV (GPS) RWY 16	641		RNAV (GPS) RWY 30	667
	RNAV (GPS) RWY 34	642			
<b>WAGNER, SD</b>			<b>WHEATON, MN</b>		
<b>WAGNER MUNI(AGZ)</b>			<b>WHEATON MUNI(ETH)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
IAPS	RNAV (GPS) RWY 09	643	ALTERNATE MINIMUMS		M
	RNAV (GPS) RWY 27	644	IAPS	RNAV (GPS) RWY 16	668
				RNAV (GPS) RWY 34	669
<b>WAHPETON, ND</b>			<b>WILLISTON, ND</b>		
<b>HARRY STERN(BWP)</b>			<b>SLOULIN FIELD INTL(ISN)</b>		
TAKEOFF MINIMUMS		L	TAKEOFF MINIMUMS		L
ALTERNATE MINIMUMS		M	ALTERNATE MINIMUMS		M
IAPS	RNAV (GPS) RWY 15	645	IAPS	ILS OR LOC RWY 29	670
	RNAV (GPS) RWY 33	646		RNAV (GPS) RWY 11	671
				RNAV (GPS) RWY 29	672
				VOR RWY 11	673
				AIRPORT DIAGRAM	674
				DPS	675
				WILLISTON ONE	675
<b>WALKER, MN</b>					
<b>WALKER MUNI(Y49)</b>					
TAKEOFF MINIMUMS		L			
ALTERNATE MINIMUMS		M			
IAPS	RNAV (GPS) RWY 15	648			
	RNAV (GPS) RWY 33	649			

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**WILLMAR MUNI - JOHN L RICE FIELD(BDH)**

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**WINDOM, MN**

**WINDOM MUNI(MWM)**

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IAPS .....	RNAV (GPS) RWY 17 .....680
	RNAV (GPS) RWY 35 .....681

**WINNER, SD**

**WINNER RGNL(ICR)**

TAKEOFF MINIMUMS .....	L
ALTERNATE MINIMUMS .....	M
IAPS .....	RNAV (GPS) RWY 13 .....682
	RNAV (GPS) RWY 31 .....683
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**WINONA, MN**

**WINONA MUNI-MAX CONRAD FIELD(ONA)**

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ALTERNATE MINIMUMS .....	M
IAPS .....	ILS Y OR LOC/DME Y RWY 30 .....685
	ILS Z OR LOC/DME Z RWY 30 .....686
	RNAV (GPS) RWY 30 .....687

**WORTHINGTON, MN**

**WORTHINGTON MUNI(OTG)**

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	RNAV (GPS) RWY 18 .....690
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**YANKTON, SD**

**CHAN GURNEY MUNI(YKN)**

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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

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INSTRUMENT APPROACH PROCEDURE CHARTS

## IFR TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

### Civil Airports and Selected Military Airports

ALL USERS: Airports that have Departure Procedures (DPs) designed specifically to assist pilots in avoiding obstacles during the climb to the minimum enroute altitude, and/or airports that have civil IFR takeoff minimums other than standard, are listed below. Takeoff Minimums and Departure Procedures apply to all runways unless otherwise specified. Altitudes, unless otherwise indicated, are minimum altitudes in MSL.

DPs specifically designed for obstacle avoidance are referred to as Obstacle Departure Procedures (ODPs) and are textually described below, or published separately as a graphic procedure. If the ODP is published as a graphic procedure, its name will be listed below, and it can be found in either this volume (civil), or the applicable military volume, as appropriate. Users will recognize graphic obstacle DPs by the term "(OBSTACLE)" included in the procedure title; e.g., TETON TWO (OBSTACLE). If not specifically assigned an ODP, SID, or radar vector as part of an IFR clearance, an ODP may be required to be flown for obstacle clearance, even though not specifically stated in the IFR clearance. When doing so in this manner, ATC should be informed when the ODP being used contains a specified route to be flown, restrictions before turning, and/or altitude restrictions.

Some ODPs, which are established solely for obstacle avoidance, require a climb in visual conditions to cross the airport, a fix, or a NAVAID in a specified direction, at or above a specified altitude. These procedures are called VCOA Over Airport (VCOA). To ensure safe and efficient operations, the pilot must verbally request approval from ATC to fly the VCOA when requesting their IFR clearance.

At some locations where an ODP has been established, a diverse vector area (DVA) may be created to allow radar vectors to be used in lieu of an ODP. DVA information will state that headings will be as assigned by ATC and climb gradients, when applicable, will be published immediately following the specified departure procedure.

Graphic DPs designed by ATC to standardize traffic flows, ensure aircraft separation and enhance capacity are referred to as "Standard Instrument Departures (SIDs)". SIDs also provide obstacle clearance and are published under the appropriate airport section. ATC clearance must be received prior to flying a SID.

CIVIL USERS NOTE: Title 14 Code of Federal Regulations Part 91 prescribes standard takeoff rules and establishes takeoff minimums for certain operators as follows: (1) For aircraft, other than helicopters, having two engines or less – one statute mile visibility. (2) For aircraft having more than two engines – one-half statute mile visibility. (3) For helicopters – one-half statute mile visibility. These standard minima apply in the absence of any different minima listed below.

MILITARY USERS NOTE: Civil (nonstandard) takeoff minima are published below. For military takeoff minima, refer to appropriate service directives.

NAME	TAKEOFF MINIMUMS
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#### ABERDEEN, SD

ABERDEEN RGNL (ABR)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 09239 (FAA)

NOTE: **Rwy 17**, trees 1138' from DER, 432' right of centerline, 41' AGL/1336' MSL. **Rwy 31**, multiple trees beginning 1391' from DER, 326' left of centerline, up to 65' AGL/1360' MSL.

#### ADA/TWIN VALLEY, MN

NORMAN COUNTY ADA/TWIN VALLEY (D00)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 11013 (FAA)

TAKEOFF MINIMUMS: **Rwy 15**, 300-2 or std. w/min climb of 205' per NM to 1300, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1300' prior to DER.

NOTE: **Rwy 15**, tree 176' from DER 383' left of centerline, 50' AGL/999' MSL. Tree 178' from DER 307' right of centerline, 50' AGL/999' MSL. Tree 1,305' from DER 493' right of centerline, 50' AGL/1,004' MSL. Tree 176' from DER 383' left of centerline, 50' AGL/999' MSL. **Rwy 33**, tree 85' from DER 282' left of centerline, 50' AGL/989' MSL. Multiple buildings beginning 2' from DER 468' right of centerline, up to 50' AGL/954' MSL.

NAME	TAKEOFF MINIMUMS
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#### AITKIN, MN

AITKIN MUNI-STEVE KURTZ FIELD (AIT)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 4 15232 (FAA)

DEPARTURE PROCEDURE: **Rwy 8, 26**, NA-  
Environmental.

NOTE: **Rwy 16**, trees beginning 6' from DER, 86' left of centerline, up to 32' AGL/1238' MSL. Trees and road beginning 239' from DER, 357' left of centerline, up to 59' AGL/1265' MSL. Trees beginning 335' from DER, 114' right of centerline, up to 54' AGL/1260' MSL. Trees beginning 1352' from DER, 189' left of centerline, up to 94' AGL/1300' MSL. Trees beginning 1759' from DER, 5' right of centerline, up to 93' AGL/1299' MSL. Trees beginning 3354' from DER, 16' left of centerline, up to 100' AGL/1332' MSL. Trees beginning 3558' from DER, 48' right of centerline, up to 100' AGL/1333' MSL. **Rwy 34**, trees beginning 121' from DER, 408' right of centerline, up to 29' AGL/1235' MSL. Trees beginning 320' from DER, 406' right of centerline, up to 62' AGL/1268' MSL. Trees beginning 2084' from DER, 108' right of centerline, up to 74' AGL/1280' MSL. Trees beginning 1906' from DER, 179' left of centerline, up to 82' AGL/1288' MSL.

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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



## TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND



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## DIVERSE VECTOR AREA (RADAR VECTORS)

## ALBERT LEA, MN

ALBERT LEA MUNI (AEL)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 11293 (FAA)

NOTE: **Rwy 5**, sign 2074' from DER, 952' right of centerline, 47' AGL/1316' MSL. **Rwy 17**, tree 9' from DER, 349' right of centerline, 14' AGL/1263' MSL. Trees beginning 711' from DER, 121' left of centerline, up to 71' AGL/1330' MSL. **Rwy 23**, trees beginning 77' from DER, 259' left of centerline, up to 75' AGL/1324' MSL. Trees beginning 127' from DER, 326' right of centerline, up to 36' AGL/1285' MSL. **Rwy 35**, trees beginning 8' from DER, 397' right of centerline, up to 51' AGL/1290' MSL.

## ALEXANDRIA, MN

CHANDLER FIELD (AXN)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

DEPARTURE PROCEDURE: **Rwys 4, 13, 22**, when weather is below 200-1, climb runway heading to 1800 before turning.

## APPLETON, MN

APPLETON MUNI (AQP)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG-A 10126 (FAA)

DEPARTURE PROCEDURE: **Rwy 4**, climb heading 039° to 2000 before turning right. **Rwy 13**, climb heading 130° to 2500 before turning right. **Rwy 22**, climb heading 219° to 2400 before turning left. **Rwy 31**, climb heading 300° to 2000 before turning left.  
NOTE: **Rwy 13**, trees beginning 91' from DER, 464' left of centerline, up to 100' AGL/1134' MSL. Trees beginning 576' from DER, 388' right of centerline, up to 100' AGL/1120' MSL. Tower 2.3 NM from DER, 2.4 right of centerline, 1283' AGL/2318' MSL.

## AUSTIN, MN

AUSTIN MUNI (AUM)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 08045 (FAA)

NOTE: **Rwy 17**, Multiple trees beginning 809' from DER, 663' right of centerline, up to 61' AGL/1285' MSL. **Rwy 35**, Tree 1380' from DER, 484' right of centerline, 100' AGL/1314' MSL.

## BEACH, ND

BEACH (20U)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 16203 (FAA)

DEPARTURE PROCEDURE: **Rwy 12**, climb heading 125° to 4000 before turning left.

NOTE: **Rwy 12**, airfield lt 9' from DER, 27' right of centerline, 2749' MSL. Vehicles on road beginning 39' from DER, 371' right of centerline, up to 2764' MSL. Terrain 95' from DER, 416' left of centerline, 2751' MSL. Vehicles on road beginning 444' from DER, 379' right of centerline, up to 2766' MSL. Vehicle on road 1230' from DER, 182' left of centerline, 2780' MSL. Vehicle on road 1237' from DER, 198' left of centerline, 2781' MSL. Vehicle on road 1276' from DER, 226' left of centerline, 2782' MSL. Vehicles on road beginning 1326' from DER, 273' left of centerline, up to 2785' MSL. Vehicle on road 1474' from DER, 418' left of centerline, 2786' MSL. Vehicles on road 1652' from DER, 586' left of centerline, 2790' MSL. Vehicles on road, tree, and building beginning 1671' from DER, 664' left of centerline, up to 2808' MSL. **Rwy 30**, airfield lt beginning 10' from DER, 9' right of centerline, up to 1' AGL/2757' MSL.

## BAUDETTE, MN

BAUDETTE INTL (BDE)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 10154 (FAA)

DEPARTURE PROCEDURE: **Rwy 12**, climb heading 117° to 1700 before turning northbound.

NOTE: **Rwy 12**, trees, pipes, and markers beginning 61' from DER, 354' right of centerline, up to 100' AGL/1184' MSL. Trees beginning 593' from DER, 138' left of centerline, up to 21' AGL/1100' MSL. Rod on OL tank 4132' from DER, 1233' right of centerline, 120' AGL/1204' MSL. **Rwy 30**, trees beginning 15' from DER, 348' right of centerline, 12' AGL/1096' MSL. Trees beginning 2036' from DER, 532' left of centerline, 64' AGL/1143' MSL.

## BELLE FOURCHE, SD

BELLE FOURCHE MUNI (EFC)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 2 09015 (FAA)

TAKEOFF MINIMUMS: **Rwys 18,36, NA. Rwy 14**, std. w/ min. climb of 240' per NM to 9000 or 1400-3 for climb in visual conditions. **Rwy 32**, std. w/ min. climb of 413' per NM to 3900.

DEPARTURE PROCEDURE: **Rwy 14**, for climb in visual conditions: cross Belle Fourche Muni airport at or above 4400 MSL before proceeding on course. **Rwy 32**, climb heading 321° to 3900 before proceeding southbound.

NOTE: **Rwy 14**, trees 651' from DER, 547' left of centerline, up to 20' AGL/3299' MSL. **Rwy 32**, trees 857' from DER, 150' left of centerline, up to 20' AGL/3199' MSL. Trees 3880' from DER, 966' right of centerline, up to 20' AGL/3289' MSL.

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## TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND



## DIVERSE VECTOR AREA (RADAR VECTORS)



## TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND



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## DIVERSE VECTOR AREA (RADAR VECTORS)

**BEMIDJI, MN****BEMIDJI RGNL (BJI)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 3 08213 (FAA)

NOTE: **Rwy 7**, vegetation beginning 859' from DER, 544' right of centerline, up to 62' AGL/1442' MSL. Vegetation beginning 1404' from DER, 683' left of centerline, up to 44' AGL/1424' MSL. **Rwy 13**, vehicle on road, 541' from DER, 525' right of centerline, 15' AGL/1398' MSL. **Rwy 25**, poles beginning 1337' from DER, 205' right of centerline up to 61' AGL/1445' MSL. Trees beginning 1414' from DER, 254' left of centerline, up to 57' AGL/1441' MSL. Tree 1406' from DER, 233' right of centerline, 53' AGL/1437' MSL.

**BENSON, MN****BENSON MUNI (BBB)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 09127 (FAA)

NOTE: **Rwy 14**, numerous trees beginning 838' from DER, 246' right of centerline, up to 33' AGL/1087' MSL. Numerous trees beginning 1232' from DER, 64' left of centerline, up to 69' AGL/1108' MSL. Sign 206' from DER, 198' left of centerline, 19' AGL/1044' MSL. Tower 4884' from DER, 274' right of centerline, 126' AGL/1161' MSL. **Rwy 32**, Tree 2380' from DER, 646' left of centerline, 68' AGL/1107' MSL. Multiple fences beginning 13' from DER, 361' left of centerline, up to 8' AGL/1043' MSL.

**BIGFORK, MN****BIGFORK MUNI (FOZ)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG -A 10126 (FAA)

TAKEOFF MINIMUMS: **Rwy 15**, 400-1 or std. with a min. climb of 332' per NM to 1900.

**BISMARCK, ND****BISMARCK MUNI (BIS)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 8 11069 (FAA)

DEPARTURE PROCEDURE: **Rwy 13**, climb heading 131° to 2400 before turning right. **Rwy 21**, climb heading 212° to 3700 before turning left. **Rwy 31**, climb heading 311° to 2200 before turning right.

NOTE: **Rwy 13**, trees and pole beginning 864' from DER, 721' left of centerline, up to 56' AGL/1696' MSL. **Rwy 31**, light pole 1424' from DER, 872' right of centerline, 43' AGL/1702' MSL.

**BLUE EARTH, MN****BLUE EARTH MUNI (SBU)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 16091 (FAA)

TAKEOFF MINIMUMS: **Rwy 3, 21**, NA-Environmental. NOTE: **Rwy 16**, poles beginning 1017' from DER, 586' left of centerline, up to 32' AGL/1142' MSL. **Rwy 34**, trees beginning 3407' from DER, 523' right of centerline, up to 100' AGL/1200' MSL.

**BOTTINEAU, ND****BOTTINEAU MUNI (D09)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 10154 (FAA)

TAKEOFF MINIMUMS: **Rwys 3, 21**, NA. DEPARTURE PROCEDURE: **Rwy 13**, climb heading 127° to 2200 before turning left. **Rwy 31**, climb heading 307° to 2600 before turning right.

NOTE: **Rwy 31**, street light 116' from DER, 474' left of centerline, 16' AGL/1700' MSL.

**BOWMAN, ND****BOWMAN RGNL (BWW)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 16091 (FAA)

NOTE: **Rwy 13**, terrain beginning 171' from DER, 334' right of centerline, 3013' MSL. Terrain 4199' from DER, 1275' left of centerline, 3077' MSL. **Rwy 31**, terrain beginning 18' from DER, 182' left of centerline, 2958' MSL. Pole 2360' from DER, 395' right of centerline, 33' AGL/3005' MSL.

**BRAINERD, MN****BRAINERD LAKES RGNL (BRD)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 6 12320 (FAA)

NOTE: **Rwy 16**, multiple trees beginning 1830' from DER, 749' left of centerline, up to 74' AGL/1314' MSL. **Rwy 23**, multiple trees beginning 1485' from DER, 91' left of centerline, up to 50' AGL/1299' MSL. Tree 2426' from DER, 184' right of centerline, 50' AGL/1297' MSL. **Rwy 34**, trees beginning 1635' from DER, left and right of centerline, up to 86' AGL/1312' MSL.

**BRITTON, SD****BRITTON MUNI (BTN)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 3 13010 (FAA)

TAKEOFF MINIMUMS: **Rwys 1, 19**, NA-Environmental. NOTE: **Rwy 13**, trees, poles and terrain beginning 382' from DER, 9' right of centerline, up to 81' AGL/1439' MSL. Trees, poles, vehicles on road and terrain beginning 1286' from DER, 17' left of centerline, up to 75' AGL/1449' MSL. **Rwy 31**, trees and vehicles on road beginning 578' from DER, 185' right of centerline, up to 66' AGL/1375' MSL. Tree and vehicles on road beginning 234' from DER, 413' left of centerline, up to 61' AGL/1370' MSL.

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## TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND



## DIVERSE VECTOR AREA (RADAR VECTORS)



## TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND



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## DIVERSE VECTOR AREA (RADAR VECTORS)

**BROOKINGS, SD**

**BROOKINGS RGNL (BKX)**  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 2 15176 (FAA)

NOTE: **Rwy 12**, building 1297' from DER, 734' right of centerline, 38' AGL/1681' MSL. **Rwy 17**, trees beginning 1219' from DER, 562' left of centerline, up to 82' AGL/1733' MSL. Trees beginning 2097' from DER, 252' left of centerline, up to 82' AGL/1728' MSL. **Rwy 35**, trees beginning 481' from DER, 407' right of centerline, up to 45' AGL/1641' MSL. Railroad beginning 514' from DER, crossing centerline from right to left, 23' AGL/1626' MSL. Trees 701' from DER, 216' left of centerline, 35' AGL/1631' MSL.

**BUFFALO, MN**

**BUFFALO MUNI (CFE)**  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 11013 (FAA)

TAKEOFF MINIMUMS: **Rwy 18**, 300-1½ or std. w/min climb of 403' per NM to 1200.

NOTE: **Rwy 18**, building 613' from DER, 608' right of centerline, up to 25' AGL/984' MSL. Vehicle on road 710' from DER, 641' right of centerline, up to 17' AGL/986' MSL. Trees beginning 1000' from DER, 615' left of centerline, up to 100' AGL/1059' MSL. **Rwy 36**, building 361' from DER, 262' left of centerline, up to 25' AGL/994' MSL. Vehicle on road 845' from DER, 701' left of centerline, up to 15' AGL/994' MSL. Trees beginning 1506' from DER, 350' right of centerline, up to 100' AGL/1089' MSL. Trees beginning 1508' from DER, 129' left of centerline, up to 100' AGL/1109' MSL.

**CAMBRIDGE, MN**

**CAMBRIDGE MUNI (CBG)**  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 12096 (FAA)

NOTE: **Rwy 16**, navaid 38' from DER, 78' left of centerline, 2' AGL/941' MSL. Poles beginning 1203' from DER, 140' left of centerline, up to 66' AGL/1007' MSL. Navaid 40' from DER 81' right of centerline, 2' AGL/941' MSL. Trees beginning 198' from DER, 8' left and right of centerline, up to 100' AGL/1011' MSL. Fence post 176' from DER, 403' right of centerline, 8' AGL/947' MSL. Vehicles on road 191' from DER, 431' right of centerline, 15' AGL/954' MSL. **Rwy 34**, terrain beginning 167' from DER, 374' left of centerline, up to 951' MSL. Fence post 178' from DER, 481' left of centerline, 14' AGL/959' MSL. Fence 615' from DER, 329' left of centerline, 13' AGL/958' MSL. Vehicles on road 12' from DER, 492' left and right of centerline, 15' AGL/969' MSL. Trees beginning 498' from DER, 12' left and right of centerline, up to 100' AGL/1 020' MSL. Building 427' from DER, 538' right of centerline, 24' AGL/969' MSL.

**CANBY, MN**

**MYERS FIELD (CNB)**  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 10210 (FAA)

NOTE: **Rwy 12**, numerous poles beginning 40' from DER, 421' left and right of centerline, up to 36' AGL/1216' MSL. Truck on roads beginning 134' from DER, 37' left and right of centerline, up to 22' AGL/1202' MSL. Tree 3' from DER, 159' right of centerline, 7' AGL/1187' MSL. **Rwy 30**, numerous trees beginning 726' from DER, 176' left of centerline, up to 70' AGL/1278' MSL. Tree 1338' from DER, 716' right of centerline, 68' AGL/1268' MSL.

**CANDO, ND**

**CANDO MUNI (9D7)**  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 15232 (FAA)

NOTE: **Rwy 16**, vehicles on road 443' from DER, 524' left of centerline, 15' AGL/1495' MSL. Lt support structure 10' from DER, 10' right of centerline, 3' AGL/1484' MSL. **Rwy 34**, poles beginning 382' from DER, 465' right of centerline, up to 32' AGL/1513' MSL. Building 277' from DER, 574' right of centerline, 22' AGL/1503' MSL. Vehicles on road beginning 596' from DER, 25' right of centerline, 15' AGL/1500' MSL. Vehicles on road beginning 754' from DER, 16' left of centerline, 15' AGL/1504' MSL. Lt support structure 10' from DER, 9' right of centerline, 3' AGL/1483' MSL. Tank 344' from DER, 470' right of centerline, 9' AGL/1490' MSL.

**CARRINGTON, ND**

**CARRINGTON MUNI (46D)**  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 13178 (FAA)

NOTE: **Rwy 13**, trees beginning 2097' from DER, 314' left of centerline, up to 100' AGL/1676' MSL. **Rwy 31**, terrain 60' from DER, 481' left of centerline, 1614' MSL. Trees beginning 603' from DER, 341' left of centerline, up to 100' AGL/1709' MSL.

**CASSELTON, ND**

**CASSELTON ROBERT MILLER RGNL (5N8)**  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 07354 (FAA)

TAKEOFF MINIMUMS: **Rwy 31**, 400-2½ or std. w/ a min. climb of 212' per NM to 1400 or alternatively, with standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 1700' prior to DER.

NOTE: **Rwy 13**, railroad 30' from DER, 505' right of centerline, 23' AGL/945' MSL. Vehicle on road 449' from DER, 300' left of centerline, 15' AGL/949' MSL. **Rwy 31**, trees 2251' from DER, 456' left of centerline, up to 100' AGL/1052' MSL.

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## TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND



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**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND  
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**CAVALIER, ND****CAVALIER MUNI (2C8)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

AMDT 1 12264 (FAA)

NOTE: **Rwy 16**, trees beginning 83' from DER, 454' left of centerline, up to 77' AGL/963' MSL. Trees beginning 751' from DER, 615' right of centerline, up to 77' AGL/963' MSL. Power pole 1233' from DER, 544' right of centerline, 38' AGL/927' MSL. Power poles beginning 1445' from DER, 330' left of centerline, up to 45' AGL/931' MSL. Bean elevator 1603' from DER, 450' left of centerline, 83' AGL/1003' MSL. Tank 1736' from DER, 434' left of centerline, 83' AGL/969' MSL. **Rwy 34**, trees beginning 1053' from DER, 623' left of centerline, up to 65' AGL/959' MSL. Trees beginning 2005' from DER, 393' right of centerline, up to 65' AGL/954' MSL.

**CHAMBERLAIN, SD****CHAMBERLAIN MUNI (9V9)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

AMDT 1 12348 (FAA)

TAKEOFF MINIMUMS: **Rwys 18,36**, NA-Environmental. NOTE: **Rwy 13**, trees left and right of centerline beginning 100' from DER, up to 47' AGL/1725' MSL. Pole 1116' from DER, 712' left of centerline, 32' AGL/1710' MSL. **Rwy 31**, rising terrain 91' from DER, 290' right of centerline, 1702' MSL. Vehicle on road 1072' from DER, from 553' to 781' right of centerline, 15' AGL/1728' MSL. Trees left and right of centerline beginning 1359' from DER, up to 71' AGL/1767' MSL. Pole 1201' from DER, 701' right of centerline, 45' AGL/1741' MSL.

**CLOQUET, MN****CLOQUET CARLTON COUNTY (COQ)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

AMDT 2 12208 (FAA)

NOTE: **Rwy 7**, trees beginning abeam DER, 264' left of centerline, up to 100' AGL/1369' MSL. Trees beginning 897' from DER, 358' right of centerline, up to 100' AGL/1349' MSL. Vehicles on road beginning abeam DER, 431' right of centerline, 15' AGL/1274' MSL. **Rwy 17**, trees beginning 69' from DER, 372' right of centerline, up to 81' AGL/1340' MSL. **Rwy 25**, tree 542' from DER, 365' left of centerline, 34' AGL/1313' MSL. Trees beginning 1625' from DER, 462' left of centerline, up to 119' AGL/1388' MSL. Trees beginning 153' from DER, 446' right of centerline, up to 93' AGL/1362' MSL. **Rwy 35**, tree 41' from DER, 434' left of centerline, 49' AGL/1318' MSL. Trees beginning 2181' from DER, crossing centerline left to right, up to 87' AGL/1366' MSL.

**COOK, MN****COOK MUNI (CQM)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 12040 (FAA)

NOTE: **Rwy 13**, trees and terrain beginning 17' from DER, left and right of centerline, up to 60' AGL/1379' MSL. Buildings beginning 326' from DER, 561' left of centerline, up to 20' AGL/1349' MSL. **Rwy 31**, trees beginning 134' from DER, 376' left and right of centerline, up to 60' AGL/1389' MSL.

**COOPERSTOWN, ND****COOPERSTOWN MUNI (S32)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 10322 (FAA)

NOTE: **Rwy 13**, power lines 4085' from DER, 1585' right to 1588' left of centerline, up to 80' AGL/1526' MSL. **Rwy 31**, building 12' from DER, 369' left of centerline, 14' AGL/1443' MSL. Vehicles 312' from DER, 550' left of centerline, 15' AGL/1444' MSL. Vehicles 353' from DER, 585' right of centerline, 15' AGL/1434' MSL.

**CROOKSTON, MN****CROOKSTON MUNI-KIRKWOOD FIELD (CKN)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 2 07298 (FAA)

TAKEOFF MINIMUMS: **Rwys 6, 17, 24, 35**, NA-turf runways.

NOTE: **Rwy 13**, tree 1998' from DER, 587' left of centerline, 94' AGL/970' MSL. Pole 1127' from DER, 662' left of centerline, 46' AGL/926' MSL.

**CROSBY, ND****CROSBY MUNI (D50)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 10154 (FAA)

TAKEOFF MINIMUMS: **Rwys 3, 21**, NA-Environmental. NOTE: **Rwy 12**, hangars and poles beginning 133' from DER, 263' right of centerline, up to 35' AGL/1983' MSL. Vehicle on road 800' from DER, 200' right of centerline, 22' AGL/1967' MSL. **Rwy 30**, power line, 2100' from DER, on centerline, 60' AGL/2011' MSL.

**DETROIT LAKES, MN****DETROIT LAKES-WETHING FIELD (DTL)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 05132 (FAA)

TAKEOFF MINIMUMS: **Rwys 17, 35**, NA. NOTE: **Rwy 31**, highway 243' from DER, 267' right of centerline, 15' AGL/1404' MSL. Railroad 534' from DER, 298' right of centerline, 23' AGL/1411' MSL.

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**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND  
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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

## DEVILS LAKE, ND

### DEVILS LAKE RGNL (DVL)

#### TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 2 13346 (FAA)

DEPARTURE PROCEDURE: **Rwy 3**, Climb heading 038° to 1900 before turning left.

NOTE: **Rwy 3**, tree 1523' from DER, 136' right of centerline, 49' AGL/1489' MSL. Tree 1531' from DER, 319' left of centerline, 50' AGL/1490' MSL. Trees beginning 3105' from DER, 544' right of centerline, 71' AGL/1522' MSL. **Rwy 13**, tree 1144' from DER, 716' right of centerline, 37' AGL/1482' MSL. Pole 1601' from DER, 609' right of centerline, 39' AGL/1484' MSL. **Rwy 21**, vehicle on road beginning 335' from DER, 404' right of centerline, up to 15' AGL/1477' MSL. Antenna on pole 552' from DER, 595' left of centerline, 61' AGL/1506' MSL. Trees beginning 613' from DER, 355' left of centerline, up to 47' AGL/1492' MSL. Vehicles on road beginning 674' from DER, left and right of centerline, up to 15' AGL/1483' MSL. Transmission tower 3566' from DER, 441' left of centerline, 123' AGL/1549' MSL.

## DICKINSON, ND

### DICKINSON-THEODORE ROOSEVELT RGNL (DIK)

#### TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1A 12180 (FAA)

DEPARTURE PROCEDURE: **Rwy 25**, climb heading 250° to 3500 before turning left.

NOTE: **Rwy 7**, road 887' from DER, on rwy centerline, 15' AGL/2631' MSL.

## DODGE CENTER, MN

### DODGE CENTER (TOB)

#### TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 09015 (FAA)

TAKEOFF MINIMUMS: **Rwy 22**, NA-Environmental.

NOTE: **Rwy 16**, trees 3945' from DER, 1542' left of centerline, 100' AGL/1409' MSL.

## DULUTH, MN

### DULUTH INTL (DLH)

#### TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 06327 (FAA)

NOTE: **Rwy 3**, multiple trees beginning 21' from DER, 226' right of centerline, up to 68' AGL/1477' MSL. Multiple trees beginning 246' from DER, 26' left of centerline, up to 64' AGL/1473' MSL. **Rwy 9**, electrical equipment 207' from DER, 408' left of centerline, 6' AGL/1425' MSL. **Rwy 21**, tower 3762' from DER, 410' left of centerline, 92' AGL/1522' MSL. **Rwy 27**, tree 2426' from DER, 1127' right of centerline, 53' AGL/1522' MSL. Bush and multiple trees beginning 347' from DER, 484' left of centerline, up to 44' AGL/1533' MSL.

## EAGLE BUTTE, SD

### CHEYENNE EAGLE BUTTE (84D)

#### TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG-A 16035 (FAA)

NOTE: **Rwy 13**, vehicles on road beginning 55' from DER, 77' left of centerline, up to 15' AGL/2463' MSL. Fence beginning 14' from DER, 347' left of centerline, up to 16' AGL/2458' MSL. **Rwy 31**, terrain 26' from DER, 284' left of centerline, 2435' MSL. Fence 21' from DER, 390' right of centerline, 5' AGL/2433' MSL. Vehicles on road beginning 70' from DER, 283' right of centerline, up to 15' AGL/2444' MSL. Fence beginning 122' from DER, 364' left of centerline, up to 9' AGL/2441' MSL.

## EDGELEY, ND

### EDGELEY MUNI (51D)

#### TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 16287 (FAA)

TAKEOFF MINIMUMS: **Rwy 9, 27**, NA-Turf strip.

NOTE: **Rwy 14**, ground 5' from DER, 11' left of centerline, 1592' MSL. Electric sys 11' from DER, 10' right of centerline, 2' AGL/1594' MSL. Electric sys 11' from DER, 9' left of centerline, 2' AGL/1594' MSL. **Rwy 32**, electric system 8' from DER, 10' left of centerline, 3' AGL/1603' MSL. Fence 47' from DER, 250' left of centerline, 4' AGL/1604' MSL. Pole 759' from DER, 672' right of centerline, 26' AGL/1626' MSL. Tree 1276' from DER, 635' left of centerline, 47' AGL/1652' MSL. Tree 1383' from DER, 823' left of centerline, 51' AGL/1652' MSL. Tree 2075' from DER, 800' left of centerline, 58' AGL/1659' MSL. Tree 2477' from DER, 854' left of centerline, 68' AGL/1669' MSL.

## ELBOW LAKE, MN

### ELBOW LAKE MUNI-PRIDE OF THE PRAIRIE (Y63)

#### TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

ORIG 13290 (FAA)

NOTE: **Rwy 14**, trees, sign, and terrain beginning 128' from DER, 73' right of centerline, up to 29' AGL/1229' MSL. Navaid and terrain beginning 28' from DER, 69' left of centerline, up to 10' AGL/1210' MSL. **Rwy 32**, trees beginning 405' from DER, 190' left of centerline, up to 32' AGL/1232' MSL.

## ELLSWORTH AFB (KRCA),

### RAPID CITY, SD

#### TAKEOFF MINIMUMS AND (OBSTACLE) DEPARTURE PROCEDURES

AMDT 1 14317

TAKE-OFF OBSTACLES: **Rwy 13**, Terrain 3182' MSL, 1' from DER, 490' left of centerline. Terrain 3182' MSL, inward of DER, 500' left of centerline. Terrain 3182' MSL, 0' from DER, 500' left of centerline. Tree 140' AGL/3289' MSL, 2405' from DER, 1044' left of centerline. B1 tail 34' AGL/3208' MSL, 64' inward of DER, 582' right of centerline. **Rwy 31**, Building 12' AGL/3311' MSL, 1804' from DER, 762' left of centerline.

# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

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**ELY, MN****ELY MUNI (ELO)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 3 12040 (FAA)

NOTE: **Rwy 12**, rising terrain and trees beginning 148' from DER, 18' right of centerline, up to 53' AGL/1539' MSL. Trees beginning 181' from DER, 247' left of centerline, up to 81' AGL/1542' MSL. **Rwy 30**, trees beginning 61' from DER, 242' left of centerline, up to 73' AGL/1520' MSL. Trees beginning 665' from DER, 652' right of centerline, up to 100' AGL/1551' MSL. Pole 670' from DER, 529' right of centerline, 49' AGL/1460' MSL.

**EVELETH, MN****EVELETH-VIRGINIA MUNI (EVM)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 3 13066 (FAA)

TAKEOFF MINIMUMS: **Rwy 32**, 300-1¼ or std. w/ min. climb to 227' per NM to 1800.

DEPARTURE PROCEDURE: **Rwy 27**, northwest departures (270°-050°) climb heading 274° to 2000 before proceeding on course. **Rwy 32**, climb heading 304° to 2400 before proceeding on course.

NOTE: **Rwy 9**, trees beginning 1842' from DER, crossing centerline left to right, up to 88' AGL/1455' MSL. Trees and vehicle on road beginning 13' from DER, 188' right of centerline, up to 88' AGL/1433' MSL. **Rwy 14**, vehicle on road beginning 63' from DER, crossing centerline left to right, up to 15' AGL/1385' MSL. Post 23' from DER, 150' right of centerline, 3' AGL/1372' MSL. Trees beginning 56' from DER, 298' right of centerline, up to 14' AGL/1382' MSL. Trees beginning 1863' from DER, 285' left of centerline, up to 72' AGL/1441' MSL. Rising terrain 13' from DER, 458' left of centerline, 1372' MSL. **Rwy 27**, trees and poles beginning 989' from DER, crossing centerline left to right, up to 110' AGL/1502' MSL. Trees and vehicle on road beginning 66' from DER, 285' left of centerline, up to 37' AGL/1416' MSL. **Rwy 32**, trees and vehicle on road beginning 377' from DER, 545' right of centerline, up to 85' AGL/1464' MSL. Aircraft on parking ramp beginning abeam DER, 332' left of centerline, up to 10' AGL/1389' MSL. Trees. beginning 813' from DER, crossing centerline left to right, up to 85' AGL/1464' MSL.

**FAIRMONT, MN****FAIRMONT MUNI (FRM)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 3 09127 (FAA)

NOTE: **Rwy 2**, trees beginning 2466' from DER, 1105' right of centerline, up to 100' AGL/1269' MSL. **Rwy 13**, tree 2340' from DER, 1039' left of centerline, 100' AGL/1269' MSL. **Rwy 20**, trees beginning 1640' from DER, 914' right of centerline, up to 100' AGL/1289' MSL. Trees beginning 913' from DER, 449' left of centerline, up to 100' AGL/1299' MSL. **Rwy 31**, trees beginning 954' from DER, 161' left of centerline, up to 100' AGL/1299' MSL. Trees and road beginning 791' from DER, 339' right of centerline, up to 57' AGL/1226' MSL.

**FARGO, ND****HECTOR INTL (FAR)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 4A 11349 (FAA)

TAKEOFF MINIMUMS: **Rwys13,31, NA.**

NOTE: **Rwy 9**, tree 1876' from DER 686' left of centerline, 53' AGL/952' MSL. Tree 2620' from DER, 1100' right of centerline, 66' AGL/965' MSL. Road and vehicle beginning 420' from DER, 601' right of centerline, up to 15' AGL/913' MSL. Road and vehicle beginning 543' from DER, 619' left of centerline, up to 15' AGL/912' MSL. Runway end lights beginning 41' from DER, left and right of centerline, up to 3' AGL/901' MSL. Sign 39' from DER, 201' left of centerline, 2' AGL/900' MSL. Multiple light poles beginning 1082' from DER, left and right of centerline, up to 27' AGL/927' MSL. **Rwy 18**, road and vehicle 536' from DER, 19' right of centerline, 15' AGL/914' MSL. **Rwy 27**, road and vehicle beginning 451' from DER, 479' right of centerline, up to 15' AGL/910' MSL. Tree 2912' from DER, 944' left of centerline, 72' AGL/971' MSL. Runway end lights 42' from DER, 126' right of centerline, 2' AGL/898' MSL. **Rwy 36**, light support structure 11' from DER, 55' right of centerline, 1' AGL/901' MSL.

**FARIBAULT, MN****FARIBAULT MUNI (FBL)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 10266 (FAA)

NOTE: **Rwy 12**, numerous trees beginning 73' from DER, 51' right and left of centerline, up to 100' AGL/1169' MSL. **Rwy 30**, numerous trees beginning 24' from DER, 266' right and left of centerline, up to 100' AGL/1189' MSL.

**FERGUS FALLS, MN****FERGUS FALLS MUNI-EINAR MICKELSON FIELD (FFM)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 09239 (FAA)

NOTE: **Rwy 13**, trees beginning 2612' from DER, 128' right of centerline, up to 100' AGL/1269' MSL. Trees beginning 2514' from DER, 42' left of centerline, up to 100' AGL/1259' MSL. **Rwy 17**, trees beginning 1100' from DER 663' right of centerline, up to 100' AGL/1269' MSL. Road 222' from DER, 469' right of centerline, 15' AGL/1173' MSL. **Rwy 35**, trees beginning 2156' from DER, 176' right of centerline, up to 100' AGL/1289' MSL.

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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND  
DIVERSE VECTOR AREA (RADAR VECTORS)**

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**FOSSTON, MN****FOSSTON MUNI (FSE)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 2 12124 (FAA)

NOTE: **Rwy 16**, road 17' from DER, 114' left of centerline, 10' AGL/1289' MSL. Road 27' from DER, 127' left of centerline, 10' AGL/1289' MSL. **Rwy 34**, multiple trees and REIL beginning 39' from DER, 78' left of centerline, up to 56' AGL/1329' MSL. Tree 192' from DER, 537' right of centerline, 13' AGL/1273' MSL.

**GARRISON, ND****GARRISON MUNI (D05)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 11013 (FAA)

TAKEOFF MINIMUMS: **Rwys 3,21**, NA - Environmental.  
NOTE: **Rwy 13**, trees 849' from DER, 190' left of centerline, up to 100' AGL/1989' MSL. Grain silos 1588' from DER, 895' left of centerline, 100' AGL/1989' MSL. **Rwy 31**, vehicles on roadway beginning 424' from DER, left and right of centerline, up to 15' AGL/1974' MSL. Trees 538' from DER, 425' left of centerline, up to 100' AGL/2059' MSL.

**GETTYSBURG, SD****GETTYSBURG MUNI (0D8)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 07018 (FAA)

NOTE: **Rwy 4**, multiple trees beginning 1011' from DER, 420' left of centerline, up to 60' AGL/2119' MSL. **Rwy 13**, multiple trees beginning 1897' from DER, 975' left of centerline, 60' AGL/2119' MSL. **Rwy 22**, multiple trees beginning 679' from DER, 117' left of centerline, up to 60' AGL/2109' MSL.

**GLENCOE, MN****GLENCOE MUNI (GYL)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 09071 (FAA)

NOTE: **Rwy 13**, trees beginning 349' from DER, 257' right of centerline, up to 100' AGL/1099' MSL. Trees beginning 1211' from DER, 314' left of centerline, up to 100' AGL/1109' MSL. Terrain beginning 53' from DER, 166' left of centerline, up to 998' MSL. Terrain beginning 286' from DER, 435' right of centerline, up to 1001' MSL. **Rwy 31**, trees beginning 501' from DER, 530' right of centerline, up to 100' AGL/1099' MSL. Tree 2577' from DER, 129' left of centerline, 100' AGL/1109' MSL.

**GLENWOOD, MN****GLENWOOD MUNI (GHW)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 3 10233 (FAA)

TAKEOFF MINIMUMS: **Rwys 5, 23** N/A Environmental.  
NOTE: **Rwy 15**, road beginning 278' from DER, 521' left of centerline, 15' AGL/1414' MSL. Trees beginning 3257' from DER, 1239' right of centerline, up to 100' AGL/1489' MSL. Terrain beginning 42' from DER, 448' left of centerline, 1378' MSL. **Rwy 33**, trees beginning 1266' from DER, 174' left of centerline, up to 100' AGL/1499' MSL. Power lines beginning 1259' from DER, 793' left of centerline, up to 50' AGL/1439' MSL.

**GRAFTON, ND****HUTSON FIELD (GAF)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 10210 (FAA)

TAKEOFF MINIMUMS: **Rwys 8, 26**, NA-Environmental.  
NOTE: **Rwy 17**, vehicle on roads beginning 23' from DER, 300' left of centerline, up to 15' AGL/837' MSL. Tree 2612' from DER, 857' left of centerline, 100' AGL/929' MSL. **Rwy 35**, building 107' from DER, 344' left of centerline, 17' AGL/836' MSL. Electrical system 153' from DER, 398' left of centerline, 21' AGL/840' MSL. Vehicle on roads beginning 260' from DER, 74' left of centerline, up to 15' AGL/841' MSL. Obstruction light on airport beacon 471' from DER, 601' left of centerline, 54' AGL/873' MSL.

**GRAND FORKS, ND****GRAND FORKS INTL (GFK)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 2 09071 (FAA)

NOTE: **Rwy 9L**, tree 127' from DER, 451' left of centerline, 12' AGL/853' MSL. **Rwy 27R**, bush 38' from DER, 474' right of centerline, 5' AGL/844' MSL. **Rwy 35L**, obstruction light on DME 645' from DER, 198' left of centerline, 21' AGL/860' MSL. **Rwy 35R**, tree 1259' from DER, 521' right of centerline, 41' AGL/880' MSL. Tree 1655' from DER, 271' left of centerline, 45' AGL/884' MSL.

**GRAND MARAIS, MN****GRAND MARAIS/COOK COUNTY (CKC)**

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 09015 (FAA)

NOTE: **Rwy 9**, trees beginning 58' from DER, 168' right of centerline up to 54' AGL/1833' MSL. Bushes 112' from DER, 142' left of centerline, 11' AGL/1805' MSL. Tree 464' from DER, 75' left of centerline, 14' AGL/1813' MSL. **Rwy 27**, trees beginning 85' from DER, 187' left of centerline, up to 59' AGL/1858' MSL. Trees beginning 282' from DER, 115' right of centerline, up to 42' AGL/1861' MSL.

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**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND  
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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

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## GRAND RAPIDS, MN

GRAND RAPIDS/ITASCA COUNTY-  
GORDON NEWSTROM FIELD (GPZ)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 4 09127 (FAA)

TAKEOFF MINIMUMS: **Rwys 5,10,23,28**, NA-  
Environmental.

NOTE: **Rwy 16**, tree 1655' from DER, 899' left of centerline, 51' AGL/1410' MSL. Tree 3236' from DER, 1130' right of centerline, 82' AGL/1441' MSL. **Rwy 34**, tree 3416' from DER, 1253' right of centerline, 100' AGL/1399' MSL.

## GRANITE FALLS, MN

GRANITE FALLS MUNI/LENZEN-ROE  
FAGEN MEMORIAL FIELD (GDB)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 10126 (FAA)

NOTE: **Rwy 15**, trees beginning 1780' from DER, 94' left of centerline, up to 100' AGL/1149' MSL. **Rwy 33**, trees beginning 1196' from DER, right and left of centerline, up to 100' AGL/1149' MSL. Power line 1242' from DER, 762' left of centerline, 80' AGL/1129' MSL. Train 1390' from DER, 149' left of centerline, 23' AGL/1162' MSL. Vehicle on road 1389' from DER, 156' left of centerline, up to 15' AGL/1154' MSL.

## GREGORY, SD

GREGORY MUNI-FLYNN FIELD (9D1)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG-A 10182 (FAA)

TAKEOFF MINIMUMS: **Rwy 31**, 400-2¼ or std. with a min. climb of 228' per NM to 2600.

NOTE: **Rwy 31**, tower 11377' from DER, 816' right of centerline, 210' AGL/2491' MSL.

## GWINNER, ND

GWINNER-ROGER MELROE FIELD  
(GWR)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT1 14261 (FAA)

TAKEOFF MINIMUMS: **Rwys 6, 24**, NA-Environment.

DEPARTURE PROCEDURE: **Rwy 34**, climbing right turn heading 010° to 2000 before proceeding on course.

NOTE: **Rwy 34**, tree 84' from DER, 469' right of centerline, 43' AGL/1293' MSL. Pole 523' from DER, 626' right of centerline, 47' AGL/1296' MSL.

## HALLOCK, MN

HALLOCK MUNI (HCO)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 11125 (FAA)

NOTE: **Rwy 13**, tree 1076' from DER, 620' right of centerline, 100' AGL/919' MSL. Trees beginning 81' from DER, from 472' left of centerline, up to 100' AGL/919' MSL. **Rwy 31**, tree 1668' from DER, 560' right of centerline, 100' AGL/919' MSL.

## HARVEY, ND

HARVEY MUNI (5H4)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 10266 (FAA)

NOTE: **Rwy 11**, vehicle on road beginning 50' from DER, 318' left of centerline, up to 15' AGL/1654' MSL. Tree 300' from DER, 329' right of centerline, 20' AGL/1621' MSL. Tree 350' from DER, 444' right of centerline, 20' AGL/1619' MSL. **Rwy 29**, vehicle on road beginning 4' from DER, left and right of centerline, up to 15' AGL/1654' MSL. Rising terrain beginning 7' from DER, 31' left of centerline, up to 1608' MSL.

## HAWLEY, MN

HAWLEY MUNI (04Y)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 07074 (FAA)

NOTE: **Rwy 34**, road 15' from DER, 421' left of centerline, 15' AGL/1224' MSL.

## HAZEN, ND

MERCER COUNTY RGNL (HZE)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 10210 (FAA)

TAKEOFF MINIMUMS: **Rwy 32**, std. w/ min. climb of 215' per NM to 2700, or 900-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 32**, for climb in visual conditions: cross Mercer County Rgnl airport at or above 2600 MSL before proceeding on course.

NOTE: **Rwy 14**, numerous fences beginning 196' from DER, 108' left of centerline, up to 12' AGL/1843' MSL. Terrain beginning 501' from DER, 271' left of centerline, up to 1837' MSL. **Rwy 32**, tree 1291' from DER, 592' right of centerline, 25' AGL/1833' MSL. Terrain 495' from DER, 360' left of centerline, 1803' MSL. Fence 5' from DER, 298' left of centerline, 8' AGL/1790' MSL. Tree 1444' from DER, 520' right of centerline, 25' AGL/1823' MSL.

## HETTINGER, ND

HETTINGER MUNI (HEI)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 2 10154 (FAA)

TAKEOFF MINIMUMS: **Rwy 12**, 300-1 or std. with a min. climb of 324' per NM to 3000. **Rwys 17, 35**, NA-Environmental.

NOTE: **Rwy 30**, road plus vehicles beginning 63' from DER, crossing left to right, 15' AGL/2744' MSL. Trees beginning 4306' from DER, 17' right of centerline, 100' AGL/2819' MSL.

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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



## TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND



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## DIVERSE VECTOR AREA (RADAR VECTORS)

## HIBBING, MN

## RANGE RGNL (HIB)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 6 04218 (FAA)

DEPARTURE PROCEDURE: **Rwy 22**, climb via heading 227° to 2200 before turning right. **Rwy 31**, climb via heading 310° to 2200 before turning left.  
NOTE: **Rwy 4**, antenna on pole, 361' from DER, 409' right of centerline, 1377' MSL. **Rwy 13**, obstacle light on pole, 1184' from DER, 636' left of centerline. Numerous trees beginning 1291' from DER, 745' left of centerline up to 1419' MSL. Trees 1497' from DER, 563' right of centerline, 1388' MSL. **Rwy 22**, multiple trees beginning 368' from DER, 170' right of centerline, up to 1416' MSL. Multiple trees beginning 413' from DER, 117' left of centerline, up to 1400' MSL. **Rwy 31**, light standard, 865' from DER, 595' right of centerline, 1381' MSL.

## HIGHMORE, SD

## HIGHMORE MUNI (9D0)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 16259 (FAA)

NOTE: **Rwy 13**, tank 245' from DER, 564' left of centerline, 44' AGL/1890' MSL. Tank 9' from DER, 492' left of centerline, 30' AGL/1877' MSL. Building 169' from DER, 449' left of centerline, 23' AGL/1871' MSL. Vehicles on road beginning 70' from DER, 397' left of centerline, 15' AGL/1865' MSL. Ground beginning 7' from DER, 413' right of centerline, 0' AGL/1856' MSL. NAVAID 10' from DER, 11' right of centerline, 3' AGL/1855' MSL. **Rwy 31**, fence beginning 83' from DER, 453' left of centerline, up to 12' AGL/1852' MSL. Fence beginning 129' from DER, 449' right of centerline, up to 12' AGL/1851' MSL. Trees beginning 1079' from DER, 397' left of centerline, up to 50' AGL/1898' MSL. Vertical structure 25' from DER, 450' right of centerline, up to 33' AGL/1845' MSL. NAVAID 9' from DER, 8' right of centerline, 2' AGL/1843' MSL. Vertical structure 201' from DER, 439' left of centerline, 32' AGL/1847' MSL.

## HILLSBORO, ND

## HILLSBORO MUNI (3H4)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 15008 (FAA)

DEPARTURE PROCEDURE: **Rwy 16**, climb heading 166° to 1700 before turning right. **Rwy 34**, climb heading 346° to 2000 before turning left.  
NOTE: **Rwy 16**, REILs 11' from DER, 52' right of centerline, 1' AGL/906' MSL. Vehicles on road beginning 9' from DER, 463' right of centerline, up to 17' AGL/922' MSL. Vehicles on road beginning 109' from DER, 326' right of centerline, up to 17' AGL/923' MSL. Vehicles on road beginning 355' from DER, 326' right of centerline, 17' AGL/924' MSL. Vehicles on roads beginning 632' from DER, 61' right of centerline, 17' AGL/925' MSL. **Rwy 34**, post 4' from DER, 140' right of centerline, 5' AGL/908' MSL. NAVAID 21' from DER, 126' left of centerline, 2' AGL/907' MSL. Vehicles on road beginning 65' from DER, 411' right of centerline, up to 20' AGL/919' MSL.

## HINCKLEY, MN

## FIELD OF DREAMS (04W)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 08045 (FAA)

NOTE: **Rwy 6**, Tree 82' from DER, 480' right of centerline, 100' AGL/1114' MSL. Tree 143' from DER, 161' left of centerline, 100' AGL/1114' MSL. **Rwy 24**, Tree 48' from DER, 165' left of centerline, 100' AGL/1124' MSL.

## HOT SPRINGS, SD

## HOT SPRINGS MUNI (HSR)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 12208 (FAA)

TAKEOFF MINIMUMS: **Rwy 6**, 24, NA-environmental. **Rwy 1**, 400-2½ or std. w/min. climb of 235' per NM to 3700. **Rwy 19**, 400-2¾ or std. w/min. climb of 255' per NM to 3600.  
DEPARTURE PROCEDURE: **Rwy 1**, climb heading 026° to 4700 before turning westbound. **Rwy 19**, climb heading 192° to 4700 before turning westbound.  
NOTE: **Rwy 1**, terrain 55' from DER, 468' right of centerline, 3144' MSL. Vehicle on road beginning 312' from DER, left and right of centerline, up to 15' AGL/3154' MSL. Trees beginning 528' from DER, left and right of centerline, up to 100' AGL/3239' MSL. Trees 2.1 NM from DER, 3246' left of centerline, up to 100' AGL/3519' MSL. **Rwy 19**, vehicle on road beginning 5' from DER, 369' left of centerline, up to 15' AGL/3161' MSL. Vehicle on road beginning 407' from DER, left and right of centerline, up to 15' AGL/3166' MSL. Poles beginning 607' from DER, left and right of centerline, up to 30' AGL/3181' MSL. Multiple trees and poles beginning 1875' from DER, left and right of centerline, up to 100' AGL/3281' MSL. Buildings 3031' from DER, 149' left of centerline, up to 20' AGL/3230' MSL. Fence beginning 3033' from DER, 559' left of centerline, up to 6' AGL/3236' MSL. Rising terrain beginning 3477' from DER, 545' left of centerline, up to 3241' MSL. Trees beginning 1.6 NM from DER, 764' left of centerline, up to 100' AGL/3489' MSL. Power lines beginning 1.4 NM from DER, 166' left of centerline, up to 120' AGL/3440' MSL.

## HURON, SD

## HURON RGNL (HON)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 5 09239 (FAA)

NOTE: **Rwy 12**, trees and pole beginning 918' from DER, 525' left of centerline, up to 62' AGL/1341' MSL. Trees beginning 291' from DER, 234' right of centerline, up to 100' AGL/1389' MSL. **Rwy 17**, trees beginning 236' from DER, 307' left of centerline, up to 67' AGL/1346' MSL. Trees beginning 264' from DER, 262' right of centerline, 73' AGL/1352' MSL. **Rwy 30**, trees beginning 3428' from DER, 1378' left of centerline, up to 100' AGL/1394' MSL. **Rwy 35**, trees beginning 60' from DER, 104' left of centerline, up to 49' AGL/1328' MSL. Trees beginning 251' from DER, 97' right of centerline, 52' AGL/1331' MSL.

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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

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## HUTCHINSON, MN

HUTCHINSON MUNI-BUTLER FIELD  
(HCD)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 11181 (FAA)

NOTE: **Rwy 15**, tree 3342' from DER, 425' right of centerline, 89' AGL/1148' MSL. Trees beginning 545' from DER, 394' left of centerline, up to 64' AGL/1113' MSL. **Rwy 33**, tree 994' from DER, 561' right of centerline, 40' AGL/1 099' MSL.

## INTERNATIONAL FALLS, MN

FALLS INTL-EINARSON FIELD (INL)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 3A 15008 (FAA)

NOTE: **Rwy 4**, Tree 392' from DER 311' left of centerline, 51' AGL/1231' MSL. **Rwy 13**, multiple trees beginning 1999' from DER, 773' left of centerline, up to 63' AGL/1233' MSL. Pole 1091, from DER, 703' right of centerline, 37' AGL/1207' MSL. Road 1005' from DER, 766' left of centerline, 15' AGL/1195' MSL. **Rwy 22**, Multiple trees beginning 433' from DER 273' left of centerline, up to 33' AGL/1213' MSL. Trees 1144' from DER 136' right of centerline, 28' AGL/1208' MSL. **Rwy 31**, Trees 968' from DER, 752' left of centerline, 56' AGL/1236' MSL.

## JACKSON, MN

JACKSON MUNI (MJQ)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 08045 (FAA)

TAKEOFF MINIMUMS: **Rwys 4,22**, NA-TURF.  
DEPARTURE PROCEDURE: **Rwy 13**, Climb heading 134° to 1900 before turning right.

NOTES: **Rwy 13**, Trees beginning 1474' from DER, 556' left of centerline, up to 80' AGL/1539' MSL. Vehicle on road 258' from DER, 559' from centerline, 15' AGL/1459' MSL. **Rwy 31**, Vehicle on road 465' from DER, 618' left of centerline, 15' AGL/1446' MSL. Trees beginning 1616' from DER, 580' right of centerline, up to 80' AGL/1519' MSL. Trees beginning 1110' from DER, 429' left of centerline, up to 80' AGL/1509' MSL.

## JAMESTOWN, ND

JAMESTOWN RGNL (JMS)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 07242 (FAA)

NOTE: **Rwy 22**, antenna and tank beginning 2960' from DER, 1007' left of centerline, up to 150' AGL/1631' MSL. **Rwy 31**, multiple trees beginning 2129' from DER 47' right of centerline, up to 60' AGL/1560' MSL.

## KENMARE, ND

KENMARE MUNI (7K5)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 11125 (FAA)

NOTE: **Rwy 8**, vehicles on roadway 359' from DER, left and right of centerline, up to 15' AGL/1980' MSL. Trees 374' from DER, 359' right of centerline, 50' AGL/2004' MSL. **Rwy 26**, aircraft on taxiway beginning abeam DER, 385' right of centerline, up to 17' AGL/1981' MSL. Hangars beginning 147' from DER, 506' right of centerline, up to 30' AGL/1994' MSL. Pole 1259' from DER, 49' right of centerline, 40' AGL/2002' MSL. Trees beginning 1342' from DER, 85' right of centerline, up to 50' AGL/2014' MSL.

## KINDRED, ND

ROBERT ODEGAARD FIELD (K74)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG-A 15064 (FAA)

NOTE: **Rwy 29**, tree 991' from DER, 367' left of centerline, 38' AGL/982' MSL. Tree 1073' from DER, 221' left of centerline, 38' AGL/982' MSL.

## LANGDON, ND

ROBERTSON FIELD (D55)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 10154 (FAA)

TAKEOFF MINIMUMS: **Rwys 8, 26**, NA - Environmental. NOTE: **Rwy 14**, vehicles on road beginning 479' to 684' from DER, from 238' to 413' left of centerline, up to 15' AGL/1627' MSL. **Rwy 32**, windsock 13' from DER, 416' right of centerline, 16' AGL/1619' MSL. Fence 24' from DER, 301' left of centerline, 5' AGL/1608' MSL. Fence 199' from DER, 293' left of centerline, 5' AGL/1608' MSL. Trees beginning 485' from DER 203' right of centerline, up to 30' AGL/1628' MSL. Trees beginning 1912' from DER, from 241' to 418' left of centerline, up to 78' AGL/1677' MSL.

## LEMMON, SD

LEMMON MUNI (LEM)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 13234 (FAA)

TAKEOFF MINIMUMS: **Rwys 7, 25**, NA - Environmental. NOTE: **Rwy 11**, rising terrain beginning 43' from DER, 318' right of centerline, up to 2575' MSL. Vehicles on road beginning 861' from DER, 369' left of centerline, up to 15' AGL/2596' MSL. **Rwy 29**, vehicles on road beginning 445' from DER, 231' left of centerline, up to 15' AGL/2583' MSL.

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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND**

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**DIVERSE VECTOR AREA (RADAR VECTORS)****LINTON, ND****LINTON MUNI (7L2)**

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 13234 (FAA)

NOTE: **Rwy 9**, trees beginning 902' from DER, 210' right of centerline, up to 100' AGL/1830' MSL. Flag pole 37' from DER, 465' left of centerline, 30' AGL/1810' MSL. Vehicle on road beginning 72' from DER, 237' right of centerline, up to 15' AGL/1815' MSL. **Rwy 27**, trees beginning 14' from DER, 286' left of centerline, up to 100' AGL/1806' MSL.

**LITCHFIELD, MN****LITCHFIELD MUNI (LJF)**

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 1 10266 (FAA)

DEPARTURE PROCEDURE: **Rwy 31**, climb heading 316° to 1700 before turning left.

NOTE: **Rwy 13**, trees beginning 11' from DER, 417' left and right of centerline, up to 90' AGL/1234' MSL. Trees beginning 1251' from DER, 830' left of centerline, up to 89' AGL/1228' MSL. **Rwy 31**, trees beginning 958' from DER, 73' left of centerline, up to 46' AGL/1185' MSL. Trees beginning 13' from DER, 370' right of centerline, up to 95' AGL/1234' MSL.

**LITTLE FALLS, MN****LITTLE FALLS/MORRISON COUNTY-****LINDBERGH FIELD (LXL)**

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 4A 14121 (FAA)

TAKEOFF MINIMUMS: **Rwy 13**, 300-1½ or std. with a min. climb of 301' per NM to 1500. **Rwys 18,36**, NA-Environmental.

DEPARTURE PROCEDURE: **Rwy 31**, climb heading 308° to 1600 before turning right.

NOTE: **Rwy 13**, numerous trees beginning 76' from DER, right and left of centerline, up to 100' AGL/1389' MSL. **Rwy 31**, numerous trees beginning 1986' from DER, right and left of centerline, up to 100' AGL/1214' MSL.

**LONG PRAIRIE, MN****TODD FIELD (14Y)**

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 08157 (FAA)

NOTE: **Rwy 16**, tree 273' from DER, 310' right of centerline, 100' AGL/1436' MSL. **Rwy 34**, tree 70' from DER, 100' right of centerline, 100' AGL/1439' MSL. Tree 122' from DER, 105' left of centerline, 100' AGL/1436' MSL. Tree 18' from DER, 106' right of centerline, 100' AGL/1433' MSL.

**LONGVILLE, MN****LONGVILLE MUNI (XVG)**

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 11349 (FAA)

TAKEOFF MINIMUMS: **Rwy 31**, 300-1½ or std. w/min. climb of 330' per NM to 1600.

NOTE: **Rwy 13**, trees beginning 237' from DER, 497' right of centerline, up to 100' AGL/1449' MSL. Trees beginning 286' from DER, 533' left of centerline, up to 100' AGL/1429' MSL. Trees beginning 1122' from DER, 4' left of centerline, up to 100' AGL/1429' MSL. **Rwy 31**, vehicles on roadway beginning 58' from DER. 59' left of centerline, up to 17' AGL/1366' MSL. Trees beginning 281' from DER, 559' right of centerline, up to 100' AGL/1519' MSL. Trees beginning 327' from DER, 115' left of centerline, up to 100' AGL/1479' MSL.

**LUVERNE, MN****QUENTIN AANENSON FIELD (LYV)**

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 10154 (FAA)

NOTE: **Rwy 18**, tree 813' from DER, 578' left of centerline, 50' AGL/1469' MSL. Road plus vehicle 685' from DER, 574' right of centerline, 15' AGL/1454' MSL. Terrain 20' from DER, on centerline, 1429' MSL. **Rwy 36**, transmission tower, 5752' from DER, 1036' right of centerline, 139' AGL/1581' MSL.

**MADISON, MN****LAC QUI PARRE COUNTY (DXX)**

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 12320 (FAA)

TAKEOFF MINIMUMS: **Rwys 9, 27**, NA-Environmental. **Rwy 32**, 300-1½ or std. w/min. climb of 213' per NM to 1400, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1500' prior to DER.

NOTE: **Rwy 14**, trees beginning 40' from DER, 463' right of centerline, up to 100' AGL/1081' MSL. Terrain 22' from DER, 175' left of centerline, 1080' MSL. **Rwy 32**, vehicles on roadway beginning 538' from DER, left to right of centerline, up to 15' AGL/1098' MSL. Trees beginning 1485' from DER, 790' left of centerline, up to 100' AGL/1152' MSL. Tower 1.2 NM from DER, 2112' right of centerline, 200' AGL/1277' MSL.

**MADISON, SD****MADISON MUNI (MDS)**

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 11181 (FAA)

TAKEOFF MINIMUMS: **Rwys 3, 21**, NA - environmental.

NOTE: **Rwy 15**, trees beginning 764' from DER, 284' left of centerline, up to 76' AGL/1766' MSL. Plant and fence beginning 65' from DER, 384' right of centerline, up to 24' AGL/1733' MSL. **Rwy 33**, road 82' from DER, 399' left of centerline, 23' AGL/1723' MSL. Road and trees beginning 131' from DER, 9' right of centerline, up to 100' AGL/1859' MSL.

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**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND****DIVERSE VECTOR AREA (RADAR VECTORS)**

# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND

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## DIVERSE VECTOR AREA (RADAR VECTORS)

### MAHONOMEN, MN

MAHONOMEN COUNTY (3N8)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 13290 (FAA)

TAKEOFF MINIMUMS: **Rwys 9,27**, NA-  
Environmental.

NOTE: **Rwy 17**, terrain beginning 14' from DER, 402' right of centerline, up to 1248' MSL. **Rwy 35**, vehicles on roadway, poles, and telephone lines beginning 201' from DER, 450' left of centerline, up to 42' AGL/1273' MSL. Telephone line 972' from DER, 590' right of centerline, 35' AGL/1266' MSL. Trees beginning 1597' from DER 605' left of centerline, 75' AGL/1306' MSL.

### MANDAN, ND

MANDAN MUNI (Y19)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 14149 (FAA)

TAKEOFF MINIMUMS: **Rwys 4, 22**, NA-  
Environmental.

NOTE: **Rwy 13**, fence and trees beginning 26' from DER, 310' left of centerline, up to 48' AGL/1988' MSL. Transmission lines and pole beginning 1604' from DER, from left to right of centerline, up to 64' AGL/1984' MSL. **Rwy 31**, trees beginning 1256' from DER, from left to right of centerline up to 65' AGL/1995' MSL.

### MANKATO, MN

MANKATO RGNL (MKT)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 09267 (FAA)

NOTE: **Rwy 4**, trees beginning 447' from DER, 408' right of centerline, up to 100' AGL/1078' MSL. Trees beginning 1996' from DER, 17' left of centerline, up to 100' AGL/1084' MSL. **Rwy 15**, trees beginning 1552' from DER, 719' left of centerline, up to 100' AGL/1088' MSL. **Rwy 22**, trees beginning 2370' from DER, 989' right of centerline, up to 100' AGL/1069' MSL. **Rwy 33**, trees beginning 2085' from DER, 780' right of centerline, up to 100' AGL/1077' MSL. Rising terrain 9' from DER, 65' right of centerline, up to 1029' MSL. Terrain beginning 82' from DER, 60' left of centerline, up to 1029' MSL.

### MARSHALL, MN

SOUTHWEST MINNESOTA RGNL MARSHALL/  
RYAN FIELD (MML)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 2A 15344 (FAA)

TAKEOFF MINIMUMS: **Rwy 20**, Std. w/ min. climb of 270' per NM to 2000, or 1000-3 for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 20**, for climb in visual conditions, cross Marshall Airport at or above 2000 MSL before proceeding on course.

NOTE: **Rwy 2**, runway light 39' from DER, 79' left of centerline, 3' AGL/1174' MSL; trees beginning 1324' from DER, 796' left of centerline, up to 89' AGL/1256' MSL. **Rwy 12**, Pole 706' from DER, 671' right of centerline, 60' AGL/1212' MSL, pole 1580' from DER, 732' left of centerline, 70' AGL/1225' MSL, antenna 1496' from DER, 620' right of centerline, 64' AGL/1219' MSL, pole 1185' from DER, 540' right of centerline, 55' AGL/1210' MSL, tree 3564' from DER, 400' right of centerline, 110' AGL/1269' MSL, tree 2135' from DER, 113' left of centerline, 77' AGL/1232' MSL. **Rwy 20**, runway light 42' from DER, 77' left of centerline, 2' AGL, 1183' MSL; runway light 41' from DER, 78' right of centerline, 2' AGL/1182' MSL. **Rwy 30**, Vehicle on road 1' from DER, 435' left of centerline, 24' AGL/1200' MSL.

### MARTIN, SD

MARTIN MUNI (9V6)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 16147 (FAA)

NOTE: **Rwy 14**, Lt support structure 9' from DER, 20' left of centerline, 3280' MSL. Lt support structure 10' from DER, 9' right of centerline, 3278' MSL. Ground 13' from DER, 408' left of centerline, 3282' MSL. Ground 27' from DER, 199' left of centerline, 15' AGL/3282' MSL. Fence and ground beginning 74' from DER, 219' left of centerline, up to 3287' MSL. Vehicle on road 145' from DER, 289' right of centerline, 15' AGL/3283' MSL. **Rwy 32**, building, pole, ground and, vehicle on road, beginning 1' from DER, 9' left of centerline, up to 23' AGL/3317' MSL. Tree 1083' from DER, 19' left of centerline, 3322' MSL. Tree 1095' from DER, 387' right of centerline, 3382' MSL. Tree 1172' from DER, 130' left of centerline, 3340' MSL. Tree and pole beginning 1270' from DER, 9' left of centerline, up to 3341' MSL. Tree 1315' from DER, 219' left of centerline, 3343' MSL. Poles and trees beginning 1366' from DER, 174' left of centerline, up to 44' AGL/3349' MSL. Trees beginning 1463' from DER, 94' right of centerline, up to 3334' MSL. Poles and trees beginning 1481' from DER, 406' left of centerline, up to 43' AGL/3350' MSL.

### MC GREGOR, MN

ISEDOR IVERSON (HZX)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 11349 (FAA)

DEPARTURE PROCEDURE: **Rwy 14**, climb heading 139° to 1900 before turning left.

NOTE: **Rwy 14**, trees beginning 72' from DER, 440' left of centerline, up to 100' AGL/1324' MSL. Trees beginning 1158' from DER, 724' right of centerline, up to 100' AGL/1324' MSL. Trees beginning 2888' from DER, 589' left of centerline, up to 100' AGL/1334' MSL. **Rwy 32**, vehicles on roadway beginning 499' from DER, 577' left of centerline, up to 17' AGL/1246' MSL. Trees beginning 2919' from DER, left and right of centerline, up to 100' AGL/1329' MSL.

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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND

## DIVERSE VECTOR AREA (RADAR VECTORS)



# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

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## MILBANK, SD

### MILBANK MUNI (1D1)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 08101 (FAA)

TAKEOFF MINIMUMS: **Rwy 25**, Std. w/ a min. climb of 207' per NM to 1900, or 900-2½ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 25**, For climb in visual conditions cross Milbank Muni airport at or above 1900 before proceeding on course.

NOTE: **Rwy 7**, trees beginning 1207' from DER, 387' left of centerline, up to 100' AGL/ 1219' MSL. Vehicle on road 829' from DER, 373' right of centerline, 15' AGL/ 1134' MSL. Building 322' from DER, 582' right of centerline, 25' AGL/ 1134' MSL. **Rwy 13**, trees beginning 1448' from DER, 394' right of centerline, up to 100' AGL/ 1219' MSL. Vehicle on road 218' from DER, 490' left of centerline, 15' AGL/ 1134' MSL. Building 78' from DER, 397' left of centerline, 25' AGL/ 1134' MSL. **Rwy 25**, tree 3584' from DER, 477' left of centerline, 100' AGL/ 1249' MSL. **Rwy 31**, tree 2992' from DER, 715' left of centerline, 100' AGL/ 1239' MSL.

## MILLER, SD

### MILLER MUNI (MKA)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 08269 (FAA)

NOTE: **Rwy 15**, vehicle on road 769' from DER, 642' right of centerline, 15' AGL/1599' MSL. Snow removal equipment 206' from DER, 475' right of centerline, 21' AGL/1594' MSL. Tree 3903' from DER, 998' left of centerline, 100' AGL/1684' MSL. **Rwy 33**, vehicle on road 450' from DER, 560' left of centerline, 15' AGL/1584' MSL. Tree 762' from DER, 628' left of centerline, 100' AGL/1669' MSL.

## MINNEAPOLIS, MN

### AIRLAKE (LVN)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 10154 (FAA)

NOTE: **Rwy 12**, ground 198' from DER, 533' right of centerline, 0' AGL/963' MSL. Tree and vehicle on road, beginning 422' from DER, 379' right of centerline, up to 15' AGL/978' MSL. Tree 1291' from DER, 506' left of centerline, 62' AGL/1002' MSL. **Rwy 30**, ground 104' from DER, 479' left of centerline, 0' AGL/965' MSL. Tree, pole, and antenna on building beginning 171' from DER, 259' right of centerline, up to 50' AGL/1000' MSL. Tree, railroad, and antenna on building 486' from DER, 268' left of centerline, up to 41' AGL/1001' MSL. Trees and a building beginning 821' from DER, 30' right of centerline, up to 49' AGL/1009' MSL.

## MINNEAPOLIS, MN (CON'T)

### ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (ANE)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 5A 10126 (FAA)

TAKEOFF MINIMUMS: **Rwy 9**, 300-1½ or std. w/ min. climb of 204' per NM to 1200, or alternatively, with standard takeoff minimums and a normal 200'/NM climb gradient, takeoff must occur no later than 1200' prior to DER. **Rwy 18**, 300-1 or std. w/ min. climb of 367' per NM to 1200.

DEPARTURE PROCEDURE: **Rwy 9**, climb heading 089° to 2200 before turning right. **Rwy 18**, climb heading 179° to 2600 before turning left. **Rwy 27**, climb heading 269° to 1700 before proceeding southeast bound. **Rwy 36**, climb heading 359° to 1700 before proceeding southeast bound.

NOTE: **Rwy 9**, tank and multiple trees beginning 822' from DER, 619' right of centerline, up to 170' AGL/1082' MSL. Trees 2248' from DER, 966' left of centerline, 100' AGL/1009' MSL. **Rwy 18**, aircraft on taxiway 36' from DER, 481' right of centerline, up to 21' AGL/928' MSL. Multiple trees beginning 406' from DER, 287' left of centerline, up to 49' AGL/959' MSL. Tower 5016' from DER, 201' left of centerline, 120' AGL/1078' MSL. **Rwy 27**, multiple trees beginning 7' from DER, 235' right of centerline, up to 83' AGL/983' MSL. Multiple trees beginning 558' from DER, 406' left of centerline, up to 57' AGL/957' MSL. **Rwy 36**, multiple trees beginning 86' from DER, 10' right of centerline, up to 87' AGL/987' MSL. Multiple trees beginning 1282' from DER, 53' left of centerline, up to 70' AGL/970' MSL.

## CRYSTAL (MIC)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 3 11041 (FAA)

TAKEOFF MINIMUMS: **Rwy 6R, 24L**, NA - Environmental. DEPARTURE PROCEDURE: **Rwy 6L**, Climb heading 051° to 2400 before turning right. **Rwys 14L, 14R** Climb heading 140° to 1900 before turning left.

NOTE: **Rwy 6L**, multiple trees beginning 514' from DER, 35' left of centerline, up to 66' AGL/945' MSL. Multiple trees beginning 836' from DER, 18' right of centerline, up to 76' AGL/945' MSL. **Rwy 14L**, multiple trees, sign and pole beginning 46' from DER, 125' left of centerline, up to 61' AGL/940' MSL. Multiple trees beginning 153' from DER, 4' right of centerline, up to 57' AGL/946' MSL. **Rwy 14R**, multiple trees, pole, and sign beginning 51' from DER, 295' left of centerline, up to 61' AGL/940' MSL. Multiple trees beginning 5' from DER, 121' right of centerline, up to 67' AGL/946' MSL. **Rwy 24R**, multiple trees beginning 1179' from DER, 110' left of centerline, up to 60' AGL/939' MSL. Multiple trees, sign and hangar beginning 41' from DER, 132' right of centerline, up to 62' AGL/941' MSL. Vehicles on road 903' from DER, 8' right of centerline, up to 17' AGL/896' MSL. **Rwy 32L**, multiple trees beginning 562' from DER, 70' left of centerline, up to 79' AGL/958' MSL. Multiple trees and sign beginning 70' from DER, 26' right of centerline, up to 81' AGL/960' MSL. Vehicles on road beginning 390' from DER, 11' left of centerline, up to 15' AGL/984' MSL. Power line 272' from DER, 443' left of centerline, 40' AGL/909' MSL. Multiple hangars beginning 88' from DER, 326' left of centerline, up to 20' AGL/889' MSL. **Rwy 32R**, multiple trees beginning 899' from DER, 50' left of centerline, up to 81' AGL/960' MSL. Tree and sign beginning 77' from DER, 149' right of centerline, up to 70' AGL/950' MSL. Vehicles on road beginning 537' from DER, 311' left of centerline, up to 15' AGL/894' MSL. Multiple hangars beginning 355' from DER, 490' right of centerline, up to 30' AGL/899' MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

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## MINNEAPOLIS, MN (CON'T)

FLYING CLOUD (FCM)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 6 14037 (FAA)

NOTE: **Rwy 10L**, tree, buildings, and poles beginning 78' from DER, 346' left of centerline, up to 45' AGL/945' MSL. Vehicle on road, sign, and trees beginning 645' from DER, 442' right of centerline, up to 37' AGL/937' MSL. **Rwy 10R**, buildings beginning 260' from DER, 321' right of centerline, up to 40' AGL/943' MSL. Trees, poles, and general utility beginning 331' from DER, 106' right of centerline, up to 38' AGL/939' MSL. **Rwy 28R**, tree, buildings, and general utility beginning 105' from DER, 353' right of centerline, up to 38' AGL/938' MSL. **Rwy 18**, buildings beginning 212' from DER, 318' right of centerline, up to 34' AGL/938' MSL. Vehicle on road 262' from DER, 195' left of centerline, 15' AGL/918' MSL. Trees beginning 401' from DER, 165' left of centerline, up to 51' AGL/961' MSL. **Rwy 36**, building 3' from DER, 478' left of centerline, 18' AGL/920' MSL. Trees beginning 426' from DER, 323' right of centerline, up to 61' AGL/951' MSL. Trees, buildings, poles, and windmill beginning 541' from DER, 302' left of centerline, up to 59' AGL/960' MSL.

## MINNEAPOLIS-ST. PAUL INTL / WOLD- CHAMBERLAIN (MSP)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 12 13122 (FAA)

TAKEOFF MINIMUMS: **Rwy 12L**, 300-1½ or std. w/min. climb of 207' per NM to 1100, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1300' prior to DER. **Rwy 35**, std. w/min. climb of 219' per NM to 2100.

DEPARTURE PROCEDURE: **Rwy 4**, climb heading 045° to 2100 before turning left. **Rwys 30L,30R**, climb heading 301° to 2100 before turning right.

**Rwy 35**, climb heading 350° to 2100 before proceeding on course

NOTE: **Rwy 4**, trees beginning 800' from DER, 301' left of centerline, up to 75' AGL/925' MSL. Rod on building 2528' from DER, 1174' left of centerline, 78' AGL/922' MSL. Fence beginning 13' from DER, 486' left of centerline, up to 6' AGL/860' MSL. Stack 4535' from DER, 480' left of centerline, 139' AGL/949' MSL. **Rwy 12L**, tree 1.1 NM from DER, 1691' left of centerline, 92' AGL/991' MSL. Light pole and camera on wall beginning 398' from DER, 561' right of centerline, up to 23' AGL/832' MSL. **Rwy 12R**, tree 1479' from DER, 561' left of centerline, 86' AGL/855' MSL. Obstruction light on pole 1002' from DER, 753' left of centerline, 53' AGL/852' MSL. **Rwy 17**, pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL. Building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL. Building 1956' from DER, 904' left of centerline, 61' AGL/866' MSL. Tree 2619' from DER, on centerline, 79' AGL/900' MSL. **Rwy 22**, trees beginning 2659' from DER, 867' right of centerline, 94' AGL/934' MSL. **Rwy 30L**, antenna on tower 3555' from DER, 1334' left of centerline, 116' AGL/935' MSL. **Rwy 30R**, billboard sign 1463' from DER, 848' right of centerline, 31' AGL/880' MSL. **Rwy 35**, trees beginning 2553' from DER, 770' right of centerline, 100' AGL/919' MSL. Trees beginning 1989' from DER, 194' left of centerline, up to 87' AGL/906' MSL. Buildings beginning 5.4 NM from DER, 1781' left of centerline, up to 889' AGL/1743' MSL.

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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

## MINOT, ND

MINOT INTL (MOT)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 3A 11097 (FAA)

TAKEOFF MINIMUMS: **Rwy 26**, 300-1½ or std. with a min. climb of 219' per NM to 2000.

DEPARTURE PROCEDURE: **Rwy 13**, climb via heading 128° to 2200 before turning right. **Rwy 26**, climb via heading 260° to 2300 before turning left.

NOTE: **Rwy 8**, fence 261' from DER, 415' right of centerline, 9' AGL/1669' MSL. **Rwy 26**, poles beginning 952' from DER, 523' left of centerline, up to 42' AGL/1761' MSL. Tower 1297' from DER, 405' right of centerline, 29' AGL/1751' MSL. Sign 1372' from DER, 323' left of centerline, 31' AGL/1750' MSL. Sign 1377' from DER, 832' right of centerline, 59' AGL/1778' MSL. Light pole 1419' from DER, 24' right of centerline, 36' AGL/1752' MSL. Trees beginning 1463' from DER, 73' right of centerline, up to 76' AGL/1795' MSL. Building 1432' from DER, 303' right of centerline, 33' AGL/1753' MSL. Tree 2071' from DER, 60' left of centerline, 53' AGL/1772' MSL. Tank 1.1 NM from DER, 1812' right of centerline, 140' AGL/1900' MSL. **Rwy 31**, trees beginning 2908' from DER, 560' left of centerline, up to 64' AGL/1778' MSL.

## MITCHELL, SD

MITCHELL MUNI (MHE)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 1A 15344 (FAA)

NOTE: **Rwy 18**, trees beginning 829' from DER, 505' right of centerline, up to 80' AGL/1386' MSL.

NAVAID 119' from DER, 409' left of centerline, 9' AGL/1308' MSL. **Rwy 36**, trees beginning 552' from DER, 575' right of centerline, up to 80' AGL/1328' MSL. NAVAIDs beginning 34' from DER, 100' right and left of centerline, up to 3' AGL/1286' MSL.

## MOBRIDGE, SD

MOBRIDGE MUNI(MBG)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 1 11181 (FAA)

TAKEOFF MINIMUMS: **Rwys 17,35,NA** - environmental

DEPARTURE PROCEDURE: **Rwy 12**, climb heading 118° to 2600 before turning left.

NOTE: **Rwy 12**, tower 2587' from DER, 651' right of centerline, 40' AGL/ 1810' MSL. Pole 3567' from DER, 12' right of centerline, 11' AGL/ 1790' MSL. Tree 1495' from DER, 230' right of centerline, 29' AGL/ 1738' MSL. Trees and poles beginning 1698' from DER, 160' left of centerline, up to 75' AGL/ 1811' MSL. Terrain and road beginning 153 from DER, 307' left of centerline, up to 17' AGL/1749' MSL. **Rwy 30**, terrain and road beginning 36' from DER, left to right across centerline, up to 17' AGL/1710' MSL.

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**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND  
DIVERSE VECTOR AREA (RADAR VECTORS)**

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**MOHALL, ND**

HOHALL MUNI (HBC)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 11293 (FAA)

NOTE: **Rwy 13**, vehicles on roadway, 361' from DER, left and right of centerline, up to 15' AGL/1664' MSL.

**MONTEVIDEO, MN**

MONTEVIDEO-CHIPPEWA COUNTY (MVE)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG-A 15232 (FAA)

TAKEOFF MINIMUMS: **Rwy 3, 21**, NA-Environmental.  
DEPARTURE PROCEDURE: **Rwy 14**, climb runway heading to 1500 before turning.

**MOORHEAD, MN**

MOORHEAD MUNI (JKJ)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 11293 (FAA)

NOTE: **Rwy 12**, building 263' from DER, 495' left of centerline, 15' AGL/932' MSL. Tree 657' from DER, 449' left of centerline, 114' AGL/1031' MSL. Trees 1463' from DER, 711' left of centerline, up to 69' AGL/986' MSL. Poles beginning 868' from DER, left and right of centerline, up to 48' AGL/965' MSL. **Rwy 30**, tree 119' from DER, 104' left of centerline, 4' AGL/918' MSL. Poles beginning 1342' from DER, 855' right of centerline, up to 55' AGL/969' MSL.

**MOOSE LAKE, MN**

MOOSE LAKE CARLTON COUNTY (MZH)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 94006 (FAA)

TAKEOFF MINIMUMS: **Rwys 4, 22**, 300-1.

**MORA, MN**

MORA MUNI (JMR)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 15288 (FAA)

NOTE: **Rwy 17**, light pole 16' from DER, 17' right of centerline, 3' AGL/1012' MSL. Terrain 27' from DER, 311' from DER, 1012' MSL. Vehicle on road, building, and trees beginning 162' from DER, 410' right of centerline, up to 33' AGL/1034' MSL. Trees beginning 208' from DER, 443' left of centerline, up to 44' AGL/1045' MSL. Trees beginning 644' from DER, 455' right of centerline, up to 53' AGL/1054' MSL. Trees beginning 864' from DER, 178' right of centerline, up to 76' AGL/1068' MSL. Trees beginning 1055' from DER, 37' left of centerline, up to 62' AGL/1063' MSL. Trees beginning 1619' from DER, 491' right of centerline, up to 72' AGL/1074' MSL. Tree 1975' from DER, 405' left of centerline, 68' AGL/1069' MSL. Tree 2054' from DER, 2' right of centerline, 68' AGL/1069' MSL. Trees beginning 2237' from DER, crossing centerline, up to 88' AGL/1089' MSL. Trees beginning 2645' from DER, 777' right of centerline, up to 89' AGL/1105' MSL. **Rwy 35**, terrain beginning 168' from DER, 290' left of centerline, up to 1018' MSL. Terrain 178' from DER, 383' right of centerline, 1005' MSL. Terrain, vehicle on road, and trees beginning 349' from DER, 387' right of centerline, up to 58' AGL/1059' MSL. Trees beginning 441' from DER, 388' left of centerline, up to 46' AGL/1057' MSL. Trees beginning 634' from DER, 354' left of centerline, up to 70' AGL/1071' MSL. Trees beginning 617' from DER, 427' right of centerline, up to 66' AGL/1067' MSL. Trees beginning 1032' from DER, 267' left of centerline, up to 68' AGL/1086' MSL. Trees beginning 1563' from DER, 582' right of centerline, up to 61' AGL/1072' MSL. Tree 1791' from DER, 964' left of centerline, 66' AGL/1097' MSL. Trees beginning 2085' from DER, crossing centerline, up to 73' AGL/1104' MSL.

**MORRIS, MN**

MORRIS MUNI-CHARLIE SCHMIDT FLD (MOX)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 08045 (FAA)

TAKEOFF MINIMUMS: **Rwys 4, 22**, NA-Environmental.  
NOTE: **Rwy 32**, Trees 2888' from DER, 1125' left of centerline, 100' AGL/1209' MSL.

**NEW ULM, MN**

NEW ULM MUNI (ULM)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG-A 15260 (FAA)

TAKEOFF MINIMUMS: **Rwy 4, 22**, NA-Environmental.  
NOTE: **Rwy 33**, tree 628' from DER, 417' right of centerline, 33' AGL/1034' MSL. Tree 1457' from DER, 650' left of centerline, 38' AGL/1047' MSL. Ground 4' from DER, 154' left of centerline, 1007' MSL. **Rwy 15**, tree 1935' from DER, 610' left of centerline, 100' AGL/1099' MSL.

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**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND  
DIVERSE VECTOR AREA (RADAR VECTORS)**



# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

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## NORTHWOOD, ND

NORTHWOOD MUNI-VINCE FIELD (4V4)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 12040 (FAA)

NOTE: **Rwy 8**, trees beginning 3317' from DER, 737' left of centerline, up to 100' AGL/1214' MSL. **Rwy 26**, trees beginning 1171' from DER, left and right of centerline, up to 100' AGL/1214' MSL.

## OAKES, ND

OAKES MUNI (2D5)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 11125 (FAA)

NOTE: **Rwy 12**, trees beginning 2071' from DER, left and right of centerline, up to 100' AGL/1459' MSL.  
**Rwy 30**, trees beginning 2509' from DER, 744' left of centerline, up to 100' AGL/1454' MSL.

## OLIVIA, MN

OLIVIA RGNL (OVL)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 86044 (FAA)

TAKEOFF MINIMUMS: **Rwy 11**, 300-1.

## ORR, MN

ORR RGNL (ORB)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 2 12152 (FAA)

TAKEOFF MINIMUMS: **Rwy 13**, 300-1½ or std. w/ min. climb of 260' per NM to 1600.

DEPARTURE PROCEDURE: **Rwy 13**, climb heading 136° to 1900 before turning right.

NOTE: **Rwy 13**, trees beginning 630' from DER, 476' right of centerline, up to 80' AGL/1389' MSL. Trees beginning 759' from DER, 361' left of centerline, up to 80' AGL/1459' MSL. Trees beginning 1.1 NM from DER, 1343' right of centerline, up to 80' AGL/1499' MSL. **Rwy 31**, trees beginning 366' from DER, 162' left of centerline, up to 80' AGL/429' MSL. Trees beginning 867' from DER, 719' right of centerline, up to 80' AGL/1429' MSL. Trees beginning 5401' from DER, 148' right of centerline, up to 80' AGL/1449' MSL.

## ORTONVILLE, MN

ORTONVILLE MUNI-MARTINSON FIELD (VVV)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 81274 (FAA)

TAKEOFF MINIMUMS: **Rwy 16**, 300-1 or std. with a min. climb of 210' per NM to 1300.

## OWATONNA, MN

OWATONNA DEGNER RGNL (OWA)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 2 97030 (FAA)

DEPARTURE PROCEDURE: **Rwy 12**, climb runway heading to 1500 before turning on course.

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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

## PARK RAPIDS, MN

PARK RAPIDS MUNI-KONSKHOK FIELD (PKD)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 16175 (FAA)

DEPARTURE PROCEDURE: **Rwy 36**, climb heading 356° to 2000 before turning right.

NOTE: **Rwy 13**: Pole 880' from DER, 711' left of centerline, 26' AGL/1467' MSL. **Rwy 18**: Trees beginning 1371' from DER, left and right of centerline, up to 1549' MSL. Trees beginning 3080' from DER, left and right of centerline, up to 1539' MSL. **Rwy 31**: Vehicles on road beginning 66' from DER, right and left of centerline, up to 1462' MSL. Trees beginning 359' from DER, 454' right of centerline, up to 1468' MSL. Trees beginning 799' from DER, 236' left of centerline, up to 1479' MSL. Trees beginning 854' from DER, 296' right of centerline, up to 1476' MSL. **Rwy 36**: Trees and buildings beginning 575' from DER, left and right of centerline, up to 1549' MSL. Trees beginning 2802' from DER, 95' right of centerline, up to 1559' MSL.

## PARKSTON, SD

PARKSTON MUNI (8V3)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 13290 (FAA)

NOTE: **Rwy 15**, poles beginning 628' from DER, left and right of centerline, up to 37' AGL/1452' MSL. Transmission towers beginning 758' from DER, left and right of centerline, up to 29' AGL/1444' MSL. Train on railroad, 777' from DER, 573' left of centerline, 24' AGL/1439' MSL. Building 1189' from DER, 694' left of centerline, 35' AGL/1450' MSL. Trees beginning 1227' from DER, 268' left of centerline, up to 36' AGL/1459' MSL. **Rwy 33**, trees beginning 300' from DER, left and right of centerline, up to 63' AGL/1478' MSL. Poles beginning 662' from DER, left and right of centerline, up to 48' AGL/1463' MSL.

Transmission towers beginning 896' from DER, left and right of centerline, up to 44' AGL/1459' MSL. Lighted support structures beginning 1076' from DER, left and right of centerline, up to 48' AGL/1463' MSL. Fences beginning 17' from DER, left and right of centerline, up to 6' AGL/1421' MSL. Silo, 1677' from DER, 43' AGL/1458' MSL. Vehicle on road, 54' from DER, 14' AGL/1459' MSL.

## PAYNESVILLE, MN

PAYNESVILLE MUNI (PEX)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 11013 (FAA)

TAKEOFF MINIMUMS: **Rwy 11**, 300-2 or std. w/min climb of 239' per NM to 1800. NA at night. **Rwy 29**, 300-1½ or std. w/min climb of 210' per NM to 1500. NA at night.

NOTE: **Rwy 11**, trees 3507' from DER, 1179' right of centerline, 60' AGL/1329' MSL. Antenna 1.6 NM from DER, 1705' left of centerline, 200' AGL/1470' MSL. Vehicle on road beginning 2216' from DER, left and right of centerline, 15' AGL/1244' MSL. Terrain 51' from DER, left and right of centerline 1188' MSL.

**Rwy 29**, trees 1328' from DER, 533' right of centerline, 60' AGL/1249' MSL. Trees 2062' from DER, 940' right of centerline, 60' AGL/1249' MSL. Buildings 619' from DER, 601' right of centerline, 20' AGL/1209' MSL. Power lines 1.3 NM from DER, 2625' left of centerline, 200' AGL/1399' MSL.



## TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND



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## DIVERSE VECTOR AREA (RADAR VECTORS)

**PEMBINA, ND**

## PEMBINA MUNI (PMB)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

ORIG 85325 (FAA)

DEPARTURE PROCEDURE: **Rwy 33**, climb runway  
heading 3200 before turning left.**PERHAM, MN**

## PERHAM MUNI (16D)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

AMDT 1 13234 (FAA)

DEPARTURE PROCEDURE: **Rwy 13**, climb heading  
128° to 1900 before turning left.NOTE: **Rwy 13**, REILs 8' from DER, 79' right of  
centerline, 2' AGL/1373' MSL. Trees beginning 6' from  
DER, 350' right of centerline, up to 50' AGL/1386' MSL  
and trees beginning 138' from DER, 115' right of  
centerline, up to 50' AGL/1433' MSL. Light 8' from  
DER, 79' left of centerline, 2' AGL/1373' MSL. Trees  
beginning 261' from DER, 251' left of centerline, up to  
50' AGL/1387' MSL. **Rwy 31**, REILs 9' from DER, 79'  
right of centerline, 2' AGL/1378' MSL. Ground 8' from  
DER, 223' right of centerline, 1377' MSL. Poles and  
tower beginning 627' from DER, 570' right of  
centerline, up to 43' AGL/1430' MSL. Light, 8' from  
DER, 79' left of centerline, 2' AGL/1377' MSL. Vehicles  
on road beginning 431' from DER, 32' left of centerline,  
up to 18' AGL/1394' MSL. Trees, pole, and building  
beginning 93' from DER, 377' left of centerline, up to  
50' AGL/1409' MSL.**PHILIP, SD**

## PHILIP (PHP)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

ORIG 14037 (FAA)

TAKEOFF MINIMUMS: **Rwys 5, 23**, NA-Environmental.NOTES: **Rwy 12**, tree and fence beginning 2' from  
DER, 334' right of centerline, up to 25' AGL/2204'  
MSL. Sign, fence and trees beginning 27' from DER,  
127' left of centerline, up to 30' AGL/2212' MSL. **Rwy  
30**, fence beginning 174' from DER, 286' left of  
centerline, up to 10' AGL/2219' MSL. Fence and  
vehicles on road beginning 3' from DER, 448' right of  
centerline, up to 15' AGL/2219' MSL. Poles beginning  
950' from DER, 308' right of centerline, up to 36'  
AGL/2250' MSL. Terrain beginning 2598' from DER,  
251' right of centerline, up to 2277' MSL. Road  
beginning 4019' from DER, 1413' right of centerline, up  
to 15' AGL/2322' MSL.**PIERRE, SD**

## PIERRE RGNL (PIR)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

AMDT 2 85115 (FAA)

TAKEOFF MINIMUMS: **Rwy 25**, 300-1.**PINE RIDGE, SD**

## PINE RIDGE (IEN)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

AMDT 1 12208 (FAA)

TAKEOFF MINIMUMS: **Rwy 6, 24**, NA- closed indefinitely.  
**Rwy 12**, 300-1 or std. w/min. climb of 450' per NM to  
3700. **Rwy 30**, 300-1 or std. w/min. climb of 407' per NM  
to 3600.NOTE: **Rwy 12**, vehicle on road 10' from DER, left to right  
of centerline, 15' AGL/3347' MSL. Fence 200' from DER,  
350' right of centerline, 10' AGL/3338' MSL. **Rwy 30**,  
tree 638' from DER, 492' right of centerline, 50'  
AGL/3339' MSL. Vehicle on road 10' from DER, right of  
centerline, 15' AGL/3316' MSL. Vehicle on road 407'  
from DER, right to left of centerline, 15' AGL/3313' MSL.**PINECREEK, MN**

## PINEY PINECREEK BORDER (48Y)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

ORIG 12320 (FAA)

NOTE: **Rwy 15**, poles beginning 459' from DER, 415' left  
of centerline, up to 32' AGL/1092' MSL. Airfield light 8'  
from DER, 45' right of centerline, 8' AGL/1068' MSL.  
Vehicle on road 900' from DER, left and right of  
centerline, 15' AGL/1078' MSL. **Rwy 33**, trees beginning  
11' from DER, 47' left of centerline, up to 100' AGL/1084'  
MSL. Trees beginning 167' from DER, 406' right of  
centerline, up to 100' AGL/1101' MSL.**PINE RIVER, MN**

## PINE RIVER RGNL (PWC)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

ORIG 12068 (FAA)

TAKEOFF MINIMUMS: **Rwy 16**, 300-1½ or std. w/min.  
climb gradient of 218' per NM to 1000.DEPARTURE PROCEDURE: **Rwy 16**, climb heading 160°  
to 1800 before turning right.NOTE: **Rwy 16**, trees 2' from DER, 181' right of centerline,  
up to 5' AGL/1296' MSL. Trees beginning 10' from DER,  
113' left of centerline, up to 67' AGL/1366' MSL. Road  
beginning 63' from DER, 381' right of centerline, up to 15'  
AGL/1310' MSL. Poles beginning 611' from DER, 424'  
right of centerline, 26' AGL/1325' MSL. REIL 50' from  
DER, 76' right of centerline, 7' AGL/1298' MSL. Trees  
beginning 1267' from DER, 15' right of centerline, up to  
100' AGL/1449' MSL. **Rwy 34**, trees beginning 13' from  
DER, 121' right of centerline, up to 65' AGL/1374' MSL.  
Trees beginning 1059' from DER, left and right of  
centerline, up to 101' AGL/1400' MSL. REIL 50' from  
DER, 77' left of centerline, 7' AGL/1298' MSL. Poles  
beginning 522' from DER, 520' left of centerline, up to 35'  
AGL/1334' MSL. Buildings beginning 373' from DER,  
465' left of centerline, up to 18' AGL/1327' MSL.**PIPESTONE, MN**

## PIPESTONE MUNI (PQN)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

ORIG 08045 (FAA)

TAKEOFF MINIMUMS: **Rwys 9,27**, NA-Environmental.NOTE: **Rwy 18**, Trees beginning 3811' from DER, 854'  
right of centerline, up to 100' AGL/1859' MSL.

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## TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND



## DIVERSE VECTOR AREA (RADAR VECTORS)



## TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND



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## DIVERSE VECTOR AREA (RADAR VECTORS)

**PRESTON, MN**

FILLMORE COUNTY (FKA)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 98113 (FAA)

TAKEOFF MINIMUMS: **Rwys 11,29**, 300-1.**PRINCETON, MN**

PRINCETON MUNI (PNM)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 1 05132 (FAA)

NOTE: **Rwy 15**, trees 982' from DER, 335' right of centerline, 50' AGL/1029' MSL. Trees 1449' from DER, 387' left of centerline, 50' AGL/1029' MSL. **Rwy 33**, barn 1159' from DER, 780' right of centerline, 50' AGL/1139' MSL, multiple trees, terrain, and road beginning 36' from DER, 84' right of centerline, up to 50' AGL/1045' MSL.

**RAPID CITY, SD**

RAPID CITY RGNL (RAP)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 7 11069 (FAA)

DEPARTURE PROCEDURE: **Rwy 5**, climb on heading between 255° CW to 210° from DER, or min. climb of 240' per NM to 8900 for all other courses. **Rwy 14**, climb on heading between 325° CW to 210° from DER, or min. climb of 245' per NM to 8900 for all other courses. **Rwy 23**, climb on heading between 210° CCW to 055° from DER, or min. climb of 245' per NM to 8900 for all other courses. **Rwy 32**, climb on heading 324° to 3700 for courses between 255° CW to 140° from DER, or min. climb of 244' per NM to 8900 for all other courses.

NOTE: **Rwy 5**, fence 132' from DER, 249' left of centerline, up to 13' AGL/3215' MSL. Trees beginning 16' from DER, 188' right of centerline, up to 25' AGL/3234' MSL. Trees beginning 11' from DER, 111' left of centerline, up to 25' AGL/3234' MSL. **Rwy 14**, trees beginning 136' from DER, 123' right of centerline, up to 25' AGL/3174' MSL. Trees beginning 33' from DER, 229' left of centerline, up to 25' AGL/3164' MSL. **Rwy 23**, vehicle on road 36' from DER, 121' left of centerline, up to 15' AGL/3175' MSL. Hanger 201' from DER, 298' left of centerline, up to 30' AGL/3193' MSL. Fence 333' from DER, 255' right of centerline, up to 14' AGL/3184' MSL. Trees beginning 199' from DER, 175' right of centerline, up to 25' AGL/3194' MSL. Trees beginning 158' from DER, 159' left of centerline, up to 25' AGL/3194' MSL. **Rwy 32**, fence 1001' from DER, 750' right of centerline, up to 13' AGL/3233' MSL. Obstruction light 661' from DER, 242' left of centerline, up to 43' AGL/3213' MSL. Trees beginning 31' from DER, 262' right of centerline, up to 25' AGL/3254' MSL. Trees beginning 61' from DER, 146' left of centerline, up to 25' AGL/3204' MSL.

**RAY S. MILLER AAF (KRYM)**

CAMP RIPLEY, MN

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 2, 09155

TAKEOFF OBSTACLES: **Rwy 13**, Terrain 1270' MSL, 73' from DER, 8' left and right of centerline. Vehicle 15' AGL/1180' MSL, 765' from DER, 638' left of centerline. **Rwy 31**, Terrain 1273' MSL, 54' from DER, 9' left and right of centerline. Trees 64' AGL/1282' MSL, 798' from DER, 325' left and right of centerline.

**RED WING, MN**

RED WING RGNL (RGK)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 2 11013 (FAA)

TAKEOFF MINIMUMS: **Rwy 9**, std. w/ min. climb of 299' per NM to 1700

NOTE: **Rwy 9**, pole 1080' from DER, 554' left of centerline, 35' AGL/812' MSL. Trees beginning 1375' from DER, 387' left of centerline, up to 75' AGL/1114' MSL. Trees beginning 1231' from DER, 397' right of centerline, up to 49' AGL/1108' MSL. **Rwy 27**, trees beginning 3451' from DER, 584' left of centerline, up to 100' AGL/879' MSL. Trees beginning 406' from DER, 439' right of centerline, up to 100' AGL/879' MSL.

**REDWOOD FALLS, MN**

REDWOOD FALLS MUNI (RWF)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 09071 (FAA)

TAKEOFF MINIMUMS: **Rwys 5, 23**, NA-Environmental. NOTE: **Rwy 12**, numerous buildings beginning 388' from DER, 376' right of centerline, up to 13' AGL/1052' MSL. Numerous fences beginning 6' from DER, 329' right of centerline, up to 13' AGL/1052' MSL. Tree 62' from DER, 444' left of centerline, 11' AGL/1040' MSL. **Rwy 30**, multiple trees beginning 865' from DER, 401' right of centerline, up to 100' AGL/1119' MSL. Vehicle on road 128' from DER, 306' right of centerline, 15' AGL/1027' MSL.

**ROCHESTER, MN**

ROCHESTER INTL (RST)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 09015 (FAA)

NOTE: **Rwy 2**, road 73' from DER, 385' right of centerline, 10' AGL/1292' MSL. Tree 4377' from DER, 1132' right of centerline, 100' AGL/1399' MSL. Road 268' from DER, 366' right of centerline, 10' AGL/1290' MSL. **Rwy 13**, tree 1498' from DER, 840' right of centerline, 44' AGL/1348' MSL. **Rwy 20**, pole 259' from DER, 407' right of centerline, 23' AGL/1338' MSL. Roads beginning 1' from DER, 231' right of centerline, up to 10' AGL/1327' MSL. **Rwy 31**, tree 4760' from DER, 1103' left of centerline, 100' AGL/1389' MSL.

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## TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND



## DIVERSE VECTOR AREA (RADAR VECTORS)

**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND**

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**DIVERSE VECTOR AREA (RADAR VECTORS)****ROLLA, ND****ROLLA MUNI (06D)**TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

ORIG 11013 (FAA)

TAKEOFF MINIMUMS: **Rwys 7, 25**, NA-Environmental.  
NOTE: **Rwy 14**, vehicle on road 49' from DER, 23' left of centerline, 15' AGL/1830' MSL. Trees beginning 1232' from DER, 209' left of centerline, up to 80' AGL/1867' MSL. **Rwy 32**, trees beginning 2207' from DER, 59' left of centerline, up to 80' AGL/1929' MSL. Trees beginning 651' from DER, 80' right of centerline, up to 80' AGL/1939' MSL.

**ROSEAU, MN****ROSEAU MUNI-RUDY BILLBERG FIELD (ROX)**TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

ORIG 07242 (FAA)

NOTE: **Rwy 16**, building 258' from DER, 505' right of centerline, 24' AGL/1078' MSL. Tree 1582' from DER, 337' left of centerline, 47' AGL/1101' MSL. **Rwy 34**, truck on road 41' from DER, 511' left of centerline, 15' AGL/1069' MSL.

**RUGBY, ND****RUGBY MUNI (RUG)**TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

AMDT 1 14205 (FAA)

TAKEOFF MINIMUMS: **Rwy 12**, 300-1¼ or std. w/min. climb of 300' per NM to 2000.

NOTE: **Rwy 12**, trees beginning 1186' from DER, 432' left of centerline, up to 67' AGL/1620' MSL. Elevators beginning 1.4 NM from DER, 819' right of centerline, up to 246' AGL/1804' MSL. **Rwy 30**, edge light 11' from DER, 9' right of centerline, 1' AGL/1534' MSL. Edge light 11' from DER, 20' left of centerline, 1' AGL/1534' MSL.

**RUSH CITY, MN****RUSH CITY RGNL (ROS)**TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

ORIG 11041 (FAA)

NOTE: **Rwy 16**, multiple trees beginning 27' from DER, 315' left of centerline, up to 100' AGL/ 969' MSL. Multiple trees beginning 838' from DER, 226' right of centerline, up to 100' AGL/ 997' MSL. Pole 1712' from DER, 811' left of centerline, 50' AGL/ 970' MSL.

**Rwy 34**, trees 91' from DER, 472' left of centerline, 100' AGL/ 939' MSL. Trees 1173' from DER, 375' right of centerline, 100' AGL/ 1029' MSL. Trees 2250' from DER, 928' left of centerline, 100' AGL/ 1009' MSL.

**RUSHFORD, MN****RUSHFORD MUNI (55Y)**TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

AMDT 2 12096 (FAA)

DEPARTURE PROCEDURE: **Rwy 16**, climb heading 161° to 1800 before turning left.

NOTE: **Rwy 16**, trees beginning 132' from DER, 448' left of centerline, up to 100' AGL/1280' MSL. Trees beginning 899' from DER, 685' right of centerline, up to 100' AGL/1319' MSL. **Rwy 34**, Trees beginning 308' from DER, 147' right of centerline, up to 100' AGL/1299' MSL. Trees beginning 761' from DER, 34' left of centerline, up to 100' AGL/1319' MSL. Trees beginning 1169' from DER, 23' right of centerline, up to 100' AGL/1344' MSL.

**ST. CLOUD, MN****ST. CLOUD RGNL (STC)**TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

ORIG 09239 (FAA)

TAKEOFF MINIMUMS: **Rwy 5**, 300-1¼ or std. w/ min. climb of 201' per NM to 1300 or alternatively, with standard TAKEOFF minimums and a normal 200'/NM climb gradient, TAKEOFF must occur no later than 1100' prior to DER.

NOTE: **Rwy 5**, tower 6201' from DER, 1416' left of centerline, 149' AGL/1179' MSL. Multiple trees beginning 17' from DER, 373' right of centerline, up to 59' AGL/1081' MSL. Multiple trees beginning 1752' from DER, 56' left of centerline, up to 80' AGL/1102' MSL.

**Rwy 13**, tree 1654' from DER, 884' right of centerline, 61' AGL/1078' MSL. Tree 1265' from DER, 794' left of centerline, 42' AGL/1059' MSL. **Rwy 23**, trees 2109' from DER, 29' right of centerline, up to 61' AGL/1082' MSL. Trees 1725' from DER, 93' left of centerline, up to 55' AGL/1076' MSL. Fence 74' from DER, 216' left of centerline, 2' AGL, 1023' MSL. **Rwy 31**, terrain beginning 29' from DER, 50' right of centerline, up to 1083' MSL. Terrain beginning 107' from DER, 7' left of centerline, up to 1060' MSL.

**ST. JAMES, MN****ST. JAMES MUNI (JYG)**TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

ORIG 94342 (FAA)

DEPARTURE PROCEDURE: **Rwy 15**, climb to 1900 before turning eastbound.

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**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND****DIVERSE VECTOR AREA (RADAR VECTORS)**

# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

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## ST. PAUL MN

### LAKE ELMO (21D)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

AMDT 1A 15148 (FAA)

TAKEOFF MINIMUMS: **Rwy 14**, 400-2½ or std. w/min. climb of 233' per NM to 1400.

DEPARTURE PROCEDURE: **Rwy 4**, climb heading 038° to 1600 before turning right.

NOTE: **Rwy 4**, trees beginning at DER, 458' right of centerline, up to 100' AGL/1039' MSL. Trees and buildings beginning 94' from DER, 377' left of centerline up to 100' AGL/1049' MSL. **Rwy 14**, trees and vehicles on road beginning 152' from DER, left and right of centerline, up to 100' AGL/933' MSL. Trees beginning 1106' from DER, right and left of centerline, up to 100' AGL/1005' MSL. **Rwy 22**, buildings and pole beginning 100' from DER, 476' right of centerline, up to 39' AGL/962' MSL. Trees beginning 1912' from DER, left and right of centerline, up to 100' AGL/986' MSL. **Rwy 32**, sign 13' from DER, 154' right of centerline, 3' AGL/924' MSL. Pole 388' from DER, 388' left of centerline, 34' AGL/951' MSL. Poles and trees beginning 876' from DER, 73' right of centerline, up to 100' AGL/1004' MSL.

## ST. PAUL DOWNTOWN HOLMAN FIELD (STP)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 8 11349 (FAA)

TAKEOFF MINIMUMS: **Rwy 9**, std. w/min. climb of 340' per NM to 1300. **Rwy 13**, std. w/min. climb of 230' per NM to 1500. **Rwy 27**, 600-2 or std. w/min. climb of 442' per NM to 1500. **Rwy 31**, NA-obstacles. **Rwy 32**, std. w/min. climb of 340' per NM to 3000.

DEPARTURE PROCEDURE: **Rwy 9**, climb heading 088° to 1400 before proceeding on course. **Rwy 13**, climb heading 125° to 1300 before proceeding on course. **Rwy 14**, climb heading 143° to 1400 before proceeding on course. **Rwy 27**, climb heading 268° to 1700 before proceeding on course. **Rwy 32**, climb heading 323° to 1400 before proceeding on course.

NOTE: **Rwy 9**, mobile crane 1362' from DER, 124' left of centerline, 68' AGL/758' MSL. Trees and silo 1464' from DER, 178' right of centerline, up to 116' AGL/816' MSL. Trees and pole beginning 1.1 NM from DER, left and right of centerline, up to 100' AGL/1099' MSL. **Rwy 13**, tree and tower beginning 1125' from DER, 609' left of centerline, up to 67' AGL/767' MSL. Tree, pole, vent on building, stacks, and obstruction light on stack beginning 1672' from DER, 55' right of centerline, up to 120' AGL/820' MSL. Trees beginning 1.9 NM from DER, 2938' left of centerline, up to 100' AGL/1020' MSL. **Rwy 14**, trees, obstruction light on DME antenna, and pole beginning 290' from DER, 1' right of centerline, up to 129' AGL/819' MSL. Trees and pole beginning 1099' from DER, 6' left of centerline, up to 87' AGL/777' MSL. **Rwy 27**, trees, light pole, and flagpole beginning 617' from DER, 198' left of centerline, up to 119' AGL/829' MSL. Obstruction light on antenna, buildings, tower, and tree beginning 810' from DER, 26' right of centerline, up to 165' AGL/955' MSL. Trees and building beginning 3886' from DER, 120' left of centerline, up to 84' AGL/1014' MSL. Tower 1.7 NM from DER, 633' left of centerline, 569' AGL/1279' MSL. **Rwy 32**, vehicle on road, trees, railroad, poles, and navaid beginning 179' from DER, 267' right of centerline, up to 58' AGL/758' MSL. Vehicle on road, railroad, and trees beginning 192' from DER, up to 59' AGL/759' MSL. Navaid 257' from DER, on centerline, 26' AGL/726' MSL. Trees, poles, buildings, and tower beginning 3674' from DER, 616' right of centerline, up to 157' AGL/ 973' MSL. Trees, buildings, tower, sign, and stack beginning 1924' from DER, 378' left of centerline, up to 143' AGL/969' MSL.

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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

## SAUK CENTRE, MN

### SAUK CENTRE MUNI (D39)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

ORIG 11237 (FAA)

TAKEOFF MINIMUMS: **Rwys 8, 26, NA** - Environmental.

NOTE: **Rwy 14**, tree 1269' from DER, 39' right of centerline, 80' AGL/1319' MSL. **Rwy 32**, tree 1105' from DER, 136' left of centerline, 80' AGL/1299' MSL.

## SILVER BAY, MN

### SILVER BAY MUNI (BFW)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

AMDT 1 10322 (FAA)

TAKEOFF MINIMUMS: **Rwy 7**, 500-3 or std. w/min. climb of 240' per NM to 1700. **Rwy 25**, 400-2½ or std. w/min. climb of 215' per NM to 1600 or alternatively, with std. takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1600' prior to DER.

DEPARTURE PROCEDURE: **Rwy 7**, Climb heading 087° to 1700 before turning left.

NOTE: **Rwy 7**, vehicles on roadway 4' from DER, 257' right of centerline, up to 16' AGL/1155' MSL. Trees beginning 7' from DER, 104' right of centerline, up to 100' AGL/1509' MSL. Hangar 268' from DER, 268' left of centerline, 30' AGL/1149' MSL. Trees beginning 1088' from DER, 774' left of centerline, up to 100' AGL/1549' MSL. **Rwy 25**, trees beginning 170' from DER, 152' right of centerline, up to 100' AGL/1419' MSL. Trees beginning 4' from DER, 164' left of centerline, up to 100' AGL/1229' MSL.

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## TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND



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## DIVERSE VECTOR AREA (RADAR VECTORS)

## SIOUX FALLS, SD

JOE FOSS FIELD (FSD)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 8 13234 (FAA)

TAKEOFF MINIMUMS: **Rwy 33**, 200-1¼ or std. w/ min. climb of 343' per NM to 1700.

DEPARTURE PROCEDURE: **Rwy 3**, climb heading 030° to 2300 before turning eastbound. **Rwy 9**, climb heading 098° to 2000, then left turn direct FSD VORTAC, continue climb in FSD VORTAC holding pattern (hold NW, left turns, 147° inbound) to cross FSD VORTAC at or above MEA for route of flight: **Rwy 15**, climb heading 150° to 2000, then right turn direct FSD VORTAC, continue climb in FSD VORTAC holding pattern (hold NW, left turns, 147° inbound) to cross FSD VORTAC at or above MEA for route of flight. **Rwy 21**, climb heading 210° to 2200 before turning eastbound. **Rwy 27**, climb heading 278° to 2300 before turning eastbound. **Rwy 33**, climb heading 330° to 2300 before turning eastbound.

NOTE: **Rwy 3**, vehicles on road 20' from DER, 448' left of centerline, 21' AGL/1441' MSL. Light support 24' from DER, 85' left of centerline, 11' AGL/1431' MSL. Trees beginning 1200' from DER, 682' left of centerline, up to 42' AGL/1462' MSL. Trees beginning 2085' from DER, 908' right of centerline, up to 64' AGL/1493' MSL. **Rwy 9**, vehicles on road beginning 50' from DER, 474' left of centerline, 18' AGL/1438' MSL. Multiple poles beginning 1257' from DER, 22' left of centerline, up to 56' AGL/1476' MSL. Navaid and windsock beginning 324' from DER, 460' right of centerline, up to 13' AGL/1433' MSL. Multiple poles beginning 1806' from DER, 136' right of centerline, up to 55' AGL/1475' MSL. Crane, buildings, antenna on building, trees, and multiple transmission towers beginning 1949' from DER, 462' right of centerline, up to 122' AGL/1562' MSL. **Rwy 15**, light support 10' from DER, 39' left of centerline 4' AGL/1424' MSL. Multiple poles, buildings, trees, and transmission towers beginning 553' from DER, 220' left of centerline, up to 100' AGL/1559' MSL. Vehicles on road beginning 194' from DER, 551' right of centerline, 16' AGL/1436' MSL. Multiple poles and trees beginning 1330' from DER, 19' right of centerline, up to 88' AGL/1536' MSL. **Rwy 21**, sign 7' from DER, 304' left of centerline, 6' AGL/1426' MSL. Vehicles on road 393' from DER, 531' left of centerline, 15' AGL/1435' MSL. Multiple trees beginning 866' from DER, 149' left of centerline, up to 100' AGL/1529' MSL. Vehicles on road 385' from DER, 456' right of centerline, 17' AGL/1437' MSL. Multiple trees beginning 424' from DER, 25' right of centerline, up to 84' AGL/1504' MSL. **Rwy 27**, sign 27' from DER, 240' right of centerline, 5' AGL/1425' MSL. Trees beginning 1423' from DER, 793' right of centerline, up to 76' AGL/1496' MSL. Navaid beginning 1818' from DER, 831' left of centerline, 50' AGL/1471' MSL. Trees beginning 2158' from DER, 386' left of centerline, up to 76' AGL/1496' MSL. **Rwy 33**, navaid 34' from DER, 115' right of centerline, 11' AGL/1431' MSL. Multiple poles and trees beginning 3491' from DER, 15' right of centerline, up to 100' AGL/1579' MSL. Navaid 34' from DER, 115' left of centerline, 11' AGL/1431' MSL. Vehicles on road beginning 116' from DER, 496' left of centerline, 21' AGL/1441' MSL. Tank, navaid, poles, trees, and towers beginning 2295' from DER, 80' left of centerline, up to 100' AGL/1610' MSL.

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## TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND



## DIVERSE VECTOR AREA (RADAR VECTORS)

## SISSETON, SD

SISSETON MUNI (8D3)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 16203 (FAA)

TAKEOFF MINIMUMS: **Rwy 04,22**, NA-Environmental.DEPARTURE PROCEDURE: **Rwy 34**, climb heading 344° to 1600 before turning left.

NOTE: **Rwy 16**, poles beginning 1462' from DER, 709' left of centerline, 1216' MSL. Fence beginning 51' from DER, crossing left to right, 5' AGL/1166' MSL. Trees beginning 934' from DER, 710' right of centerline, 1235' MSL. Pole 1508' from DER, 878' right of centerline, 41' AGL/1201' MSL. Pole 1562' from DER, 638' right of centerline, 45' AGL/1205' MSL. **Rwy 34**, trees beginning 832' from DER, 618' left of centerline, 1194' MSL.

## SLAYTON, MN

SLAYTON MUNI (DVP)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 11265 (FAA)

NOTE: **Rwy 17**, trees beginning 951' from DER, 345' right of centerline, up to 100' AGL/1723' MSL. Power lines beginning 1531' from DER, left and right of centerline, 40' AGL/1663' MSL. Vehicle on road beginning at DER, 234' right of centerline, 15' AGL/1638' MSL. Terrain beginning 65' from DER, left and right of centerline up to 1657' MSL. **Rwy 35**, trees beginning 1034' from DER, left and right of centerline, up to 100' AGL/1715' MSL. Power lines beginning 892' from DER, 206' left of centerline, 40' AGL/1655' MSL. Vehicle on roads beginning at DER, 230' left and right of centerline, 15' AGL/1630' MSL. Terrain beginning 271' from DER, left and right of centerline up to 1650' MSL.

## SOUTH ST PAUL, MN

SOUTH ST PAUL MUNI-RICHARD E FLEMING

FLD (SGS)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 1 14317 (FAA)

TAKEOFF MINIMUMS: **Rwy 16**, 300 -1¼ or std. w/min. climb of 225' per NM to 1200 or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1900' prior to DER. **Rwy 34**, 200-1¼ or std. w/min. climb of 220' per NM to 1100 or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1500' prior to DER.

NOTE: **Rwy 16**, tree, 1' from DER, 321' left of centerline, 56' AGL/877' MSL. Trees beginning 108' from DER, 103' left of centerline, up to 68' AGL/889' MSL. Trees beginning 1021' from DER, 88' left of centerline, up to 85' AGL/898' MSL. Trees beginning 116' from DER, 193' right of centerline, up to 75' AGL/894' MSL. Trees beginning 1108' from DER, 78' right of centerline up to 64' AGL/875' MSL. Trees beginning 2123' from DER, 444' right of centerline, up to 100' AGL/1069' MSL. **Rwy 34**, poles, trees and buildings beginning 76' from DER, 274' left of centerline, up to 79' AGL/880' MSL. Poles and trees beginning 1021' from DER, 6' left of centerline, up to 82' AGL/901' MSL. Trees beginning 2048' from DER, 71' left of centerline, up to 68' AGL/889' MSL. Tower 1 mile from DER, 657' left of centerline, 103' AGL/987' MSL. Trees and buildings beginning 84' from DER, 351' right of centerline, up to 38' AGL/856' MSL. Trees beginning 1042' from DER, 54' right of centerline, up to 72' AGL/892' MSL. Trees beginning 2017' from DER, 10' right of centerline, up to 80' AGL/899' MSL.

# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

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## SPEARFISH, SD

BLACK HILLS-CLYDE ICE FIELD (SPF)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

AMDT 1 11153 (FAA)

TAKEOFF MINIMUMS: **Rwys 4, 8, 22, 26**, NA -  
Environmental. **Rwy 13**, std. w/min. climb of 334' per  
NM to 6300. **Rwy 31**, 400-1¼ or std. w/min. climb of  
329' per NM to 4400.

DEPARTURE PROCEDURE: **Rwy 13**, climbing heading  
109° to 6300, then climbing left turn to intercept SPF  
NDB 090° bearing inbound, thence ... **Rwy 31**, climb to  
6000 then climbing right turn to intercept SPF NDB  
330° bearing inbound, thence ... enter SPF holding  
pattern (Northeast, right turn, 226° inbound), continue  
climb in hold to enroute MEA before proceeding on  
course.

NOTE: **Rwy 13**, terrain 175' from DER, 478' right of  
centerline, 3903' MSL. **Rwy 31**, structure 127' from  
DER, on centerline, 8' AGL/3888' MSL. Terrain 52'  
from DER, 497' left of centerline, 3918' MSL. Pole 734'  
from DER, 572' left of centerline, 9' AGL/3986' MSL.  
Terrain 195' from DER, 499' right of centerline, 3916'  
MSL. Pole 285' from DER, 311' right of centerline, 9'  
AGL/3978' MSL. Trees 1.3 NM from DER, 2481' right  
of centerline, up to 100' AGL/4225' MSL.

## SPRINGFIELD, MN

SPRINGFIELD MUNI (D42)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

ORIG 13010 (FAA)

NOTE: **Rwy 13**, trees beginning 267' from DER, 267'  
right of centerline, up to 100' AGL/1149' MSL. Building  
802' from DER, 684' left of centerline, up to 30'  
AGL/1089' MSL. Trees beginning 763' from DER, 603'  
left of centerline, up to 100' AGL/1159' MSL. Trees  
beginning 1083' from DER, 240' right of centerline, up  
to 100' AGL/1169' MSL. Trees beginning 3562' from  
DER, 98' left of centerline, up to 100' AGL/1169' MSL.  
**Rwy 31**, trees beginning 2248' from DER, 183' left of  
centerline, up to 100' AGL/1189' MSL. Building 604'  
from DER, 563' right of centerline, up to 30' AGL/1109'  
MSL. Trees beginning 656' from DER, 481' right of  
centerline, up to 100' AGL/1169' MSL. Trees beginning  
3889' from DER, 1495' right of centerline, up to 100'  
AGL/1199' MSL.

## STANLEY, ND

STANLEY MUNI (08D)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

ORIG 11013 (FAA)

NOTE: **Rwy 27**, Power line beginning 23' from DER,  
right to left of centerline, up to 40' AGL/2299' MSL.

## STAPLES, MN

STAPLES MUNI (SAZ)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

AMDT 3 12152 (FAA)

TAKEOFF MINIMUMS: **Rwy 14**, 400-2 or std. w/min. climb  
of 285' per NM to 1800.

NOTE: **Rwy 14**, towers beginning 1.60 NM from DER,  
1868' right of centerline, up to 367' AGL/1634' MSL.  
Vehicles on road and trees beginning 38' from DER, 76'  
right of centerline, up to 63' AGL/1332' MSL. Vehicles on  
road, trees and pole beginning 38' from DER, 77' left of  
centerline, up to 63' AGL/1342' MSL. **Rwy 32**, vehicles  
on road and trees beginning 228' from DER, 8' right of  
centerline, up to 85' AGL/1374' MSL. Vehicles on road  
and trees beginning 2' from DER, 18' left of centerline, up  
to 79' AGL/1368' MSL.

## STURGIS, SD

STURGIS MUNI (49B)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

AMDT 1A 15288 (FAA)

TAKEOFF MINIMUMS: **Rwys 5, 23**, NA-Environmental.  
DEPARTURE PROCEDURE: **Rwy 11**, climb heading 096°  
to 5200, then climbing right turn to 7000 direct RAP  
VORTAC. **Rwy 29**, climb heading 291° to 5000, then  
climbing right turn to 7000 direct RAP VORTAC.

NOTE: **Rwy 11**, fence 37' from DER, 347' left of  
centerline, 6' AGL/3210' MSL. **Rwy 29**, trees 63' from  
DER, 271' right of centerline, up to 20' AGL/3265' MSL.  
Ground 134' from DER, 443' left of centerline, 3248'  
MSL.

## THIEF RIVER FALLS, MN

THIEF RIVER FALLS RGNL (TVF)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES

ORIG-A 14317 (FAA)

NOTE: **Rwy 4**, light 41' from DER, 77' left of centerline, 2'  
AGL/1120' MSL. Terrain 2' from DER, 255' right of  
centerline, 1119' MSL. Light 41' from DER, 75' right of  
centerline, 2' AGL/1120' MSL. Road with vehicle  
beginning 578' from DER, 595' right of centerline, up to  
15' AGL/1135' MSL. **Rwy 13**, lights beginning 6' from  
DER, 4' left of centerline, up to 2' AGL/1114' MSL. Sign  
22' from DER, 253' left of centerline, 3' AGL/1114' MSL.  
Lights beginning 6' from DER, 5' right of centerline, up to  
2' AGL/1114' MSL. **Rwy 22**, utilities and lights beginning  
10' from DER, 77' left of centerline, up to 4' AGL/1115'  
MSL. Sign 38' from DER, 197' left of centerline, 4'  
AGL/1115' MSL. Light 40' from DER, 77' right of  
centerline, 3' AGL/1114' MSL. Trees beginning 545' from  
DER, 183' right of centerline, up to 91' AGL/1181' MSL.  
**Rwy 31**, lights beginning 9' from DER, 39' left of  
centerline, up to 3' AGL/1116' MSL. Trees beginning 275'  
from DER, 549' left of centerline, up to 61' AGL/1172'  
MSL. Lights beginning 9' from DER, 40' right of  
centerline, up to 2' AGL/1116' MSL.

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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)



# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

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## TIOGA, ND

TIOGA MUNI (D60)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 09239 (FAA)  
TAKEOFF MINIMUMS: **Rwys 3, 21**, NA-Environmental.  
NOTE: **Rwy 12**, vehicle on road 1243' from DER, 78'  
left of centerline, 15' AGL/2304' MSL. Vehicle on road,  
tree and pole beginning 618' from DER, 50' right of  
centerline, up to 100' AGL/2419' MSL. Ground 21' from  
DER, 481' right of centerline, 2272' MSL. **Rwy 30**,  
vehicle on road 1' from DER, 144' left of centerline, 15'  
AGL/2256' MSL.

## TOWER, MN

TOWER MUNI (12D)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 09127 (FAA)  
TAKEOFF MINIMUMS: **Rwy 8**, NA - Obstacles.  
NOTE: **Rwy 26**, tree 2315' from DER, 700' right of  
centerline, 100' AGL/1479' MSL.

## TRACY, MN

TRACY MUNI (TKC)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 11013 (FAA)  
TAKEOFF MINIMUMS: **Rwys 6,17, 24, 35**, NA-  
Environmental. **Rwy 29**, 300-2 ¼ or std. w/ min. climb  
of 250' per NM to 1800.  
NOTE: **Rwy 11**, tree 56' from DER, 174' right of  
centerline, 20' AGL/1342' MSL. Numerous trees and  
bushes beginning 137' from DER, 86' left of centerline,  
up to 100' AGL/1410' MSL. **Rwy 29**, tower 1.9 NM from  
DER, 1951' left of centerline, 265' AGL/1625' MSL.

## TWO HARBORS, MN

RICHARD B. HE'GESSON (TWM)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 11181 (FAA)  
TAKEOFF MINIMUMS: **Rwys 15,33**, NA -  
environmental.

NOTE: **Rwy 6**, multiple trees, beginning 20' from DER,  
44' right of centerline, up to 40' AGL/1122' MSL.  
Multiple trees, beginning 46' from DER, 201' left of  
centerline, up to 40' AGL/1126' MSL. **Rwy 24**, multiple  
trees, beginning 13' from DER, 61' right of centerline,  
up to 40' AGL/1156' MSL. Multiple trees, beginning 56'  
from DER, 97' left of centerline, up to 40' AGL/1138'  
MSL.

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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

## VALLEY CITY, ND

BARNES COUNTY MUNI (BAC)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 10098 (FAA)  
NOTE: **Rwy 13**, vehicle on road, 111' from DER, 356'  
right of centerline, 15' AGL/1396' MSL. Trees beginning  
644' from DER, 242' right of centerline, up to 40'  
AGL/1421' MSL. **Rwy 31**, terrain beginning 32' from  
DER, 20' right of centerline, up to 1424' MSL. Vehicle on  
road 38' from DER, 285' right of centerline, 15'  
AGL/1418' MSL. Fence 71' from DER, 292' left of  
centerline, 4' AGL/1407' MSL. Terrain beginning 120'  
from DER, 125' left of centerline, up to 1447' MSL. Fence  
198' from DER, 299' right of centerline, 4' AGL/1408'  
MSL. Trees beginning 365' from DER, 10' left of  
centerline, up to 40' AGL/1457' MSL. Tree 545' from  
DER, 607' right of centerline, 16' AGL/1436' MSL.

## VERMILLION, SD

HAROLD DAVIDSON FIELD (VMR)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 09239 (FAA)  
NOTE: **Rwy 12**, road 1' from DER, 200' right of  
centerline, up to 15' AGL/1156' MSL. Multiple trees  
beginning 541' from DER, 366' right of centerline, up to  
62' AGL/1202' MSL. **Rwy 30**, road 79' from DER 342'  
left of centerline 15' AGL/1155' MSL. Road 200' from  
DER, 450' right of centerline, 15' AGL/1160' MSL. Fence  
199' from DER, 347' left of centerline, 6' AGL/1150' MSL.

## WADENA, MN

WADENA MUNI (ADC)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 13234 (FAA)  
NOTE: **Rwy 34**, runway lights beginning 38' from DER, 76'  
left and right of centerline 5' AGL/1369' MSL. Rising  
terrain and trees beginning 69' from DER, 267' left of  
centerline, up to 20' AGL/1381' MSL. Trees beginning  
1678' from DER, 213' right of centerline, up to 91'  
AGL/1436' MSL. Trees beginning 2445' from DER, 272'  
right of centerline, up to 96' AGL/1447' MSL.

## WAGNER, SD

WAGNER MUNI (AGZ)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 13290 (FAA)  
TAKEOFF MINIMUMS: **Rwys 14, 32**, NA-Environmental.  
NOTE: **Rwy 9**, vehicles on roadway beginning 629' from  
DER, 162' right of centerline, up to 15' AGL/1485' MSL.  
Trees beginning 700' from DER, 227' right of centerline,  
up to 49' AGL/1514' MSL. Trees beginning 727' from  
DER, 532' left of centerline, up to 44' AGL/1508' MSL.  
Building and pole beginning 781' from DER, 416' left of  
centerline, up to 26' AGL/1491' MSL. Trees beginning  
881' from DER, 229' right of centerline, up to 40'  
AGL/1505' MSL. Tree 1239' from DER, 558' left of  
centerline, 36' AGL/1501' MSL. **Rwy 27**, terrain 13' from  
DER, 371' right of centerline, 1478 MSL. Vehicles on  
roadway beginning 338' from DER, 556' right of  
centerline, up to 15' AGL/1494' MSL. Tree 939' from  
DER, 462' left of centerline, 32' AGL/1509' MSL. Trees  
beginning 1331' from DER, 409' right of centerline, up to  
53' AGL/1530' MSL.

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**DIVERSE VECTOR AREA (RADAR VECTORS)****WAHPETON, ND****HARRY STERN (BWP)**

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 1 11181 (FAA)

TAKEOFF MINIMUMS: **Rwys 3,21**, NA - environmental.

NOTE: **Rwy 15**, trees beginning 1020' from DER, 114' left of centerline, up to 74' AGL/ 1033' MSL. Trees beginning 2753' from DER, 457' right of centerline, up to 86' AGL/1045' MSL. **Rwy 33**, electrical system 657' from DER, 632' right of centerline, 71' AGL/1010' MSL. Trees beginning 714' from DER, 33' right of centerline, up to 70' AGL/ 1039' MSL. Electrical system 1570' from DER, 258' right of centerline, 68' AGL/1032' MSL. Trees beginning 1326' from DER, 15' left of centerline, up to 75' AGL/1039' MSL.

**WALHALLA, ND****WALHALLA MUNI (96D)**

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 11125 (FAA)

TAKEOFF MINIMUMS: **Rwy 15**, 400-2¾ or std. w/min. climb gradient of 260' per NM to 1500.DEPARTURE PROCEDURE: **Rwy 15**, Climb heading 164° to 1500 before turning right.

NOTE: **Rwy 15**, vehicles on roadway beginning 478' from DER, 583' right of centerline, 15' AGL/969' MSL. Trees beginning 734' from DER, 623' right to 708' left of centerline, up to 100' AGL/1054' MSL. **Rwy 33**, trees beginning 53' from DER, 12' left to 654' right of centerline, up to 100' AGL/1 049' MSL. Power lines beginning 81' from DER, 266' left of centerline, up to 70' AGL/1019' MSL. Vehicles on roadway beginning 113' from DER, 490' left of centerline, 15' AGL/964' MSL.

**WALKER, MN****WALKER MUNI (Y49)**

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 14093 (FAA)

TAKEOFF MINIMUMS: **Rwy 33**, 300-1¼ or std. w/min. climb of 235' per NM to 1600, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1800' prior to DER.

NOTE: **Rwy 15**, terrain beginning 1' from DER, 1' right of centerline crossing left of centerline, 1408' MSL. Lights 38' from DER, 76' left and right of centerline, 2' AGL/1348' MSL. Trees beginning 220' from DER, 466' right of centerline, up to 50' AGL/1396' MSL. Trees beginning 330 from DER, 408' left of centerline, up to 38' AGL/1384' MSL. Trees beginning 453' from DER, 400' left and right crossing centerline, up to 48' AGL/1453' MSL. **Rwy 33**, lights 38' from DER, 77' left and right of centerline, 3' AGL/1348' MSL. Terrain beginning 84' from DER, 37' left and right of centerline, 1418' MSL. Vehicle on road 250' from DER, 455' right of centerline, 15' AGL/1360' MSL. Tree 328' from DER, 200' right of centerline, 6' AGL/1354' MSL. Trees beginning 420' from DER, 370' left of centerline, up to 55' AGL/1388' MSL. Trees beginning 903' from DER, 19' right and left of centerline, up to 39' AGL/1392' MSL. Trees beginning 2213' from DER, 100' left and right crossing centerline, up to 72' AGL/1404' MSL. Terrain beginning 2916' from DER, 20' left and right of centerline, 1503' MSL. Trees beginning 3597' from DER, 400' left and right crossing centerline, up to 128' AGL/1509' MSL.

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**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND****DIVERSE VECTOR AREA (RADAR VECTORS)****WARREN, MN****WARREN MUNI (D37)**

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG-A 15008 (FAA)

TAKEOFF MINIMUMS: **Rwys 4,22**, NA - environmental.DEPARTURE PROCEDURE: **Rwy 30**, climb runway heading to 1400 before turning on course.

NOTE: **Rwy 12**, trees beginning 379' from DER, 306' left of centerline, up to 86' AGL/973' MSL. Light support structure 3' from DER, 17' right of centerline, 2' AGL/888' MSL. Trees beginning 926' from DER, left and right of centerline, up to 71' AGL/955' MSL. **Rwy 30**, trees beginning 30' from DER, 86' right of centerline, up to 15' AGL/904' MSL. Trees, poles and antenna beginning 331' from DER, 373' right of centerline, up to 62' AGL/948' MSL. Trees and bush beginning 51' from DER, 36' left of centerline, up to 68' AGL/954' MSL. Vehicles on road beginning 233' from DER, 179' right of centerline, up to 15' AGL/906' MSL.

**WARROAD, MN****WARROAD INTL MEMORIAL (RRT)**

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG-A 16175 (FAA)

TAKEOFF MINIMUMS: **Rwys 4, 22**, NA-Environmental.NOTE: **Rwy 13**, pole 148' from DER, 471' right of centerline, 24' AGL/1093' MSL.**WASECA, MN****WASECA MUNI (ACQ)**

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG 09015 (FAA)

NOTE: **Rwy 15**, tree 560' from DER, 560' right of centerline, 100' AGL/1239' MSL. Terrain beginning 172' from DER, on centerline, up to 1149' MSL.**Rwy 33**, tree 5042' from DER, 1533' right of centerline, 100' AGL/1259' MSL.**WATERTOWN, SD****WATERTOWN RGNL (ATY)**

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

ORIG-A 16147 (FAA)

NOTE: **Rwy 30**, light 10' from DER, 30' left of centerline, 1' AGL/1749' MSL. Light 11' from DER, 30' right of centerline, 1' AGL/1749' MSL. Tree, 2091' from DER, 34' right of centerline, 100' AGL/1806' MSL. Tree 2241' from DER, 812' left of centerline, 100' AGL/1805' MSL. **Rwy 35**, sign , 102' from DER, 4' left of centerline, 10' AGL/1750' MSL.

**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND  
DIVERSE VECTOR AREA (RADAR VECTORS)**

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**WATFORD CITY, ND**

WATFORD CITY MUNI (S25)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 10154 (FAA)

TAKEOFF MINIMUMS: **Rwy 12**, 400-1¼ or std. with a min. climb of 462' per NM to 2600. **Rwys 18, 36**, NA-Environmental.

NOTE: **Rwy 12**, tree 5528' from DER, 1819' right of centerline, up to 100' AGL/2439' MSL. Vehicle on road, trees, and terrain beginning 186' from DER, 62' right of centerline, up to 100' AGL/2258' MSL. Vehicle on road, fence, and terrain beginning 90' from DER, 43' left of centerline, up to 27' AGL/2167' MSL. **Rwy 30**, trees and buildings beginning 672' from DER, 119' right of centerline, up to 41' AGL/2101' MSL. Vehicle on road, light and trees beginning 199' from DER, 128' left of centerline, up to 59' AGL/2119' MSL.

**WHEATON, MN**

WHEATON MUNI (ETH)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 1 92177 (FAA)

TAKEOFF MINIMUMS: **Rwy 16**, 300-1. **Rwys 4, 22**, NA.

**WILLISTON, ND**

SLOULIN FIELD INTL (ISN)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 5 15232 (FAA)

TAKEOFF MINIMUMS: **Rwy 29**, 300-2 or std. w/min. climb of 359' per NM to 2400.

DEPARTURE PROCEDURE: **Rwy 11**, climb heading 115° to 2400 before turning left.

NOTE: **Rwy 2**, poles beginning 973' from DER, 258' left of centerline, up to 40' AGL/1953' MSL. **Rwy 20**, bldg 1811' from DER, 371' right of centerline, 65' AGL/1980' MSL. Pole 1346' from DER, 69' right of centerline, 44' AGL/1954' MSL. **Rwy 29**, rising terrain 639' from DER, 301' left of centerline, up to 2001' MSL. Rising terrain 645' from DER, 305' right of centerline, up to 2000' MSL. Fences beginning 966' from DER, 250' left of centerline, up to 7' AGL/2029' MSL. NAVAJD 999' from DER, on centerline, 14' AGL/2104' MSL. Buildings beginning 1000' from DER, 270' right of centerline, up to 27' AGL/2040' MSL. Fence 1341' from DER, 210' right of centerline, 21' AGL/2021' MSL. Rising terrain beginning 1965' from DER, 459' right of centerline, up to 2071' MSL. Building 2345' from DER, 519' left of centerline, 5' AGL/2066' MSL. Rising terrain beginning 2531' from DER, 733' left of centerline, up to 2092' MSL. Rising terrain and t-tower beginning 3479' from DER, 248' right of centerline, up to 77' AGL/2137' MSL. Rising terrain and t-tower beginning 3693' from DER, 179' left of centerline, up to 82' AGL/2150' MSL. T-towers and tree beginning 5861' from DER, 35' right of centerline, up to 74' AGL/2226' MSL.

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**TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND  
DIVERSE VECTOR AREA (RADAR VECTORS)**

**WINDOM, MN**

WINDOM MUNI (MWM)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 10322 (FAA)

TAKEOFF MINIMUMS: **Rwy 35**, 200-1½ or std. w/min. climb of 225' per NM to 1700, or alternatively, with std. takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1700' prior to DER.

NOTE: **Rwy 17**, trees beginning 1074' from DER, 461' right of centerline, up to 100' AGL/1409' MSL.

**Rwy 35**, trees beginning 1.1 NM from DER, 2057' right of centerline, up to 100' AGL/1599' MSL.

**WILLMAR, MN**

WILLMAR MUNI-JOHN L. RICE FIELD  
(BDH)

TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
ORIG 06327 (FAA)

NOTE: **Rwy 31**, tree 1338' from DER, 740' left of centerline, 67' AGL/1193' MSL.

**WINNER, SD**

WINNER RGNL (ICR)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 4 16203 (FAA)  
TAKEOFF MINIMUMS: **Rwy 3, 21**, NA-Environmental.

**WINONA, MN**

WINONA MUNI-MAX CONRAD FIELD (ONA)  
TAKEOFF MINIMUMS AND (OBSTACLE)  
DEPARTURE PROCEDURES  
AMDT 5 16035 (FAA)

TAKEOFF MINIMUMS: **Rwy 17**, NA - Obstacles.

**Rwy 30**, 700-2¼ w/min. climb of 318' per NM to 1700 or std. w/min. climb of 454' per NM to 1300 or 1400-2¼ for climb in visual conditions. **Rwy 35**, std. w/min. climb of 280' per NM to 1700 or 1400-2¼ for climb in visual conditions.

DEPARTURE PROCEDURE: **Rwy 12**, climb heading 110° to 1900 before turning. **Rwy 30**, climb heading 300° to 1400 before turning. **Rwy 35**, climb heading 357° to 1600 before turning.

VCOA: **Rwy 30, 35**, obtain ATC approval for climb in visual conditions when requesting IFR clearance. Climb in visual conditions to cross Winona Muni-Max Conrad Field at or above 1900 before proceeding on course.

NOTE: **Rwy 12**, fence beginning 89' from DER, 102' right of centerline, 5' AGL/660' MSL. Trees beginning 958' from DER, left and right of centerline, up to 87' AGL/737' MSL. **Rwy 30**, trees beginning 789' from DER, 28' right of centerline, 104' AGL/758' MSL. Tree 56' from DER, 431' left of centerline, 12' AGL/666' MSL. **Rwy 35**, trees beginning 451' from DER, left and right of centerline, 93' AGL/747' MSL.

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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)

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## WORTHINGTON, MN

WORTHINGTON MUNI (OTG)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 3 13010 (FAA)

TAKEOFF MINIMUMS: **Rwy 18**, 300-1½ or std. w/min. climb of 233' per NM to 1900, or alternately, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 2100' prior to DER.

DEPARTURE PROCEDURE: **Rwy 29**, climb heading 293° to 2100 before turning left.

NOTE: **Rwy 18**, REIL beginning 34' from DER, 78' left of centerline, 4' AGL/1577' MSL. VOR/DME 1201' from DER, 432' left of centerline, 35' AGL/1606' MSL. Pole 7390' from DER, 1989' left of centerline, 195' AGL/1781' MSL. REIL beginning 34' from DER, 78' right of centerline, 4' AGL/1577' MSL. Poles beginning 455' from DER, 530' right of centerline, up to 39' AGL/1610' MSL. Building 703' from DER, 627' right of centerline, 20' AGL/1611' MSL. **Rwy 29**, vehicles on road beginning 106' from DER, 258' left of centerline, up to 18' AGL/1587' MSL. Trees beginning 1083' from DER, 475' left of centerline, up to 56' AGL/1625' MSL. Terrain beginning 17' from DER, 2' right of centerline, 1574' MSL. **Rwy 36**, light support structure 10' from DER, 18' left of centerline, 3' AGL/1574' MSL. Light support structure 10' from DER, 17' right of centerline, 3' AGL/1574' MSL.

## YANKTON, SD

CHAN GURNEY MUNI (YKN)

TAKEOFF MINIMUMS AND (OBSTACLE)

DEPARTURE PROCEDURES

AMDT 2 85003 (FAA)

TAKEOFF MINIMUMS: **Rwy 31**, 300-1.

DEPARTURE PROCEDURE: **Rwys 1, 13, 19, 31**, climb runway heading to 2400 before turning.

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# TAKEOFF MINIMUMS, (OBSTACLE) DEPARTURE PROCEDURES, AND DIVERSE VECTOR AREA (RADAR VECTORS)





INSTRUMENT APPROACH PROCEDURE CHARTS



IFR ALTERNATE AIRPORT MINIMUMS

Standard alternate minimums for non-precision approaches and approaches with vertical guidance [NDB, VOR, LOC, TACAN, LDA, SDF, VOR/DME, ASR, RNAV (GPS) or RNAV (RNP)] are 800-2. Standard alternate minimums for precision approaches (ILS, PAR, or GLS) are 600-2. Airports within this geographical area that require alternate minimums other than standard or alternate minimums with restrictions are listed below. NA - means alternate minimums are not authorized due to unmonitored facility, absence of weather reporting service, or lack of adequate navigation coverage. Civil pilots see FAR 91. IFR Alternate Minimums: Ceiling and Visibility Minimums not applicable to USA/USN/USAF. Pilots must review the IFR Alternate Minimums Notes for alternate airfield suitability.

NAME ALTERNATE MINIMUMS
ABERDEEN, SD
ABERDEEN
RGNL (ABR)..... RNAV (GPS) Rwy 13
RNAV (GPS) Rwy 31
RNAV (GPS) Rwy 35
VOR Rwy 31
VOR/DME Rwy 13
NA when local weather not available.

AITKIN, MN
AITKIN MUNI-STEVE KURTZ
FIELD (AIT) ..... RNAV (GPS) Rwy 16
RNAV (GPS) Rwy 34
NA when local weather not available.

ALBERT LEA, MN
ALBERT LEA
MUNI (AEL)..... RNAV (GPS) Rwy 17
RNAV (GPS) Rwy 35
VOR RWY 17
VOR/DME RWY 35
NA when local weather not available.

ALEXANDRIA, MN
CHANDLER
FIELD (AXN) ..... RNAV (GPS) Rwy 22
RNAV (GPS) Rwy 31
NA when local weather not available.

APPLETON, MN
APPLETON
MUNI (AQP) ..... RNAV (GPS) Rwy 13
NA when local weather not available.

AUSTIN, MN
AUSTIN MUNI (AUM)..... RNAV (GPS) Rwy 17<sup>1</sup>
RNAV (GPS) Rwy 35
NA when local weather not available.
<sup>1</sup>Category D, 800-2½.

NAME ALTERNATE MINIMUMS
BAUDETTE, MN
BAUDETTE INTL (BDE) ... RNAV (GPS) Rwy 12<sup>1</sup>
RNAV (GPS) Rwy 30<sup>1</sup>
VOR/DME Rwy 12
Category C, 800-2¼; Category D, 800-2½.
<sup>1</sup>NA when local weather not available.

BEMIDJI, MN
BEMIDJI RGNL (BJI) ..... RNAV (GPS) Rwy 13
RNAV (GPS) Rwy 25
RNAV (GPS) Rwy 31
NA when local weather not available.

BENSON, MN
BENSON MUNI (BBB) ..... RNAV (GPS) Rwy 14
RNAV (GPS) Rwy 32
NA when local weather not available.

BIGFORK, MN
BIGFORK MUNI (FOZ) ..... RNAV (GPS) Rwy 15
RNAV (GPS) Rwy 33
NA when local weather not available.

BISMARCK, ND
BISMARCK MUNI (BIS) ..... ILS or LOC Rwy 13<sup>1</sup>
ILS or LOC Rwy 31<sup>2</sup>
RADAR-1
NA when control tower closed.
<sup>1</sup>ILS, Categories A, B, C, 800-2; Category D 800-2¼. LOC, Category D 800-2¼.
<sup>2</sup>ILS, Categories A, B, C, D, 700-2.

BOWMAN, ND
BOWMAN RGNL (BWW) .... RNAV (GPS) Rwy 13
RNAV (GPS) Rwy 31
NA when local weather not available.

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**NAME** ALTERNATE MINIMUMS

**BRAINERD, MN**  
 BRAINERD LAKES  
 RGNL (BRD) ..... ILS or LOC Rwy 23  
   **RNAV (GPS) Rwy 5**  
   **RNAV (GPS) Rwy 23**  
   **RNAV (GPS) Rwy 34**

NA when local weather not available.

**BROOKINGS, SD**  
 BROOKINGS  
 RGNL (BKX)..... **RNAV (GPS) Rwy 12<sup>1</sup>**  
   **RNAV (GPS) Rwy 30**

NA when local weather not available.  
<sup>1</sup>Category D, 800-2¼.

**BUFFALO, MN**  
 BUFFALO MUNI (CFE) ..... **RNAV (GPS) Rwy 36**  
   **VOR-A**

NA when local weather not available.

**CAMBRIDGE, MN**  
 CAMBRIDGE  
 MUNI (CBG)..... **RNAV (GPS) Rwy 16**  
   **RNAV (GPS) Rwy 34**

NA when local weather not available.

**CANBY, MN**  
 MYERS FIELD (CNB)..... **RNAV (GPS) Rwy 12**  
   **RNAV (GPS) Rwy 30**

NA when local weather not available.

**CAVALIER, ND**  
 CAVALIER MUNI (2C8)..... **RNAV (GPS) Rwy 34**

NA when local weather not available.

**CLOQUET, MN**  
 CLOQUET CARLTON  
 COUNTY (COQ)..... **RNAV (GPS) Rwy 17**  
   **RNAV (GPS) Rwy 35**

NA when local weather not available.

**COOK, MN**  
 COOK MUNI (CQM)..... **RNAV (GPS) Rwy 13**  
   **RNAV (GPS) Rwy 31**

NA when local weather not available.

**CROOKSTON, MN**  
 CROOKSTON MUNI-KIRKWOOD  
 FIELD (CKN) ..... **RNAV (GPS) Rwy 13**  
   **RNAV (GPS) Rwy 31**  
   **VOR/DME Rwy 31**

NA when local weather not available.

**NAME** ALTERNATE MINIMUMS

**DETROIT LAKES, MN**  
 DETROIT LAKES-WETHING  
 FIELD (DTL)..... **RNAV (GPS) Rwy 13**  
   **RNAV (GPS) Rwy 31**

NA when local weather not available.  
 Category D, 800-2¼.

**DEVILS LAKE, ND**  
 DEVILS LAKE  
 RGNL (DVL)..... **RNAV (GPS) Rwy 3<sup>2</sup>**  
   **RNAV (GPS) Rwy 13<sup>2</sup>**  
   **RNAV (GPS) Rwy 21<sup>2</sup>**  
   **RNAV (GPS) Rwy 31<sup>2</sup>**  
   **VOR Rwy 3<sup>1</sup>**  
   **VOR Rwy 13<sup>2</sup>**  
   **VOR Rwy 31<sup>2</sup>**

NA when local weather not available.  
<sup>1</sup>Categories A, B, 900-2; Category C, 900-2½;  
 Category D, 900-2¼.  
<sup>2</sup>Category C, 800-2¼, Category D, 800-2½.

**DICKINSON, ND**  
 DICKINSON-THEODORE ROOSEVELT  
 RGNL (DIK)..... **RNAV (GPS) Rwy 14**  
   **RNAV (GPS) Rwy 25**  
   **RNAV (GPS) Rwy 32**  
   **VOR-A**

NA when local weather not available.

**DODGE CENTER, MN**  
 DODGE CENTER (TOB)..... **RNAV (GPS) Rwy 16**  
   **RNAV (GPS) Rwy 34**  
   **VOR-A**

NA when local weather not available.

**DULUTH, MN**  
 DULUTH INTL (DLH) ..... **ILS or LOC Rwy 9**  
   **ILS or LOC Rwy 27**  
   **RNAV (GPS) Rwy 3**  
   **RNAV (GPS) Rwy 9**  
   **RNAV (GPS) Rwy 21**  
   **RNAV (GPS) Rwy 27**  
   **VOR or TACAN Rwy 3**  
   **VOR/DME or TACAN Rwy 21**

Categories D, E, 1000-3.

**ELY, MN**  
 ELY MUNI (ELO) ..... **RNAV (GPS) Rwy 12**  
   **RNAV (GPS) Rwy 30**

NA when local weather not available.

**EVELETH, MN**  
 EVELETH-VIRGINIA  
 MUNI (EVM)..... **RNAV (GPS) Rwy 27<sup>1</sup>**  
   **VOR/DME-A<sup>2</sup>**

<sup>1</sup>NA when local weather not available.  
<sup>2</sup>Category C, 800-2¼; Category D, 800-2½.

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## FAIRMONT, MN

FAIRMONT MUNI (FRM) ... **RNAV (GPS) Rwy 13**  
**RNAV (GPS) Rwy 31**  
NA when local weather not available.

## FARGO, ND

HECTOR INTL (FAR) ..... **ILS or LOC Rwy 18<sup>1</sup>**  
**ILS or LOC Rwy 36<sup>1</sup>**  
**RNAV (GPS) Rwy 9<sup>3</sup>**  
**RNAV (GPS) Rwy 18<sup>2</sup>**  
**RNAV (GPS) Rwy 27<sup>3</sup>**  
**RNAV (GPS) Rwy 36<sup>2</sup>**  
**VOR Rwy 36<sup>2</sup>**

<sup>1</sup>ILS, Category C, 700-2; Category D, 800-2½;  
Category E, 800-2½. LOC, Category D,  
800-2½; Category E, 800-2½.

<sup>2</sup>Category D, 800-2½, Category E, 800-2½.

<sup>3</sup>Category D, 800-2½.

## FARIBAULT, MN

FARIBAULT MUNI (FBL).... **RNAV (GPS) Rwy 12**  
**RNAV (GPS) Rwy 30**  
NA when local weather not available.

## FERGUS FALLS, MN

FERGUS FALLS MUNI-EINAR MICKELSON  
FIELD (FFM) ..... **ILS or LOC Rwy 31<sup>1</sup>**  
**RNAV (GPS) Rwy 13<sup>2</sup>**  
**RNAV (GPS) Rwy 31<sup>2</sup>**  
**RNAV (GPS) Rwy 35**

NA when local weather not available.

<sup>1</sup>ILS, Category D, 700-2½. LOC, Category D,  
800-2½.

<sup>2</sup>Category D, 800-2½.

## FOSSTON, MN

FOSSTON  
MUNI (FSE)..... **NDB Rwy 34<sup>1</sup>**  
**RNAV (GPS) Rwy 16**  
**RNAV (GPS) Rwy 34**

NA when local weather not available.

<sup>1</sup>Category C, 800-2½.

## GLENCOE, MN

GLENCOE  
MUNI (GYL)..... **RNAV (GPS) Rwy 13**  
**RNAV (GPS) Rwy 31**

NA when local weather not available.

## GLENWOOD, MN

GLENWOOD  
MUNI (GHW)..... **RNAV (GPS) Rwy 15**  
**RNAV (GPS) Rwy 33**

NA when local weather not available.

NAME ALTERNATE MINIMUMS

## GRAND FORKS, ND

GRAND FORKS  
INTL (GFK) ..... **ILS or LOC Rwy 35L<sup>12</sup>**  
**LOC BC Rwy 17R<sup>13</sup>**  
**RNAV (GPS) Rwy 9L<sup>3</sup>**  
**RNAV (GPS) Rwy 17R<sup>3</sup>**  
**RNAV (GPS) Rwy 27R<sup>3</sup>**  
**RNAV (GPS) Rwy 35L<sup>3</sup>**  
**VOR Rwy 17R<sup>3</sup>**  
**VOR Rwy 35L<sup>3</sup>**

<sup>1</sup>NA when control tower closed.

<sup>2</sup>ILS, Category E, 700-2½. LOC, Category E,  
800-2½.

<sup>3</sup>NA when local weather not available.

## GRAND MARAIS, MN

GRAND MARAIS/  
COOK COUNTY (CKC) ..... **RNAV (GPS) Rwy 9**  
**RNAV (GPS) Rwy 27**  
NA when local weather not available.

## GRAND RAPIDS, MN

GRAND RAPIDS/ITASCA COUNTY-GORDON  
NEWSTROM FIELD (GPZ) ... **ILS or LOC Rwy 34**  
**RNAV (GPS) Rwy 16**  
**RNAV (GPS) Rwy 34**  
**VOR Rwy 34**

NA when local weather not available.

## GRANITE FALLS, MN

GRANITE FALLS MUNI/LENZEN-ROE-FAGEN  
MEMORIAL FIELD (GDB) ... **RNAV (GPS) Rwy 33**  
NA when local weather not available.

## GWINNER, ND

GWINNER-ROGER MELROE  
FIELD (GWR)..... **RNAV (GPS) Rwy 16**  
**RNAV (GPS) Rwy 34**

NA when local weather not available.

Category D, 800-2½.

## HALLOCK, MN

HALLOCK MUNI (HCO) ..... **RNAV (GPS) Rwy 13**  
**RNAV (GPS) Rwy 31**  
NA when local weather not available.

## HETTINGER, ND

HETTINGER  
MUNI (HEI) ..... **RNAV (GPS) Rwy 12**  
**RNAV (GPS) Rwy 30**

Category D, 800-2½.

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**NAME** ALTERNATE MINIMUMS  
**HIBBING, MN**  
 RANGE  
 RGNL (HIB) ..... ILS OR LOC/DME Rwy 13  
 ILS, Categories A, B, C, D, 800-2.

**HURON, SD**  
 HURON RGNL (HON) ..... ILS or LOC Rwy 12<sup>1</sup>  
 LOC/DME BC Rwy 30<sup>2</sup>  
 RNAV (GPS) Rwy 12<sup>2</sup>  
 RNAV (GPS) Rwy 30<sup>2</sup>  
 VOR Rwy 12<sup>2</sup>  
 NA when local weather not available.  
<sup>1</sup>ILS, Category D, 700-2¼. LOC, Category D,  
 800-2¼.  
<sup>2</sup>Category D, 800-2¼.

**HUTCHINSON, MN**  
 HUTCHINSON MUNI-  
 BUTLER FIELD (HCD) ..... RNAV (GPS) Rwy 15  
 RNAV (GPS) Rwy 33  
 VOR/DME Rwy 33  
 NA when local weather not available.

**INTERNATIONAL FALLS, MN**  
 FALLS INTL-EINARSON  
 FIELD (INL) ..... COPTER ILS or LOC Rwy 31<sup>1</sup>  
 ILS or LOC/DME Rwy 13,700-2<sup>2</sup>  
 ILS or LOC Rwy 31<sup>2</sup>  
 RNAV (GPS) Rwy 13<sup>2</sup>  
 RNAV (GPS) Rwy 31<sup>2</sup>  
 VOR Rwy 13<sup>23</sup>

<sup>1</sup>LOC, NA; ILS, NA when local weather not available.  
<sup>2</sup>NA when local weather not available.  
<sup>3</sup>Category D, 800-2¼.

**JACKSON, MN**  
 JACKSON MUNI (MJQ) ..... RNAV (GPS) Rwy 13  
 RNAV (GPS) Rwy 31  
 NA when local weather not available.

**JAMESTOWN, ND**  
 JAMESTOWN  
 RGNL (JMS) ..... RNAV (GPS) Rwy 4  
 RNAV (GPS) Rwy 13  
 RNAV (GPS) Rwy 22  
 RNAV (GPS) Rwy 31  
 VOR Rwy 31  
 NA when local weather not available.

**LANGDON, ND**  
 ROBERTSON  
 FIELD (D55) ..... RNAV (GPS) Rwy 14  
 RNAV (GPS) Rwy 32  
 NA when local weather not available.

**NAME** ALTERNATE MINIMUMS  
**LITCHFIELD, MN**  
 LITCHFIELD  
 MUNI (LJF) ..... RNAV (GPS) Rwy 13<sup>1</sup>  
 RNAV (GPS) Rwy 31<sup>1</sup>  
 VOR-A<sup>1</sup>

Category D, 800-2¼.  
<sup>1</sup>NA when local weather not available.

**LITTLE FALLS, MN**  
 LITTLE FALLS/MORRISON COUNTY-  
 LINDBERGH  
 FIELD (LXL) ..... RNAV (GPS) Rwy 31  
 NA when local weather not available.

**LINTON, ND**  
 LINTON MUNI (7L2) ..... RNAV (GPS) Rwy 9  
 RNAV (GPS) Rwy 27  
 NA when local weather not available.

**MADISON, MN**  
 LAC QUI PARLE  
 COUNTY (DXX) ..... NDB Rwy 32  
 RNAV (GPS) Rwy 14  
 RNAV (GPS) Rwy 32  
 NA when local weather not available.

**MADISON, SD**  
 MADISON MUNI (MDS) ..... RNAV (GPS) Rwy 15  
 RNAV (GPS) Rwy 33  
 NA when local weather not available.

**MAHNOMEN, MN**  
 MAHNOMEN  
 COUNTY (3N8) ..... RNAV (GPS) Rwy 17  
 RNAV (GPS) Rwy 35  
 NA when local weather not available.

**MANDAN, ND**  
 MANDAN MUNI (Y19) ..... RNAV (GPS) Rwy 13  
 RNAV (GPS) Rwy 31  
 VOR-A  
 NA when local weather not available.

**MANKATO, MN**  
 MANKATO RGNL  
 (MKT) ..... COPTER ILS or LOC Rwy 33  
 ILS or LOC Rwy 33  
 RNAV (GPS) Rwy 4  
 RNAV (GPS) Rwy 15  
 RNAV (GPS) Rwy 22  
 RNAV (GPS) Rwy 33  
 VOR Rwy 15  
 NA when local weather not available.

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NAME ALTERNATE MINIMUMS  
**MAPLE LAKE, MN**  
 MAPLE LAKE MUNI-BILL MAVENCAMP  
 SR FIELD (MGG) ..... **RNAV (GPS) Rwy 28**  
**VOR-A**  
 NA when local weather not available.

**MARSHALL, MN**  
 SOUTHWEST MINNESOTA RGNL MARSHALL/  
 RYAN FIELD (MML) ..... **RNAV (GPS) Rwy 12**  
**RNAV (GPS) Rwy 30**  
**VOR Rwy 12**  
 NA when local weather not available.

**MINNEAPOLIS, MN**  
 AIRLAKE (LVN) ..... **RNAV (GPS) Rwy 12**  
**RNAV (GPS) Rwy 30**  
**VOR Rwy 12<sup>1</sup>**  
 NA when local weather not available.  
<sup>1</sup>Category D, 800-2½.

ANOKA COUNTY-BLAINE AIRPORT  
 (JANES FIELD)  
 (ANE) ..... **ILS or LOC/DME Rwy 27**  
**RNAV (GPS) Rwy 9**  
**RNAV (GPS) Rwy 18**  
**RNAV (GPS) Rwy 27**  
**VOR Rwy 9**  
 NA when local weather not available.

CRYSTAL (MIC) ..... **RNAV (GPS) Rwy 14L**  
 NA when local weather not available.

FLYING CLOUD  
 (FCM) ..... **COPTER ILS or LOC Rwy 10R<sup>1</sup>**  
**ILS or LOC Rwy 10R<sup>12</sup>**  
**RNAV (GPS) Rwy 10L**  
**RNAV (GPS) Rwy 10R**  
**RNAV (GPS) Rwy 28L**  
**RNAV (GPS) Rwy 28R**  
**RNAV (GPS) Rwy 36**  
**VOR Rwy 10R**  
**VOR/DME Rwy 36**

NA when local weather not available.  
<sup>1</sup>NA when control tower closed.  
<sup>2</sup>Category D, 700-2.

NAME ALTERNATE MINIMUMS  
**MINNEAPOLIS, MN (CON'T)**  
 MINNEAPOLIS-ST. PAUL INTL/WOLD-  
 CHAMBERLAIN (MSP) ..... **ILS or LOC Rwy 12L<sup>1</sup>**  
**ILS or LOC Rwy 12R<sup>1</sup>**  
**ILS Z or LOC Rwy 30L<sup>2</sup>**  
**ILS Z or LOC Rwy 30R<sup>2</sup>**  
**ILS Z or LOC Rwy 35<sup>3</sup>**  
**LOC Rwy 4<sup>4</sup>**  
**LOC Rwy 17<sup>5</sup>**  
**LOC Rwy 22<sup>4</sup>**  
**RNAV (GPS) Rwy 4<sup>4</sup>**  
**RNAV (GPS) Rwy 22<sup>4</sup>**  
**RNAV (GPS) Z Rwy 12L<sup>4</sup>**  
**RNAV (GPS) Z Rwy 12R<sup>4</sup>**  
**RNAV (GPS) Z Rwy 30L<sup>4</sup>**  
**RNAV (GPS) Z Rwy 30R<sup>4</sup>**  
**RNAV (GPS) Z Rwy 35<sup>4</sup>**

<sup>1</sup>ILS, Category C, 700-2; Category D, 900-2½;  
 Category E, 1000-3; LOC, Category D, 900-2½;  
 Category E, 1000-3.  
<sup>2</sup>ILS, Categories A, B, C, 700-2; Category D,  
 900-2½, Category E, 1000-3; LOC, Category D,  
 900-2½; Category E, 1000-3.  
<sup>3</sup>ILS, Categories A, B, 800-2; Category C,  
 800-2½; Category D, 900-2½; Category E,  
 1000-3. LOC, Category C, 800-2½; Category  
 D, 900-2½; Category E, 1000-3.  
<sup>4</sup>Category D, 900-2½; Category E, 1000-3.  
<sup>5</sup>Category D, 900-2½.

**MINOT, ND**  
 MINOT INTL (MOT) ..... **ILS or LOC Rwy 31<sup>12</sup>**  
**LOC/DME BC Rwy 13<sup>1</sup>**  
**RNAV (GPS) Rwy 8**  
**RNAV (GPS) Rwy 13**  
**RNAV (GPS) Rwy 26**  
**RNAV (GPS) Rwy 31**  
**VOR Rwy 8<sup>3</sup>**  
**VOR Rwy 26<sup>4</sup>**

NA when local weather not available.  
<sup>1</sup>NA when tower closed.  
<sup>2</sup>Category E, 1100-3.  
<sup>3</sup>Categories A, B, 1100-2; Categories C, D,  
 1100-3.  
<sup>4</sup>Categories A, B, 900-2; Category C, 900-2½;  
 Category D, 900-2½.

**MITCHELL, SD**  
 MITCHELL MUNI (MHE) ..... **RNAV (GPS) Rwy 13**  
**RNAV (GPS) Rwy 18**  
**RNAV (GPS) Rwy 31**  
**RNAV (GPS) Rwy 36**  
**VOR Rwy 13**  
 NA when local weather not available.

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**MOBRIDGE, SD**

MOBRIDGE MUNI (MBG) .. **RNAV (GPS) Rwy 12**  
**RNAV (GPS) Rwy 30**

NA when local weather not available  
Category D, 900-2¼.

**MONTEVIDEO, MN**

MONTEVIDEO-CHIPPEWA  
COUNTY (MVE) ..... **RNAV (GPS) Rwy 14**  
**RNAV (GPS) Rwy 32**

NA when local weather not available

**MOORHEAD, MN**

MOORHEAD  
MUNI (JKJ)..... **RNAV (GPS) Rwy 30<sup>1</sup>**  
**VOR-A<sup>2</sup>**

<sup>1</sup>NA when local weather not available.  
<sup>2</sup>Categories A, B, 900-2;

**MORA, MN**

MORA MUNI (JMR)..... **RNAV (GPS) Rwy 35**  
NA when local weather not available.  
Category D, 800-2¼.

**MORRIS, MN**

MORRIS MUNI-CHARLIE SCHMIDT  
FLD (MOX) ..... **RNAV (GPS) Rwy 14**  
**RNAV (GPS) Rwy 32**

NA when local weather not available.

**NEW ULM, MN**

NEW ULM MUNI (ULM) ..... **RNAV (GPS) Rwy 15**  
**RNAV (GPS) Rwy 33**

NA when local weather not available.

**ORR, MN**

ORR RGNL (ORB) ..... **RNAV (GPS) Rwy 13**  
NA when local weather not available.

**ORTONVILLE, MN**

ORTONVILLE MUNI-MARTINSON  
FIELD (VVV)..... **RNAV (GPS) Rwy 34**

NA when local weather not available.

**OWATONNA, MN**

OWATONNA DEGNER  
RGNL (OWA) ..... **RNAV (GPS) Rwy 12**  
**RNAV (GPS) Rwy 30<sup>1</sup>**

NA when local weather not available.  
<sup>1</sup>Category D, 800-2¼.

NAME ALTERNATE MINIMUMS

**PARK RAPIDS, MN**

PARK RAPIDS MUNI-KONSHOK  
FIELD (PKD) ..... **RNAV (GPS) Rwy 13**  
**RNAV (GPS) Rwy 31**  
**VOR Rwy 13**

NA when local weather not available.  
Category D, 1100-3.

**PAYNESVILLE, MN**

PAYNESVILLE  
MUNI (PEX) ..... **RNAV (GPS) Rwy 11**  
**RNAV (GPS) Rwy 29**

NA when local weather not available.

**PHILIP, SD**

PHILIP (PHP)..... **RNAV (GPS) Rwy 12**  
**RNAV (GPS) Rwy 30**  
**VOR-A**

NA when local weather not available.

**PINE RIDGE, SD**

PINE RIDGE (IEN)..... **RNAV (GPS) Rwy 30**  
NA when local weather not available.  
Categories A, B, 900-2.

**PIPESTONE, MN**

PIPESTONE  
MUNI (PQN)..... **RNAV (GPS) Rwy 18**  
**RNAV (GPS) Rwy 36**

NA when local weather not available.

**PRESTON, MN**

FILLMORE  
COUNTY (FKA) ..... **RNAV (GPS) Rwy 11**  
**RNAV (GPS) Rwy 29**

NA when local weather not available.

**RAPID CITY, SD**

RAPID CITY  
RGNL (RAP) ..... **ILS or LOC Rwy 32<sup>3</sup>**  
**RNAV (GPS) Rwy 5<sup>1</sup>**  
**RNAV (GPS) Rwy 14<sup>1,2</sup>**  
**RNAV (GPS) Rwy 23<sup>1</sup>**  
**RNAV (GPS) Rwy 32<sup>1,2</sup>**  
**VOR or TACAN Rwy 14<sup>1,2</sup>**  
**VOR or TACAN Rwy 32<sup>1,2</sup>**

<sup>1</sup>NA when local weather not available.

<sup>2</sup>Category E, 800-2¼.

<sup>3</sup>ILS, Categories B, C, 700-2; Category D,  
800-2¼; Category E, 800-2¼. LOC, Category  
D, 800-2¼; Category E, 800-2¼.

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NAME ALTERNATE MINIMUMS  
**RED WING, MN**  
RED WING  
RGNL (RGK) ..... RNAV (GPS) Rwy 9<sup>1</sup>  
RNAV (GPS) Rwy 27<sup>2</sup>

NA when local weather not available.  
<sup>1</sup>Category C, 800-2¼. Category D, 800-2½.  
<sup>2</sup>Category C, 800-2¼.

**REDWOOD FALLS, MN**  
REDWOOD FALLS  
MUNI (RWF) ..... RNAV (GPS) Rwy 30  
**VOR-A**

Category D, 800-2¼.  
NA when local weather not available.

**ROCHESTER, MN**  
ROCHESTER  
INTL (RST) ..... ILS or LOC Rwy 13  
ILS or LOC Rwy 31  
COPTER ILS or LOC Rwy 31  
NA when control tower closed.

**ROLLA, ND**  
ROLLA MUNI (06D) ..... RNAV (GPS) Rwy 32  
NA when local weather not available.  
Category D, 900-2¼.

**ROSEAU, MN**  
ROSEAU MUNI/RUDY BILLBERG  
FIELD (ROX) ..... RNAV (GPS) Rwy 16  
RNAV (GPS) Rwy 34  
NA when local weather not available.

**RUGBY, ND**  
RUGBY MUNI (RUG) ..... RNAV (GPS) Rwy 12  
RNAV (GPS) Rwy 30  
NA when local weather not available.

**RUSH CITY, MN**  
RUSH CITY  
RGNL (ROS) ..... RNAV (GPS) Rwy 34  
NA when local weather not available.

**ST. CLOUD, MN**  
ST. CLOUD  
RGNL (STC) ..... ILS or LOC/DME Rwy 13<sup>12</sup>  
RNAV (GPS) Rwy 5  
RNAV (GPS) Rwy 13  
RNAV (GPS) Rwy 23  
RNAV (GPS) Rwy 31  
VOR Rwy 31<sup>2</sup>

NA when local weather not available.  
<sup>1</sup>ILS, Categories A, B, C, D, 700-2.  
<sup>2</sup>NA when control tower closed.

NAME ALTERNATE MINIMUMS  
**ST. JAMES, MN**  
ST. JAMES  
MUNI (JYG) ..... RNAV (GPS) Rwy 15  
RNAV (GPS) Rwy 33  
NA when local weather not available.

**ST. PAUL, MN**  
LAKE ELMO (21D) ..... NDB Rwy 4<sup>1</sup>  
RNAV (GPS) Rwy 32  
NA when local weather not available.  
<sup>1</sup>Categories A, B, 900-2; Category C 900-2½.

ST. PAUL DOWNTOWN HOLMAN  
FIELD (STP) ..... ILS or LOC Rwy 14<sup>12</sup>  
ILS or LOC Rwy 32<sup>13</sup>  
RNAV (GPS) Rwy 14<sup>3</sup>  
RNAV (GPS) Rwy 32<sup>4</sup>  
<sup>1</sup>NA when local weather not available.  
<sup>2</sup>ILS, LOC, Categories A, B, 900-2; Category C, 900-2½; Category D, 900-2¾.  
<sup>3</sup>Categories A, B, 900-2; Category C, 900-2½; Category D, 900-2¾.  
<sup>4</sup>Categories A, B, C, 900-2½; Category D, 900-2¾.

**SAUK CENTRE, MN**  
SAUK CENTRE  
MUNI (D39) ..... RNAV (GPS) Rwy 14  
RNAV (GPS) Rwy 32  
NA when local weather not available.

**SILVER BAY, MN**  
SILVER BAY  
MUNI (BFW) ..... RNAV (GPS) Rwy 25  
NA when local weather not available.

**SIOUX FALLS, SD**  
JOE FOSS  
FIELD (FSD) ..... ILS or LOC Rwy 3<sup>12</sup>  
ILS or LOC Rwy 21<sup>13</sup>  
RADAR<sup>4</sup>  
VOR or TACAN Rwy 15<sup>5</sup>  
VOR/DME or TACAN Rwy 33<sup>4</sup>  
RNAV (GPS) Rwy 15<sup>6</sup>  
RNAV (GPS) Rwy 33<sup>6</sup>  
<sup>1</sup>NA when control tower closed.  
<sup>2</sup>ILS, Category D, 700-2.  
<sup>3</sup>ILS, Categories A, B, C, D, 700-2.  
<sup>4</sup>Category E, 800-2¾.  
<sup>5</sup>Category E, 900-3.  
<sup>6</sup>Category C, 800-2¼; Category D, 800-2½.

**SLAYTON, MN**  
SLAYTON MUNI (DVP) ..... RNAV (GPS) Rwy 17  
RNAV (GPS) Rwy 35  
NA when local weather not available.

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# ALTERNATE MINS

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NAME ALTERNATE MINIMUMS  
**SOUTH ST. PAUL, MN**  
 SOUTH ST. PAUL MUNI-RICHARD E  
 FLEMING FIELD (SGS) ..... **RNAV (GPS) Rwy 34**  
 Category D, 800-2½.  
 NA when local weather not available.

**SPEARFISH, SD**  
 BLACK HILLS-  
 CLYDE ICE FIELD (SPF) ..... **NDB-A<sup>1</sup>**  
**RNAV (GPS) Rwy 13<sup>2</sup>**  
**RNAV (GPS) Rwy 31<sup>3</sup>**

<sup>1</sup>Categories A, B, 1000-2.  
<sup>2</sup>Categories A, B, 900-2, Category C, 1000-2¾.  
<sup>3</sup>Categories A, B, 1000-2, Category C, 1000-2¾.

**STAPLES, MN**  
 STAPLES MUNI (SAZ) ..... **RNAV (GPS) Rwy 14**  
**RNAV (GPS) Rwy 32**  
 NA when local weather not available.

**THIEF RIVER FALLS, MN**  
 THIEF RIVER  
 FALLS RGNL (TVF) ..... **ILS or LOC Rwy 31<sup>1</sup>**  
**RNAV (GPS) Rwy 4**  
**RNAV (GPS) Rwy 13**  
**RNAV (GPS) Rwy 22**  
**RNAV (GPS) Rwy 31**  
**VOR Rwy 13**

NA when local weather not available.  
<sup>1</sup>ILS, Category C, 800-2; Category D, 900-2¾;  
 LOC, Category D, 900-2¾.

**TIOGA, ND**  
 TIOGA  
 MUNI (D60) ..... **RNAV (GPS) Rwy 30**  
**RNAV (GPS) Rwy 12**  
 NA when local weather not available.  
 Category D, 800-2¾.

**TWO HARBORS, MN**  
 RICHARD B.  
 HELGESON (TWM) ..... **RNAV (GPS) Rwy 6**  
**RNAV (GPS) Rwy 24**  
 NA when local weather not available.

**VERMILLON, SD**  
 HAROLD DAVIDSON  
 FIELD (VMR) ..... **RNAV (GPS) Rwy 12**  
**RNAV (GPS) Rwy 30**  
 NA when local weather not available.

**WADENA, MN**  
 WADENA MUNI (ADC) ..... **RNAV (GPS) Rwy 16**  
**RNAV (GPS) Rwy 34**  
 NA when local weather not available.

NAME ALTERNATE MINIMUMS  
**WAHPETON, ND**  
 HARRY  
 STERN (BWP) ..... **RNAV (GPS) Rwy 33**  
 NA when local weather not available.

**WALKER, MN**  
 WALKER MUNI (Y49) ..... **RNAV (GPS) Rwy 15**  
**RNAV (GPS) Rwy 33**  
 NA when local weather not available.  
 Category C, 800-2¾.

**WARROAD, MN**  
 WARROAD INTL  
 MEMORIAL (RRT) ..... **RNAV (GPS) Rwy 13<sup>1</sup>**  
**RNAV (GPS) Rwy 31**  
 NA when local weather not available.  
<sup>1</sup>Category C, 900-2¾; Category D, 900-3.

**WASECA, MN**  
 WASECA MUNI (ACQ) ..... **RNAV (GPS) Rwy 15**  
**RNAV (GPS) Rwy 33**  
 NA when local weather not available.

**WATERTOWN, SD**  
 WATERTOWN  
 RGNL (ATY) ..... **LOC/DME BC Rwy 17**  
**RNAV (GPS) Rwy 12**  
**RNAV (GPS) Rwy 17**  
**RNAV (GPS) Rwy 30**  
**RNAV (GPS) Rwy 35**  
**VOR or TACAN Rwy 17**  
 NA when local weather not available.

**WHEATON, MN**  
 WHEATON MUNI (ETH) ..... **RNAV (GPS) Rwy 16**  
**RNAV (GPS) Rwy 34**  
 NA when local weather not available.

**WILLISTON, ND**  
 SLOULIN FIELD  
 INTL (ISN) ..... **RNAV (GPS) Rwy 11**  
**RNAV (GPS) Rwy 29**  
**VOR Rwy 11**  
 NA when local weather not available.

**WILLMAR, MN**  
 WILLMAR MUNI-JOHN  
 L RICE FIELD (BDH) ..... **RNAV (GPS) Rwy 13**  
**RNAV (GPS) Rwy 31**  
**VOR Rwy 31<sup>1</sup>**  
 NA when local weather not available.  
<sup>1</sup>Category D, 800-2¾.

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**ALTERNATE MINS**

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NAME	ALTERNATE MINIMUMS	NAME	ALTERNATE MINIMUMS
<b>WINNER, SD</b>			
WINNER RGNL (ICR) .....	<b>RNAV (GPS) Rwy 13</b>		
	<b>RNAV (GPS) Rwy 31</b>		
	<b>VOR-A</b>		

NA when local weather not available.

**WINONA, MN**

WINONA MUNI-MAX CONRAD  
 FLD (ONA) .....**ILS Y or LOC/DME Y Rwy 30<sup>1</sup>**  
**ILS Z or LOC/DME Z Rwy 30<sup>1</sup>**  
**RNAV (GPS) Rwy 30**

NA when local weather not available.

<sup>1</sup>ILS, LOC, Categories A, B, 1000-2; Category C, 1200-3; Category D, 1400-3.

**WORTHINGTON, MN**

WORTHINGTON  
 MUNI (OTG) .....**RNAV (GPS) Rwy 11<sup>2</sup>**  
**RNAV (GPS) Rwy 18<sup>2</sup>**  
**RNAV (GPS) Rwy 29<sup>2</sup>**  
**RNAV (GPS) Rwy 36<sup>2</sup>**  
**VOR Rwy 11<sup>1</sup>**  
**VOR Rwy 18<sup>2</sup>**

<sup>1</sup>Category D, 800-2½.

<sup>2</sup>NA when local weather not available.

**YANKTON, SD**

CHAN GURNEY  
 MUNI (YKN) .....**RNAV (GPS) Rwy 13**  
**RNAV (GPS) Rwy 31**  
**VOR Rwy 13**

NA when local weather not available.

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# RADAR MINS

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## RADAR INSTRUMENT APPROACH MINIMUMS

### BISMARCK, ND

Amdt 3B, 26AUG10 (10238) (FAA)

ELEV 1661

### BISMARCK MUNI (BIS)

RADAR-1 126.3 298.9  

	RWY	GP/TCH/RPI	CAT	DA/	HAT/	CEIL-VIS	CAT	DA/	HAT/	CEIL-VIS
				MDA-VIS	HAA			MDA-VIS	HATH/	
ASR	31		AB	2100/24	455	(500-½)	C	2100/40	455	(500-¾)
			D	2100/50	455	(500-1)				
	13		AB	2100-1	445	(500-1)	C	2100-1¼	445	(500-1¼)
			D	2100-1½	445	(500-1½)				
	3		AB	2120-1	459	(500-1)	C	2120-1¼	459	(500-1¼)
			D	2120-1½	459	(500-1½)				
	21		AB	2120-1	459	(500-1)	C	2120-1¼	459	(500-1¼)
			D	2120-1½	459	(500-1½)				
CIR	ALL RWY		A	2180-1	519	(600-1)	B	2220-1	539	(600-1)
			C	2220-1½	559	(600-1½)	D	2280-2	619	(700-2)



Inoperative table does not apply to MALS Rwy 13.

### MANDAN, ND

Amdt 5A, 18AUG16 (16231) (FAA)

ELEV 1944

### MANDAN MUNI (Y19)

RADAR-1 126.3 298.9  

	RWY	GP/TCH/RPI	CAT	DA/	HAT/	CEIL-VIS	CAT	DA/	HAT/	CEIL-VIS
				MDA-VIS	HAA			MDA-VIS	HATH/	
ASR	31		AB	2440-1	499	(500-1)	CD	2440-1¾	499	(500-1¾)
			AB	2460-1	522	(600-1)	CD	2460-1½	522	(600-1½)
CIR	ALL RWY		AB	2460-1	516	(600-1)	C	2460-1½	516	(600-1½)
			D	2560-2	616	(700-2)				

ASR S-13: Helicopter visibility reduction below ¾ SM not authorized.

ASR S-31: Helicopter visibility reduction below ¾ SM not authorized.

When BIS control tower closed, ASR NA.

When local altimeter setting not received, use Bismarck altimeter setting and increase all MDA 60 feet, increase all CAT C/D visibility ¼ mile.

Circling to Rwy 4 and 22 NA.

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## RADAR INSTRUMENT APPROACH MINIMUMS

# RADAR MINS

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# RADAR MINS

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## RADAR INSTRUMENT APPROACH MINIMUMS

### ROCHESTER, MN ROCHESTER INTL (RST)

Amdt 8, 15JAN09 (09015) (FAA)

ELEV 1317

RADAR-1 119.8 251.125

	RWY	GP/TCH/RPI	CAT	DA/	HAT/	CEIL-VIS	DA/	HAT/	CEIL-VIS	
				MDA-VIS	HAA		MDA-VIS	HATH/		
ASR	31		ABC	1660/24	356	(400-½)	D	1660/50	356	(400-1)
	13		ABC	1640/24	360	(400-½)	D	1640/50	360	(400-1)
	20		ABC	1660-1	356	(400-1)	D	1660-1¼	356	(400-1¼)
	2		ABC	1680-1	363	(400-1)	D	1680-1¼	363	(400-1¼)
CIR	ALL RWY		A	1720-1	403	(500-1)	B	1780-1	463	(500-1)
			C	1780-1½	463	(500-1½)	D	1880-2	563	(600-2)

When control tower closed, procedure NA.

For inoperative MALSR, increase S-13 and S-31 CAT D visibility to RVR 6000.

Visibility reduction by helicopters NA Rwy 2-20.

### SIoux FALLS, SD JOE FOSS FIELD (FSD)

Amdt 10B, 06FEB14 (14205) (FAA)

ELEV 1430

RADAR-1 125.8 267.9

	RWY	GP/TCH/RPI	CAT	DA/	HAT/	CEIL-VIS	DA/	HAT/	CEIL-VIS	
				MDA-VIS	HAA		MDA-VIS	HATH/		
ASR	33		AB	1920-1	498	(500-1)	CDE	1920-1¾	498	(500-1¾)
	3		AB	1940/24	516	(600-½)	CDE	1940/55	516	(600-1¼)
	21		AB	1960/24	530	(600-½)	CDE	1960/55	530	(600-1¼)
	15		AB	1960-1	531	(600-1)	CDE	1960-1½	531	(600-1½)
CIR	ALL RWY		AB	1980-1	550	(600-1)	C	1980-1½	550	(600-1½)
			D	2040-2	610	(700-2)	E	2300-3	870	(900-3)

When control tower closed, ASR NA.

Rwy 15/33 helicopter visibility reduction below ¾ SM not authorized.

For inoperative MALSR, increase S-3 Cat C/D/E visibility to 1¾ mile.

For inoperative MALSR, increase S-21 Cat C/D/E visibility to 1½ mile.

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## RADAR INSTRUMENT APPROACH MINIMUMS

# RADAR MINS

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## LAND AND HOLD-SHORT OPERATIONS (LAHSO)

LAHSO is an acronym for "Land and Hold-Short Operations." These operations include landing and holding short of an intersection runway, an intersecting taxiway, or other predetermined points on the runway other than a runway or taxiway. Measured distance represents the available landing distance on the landing runway, in feet.

Specific questions regarding these distances should be referred to the air traffic manager of the facility concerned. The Aeronautical Information Manual contains specific details on hold-short operations and markings.

CITY/AIRPORT	LDG RWY	HOLD-SHORT POINT	AVBL LDG DIST
DULUTH, MN			
DULUTH INTL (DLH)	09	03-21	8,950 feet
FARGO, ND			
HECTOR INTL (FAR)	18	13-31	7,900 feet
	36	09-27	6,600 feet
GRAND FORKS, ND			
GRAND FORKS INTL (GFK)	27R	17R-35L	3,000 feet
	35L	09L-27R	4,600 feet
MINNEAPOLIS, MN			
MINNEAPOLIS-ST PAUL INTL/ WOLD-CHAMBERLAIN (MSP)	22	TWY K	8,550 feet
	30L	TWY A9 TWY W9	8,150 feet
ROCHESTER, MN			
ROCHESTER INTL (RST)	02	13-31	5,850 feet
	13	02-20	5,270 feet
	31	02-20	3,200 feet

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## HOT SPOTS

An "airport surface hot spot" is a location on an aerodrome movement area with a history or potential risk of collision or runway incursion, and where heightened attention by pilots/drivers is necessary.

A "hot spot" is a runway safety related problem area on an airport that presents increased risk during surface operations. Typically it is a complex or confusing taxiway/taxiway or taxiway/runway intersection. The area of increased risk has either a history of or potential for runway incursions or surface incidents, due to a variety of causes, such as but not limited to: airport layout, traffic flow, airport marking, signage and lighting, situational awareness, and training. Hot spots are depicted on airport diagrams as open circles or polygons designated as "HS 1", "HS 2", etc. and tabulated in the list below with a brief description of each hot spot. Hot spots will remain charted on airport diagrams until such time the increased risk has been reduced or eliminated.

CITY/AIRPORT	HOT SPOT	DESCRIPTION*
DULUTH, MN DULUTH INTL (DLH)	HS 1	Rwy 27 apch area.
	HS 2	Apch end of Rwy 27 located at Twy A5.
	HS 3	Rwy 21 via Twy A and Twy C complex int.
GRAND FORKS, ND GRAND FORKS INTL (GFK)	HS 1	Rwy 09L and Twy A int.
	HS 2	Rwy 17R and Twy B int.
MINNEAPOLIS, MN CRYSTAL (MIC)	HS 1	Short distance between rwys.
	HS 2	Short distance between rwys.
	HS 3	Short distance between rwys.
	HS 4	Int of Rwy 06R (sod) on Twy F.
	HS 5	Int of Rwy 24L (sod) on Twy D.
	HS 6	Multiple vehicle/pedestrian deviations occurrence.
	HS 7	Close proximity of Rwy 14R and Rwy 06R.
	HS 8	Rwy 24R proximity to Twy E and Twy B int.
MINNEAPOLIS, MN FLYING CLOUD (FCM)	HS 1	Hold position markings/sign proximity to Twy A.
	HS 2	Hold position markings/sign proximity to Twy A.
	HS 3	Hold position markings/sign proximity to Twy A.
	HS 4	Hold position markings/sign proximity to Twy A.
	HS 5	Hold position markings/sign proximity to Twy A.
	HS 6	Hold position markings/sign proximity to Twy A.
	HS 7	Hold position markings/sign proximity to Twy A.
	HS 8	Hold position markings/sign proximity to Twy A.
	HS 9	Rwy 18 apch area along Twy A.
	HS 10	Proximity of parallel rwys and holding positions.
	HS 11	Short distance between rwy hold short lines.
MINNEAPOLIS, MN MINNEAPOLIS-ST PAUL INTL/ WOLD-CHAMBERLAIN (MSP)	HS 1	Twy A, Twy B, Twy C, Twy D, Twy H, Rwy 04-22 and Rwy 12R-30L, complex geometry.
	HS 2	Twy C, Twy D, Twy P, Twy Q, Rwy 04-22 and Rwy 12L-30R, complex geometry.
	HS 3	Twy/rwy geometry and traffic flow.
	HS 4	Complex geometry at Rwy 04 apch end.
MINOT, ND MINOT INTL (MOT)	HS 1	Apch end of Rwy 08.
	HS 2	Int of Twy C and Rwy 08-26.
ROCHESTER, MN ROCHESTER INTL (RST)	HS 1	Complex twy/rwy/twy int.

(SEE CONTINUATION PAGE FOR MORE LISTINGS)

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HOT SPOTS

(CONTINUED)

CITY/AIRPORT	HOT SPOT	DESCRIPTION*
ST. PAUL, MN ST. PAUL DOWNTOWN HOLMAN FLD (STP)	HS 1	Helicopter landings on Twy A.
	HS 2	Twy D between Rwy 13 and Rwy 32 unusual configuration for rwy holding position markings.
	HS 3	Helicopter operations on Twy B.
SIOUX FALLS, SD JOE FOSS FIELD (FSD)	HS 1	Complex twy int in close proximity of rws.

\*See appropriate Chart Supplement HOT SPOT table for additional information.

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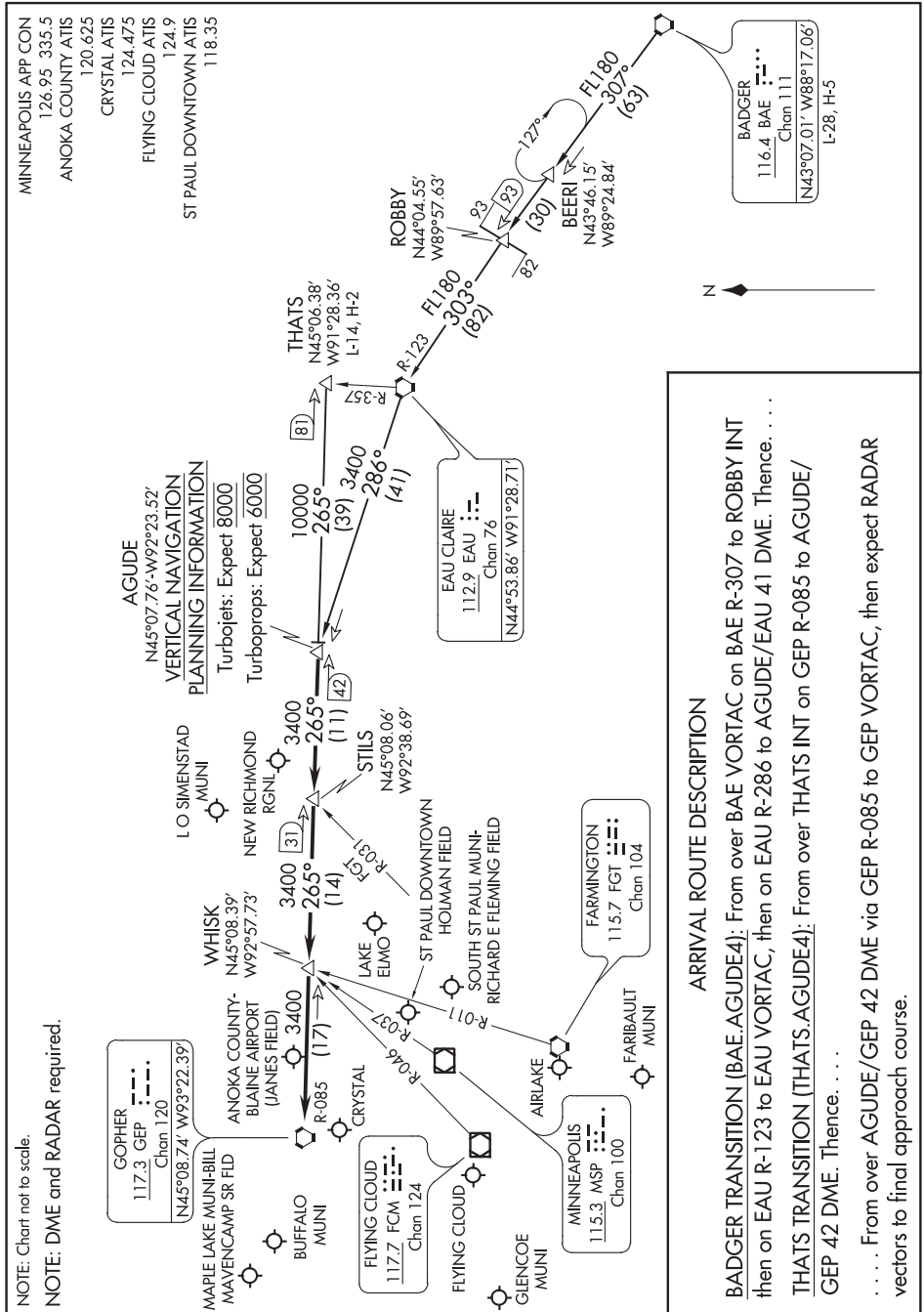
NC-1, 10 NOV 2016 to 05 JAN 2017

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# AGUDE FOUR ARRIVAL

ST-263 (FAA)

MINNEAPOLIS-ST PAUL, MINNESOTA



# AGUDE FOUR ARRIVAL

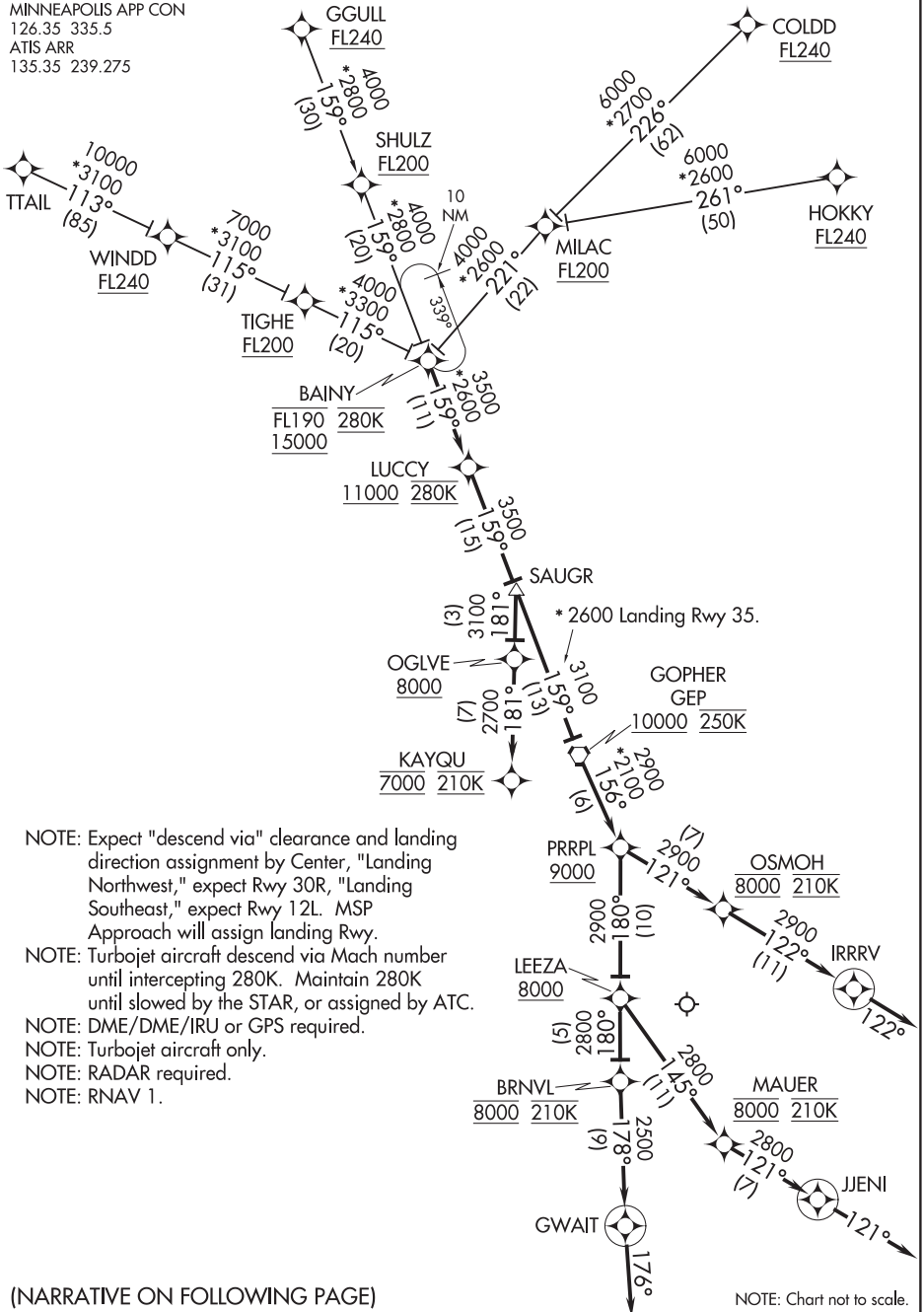
MINNEAPOLIS-ST PAUL, MINNESOTA

(BAINY.BAINY2) 16259

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)  
ST-264 (FAA) MINNEAPOLIS, MINNESOTA

# BAINY TWO ARRIVAL (RNAV)

MINNEAPOLIS APP CON  
126.35 335.5  
ATIS ARR  
135.35 239.275



NOTE: Expect "descend via" clearance and landing direction assignment by Center, "Landing Northwest," expect Rwy 30R, "Landing Southeast," expect Rwy 12L. MSP Approach will assign landing Rwy.

NOTE: Turbojet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR, or assigned by ATC.

NOTE: DME/DME/IRU or GPS required.

NOTE: Turbojet aircraft only.

NOTE: RADAR required.

NOTE: RNAV 1.

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

# BAINY TWO ARRIVAL (RNAV)

MINNEAPOLIS, MINNESOTA  
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

(BAINY.BAINY2) 25JUN15

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(BAINY.BAINY2) 16259

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

**BAINY TWO ARRIVAL (RNAV)**

ST-264 (FAA)

MINNEAPOLIS, MINNESOTA

## ARRIVAL ROUTE DESCRIPTION

COLDD TRANSITION (COLDD.BAINY2)GGULL TRANSITION (GGULL.BAINY2)HOKKY TRANSITION (HOKKY.BAINY2)MILAC TRANSITION (MILAC.BAINY2)SHULZ TRANSITION (SHULZ.BAINY2)TIGHE TRANSITION (TIGHE.BAINY2)TTAIL TRANSITION (TTAIL.BAINY2)WINDD TRANSITION (WINDD.BAINY2)

From BAINY on track 159° to cross LUCCY at/above 11000 and at 280K, then on track 159° to SAUGR.

LANDING RUNWAYS 4, 17, 22, 30R: From SAUGR on track 159° to cross GEP VORTAC at/above 10000 and at 250K, then on track 156° to cross PRRPL at/above 9000, then on track 121° to cross OSMOH at 8000 and at 210K, then on track 122° to IRRRV, then on track 122°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 12L, 12R: From SAUGR on track 181° to cross OGLVE at/above 8000, then on track 181° to cross KAYQU at 7000 and at 210K. Expect RNAV (RNP), RNAV (GPS), or ILS approach or RADAR vectors to final approach course.

LANDING RUNWAY 30L: From SAUGR on track 159° to cross GEP VORTAC at/above 10000 and at 250K, then on track 156° to cross PRRPL at/above 9000, then on track 180° to cross LEEZA at/above 8000, then on track 145° to cross MAUER at 8000 and at 210K, then on track 121° to JJENI, then on track 121°. Expect RADAR vectors to final approach course.

LANDING RUNWAY 35: From SAUGR on track 159° to cross GEP VORTAC at/above 10000 and at 250K, then on track 156° to cross PRRPL at/above 9000, then on track 180° to cross LEEZA at/above 8000, then on track 180° to cross BRNVL at 8000 and at 210K, then on track 178° to GWAIT, then on track 176°. Expect RADAR vectors to final approach course.

**BAINY TWO ARRIVAL (RNAV)**

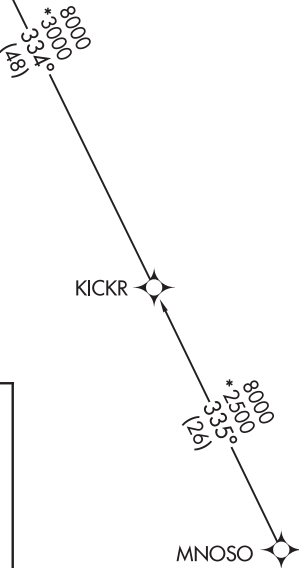
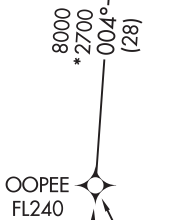
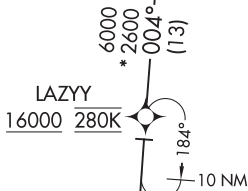
MINNEAPOLIS, MINNESOTA

(BAINY.BAINY2) 25JUN15

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

BLUEM TWO ARRIVAL (RNAV) Transition Routes ST-264 (FAA) MINNEAPOLIS, MINNESOTA

MINNEAPOLIS APP CON  
135.47 335.5  
ATIS ARR  
135.35 239.275



NOTE: Expect "descend via" clearance and landing direction assignment by Center: "Landing Northwest" expect Rwy 35 (when Rwy 35 not in use, expect Rwy 30L), "Landing Southeast" expect Rwy 12R. MSP Approach will assign landing Rwy.

NOTE: Turbojet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR, or assigned by ATC.

NOTE: DME/DME/IRU or GPS required.

NOTE: Turbojet aircraft only.

NOTE: RADAR required.

NOTE: RNAV 1.

(CONTINUED ON FOLLOWING PAGE)

- HELLO TRANSITION (HELLO.BLUEM2)
- KICKR TRANSITION (KICKR.BLUEM2)
- LAZYY TRANSITION (LAZYY.BLUEM2)
- MNOSO TRANSITION (MNOSO.BLUEM2)
- OOPEE TRANSITION (OOPEE.BLUEM2)

NOTE: Chart note to scale.

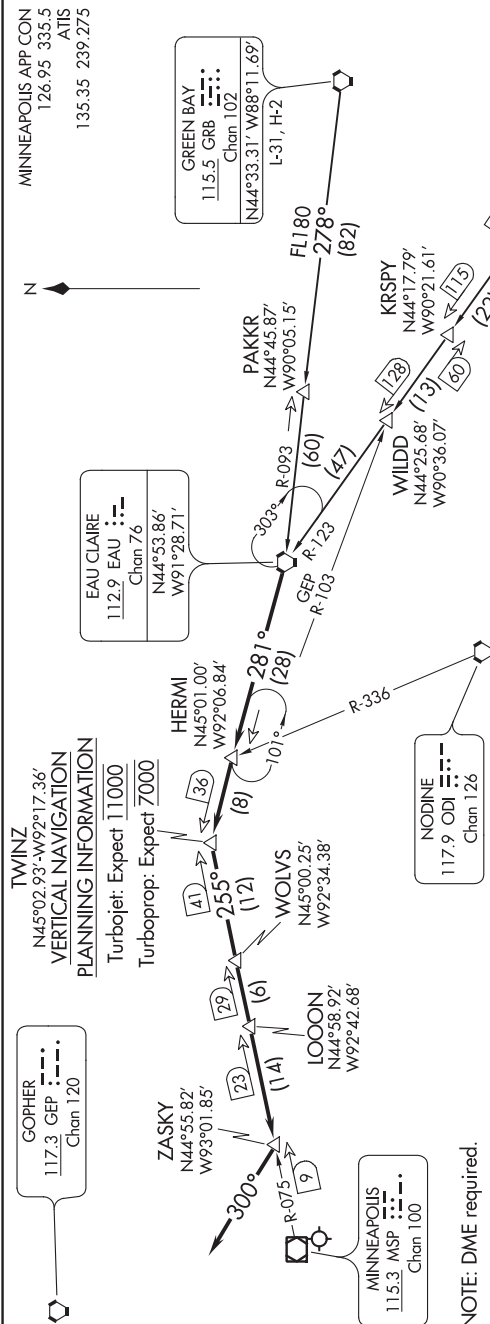
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



# EAU CLAIRE NINE ARRIVAL

NC-1, 10 NOV 2016 to 05 JAN 2017



MINNEAPOLIS APP CON  
126.95 335.5  
AITS  
135.35 239.275

GREEN BAY  
115.5 GRB  
Chan 102  
N44°33.31' W88°11.69'  
L-31, H-2

BADGER  
116.4 BAE  
Chan 111  
N43°07.01' W88°17.06'  
L-28, H-5

EAU CLAIRE  
Chan 76  
112.9 EAU  
N44°53.86'  
W91°28.71'

TWINZ  
N45°02.93'-W92°17.36'  
VERTICAL NAVIGATION  
PLANNING INFORMATION  
Turbojet: Expect 11000  
TurboPROP: Expect 7000

GOPHER  
117.3 GEP  
Chan 120

MINNEAPOLIS  
115.3 MSP  
Chan 100

NOTE: DME required.  
NOTE: RADAR required.

**ARRIVAL ROUTE DESCRIPTION**

**BADGER TRANSITION [BAE.EAU9]:** From over BAE VORTAC via BAE R-307 and EAU R-123 to EAU VORTAC. Thence. . . .

**GREEN BAY TRANSITION [GRB.EAU9]:** From over GRB VORTAC via GRB R-278 and EAU R-093 to EAU VORTAC. Thence. . . .

. . . . From over EAU VORTAC via the EAU R-281 to TWINZ/36 DME, then via the MSP R-075 to ZASKY/9 DME. Thence. . . .

**LANDING RUNWAY 12L/R:** After ZASKY via 300° heading for RADAR vectors.

**LANDING RUNWAY 30L/R, 35:** Expect RADAR vectors to final approach course.

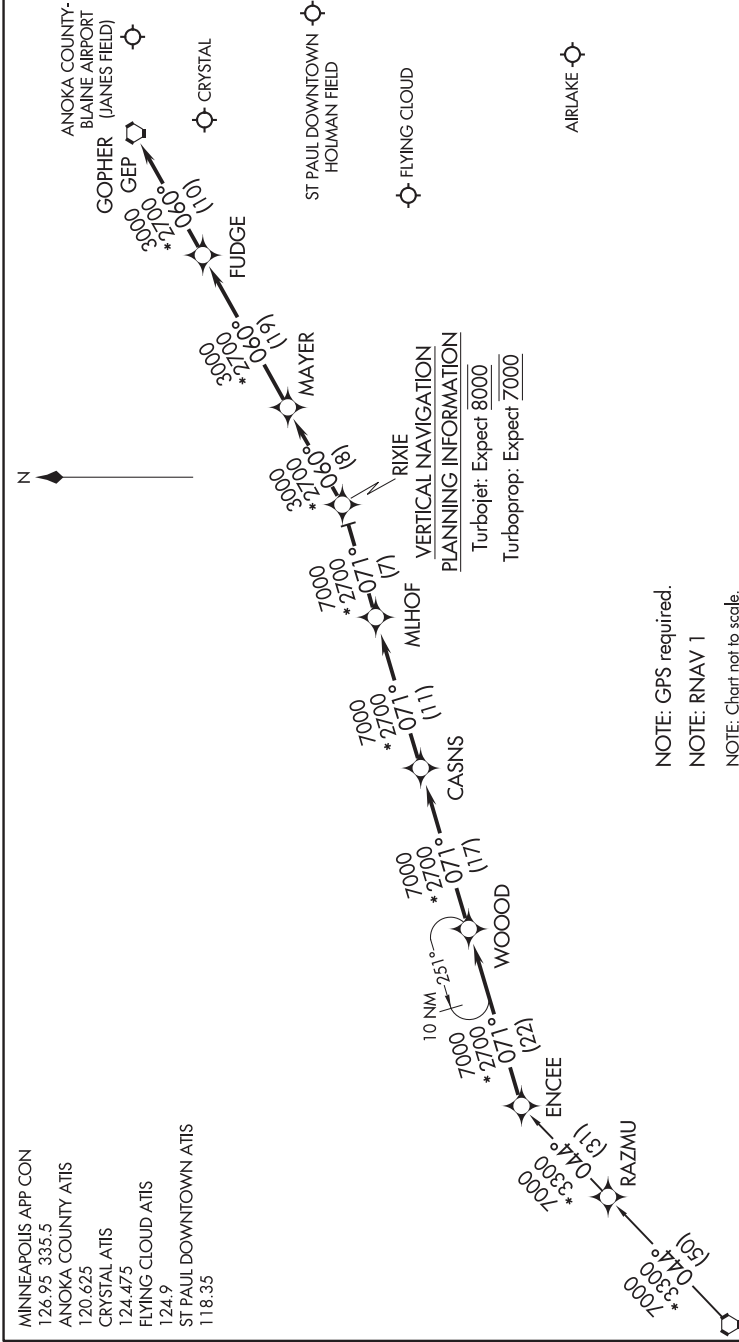
**LANDING ALL OTHER MSP RUNWAYS:** Expect RADAR vectors to final approach course.

NOTE: Chart not to scale.

# EAU CLAIRE NINE ARRIVAL



NC-1, 10 NOV 2016 to 05 JAN 2017

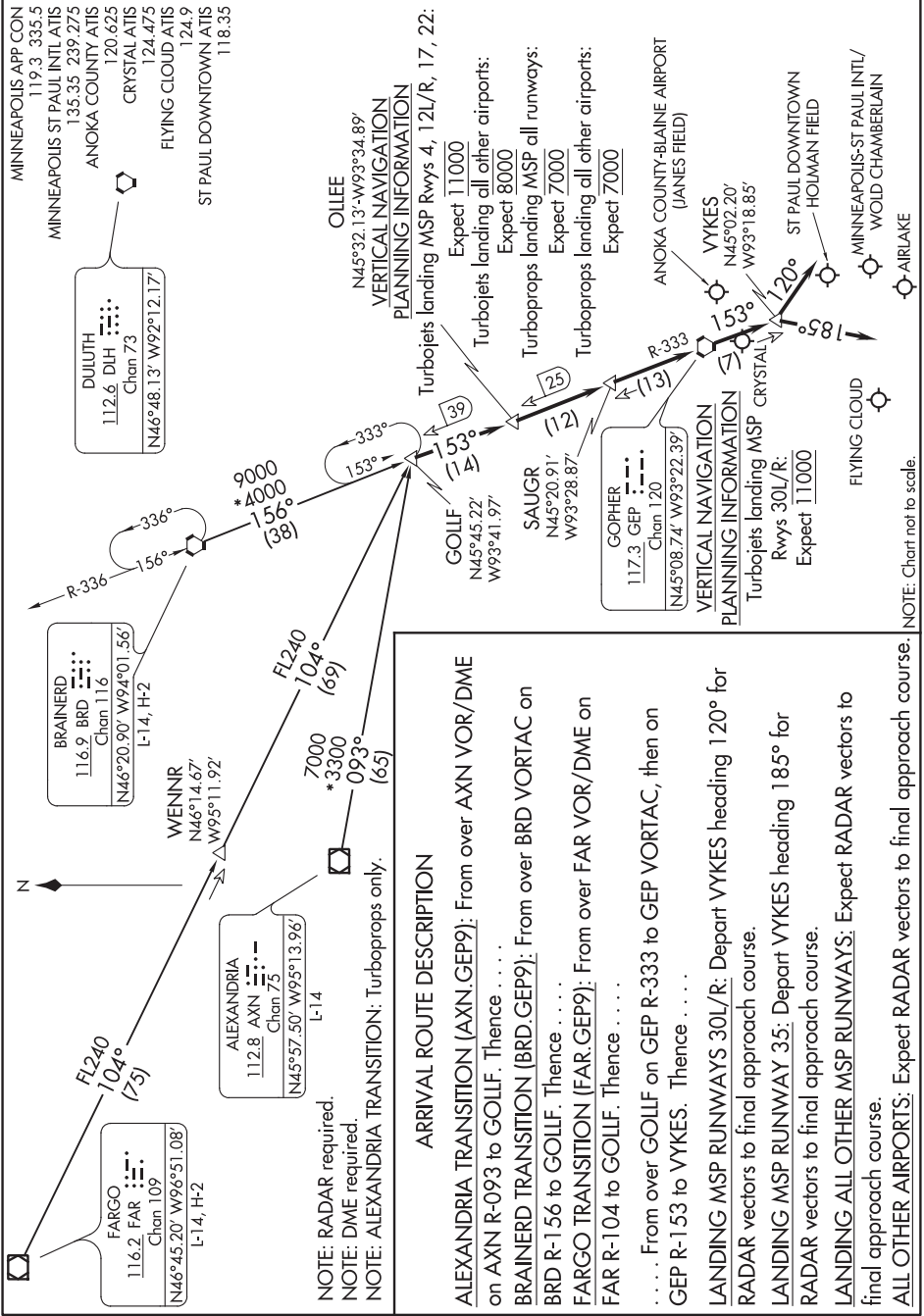


ARRIVAL ROUTE DESCRIPTION

SIUX FALLS TRANSITION (FSD.ENCEE1)

From over ENCEE WP via 071° track to RIXIE WP, thence via 060° track to GOPHER VORTAC, thence expect radar vectors to final approach course.

NC-1, 10 NOV 2016 to 05 JAN 2017



NOTE: Chart not to scale.

# (KASPR.KASPR6) 16315 KASPR SIX ARRIVAL

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)  
ST-264 (FAA) MINNEAPOLIS, MINNESOTA

ATIS  
135.35 239.275  
MINNEAPOLIS APP CON  
118.72 335.5 (Rwy 35)  
119.3 335.5 (Rwys 12L/30R, 4/22, 17)  
126.95 335.5 (Rwy 12R/30L)

FLYING CLOUD  
117.7 FCM  
Chan 124

SLIKK  
N44°47.90'  
W93°17.21'

MINNEAPOLIS  
115.3 MSP  
Chan 100  
N44°53.79'-W93°14.19'

AHMIT  
N44°29.88'  
W93°11.71'

FARMINGTON  
115.7 FGT  
Chan 104  
N44°37.86'-W93°10.92'

PEPPR  
N44°22.89'  
W93°12.40'

HALFWAY  
111.2 FOW  
Chan 49

DELZY  
N44°13.92'-W93°13.27'  
**VERTICAL NAVIGATION**  
**PLANNING INFORMATION**  
Turbojets: Expect 10000  
Turboprops: Expect 7000, 8000 or 9000

## ARRIVAL ROUTE DESCRIPTION

### MASON CITY TRANSITION (MCW.KASPR6):

From over MCW VOR/DME on MCW R-358 and FGT R-178 to KASPR INT. Thence. . .

### WATERLOO TRANSITION (ALO.KASPR6):

From over ALO VOR/DME on ALO R-320 to JAGOW INT, then on MCW R-358 and FGT R-178 to KASPR INT. Thence. . .

. . . From over KASPR INT via FGT R-178 to FGT VORTAC.

**LANDING RUNWAYS 12L/R:** After FGT VORTAC via FGT R-330 to SLIKK INT thence via 300° heading for RADAR vectors to final approach course.

**LANDING ALL OTHER RUNWAYS:** Via RADAR vectors to final approach course.

MASON CITY  
114.9 MCW  
Chan 96  
N43°05.69'-W93°19.79'  
L-12, H-5

JAGOW  
N43°30.89'  
W93°17.41'

ROCHESTER  
112.0 RST  
Chan 57

WATERLOO  
112.2 ALO  
Chan 59  
N42°33.39'-W92°23.94'  
L-28, H-5

NOTE: Chart not to scale.

NOTE: DME and RADAR required.

NOTE: MASON CITY TRANSITION: "TURBOPROPS ONLY".

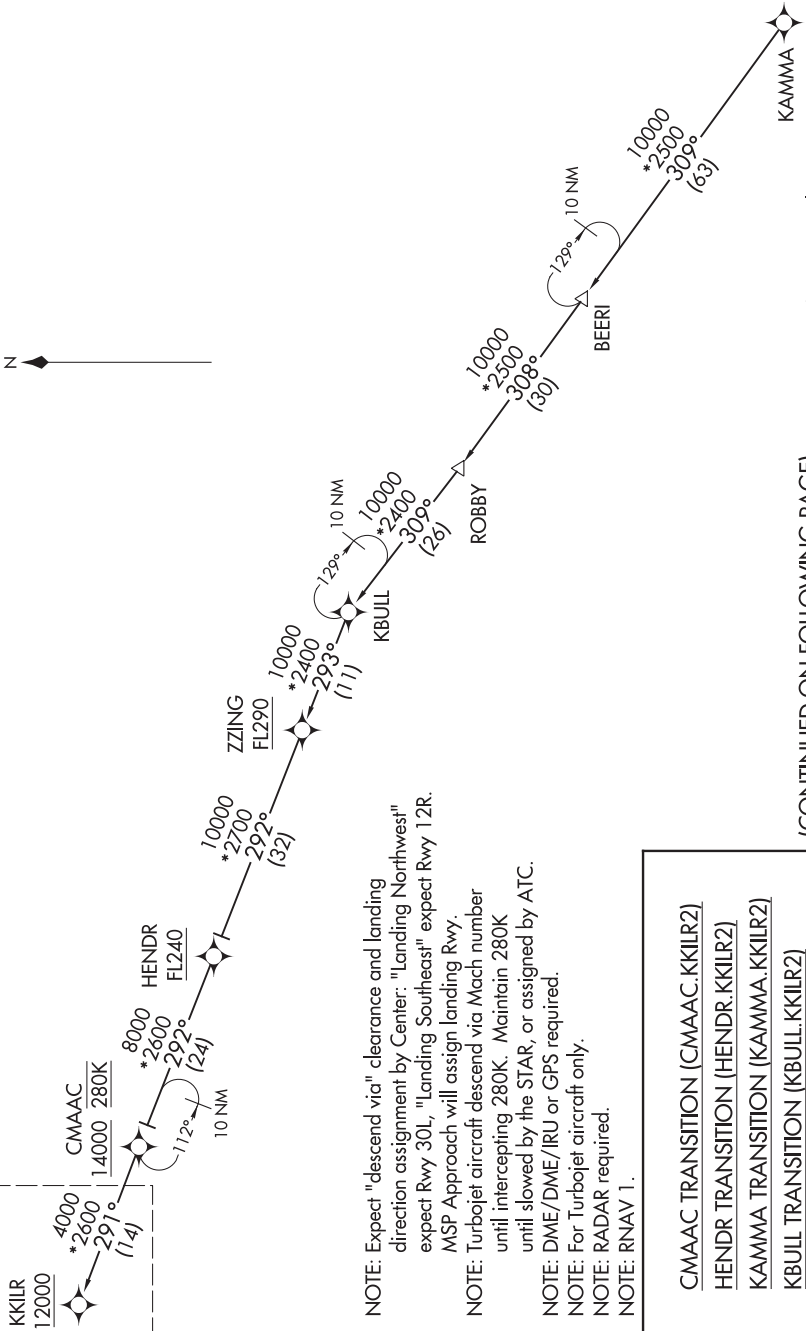
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# KASPR SIX ARRIVAL (KASPR.KASPR6) 10NOV16

MINNEAPOLIS, MINNESOTA  
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

MINNEAPOLIS APP CON  
126.35 335.5  
ATIS ARR  
135.35 239.275



NOTE: Expect "descend via" clearance and landing direction assignment by Center: "Landing Northwest" expect Rwy 30L, "Landing Southeast" expect Rwy 12R.

NOTE: MSP Approach will assign landing Rwy.

NOTE: Turbopjet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR, or assigned by ATC.

NOTE: DME/DME/IRU or GPS required.

NOTE: For Turbopjet aircraft only.

NOTE: RADAR required.

NOTE: RNAV 1.

- CMAAC TRANSITION (CMAAC.KKILR2)
- HENDR TRANSITION (HENDR.KKILR2)
- KAMMA TRANSITION (KAMMA.KKILR2)
- KBULL TRANSITION (KBULL.KKILR2)

NOTE: Chart not to scale.

(CONTINUED ON FOLLOWING PAGE)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

21.02 NAV 01 91.02 VON 10.10 1-C-N

MINNEAPOLIS APP CON  
126.35 335.5  
ATIS ARR  
135.35 239.275

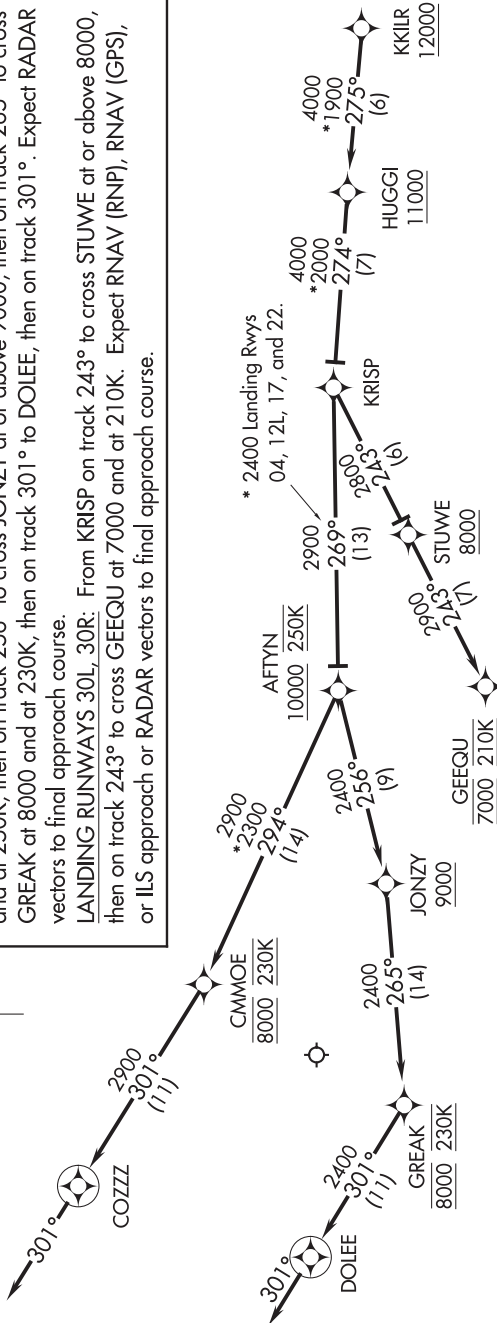
ARRIVAL ROUTE DESCRIPTION

From KKILR on track 275° to cross HUGGI at or above 11000, then on track 274° to KRISP.

LANDING RUNWAYS 4, 12L, 17, 22: From KRISP on track 269° to cross AFTYN at or above 10000 and at 250K, then on track 294° to cross CMMOE at 8000 and at 230K, then on track 301° to COZZ, then on track 301°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 12R, 35: From KRISP on track 269° to cross AFTYN at or above 10000 and at 250K, then on track 256° to cross JONZY at or above 9000, then on track 265° to cross GREAK at 8000 and at 230K, then on track 301° to DOLEE, then on track 301°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 30L, 30R: From KRISP on track 243° to cross STUWE at or above 8000, then on track 243° to cross GEEQU at 7000 and at 210K. Expect RNAV (RNP), RNAV (GPS), or ILS approach or RADAR vectors to final approach course.



NOTE: Expect "descend via" clearance and landing direction assignment by Center: "Landing Northwest" expect Rwy 30L, "Landing Southeast" expect Rwy 12R. MSP Approach will assign landing Rwy.

NOTE: Turbojet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR, or assigned by ATC.

NOTE: DME/DME/IRU or GPS required.

NOTE: For Turbojet aircraft only.

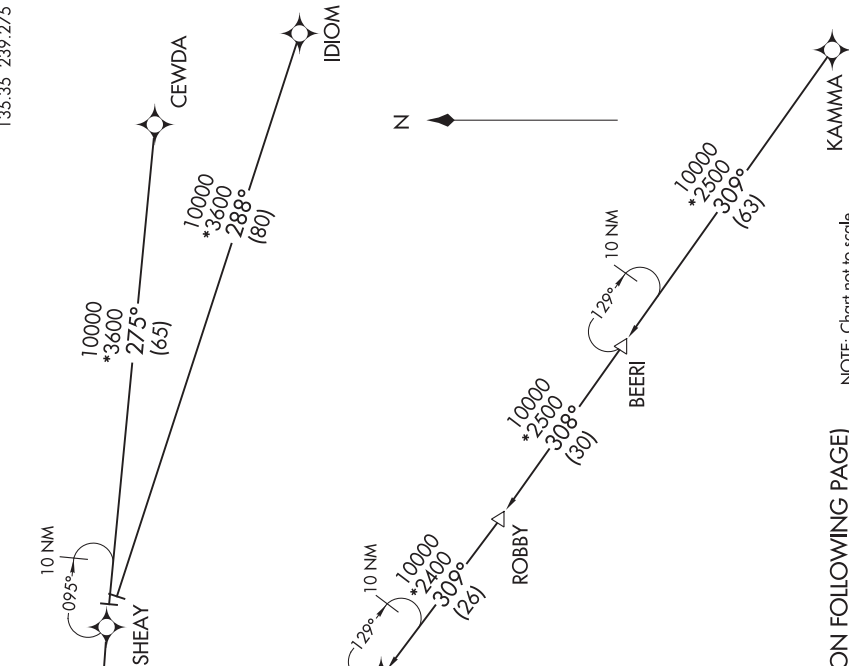
NOTE: RADAR required.

NOTE: RNAV 1.

NOTE: Chart not to scale.

MUSCL TWO ARRIVAL(RNAV) Transition Routes ST-264 (FAA) MINNEAPOLIS, MINNESOTA

MINNEAPOLIS APP CON  
126.35 335.5  
ATIS ARR  
135.35 239.275



NOTE: Chart not to scale.

(CONTINUED ON FOLLOWING PAGE)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

See following page for Arrival Routes.

NOTE: Expect "descend via" clearance and landing direction assignment by Center: "Landing Northwest" expect Rwy 30R, "Landing Southeast" expect Rwy 12L. MSP Approach will assign landing Rwy.

NOTE: Turbojet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR, or assigned by ATC.

NOTE: DME/DME/IRU or GPS required.

NOTE: Turbojet aircraft only.

NOTE: RADAR required.

NOTE: RNAV 1.

- CEWDA TRANSITION (CEWDA.MUSCL2)
- FLUID TRANSITION (FLUID.MUSCL2)
- IDIOM TRANSITION (IDIOM.MUSCL2)
- KAMMA TRANSITION (KAMMA.MUSCL2)
- KBULL TRANSITION (KBULL.MUSCL2)
- SHEAY TRANSITION (SHEAY.MUSCL2)

# MUSCL TWO ARRIVAL (RNAV) Arrival Routes

ST-264 (FAA)

MINNEAPOLIS, MINNESOTA

210Z NOV 2016 to 05 JAN 2017

MINNEAPOLIS APP CON  
126.35 333.5  
ATIS ARR  
135.35 239.275

NOTE: Expect "descend via" clearance and landing direction assignment by Center: "Landing Northwest" expect Rwy 30R, "Landing Southeast" expect Rwy 12L. MSP Approach will assign landing Rwy.

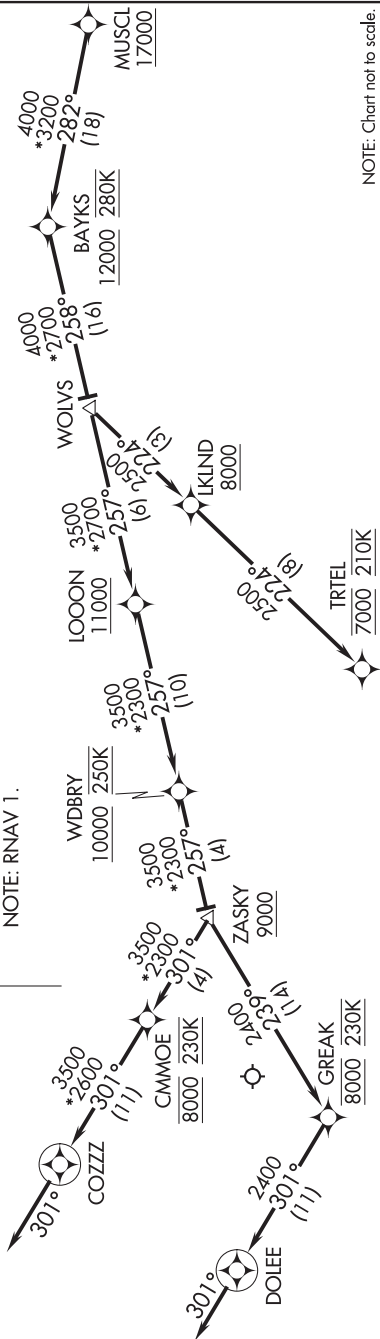
NOTE: Turbopjet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR, or assigned by ATC.

NOTE: DME/DME/IRU or GPS required.

NOTE: Turbopjet aircraft only.

NOTE: RADAR required.

NOTE: RNAV 1.



NOTE: Chart not to scale.

## ARRIVAL ROUTE DESCRIPTION

From MUSCL on track 282° to cross BAYKS at or above 12000 and at 280K, then on track 258° to WOLVS.

**LANDING RUNWAYS 4, 12L, 17, 22:** From WOLVS on track 257° to cross LOONN at or above 11000, then on track 257° to cross WDBRY at or above 10000 and at 250K, then on track 257° to cross ZASKY at or above 9000, then on track 301° to cross CMMOE at 8000 and at 230K, then on track 301° to COZZZ, then on track 301°. Expect RADAR vectors to final approach course.

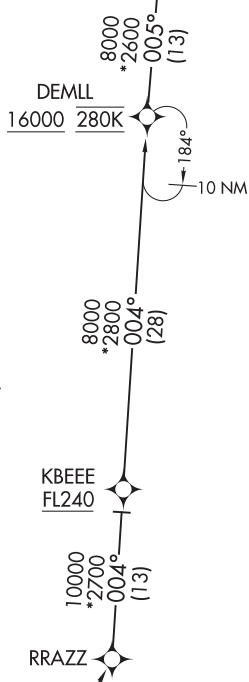
**LANDING RUNWAYS 12R, 35:** From WOLVS on track 257° to cross LOONN at or above 11000, then on track 257° to cross WDBRY at or above 10000 and at 250K, then on track 257° to cross ZASKY at or above 9000, then on track 239° to cross GREAK at 8000 and at 230K, then on track 301° to DOILEE, then on track 301°. Expect RADAR vectors to final approach course.

**LANDING RUNWAYS 30L, 30R:** From WOLVS on track 224° to cross LKIND at or above 8000, then on track 224° to cross TRTEL at 7000 and at 210K. Expect RNAV (RNP), RNAV (GPS), or ILS approach or RADAR vectors to final approach course.

NC-1, 10 NOV 2016 to 05 JAN 2017

MINNEAPOLIS APP CON  
135.47 335.5  
ATIS ARR  
135.35 239.275

NITZR 12000  
See following page for Arrival Routes.



- NOTE: Expect "descend via" clearance and landing direction assignment by Center: "Landing Northwest" expect Rwy 35 (when Rwy 35 not in use, expect Rwy 30L), "Landing Southeast" expect Rwy 12R.  
MSP Approach will assign landing Rwy.
- NOTE: Turbojet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR, or assigned by ATC.
- NOTE: DME/DME/IRU or GPS required.
- NOTE: For Turbojet aircraft only.
- NOTE: RADAR required.
- NOTE: RNAV 1.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

(CONTINUED ON FOLLOWING PAGE)

DEMLL TRANSITION (DEMLL.NITZR2)  
ROKKK TRANSITION (ROKKK.NITZR2)  
RRAZZ TRANSITION (RRAZZ.NITZR2)

NOTE: Chart not to scale.

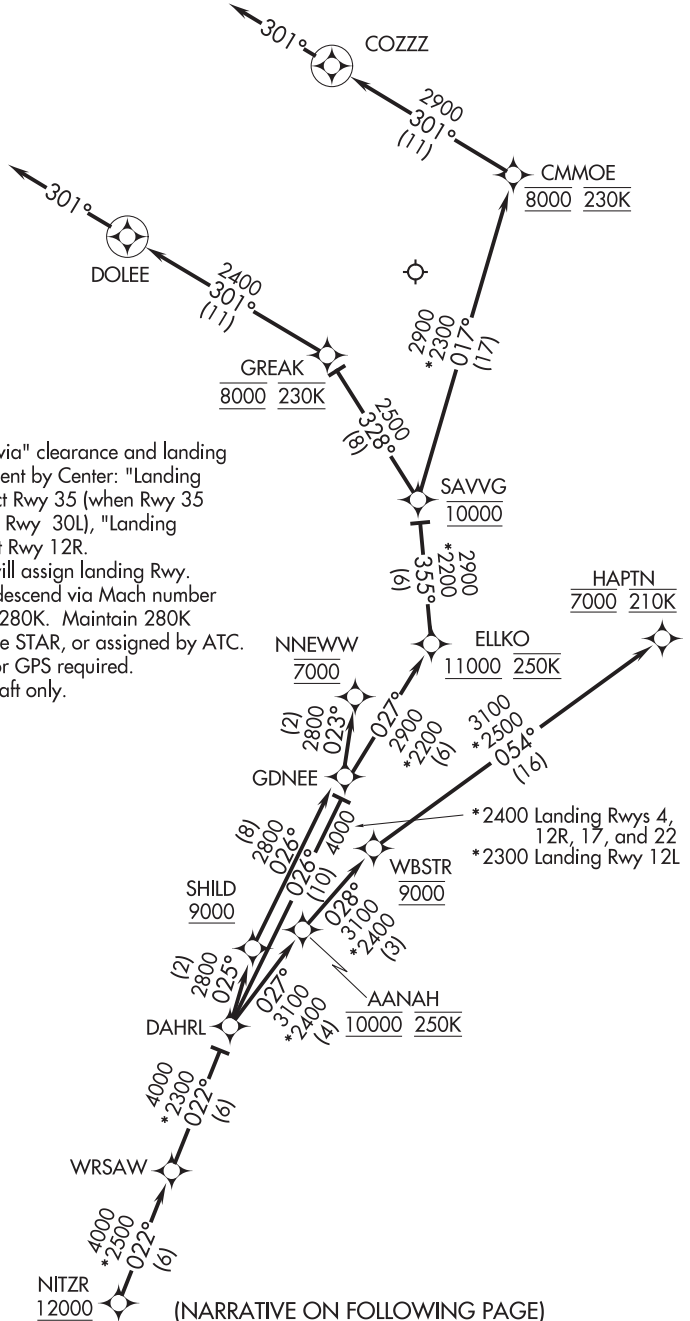


(NITZR.NITZR2) 16259

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

# NITZR TWO ARRIVAL(RNAV) Arrival Routes ST-264 (FAA) MINNEAPOLIS, MINNESOTA

MINNEAPOLIS APP CON  
135.47 335.5  
ATIS ARR  
135.35 239.275



- NOTE: Expect "descend via" clearance and landing direction assignment by Center: "Landing Northwest" expect Rwy 35 (when Rwy 35 not in use, expect Rwy 30L), "Landing Southeast" expect Rwy 12R.  
MSP Approach will assign landing Rwy.
- NOTE: Turbojet aircraft descend via Mach number until intercepting 280K. Maintain 280K until slowed by the STAR, or assigned by ATC.
- NOTE: DME/DME/IRU or GPS required.
- NOTE: For Turbojet aircraft only.
- NOTE: RADAR required.
- NOTE: RNAV 1.

NOTE: Chart not to scale.

(NARRATIVE ON FOLLOWING PAGE)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ARRIVAL ROUTE DESCRIPTION

From NITZR on track 022° to WRS AW, then on track 022° to DAHRL.

LANDING RUNWAYS 4, 12R, 17, 22: From DAHRL on track 026° to GDNEE, then on track 027° to cross ELLKO at or above 11000 and at 250K, then on track 355° to cross SAVVG at 10000, then on track 328° to cross GREAK at 8000 and at 230K, then on track 301° to DOLEE, then on track 301°. Expect RADAR vectors to final approach course.

LANDING RUNWAY 12L: From DAHRL on track 026° to GDNEE, then on track 027° to cross ELLKO at or above 11000 and at 250K, then on track 355° to cross SAVVG at 10000, then on track 017° to cross CMMOE at 8000 and at 230K, then on track 301° to COZZZ, then on track 301°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 30R, 30L: From DAHRL on track 027° to cross AANA H at 10000 and at 250K, then on track 028° to cross WBSTR at 9000, then on track 054° to cross HAPT N at 7000 and at 210K. Expect RNAV (RNP), RNAV (GPS), or ILS approach or RADAR vectors to final approach course.

LANDING RUNWAY 35: From DAHRL on track 025° to cross SHILD at or above 9000, then on track 026° to GDNEE, then on track 023° to cross NNEW W at 7000. Expect RNAV (RNP), RNAV (GPS), or ILS approach or RADAR vectors to final approach course.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# SKETR FIVE ARRIVAL

NC-1, 10 NOV 2016 to 05 JAN 2017

## ARRIVAL ROUTE DESCRIPTION

**REDWOOD FALLS TRANSITION (RWF.SKETR5):** From over RWF VOR/DME on RWF R-065 to SKETR/34 DME. Thence . . . . .

. . . . . From over SKETR/RWF 34 DME via RWF R-065 to SHONN/RFW 44 DME, then via MSP R-251 to NORWD/MSP 30 DME, then via MSP R-251 to JAEDN/MSP 22 DME, then via MSP R-251 to MONKY/MSP 9 DME, thence . . . . .

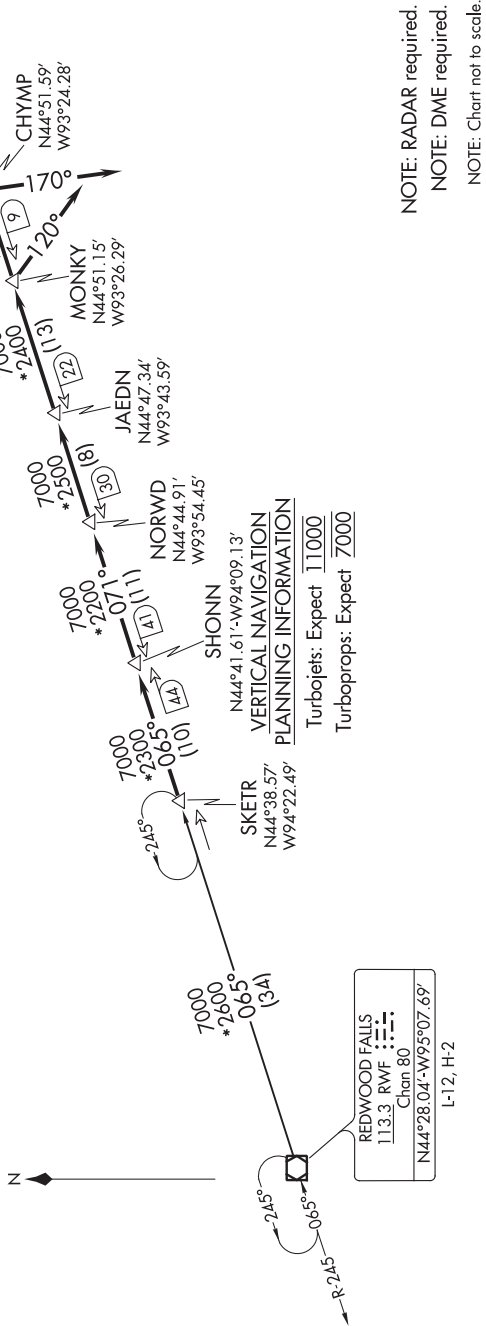
**LANDING MSP RUNWAY 30L/R:** . . . . . depart MONKY/MSP 9 DME heading 120° for RADAR vectors to final approach course.

**LANDING MSP RUNWAY 35:** . . . . . depart MONKY/MSP 9 DME via MSP R-251 to CHYMP/MSP 8 DME, then via heading 170° for RADAR vectors to final approach course.

**ALL OTHER RUNWAYS:** . . . . . via RADAR vectors to final approach course.

MINNEAPOLIS APP CON  
126.95 335.5  
ATIS  
135.35 239.275

MINNEAPOLIS  
115.3 MSP  
Chan 100

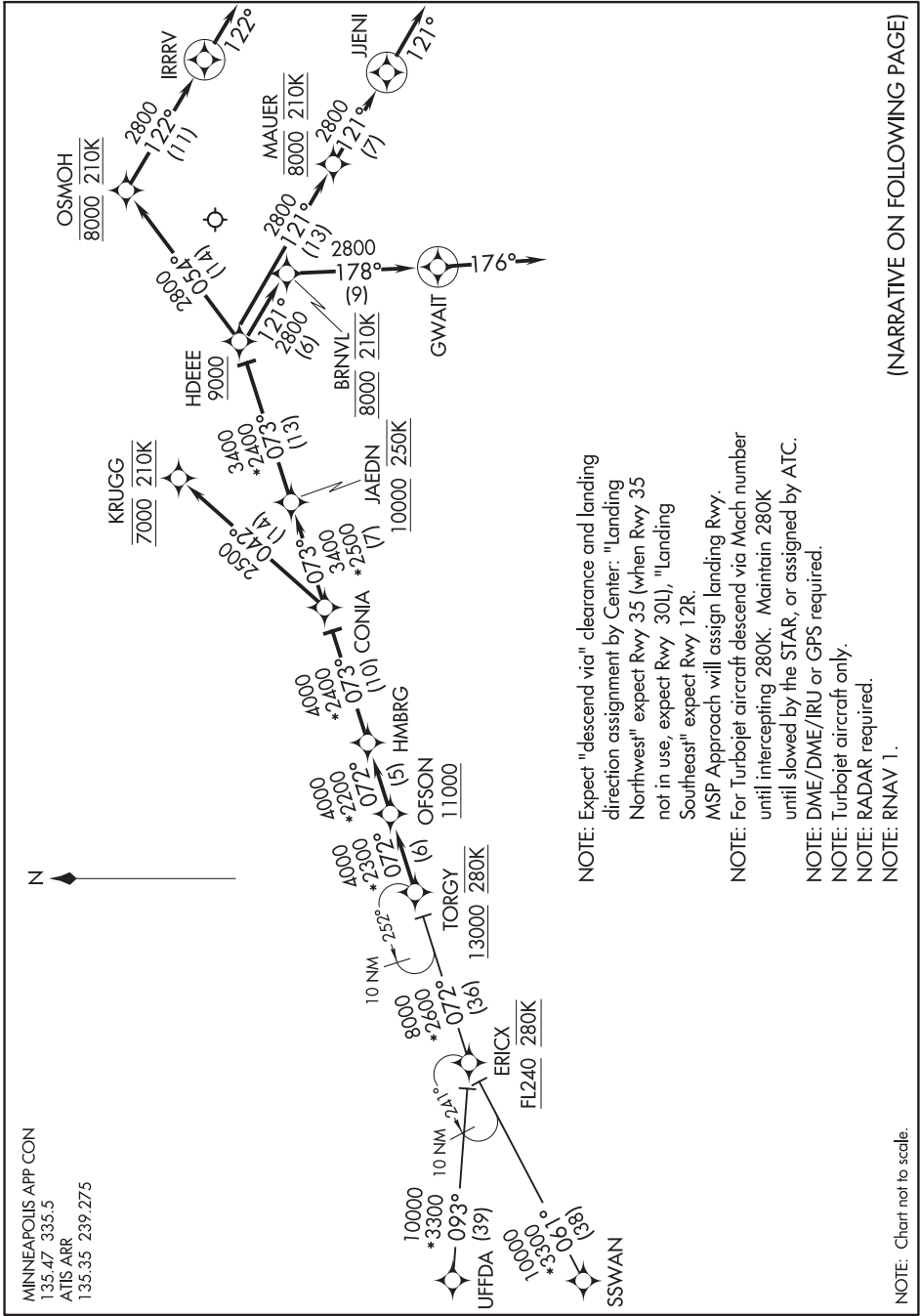


NOTE: RADAR required.  
NOTE: DME required.  
NOTE: Chart not to scale.

NC-1, 10 NOV 2016 to 05 JAN 2017

# TORGY TWO ARRIVAL (RNAV)

NC-1, 10 NOV 2016 to 05 JAN 2017



(NARRATIVE ON FOLLOWING PAGE)

NC-1, 10 NOV 2016 to 05 JAN 2017

# TORGY TWO ARRIVAL (RNAV)

(TORGY.TORGY2) 16259

**TORGY TWO ARRIVAL(RNAV)** MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)  
ST-264 (FAA) MINNEAPOLIS, MINNESOTA

## ARRIVAL ROUTE DESCRIPTION

ERICX TRANSITION (ERICX.TORGY2)SSWAN TRANSITION (SSWAN.TORGY2)UFFDA TRANSITION (UFFDA.TORGY2)

From TORGY on track 072° to cross OFSON at or above 11000, then on track 072° to HMBRG, then on track 073° to CONIA.

LANDING RUNWAYS 4, 17, 22, 30L: From CONIA on track 073° to cross JAEDN at or above 10000 and at 250K, then on track 073° to cross HDEEE at or above 9000, then on track 121° to cross MAUER at 8000 and at 210K, then on track 121° to JJENI, then on track 121°. Expect RADAR vectors to final approach course.

LANDING RUNWAYS 12L, 12R: From CONIA on track 042° to cross KRUGG at 7000 and at 210K. Expect RNAV (RNP), RNAV (GPS), or ILS approach or RADAR vectors to final approach course.

LANDING RUNWAY 30R: From CONIA on track 073° to cross JAEDN at or above 10000 and at 250K, then on track 073° to cross HDEEE at or above 9000, then on track 054° to cross OSMOH at 8000 and at 210K, then on track 122° to IRRRV, then on track 122°. Expect RADAR vectors to final approach course.

LANDING RUNWAY 35: From CONIA on track 073° to cross JAEDN at or above 10000 and at 250K, then on track 073° to cross HDEEE at or above 9000, then on track 121° to cross BRNVL at 8000 and at 210K, then on track 178° to GWAIT, then on track 176°. Expect RADAR vectors to final approach course.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

**TORGY TWO ARRIVAL(RNAV)** MINNEAPOLIS, MINNESOTA  
(TORGY.TORGY2) 25JUN15 MINNEAPOLIS ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

# TWOLF TWO ARRIVAL

ST-264 (FAA)

MINNEAPOLIS, MINNESOTA

MINNEAPOLIS APP CON

- 126.95 335.5
- 118.72 (MSP RWY 35)
- ANOKA COUNTY ATIS
- 120.625
- CRYSTAL ATIS
- 124.475
- FLYING CLOUD ATIS
- 124.9
- MINNEAPOLIS ATIS
- 135.35 239.275
- ST PAUL DOWNTOWN ATIS
- 118.35

L O SIMENSTAD MUNI

ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD)

NEW RICHMOND RGNL

ST PAUL DOWNTOWN HOLMAN FIELD

GOPHER  
117.3 GEP  
Chan 120

FLYING CLOUD

FLYING CLOUD  
117.7 FCM  
Chan 124  
N44°49.52'-W93°26.56'

SLIKK  
N44°47.90'  
W93°17.21'

FARMINGTON  
115.7 FGT  
Chan 104  
N44°37.86'-W93°10.92'

TRGET  
N44°13.88'-W93°27.73'  
**VERTICAL NAVIGATION  
PLANNING INFORMATION**

- MSP: Expect 11000
- All other airports:
- Turbojets: Expect 8000
- Turboprops: Expect 7000

R-180

R-178

R-103

R-201

R-081

R-178

R-178

R-178

R-178

R-178

R-178

R-178

R-178

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R-178

R-178

R-178

R-178

R-178

R-178

R-178

R-178

R-178

R-178

MANKATO  
110.8 MKT  
Chan 45

FORT DODGE  
113.5 FOD  
Chan 82  
N42°36.67'-W94°17.69'  
L-12, H-5

TICKT  
N42°53.71'  
W93°59.01'

TWOLF  
N43°17.00'  
W93°33.09'

KGEE  
N43°44.94'  
W93°30.47'

LYNK  
N44°06.89'  
W93°28.39'

PIKLL  
N44°22.82'  
W93°21.49'

GDNEE  
N44°30.68'  
W93°15.98'

NOTE: DME and RADAR required.

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

# TWOLF TWO ARRIVAL

MINNEAPOLIS, MINNESOTA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ARRIVAL ROUTE DESCRIPTION

FORT DODGE TRANSITION (FOD.TWOLF2): From over FOD VORTAC via FOD R-032 to TWOLF/FOD 52 DME, Thence . . . .

. . . .From over TWOLF/GEP 112 DME via GEP R-178 to KGEED/GEP 84 DME, then as depicted to TRGET INT/GEP 55 DME. Thence. . . .

LANDING MSP RUNWAYS 12L/R: From over TRGET INT via FGT R-201 to FGT VORTAC, then via FGT R-330 to SLIKK INT/FGT 11 DME, then via heading 300° for RADAR vectors to final approach course.

LANDING MSP RUNWAYS 30L/R, 4, 22, 17, 35: From over TRGET INT via FGT R-201 to FGT VORTAC, then via RADAR vectors to final approach course.

LANDING ALL OTHER AIRPORTS: From over TRGET INT via FCM R-180 to FCM VOR/DME, then expect RADAR vectors to final approach course.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

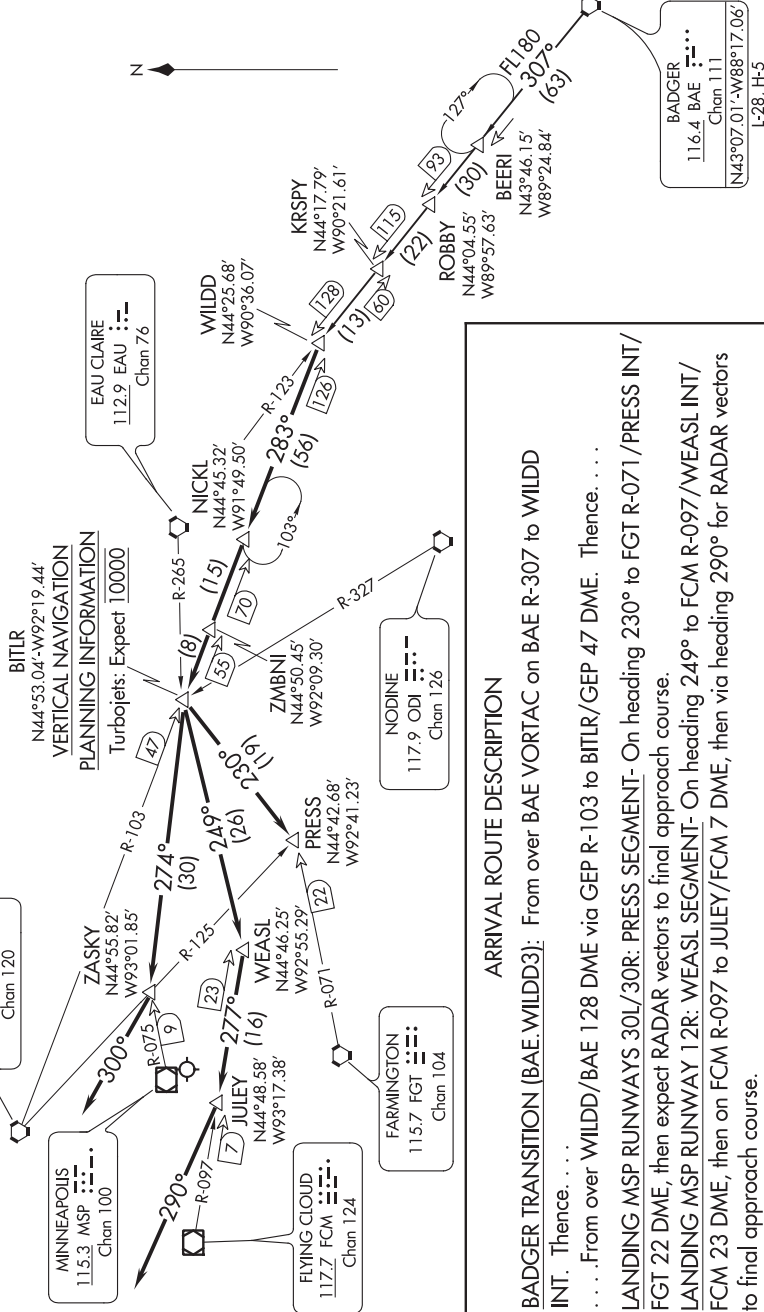
# WILDD THREE ARRIVAL

21.02.2016 10:01:10-ON

NOTE: Arrival Procedure assigned by ATC only - Do Not File.

NOTE: DME and RADAR required.

MINNEAPOLIS APP CON  
119.3 335.5  
ATIS 135.35 239.275



## ARRIVAL ROUTE DESCRIPTION

**BADGER TRANSITION [BAE.WILDD3]:** From over BAE VORTAC on BAE R-307 to WILDD INT. Thence. . . .

. . . . From over WILDD/BAE 128 DME via GEP R-103 to BITLR/GEP 47 DME. Thence. . . .

**LANDING MSP RUNWAYS 30L/30R: PRESS SEGMENT-** On heading 230° to FGT R-071/PRESS INT/FGT 22 DME, then expect RADAR vectors to final approach course.

**LANDING MSP RUNWAY 12R: WEASL SEGMENT-** On heading 249° to FCM R-097/WEASL INT/FCM 23 DME, then on FCM R-097 to JULY/FCM 7 DME, then via heading 290° for RADAR vectors to final approach course.

**LANDING MSP RUNWAY 12L: ZASKY SEGMENT-** On heading 274° to MSP R-075/ZASKY INT/MSP 9 DME, then on, then on heading 300° for RADAR vectors to final approach course.

**LANDING ALL OTHER MSP RUNWAYS:** Expect RADAR vectors to final approach course.

NOTE: Chart not to scale.

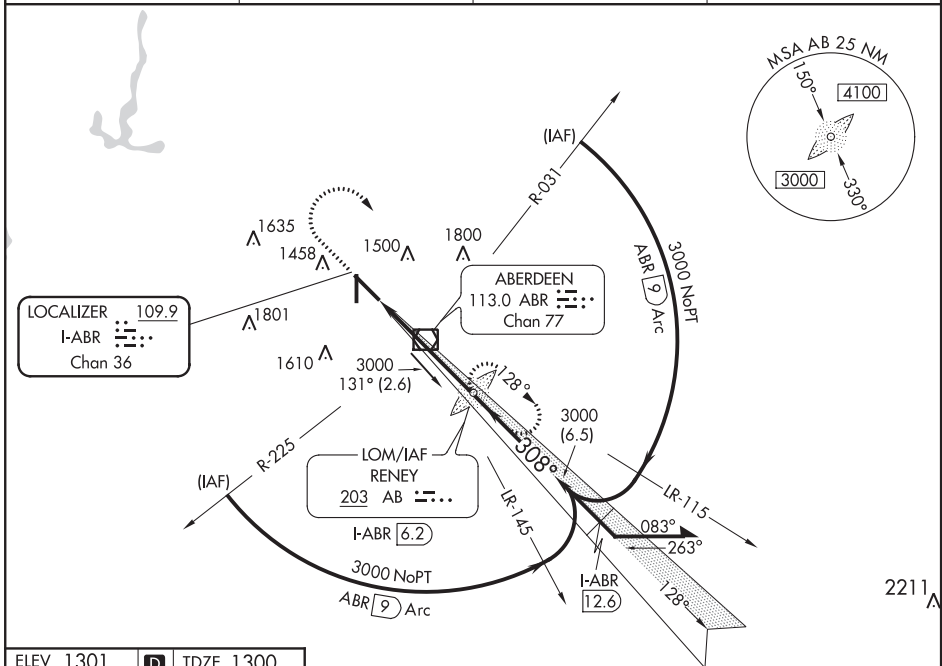
NC-1, 10 NOV 2016 to 05 JAN 2017



LOC/DME I-ABR <b>109.9</b> Chan 36	APP CRS <b>308°</b>	Rwy Idg TDZE Apt Elev	<b>6901</b> <b>1300</b> <b>1301</b>
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**ILS RWY 31**  
ABERDEEN RGNL (ABR)

MISSED APPROACH: Climb to 3000 then right turn direct RENEY LOM and hold.			
ASOS <b>125.875</b>	MINNEAPOLIS CENTER <b>120.6 371.9</b>	CTAF <b>122.7</b>	UNICOM <b>122.95</b>

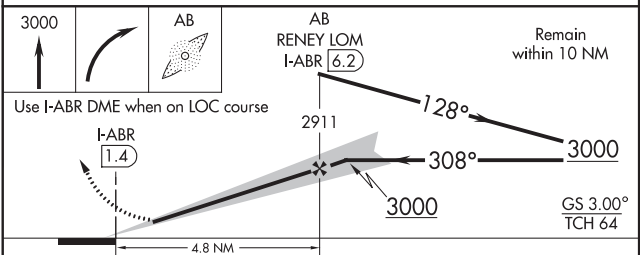


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1301	D	TDZE 1300			
HIRL Rwy 13-31					
MIRL Rwy 17-35					
REIL Rwys 13, 17 and 35					
1344	TWR 1356	1411			
1320	5500 X 100	35			
31	308° 4.8 NM from FAF				
FAF to MAP 4.8 NM					
Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36

**ADF or DME REQUIRED**



CATEGORY	A	B	C	D
S-ILS 31	1500-½		200 (200-½)	
S-LOC 31	1660-½		360 (400-½)	
			1660-¾ 360 (400-¾)	
CIRCLING	1760-1 459 (500-1)		1760-1½ 1860-2 459 (500-1½) 559 (600-2)	

ABERDEEN, SOUTH DAKOTA

AL-642 (FAA)

15232

APP CRS	Rwy Idg	<b>6901</b>
<b>128°</b>	TDZE	<b>1302</b>
	Apt Elev	<b>1302</b>

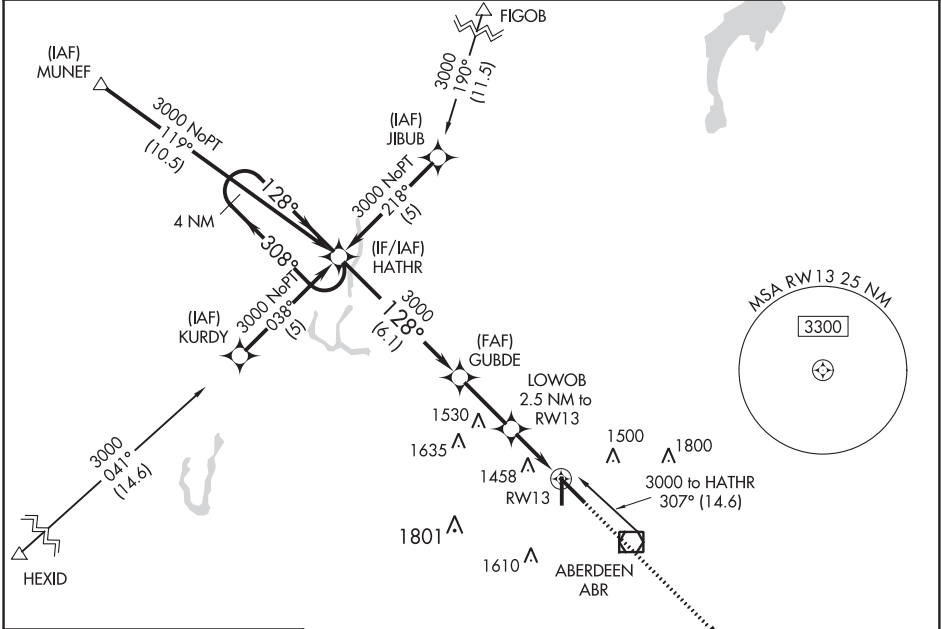
# RNAV (GPS) RWY 13

ABERDEEN RGNL (ABR)

**T** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. VDP NA when using Watertown altimeter setting. When local altimeter setting not received use Watertown altimeter setting and increase all MDA 220 feet, increase LNAV Cat C visibility 1/2 mile, Cat D visibility 3/4 mile and Circling Cats C and D visibility 1/2 mile.

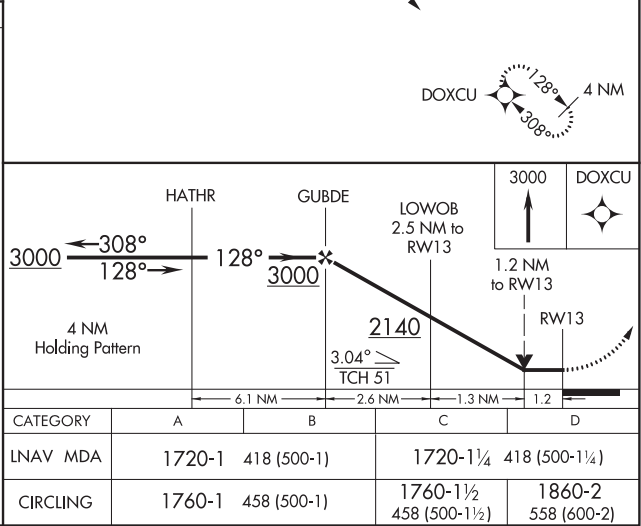
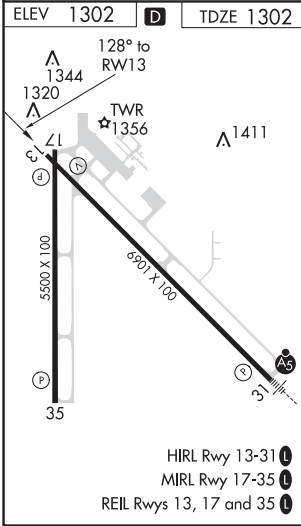
**MISSED APPROACH:** Climb to 3000 direct DOXCU and hold.

ASOS <b>125.875</b>	MINNEAPOLIS CENTER <b>120.6 371.9</b>	CTAF <b>122.7</b>	UNICOM <b>122.95</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ABERDEEN, SOUTH DAKOTA  
Orig 27AUG09

45°27'N - 98°25'W

# ABERDEEN RGNL (ABR)

## RNAV (GPS) RWY 13

WAAS CH <b>42914</b> <b>W31A</b>	APP CRS <b>308°</b>	Rwy ldg <b>6901</b> TDZE <b>1301</b> Apt Elev <b>1302</b>
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# RNAV (GPS) RWY 31

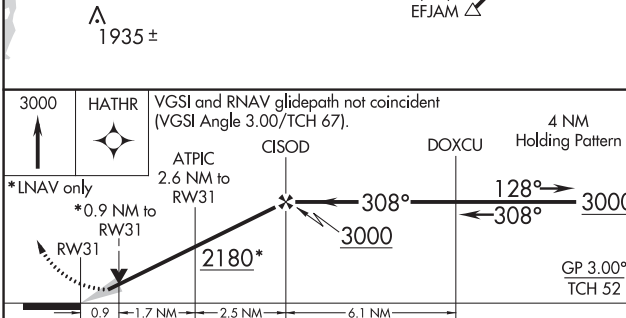
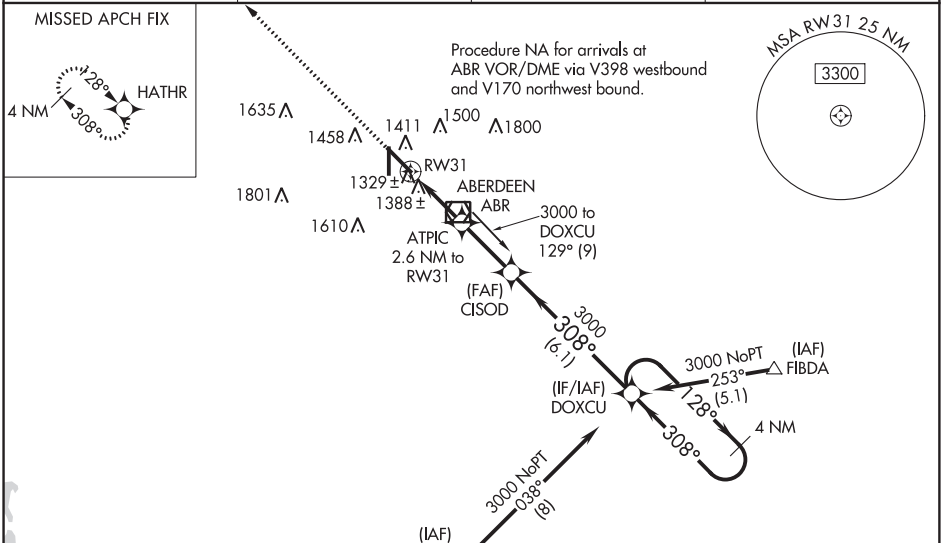
ABERDEEN RGNL (ABR)

**⚠** Baro-VNAV NA when using Watertown altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. VDP NA when using Watertown altimeter setting. For inoperative MALSR when using Watertown altimeter setting increase LPV all Cats visibility to 1½. When local altimeter setting not received, use Watertown altimeter setting and increase all DA 207 feet, all MDA 220 feet, LPV all Cats visibility ¼ mile, LNAV/VNAV all Cats visibility ¾ mile, LNAV Cat C/D visibility ⅝ mile, and Circling Cat C/D visibility ½ mile.

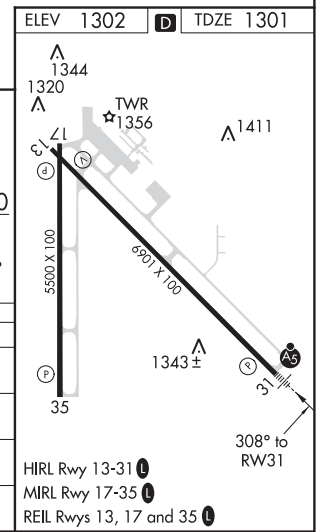
**MALSR**  
AS

**MISSED APPROACH:** Climb to 3000 direct HATHR and hold.

ASOS <b>125.875</b>	MINNEAPOLIS CENTER <b>120.6 371.9</b>	CTAF <b>122.7</b>	UNICOM <b>122.95</b>
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CATEGORY	A	B	C	D
LPV DA		1501-½	200 (200-½)	
LNAV/VNAV DA		1599-½	298 (300-½)	
LNAV MDA		1640-½	339 (400-½)	
CIRCLING	1760-1	458 (500-1)	1760-1½ 458 (500-1½)	1860-2 558 (600-2)



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ABERDEEN, SOUTH DAKOTA

AL-642 (FAA)

15232

WAAS CH <b>65800</b> <b>W35A</b>	APP CRS <b>353°</b>	Rwy Idg TDZE <b>1301</b> Apt Elev <b>1302</b>	<b>5500</b> <b>1301</b> <b>1302</b>
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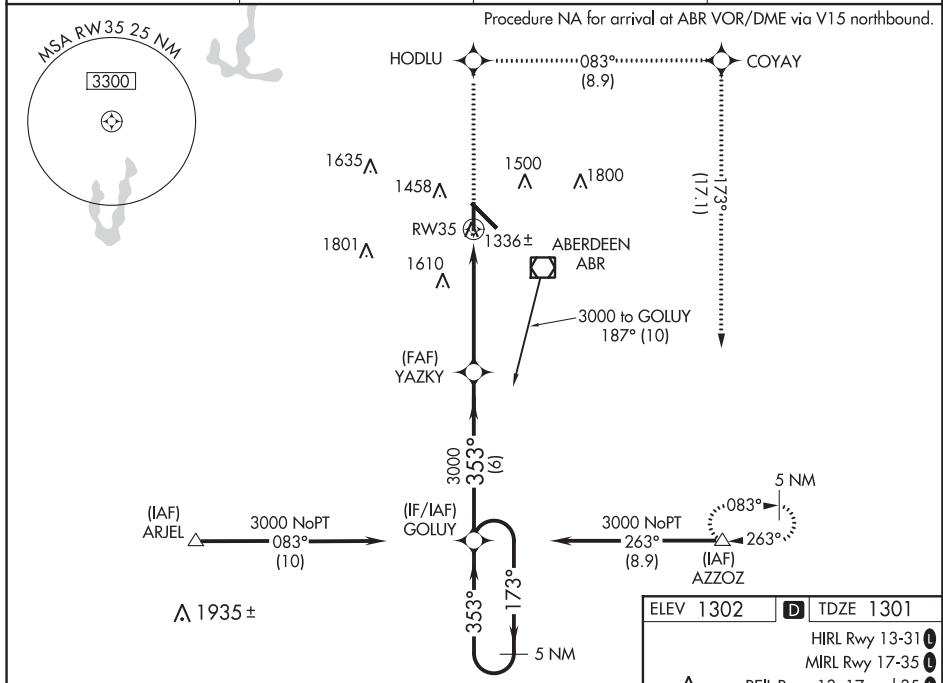
# RNAV (GPS) RWY 35

ABERDEEN RGNL (ABR)

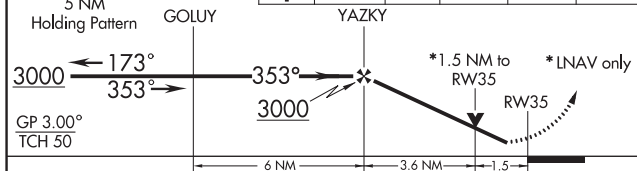
**▼** If local altimeter setting not received, use Watertown Rgnl altimeter setting and increase all DAs/MDAs 220 feet.  
**▲** Baro-VNAV and VDP NA when using Watertown Rgnl altimeter setting.  
 DME/DME RNP -0.3 NA.  
 For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (115°F).

MISSED APPROACH: Climb to 5000 direct HODLU and via 083° track to COYAY and right turn via 173° track to AZZOO and hold.

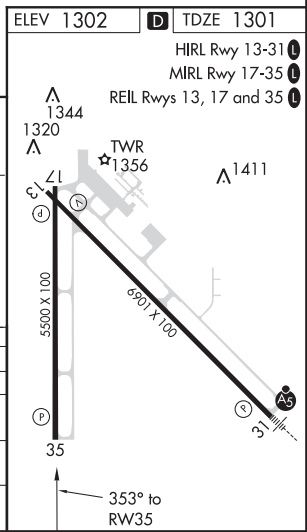
ASOS <b>125.875</b>	MINNEAPOLIS CENTER <b>120.6 371.9</b>	CTAF <b>122.7</b>	UNICOM <b>122.95</b>
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VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 37).  
 5000 HODLU 083° tr COYAY 173° tr AZZOO  
 5 NM Holding Pattern GOLUY YAZKY



CATEGORY	A	B	C	D
LPV DA	1551-3/4 250 (300-3/4)			
LNAV/VNAV DA	1586-1 285 (300-1)			
LNAV MDA	1820-1	519 (600-1)	1820-1 1/2 519 (600-1 1/2)	1820-1 3/4 519 (600-1 3/4)
CIRCLING	1820-1	518 (600-1)	1820-1 1/2 518 (600-1 1/2)	1860-2 558 (600-2)



ABERDEEN, SOUTH DAKOTA  
 Orig 03AUG06

45°27'N - 98°25'W

# ABERDEEN RGNL (ABR) RNAV (GPS) RWY 35

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME ABR <b>113.0</b> Chan <b>77</b>	APP CRS <b>125°</b>	Rwy Idg <b>6901</b> TDZE <b>1302</b> Apt Elev <b>1302</b>
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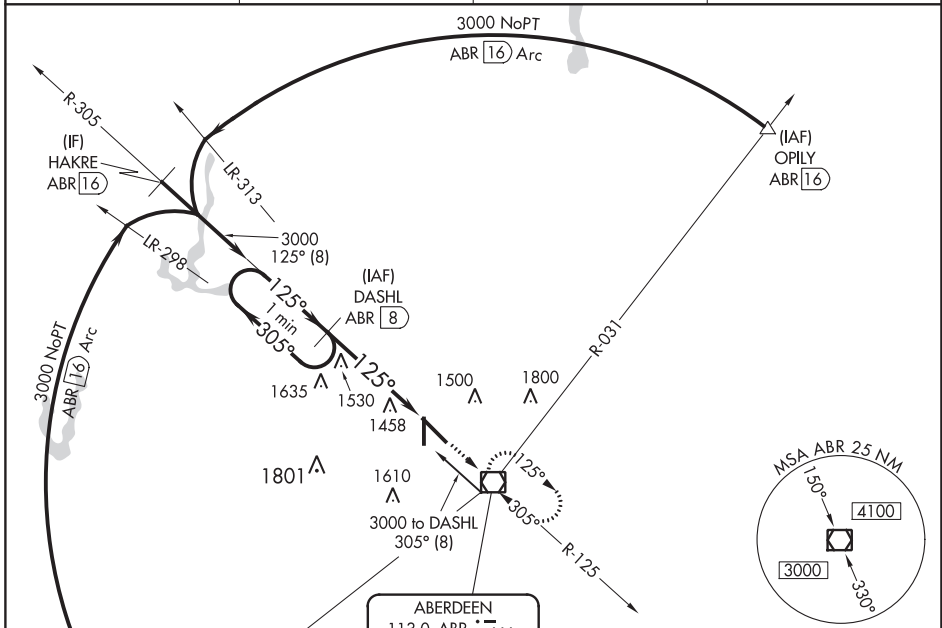
# VOR/DME RWY 13

ABERDEEN RGNL (ABR)

▼ Visibility reduction by helicopters NA. When local altimeter setting not received, use Watertown altimeter setting and increase all MDA 220 feet, increase S-13 Cats C and D visibility 3/4 mile and Circling Cats C and D visibility 1/2 mile. VDP NA when using Watertown altimeter setting.

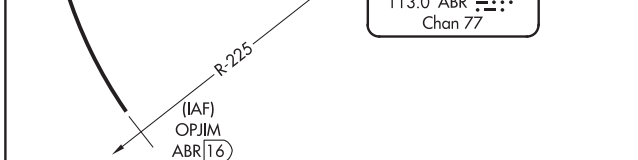
▲ MISSED APPROACH: Climb to 3000 direct ABR VOR/DME and hold.

ASOS <b>125.875</b>	MINNEAPOLIS CENTER <b>120.6 371.9</b>	CTAF <b>122.70</b>	UNICOM <b>122.95</b>
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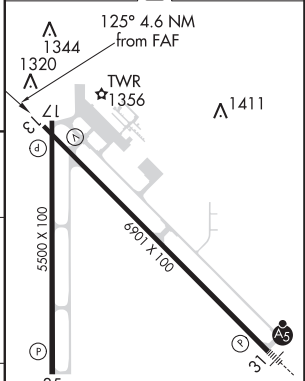


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 1302 TDZE 1302



	DASHL ABR [8]		3000	ABR
	3000		ABR [4.7]	ABR [3.4]
	3.36° TCH 51		3.3 NM	
			1.3	

CATEGORY	A	B	C	D
S-13	1780-1	478 (500-1)	1780-1 1/4 478 (500-1 1/4)	1780-1 1/2 478 (500-1 1/2)
CIRCLING	1780-1	478 (500-1)	1780-1 1/2 478 (500-1 1/2)	1860-2 558 (600-2)

HIRL Rwy 13-31

MIRL Rwy 17-35

REIL Rws 13, 17 and 35

ABERDEEN, SOUTH DAKOTA

AL-642 (FAA)

15232

VOR/DME ABR <b>113.0</b> Chan <b>77</b>	APP CRS <b>304°</b>	Rwy Idg <b>6901</b> TDZE <b>1301</b> Apt Elev <b>1302</b>
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# VOR RWY 31

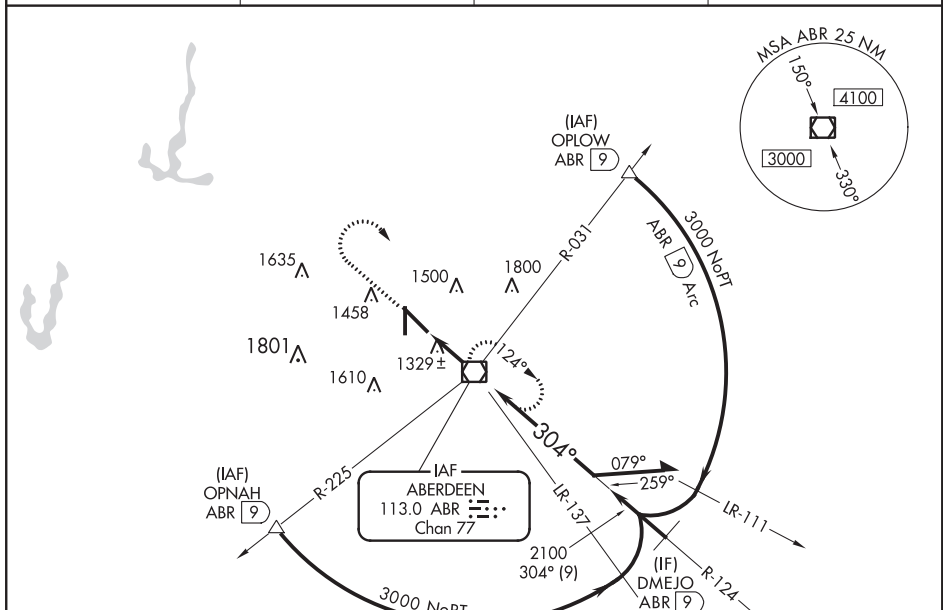
ABERDEEN RGNL (ABR)

For inoperative MALSR, increase S-31 Cat D visibility to 1 1/4.  
 ▼ When local altimeter setting not received, use Watertown altimeter setting and increase all MDA 220 feet, increase S-31 Cat C visibility 1/2 mile, Cat D visibility 1/4 mile, and Circling Cats C and D 1/2 mile.  
 ▲ Cat D visibility 1/4 mile, and Circling Cats C and D 1/2 mile.  
 VDP NA when using Watertown altimeter setting.

**MALSR**

**MISSED APPROACH:** Climb to 3000 then right turn direct ABR VOR/DME and hold.

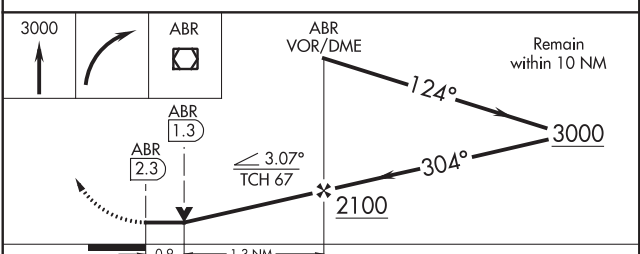
ASOS <b>125.875</b>	MINNEAPOLIS CENTER <b>120.6 371.9</b>	CTAF <b>122.7</b>	UNICOM <b>122.95</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1302	<b>D</b>	TDZE 1301
HIRL Rwy 13-31 <b>1</b>		
MIRL Rwy 17-35 <b>1</b>		
REIL Rwys 13, 17 and 35 <b>1</b>		
1344 <b>Λ</b>	TWR <b>1356</b>	1411 <b>Λ</b>
1320 <b>Λ</b>		
5500 X 100	6901 X 100	
35		
304° 2.3 NM from FAF		



FAF to MAP 2.3 NM					
Knots	60	90	120	150	180
Min:Sec	2:18	1:32	1:09	0:55	0:46

CATEGORY	A	B	C	D
S-31	1660-1/2	359 (400-1/2)		1660-1 359 (400-1)
CIRCLING	1760-1	458 (500-1)	1760-1 1/2 458 (500-1 1/2)	1860-2 558 (600-2)

ABERDEEN, SOUTH DAKOTA  
Amdt 21 22OCT09

45°27'N - 98°25'W

ABERDEEN RGNL (ABR)  
**VOR RWY 31**

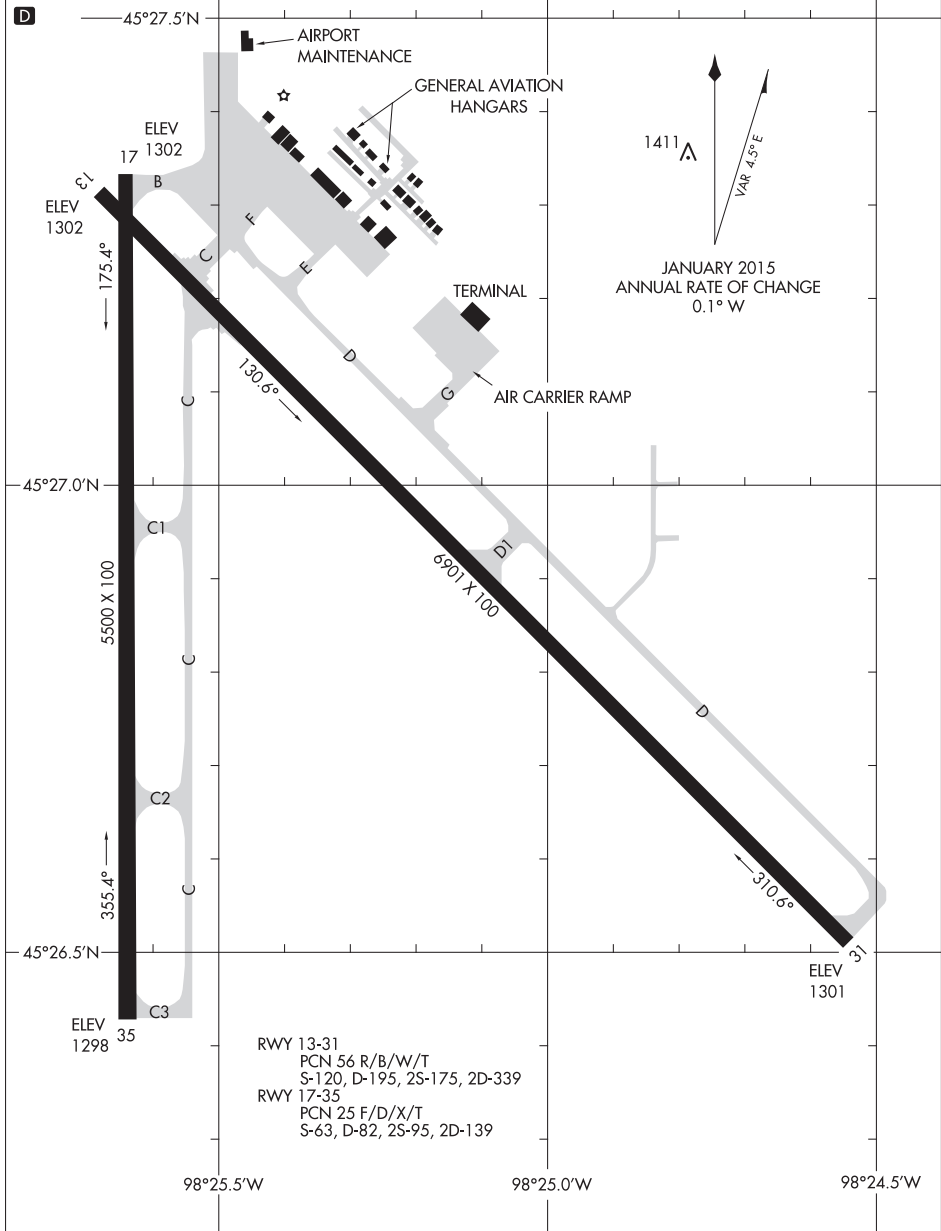
# AIRPORT DIAGRAM

AL-642 (FAA)

ABERDEEN RGNL (ABR)  
ABERDEEN, SOUTH DAKOTA

ASOS  
125.875  
CTAF  
122.7  
UNICOM  
122.95

FIELD  
ELEV  
1302



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

ABERDEEN, SOUTH DAKOTA  
ABERDEEN RGNL (ABR)

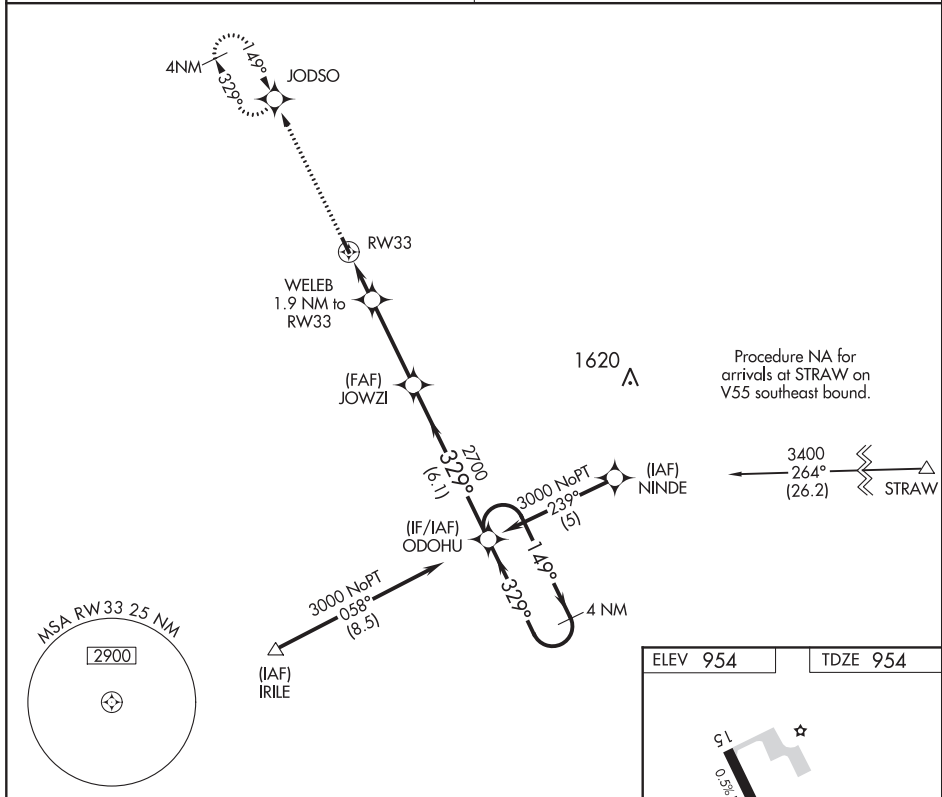
APP CRS <b>329°</b>	Rwy Idg <b>3103</b>
	TDZE <b>954</b>
	Apt Elev <b>954</b>

# RNAV (GPS) RWY 33

NORMAN COUNTY ADA/TWIN VALLEY (D00)

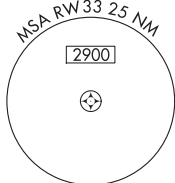
<p><b>NA</b></p> <p>DME/DME RNP-0.3 NA. Use Hector Intl altimeter setting.</p>	<p>MISSED APPROACH: Climb to 3300 direct JODSO and hold, continue climb in hold to 3300.</p>
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<p>FARGO APP CON <b>120.4 377.15</b></p>	<p>CTAF <b>122.9</b></p>
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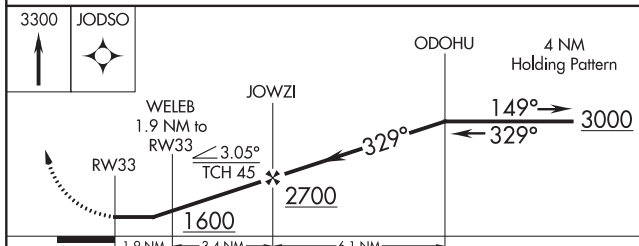
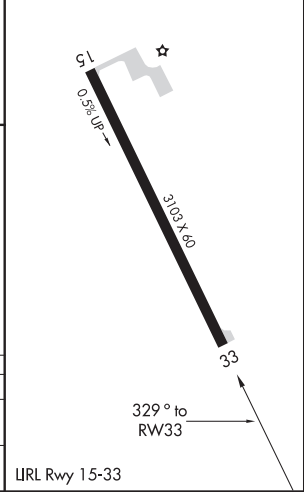


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 954	TDZE 954
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CATEGORY	A	B	C	D
LNVA MDA	1540-1	586 (600-1)	1540-1½ 586 (600-1½)	NA
CIRCLING	1540-1	586 (600-1)	1580-1¾ 626 (700-1¾)	NA



WAAS CH <b>78131</b> <b>W16A</b>	APP CRS <b>164°</b>	Rwy Idg TDZE <b>1206</b> Apt Elev <b>1206</b>	<b>4000</b>
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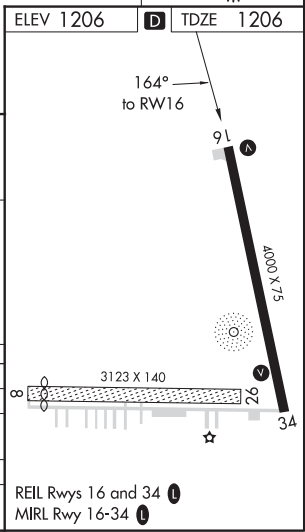
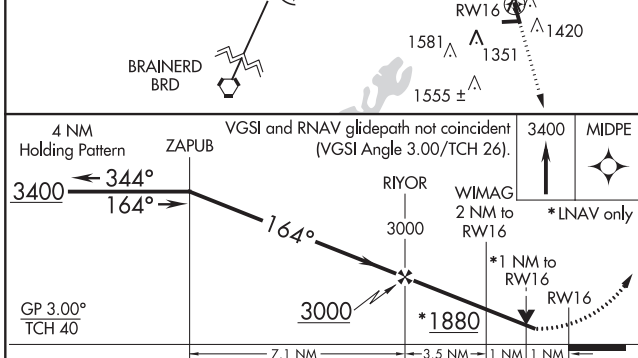
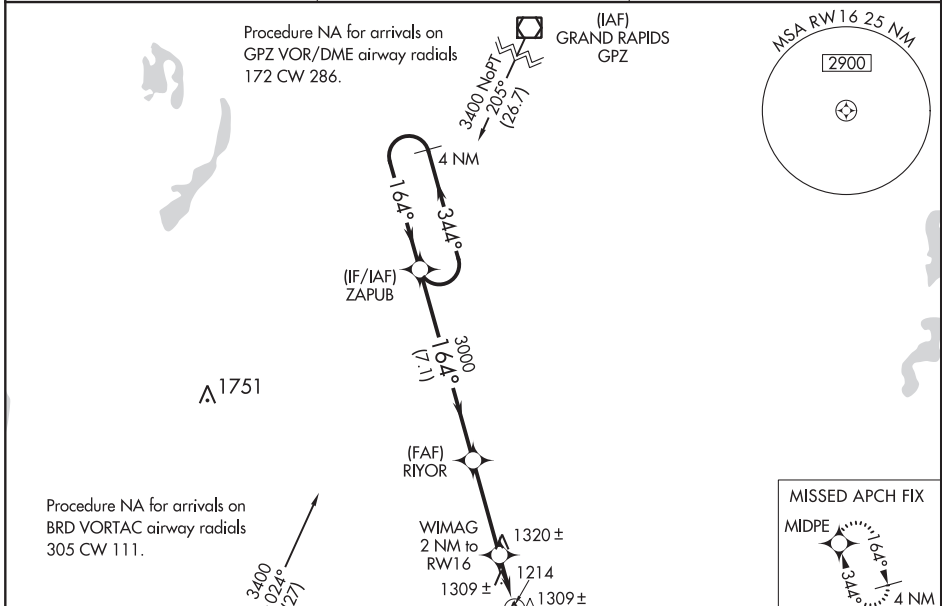
# RNAV (GPS) RWY 16

AITKIN MUNI-STEVE KURTZ FIELD (AIT)

**Baro-VNAV NA** when using Mc Gregor altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received; use Mc Gregor altimeter setting and increase all DA and MDA 40 feet; increase LPV all Cats visibilities ¼ mile, LNAV/VNAV all Cats and LNAV Cat C visibilities ½ mile, and Circling Cat C visibility ¼ mile. Circling NA to Rwy 8 and 26. Helicopter visibility reduction below ¾ SM NA.

**MISSED APPROACH:** Climb to 3400 direct MIDPE and hold.

AWOS-3 <b>118.675</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	UNICOM <b>123.05 (CTAF)</b>
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CATEGORY	A	B	C	D
LPV DA		1518-1	312 (400-1)	NA
LNAV/VNAV DA		1607-1 3/8	401 (500-1 3/8)	NA
LNAV MDA		1560-1	354 (400-1)	NA
CIRCLING	1780-1	574 (600-1)	1780-1 1/2	574 (600-1 1/2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

AITKIN, MINNESOTA

AL-6406 (FAA)

16147

WAAS CH <b>82431</b> <b>W34A</b>	APP CRS <b>344°</b>	Rwy Idg TDZE Apt Elev	<b>4000</b> <b>1206</b> <b>1206</b>
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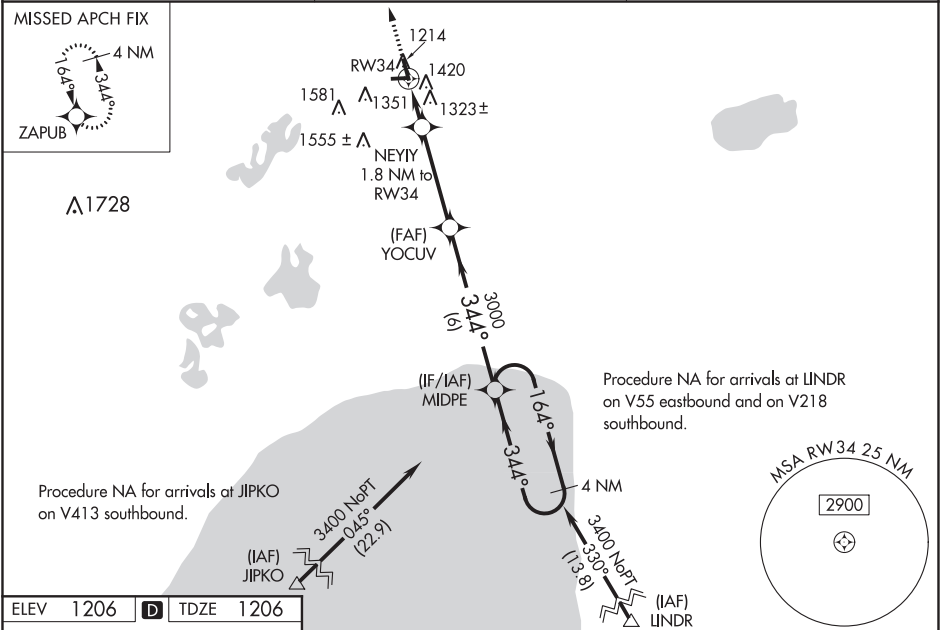
# RNAV (GPS) RWY 34

AITKIN MUNI-STEVE KURTZ FIELD (AIT)

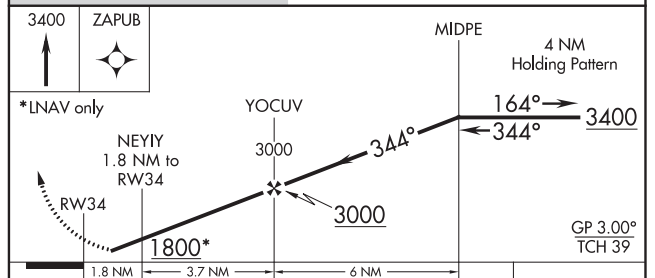
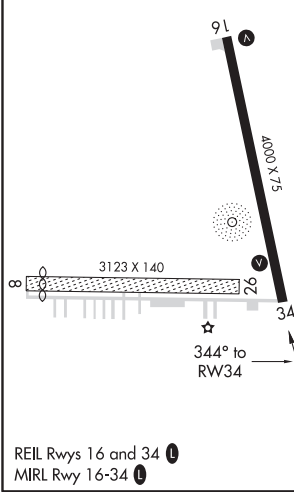
**⚠** Baro-VNAV NA when using Mc Gregor altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received; use Mc Gregor altimeter setting and increase all DA and MDA 40 feet; increase LPV and LNAV/VNAV all Cats visibility 1/8 mile and LNAV and Circling Cat C visibility 1/4 mile. Circling NA to Rws 8 and 26. Helicopter visibility reduction below 3/4 SM NA.

**MISSED APPROACH:**  
Climb to 3400 direct ZAPUB and hold.

AWOS-3 <b>118.675</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	UNICOM <b>123.05</b> (CTAF) <b>📵</b>
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ELEV 1206	<b>D</b>	TDZE 1206
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CATEGORY	A	B	C	D
LPV DA	1548-1 1/8	342 (400-1 1/8)		NA
LNAV/VNAV DA	1620-1 3/8	414 (500-1 1/8)		NA
LNAV MDA	1720-1	514 (600-1)	1720-1 3/8 514 (600-1 1/8)	NA
CIRCLING	1780-1	574 (600-1)	1780-1 1/2 574 (600-1 1/2)	NA

AITKIN, MINNESOTA  
Orig-B 20AUG15

46°33'N-93°41'W

# RNAV (GPS) RWY 34

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

NDB AIT <b>397</b>	APP CRS <b>169°</b>	Rwy Idg TDZE Apt Elev	<b>4000</b> <b>1206</b> <b>1206</b>
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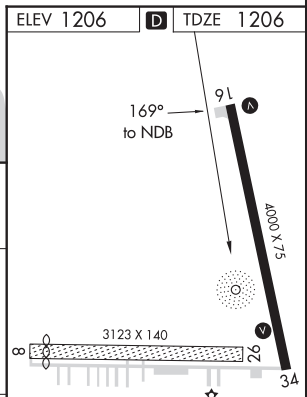
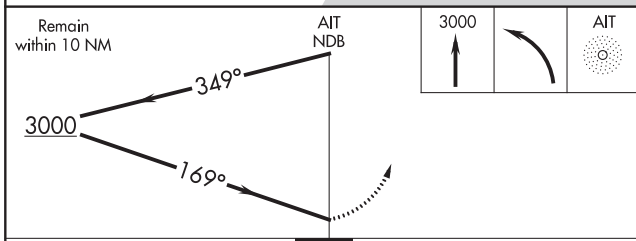
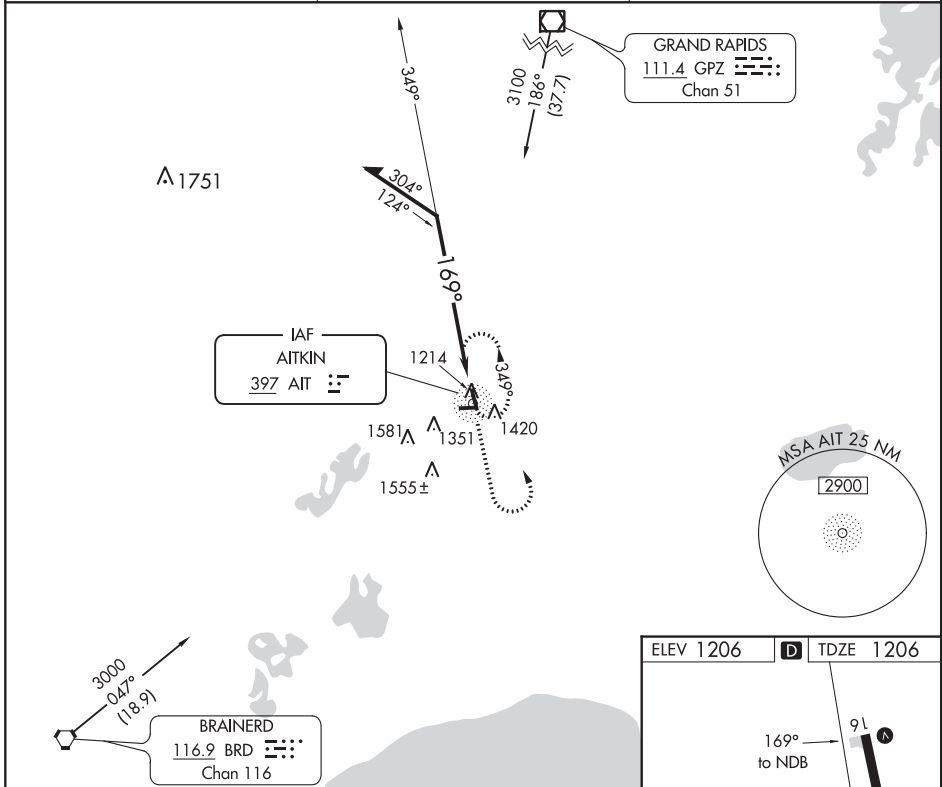
# NDB RWY 16

AITKIN MUNI-STEVE KURTZ FIELD (AIT)

**NA** When local altimeter setting not received, use McGregor altimeter setting and increase all MDA 40 feet, all Cat B visibilities ¼ mile and all Cat C visibilities ½ mile. Circling NA to Rwy's 8 and 26. Helicopter visibility reduction below ¾ SM NA.

MISSED APPROACH: Climb to 3000 then left turn direct AIT NDB and hold.

AWOS-3 <b>118.675</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	UNICOM <b>123.05 (CTAF) 0</b>
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CATEGORY	A	B	C	D
S-16	1940-1	734 (800-1)	1940-2 734 (800-2)	NA
CIRCLING	1940-1	734 (800-1)	1940-2 734 (800-2)	NA

REIL Rwy's 16 and 34 0  
MIRL Rwy 16-34 0

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>49204</b> <b>W17A</b>	APP CRS <b>167°</b>	Rwy Idg TDZE Apt Elev	<b>5000</b> <b>1260</b> <b>1261</b>
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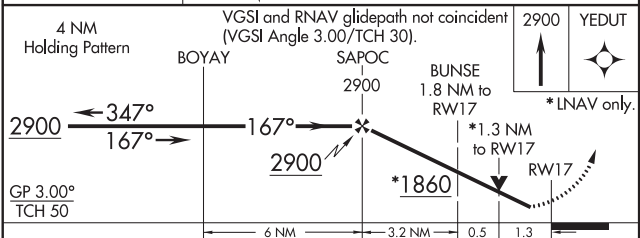
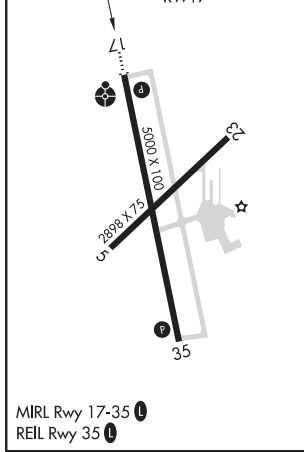
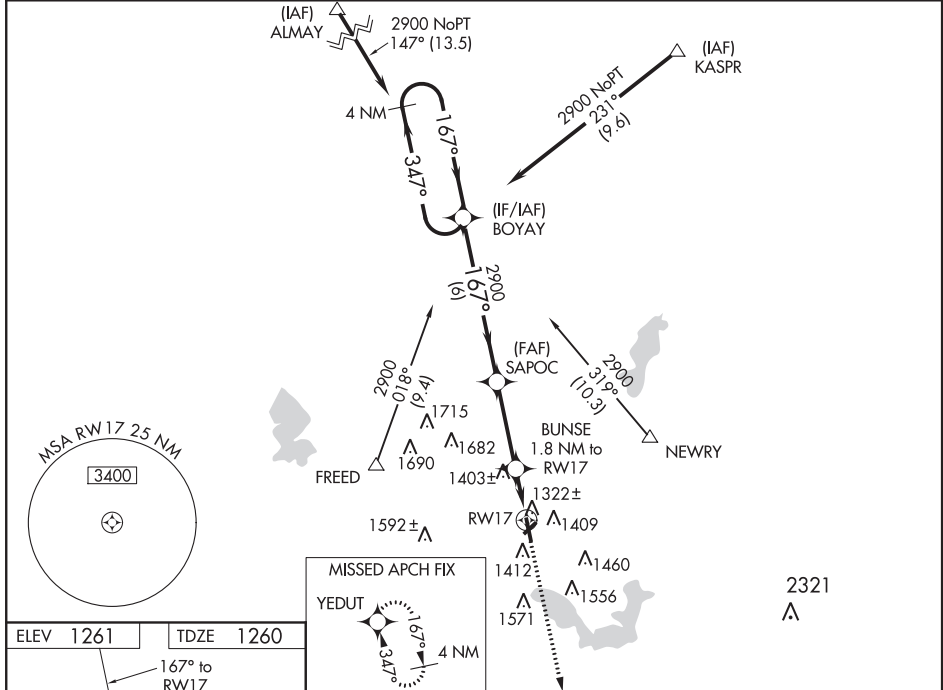
# RNAV (GPS) RWY 17

ALBERT LEA MUNI (AEL)

**⚠** Circling to Rwy 5/23 NA at night. Baro-VNAV NA when using Austin altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -28°C (18°F) or above 36°C (96°F). DME/DME RNP-0.3 NA. Visibility reduction for helicopters NA. VDP NA with Austin altimeter setting. When local altimeter setting not received, use Austin altimeter setting and increase all DA 48 feet and all MDA 60 feet; increase LPV and LNAV/VNAV visibility 1/4 mile all Cats, and LNAV Cat C/D visibility 1/8 mile.

**ODALS**  
 MISSED APPROACH:  
Climb to 2900 direct YEDUT and hold.

AWOS-3 <b>109.8</b>	ROCHESTER APP CON* <b>119.8 251.125</b>	UNICOM <b>123.0 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LPV DA	1510-3/4 250 (300-3/4)			
LNAV/VNAV DA	1510-3/4 250 (300-3/4)			
LNAV MDA	1700-1	440 (500-1)	1700-1 1/4	440 (500-1 1/4)
CIRCLING	1780-1	519 (600-1)	1780-1 1/2	1820-2 559 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>53625</b> <b>W35A</b>	APP CRS <b>347°</b>	Rwy Idg <b>5000</b> TDZE <b>1261</b> Apt Elev <b>1261</b>
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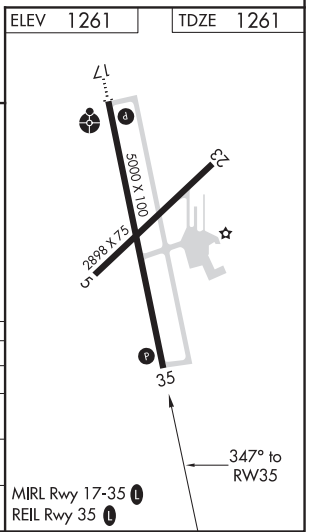
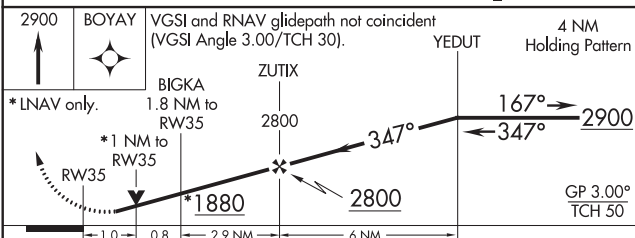
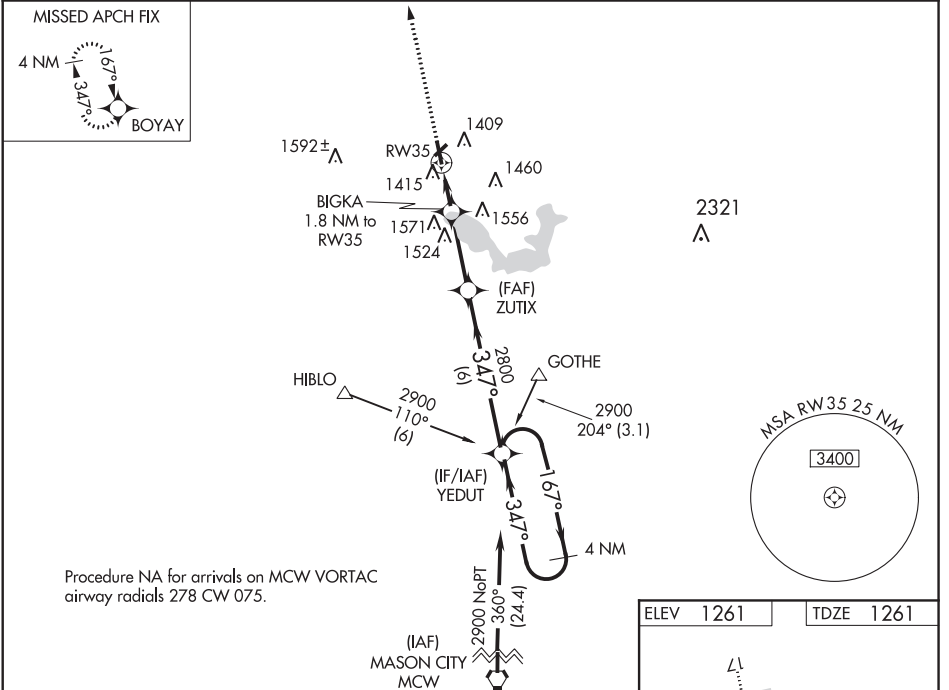
# RNAV (GPS) RWY 35

ALBERT LEA MUNI (A.E.L.)

**▼** Circling to Rwy 5/23 NA at night. Baro-VNAV NA when using Austin altimeter setting.  
**▲** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -28°C (-18°F) or above 36°C (96°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. VDP NA with Austin altimeter setting. When local altimeter setting not received, use Austin altimeter setting and increase all DA 48 feet and all MDA 60 feet; increase LPV and LNAV/VNAV visibility ¼ mile all cats.

MISSED APPROACH:  
Climb to 2900 direct BOYAY and hold.

AWOS-3 <b>109.8</b>	ROCHESTER APP CON* <b>119.8 251.125</b>	UNICOM <b>123.0 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LPV DA		1511-3/4	250 (300-3/4)	
LNAV/VNAV DA		1576-1	315 (400-1)	
LNAV MDA	1720-1	459 (500-1)	1720-1 3/8	459 (500-1 3/8)
CIRCLING	1780-1	519 (600-1)	1780-1 1/2	1820-2 559 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ALBERT LEA, MINNESOTA

AL-5420 (FAA)

16315

VOR/DME AEL <b>109.8</b> Chan <b>35</b>	APP CRS <b>342°</b>	Rwy Idg TDZE <b>1261</b> Apt Elev <b>1261</b>	<b>5000</b>
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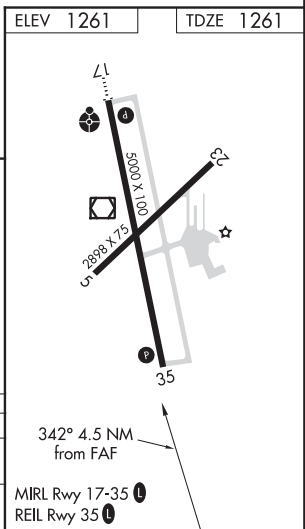
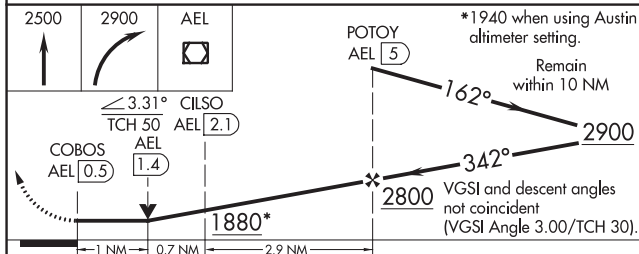
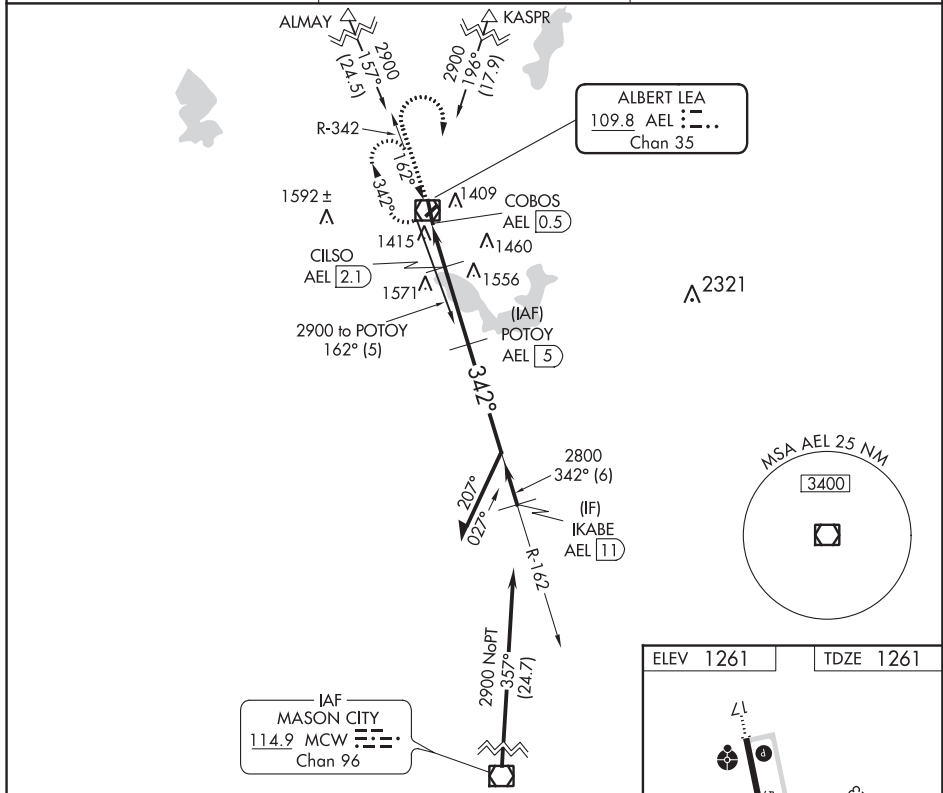
# VOR/DME RWY 35

ALBERT LEA MUNI (AEL)

**⚠** Circling to Rwy 5/23 NA at night. VDP NA with Austin altimeter setting. Visibility reduction by helicopters NA. When local altimeter setting not received, use Austin altimeter setting and increase all MDA 60 feet. Cat D Straight-In minimums NA when using Austin altimeter setting.

**MISSED APPROACH:** Climb to 2500 then climbing right turn to 2900 direct AEL VOR/DME and hold.

AWOS-3 <b>109.8</b>	ROCHESTER APP CON * <b>119.8 251.125</b>	UNICOM <b>123.0 (CTAF) 0</b>
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CATEGORY	A	B	C	D
S-35	1720-1 459 (500-1)		1720-1 3/8 459 (500-1 3/8)	
CIRCLING	1780-1 519 (600-1)		1780-1 1/2 519 (600-1 1/2)	1820-2 559 (600-2)

ALBERT LEA, MINNESOTA  
Amdt 1B 10NOV16

43°41'N-93°22'W

# VOR/DME RWY 35

ALBERT LEA MUNI (AEL)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME AEL	APP CRS	Rwy Idg	5000
109.8	173°	TDZE	1260
Chan 35		Apt Elev	1261

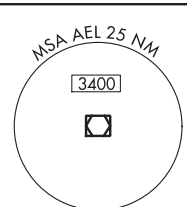
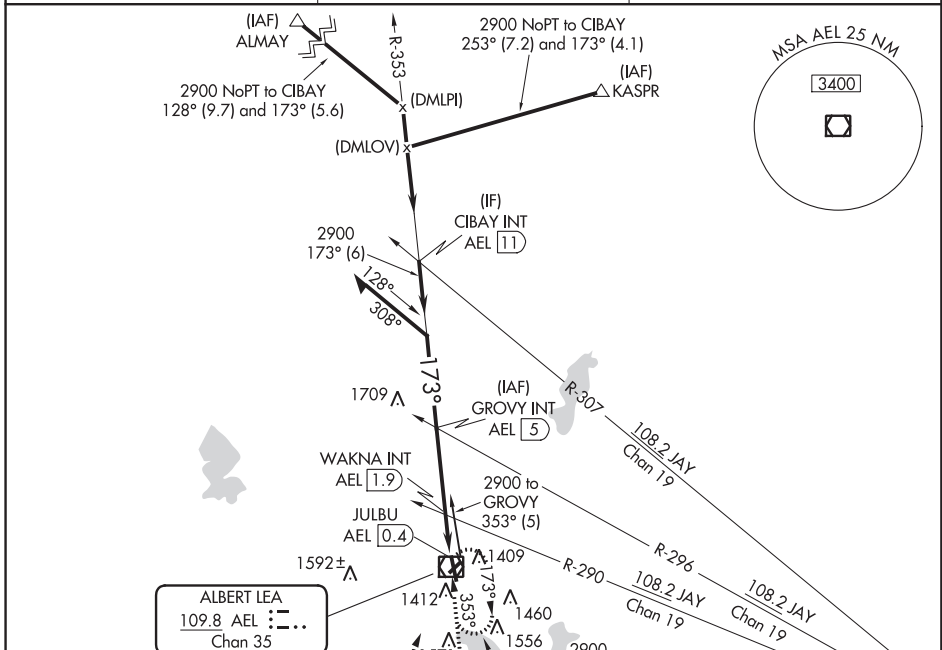
# VOR RWY 17

ALBERT LEA MUNI (AEL)

**⚠** Circling to Rwy 5/23 NA at night. Visibility reduction by helicopters NA. When local altimeter setting not received, use Austin altimeter setting and increase all MDA 60 feet; increase S-17 Cat C/D visibility 1/4 mile, and WAKNA fix minimums S-17 Cat C/D visibility 1/8 mile.

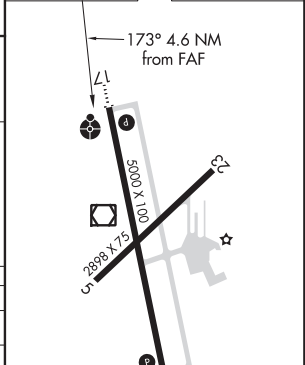
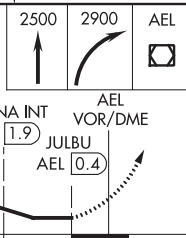
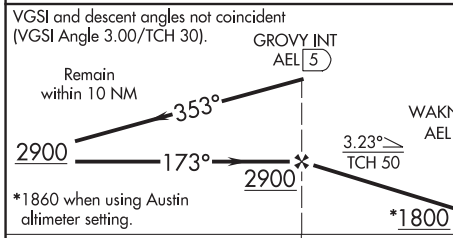
**ODALS** MISSED APPROACH: Climb to 2500 then climbing right turn to 2900 direct AEL VOR/DME and hold.

AWOS-3 <b>109.8</b>	ROCHESTER APP CON ★ <b>119.8 251.125</b>	UNICOM <b>123.0 (CTAF) 0</b>
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ALBERT LEA  
109.8 AEL :...  
Chan 35

ELEV 1261	TDZE 1260
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CATEGORY	A	B	C	D
S-17	1800-1	540 (600-1)	1800-1½	540 (600-1½)
CIRCLING	1800-1	539 (600-1)	1800-1½	1820-2 539 (600-1½)
WAKNA FIX MINIMUMS (DUAL VOR RECEIVERS OR DME REQUIRED)				
S-17	1740-1	480 (500-1)	1740-1¾	480 (500-1¾)
CIRCLING	1780-1	519 (600-1)	1780-1½	1820-2 559 (600-2)

MIRL Rwy 17-35 0	35
REIL Rwy 35 0	
FAF to MAP 4.6 NM	
Knots	60 90 120 150 180
Min:Sec	4:36 3:04 2:18 1:50 1:32

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ALEXANDRIA, MINNESOTA

AL-14 (FAA)

16259

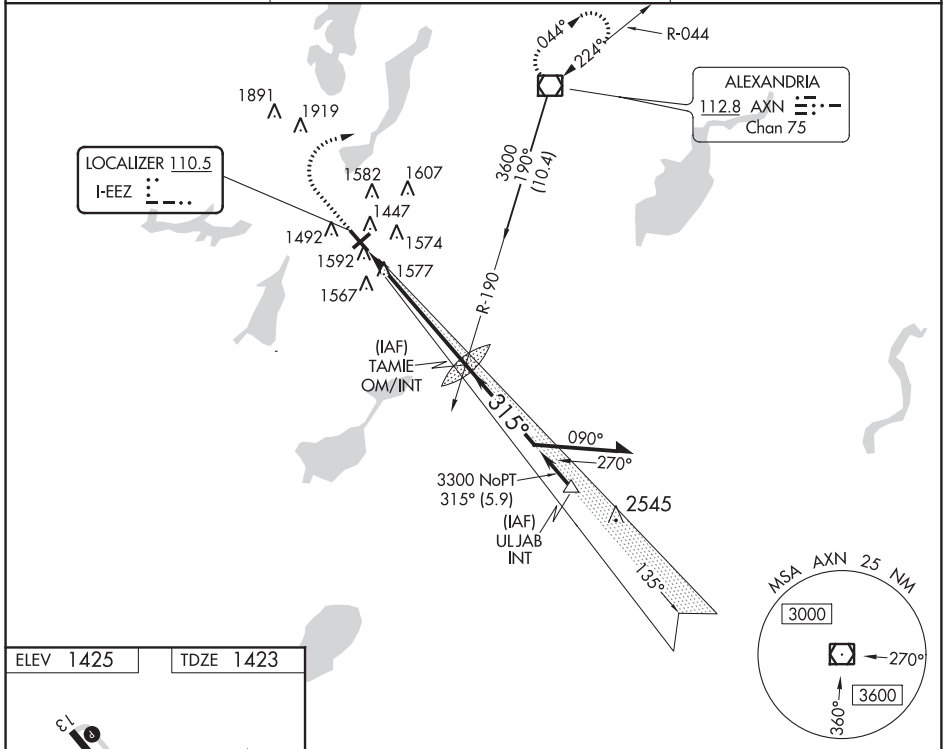
LOC I-EEZ <b>110.5</b>	APP CRS <b>315°</b>	Rwy Idg TDZE Apt Elev	<b>5099</b> <b>1423</b> <b>1425</b>
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# ILS or LOC RWY 31

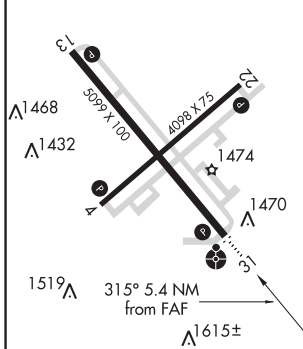
CHANDLER FIELD (AXN)

Inoperative table does not apply to S-LOC 31 Category C.	ODALS 	MISSED APPROACH: Climb to 2500 then climbing right turn to 3500 direct AXN VOR/DME and hold.

ASOS <b>118.375</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	UNICOM <b>123.0</b> (CTAF)
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ELEV 1425	TDZE 1423
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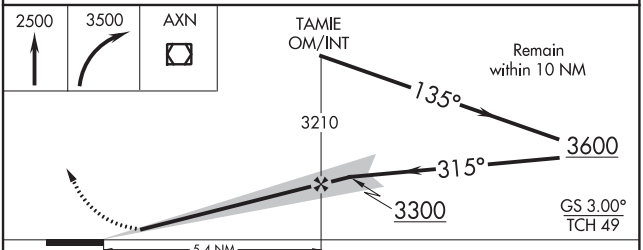


REIL Rwy 4, 13 and 22

MIRL Rwy 4-22 and 13-31

FAF to MAP 5.4 NM

Knots	60	90	120	150	180
Min:Sec	5:24	3:36	2:42	2:10	1:48



CATEGORY	A	B	C	D
S-ILS 31	1673- <sup>3</sup> / <sub>4</sub> 250 (300- <sup>3</sup> / <sub>4</sub> )			
S-LOC 31	1840- <sup>3</sup> / <sub>4</sub> 417 (500- <sup>3</sup> / <sub>4</sub> )	1840-1 <sup>1</sup> / <sub>4</sub> 417 (500-1 <sup>1</sup> / <sub>4</sub> )		
CIRCLING	1920-1 495 (500-1)	1920-1 <sup>1</sup> / <sub>2</sub> 495 (500-1 <sup>1</sup> / <sub>2</sub> )	1980-2 555 (600-2)	

ALEXANDRIA, MINNESOTA  
Orig-D 15SEP16

45°52'N-95°24'W

# CHANDLER FIELD (AXN)

## ILS or LOC RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>48917</b> <b>W22A</b>	APP CRS <b>225°</b>	Rwy Idg <b>4098</b> TDZE <b>1424</b> Apt Elev <b>1425</b>
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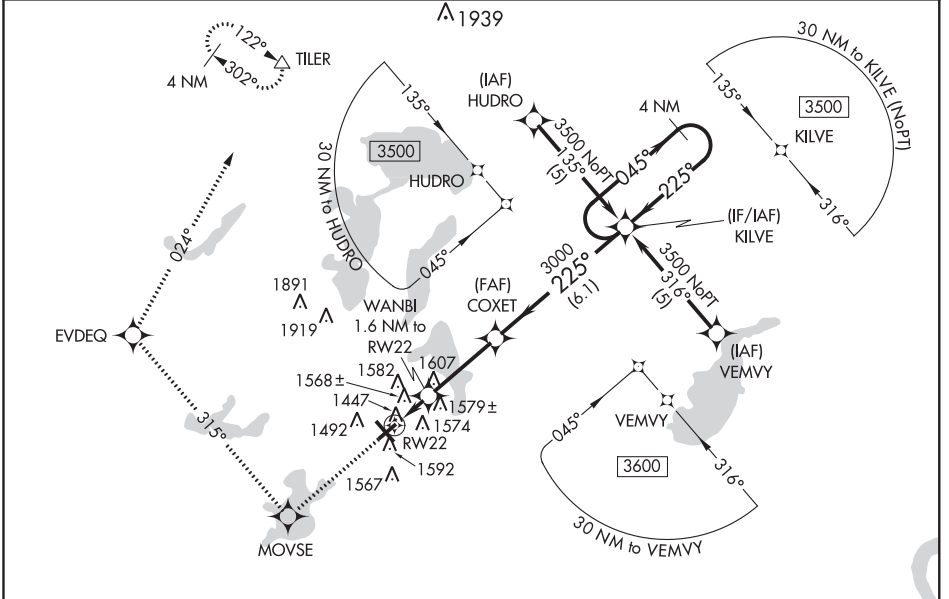
# RNAV (GPS) RWY 22

CHANDLER FIELD (AXN)

**⚠** Baro-VNAV NA when using Glenwood altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F).  
**⚠** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Glenwood altimeter setting and increase all DA 37 feet and all MDA 40 feet, increase LNAV/VNAV all Cats and LNAV Cat D visibility ¼ mile.

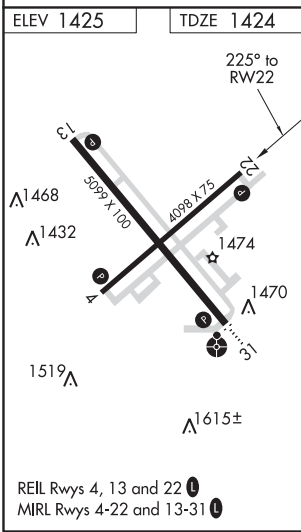
**MISSED APPROACH:** Climb to 3500 direct MOVSE and right turn on track 315° to EVDEQ and on track 024° to TILER and hold.

ASOS <b>118.375</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	UNICOM <b>123.0 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



3500	MOVSE	EVDEQ	TILER	KILVE
↑	✦	tr 315°	△	4 NM Holding Pattern
↑	✦	tr 024°	△	GP 3.00° TCH 50
*LNAV only.				
	WANBI 1.6 NM to RW22	COXET 3000		KILVE
	1980*	3000		3500
	1.6 NM	3.2 NM	6.1 NM	
CATEGORY	A	B	C	D
LPV DA	1677-1 253 (300-1)			
LNAV/VNAV DA	1880-1½ 456 (500-1½)			
LNAV MDA	1840-1	416 (500-1)	1840-1¼	416 (500-1¼)
CIRCLING	1920-1	495 (500-1)	1920-1½	1980-2 495 (500-1½) 555 (600-2)

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 44).

WAAS CH <b>61007</b> <b>W31A</b>	APP CRS <b>315°</b>	Rwy Idg TDZE <b>1423</b> Apt Elev <b>1424</b>	<b>5099</b>
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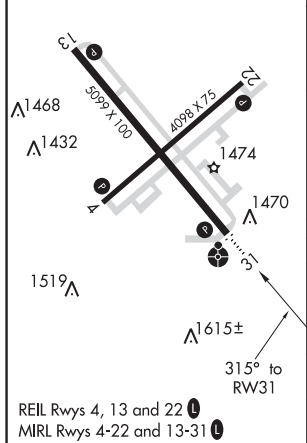
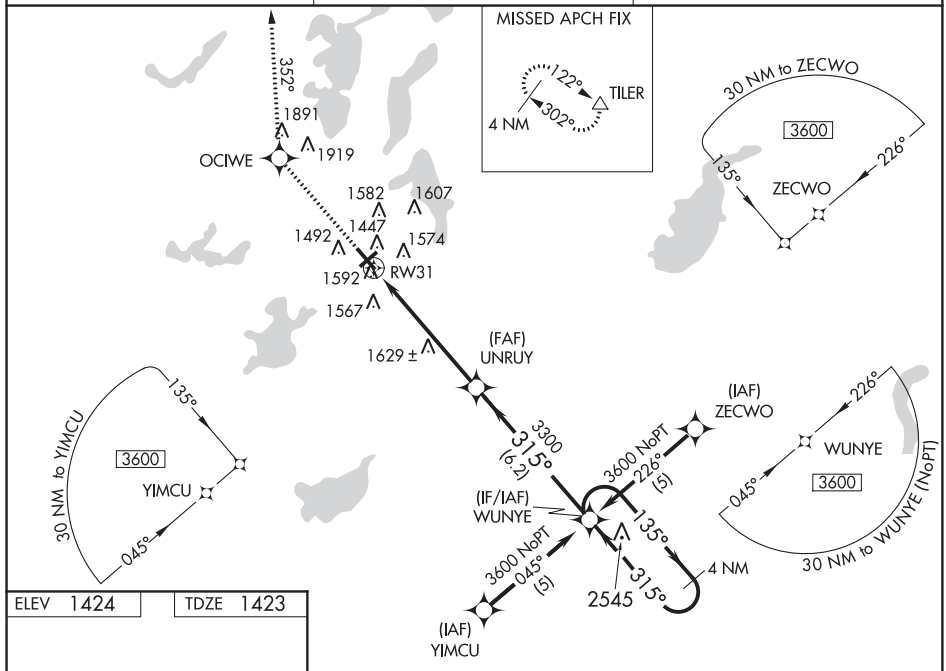
# RNAV (GPS) RWY 31

CHANDLER FIELD (AXN)

**⚠** Inoperative table does not apply to LPV & LNAV/VNAV Cats A/B/C and LNAV Cat C. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP -0.3 NA. VDP and Baro-VNAV NA when using Glenwood altimeter setting. When local altimeter setting not received, use Glenwood altimeter setting and increase all DAs/MDAs 40 feet and increase LPV and LNAV/VNAV visibilities ¼ mile all Cats.

**ODALS**  
 MISSED APPROACH: Climb to 3500 direct OCIWE and via 352° track to TILER and hold.

ASOS <b>118.375</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	UNICOM <b>123.0 (CTAF)</b>
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ELEV 1424	TDZE 1423																													
3500	OCIWE	tr 352°	TILER	WUNYE	4 NM Holding Pattern																									
*LNAV only.																														
UNRUY																														
RW31																														
<table border="1"> <thead> <tr> <th>CATEGORY</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td>LPV DA</td> <td></td> <td>1815-1¼</td> <td>392 (400-1¼)</td> <td></td> </tr> <tr> <td>LNAV/VNAV DA</td> <td></td> <td>1885-1½</td> <td>462 (500-1½)</td> <td></td> </tr> <tr> <td>LNAV MDA</td> <td>1880-¾</td> <td>457 (500-¾)</td> <td>1880-1¼ 457 (500-1¼)</td> <td>1880-1½ 457 (500-1½)</td> </tr> <tr> <td>CIRCLING</td> <td>1920-1</td> <td>496 (500-1)</td> <td>1920-1½ 496 (500-1½)</td> <td>1980-2 556 (600-2)</td> </tr> </tbody> </table>						CATEGORY	A	B	C	D	LPV DA		1815-1¼	392 (400-1¼)		LNAV/VNAV DA		1885-1½	462 (500-1½)		LNAV MDA	1880-¾	457 (500-¾)	1880-1¼ 457 (500-1¼)	1880-1½ 457 (500-1½)	CIRCLING	1920-1	496 (500-1)	1920-1½ 496 (500-1½)	1980-2 556 (600-2)
CATEGORY	A	B	C	D																										
LPV DA		1815-1¼	392 (400-1¼)																											
LNAV/VNAV DA		1885-1½	462 (500-1½)																											
LNAV MDA	1880-¾	457 (500-¾)	1880-1¼ 457 (500-1¼)	1880-1½ 457 (500-1½)																										
CIRCLING	1920-1	496 (500-1)	1920-1½ 496 (500-1½)	1980-2 556 (600-2)																										

NC-1, 10 NOV 2016 to 05 JAN 2017

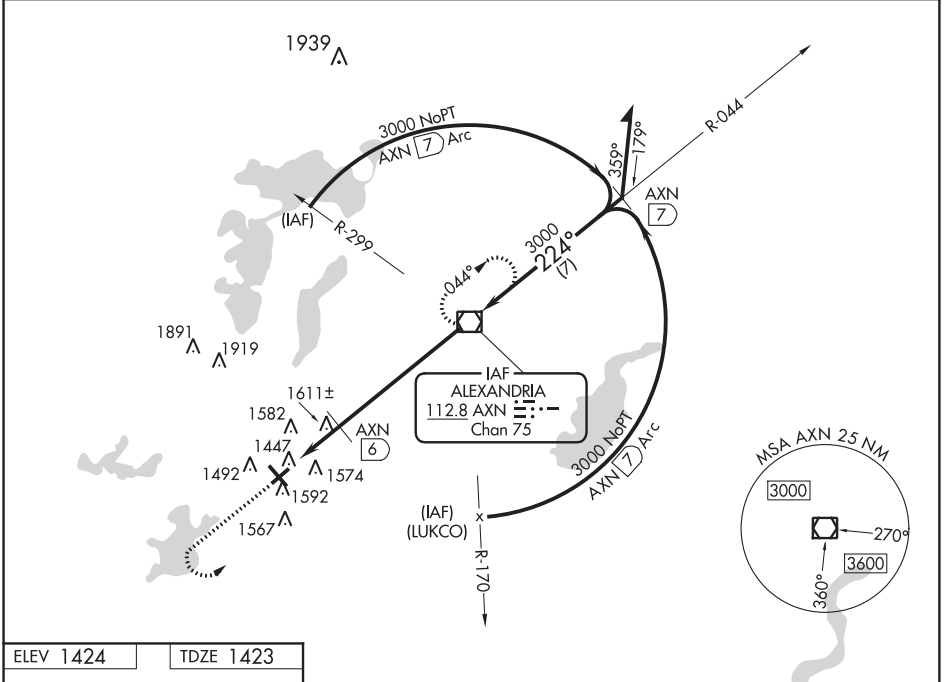
NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME AXN <b>112.8</b> Chan <b>75</b>	APP CRS <b>224°</b>	Rwy Idg TDZE Apt Elev	<b>4098</b> <b>1423</b> <b>1424</b>
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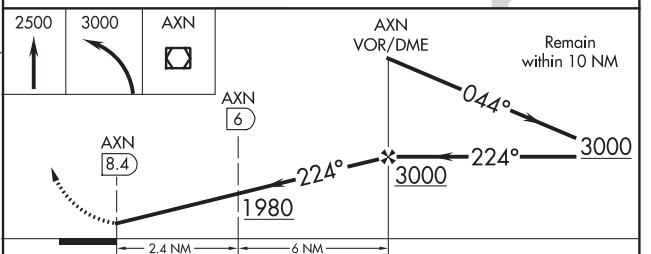
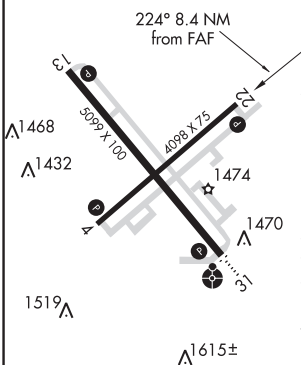
**VOR RWY 22**  
CHANDLER FIELD (AXN)

**MISSED APPROACH:** Climb to 2500 then climbing left turn to 3000 direct to AXN VOR/DME and hold.

ASOS <b>118.375</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	UNICOM <b>123.0 (CTAF) 0</b>
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ELEV 1424	TDZE 1423
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CATEGORY	A		B		C		D	
	S-22	1980-1	557 (600-1)	1980-1 ½	557 (600-1 ½)	1980-1 ¾	557 (600-1 ¾)	1980-2
CIRCLING	1980-1	556 (600-1)	1980-1 ½	556 (600-1 ½)	1980-2	556 (600-2)		
DME MINIMUMS								
S-22	1880-1	457 (500-1)	1880-1 ¼	457 (500-1 ¼)	1880-1 ½	457 (500-1 ½)	1980-2	556 (600-2)
CIRCLING	1920-1	496 (500-1)	1920-1 ½	496 (500-1 ½)	1980-2	556 (600-2)		

REIL Rwys 4, 13 and 22					
MIRL Rwy 4-22 and 13-31					
FAF to MAP 8.4 NM					
Knots	60	90	120	150	180
Min:Sec	8:24	5:36	4:12	3:22	2:48

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

APP CRS <b>130°</b>	Rwy Idg <b>3500</b>
	TDZE <b>1020</b>
	Apt Elev <b>1021</b>

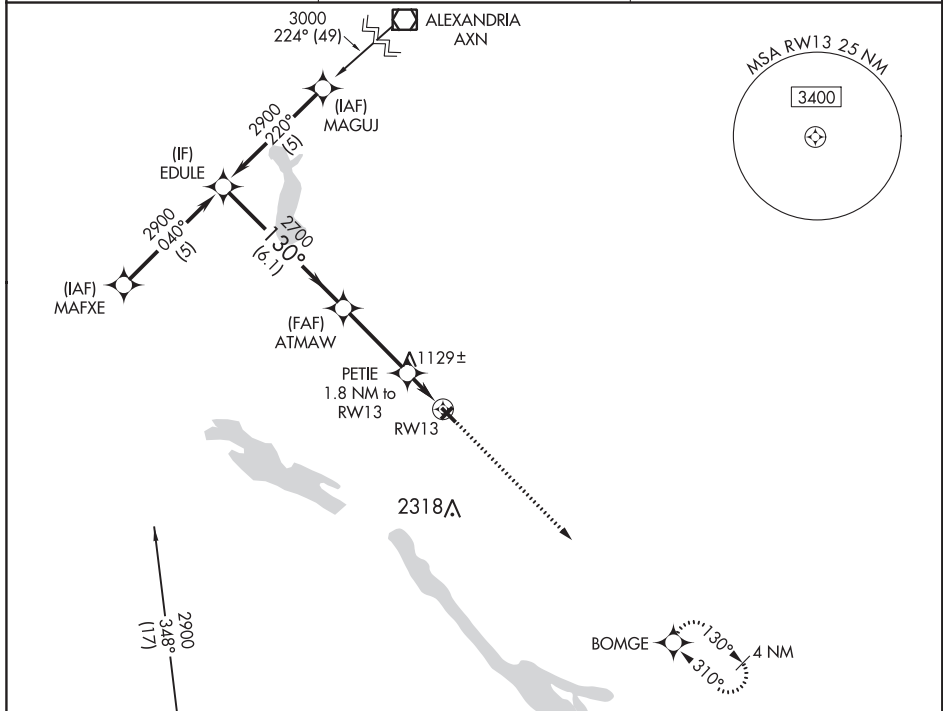
# RNAV (GPS) RWY 13

APPLETON MUNI (AQP)

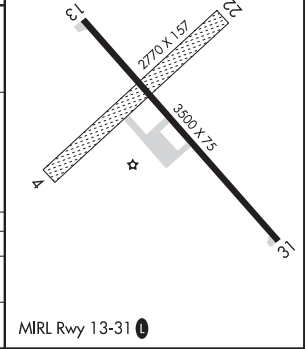
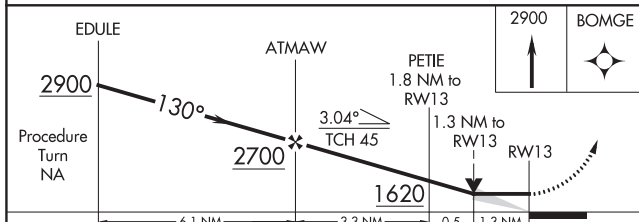
**⚠** Circling NA at night. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Benson altimeter setting and increase all MDA 40 feet. VDP NA with Benson altimeter setting.

**⚠** MISSED APPROACH: Climb to 2900 direct BOMGE and hold.

AWOS-3 <b>356</b>	PRINCETON RADIO <b>122.45</b>	CTAF <b>122.9</b> <b>⓪</b>
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ELEV 1021	TDZE 1020
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CATEGORY	A	B	C	D
LNVA MDA	1480-1	460 (500-1)	1480-1¼ 460 (500-1¼)	NA
CIRCLING	1480-1	459 (500-1)	1480-1½ 459 (500-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

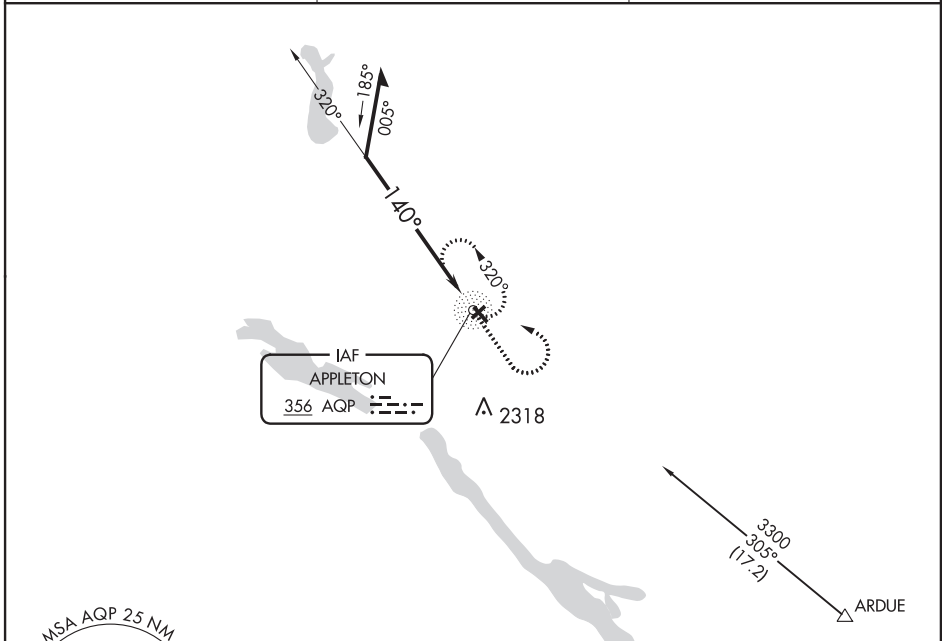
NC-1, 10 NOV 2016 to 05 JAN 2017

NDB AQP <b>356</b>	APP CRS <b>140°</b>	Rwy Idg TDZE Apt Elev	<b>3500</b> <b>1021</b> <b>1021</b>
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**NDB RWY 13**  
APPLETON MUNI (AQP)

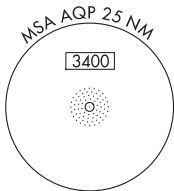
<p>▼ ▲ NA</p>	<p>MISSED APPROACH: Climb to 1900 then climbing left turn to 3300 direct AQP NDB and hold.</p>
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<p>AWOS-3 <b>356</b></p>	<p>PRINCETON RADIO <b>122.45</b></p>	<p>CTAF <b>122.9</b></p>
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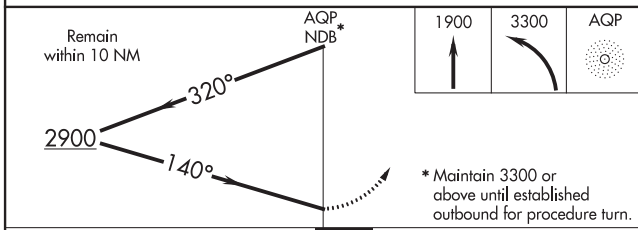
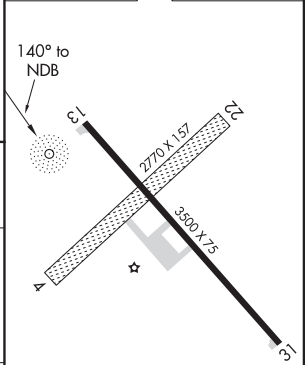


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 1021	TDZE 1021
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CATEGORY	A	B	C	D
S-13	1600-1	579 (600-1)	1600-1½ 579 (600-1½)	NA
CIRCLING	1600-1	579 (600-1)	1600-1½ 579 (600-1½)	NA

MIRL Rwy 13-31

AUSTIN, MINNESOTA

AL-5090 (FAA)

16315

LOC I-AUM <b>110.55</b>	APP CRS <b>351°</b>	Rwy Idg 5800	TDZE 1231	Apt Elev 1234
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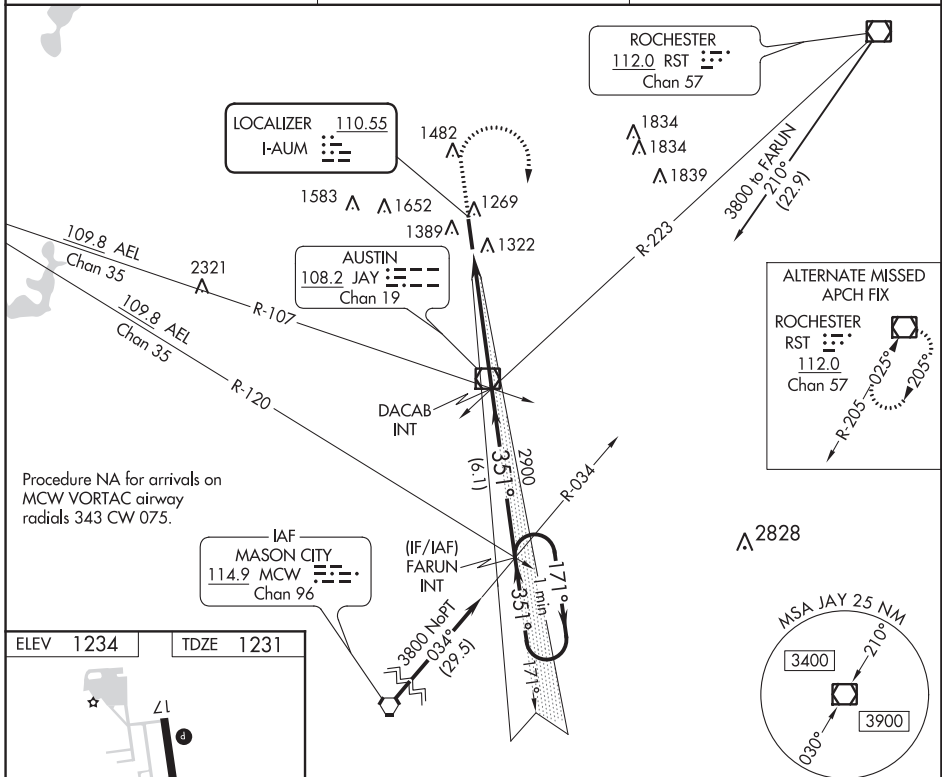
# ILS or LOC RWY 35

AUSTIN MUNI (AUM)

**NA** When local altimeter setting not received, use Albert Lea altimeter setting and increase all DA 48 feet and all MDA 60 feet. For inoperative MALSRS, increase S-LOC 35 Cats C and D visibility to 1 3/8 mile.

**MALSRS** MISSED APPROACH: Climb to 1800 then climbing right turn to 3800 on heading 179° and MCW VORTAC R-034 to FARUN INT and hold.

AWOS-3 <b>119.025</b>	ROCHESTER APP CON* <b>119.8 251.125</b>	UNICOM <b>122.7 (CTAF)</b>
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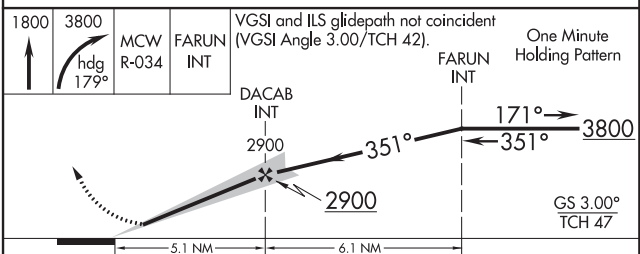
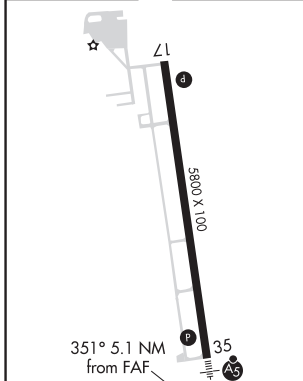


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

Procedure NA for arrivals on MCW VORTAC airway radials 343 CW 075.

ELEV 1234	TDZE 1231
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CATEGORY	A	B	C	D
S-ILS 35		1431-1/2	200 (200-1/2)	
S-LOC 35	1700-1/2	469 (500-1/2)	1700-1	469 (500-1)
CIRCLING	1740-1	506 (600-1)	1740-1 1/2 506 (600-1/2)	1800-2 566 (600-2)

AUSTIN, MINNESOTA  
Amdt 1A 29MAY14

43°40'N-92°56'W

# AUSTIN MUNI (AUM)

## ILS or LOC RWY 35

WAAS CH <b>82132</b> <b>W17A</b>	APP CRS <b>169°</b>	Rwy Idg TDZE Apt Elev	<b>5800</b> <b>1234</b> <b>1234</b>
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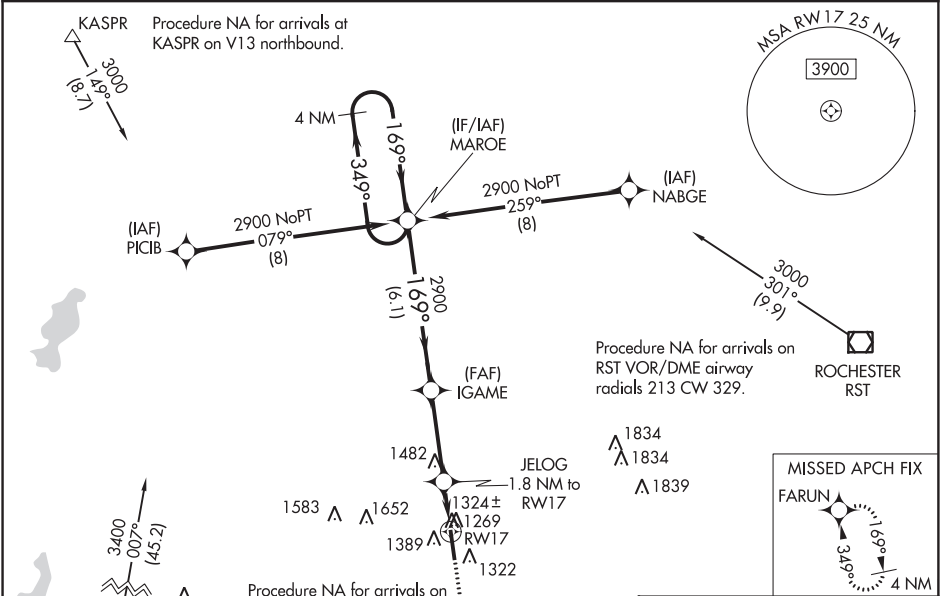
# RNAV (GPS) RWY 17

AUSTIN MUNI (AUM)

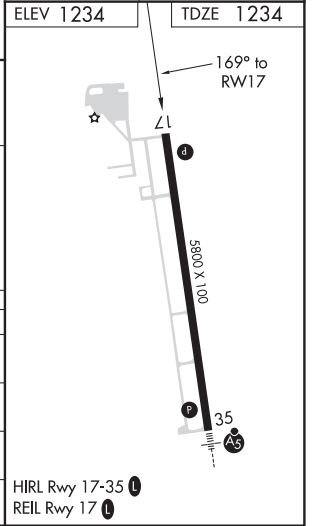
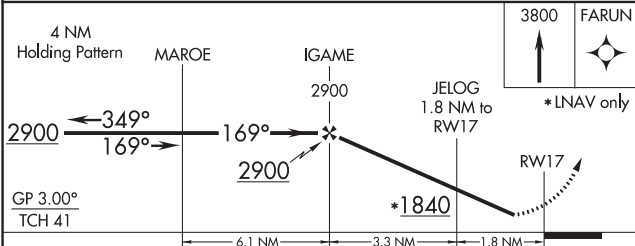
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM not authorized.  
**⚠** When local altimeter setting not received, use Albert Lea altimeter setting and increase all DA 48 feet and all LNAV/VNAV visibility ½ mile; increase all MDA 60 feet and LNAV Cats C/D visibility ½ mile and Circling Cats C/D visibility ¼ mile. Rwy 17 Straight-In and Circling minimums NA at night.

MISSED APPROACH: Climb to 3800 direct FARUN and hold.

AWOS-3 <b>119.025</b>	ROCHESTER APP CON* <b>119.8 251.125</b>	UNICOM <b>122.7</b> (CTAF) <b>Ⓛ</b>
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ELEV 1234	TDZE 1234
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CATEGORY	A	B	C	D
LPV DA		1484-1	250 (300-1)	
LNAV/VNAV DA		1508-1	274 (300-1)	
LNAV MDA	1700-1	466 (500-1)	1700-1 3/8	466 (500-1 3/8)
<b>C</b> CIRCLING	1740-1	506 (600-1)	1800-1 1/2	1960-2 1/4
			566 (600-1 1/2)	726 (800-2 1/4)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

AUSTIN, MINNESOTA

AL-5090 (FAA)

16315

WAAS CH <b>99506</b> <b>W35A</b>	APP CRS <b>349°</b>	Rwy Idg TDZE <b>1231</b> Apt Elev <b>1234</b>	<b>5800</b>
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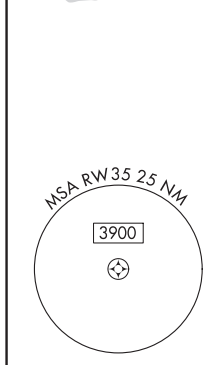
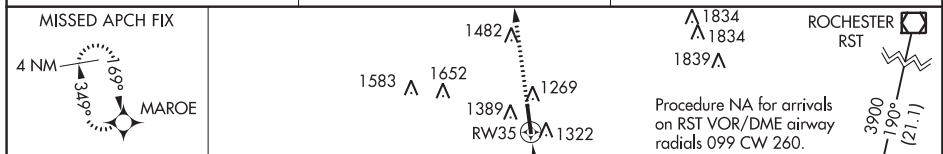
# RNAV (GPS) RWY 35

AUSTIN MUNI (AUM)

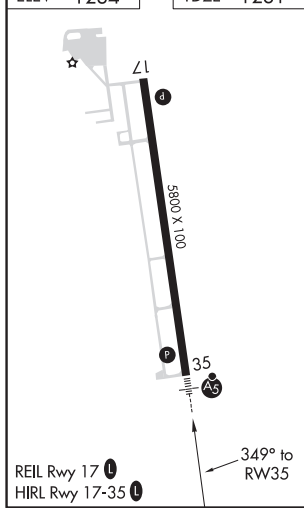
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 36°C (96°F). DME/DME RNP-0.3 NA. Baro-VNAV and VDP NA with Albert Lea altimeter setting. When local altimeter setting not received, use Albert Lea altimeter setting and increase all DA 48 feet and all MDA 60 feet and increase LNAV Cats C and D visibility 1/8 mile. For inoperative MALSR, increase LNAV/VNAV all Cats visibility to 3/4 mile and LNAV Cats C and D visibility to 1 mile. For inoperative MALSR when using Albert Lea altimeter setting, increase LNAV Cats C and D visibility to 1 1/8 mile.

**MALSR**  
  
MISSED APPROACH: Climb to 2900 direct MAROE and hold.

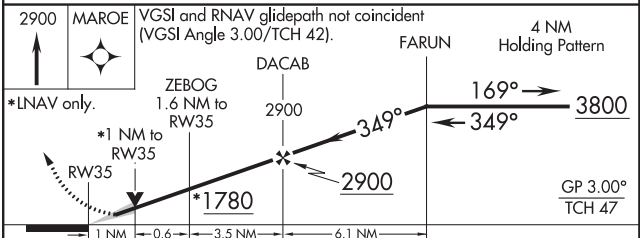
AWOS-3 <b>119.025</b>	ROCHESTER APP CON * <b>119.8 251.125</b>	UNICOM <b>122.7</b> (CTAF) <b>0</b>
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ELEV 1234	TDZE 1231
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Procedure NA for arrival on MCW VOR/DME airway radials 343 CW 100.



CATEGORY	A	B	C	D
LPV DA		1431-1/2	200 (200-1/2)	
LNAV/VNAV DA		1483-1/2	252 (300-1/2)	
LNAV MDA	1580-1/2	349 (400-1/2)	1580-5/8	349 (400-5/8)
CIRCLING	1740-1	506 (600-1)	1740-1 1/2 506 (600-1 1/2)	1800-2 566 (600-2)

AUSTIN, MINNESOTA  
Amdt 1B 10NOV16

43°40'N-92°56'W

# RNAV (GPS) RWY 35

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



VOR/DME JAY <b>108.2</b> Chan <b>19</b>	APP CRS <b>171°</b>	Rwy Idg TDZE <b>1231</b> Apt Elev <b>1234</b>
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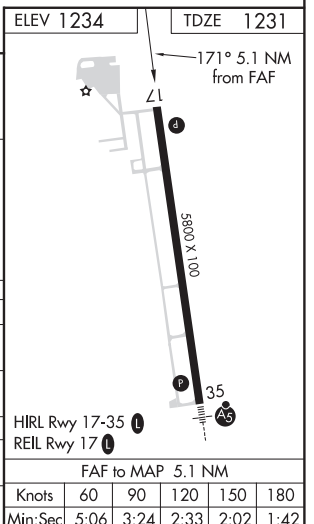
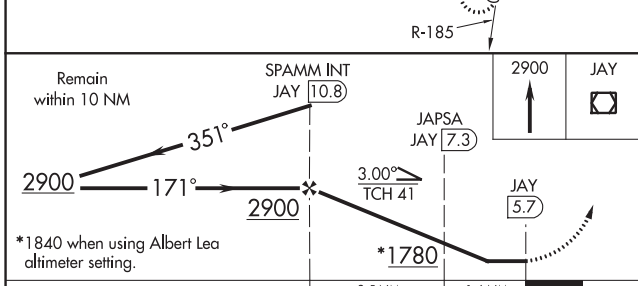
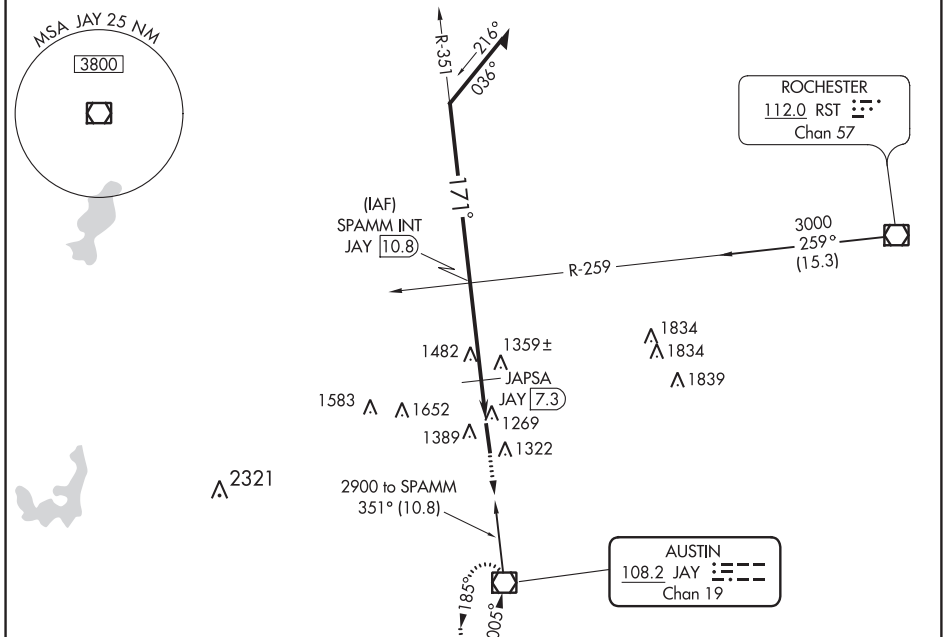
# VOR RWY 17

AUSTIN MUNI (AUM)

**NA** Visibility reduction by helicopters NA.  
When local altimeter setting not received, use Albert Lea altimeter setting and increase all MDAs 60 feet, and S-17 Cat. C/D and circling Cat. C visibility ¼ mile. Increase JAPSA FIX MINIMUMS S-17 Cat. C/D visibility ¼ mile.

MISSED APPROACH: Climb to 2900 direct JAY VOR/DME and hold.

AWOS-3 <b>119.025</b>	ROCHESTER APP CON * <b>119.8 251.125</b>	UNICOM <b>122.7 (CTAF)</b>
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CATEGORY	A	B	C	D
S-17	1780-1	549 (600-1)	1780-1½ 549 (600-1½)	1780-1¾ 549 (600-1¾)
CIRCLING	1780-1	546 (600-1)	1780-1½ 546 (600-1½)	1800-2 566 (600-2)
JAPSA FIX MINIMUMS				
S-17	1620-1 389 (400-1)		1620-1¼ 389 (400-1¼)	
CIRCLING	1740-1	506 (600-1)	1740-1½ 506 (600-1½)	1800-2 566 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

BAUDETTE, MINNESOTA

AL-5297 (FAA)

15232

LOC I-BDE <b>108.3</b>	APP CRS <b>299°</b>	Rwy Idg <b>5499</b>
		TDZE <b>1085</b>
		Apt Elev <b>1086</b>

# ILS or LOC/DME RWY 30

BAUDETTE INTL (BDE)

**▼** Visibility reduction by helicopters NA. When local altimeter setting not received, use Warroad altimeter setting and increase all DA 75 feet and all MDA 80 feet, increase S-ILS 30 all Cats visibility ½ mile, S-LOC 30 and Circling Cat C/D visibility ½ mile. DME from BDE VOR/DME. Simultaneous reception of I-BDE and BDE DME required.

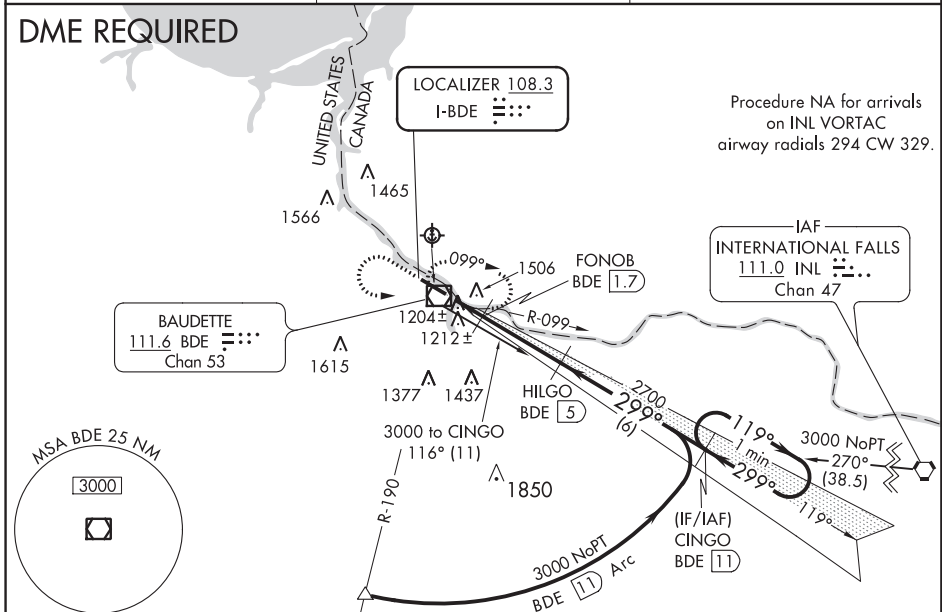
**▲ NA**

**☒** -28°C/-18°F

MISSED APPROACH: Climb to 2500 then climbing left turn to 3000 direct BDE VOR/DME and hold.

ASOS <b>126.775</b>	PRINCETON RADIO <b>122.4</b>	UNICOM <b>122.8(CTAF) 0</b>
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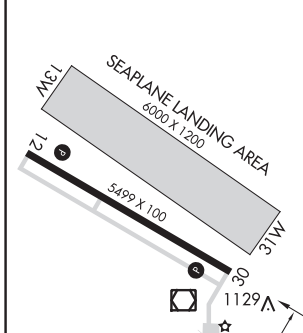
## DME REQUIRED



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

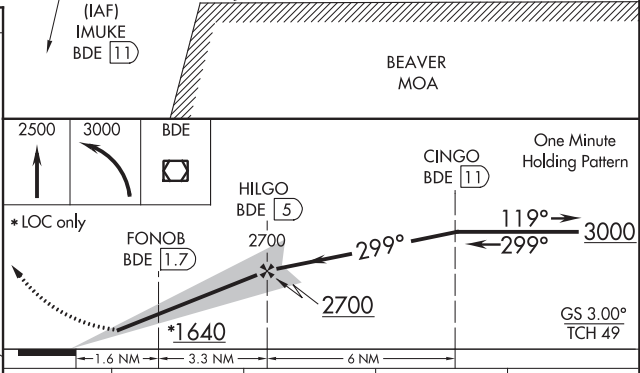
ELEV 1086	TDZE 1085
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HIRL Rwy 12-30  
REIL Rwys 12 and 30

FAF to MAP 4.9 NM

Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38



CATEGORY	A	B	C	D
S-ILS 30	1335-¾		250 (300-¾)	
S-LOC 30	1440-1		355 (400-1)	
CIRCLING	1860-1	1860-1¼	1860-2¼	1860-2½
	774 (800-1)	774 (800-1¼)	774 (800-2¼)	774 (800-2½)

BAUDETTE, MINNESOTA  
Orig 03JUN10

48°44'N-94°37'W

# ILS or LOC/DME RWY 30

BAUDETTE INTL (BDE)

APP CRS <b>117°</b>	Rwy Idg <b>5499</b>
	TDZE <b>1086</b>
	Apt Elev <b>1086</b>

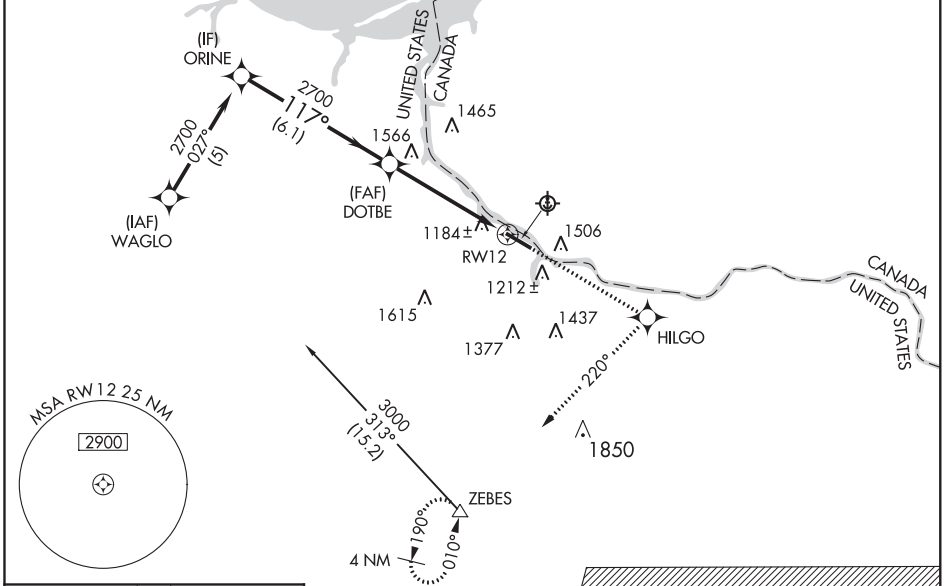
# RNAV (GPS) RWY 12

BAUDETTE INTL (BDE)

**▼** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Baro-VNAV NA when using Warroad altimeter setting. VDP NA with Warroad altimeter setting. When local altimeter setting not received, use Warroad altimeter setting and increase all DA 75 feet and all MDA 80 feet, increase LNAV/VNAV all Cats, LNAV and Circling Cats C and D visibility ¼ mile.

**MISSED APPROACH:**  
Climb to 3000 direct HILGO and right turn on track 220° to ZEBES and hold.

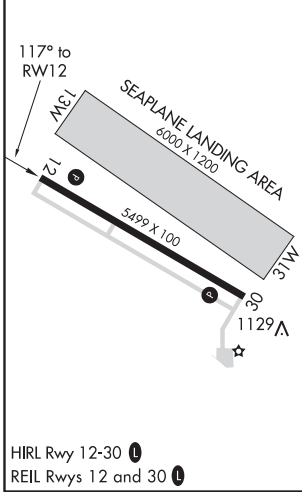
ASOS <b>126.775</b>	PRINCETON RADIO <b>122.4</b>	UNICOM <b>122.8 (CTAF) 0</b>
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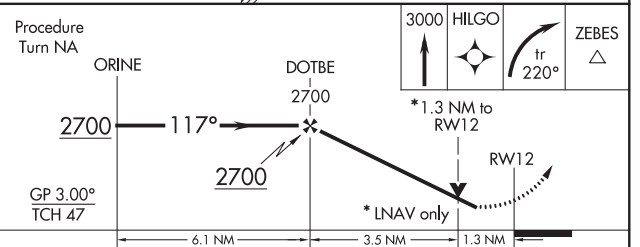
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1086	TDZE 1086
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Procedure NA for arrivals at ZEBES via V82 Southbound.



CATEGORY	A	B	C	D
LNAV/VNAV DA	1481-1½ 395 (400-1½)			
LNAV MDA	1560-1	474 (500-1)	1560-1¼ 474 (500-1¼)	1560-1½ 474 (500-1½)
CIRCLING	1860-1 774 (800-1)	1860-1¼ 774 (800-1¼)	1860-2¼ 774 (800-2¼)	1860-2½ 774 (800-2½)

BAUDETTE, MINNESOTA  
Amdt 1 03JUN10

48°44'N-94°37'W  
27

# BAUDETTE INTL (BDE) RNAV (GPS) RWY 12

BAUDETTE, MINNESOTA

AL-5297 (FAA)

15232

WAAS CH <b>81814</b> <b>W30A</b>	APP CRS <b>297°</b>	Rwy Idg TDZE Apt Elev	<b>5499</b> <b>1085</b> <b>1086</b>
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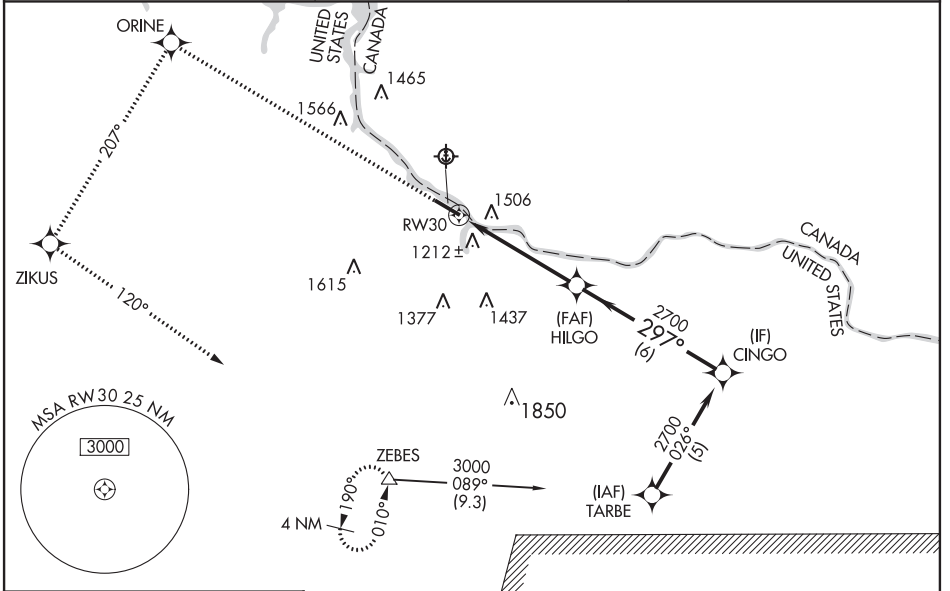
# RNAV (GPS) RWY 30

BAUDETTE INTL (BDE)

Baro-VNAV NA when using Wroarod altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. VDP NA with Wroarod altimeter setting. When local altimeter setting not received, use Wroarod altimeter setting and increase all DA 75 feet and all MDA 80 feet, increase LPV all Cats and LNAV Cat C/D visibility ½ mile, increase LNAV Cat B and Circling Cat C and D visibility ¼ mile.

MISSED APPROACH: Climb to 3000 direct ORINE and left turn on track 207° to ZIKUS and on track 120° to ZEBES and hold.

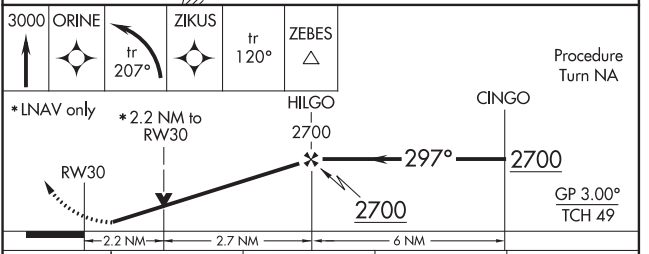
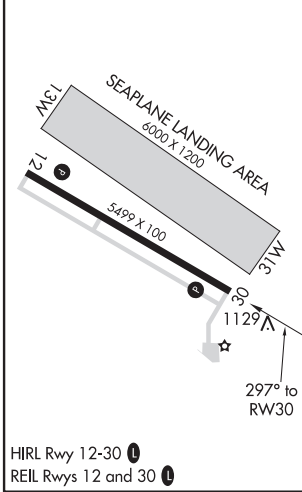
ASOS <b>126.775</b>	PRINCETON RADIO <b>122.4</b>	UNICOM <b>122.8 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1086	TDZE 1085
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CATEGORY	A	B	C	D
LPV DA		1335-¾	250 (300-¾)	
LNAV/VNAV DA		1985-4	900 (900-4)	
LNAV MDA	1820-1	735 (800-1)	1820-2 735 (800-2)	1820-2½ 735 (800-2½)
CIRCLING	1860-1 774 (800-1)	1860-1¼ 774 (800-1¼)	1860-2¼ 774 (800-2¼)	1860-2½ 774 (800-2½)

BAUDETTE, MINNESOTA  
Amdt 2 03JUN10

48°44'N-94°37'W

# BAUDETTE INTL (BDE)

## RNAV (GPS) RWY 30

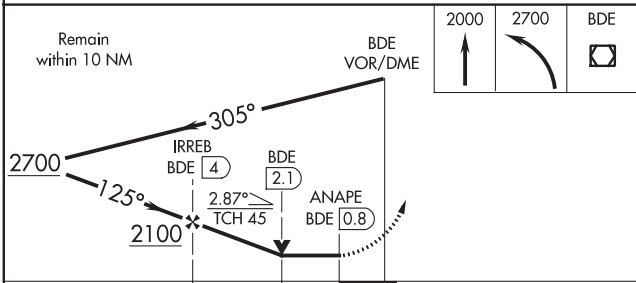
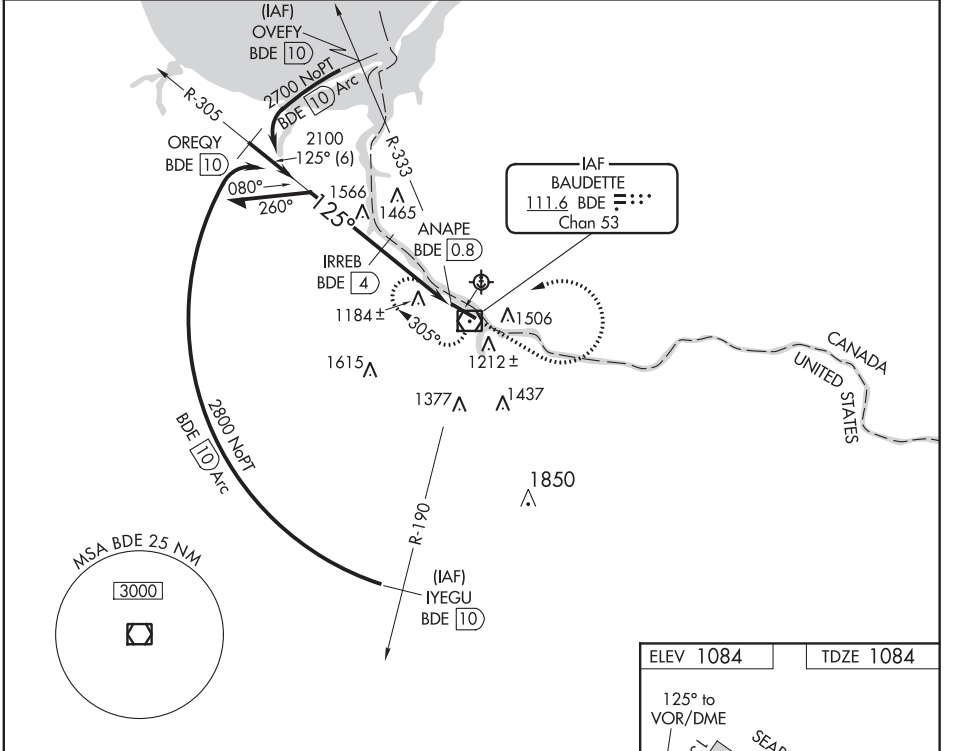
VOR/DME BDE	APP CRS	Rwy Idg	<b>5499</b>
<b>111.6</b>	<b>125°</b>	TDZE	<b>1084</b>
Chan <b>53</b>		Apt Elev	<b>1084</b>

# VOR/DME RWY 12

BAUDETTE INTL (BDE)

**MISSED APPROACH:** Climb to 2000 then climbing left turn to 2700 direct BDE VOR/DME and hold.

ASOS <b>126.775</b>	PRINCETON RADIO <b>122.4</b>	UNICOM <b>122.8</b> (CTAF) <b>1</b>
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ELEV 1084	TDZE 1084
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CATEGORY	A	B	C	D
S-12	1540-1 456 (500-1)		1540-1½ 456 (500-1½)	1540-1½ 456 (500-1½)
CIRCLING	1860-1 776 (800-1)	1860-1¼ 776 (800-1¼)	1860-2¼ 776 (800-2¼)	1860-2½ 776 (800-2½)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

BEACH, NORTH DAKOTA

AL-10418 (FAA)

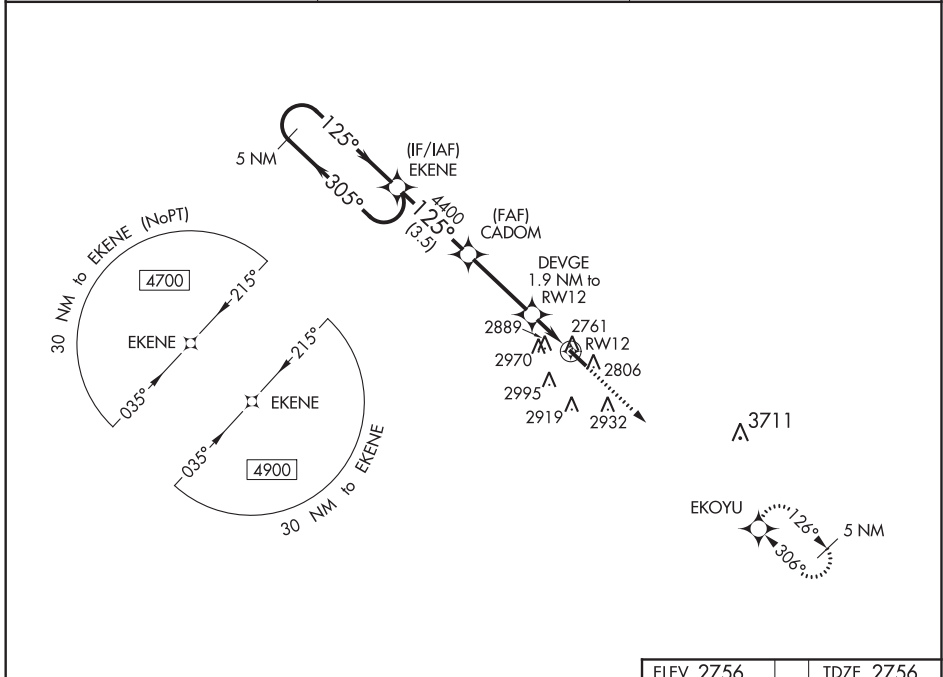
16203

WAAS CH <b>61338</b> <b>W12A</b>	APP CRS <b>125°</b>	Rwy Idg TDZE Apt Elev	<b>4200</b> <b>2756</b> <b>2756</b>
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# RNAV (GPS) RWY 12

BEACH (20U)

DME/DME RNP-0.3 NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C (-4°F) or above 54°C (130°F).		MISSED APPROACH: Climb to 5000 direct EKOYU and hold.
AWOS-3 <b>118.175</b>	SALT LAKE CENTER <b>126.85 305.2</b>	UNICOM <b>122.8 (CTAF) 0</b>



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

5 NM Holding Pattern		VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 26).		ELEV 2756	TDZE 2756
EKENE		CADOM	DEVEGE	5000	EKOYU
4700 ← 305°		4400	1.9 NM to RWY 12	↑	✧
125° →		* 1.1 NM to RWY 12	RWY 12		* LNAV only
GP 3.00°		* 3400			
TCH 40		3.5 NM	3.1 NM	0.8 NM	1.1 NM
CATEGORY	A	B	C	D	
LPV DA	3006-1	250 (300-1)		NA	
LNAV/VNAV DA	3051-1	295 (300-1)		NA	
LNAV MDA	3140-1	384 (400-1)		NA	
CIRCLING	3280-1 524 (600-1)	3300-1 544 (600-1)		NA	

MIRL Rwy 12-30 0

BEACH, NORTH DAKOTA  
Orig 21JUL16

46°56'N-103°59'W

# BEACH (20U) RNAV (GPS) RWY 12

WAAS CH <b>66038</b> <b>W30A</b>	APP CRS <b>306°</b>	Rwy Idg TDZE Apt Elev	<b>4200</b> <b>2754</b> <b>2756</b>
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# RNAV (GPS) RWY 30

BEACH (20U)

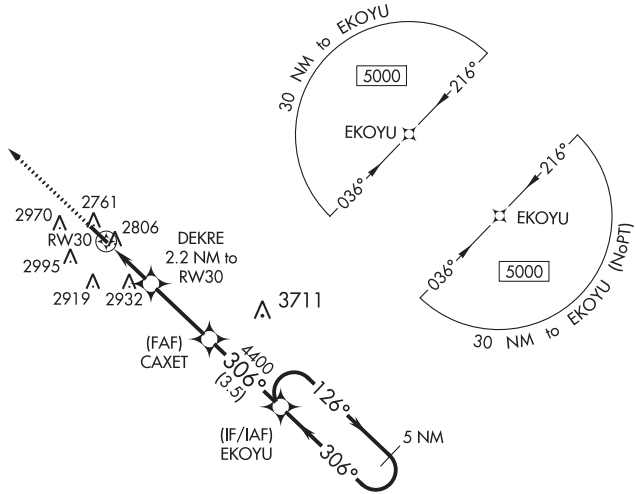
**DME/DME RNP-0.3 NA.** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C (-4°F) or above 54°C (130°F). Helicopter visibility reduction below 3/4 SM NA.

**MISSED APPROACH:** Climb to 4700 direct EKENE and hold.

AWOS-3  
**118.175**

SALT LAKE CENTER  
**126.85 305.2**

UNICOM  
**122.8 (CTAF) 0**

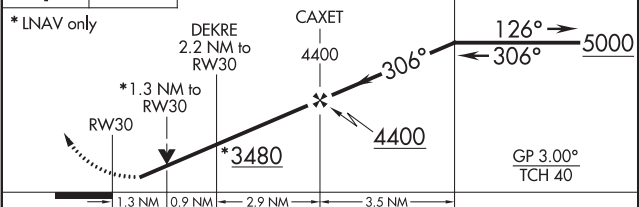
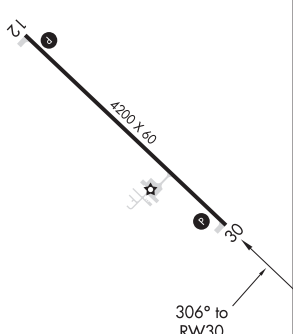


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 2756      TDZE 2754

4700      EKENE      VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 27).      5 NM Holding Pattern



CATEGORY	A	B	C	D
LPV DA	3004-1	250 (300-1)		NA
LNAV/VNAV DA	3175-1½	421 (500-1½)		NA
LNAV MDA	3180-1	426 (500-1)		NA
<b>C</b> CIRCLING	3280-1 524 (600-1)	3300-1 544 (600-1)		NA

BELLE FOURCHE, SOUTH DAKOTA

AL-6992 (FAA)

15232

WAAS CH <b>82728</b> <b>W32A</b>	APP CRS <b>321°</b>	Rwy Idg TDZE Apt Elev	<b>4501</b> <b>3180</b> <b>3191</b>
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# RNAV (GPS) RWY 32

BELLE FOURCHE MUNI (EFC)

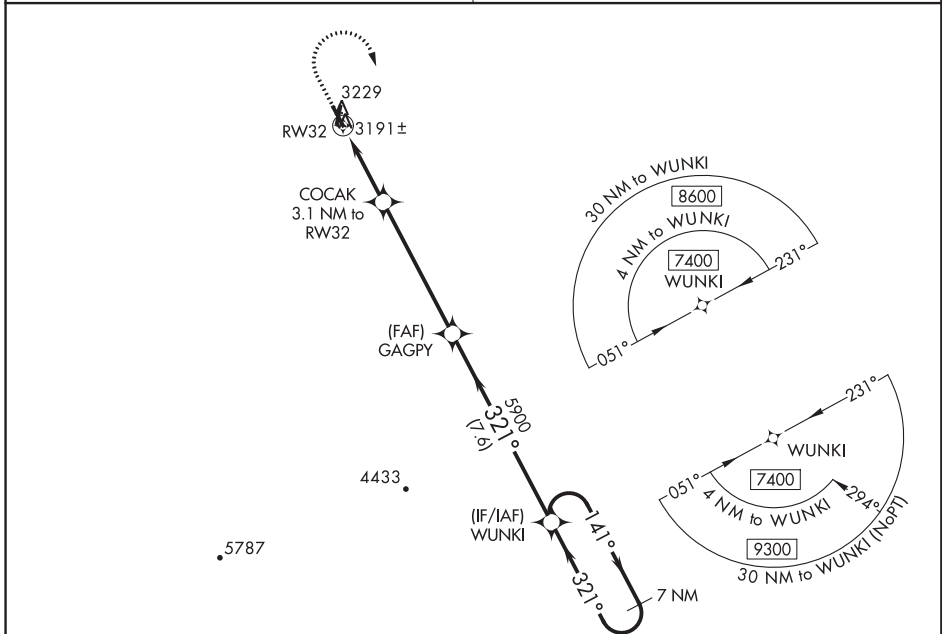
**▼** Baro-VNAV NA. Use Ellsworth altimeter setting; when not received, use Rapid City altimeter setting. When VGSI inop, Straight-In/Circling Rwy 32 procedure NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

**▲** NA

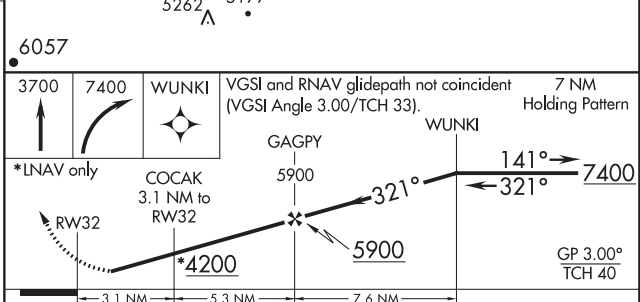
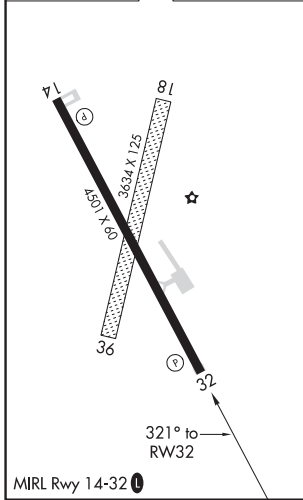
**❄** -26°C/-15°F

**MISSED APPROACH:** Climb to 3700 then climbing right turn to 7400 direct WUNKI and hold. Continue climb-in-hold to 7400.

DENVER CENTER <b>127.95 338.2</b>	AUNICOM <b>122.8 (CTAF)</b>
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ELEV 3191	TDZE 3180
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CATEGORY	A	B	C	D
LPV DA	3556-1¼ 376 (400-1¼)			NA
LNAV/VNAV DA	3556-1¼ 376 (400-1¼)			NA
LNAV MDA	3640-1	460 (500-1)	3640-1⅜ 460 (500-1⅜)	NA
CIRCLING	3800-1 609 (700-1)	3820-1 629 (700-1)	3820-1¾ 629 (700-1¾)	NA

BELLE FOURCHE, SOUTH DAKOTA  
Amdt 1A 05MAR15

44°44'N-103°52'W

# BELLE FOURCHE MUNI (EFC) RNAV (GPS) RWY 32

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



LOC I-MDI <b>111.9</b>	APP CRS <b>313°</b>	Rwy ldg TDZE <b>7002 1389</b>	Apt Elev <b>1391</b>
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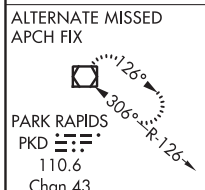
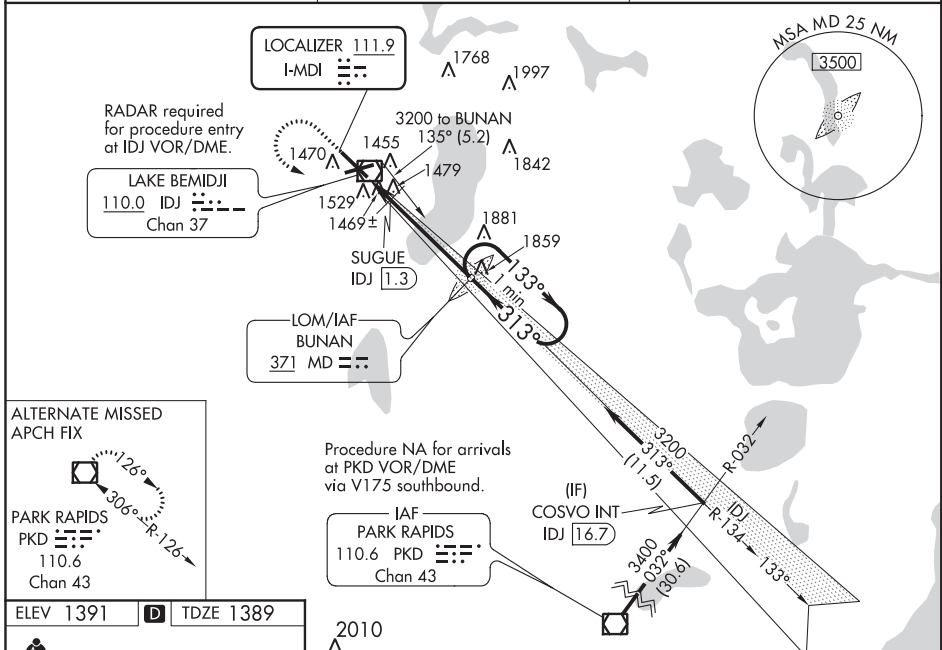
# ILS or LOC RWY 31

BEMIDJI RGNL (BJI)

**NA** Autopilot coupled approach NA below 2093. ADF required. When local altimeter setting not received, use Park Rapids altimeter setting and increase DA 93 feet and all MDA 100 feet, increase S-LOC 31 Cat C/D visibility ¼ mile. For inoperative MALSR when using Park Rapids altimeter setting, increase S-ILS 31 all Cats visibility to 1 mile. SUGUE FIX minimums NA when using Park Rapids altimeter setting. \*\*DME from IDJ VOR/DME.

**MALSR** MISSED APPROACH: Climb to 2300 then climbing left turn to 3200 direct BUNAN LOM and hold.

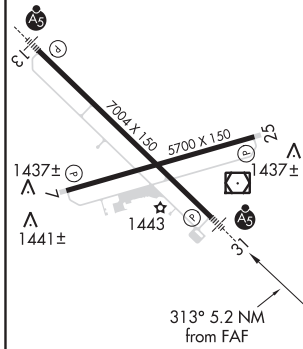
AWOS-3 <b>110.0</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	UNICOM <b>122.8 (CTAF) 0</b>
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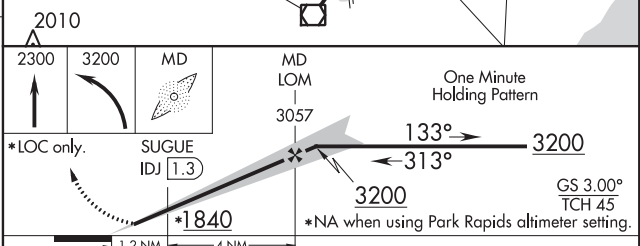
Procedure NA for arrivals at PKD VOR/DME via V175 southbound.



ELEV 1391	<b>D</b>	TDZE 1389
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FAF to MAP 5.2 NM					
Knots	60	90	120	150	180
Min:Sec	5:12	3:28	2:36	2:05	1:44



CATEGORY	A	B	C	D
S-ILS 31	1589-½		200 (200-½)	
S-LOC 31	1840-½	451 (500-½)	1840-¾ 451 (500-¾)	1840-1 451 (500-1)
CIRCLING	1840-1 449 (500-1)	1860-1 469 (500-1)	1860-1½ 469 (500-1½)	1960-2 569 (600-2)
**SUGUE FIX MINIMUMS				
S-LOC 31	1780-½		391 (400-½)	
CIRCLING	1840-1 449 (500-1)	1860-1 469 (500-1)	1860-1½ 469 (500-1½)	1780-¾ 391 (400-¾)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

BEMIDJI, MINNESOTA

AL-5174 (FAA)

16091

LOC/DME I-BJI <b>109.35</b> Chan 30 (Y)	APP CRS <b>253°</b>	Rwy ldg TDZE Apt Elev	<b>5700</b> <b>1389</b> <b>1391</b>
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# ILS or LOC/DME RWY 25

BEMIDJI RGNL (BJI)

**NA** VDP NA with Park Rapids altimeter setting. When local altimeter setting not received, use Park Rapids altimeter setting and increase DA 93 feet and all MDA 100 feet, increase S-ILS 25 all Cats visibility and S-LOC 25 Cat C visibility ¼ mile, S-LOC 25 Cat D visibility ½ mile. Helicopter visibility reduction below ¾ SM not authorized.

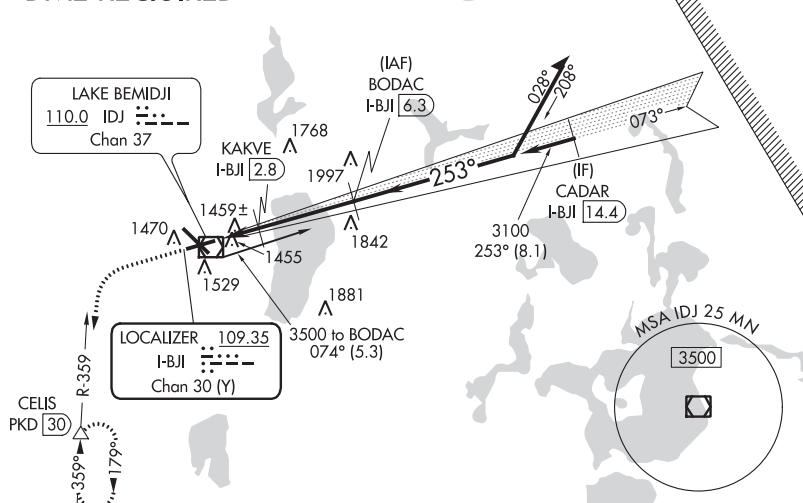
MISSED APPROACH: Climb to 2300 then climbing left turn to 3400 via PKD VOR/DME R-359 to CELIS/PKD 30 DME and hold.

AWOS-3  
**110.0**

MINNEAPOLIS CENTER  
**134.75 251.1**

UNICOM  
**122.8 (CTAF)**

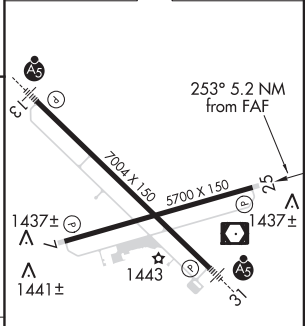
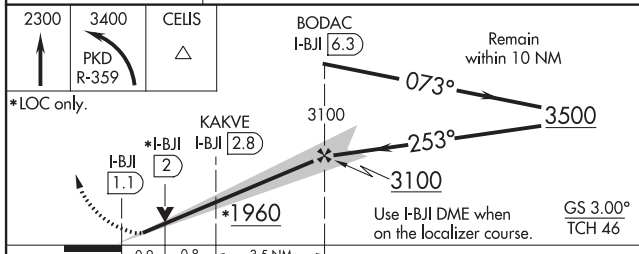
## RADAR REQUIRED DME REQUIRED



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1391 **D** TDZE 1389



CATEGORY	A	B	C	D
S-ILS 25		1589-¾	200 (200-¾)	
S-LOC 25		1720-1	331 (400-1)	
CIRCLING	1840-1 449 (500-1)	1860-1 469 (500-1)	1860-1½ 469 (500-1½)	1960-2 569 (600-2)

HIRL Rwy 13-31 **1**  
MIRL Rwy 7-25 **1**  
REIL Rws 7 and 25 **1**

BEMIDJI, MINNESOTA  
Amdt 1A 29MAY14

47°31'N-94°56'W

# BEMIDJI RGNL (BJI) ILS or LOC/DME RWY 25


WAAS CH <b>93636</b> <b>W13A</b>	APP CRS <b>133°</b>	Rwy Idg TDZE Apt Elev	<b>7002</b> <b>1391</b> <b>1391</b>
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# RNAV (GPS) RWY 13

BEMIDJI RGNL (BJI)

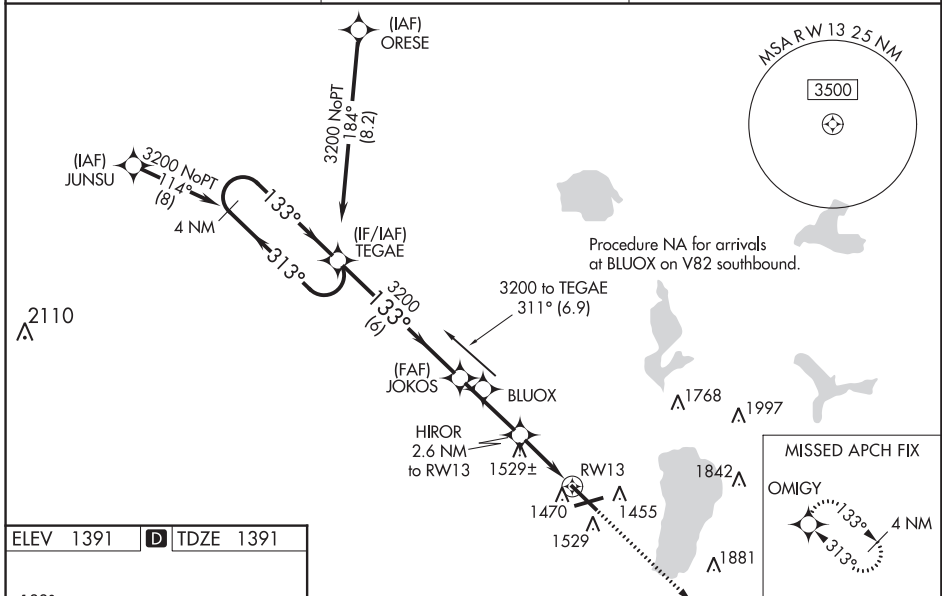
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received use Park Rapids altimeter setting increase all DA 93 feet and all MDA 100 feet, increase LNAV/VNAV visibility all Cats ½ mile and LNAV Cat C and D visibility ¼ mile. Baro-VNAV and VDP NA when using Park Rapids altimeter setting. For inoperative MALS R increase LPV visibility all Cats to ¾ mile, increase LNAV/VNAV visibility all Cats to 1 mile, increase LNAV Cats A and B visibility to 1 mile and Cats C and D visibility to 1 ½ miles. For inoperative MALS R when using Park Rapids altimeter setting increase LPV visibility all Cats to 1 ½ mile, LNAV/VNAV visibility all Cats to 1 ¼ mile, LNAV Cats A and B visibility to 1 mile, and Cats C and D visibility to 1 ½ mile. Helicopter visibility reduction below ¾ SM not authorized.

**MALS R**

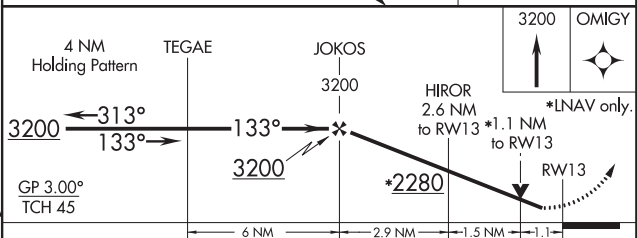
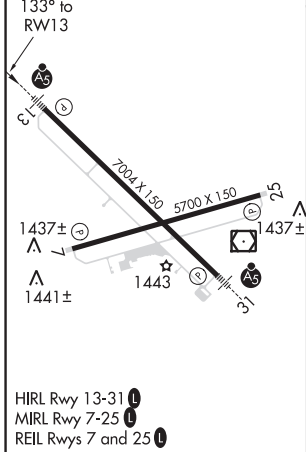


**MISSED APPROACH:**  
Climb to 3200 direct OMIGY and hold.

AWOS-3 <b>110.0</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1391	<b>D</b>	TDZE 1391
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CATEGORY	A	B	C	D
LPV DA		1648-¾	257 (300-¾)	
LNAV/VNAV DA		1680-¾	289 (300-¾)	
LNAV MDA		1780-¾	389 (400-¾)	
<b>C</b> CIRCLING	1840-1 449 (500-1)	1860-1 469 (500-1)	1860-1½ 469 (500-1½)	1960-2 569 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>65917</b> <b>W25A</b>	APP CRS <b>253°</b>	Rwy Idg TDZE <b>1389</b> Apt Elev <b>1391</b>	<b>5700</b> <b>1389</b> <b>1391</b>
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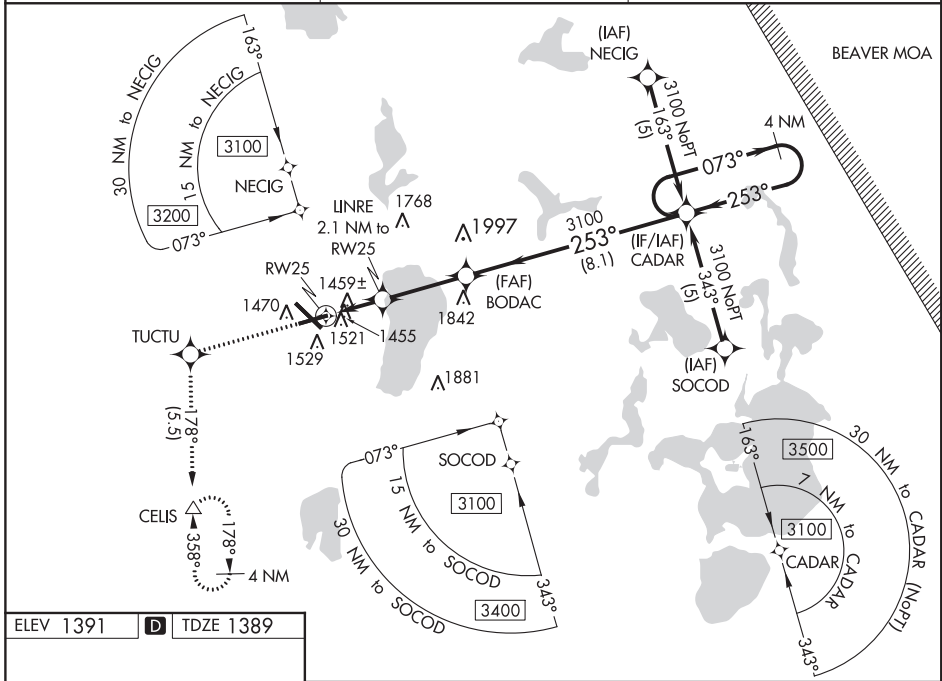
# RNAV (GPS) RWY 25

BEMIDJI RGNL (BJI)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). VDP NA with Park Rapids altimeter setting. When local altimeter setting not received, use Park Rapids altimeter setting and increase all DA 93 feet and all MDA 100 feet, increase LPV all Cats visibility and LNAV Cat C/D visibility ¼ mile, LNAV/VNAV all Cats visibility ½ mile. Baro-VNAV NA when using Park Rapids altimeter setting. Helicopter visibility reduction below ¾ SM not authorized.

**MISSED APPROACH:**  
Climb to 3400 direct TUCTU and on track 178° to CELIS and hold.

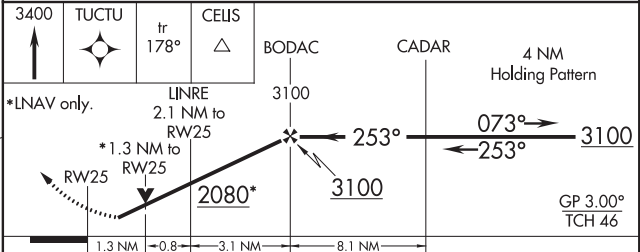
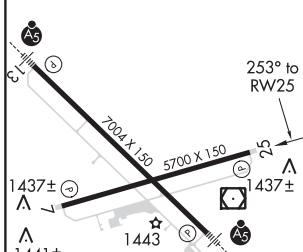
AWOS-3 <b>110.0</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	UNICOM <b>122.8 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1391	<b>D</b>	TDZE 1389
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CATEGORY	A	B	C	D
LPV DA		1589-¾	200 (200-¾)	
LNAV/VNAV DA		1752-1¼	363 (400-1¼)	
LNAV MDA	1840-1	451 (500-1)	1840-1¼ 451 (500-1¼)	1840-1½ 451 (500-1½)
CIRCLING	1840-1 449 (500-1)	1860-1 469 (500-1)	1860-1½ 469 (500-1½)	1960-2 569 (600-2)

WAAS CH <b>99711</b> <b>W31A</b>	APP CRS <b>313°</b>	Rwy Idg TDZE Apt Elev	<b>7002</b> <b>1389</b> <b>1391</b>
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# RNAV (GPS) RWY 31

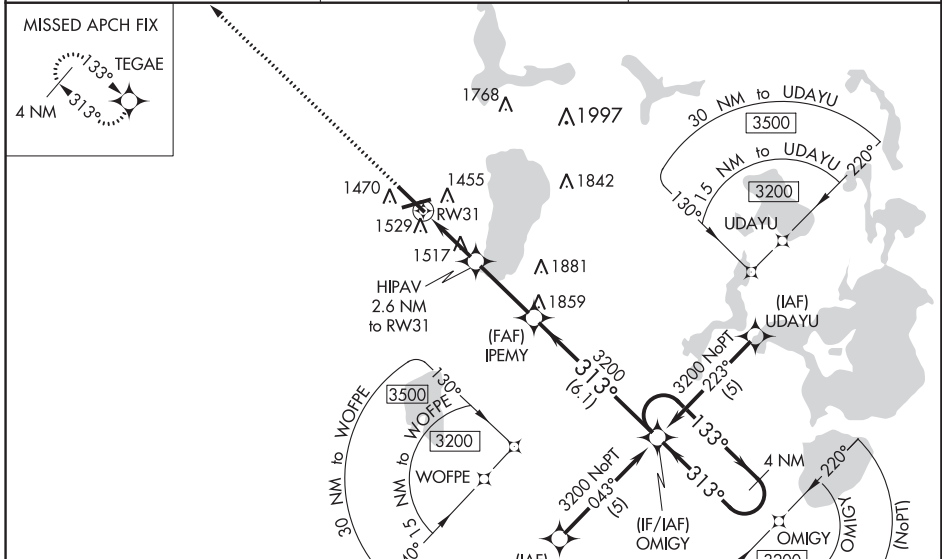
BEMIDJI RGNL (BJI)

**▼** Baro-VNAV NA when using Park Rapids altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP -0.3 NA. For inoperative MALSR, increase LNAV Cat D visibility to 1½ mile. VDP NA when using Park Rapids altimeter setting. When local altimeter setting not received, use Park Rapids altimeter setting and increase all DA 93 feet and all MDA 100 feet; increase LNAV/VNAV all Cats visibility ½ mile and LNAV Cat C visibility ¼ mile. For inoperative MALSR when using Park Rapids altimeter setting, increase LPV visibility to 1 mile all Cats.

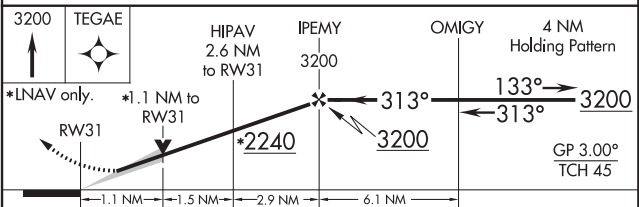
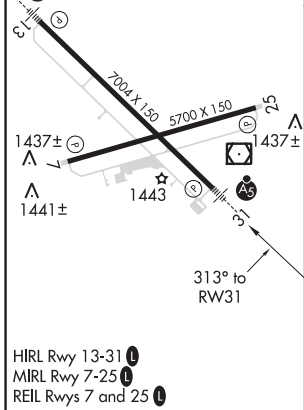


**MISSED APPROACH:**  
Climb to 3200 direct  
TEGAE and hold.

AWOS-3 <b>110.0</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1391	<b>D</b>	TDZE 1389
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CATEGORY	A	B	C	D
LPV DA		1589-½	200 (200-½)	
LNAV/VNAV DA		1825-1	436 (500-1)	
LNAV MDA		1780-½	391 (400-½)	1780-1 391 (400-1)
CIRCLING	1840-1 449 (500-1)	1860-1 469 (500-1)	1860-1½ 469 (500-1½)	1960-2 569 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

BEMIDJI, MINNESOTA

AL-5174 (FAA)

16175

VOR/DME IDJ <b>110.0</b> Chan <b>37</b>	APP CRS <b>126°</b>	Rwy Idg TDZE <b>1391</b> Apt Elev <b>1391</b>	<b>7002</b>
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# VOR/DME RWY 13

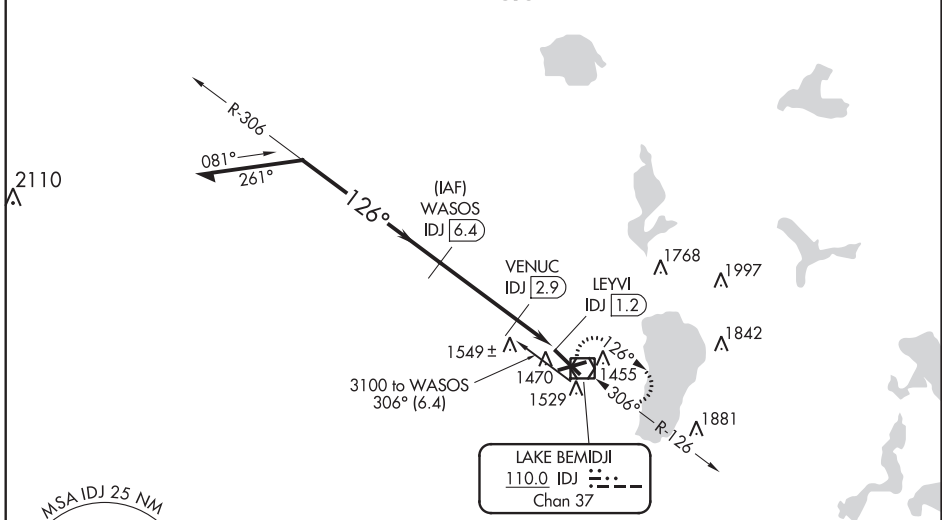
BEMIDJI RGNL (BJI)

**NA** When local altimeter setting not received, use Park Rapids altimeter setting and increase all MDA 100 feet, increase S-13 Cat C and D visibility 1/4 mile. VDP NA with Park Rapids altimeter setting. For inoperative MALS, increase S-13 Cat A and B visibility to 1 mile and Cat C and D visibility to 1 1/2 mile. For inoperative MALS when using Park Rapids altimeter setting, increase S-13 Cat A and B visibility to 1 mile and Cat C and D visibility to 1 1/2 mile. Helicopter visibility reduction below 3/4 SM not authorized.

**MALS** MISSED APPROACH: Climb to 3100 direct IDJ VOR/DME and hold, continue climb-in-hold to 3100.

AWOS-3 <b>110.0</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	UNICOM <b>122.8 (CTAF)</b>
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## RADAR REQUIRED

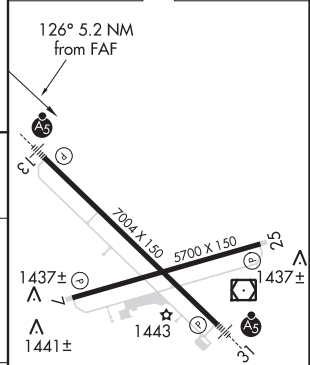


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 1391 **D** TDZE 1391



Remain within 10 NM	WASOS IDJ 6.4	3100 IDJ
3100	306°	3100
3100	126°	3100
	3.01° TCH 45	
	2000	126°
	3.4 NM	0.6
		1.1 NM

CATEGORY	A	B	C	D
S-13	1800-3/4 409 (500-3/4)			
<b>C</b> CIRCLING	1840-1 449 (500-1)	1860-1 469 (500-1)	1860-1 1/2 469 (500-1 1/2)	1960-2 569 (600-2)

HIRL Rwy 13-31 **D**  
MRL Rwy 7-25 **D**  
REIL Rws 7 and 25 **D**

BEMIDJI, MINNESOTA  
Amdt 1A 23JUN16

47°31'N-94°56'W

# BEMIDJI RGNL (BJI)

## VOR/DME RWY 13

# AIRPORT DIAGRAM

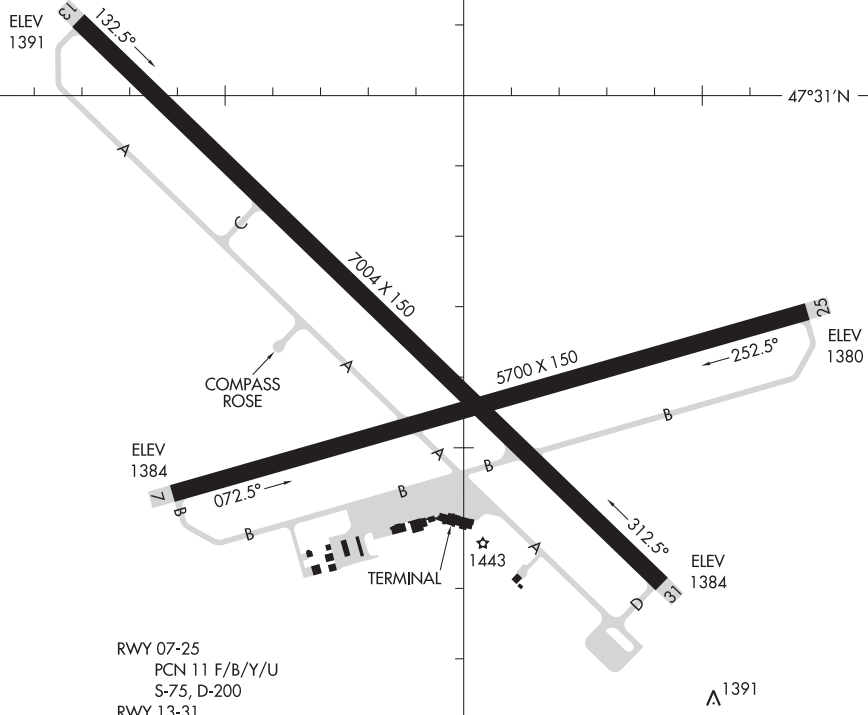
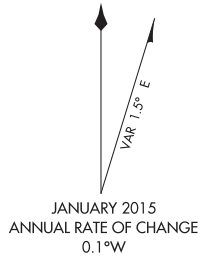
AL-5174 (FAA)

BEMIDJI RGNL (BJI)  
BEMIDJI, MINNESOTA

AWOS-3  
110.0  
CTAF/UNICOM  
122.8

FIELD  
ELEV  
1391

**D**



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

94°57'W

94°56'W

47°31'N

47°30'N

# AIRPORT DIAGRAM

BEMIDJI, MINNESOTA  
BEMIDJI RGNL (BJI)

BENSON, MINNESOTA

AL-5839 (FAA)

15232

WAAS CH <b>49210</b> <b>W14A</b>	APP CRS <b>138°</b>	Rwy Idg <b>4000</b> TDZE <b>1039</b> Apt Elev <b>1039</b>
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# RNAV (GPS) RWY 14

BENSON MUNI (BBB)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F).  
**⚠** DME/DME RNP-0.3 NA.  
 Baro-VNAV and VDP NA when using Appleton altimeter setting.  
 When local altimeter setting not received, use Appleton altimeter setting and increase all DA and MDA 40 feet, increase Circling Cat B visibility ¼ mile.

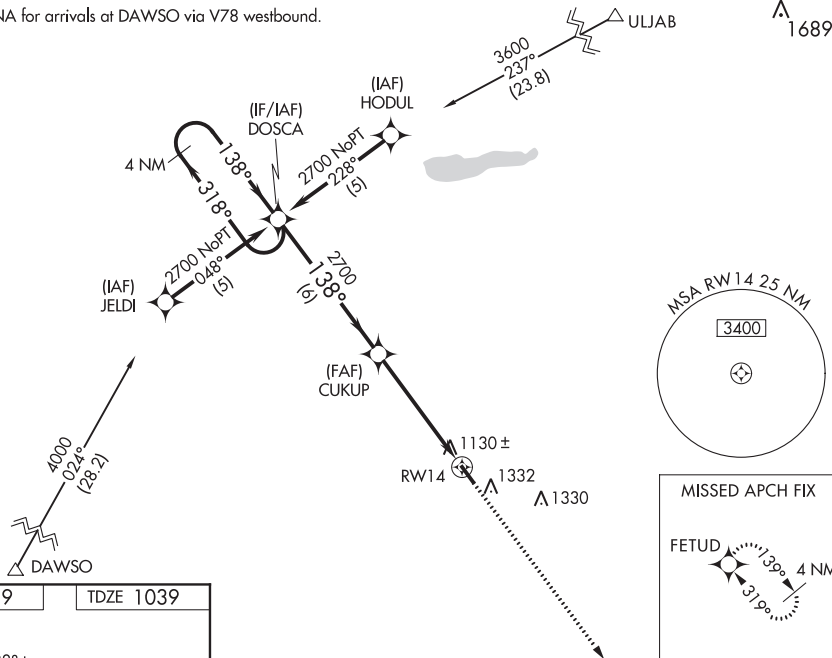
MISSED APPROACH: Climb to 2700  
 direct FETUD and hold.

AWOS-3  
**118.45**

MINNEAPOLIS CENTER  
**125.5 323.1**

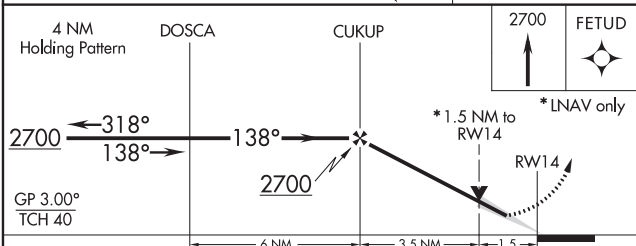
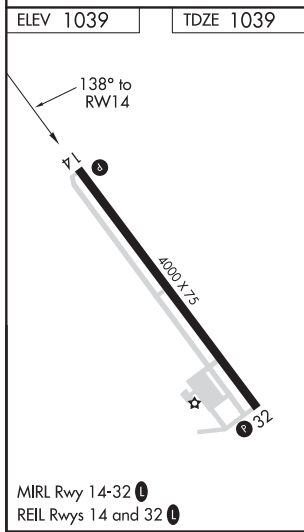
UNICOM  
**122.8 (CTAF) ①**

Procedure NA for arrivals at DAWSO via V78 westbound.



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D
LPV DA	1382-1¼	343 (400-1¼)		NA
LNAV/VNAV DA	1426-1½	387 (400-1½)		NA
LNAV MDA	1540-1	501 (600-1)		NA
CIRCLING	1740-1	701 (800-1)		NA

BENSON, MINNESOTA  
 Amdt 1 12MAR09

45°20'N-95°39'W

# BENSON MUNI (BBB) RNAV (GPS) RWY 14



WAAS CH <b>99710</b> <b>W32A</b>	APP CRS <b>319°</b>	Rwy Idg TDZE <b>1039</b> Apt Elev <b>1039</b>	<b>4000</b>
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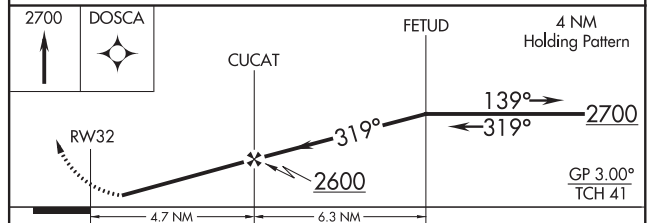
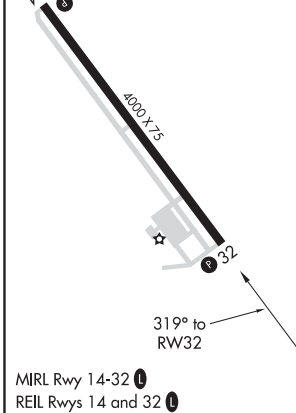
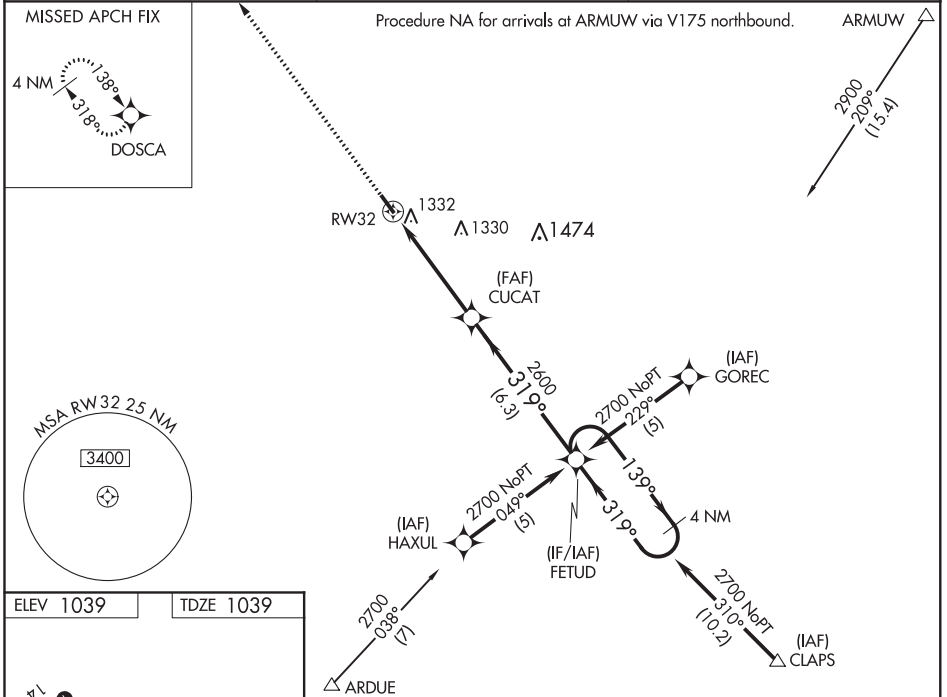
# RNAV (GPS) RWY 32

BENSON MUNI (BBB)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F).  
**⚠** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.  
 Baro-VNAV NA when using Appleton altimeter setting.  
 When local altimeter setting not received, use Appleton altimeter setting and increase all DA and MDA 40 feet, increase Circling Cat B visibility ¼ mile.

MISSED APPROACH: Climb to 2700 direct DOSCA and hold.

AWOS-3 <b>118.45</b>	MINNEAPOLIS CENTER <b>125.5 323.1</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
LPV DA	1426-1½	387 (400-1½)		NA
LNAV/VNAV DA	1710-2½	671 (700-2½)		NA
LNAV MDA	1700-1	661 (700-1)		NA
CIRCLING	1740-1	701 (800-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

BENSON, MINNESOTA

AL-5839 (FAA)

14317

NDB BBB	APP CRS	Rwy Idg	4000
<b>239</b>	<b>148°</b>	TDZE	1039
		Apt Elev	1039

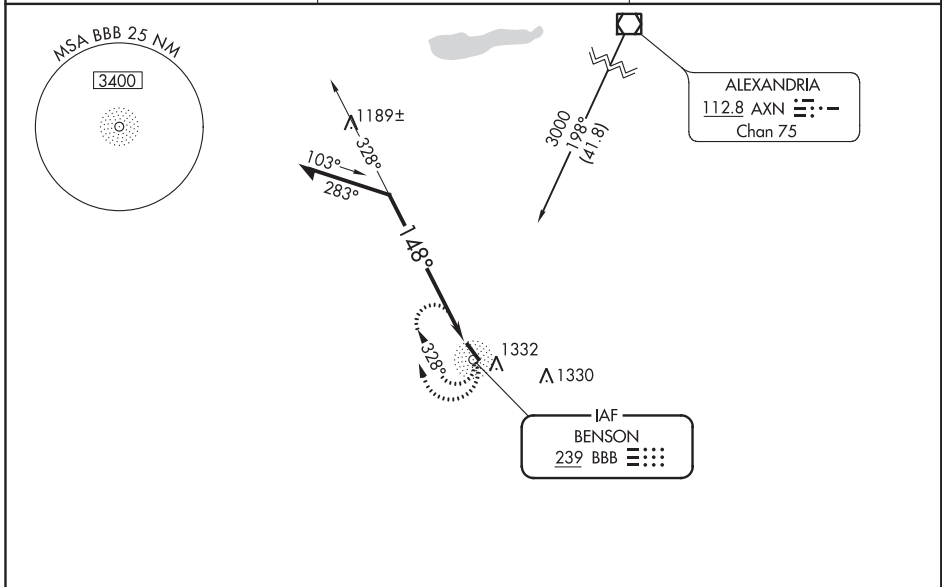
# NDB RWY 14

BENSON MUNI (BBB)

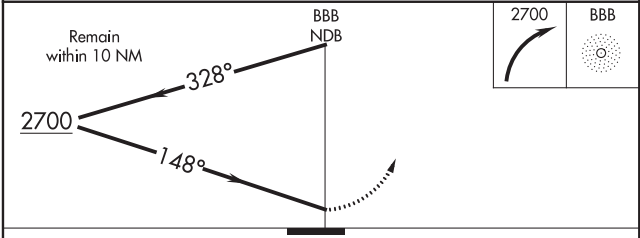
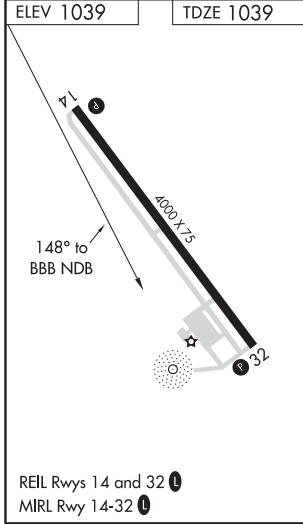
**NA** If local altimeter setting not received, use Appleton altimeter setting and increase all MDAs 40 feet.

MISSED APPROACH: Climbing right turn to 2700 in BBB NDB holding pattern.

AWOS-3 <b>118.45</b>	MINNEAPOLIS CENTER <b>125.5 323.1</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1039	TDZE 1039
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CATEGORY	A	B	C	D
S-14	1700-1	661 (700-1)	NA	
CIRCLING	1740-1	701 (800-1)	NA	

BENSON, MINNESOTA  
Amdt 7A 05JUN08

45°20'N-95°39'W

# BENSON MUNI (BBB) NDB RWY 14

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>78126</b> <b>W15A</b>	APP CRS <b>149°</b>	Rwy Idg TDZE Apt Elev	<b>3998</b> <b>1351</b> <b>1351</b>
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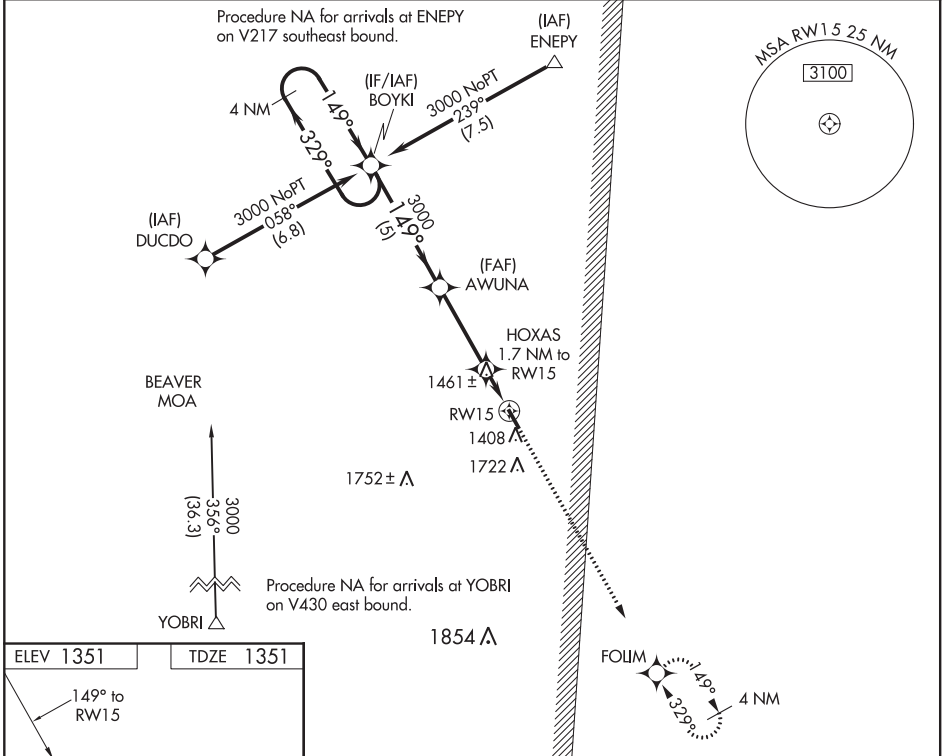
# RNAV (GPS) RWY 15

BIGFORK MUNI (FOZ)

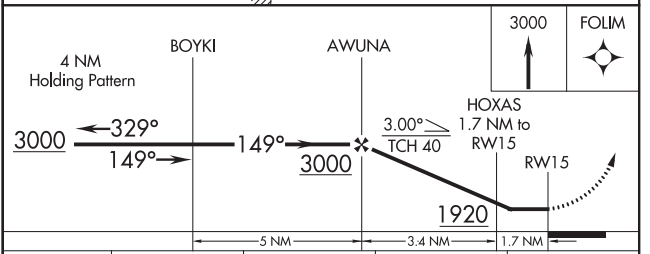
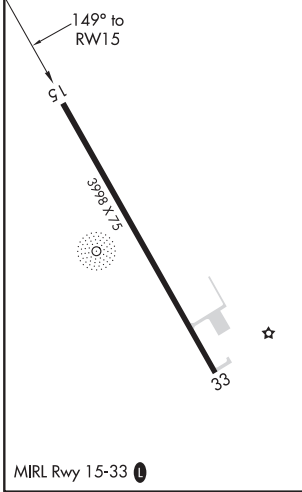
**⚠** When local altimeter setting not received, use Grand Rapids altimeter setting and increase all MDA 100 feet. DME/DME RNP-0.3 NA. Circling to Rwy 33 NA at night. Helicopter visibility reduction below 3/4 SM NA.

MISSED APPROACH: Climb to 3000 direct FOLIM and hold.

AWOS-3 <b>345</b>	MINNEAPOLIS CENTER <b>127.9 281.45</b>	GCO <b>121.725</b>	CTAF <b>122.9</b>
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ELEV 1351	TDZE 1351
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CATEGORY	A	B	C	D
LP MDA	1720-1	369 (400-1)		NA
LNAV MDA	1740-1	389 (400-1)		NA
CIRCLING	1780-1 429 (500-1)	1820-1 469 (500-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

BIGFORK, MINNESOTA

AL-9255 (FAA)

15232

WAAS CH <b>40226</b> <b>W33A</b>	APP CRS <b>329°</b>	Rwy Idg TDZE Apt Elev	<b>3998</b> <b>1349</b> <b>1351</b>
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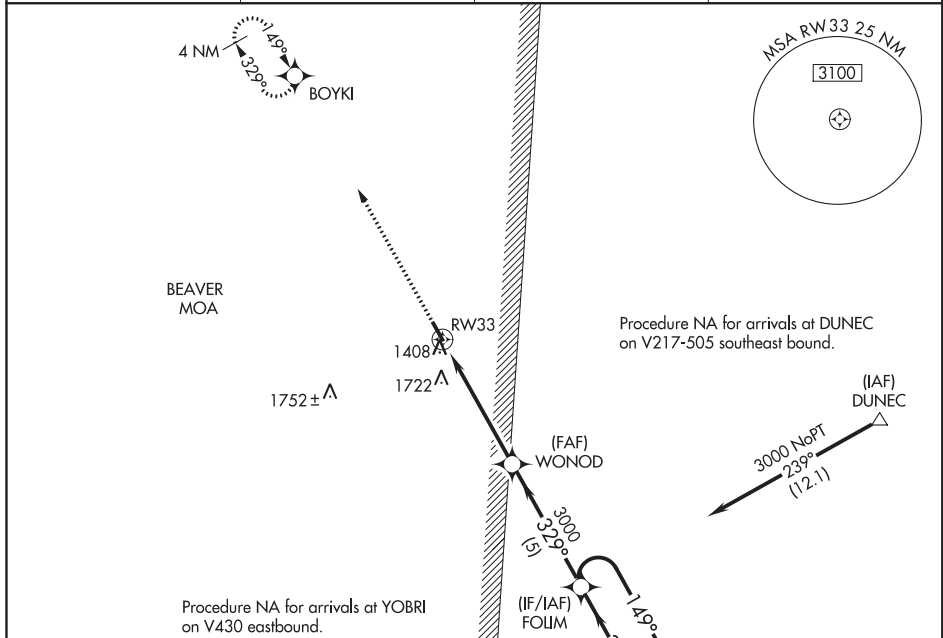
# RNAV (GPS) RWY 33

BIGFORK MUNI (F'0Z)

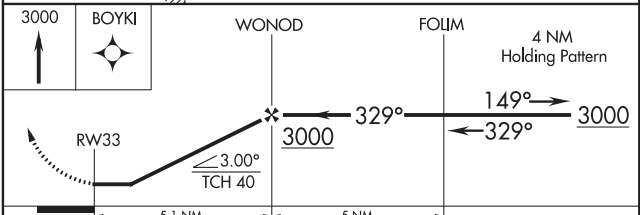
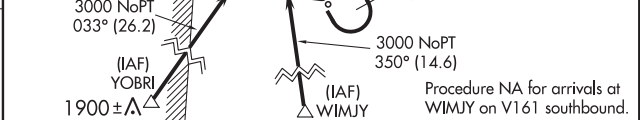
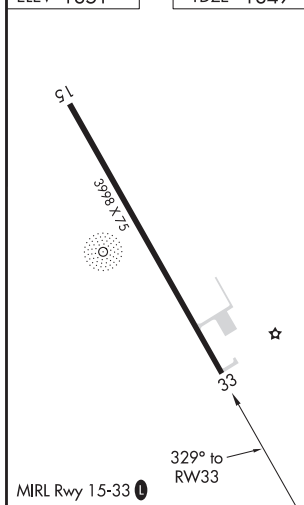
**⚠** When local altimeter setting not received, use Grand Rapids altimeter setting and increase all MDA 100 feet. DME/DME RNP-0.3 NA. Rwy 33 Straight-in and Circling minimums NA at night. Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 3000 direct BOYKI and hold.

AWOS-3 <b>345</b>	MINNEAPOLIS CENTER <b>127.9 281.45</b>	GCO <b>121.725</b>	CTAF <b>122.9</b>
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ELEV 1351	TDZE 1349
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CATEGORY	A	B	C	D
LP MDA	1860-1	511 (600-1)		NA
LNAV MDA	1860-1	511 (600-1)		NA
CIRCLING	1860-1	509 (600-1)		NA

BIGFORK, MINNESOTA  
Orig-B 28MAY15

47°47'N-93°39'W

# RNAV (GPS) RWY 33

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

NDB FOZ <b>345</b>	APP CRS <b>160°</b>	Rwy Idg TDZE Apt Elev	<b>3998</b> <b>1351</b> <b>1351</b>
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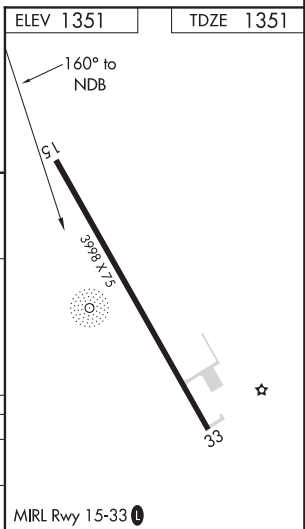
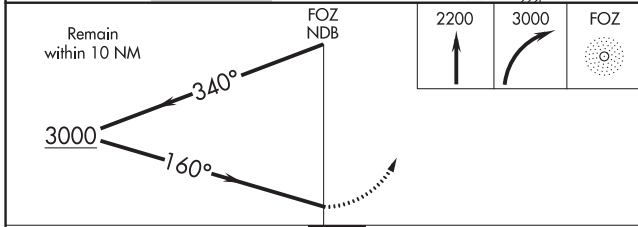
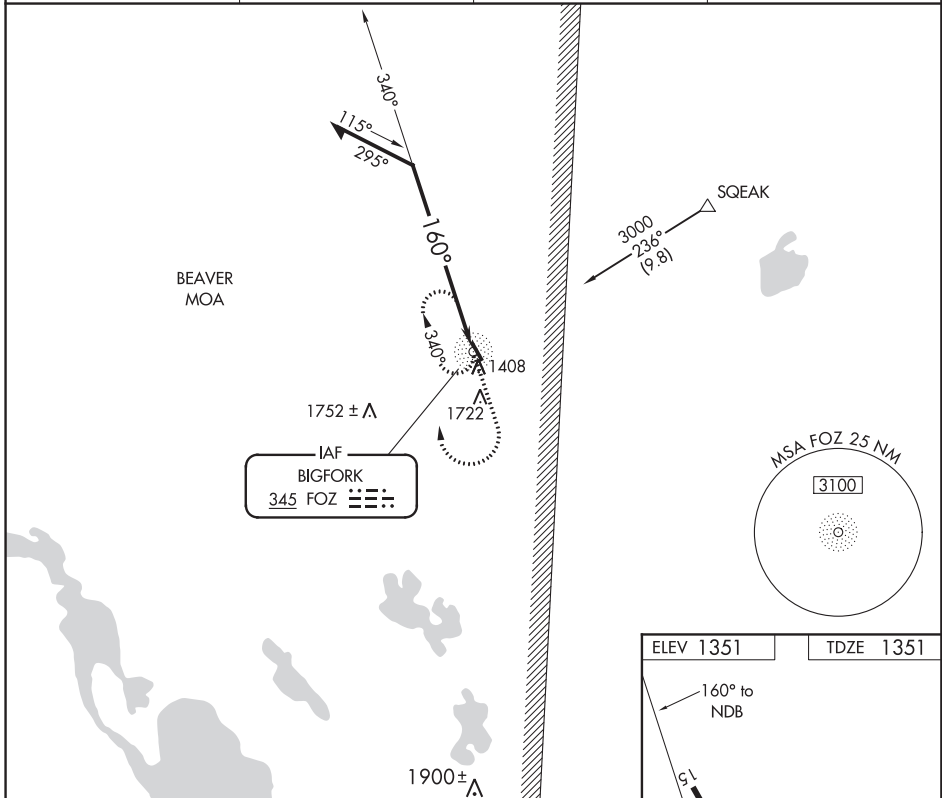
# NDB RWY 15

BIGFORK MUNI (FOZ)

**⚠** Procedure not authorized when BEAVER MOA is active. Night landing rwy 33 NA. Helicopter visibility reduction below 3/4 SM NA. When local altimeter setting not received, use Grand Rapids altimeter setting and increase all MDA 100 feet.

**⚠ NA** MISSED APPROACH: Climb to 2200 then climbing right turn to 3000 direct FOZ NDB and hold.

AWOS-3 <b>345</b>	MINNEAPOLIS CENTER <b>127.9 281.45</b>	GCO <b>121.725</b>	CTAF <b>122.9</b>
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CATEGORY	A	B	C	D
S-15	1840-1	489 (500-1)		NA
CIRCLING	1840-1	489 (500-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

BISMARCK, NORTH DAKOTA

AL-51 (FAA)

16259

LOC I-BZX <b>111.5</b>	APP CRS <b>131°</b>	Rwy Idg <b>8794</b>
		TDZE <b>1655</b>
		Apt Elev <b>1661</b>

# ILS or LOC RWY 13

BISMARCK MUNI (BIS)

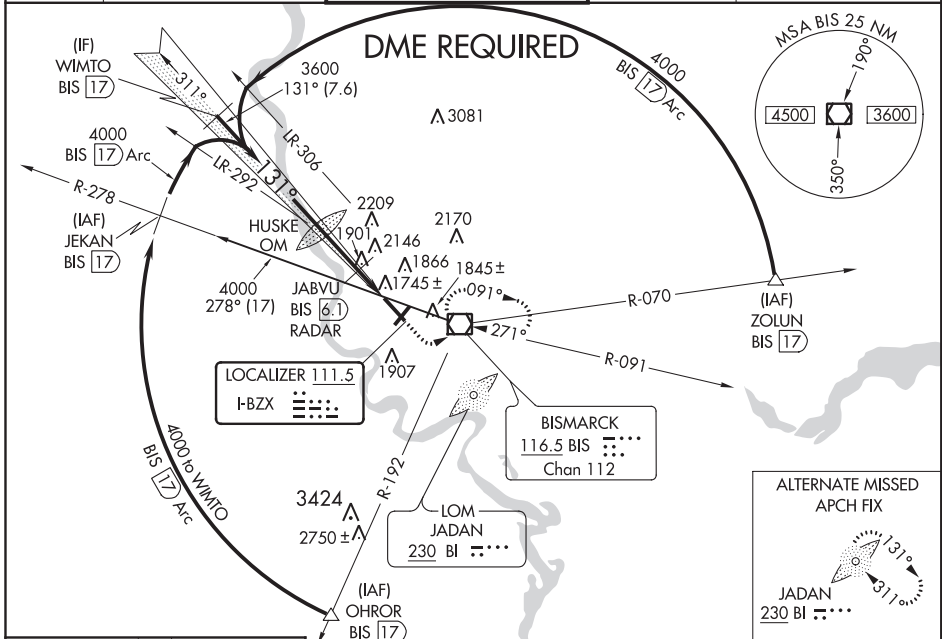
**ASR** -35°C/-31°F

Inoperative table does not apply.

**MALS**

**MISSED APPROACH:** Climb to 2200 then climbing left turn to 3600 direct BIS VOR/DME and hold, continue climb-in-hold to 3600.

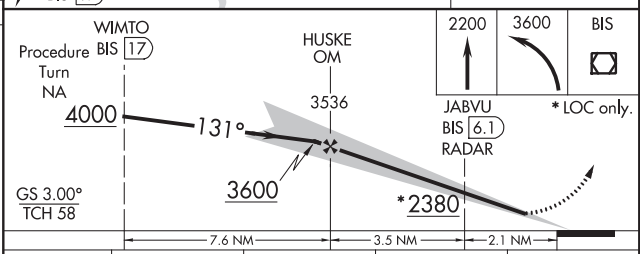
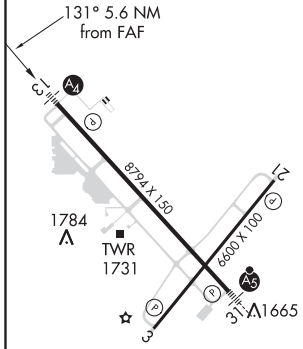
ATIS <b>119.35</b>	BISMARCK APP CON ★ <b>126.3 298.9</b>	BISMARCK TOWER★ <b>118.3 (CTAF) 0257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1661	<b>D</b> TDZE 1655
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CATEGORY	A	B	C	D
S-ILS 13	1855-3/4 200 (200-3/4)			
S-LOC 13	2380-1	725 (800-1)	2380-2	725 (800-2)
CIRCLING	2380-1	719 (800-1)	2380-2 719 (800-2)	2380-2 1/4 719 (800-2 1/4)
JABVU FIX MINIMUMS				
S-LOC 13	2160-1	505 (500-1)	2160-1 3/8	505 (500-1 3/8)
CIRCLING	2240-1	579 (600-1)	2240-1 1/2 579 (600-1 1/2)	2320-2 659 (700-2)

REIL Rwy 3 and 21  
HIRL Rwy 3-21 and 13-31

FAF to MAP 5.6 NM

Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52

BISMARCK, NORTH DAKOTA  
Amdt 3A 29MAY14

46°46'N-100°45'W

# BISMARCK MUNI (BIS)

## ILS or LOC RWY 13

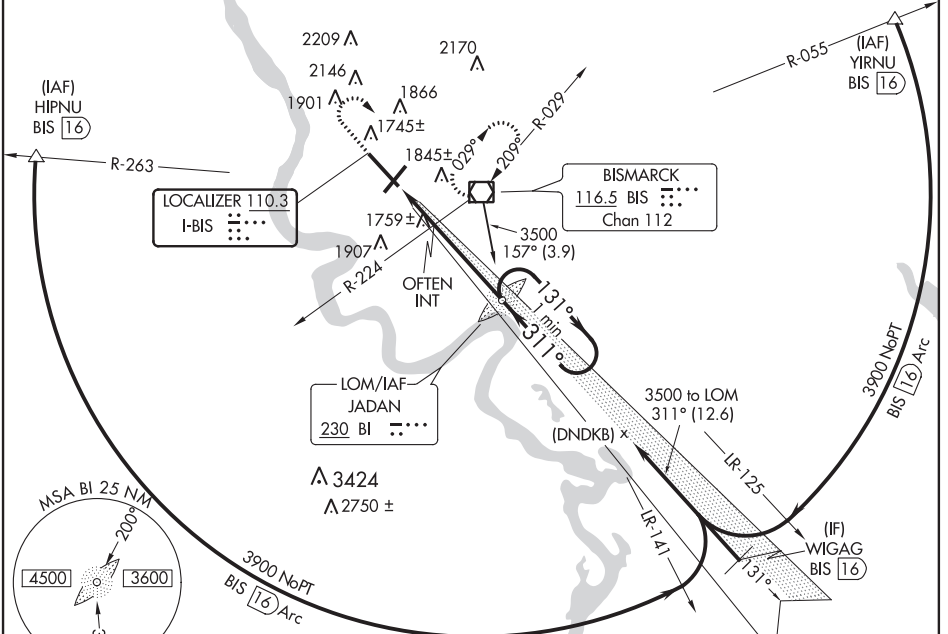
LOC I-BIS <b>110.3</b>	APP CRS <b>311°</b>	Rwy Ldg TDZE Apt Elev	<b>8794</b> <b>1645</b> <b>1661</b>
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# ILS or LOC RWY 31

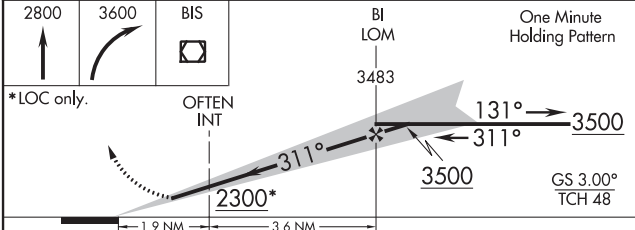
BISMARCK MUNI (BIS)

Autopilot coupled approach NA below 2680. -35°C/-31°F	MALSR 	MISSED APPROACH: Climb to 2800 then climbing right turn to 3600 direct BIS VOR/DME and hold.
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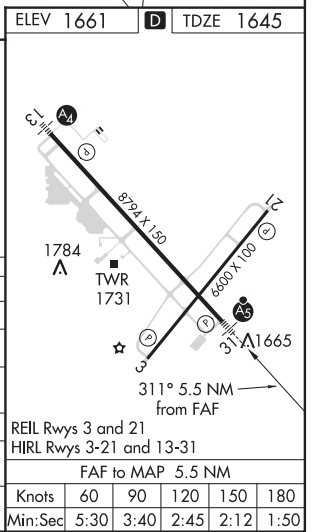
ATIS <b>119.35</b>	BISMARCK APP CON* <b>126.3 298.9</b>	BISMARCK TOWER* <b>118.3 (CTAF) 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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ELEV 1661	<b>D</b>	TDZE 1645
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CATEGORY	A	B	C	D
S-ILS 31	1845/24 200 (200-½)			
S-LOC 31	2300/24	655 (700-½)	2300-1⅞	655 (700-1⅞)
CIRCLING	2300-1	639 (700-1)	2300-1⅞	2320-2 659 (700-2)
OFTEN FIX MINIMUMS (DUAL VOR RECEIVERS REQUIRED)				
S-LOC 31	2020/24	375 (400-½)	2020/35	375 (400-¾)
CIRCLING	2240-1	579 (600-1)	2240-1½	2320-2 659 (700-2)



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>63099</b> <b>W03A</b>	APP CRS <b>032°</b>	Rwy Idg TDZE Apt Elev	<b>6600</b> <b>1661</b> <b>1661</b>
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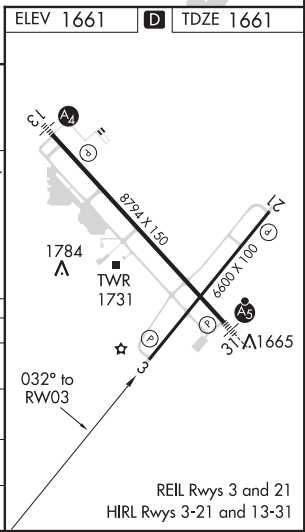
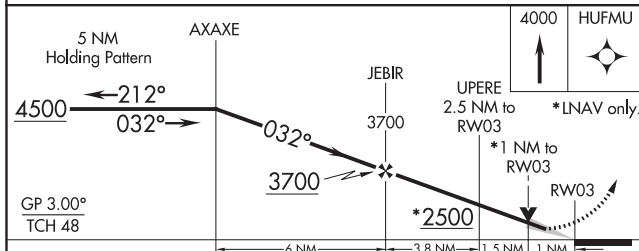
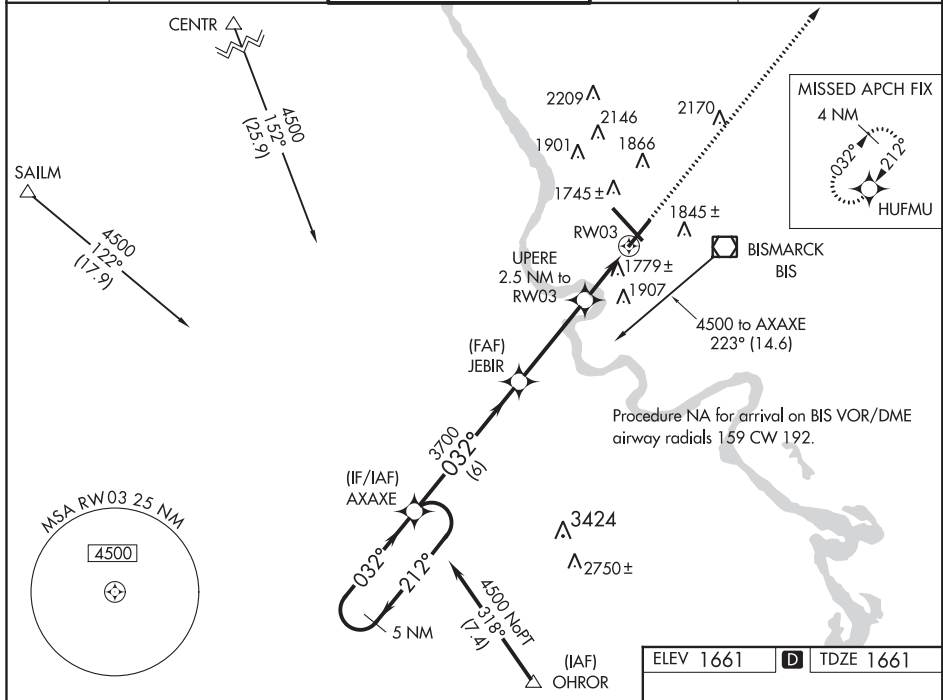
# RNAV (GPS) RWY 3

BISMARCK MUNI (BIS)

ASR -35°C/-31°F For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 33°C (91°F). DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 4000 direct HUFMU and hold.

ATIS <b>119.35</b>	BISMARCK APP CON * <b>126.3 298.9</b>	BISMARCK TOWER * <b>118.3 (CTAF) 0 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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CATEGORY	A	B	C	D
LPV DA		1861-3/4	200 (200-3/4)	
LNAV/VNAV DA		2081-13/8	420 (500-13/8)	
LNAV MDA		2040-1	379 (400-1)	
CIRCLING	2240-1	579 (600-1)	2240-1 1/2 579 (600-1 1/2)	2320-2 659 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017





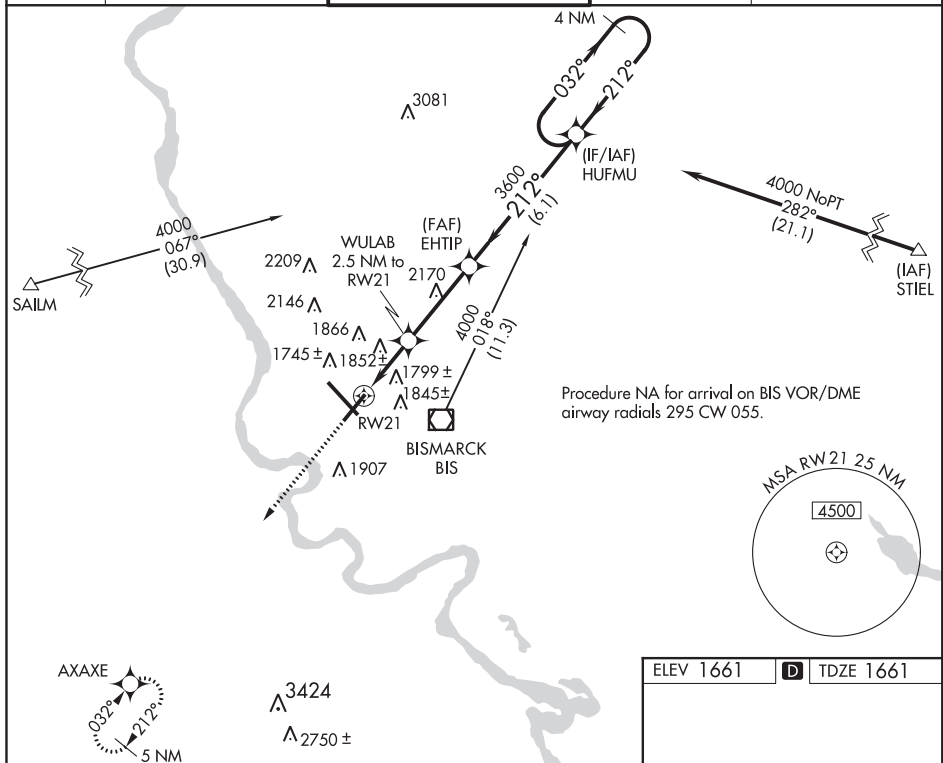
WAAS CH <b>53520</b> <b>W21A</b>	APP CRS <b>212°</b>	Rwy Idg TDZE Apt Elev	<b>6600</b> <b>1661</b> <b>1661</b>
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# RNAV (GPS) RWY 21

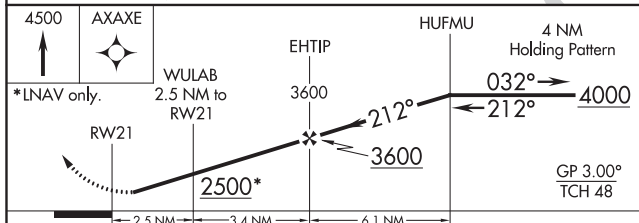
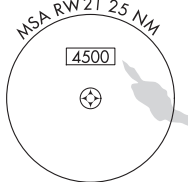
BISMARCK MUNI (BIS)

<p><b>ASR</b></p> <p><b>☼ -35°C/-31°F</b></p>	<p>For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 33°C (91°F). When VGSI inoperative, procedure NA at night.</p> <p>DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.</p>	<p><b>MISSED APPROACH:</b> Climb to 4500 direct AXAXE and hold.</p>
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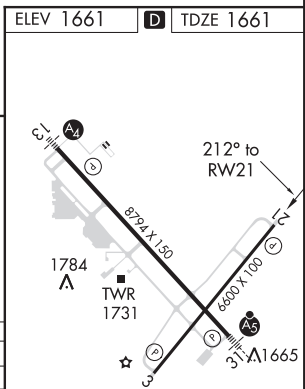
ATIS <b>119.35</b>	BISMARCK APP CON* <b>126.3 298.9</b>	BISMARCK TOWER* <b>118.3 (CTAF) 0 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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Procedure NA for arrival on BIS VOR/DME  
airway radials 295 CW 055.



CATEGORY	A	B	C	D
LPV DA	1911-1	250 (300-1)		
LNAV/VNAV DA	2105-1½	444 (500-1½)		
LNAV MDA	2120-1	459 (500-1)	2120-1⅓	459 (500-1⅓)
CIRCLING	2240-1	579 (600-1)	2240-1½	2320-2 659 (700-2)



REIL Rwy 3 and 21  
HIRL Rwy 3-21 and 13-31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

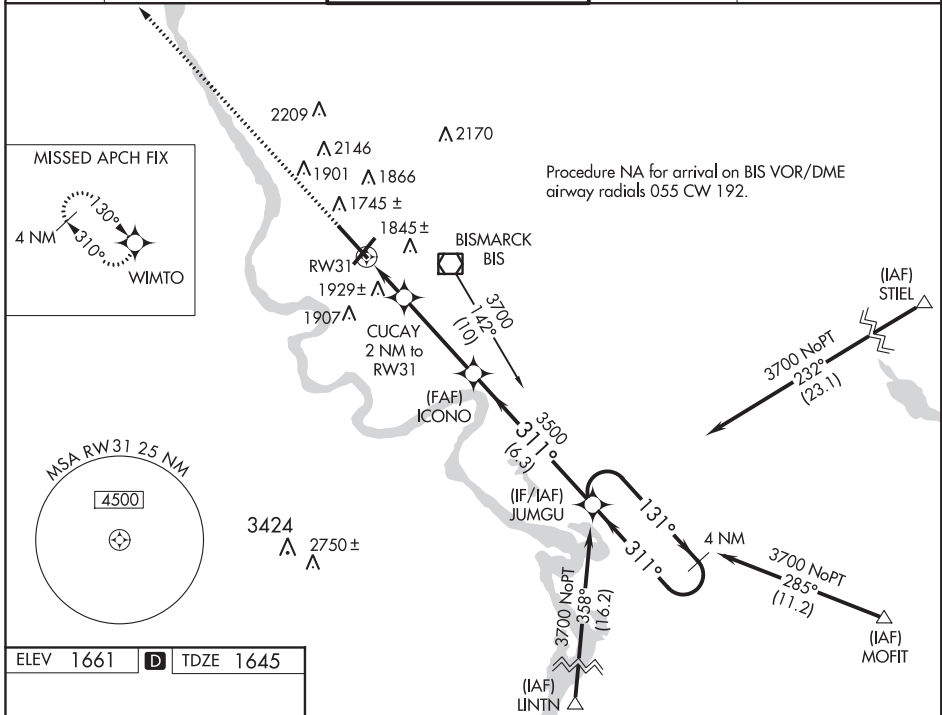
# RNAV (GPS) RWY 31

BISMARCK MUNI (BIS)

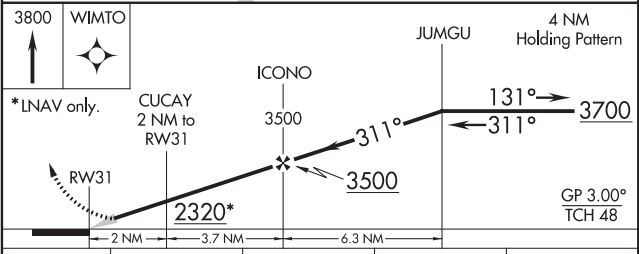
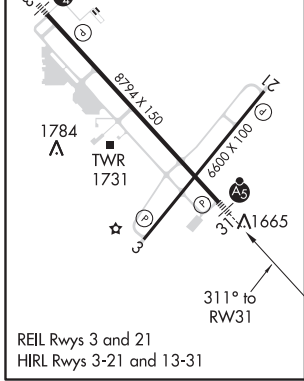
WAAS CH <b>56599</b> W31A	APP CRS <b>311°</b>	Rwy Idg TDZE <b>8794</b> <b>1645</b> Apt Elev <b>1661</b>
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VASR -35°C/-31°F	For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 33°C (91°F). DME/DME RNP-0.3 NA.	MALSR 	MISSED APPROACH: Climb to 3800 direct WIMTO and hold.
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ATIS <b>119.35</b>	BISMARCK APP CON* <b>126.3 298.9</b>	BISMARCK TOWER* <b>118.3</b> (CTAF) <b>0 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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ELEV 1661	<b>D</b>	TDZE 1645
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CATEGORY	A	B	C	D
LPV DA		1845/24	200 (200-1/2)	
LNAV/VNAV DA		2269-1 3/4	624 (700-1 3/4)	
LNAV MDA	2180/24	535 (600-1/2)	2180/55	535 (600-1 1/4)
CIRCLING	2240-1	579 (600-1)	2240-1 1/2 579 (600-1 1/2)	2320-2 659 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

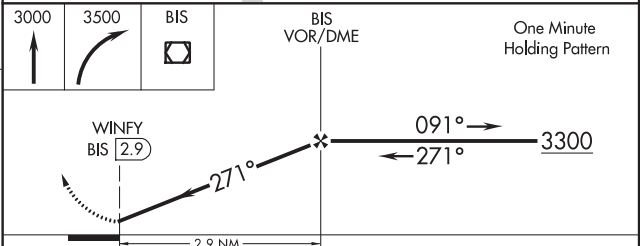
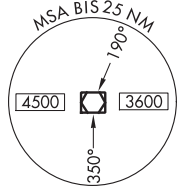
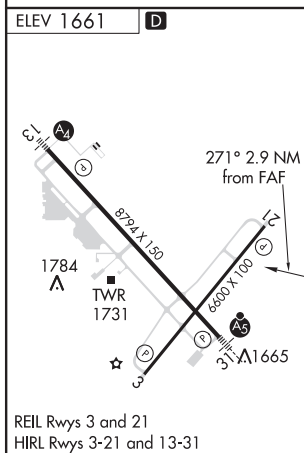
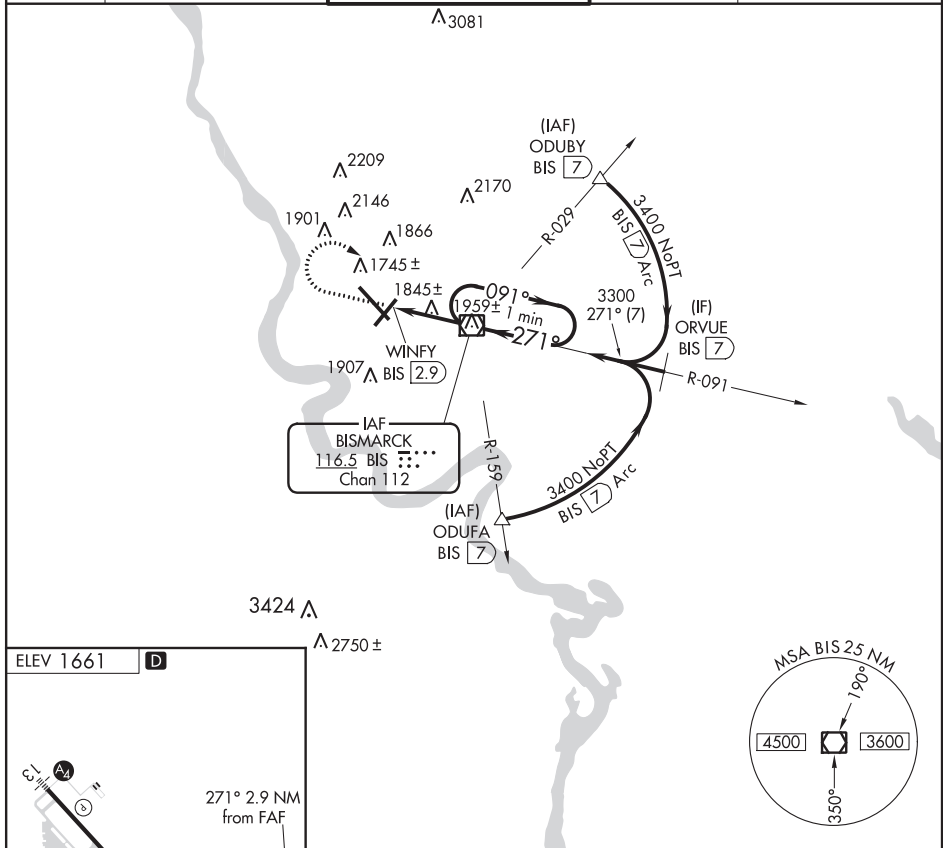
NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME BIS <b>116.5</b> Chan <b>112</b>	APP CRS <b>271°</b>	Rwy ldg TDZE Apt Elev <b>N/A</b> <b>N/A</b> <b>1661</b>
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**VOR-A**  
BISMARCK MUNI (BIS)

ASR -35°C/-31°F	MISSED APPROACH: Climb to 3000 then climbing right turn to 3500 direct BIS VOR/DME and hold.
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ATIS <b>119.35</b>	BISMARCK APP CON * <b>126.3 298.9</b>	BISMARCK TOWER * <b>118.3 (CTAF) 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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FAF to MAP 2.9 NM					
Knots	60	90	120	150	180
Min:Sec	2:54	1:56	1:27	1:10	0:58
CATEGORY	A		B		
CIRCLING	2240-1		579 (600-1)		2240-1½ 579 (600-1½)
					2320-2 659 (700-2)

BISMARCK, NORTH DAKOTA  
Amdt 21 05MAY11

46°46'N-100°45'W

BISMARCK MUNI (BIS)  
**VOR-A**

NC-1, 10 NOV 2016 to 05 JAN 2017

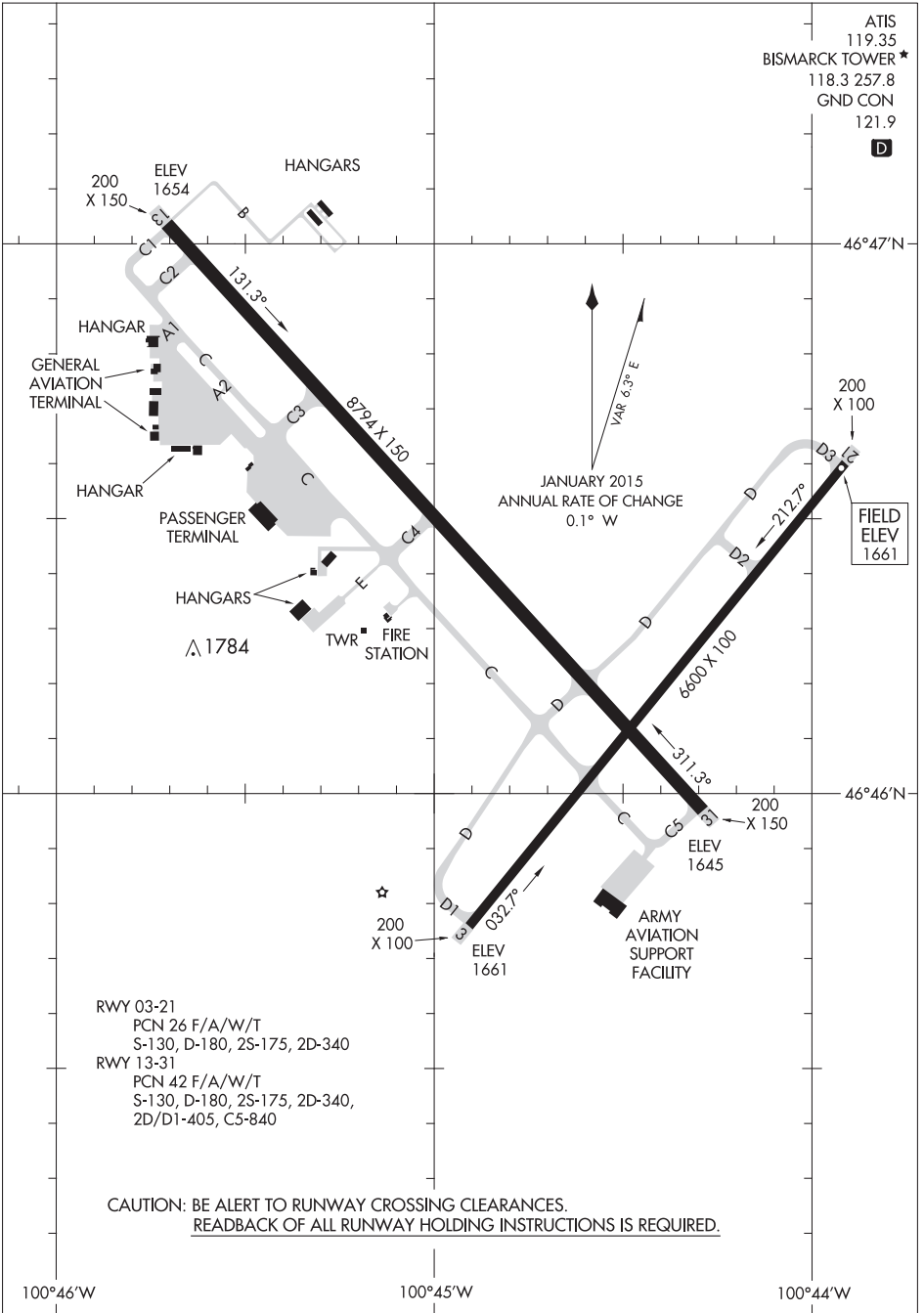
NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

AL-51 (FAA)

BISMARCK MUNI (BIS)  
BISMARCK, NORTH DAKOTA

ATIS 119.35  
 BISMARCK TOWER \* 118.3 257.8  
 GND CON 121.9  
D



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

RWY 03-21  
 PCN 26 F/A/W/T  
 S-130, D-180, 2S-175, 2D-340  
 RWY 13-31  
 PCN 42 F/A/W/T  
 S-130, D-180, 2S-175, 2D-340,  
 2D/D1-405, C5-840

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.  
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

# AIRPORT DIAGRAM

WAAS CH <b>70339</b> <b>W34A</b>	APP CRS <b>340°</b>	Rwy Idg TDZE <b>1107</b> Apt Elev <b>1107</b>	<b>3400</b>
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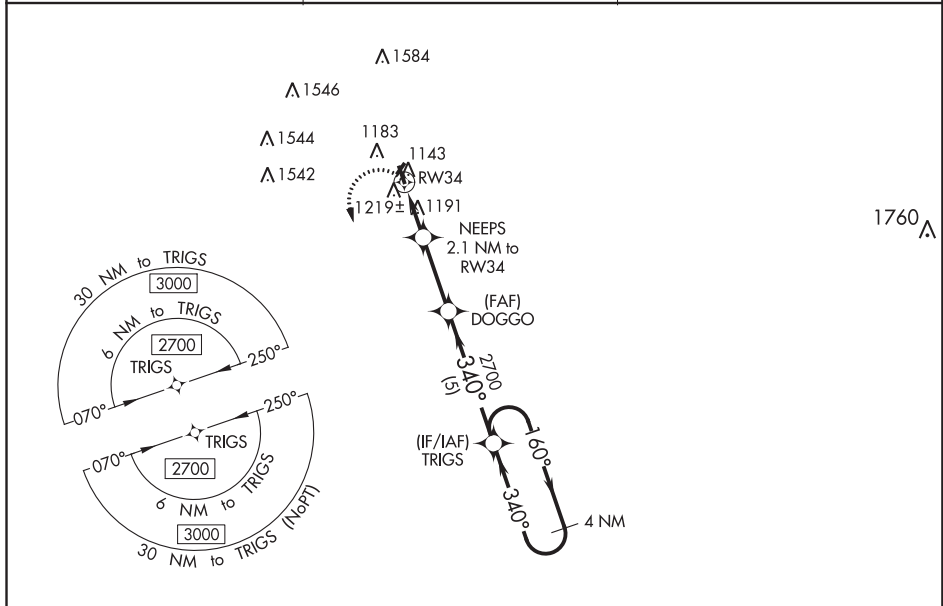
# RNAV (GPS) RWY 34

BLUE EARTH MUNI (SBU)

**NA** Baro-VNAV NA. Use Fairmont altimeter setting; when not received, use Forest City altimeter setting and increase all DA 45 feet and all MDA 60 feet; increase LPV all Cats visibility  $\frac{1}{8}$  mile, LNAV/VNAV all Cats, LNAV Cat C and Circling Cat C visibility  $\frac{1}{4}$  mile. DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. Circling NA to Rwy's 3 and 21.

**MISSED APPROACH:** Climbing left turn to 2700 direct TRIGS and hold.

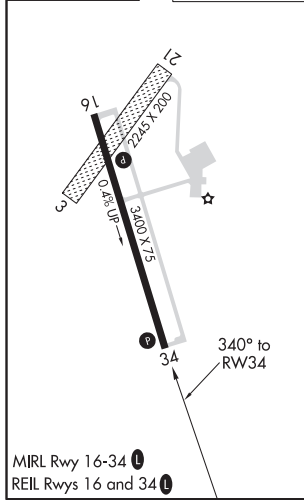
FAIRMONT MUNI AWOS-3 <b>110.2</b>	MINNEAPOLIS CENTER <b>127.75 257.7</b>	UNICOM <b>122.8 (CTAF) 0</b>
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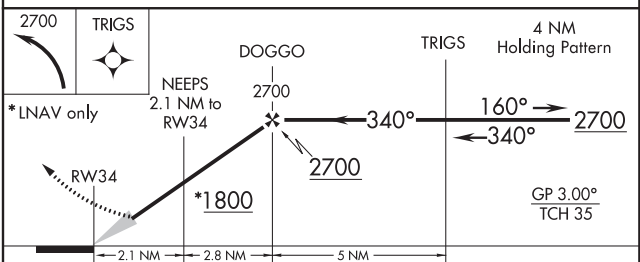
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1107	TDZE 1107
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MIRL Rwy 16-34 **0**  
REIL Rwy's 16 and 34 **0**



CATEGORY	A	B	C	D
LPV DA	1398-1 291 (300-1)			NA
LNAV/VNAV DA	1548-1½ 441 (500-1½)			NA
LNAV MDA	1520-1	413 (500-1)	1520-1½ 413 (500-1½)	NA
<b>C</b> CIRCLING	1560-1	453 (500-1)	1720-1¾ 613 (700-1¾)	NA

WAAS CH <b>78217</b>	APP CRS <b>307°</b>	Rwy Idg TDZE <b>1675</b>	<b>3700</b>
<b>W31A</b>		Apt Elev <b>1681</b>	

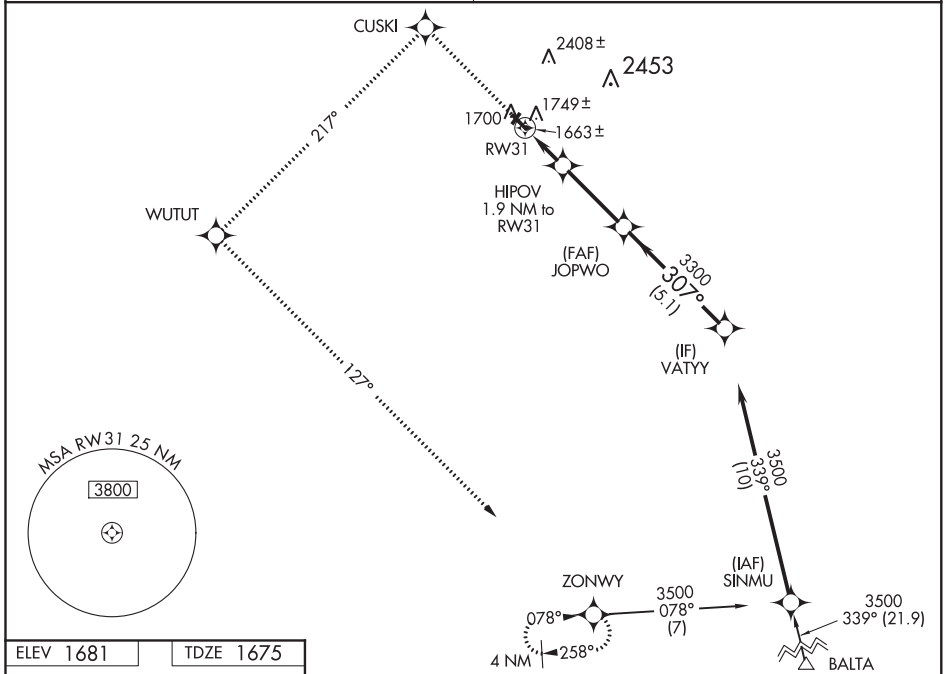
# RNAV (GPS) RWY 31

BOTTINEAU MUNI (D09)

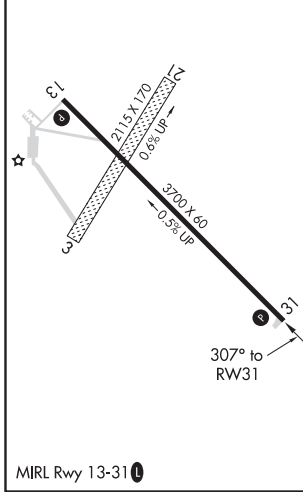
**Baro-VNAV NA. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Use Minot Air Force Base altimeter setting, when not received; use Devils Lake altimeter setting and increase all DA/MDA 100 feet increase LPV, LNAV/VNAV Cots A/B and Circling Cat B visibility ¼ mile.**

**MISSED APPROACH: Climb to 3900 direct CUSKI and left turn on track 217° to WUTUT and left turn on track 127° to ZONWY and hold.**

MINOT APP CON ★ <b>119.6 363.8</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1681	TDZE 1675
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3900	CUSKI	tr 217°	WUTUT	tr 127°	ZONWY	Procedure Turn NA
VGSi and RNAV glidepath not coincident (VGSi Angle 3.00/TCH 30).						
*LNAV only						
	HIPOV 1.9 NM to RW31		JOPWO		VATYY	
	RW31		3300		3500	
			*2300		3300	GP 3.00° TCH 40
	1.9 NM	3.1 NM	5.1 NM			
CATEGORY	A	B	C	D		
LPV DA	2051-1½	376 (400-1½)			NA	
LNAV/VNAV DA	2125-1¾	450 (500-1¾)			NA	
LNAV MDA	2120-1	445 (500-1)			NA	
CIRCLING	2320-1 639 (700-1)	2380-1 699 (700-1)			NA	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>81839</b> <b>W13A</b>	APP CRS <b>133°</b>	Rwy Idg TDZE Apt Elev	<b>5700</b> <b>2948</b> <b>2965</b>
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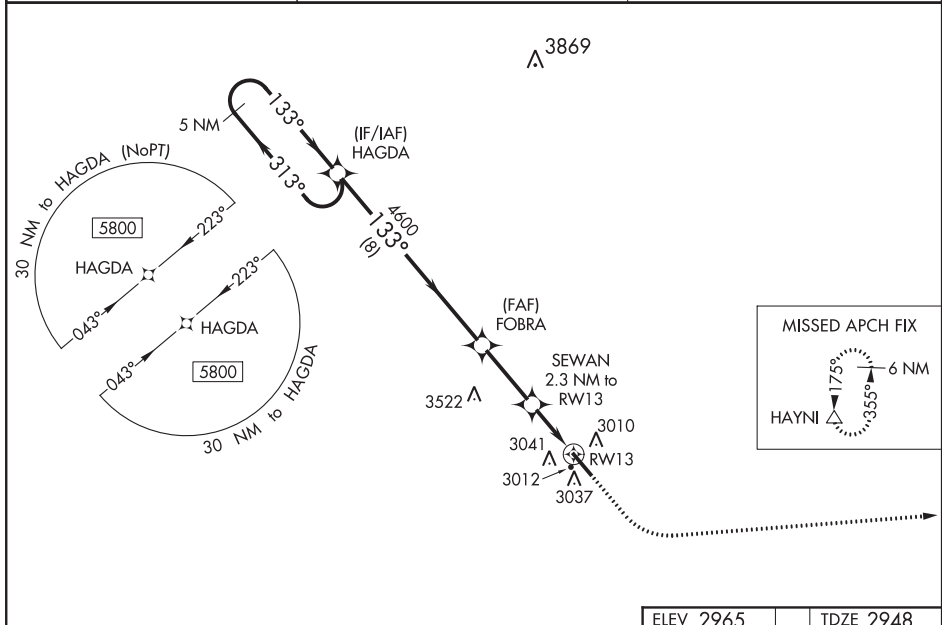
# RNAV (GPS) RWY 13

BOWMAN RGNL (BWW)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C (-4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Hettinger altimeter setting and increase all DA 102 feet, and all MDA 120 feet; increase LPV and LNAV/VNAV visibility ¼ mile all Cats, and LNAV Cat C visibility ⅓ mile. Baro-VNAV and VDP NA when using Hettinger altimeter setting.

**MISSED APPROACH:**  
Climb to 3400 then climbing left turn to 6000 direct HAYNI and hold.

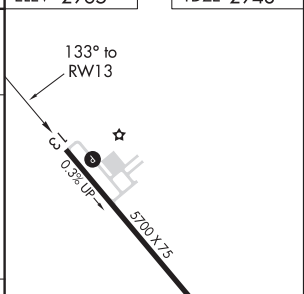
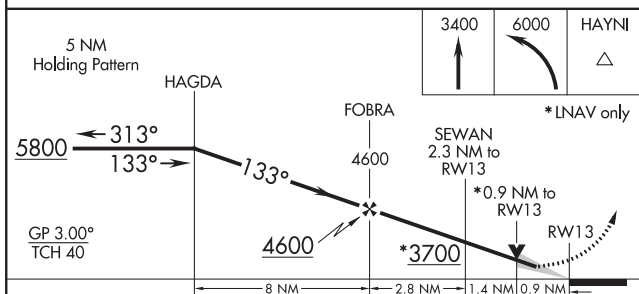
AWOS-3PT <b>118.075</b>	SALT LAKE CITY CENTER <b>126.85 305.2</b>	UNICOM <b>122.8 (CTAF) ①</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 2965	TDZE 2948
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CATEGORY	A	B	C	D
LPV DA		3198-1	250 (300-1)	
LNAV/VNAV DA		3198-1	250 (300-1)	
LNAV MDA		3280-1	332 (400-1)	
<b>C</b> CIRCLING	3380-1 415 (500-1)	3420-1 455 (500-1)	3580-1¾ 615 (700-1¾)	3580-2 615 (700-2)

REIL Rwy 13 and 31 ①  
MIRL Rwy 13-31 ①



WAAS CH <b>42538</b> <b>W31A</b>	APP CRS <b>313°</b>	Rwy Idg <b>5700</b> TDZE <b>2965</b> Apt Elev <b>2965</b>
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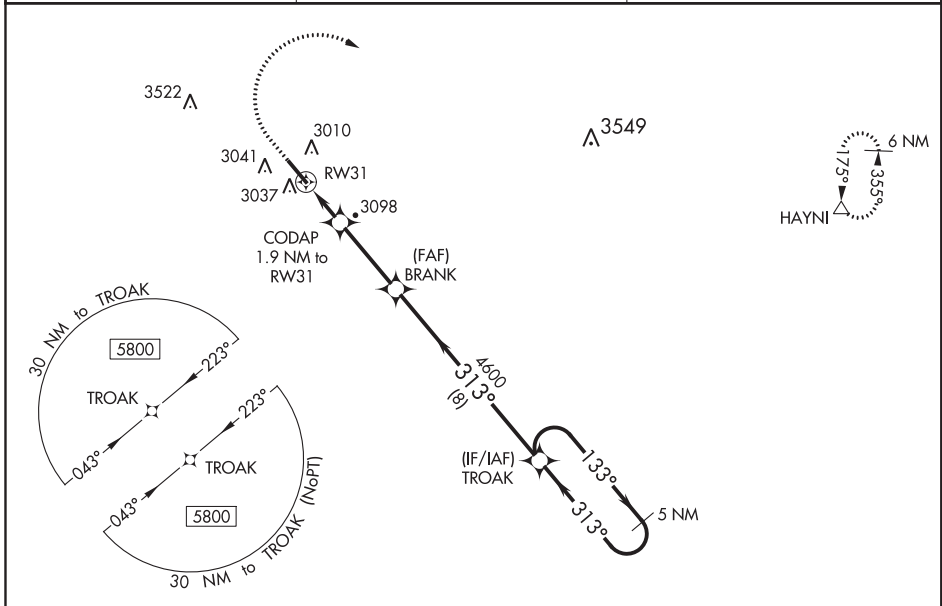
# RNAV (GPS) RWY 31

BOWMAN RGNL (BWW)

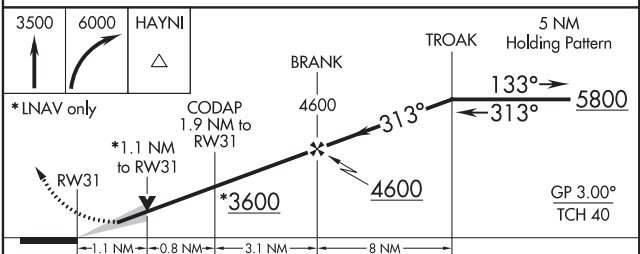
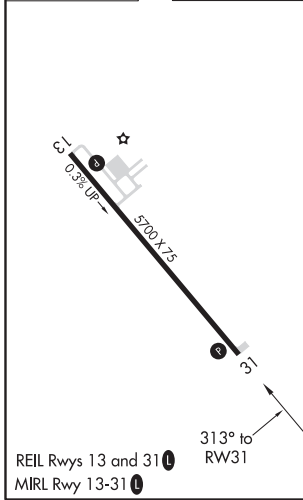
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C (-4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Hettinger altimeter setting and increase all DA 102 feet, and all MDA 120 feet; increase LPV and LNAV/VNAV visibility ¼ mile all Cats, increase LNAV Cat C visibility ½ mile. Baro-VNAV and VDP NA when using Hettinger altimeter setting.

**MISSED APPROACH:** Climb to 3500 then climbing right turn to 6000 direct HAYNI and hold.

AWOS-3PT <b>118.075</b>	SALT LAKE CITY CENTER <b>126.85 305.2</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 2965	TDZE 2965
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CATEGORY	A	B	C	D
LPV DA		3215-1	250 (300-1)	
LNAV/VNAV DA		3227-1	262 (300-1)	
LNAV MDA	3360-1	395 (400-1)	3360-1½	395 (400-1½)
<b>C</b> CIRCLING	3380-1 415 (500-1)	3420-1 455 (500-1)	3580-1¾ 615 (700-1¾)	3580-2 615 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

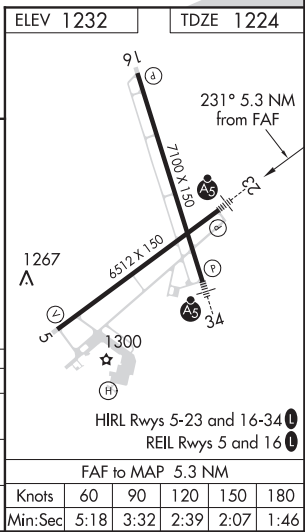
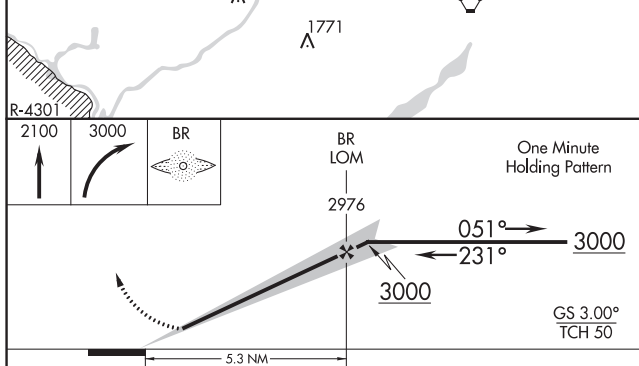
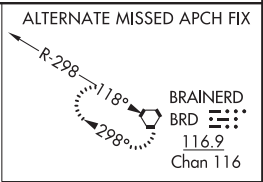
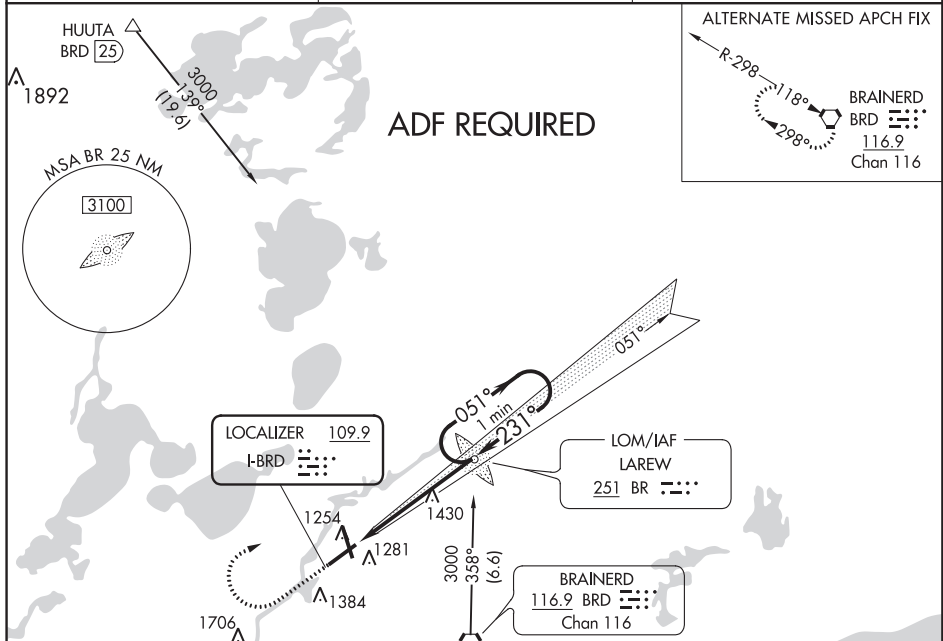
LOC I-BRD <b>109.9</b>	APP CRS <b>231°</b>	Rwy ldg TDZE Apt Elev	<b>6512</b> <b>1224</b> <b>1232</b>
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# ILS or LOC RWY 23

BRAINERD LAKES RGNL (BRD)

<p>▼ If local altimeter setting not received, use Aitkin Muni-Steve Kurtz Field altimeter setting and increase all DAs 52 feet, all MDAs 60 feet.</p>	<p>MALSR</p>	<p>MISSED APPROACH: Climb to 2100 then climbing right turn to 3000 direct LAREW LOM and hold.</p>
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ASOS <b>126.775</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	UNICOM <b>122.7 (CTAF)</b>
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CATEGORY	A	B	C	D
S-ILS 23	1424-½ 200 (200-½)			
S-LOC 23	1680-½ 456 (500-½)	1680-¾ 456 (500-¾)	1680-1 456 (500-1)	
CIRCLING	1760-1 528 (600-1)	1760-1½ 528 (600-1½)	1800-2 568 (600-2)	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-LEr	APP CRS	Rwy Idg	<b>7100</b>
<b>109.7</b>	<b>340°</b>	TDZE	<b>1232</b>
Chan <b>34</b>		Apt Elev	<b>1232</b>

# ILS or LOC/DME RWY 34

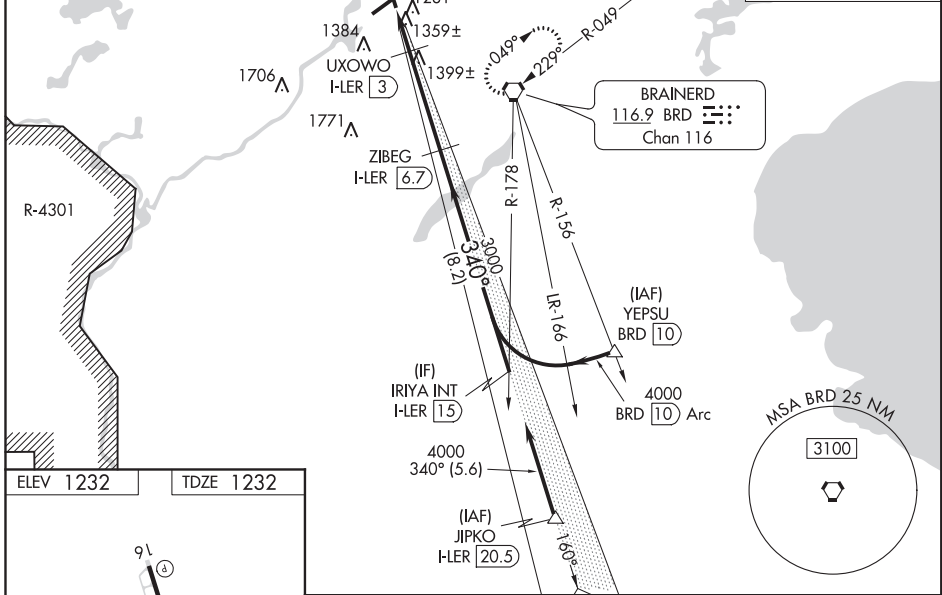
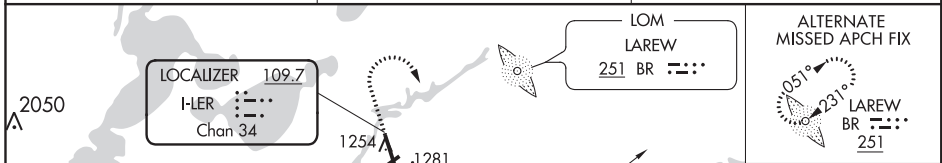
BRainerd LAKES RGNL (BRD)

**NA** When local altimeter setting not received, use Aitkin altimeter setting and increase DA 53 feet and all MDA 60 feet, increase S-LOC 34 Cats C and D visibility ¼ mile. DME required. VDP NA with Aitkin altimeter setting.

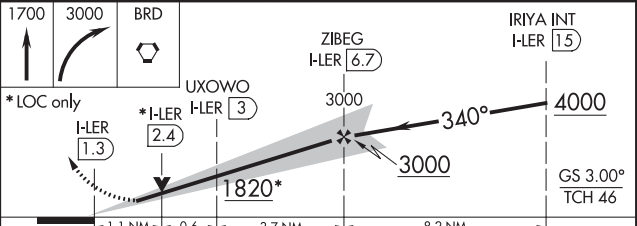
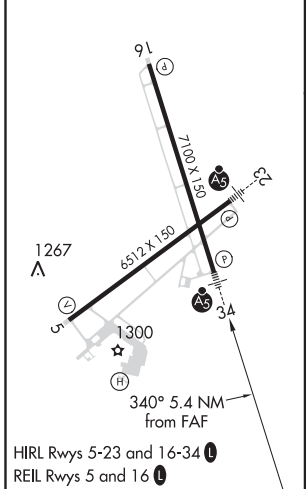


**MISSED APPROACH:** Climb to 1700 then climbing right turn to 3000 direct BRD VORTAC and hold.

ASOS <b>126.775</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	UNICOM <b>122.7 (CTAF)</b>
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ELEV 1232	TDZE 1232
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CATEGORY	A	B	C	D
S-ILS 34	1432-½		200 (200-½)	
S-LOC 34	1620-½	388 (400-½)	1620-⅝	388 (400-⅝)
CIRCLING	1760-1	528 (600-1)	1760-½	1800-2
			528 (600-½)	568 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>82018</b> <b>W05A</b>	APP CRS <b>050°</b>	Rwy Idg TDZE Apt Elev	<b>6512</b> <b>1223</b> <b>1232</b>
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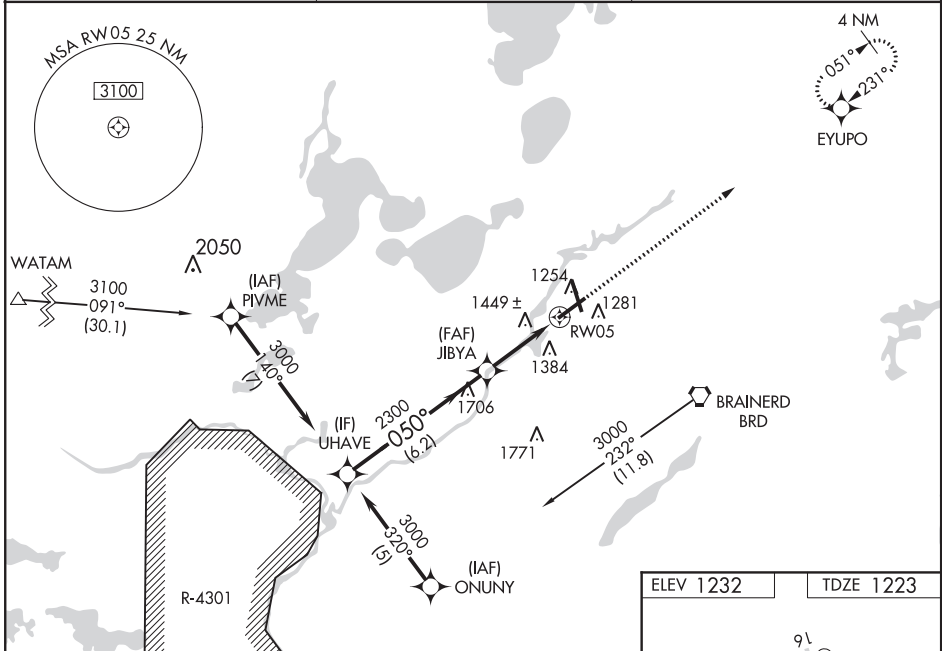
# RNAV (GPS) RWY 5

BRAINERD LAKES RGNL (B.R.D)

Baro-VNAV NA when using Aitkin Muni-Steve Kurtz Field altimeter setting.  
 For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F)  
 or above 45°C (113°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.  
 Procedure NA when R-4301 is active. When local altimeter setting not received, use Aitkin  
 Muni-Steve Kurtz Field altimeter setting and increase all DA 52 feet and all MDA 60 feet,  
 increase LPV and LNAV/VNAV visibility 1/4 mile all Cats, and LNAV Cats C and D visibility  
 1/4 mile. VDP NA with Aitkin Muni-Steve Kurtz Field altimeter setting.

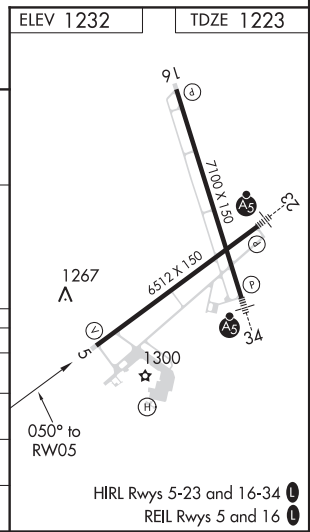
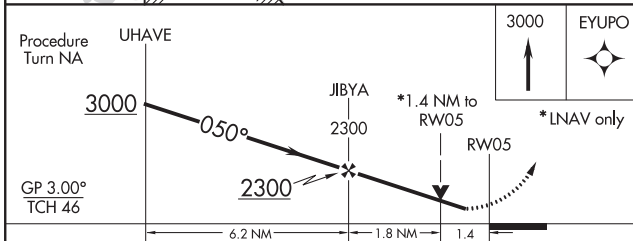
MISSED APPROACH: Climb to 3000 direct EYUPO and hold.

ASOS <b>126.775</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	UNICOM <b>122.7(CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D
LPV DA		1423-3/4	200 (200-3/4)	
LNAV/VNAV DA		1776-2	553 (600-2)	
LNAV MDA	1700-1	477 (500-1)	1700-1 1/4 477 (500-1 1/4)	1700-1 1/2 477 (500-1 1/2)
CIRCLING	1760-1	528 (600-1)	1760-1 1/2 528 (600-1 1/2)	1800-2 568 (600-2)

WAAS CH <b>82502</b> <b>W23A</b>	APP CRS <b>231°</b>	Rwy Idg TDZE <b>1224</b> Apt Elev <b>1232</b>	<b>6512</b>
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# RNAV (GPS) RWY 23

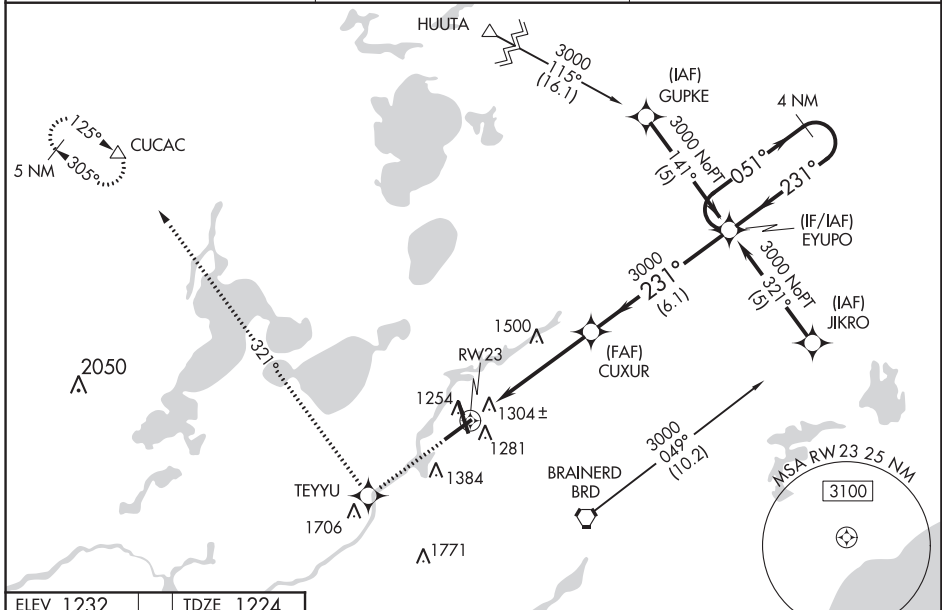
BRainerd LAKES RGNL (B.R.D)

**⚠** For inoperative MALS, increase LPV all Cats visibility to 1 mile.  
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP -0.3 NA.  
 VDP and Baro-VNAV NA when using Aitkin Muni-Steve Kurtz Field altimeter setting.  
 If local altimeter setting not received, use Aitkin Muni-Steve Kurtz Field altimeter setting and increase all DAs 52 feet and all MDAs 60 feet.

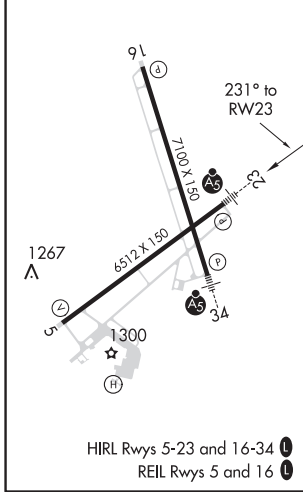


**MALS**  
**MISSED APPROACH:** Climb to 3300 direct TEYU and via 321° track to CUCAC and hold.

ASOS <b>126.775</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	UNICOM <b>122.7 (CTAF)</b>
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ELEV 1232	TDZE 1224
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Procedure NA for arrivals at BRD VORTAC via V161 southbound.

3300	TEYU	ir	CUCAC	CUXUR	EYUPO	4 NM Holding Pattern
↑	⬤	↔	△			
*LNAV only		*1.5 NM to RWY 23				
				← 231° →	← 231° →	← 051° →
				3000	3000	3000
				GP 3.00°		
				TCH 50		
	1.5 NM	3.8 NM	6.1 NM			
CATEGORY	A	B	C	D		
LPV DA		1501-½	277 (300-½)			
LNAV/VNAV DA		1573-¾	349 (400-¾)			
LNAV MDA	1760-½	536 (600-½)	1760-1 536 (600-1)	1760-1½ 536 (600-1½)	1760-1¼ 536 (600-1¼)	
CIRCLING	1760-1	528 (600-1)	1760-1½ 528 (600-1½)	1800-2 568 (600-2)		

NC-1, 10 NOV 2016 to 05 JAN 2017


NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>70711</b> <b>W34A</b>	APP CRS <b>340°</b>	Rwy Idg TDZE <b>1232</b> Apt Elev <b>1232</b>
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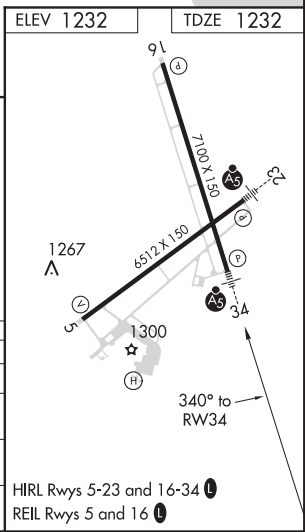
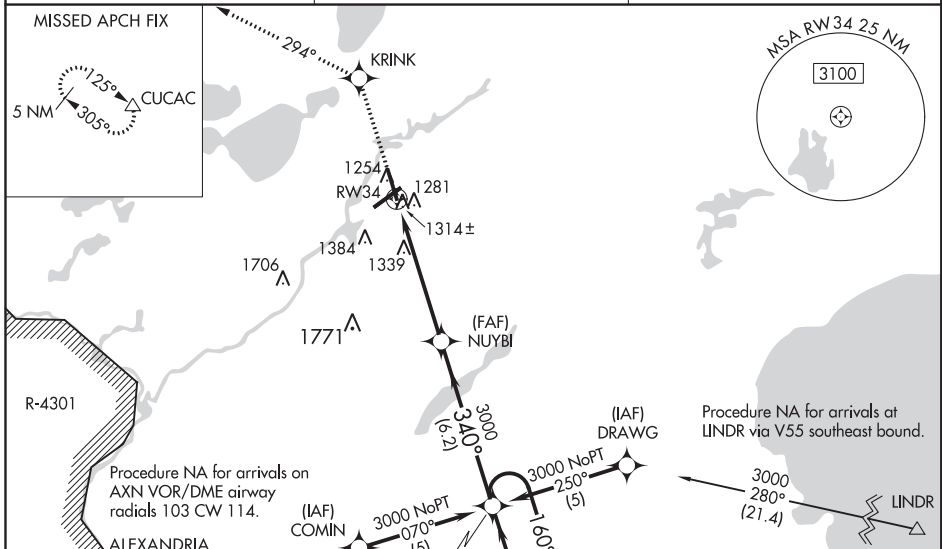
# RNAV (GPS) RWY 34

BRAINERD LAKES RGNL (BRD)

**⚠** For inoperative MALS, increase LNAV Cat D visibility to 1½ mile.  
**⚠** Baro-VNAV NA when using Aitkin altimeter setting.  
 For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA.  
 When local altimeter setting not received, use Aitkin altimeter setting and increase all DA 52 feet and all MDA 60 feet, increase LNAV/VNAV all Cats and LNAV Cat C and D visibility ½ mile. VDP NA when using Aitkin altimeter setting.  
 For inoperative MALS, increase LNAV Cat D visibility to 1½ mile.

**MALS**  
  
**MISSED APPROACH:** Climb to 3300 direct KRINK and via 294° track to CUCAC and hold.

ASOS <b>126.775</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	UNICOM <b>122.7 (CTAF)</b> 
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CATEGORY	A	B	C	D
LPV DA		1432-½	200 (200-½)	
LNAV/VNAV DA		1584-¾	352 (400-¾)	
LNAV MDA		1600-½	368 (400-½)	1600-1 368 (400-1)
CIRCLING	1760-1	528 (600-1)	1760-1½ 528 (600-1½)	1800-2 568 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

15176

# AIRPORT DIAGRAM

AL-5182 (FAA)

BRAINERD LAKES RGNL (B.R.D)

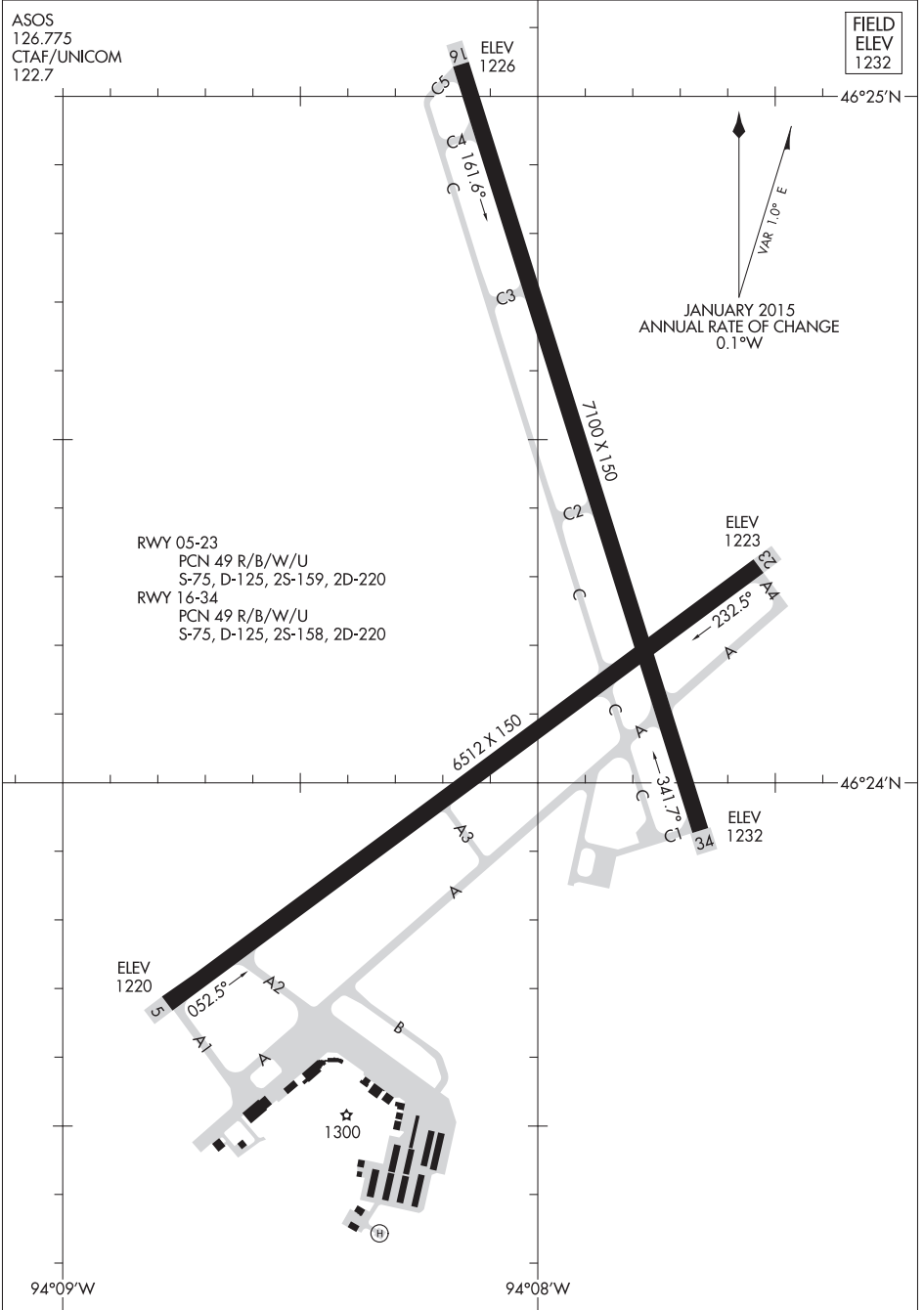
BRAINERD, MINNESOTA

ASOS  
126.775  
CTAF/UNICOM  
122.7

FIELD  
ELEV  
1232

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



# AIRPORT DIAGRAM

15176

BRAINERD, MINNESOTA

BRAINERD LAKES RGNL (B.R.D)

BRITTON, SOUTH DAKOTA

AL-6679 (FAA)

16119

APP CRS <b>131°</b>	Rwy Idg <b>4210</b>
	TDZE <b>1316</b>
	Apt Elev <b>1318</b>

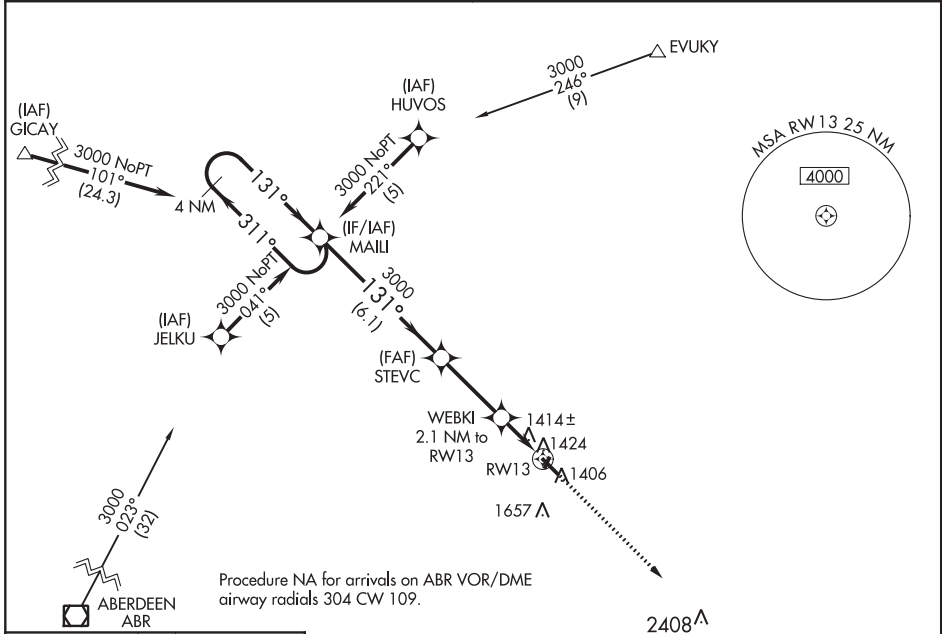
# RNAV (GPS) RWY 13

BRITTON MUNI (BTN)

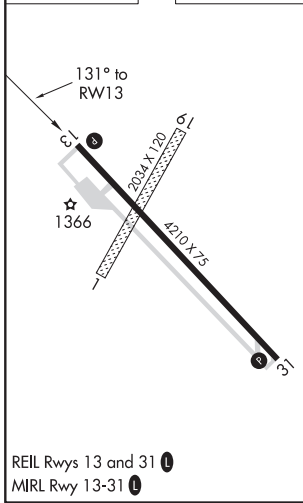
**⚠** Use Aberdeen altimeter setting; when not received, use Wheaton altimeter setting and increase all MDA 80 feet. DME/DME RNP-0.3 NA. Circling NA to Rwys 1 and 19. Helicopter visibility reduction below 3/4 SM NA.

MISSED APPROACH: Climb to 3500 direct RNORD and hold.

ABERDEEN ASOS <b>125.875</b>	MINNEAPOLIS CENTER <b>120.6 371.9</b>	GCO <b>121.725</b>	AUNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1318	TDZE 1316
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4 NM Holding Pattern	MAILI	STEVC	3500	RNORD
3000	311°	131°	3000	3.00° TCH 38
			2020	WEBKI 2.1 NM to RW13
	6.1 NM	3.1 NM	2.1 NM	RW13
CATEGORY	A	B	C	D
LNAV MDA	1820-1	504 (600-1)	NA	
CIRCLING	2000-1	682 (700-1)	NA	

BRITTON, SOUTH DAKOTA  
Amdt 1B 28APR16

45°49'N-97°45'W

# RNAV (GPS) RWY 13

BRITTON MUNI (BTN)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



# RNAV (GPS) RWY 31

BRITTON MUNI (BTN)

APP CRS <b>311°</b>	Rwy Idg <b>4210</b>
	TDZE <b>1318</b>
	Apt Elev <b>1318</b>

**NA** Use Aberdeen altimeter setting; when not received, use Wheaton altimeter setting and increase all MDA 80 feet. DME/DME RNP-0.3 NA. Circling to Rws 1 and 19 NA. Helicopter visibility reduction below 3/4 SM NA.

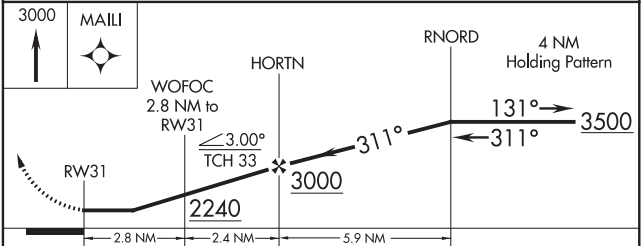
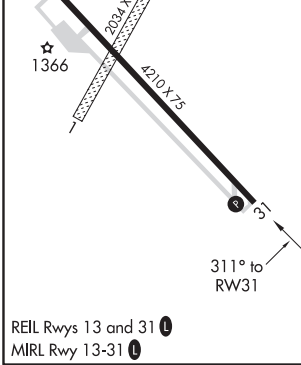
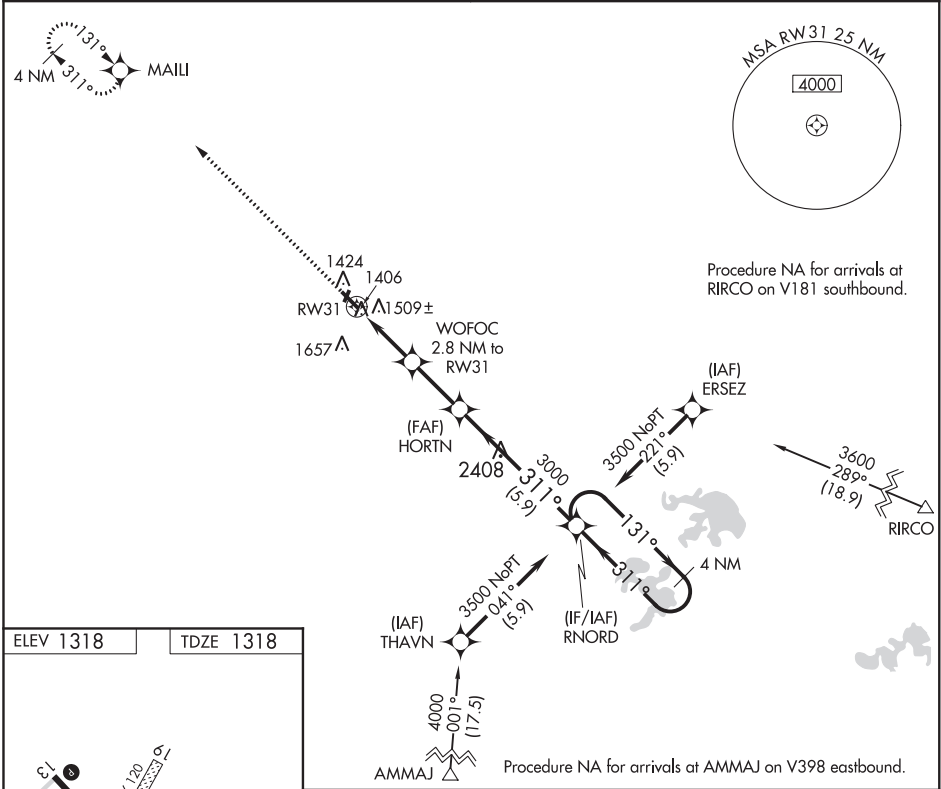
**MISSED APPROACH:** Climb to 3000 direct MAILL and hold.

ABERDEEN ASOS  
**125.875**

MINNEAPOLIS CENTER  
**120.6 371.9**

GCO  
**121.725**

AUNICOM  
**122.8 (CTAF)**



CATEGORY	A	B	C	D
LNAV MDA	1860-1	542 (600-1)		NA
CIRCLING	2000-1	682 (700-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-BKX <b>111.35</b> Chan <b>50(Y)</b>	APP CRS <b>116°</b>	Rwy Idg <b>6000</b> TDZE <b>1621</b> Apt Elev <b>1648</b>
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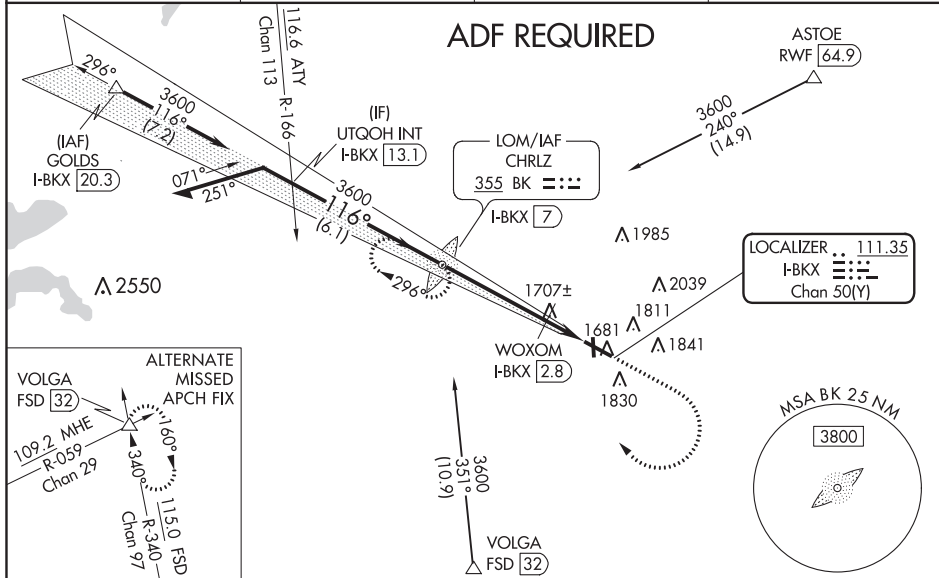
# ILS or LOC RWY 12

BROOKINGS RGNL (BKK)

**NA** VDP NA when using Pipestone altimeter setting. For inoperative MALSRS when using Pipestone altimeter setting, increase S-ILS 12 all Cats visibility to 3/8 mile, and S-LOC 12 Cat C/D visibility to 1 1/4 mile. For inoperative MALSRS, increase S-LOC 12 Cats C/D visibility to 1 3/8 mile. When local altimeter setting not received, use Pipestone altimeter setting and increase all DA 81 feet and all MDA 100 feet, increase S-LOC 12 Cats C/D visibility 3/8 mile and WOXOM fix minimums S-LOC 12 Cats C/D 5/8 mile, and increase Circling Cats C/D visibility 1/4 mile. Night landing: Rwy 17, NA. ADF required.

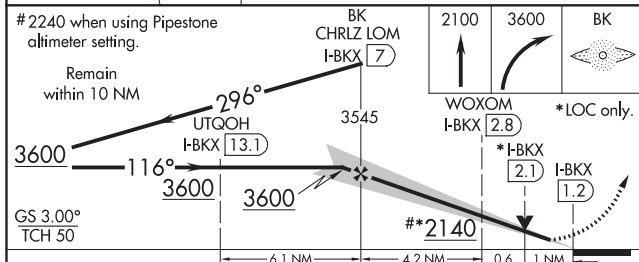
**MALSRS**  
MISSED APPROACH:  
Climb to 2100 then climbing right turn to 3600 direct CHRLZ LOM/I-BKX 7 DME and hold.

AWOS-3PT <b>119.925</b>	HURON RADIO <b>122.65</b>	GCO <b>121.725</b>	UNICOM <b>123.0</b> (CTAF) <b>1</b>
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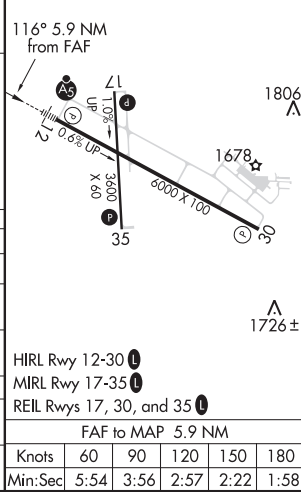
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 1648	TDZE 1621
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CATEGORY	A	B	C	D
S-ILS 12	1821-1/2 200 (200-1/2)			
S-LOC 12	2140-1/2	519 (500-1/2)	2140-1 519 (500-1)	
<b>C</b> CIRCLING	2140-1 492 (500-1)	2160-1 512 (600-1)	2340-2 692 (700-2)	2340-2 1/4 692 (700-2 1/4)
WOXOM FIX MINIMUMS				
S-LOC 12	1960-1/2	339 (400-1/2)	1960-5/8	339 (400-5/8)
<b>C</b> CIRCLING	2140-1 492 (500-1)	2160-1 512 (600-1)	2340-2 692 (700-2)	2340-2 1/4 692 (700-2 1/4)




WAAS CH <b>73036</b> <b>W12A</b>	APP CRS <b>115°</b>	Rwy Idg TDZE Apt Elev	<b>6000</b> <b>1621</b> <b>1648</b>
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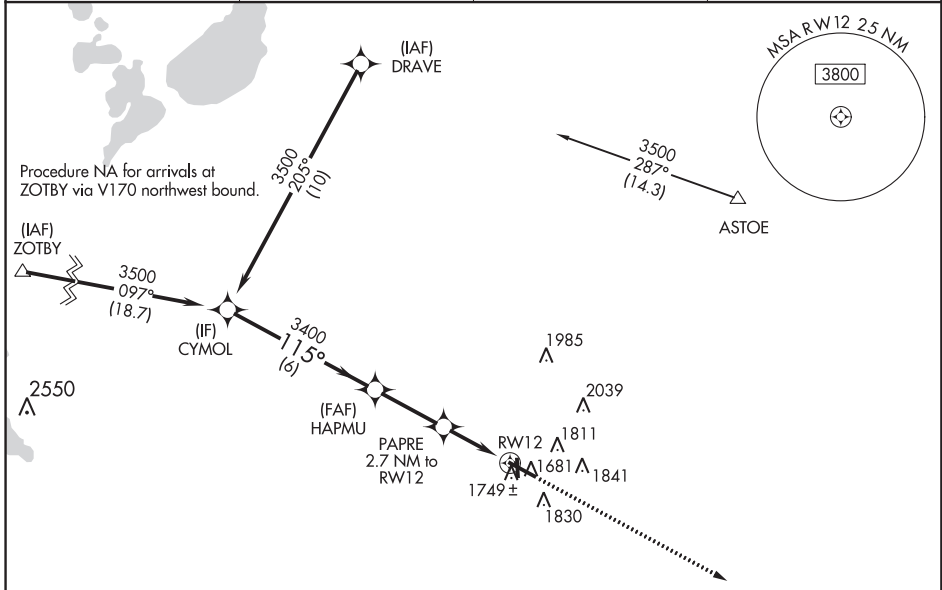
# RNAV (GPS) RWY 12

BROOKINGS RGNL (BKK)

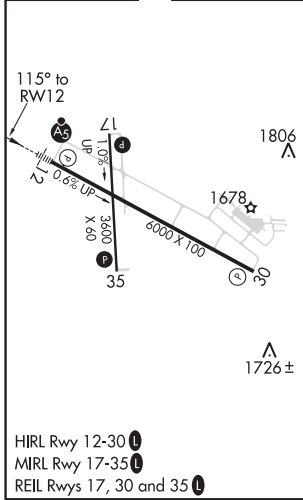
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Pipestone altimeter setting and increase all DA 81 feet and all MDA 100 feet; increase LNAV/VNAV all Cats visibility ¼ mile; LNAV Cats C and D visibility ⅜ mile; Circling Cats C and D visibility ¼ mile. Baro-VNAV and VDP NA when using Pipestone altimeter setting. Night landing Rwy 17 NA.

MALSR  
  
**MISSED APPROACH:**  
 Climb to 3500 direct REEKY and hold.

AWOS-3PT <b>119.925</b>	HURON RADIO <b>122.65</b>	GCO <b>121.725</b>	UNICOM <b>123.0 (CTAF) 0</b>
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ELEV 1648	<b>D</b>	TDZE 1621
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	CYMOL	HAPMU	PAPRE 2.7 NM to RWY12	REEKY
	3500	3400	*2500	3500
	GP 3.00° TCH 50		*1.1 NM to RWY12	*INAV only.
	6 NM	2.8 NM	1.6 NM	1.1 NM
CATEGORY	A	B	C	D
LPV DA		1821-½	200 (200-½)	
LNAV/VNAV DA		1948-⅝	327 (300-⅝)	
LNAV MDA	2000-½	379 (400-½)	2000-⅝	379 (400-⅝)
<b>C</b> CIRCLING	2140-1 492 (500-1)	2160-1 512 (600-1)	2340-2 692 (700-2)	2340-2¼ 692 (700-2¼)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>82736</b> <b>W30A</b>	APP CRS <b>296°</b>	Rwy Idg TDZE Apt Elev	<b>6000</b> <b>1637</b> <b>1648</b>
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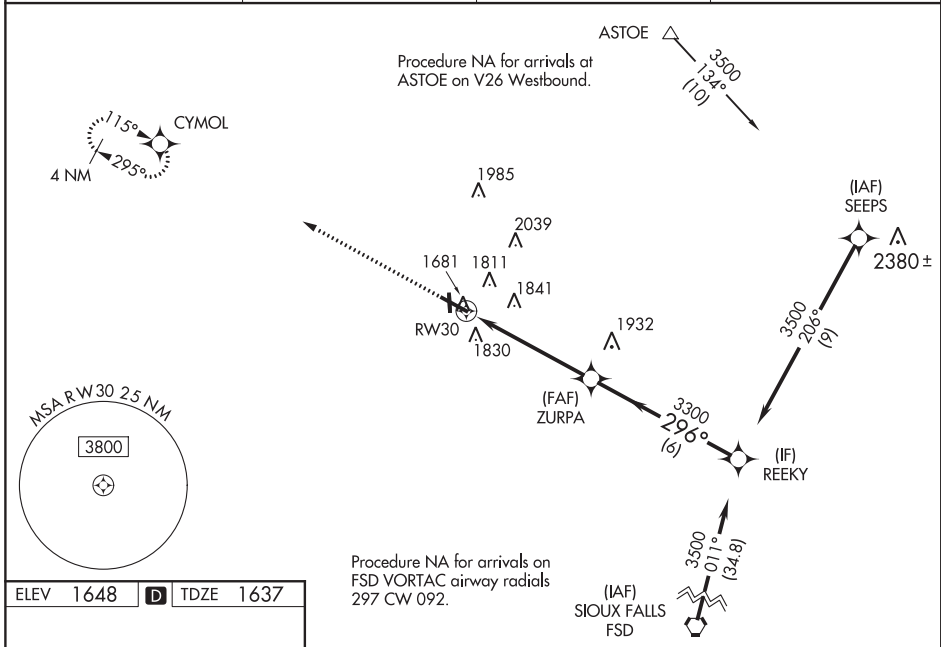
# RNAV (GPS) RWY 30

BROOKINGS RGNL (BKK)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Pipestone altimeter setting and increase all DA 81 feet and all MDA 100 feet; increase LPV and LNAV all Cats visibility 1/8 mile, LNAV/VNAV all Cats visibility and Circling Cats C and D visibility 1/4 mile. Baro-VNAV and VDP NA when using Pipestone altimeter setting. Helicopter visibility reduction below 1 SM not authorized. Night landing: Rwy 17 not authorized.

**MISSED APPROACH:** Climb to 3500 direct CYMOL and hold.

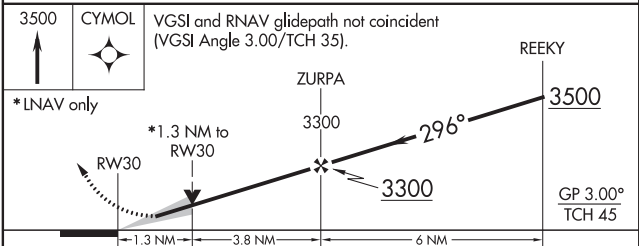
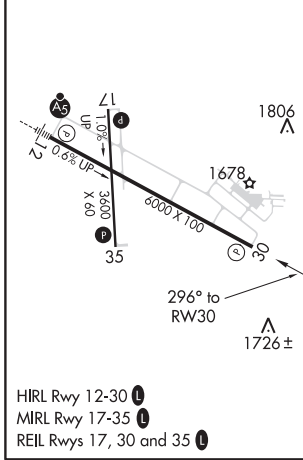
AWOS-3PT <b>119.925</b>	HURON RADIO <b>122.65</b>	GCO <b>121.725</b>	UNICOM <b>123.0</b> (CTAF) <b>Ⓛ</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1648	<b>D</b>	TDZE 1637
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CATEGORY	A	B	C	D
LPV DA	1887-1		250 (300-1)	
LNAV/VNAV DA	1968-1 1/8		331 (400-1 1/8)	
LNAV MDA	2080-1 443 (500-1)		2080-1 3/8 443 (500-1 3/8)	
<b>C</b> CIRCLING	2140-1 492 (500-1)	2160-1 512 (600-1)	2340-2 692 (700-2)	2340-2 1/4 692 (700-2 1/4)



APP CRS <b>360°</b>	Rwy Idg <b>3200</b>
	TDZE <b>968</b>
	Apt Elev <b>968</b>

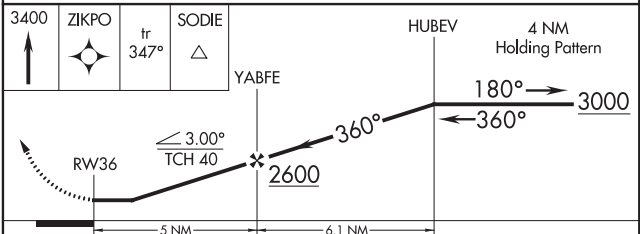
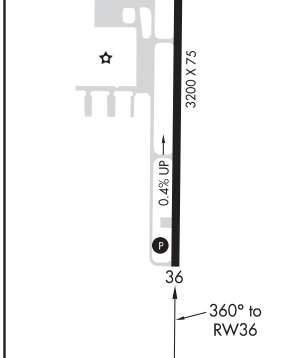
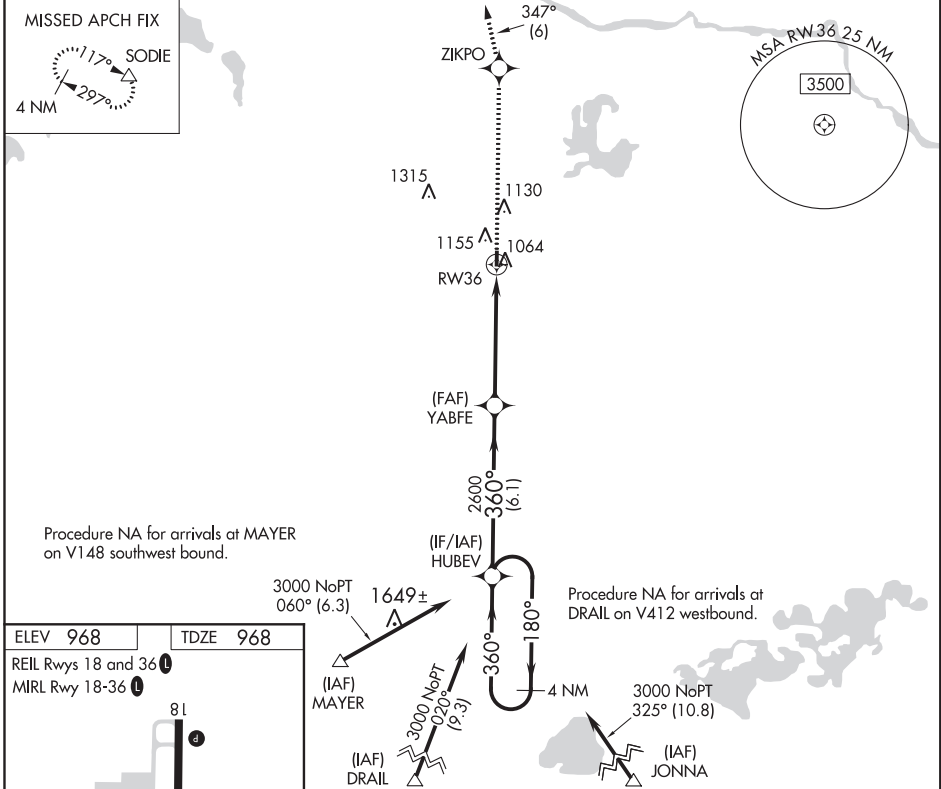
# RNAV (GPS) RWY 36

BUFFALO MUNI (CFE)

**⚠** When local altimeter setting not received, use Maple Lake altimeter setting and increase all MDA 40 feet, LNAV Cat C and Circling Cat C visibility ¼ mile. When VGSI inop, procedure NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3400 direct ZIKPO and on track 347° to SODIE and hold.

AWOS-3 <b>120.45</b>	MINNEAPOLIS APP CON <b>126.5 357.4</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
LNAV MDA	1460-1	492 (500-1)	1460-1 <sup>3</sup> / <sub>8</sub> 492 (500-1 <sup>3</sup> / <sub>8</sub> )	NA
CIRCLING	1460-1	492 (500-1)	1540-1 <sup>1</sup> / <sub>2</sub> 572 (600-1 <sup>1</sup> / <sub>2</sub> )	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

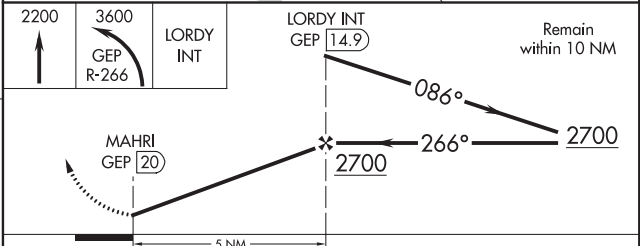
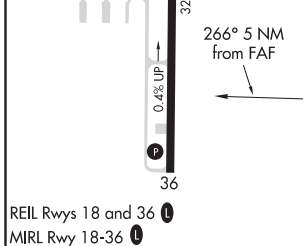
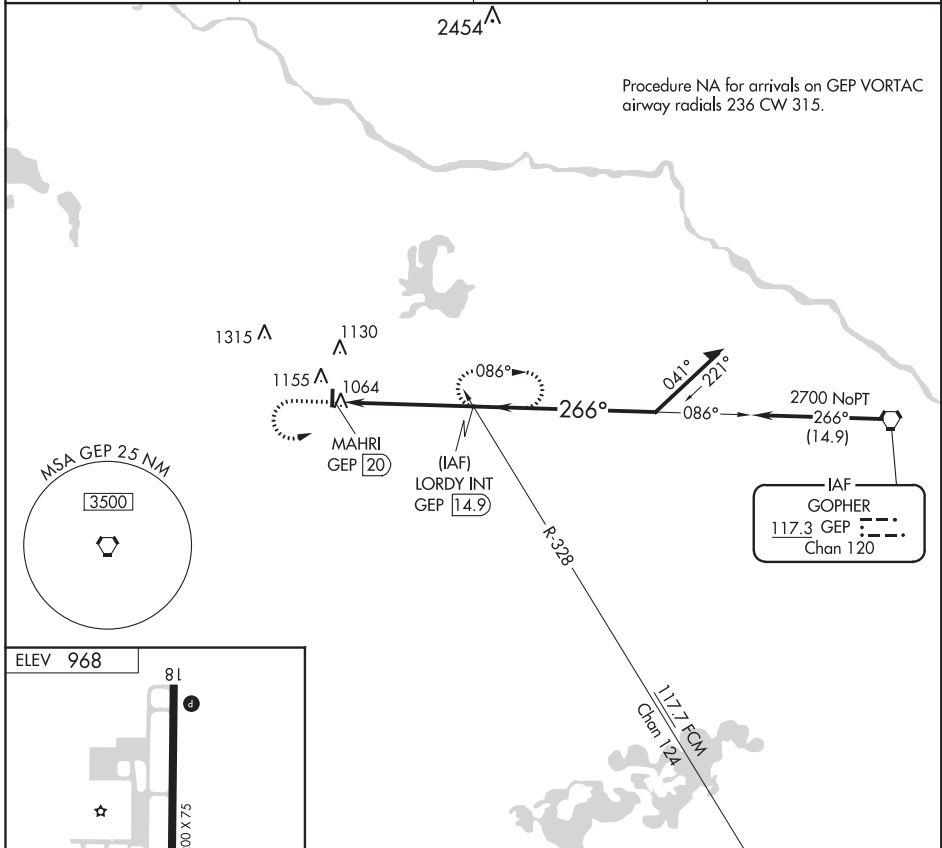
VORTAC GEP <b>117.3</b> Chan <b>120</b>	APP CRS <b>266°</b>	Rwy Idg TDZE Apt Elev	<b>N/A</b> <b>N/A</b> <b>968</b>
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**VOR-A**  
BUFFALO MUNI (CFE)

**⚠** When local altimeter setting not received, use Maple Lake altimeter setting. When VGSI inoperative, procedure NA at night.

MISSED APPROACH: Climb to 2200 then climbing left turn to 3600 via GEP VORTAC R-266 to LORDY INT/GEP VORTAC 14.9 DME and hold.

AWOS-3 <b>120.45</b>	MINNEAPOLIS APP CON <b>126.5 357.4</b>	GCO <b>121.725</b>	UNICOM <b>122.8</b> (CTAF) <b>📞</b>
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FAF to MAP 5 NM						
Knots	60	90	120	150	180	
Min:Sec	5:00	3:20	2:30	2:00	1:40	
CATEGORY	A		B		C	D
CIRCLING	1580-1		612 (700-1)		1580-1 <sup>3</sup> / <sub>4</sub> 612 (700-1 <sup>3</sup> / <sub>4</sub> )	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

CALEDONIA, MINNESOTA

AL-6374 (FAA)

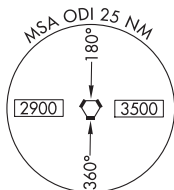
14317

VORTAC ODI <b>117.9</b> Chan <b>126</b>	APP CRS <b>184°</b>	Rwy Idg TDZE Apt Elev <b>1179</b>	<b>N/A</b> <b>N/A</b> <b>1179</b>
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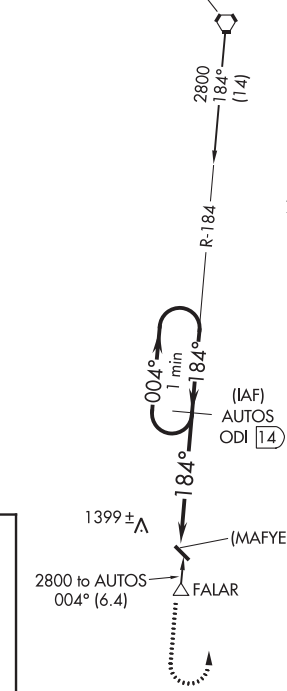
# VOR/DME or GPS-A

HOUSTON COUNTY (CHU)

<b>▲</b> NA Use La Crosse, WI altimeter setting.	MISSED APPROACH: Climb to 2800 then left turn via ODI R-184 to AUTOS/14 DME and hold.
MINNEAPOLIS CENTER <b>128.6 363.0</b>	CTAF <b>122.9 0</b>



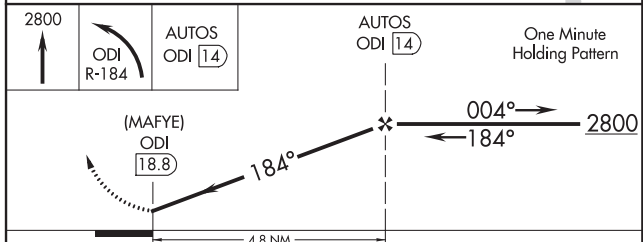
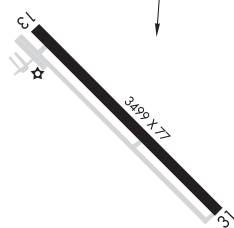
NODINE  
117.9 ODI  
Chan 126



2045 ▲

ELEV 1179

184° 4.8 NM from FAF



CATEGORY	A	B	C	D
CIRCLING	1820-1	641 (700-1)	1820-1 <sup>34</sup> 641 (700-1 <sup>34</sup> )	NA

MIRL Rwy 13-31 0

CALEDONIA, MINNESOTA  
Amdt 3 30DEC99

43°36'N-91°30'W

# HOUSTON COUNTY (CHU)

## VOR/DME or GPS-A

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>97428</b> <b>W16A</b>	APP CRS <b>161°</b>	Rwy Idg TDZE Apt Elev	<b>4001</b> <b>945</b> <b>945</b>
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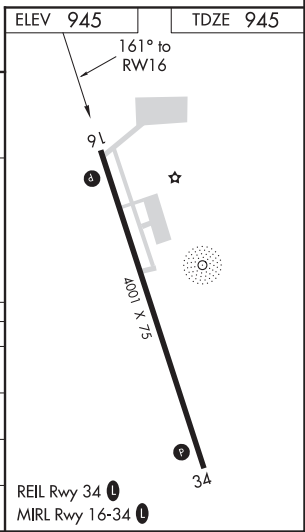
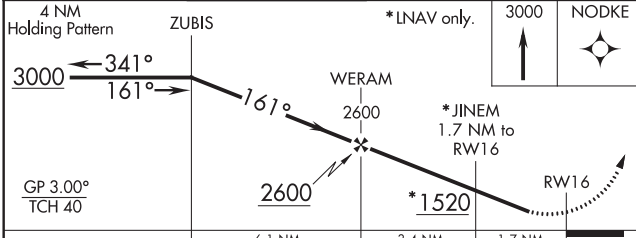
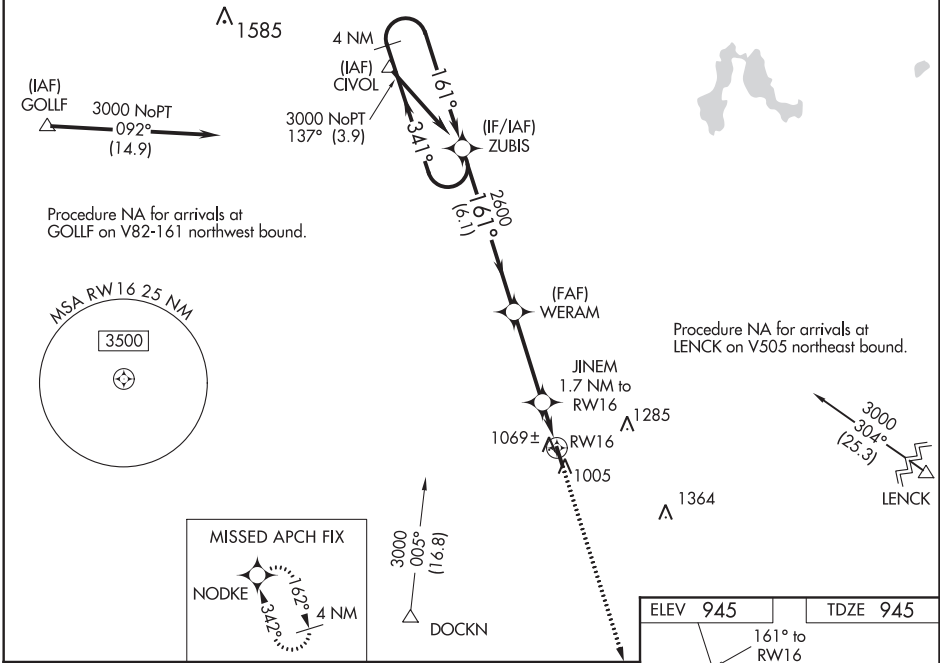
# RNAV (GPS) RWY 16

CAMBRIDGE MUNI (CBG)

**⚠** Baro-VNAV NA when using Princeton altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). When local altimeter setting not received, use Princeton altimeter setting and increase all DA/MDA 40 feet, increase LNAV/VNAV all Cats visibility 1/8 mile, LNAV Cat C visibility 1/8 mile. Procedure NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

**MISSED APPROACH:**  
Climb to 3000 direct NODKE and hold.

AWOS-3 <b>121.125</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	UNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LPV DA		1223-1 278 (300-1)		NA
LNAV/VNAV DA		1242-1 297 (300-1)		NA
LNAV MDA		1320-1 375 (400-1)		NA
CIRCLING	1420-1	475 (500-1)	1420-1½ 475 (500-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

CAMBRIDGE, MINNESOTA

AL-6257 (FAA)

15092

WAAS CH <b>56328</b> <b>W34A</b>	APP CRS <b>342°</b>	Rwy Idg TDZE Apt Elev	<b>4001</b> <b>945</b> <b>945</b>
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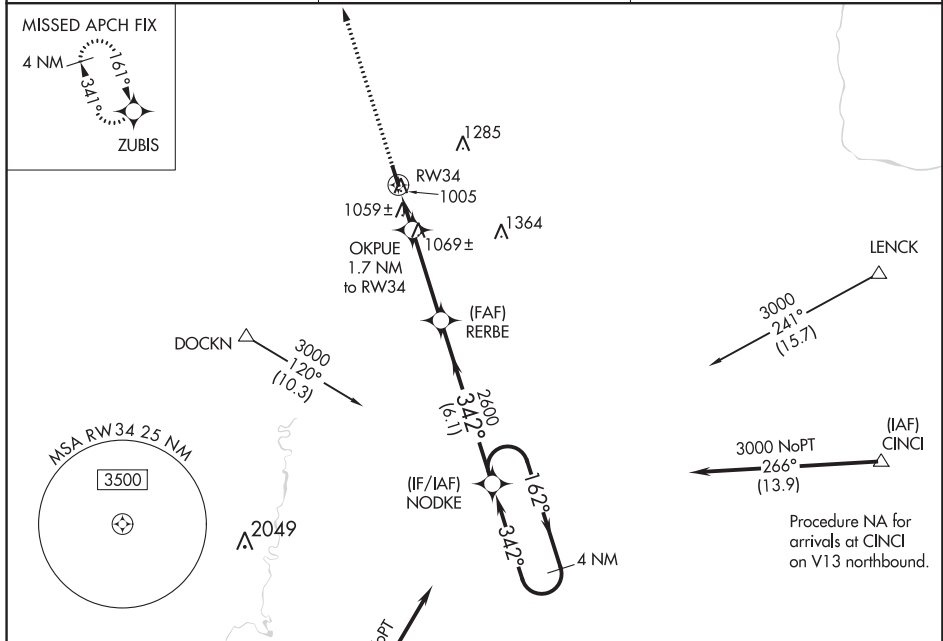
# RNAV (GPS) RWY 34

CAMBRIDGE MUNI (CBG)

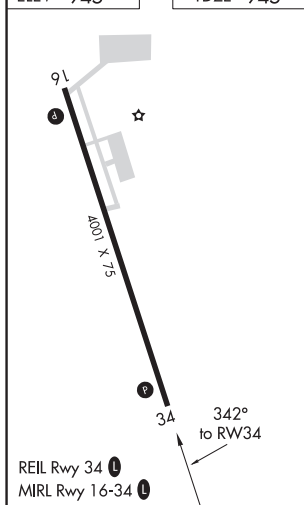
**⚠** When local altimeter setting not received, use Princeton altimeter setting and increase all MDA 40 feet, increase LP visibility 1/8 mile and LNAV visibility 1/4 mile. Procedure NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

**⚠** MISSED APPROACH: Climb to 3000 direct ZUBIS and hold.

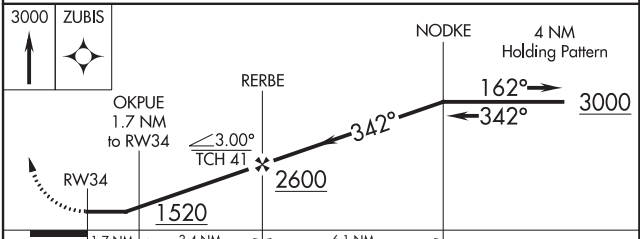
AWOS-3 <b>121.125</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	UNICOM <b>122.8</b> (CTAF) <b>⓪</b>
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ELEV 945	TDZE 945
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Procedure NA for arrivals on GEP VORTAC airway radials 297 CW 103.



CATEGORY	A	B	C	D
LP MDA	1320-1	375 (400-1)	1320-1 1/8 375 (400-1 1/8)	NA
LNAV MDA	1340-1	395 (400-1)	1340-1 1/8 395 (400-1 1/8)	NA
CIRCLING	1420-1	475 (500-1)	1420-1 1/2 475 (500-1 1/2)	NA

CAMBRIDGE, MINNESOTA  
Orig-A 02APR15

45°33'N-93°16'W

# RNAV (GPS) RWY 34

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

NDB CBG <b>350</b>	APP CRS <b>348°</b>	Rwy Idg 4001
		TDZE 945
		Apt Elev 945

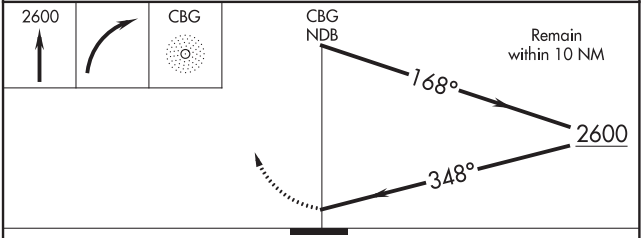
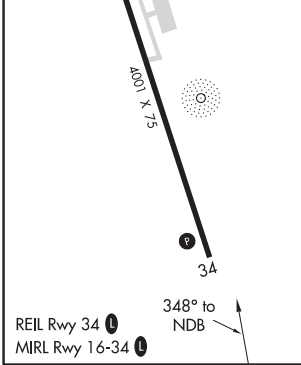
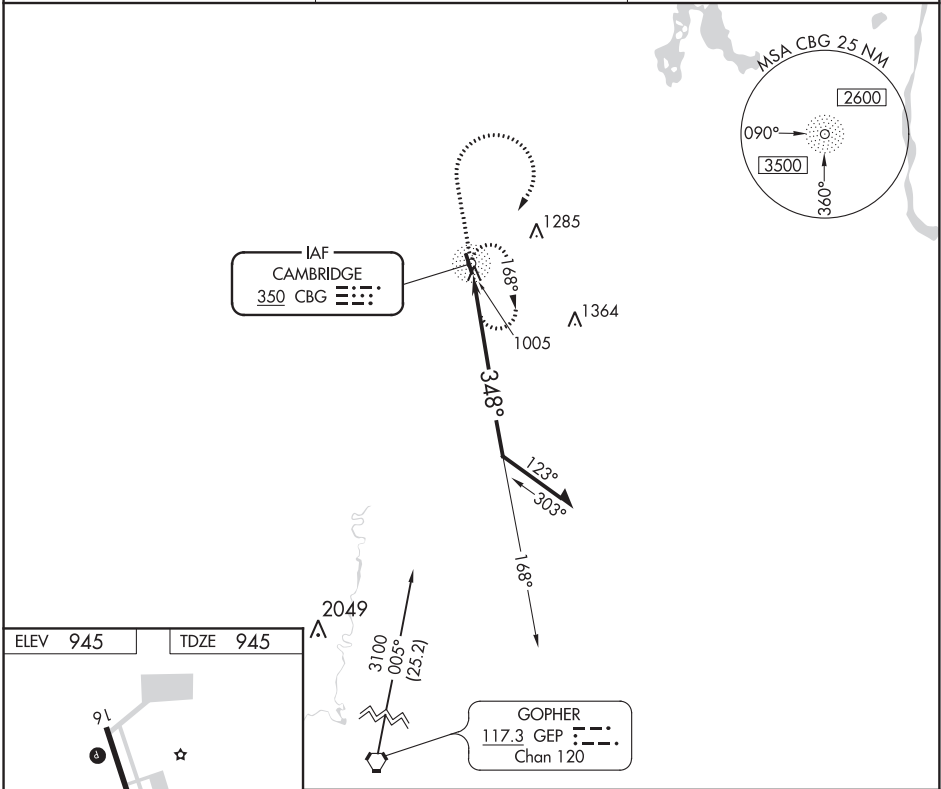
# NDB RWY 34

CAMBRIDGE MUNI (CBG)

**⚠ NA** When local altimeter setting not received, use Princeton altimeter setting and increase all MDA 40 feet, increase S-34 Cat C and Circling Cat C visibility to ¼ mile. Procedure NA at night. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 2600 then right turn direct CBG NDB and hold.

AWOS-3 <b>121.125</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
S-34	1540-1	595 (600-1)	1540-1¾ 595 (600-1¾)	NA
CIRCLING	1540-1	595 (600-1)	1540-1¾ 595 (600-1¾)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

CANBY, MINNESOTA

AL-9526 (FAA)

15232

WAAS CH <b>56418</b> <b>W12A</b>	APP CRS <b>118°</b>	Rwy Idg TDZE Apt Elev	<b>4648</b> <b>1194</b> <b>1194</b>
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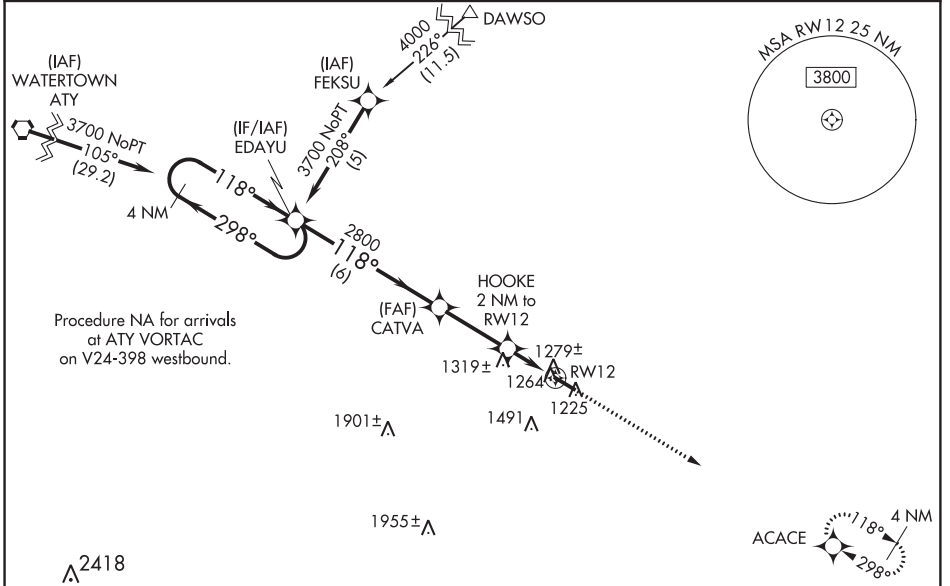
# RNAV (GPS) RWY 12

MYERS FIELD (CNB)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. VDP NA with Lac Qui Parle County altimeter setting. Baro-VNAV NA when using Lac Qui Parle County altimeter setting. When local altimeter setting not received, use Lac Qui Parle County altimeter setting and increase all DA 53 feet, and all MDA 60 feet, increase LNAV/VNAV all Cats visibility ¼ mile, LNAV Cats C and D visibility ½ mile.

**MISSED APPROACH:**  
Climb to 3700 direct ACACE and hold.

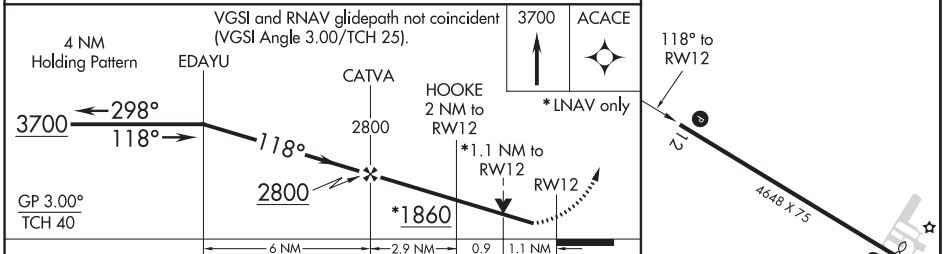
AWOS-3 <b>118.575</b>	MINNEAPOLIS CENTER <b>128.5 306.2</b>	GCO <b>121.725</b>	CTAF <b>122.9</b>
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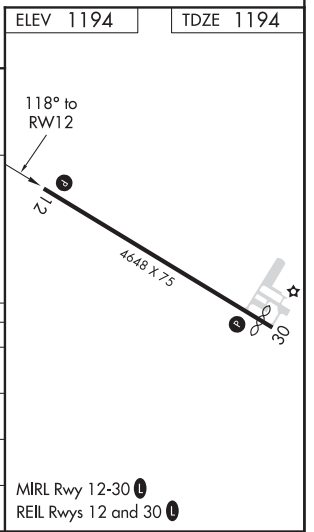
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1194	TDZE 1194
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CATEGORY	A	B	C	D
LPV DA	1444-1 250 (300-1)			
LNAV/VNAV DA	1598-1½ 404 (500-1½)			
LNAV MDA	1580-1 386 (400-1)		1580-1¼ 386 (400-1¼)	
CIRCLING	1700-1 506 (600-1)	1700-1½ 506 (600-1½)		1800-2 606 (700-2)



CANBY, MINNESOTA  
Amdt 1 29JUL10

44°44'N-96°16'W

# MYERS FIELD (CNB)

## RNAV (GPS) RWY 12

WAAS CH <b>77718</b> <b>W30A</b>	APP CRS <b>298°</b>	Rwy Idg TDZE Apt Elev	<b>4409</b> <b>1192</b> <b>1194</b>
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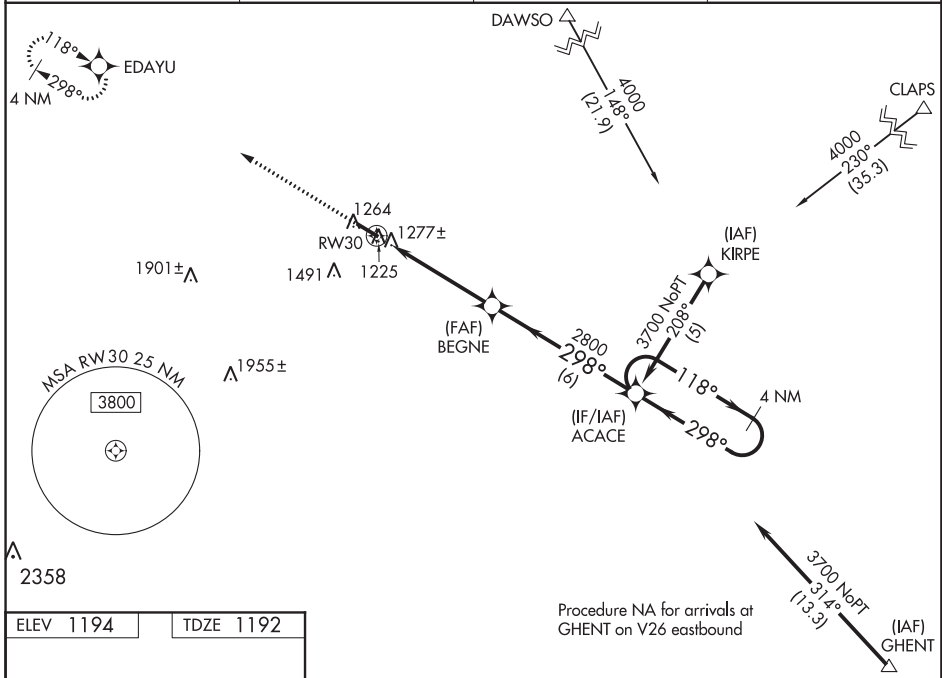
# RNAV (GPS) RWY 30

MYERS FIELD (CNB)

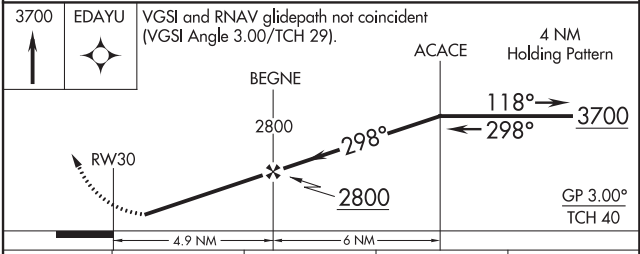
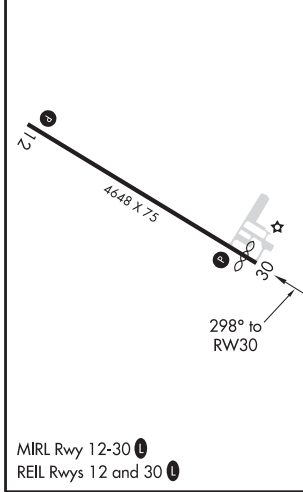
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Baro-VNAV NA when using Lac Qui Parle County altimeter setting. When local altimeter setting not received, use Lac Qui Parle County altimeter setting and increase all DA 53 feet, and all MDA 60 feet, increase LNAV Cats C and D visibility ¼ mile.

**MISSED APPROACH:**  
Climb to 3700 direct EDAYU and hold.

AWOS-3 <b>118.575</b>	MINNEAPOLIS CENTER <b>128.5 306.2</b>	GCO <b>121.725</b>	CTAF <b>122.9</b>
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ELEV 1194	TDZE 1192
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CATEGORY	A	B	C	D
LPV DA	1442-1 250 (300-1)			
LNAV/VNAV DA	1573-1½ 381 (400-1½)			
LNAV MDA	1680-1	488 (500-1)	1680-1¼ 488 (500-1¼)	1680-1½ 488 (500-1½)
CIRCLING	1700-1	506 (600-1)	1700-1½ 506 (600-1½)	1800-2 606 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

CANDO, NORTH DAKOTA

AL-10431 (FAA)

15232

APP CRS	Rwy Idg	<b>3500</b>
<b>160°</b>	TDZE	<b>1481</b>
	Apt Elev	<b>1482</b>

# RNAV (GPS) RWY 16

CANDO MUNI (9D7)

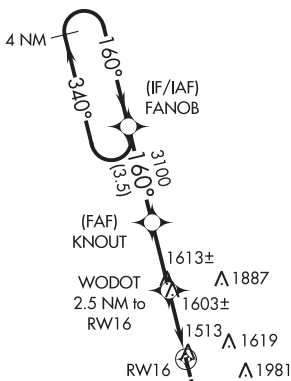
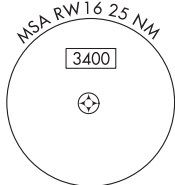
**NA** When local altimeter setting not received, use Devils Lake altimeter setting and increase all MDAs 80 feet. DME/DME RNP-0.3 NA. VDP NA with Devils Lake altimeter setting. Helicopter visibility reduction below 3/4 SM NA.

**MISSED APPROACH:** Climb to 1900 then climbing right turn to 3600 direct CAREW and hold.

AWOS-3  
**118.325**

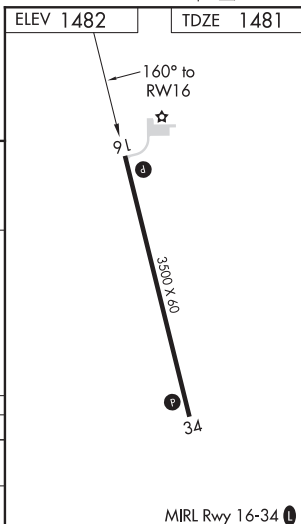
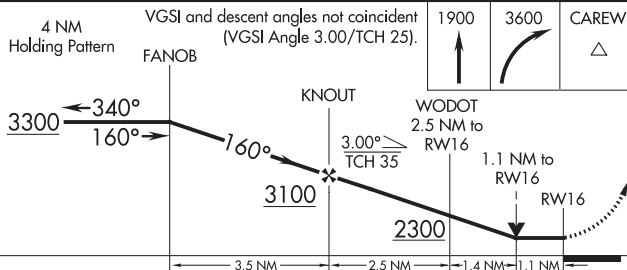
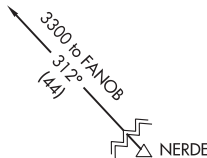
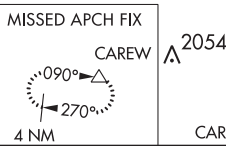
MINNEAPOLIS CENTER  
**124.2 270.3**

CTAF  
**122.9**



Procedure NA for arrivals at NERDE on V430 eastbound.

Procedure NA for arrivals at CAREW on V430 westbound.



CATEGORY	A	B	C	D
LNVA MDA	1860-1	379 (400-1)		NA
CIRCLING	1900-1 418 (500-1)	1940-1 458 (500-1)		NA

MIRL Rwy 16-34

CANDO, NORTH DAKOTA  
Orig 20AUG15

48°29'N-99°14'W

# CANDO MUNI (9D7) RNAV (GPS) RWY 16

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CARRINGTON, NORTH DAKOTA

AL-9235 (FAA)

15148

WAAS CH <b>70631</b> <b>W31A</b>	APP CRS <b>313°</b>	Rwy Idg TDZE Apt Elev	<b>4198</b> <b>1606</b> <b>1607</b>
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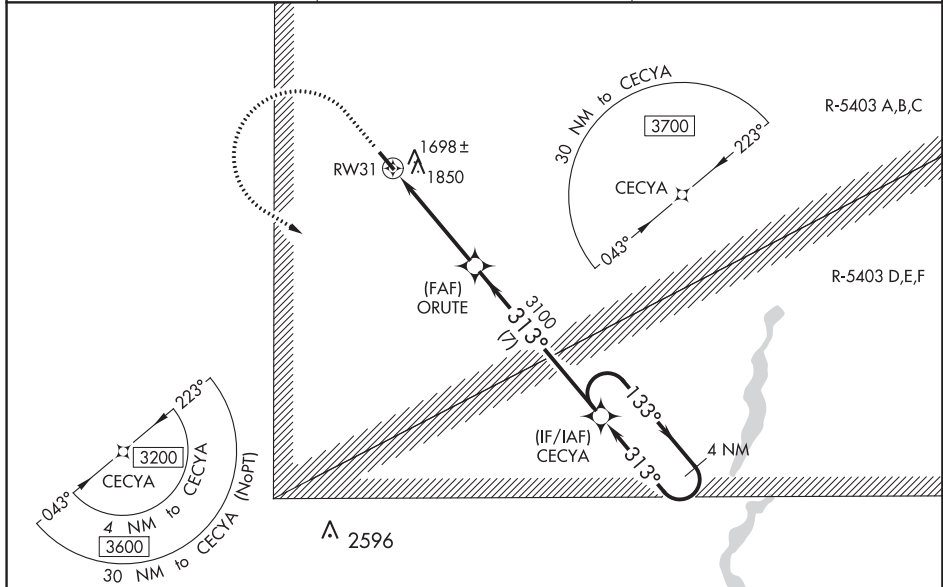
# RNAV (GPS) RWY 31

CARRINGTON MUNI (46D)

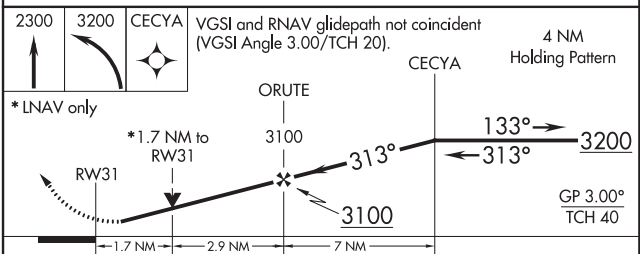
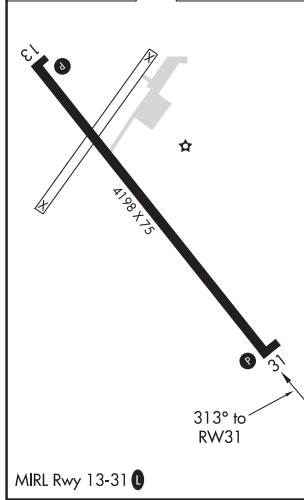
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA. Circling Rwy 13 NA at night. VDP and Baro-VNAV NA with Jamestown altimeter setting. When local altimeter setting not received, use Jamestown altimeter setting and increase all DA and MDA 100 feet, increase LPV all Cats visibility 1/8 mile; LNAV/VNAV all Cats visibility 3/8 mile; LNAV Cat C visibility 1/4 mile and Circling Cat C visibility 3/8 mile.

**MISSED APPROACH:** Climb to 2300 then climbing left turn to 3200 direct CECYA and hold.

AWOS-3 <b>118.575</b>	MINNEAPOLIS CENTER <b>124.2 270.3</b>	CTAF <b>122.9</b> <b>⓪</b>
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ELEV 1607	TDZE 1606
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CATEGORY	A	B	C	D
LPV DA	1856-1	250 (300-1)		NA
LNAV/VNAV DA	2050-1½	444 (500-1½)		NA
LNAV MDA	2160-1	554 (600-1)	2160-1½ 554 (600-1½)	NA
<b>⓪</b> CIRCLING	2200-1	593 (600-1)	2200-1½ 593 (600-1½)	NA

CARRINGTON, NORTH DAKOTA  
Orig-A 28MAY15

47°27'N-99°09'W

# CARRINGTON MUNI (46D) RNAV (GPS) RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



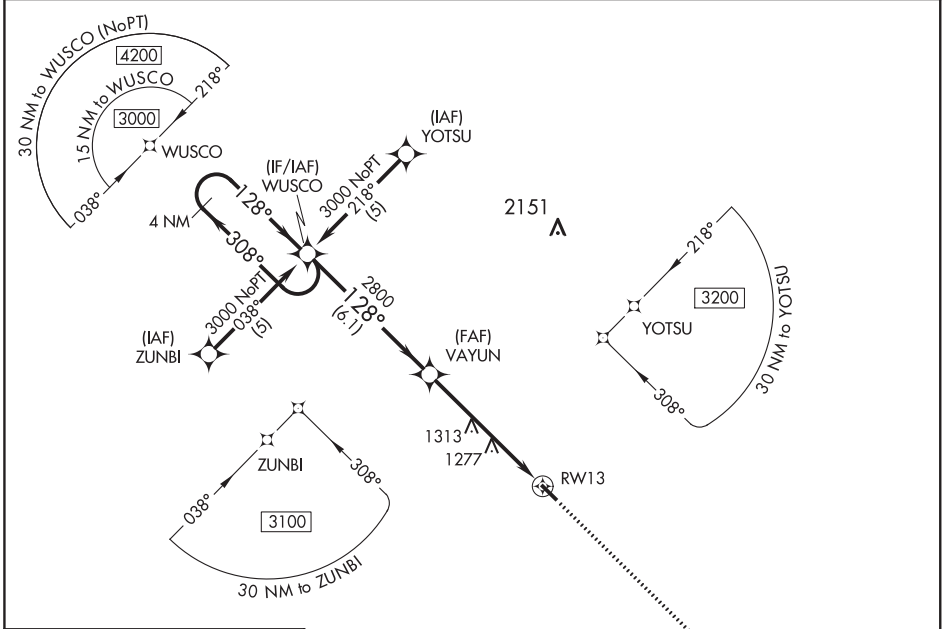
APP CRS	Rwy Idg	<b>3900</b>
<b>128°</b>	TDZE	<b>933</b>
	Apt Elev	<b>933</b>

# RNAV (GPS) RWY 13

CASSELTON ROBERT MILLER RGNL (5N8)

**▽** Use Fargo altimeter setting; when not received use Morehead altimeter setting and increase all MDA 20 feet.  
**▲ NA** MISSED APPROACH: Climb to 3000 direct JINPU and hold.

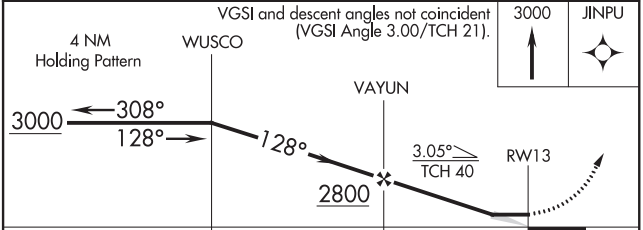
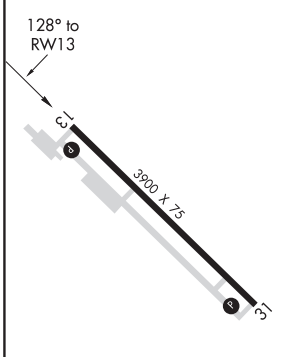
FARGO ASOS <b>124.5</b>	FARGO APP CON <b>120.4 377.15</b>	UNICOM <b>122.8 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 933	TDZE 933
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CATEGORY	A	B	C	D
LNAV MDA	1620-1	687 (700-1)	1620-2 687 (700-2)	NA
CIRCLING	1620-1	687 (700-1)	1620-2 687 (700-2)	NA

CASSELTON, NORTH DAKOTA

AL-6950 (FAA)

15232

WAAS CH <b>53607</b> <b>W31A</b>	APP CRS <b>308°</b>	Rwy Idg <b>3900</b> TDZE <b>933</b> Apt Elev <b>933</b>
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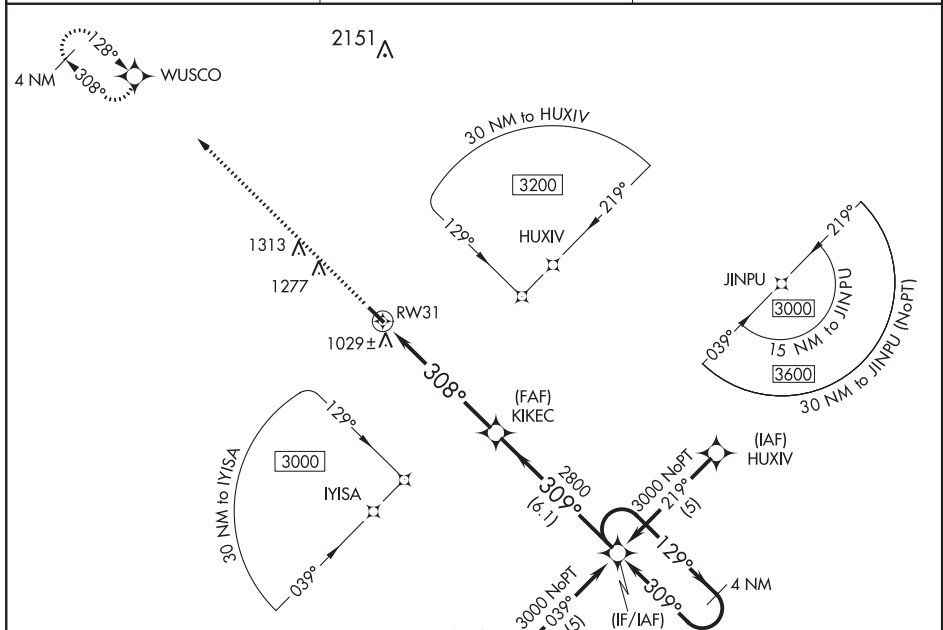
# RNAV (GPS) RWY 31

CASSELTON ROBERT MILLER RGNL (5N8)

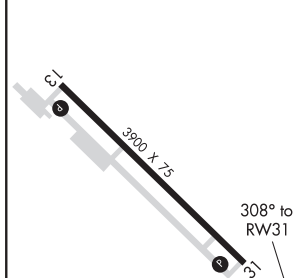
**▲** Use Fargo altimeter setting; when not received, use Morehead altimeter setting and increase all DA 11 feet and all MDA 20 feet, increase LNAV Cat C visibility ¼ mile. Baro-VNAV NA. Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.

**▲** NA MISSED APPROACH: Climb to 3000 direct WUSCO and hold.

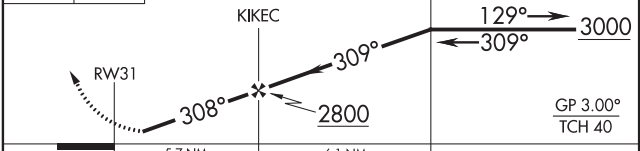
FARGO ASOS <b>124.5</b>	FARGO APP CON <b>120.4 377.15</b>	UNICOM <b>122.8 (CTAF) 1</b>
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ELEV 933	TDZE 933
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3000 WUSCO VGSi and RNAV glidepath not coincident (VGSi Angle 3.00/TCH 26). 4 NM Holding Pattern



CATEGORY	A	B	C	D
LPV DA	1226-1 293 (300-1)			NA
LNAV/VNAV DA	1370-1½ 437 (500-1½)			NA
LNAV MDA	1420-1	487 (500-1)	1420-1¼ 487 (500-1¼)	NA
CIRCLING	1420-1	487 (500-1)	1420-1½ 487 (500-1½)	NA

REIL Rwy 31 **1**  
MIRL Rwy 13-31 **1**

CASSELTON, NORTH DAKOTA  
Amdt 1 31JUL08

46°51'N-97°12'W

# RNAV (GPS) RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

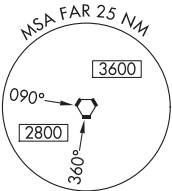
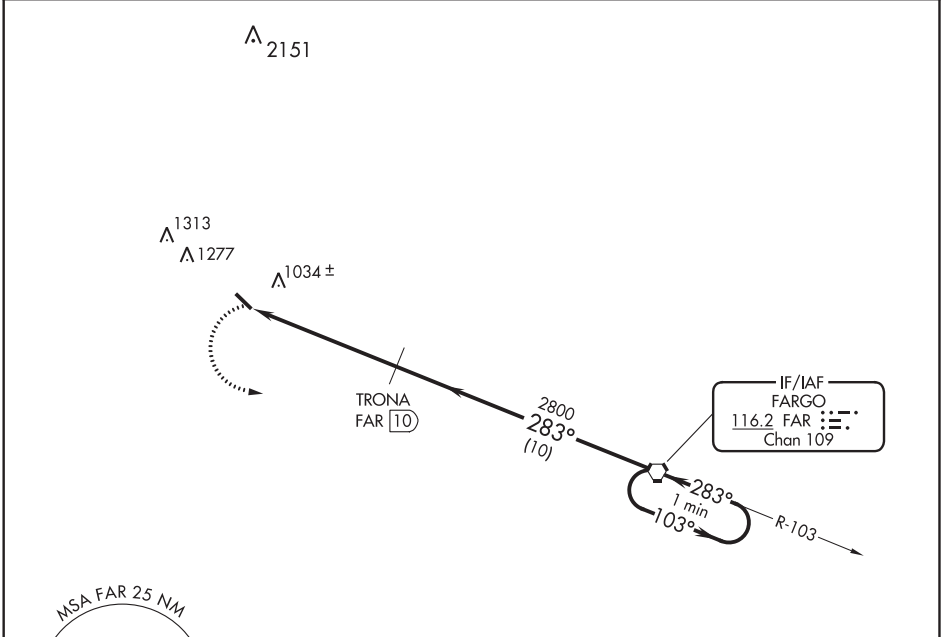
VORTAC FAR <b>116.2</b> Chan <b>109</b>	APP CRS <b>283°</b>	Rwy Idg <b>3900</b> TDZE <b>929</b> Apt Elev <b>933</b>
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# VOR/DME RWY 31

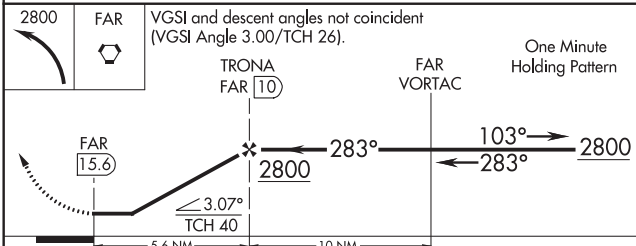
CASSELTON ROBERT MILLER RGNL (5N8)

**▼** Use Fargo altimeter setting; if not received, use Morehead altimeter setting.  
**▲ NA** MISSED APPROACH: Climbing left turn to 2800 direct FAR VORTAC and hold.

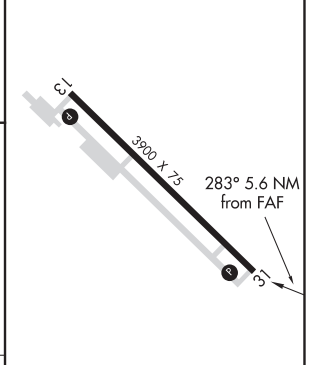
FARGO ASOS <b>124.5</b>	FARGO APP CON <b>120.4 377.15</b>	UNICOM <b>122.8 (CTAF) 0</b>
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2800 FAR VGS1 and descent angles not coincident (VGS1 Angle 3.00/TCH 26). One Minute Holding Pattern.



ELEV 933	TDZE 929
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CATEGORY	A	B	C	D
S-31	1360-1	431 (500-1)	1360-1½ 431 (500-1½)	NA
CIRCLING	1400-1	467 (500-1)	1400-1½ 467 (500-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>45630</b> <b>W34A</b>	APP CRS <b>340°</b>	Rwy Idg <b>3299</b> TDZE <b>892</b> Apt Elev <b>892</b>
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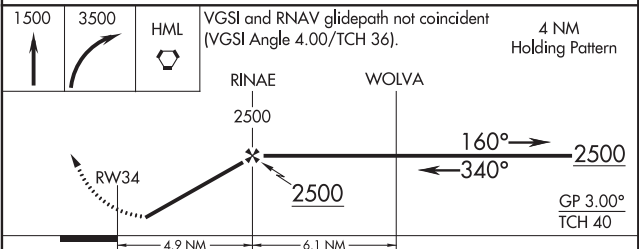
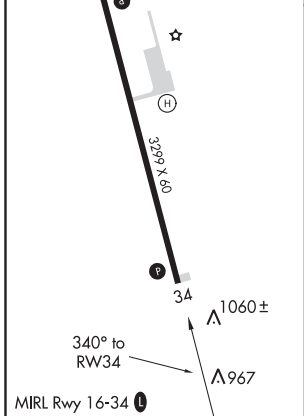
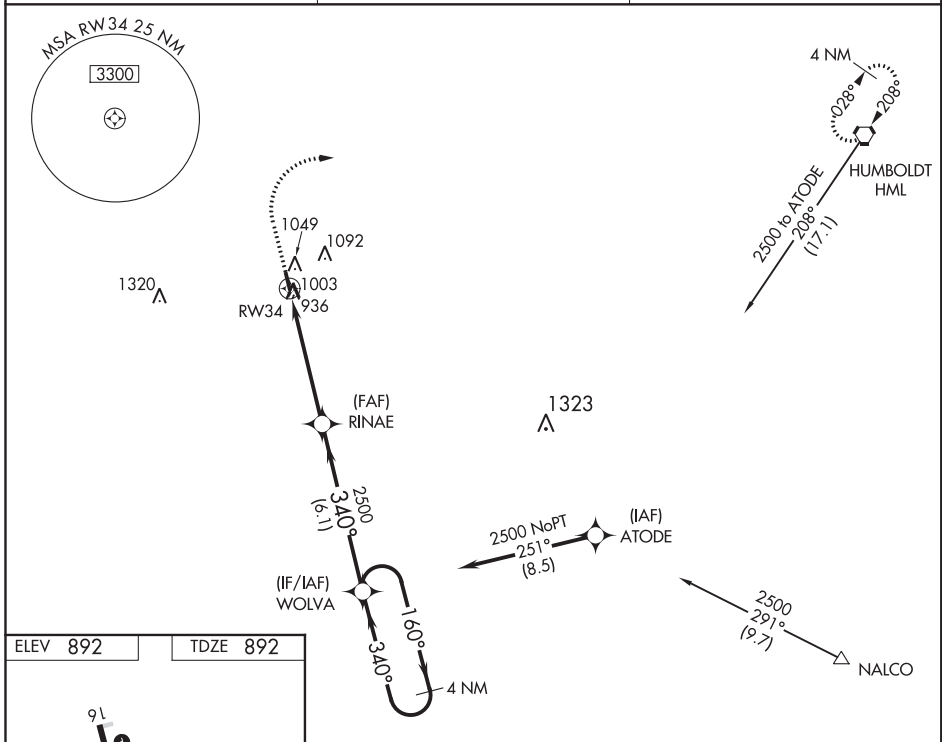
# RNAV (GPS) RWY 34

CAVALIER MUNI (2C8)

**⚠** When local altimeter setting not received, Use Hallock altimeter setting and increase all DA to 1 230 feet; increase LPV all Cats visibility 1/8 mile; increase all MDA 80 feet and increase Cat C visibility 1/8 mile. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

**⚠** MISSED APPROACH: Climb to 1500 then climbing right turn to 3500 direct HML VORTAC and hold.

AWOS-3 <b>118.275</b>	GRAND FORKS RADIO <b>122.3</b>	UNICOM <b>122.8</b> (CTAF) <b>📻</b>
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CATEGORY	A	B	C	D
LPV DA	1157-1 265 (300-1)			NA
LNAV MDA	1440-1	548 (600-1)	1440-1½ 548 (600-1½)	NA
CIRCLING	1440-1	548 (600-1)	1440-1½ 548 (600-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

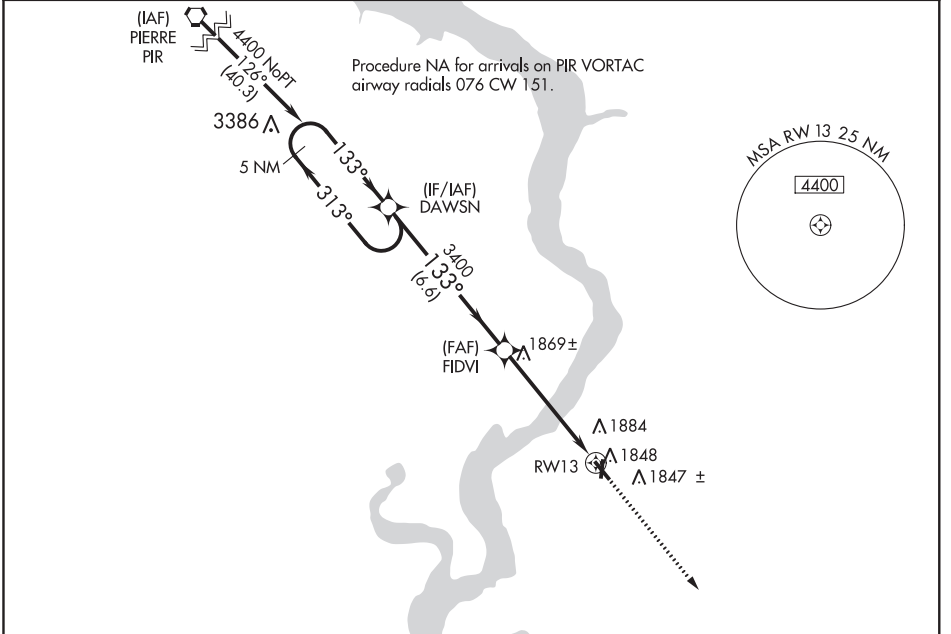
APP CRS <b>133°</b>	Rwy Idg <b>4299</b>
	TDZE <b>1688</b>
	Apt Elev <b>1695</b>

# RNAV (GPS) RWY 13

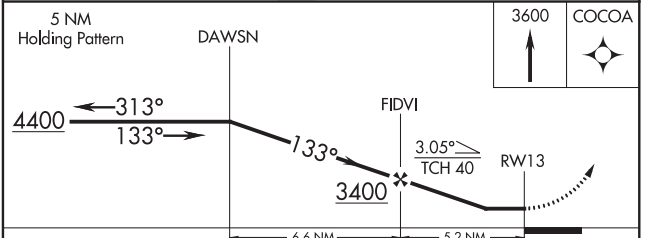
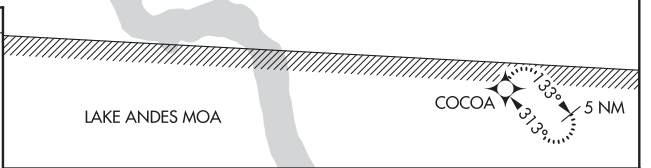
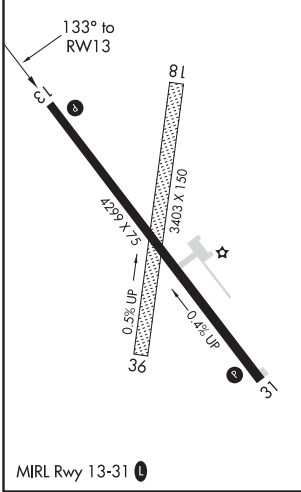
CHAMBERLAIN MUNI (9V9)

<p><b>▼</b> DME/DME RNP-0.3 NA.</p> <p><b>▲</b> NA Use Winner altimeter setting; if not received, use Pierre Rgnl altimeter setting and increase all MDAs 20 feet.</p> <p>When VGSI inoperative, Straight-in/Circling Rwy 13 NA at night.</p>	MISSED APPROACH: Climb to 3600 direct COCOA and hold.
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AWOS-3P <b>118.025</b>	MINNEAPOLIS CENTER <b>125.1 269.1</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1695	TDZE 1688
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CATEGORY	A	B	C	D
LNAV MDA	2240-1	552 (600-1)	NA	
CIRCLING	2360-1	665 (700-1)	NA	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

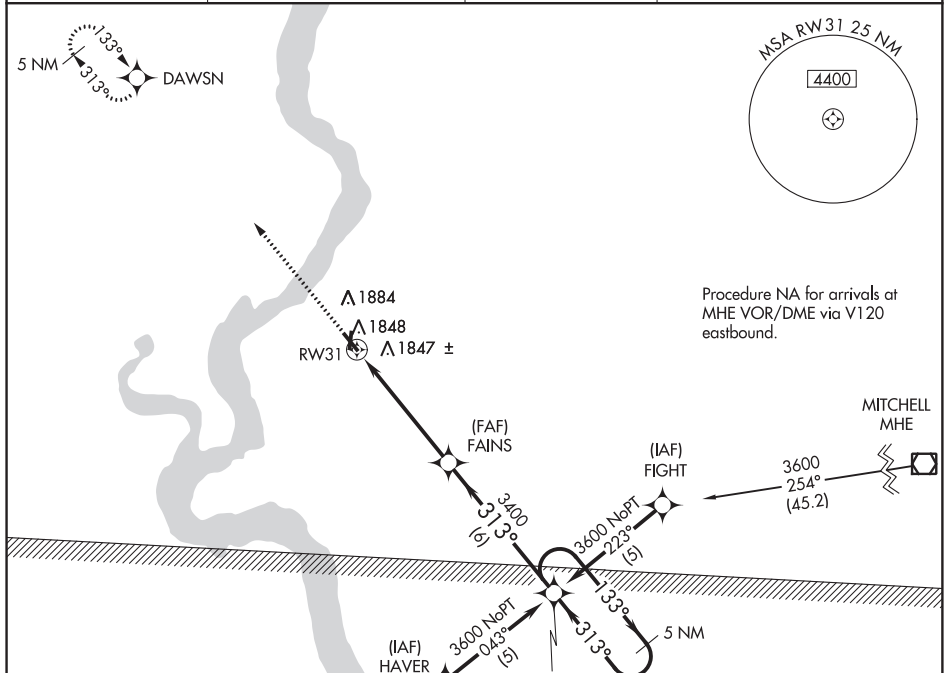
APP CRS <b>313°</b>	Rwy Idg <b>4299</b>
	TDZE <b>1684</b>
	Apt Elev <b>1695</b>

# RNAV (GPS) RWY 31

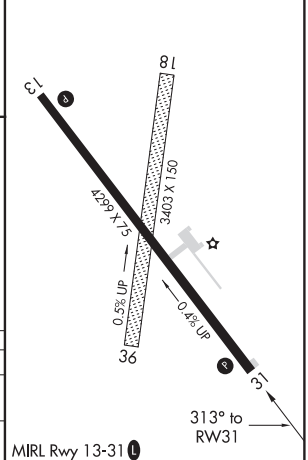
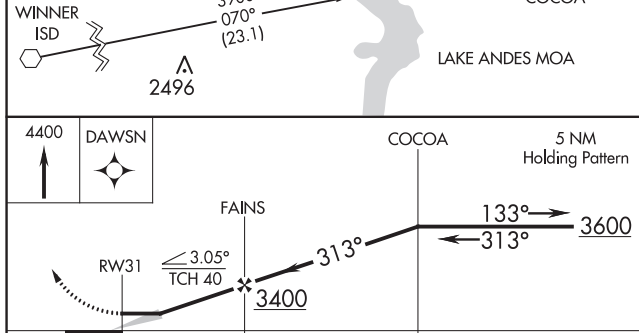
CHAMBERLAIN MUNI (9V9)

<p><b>▼</b> DME/DME RNP-0.3 NA. Use Winner altimeter setting; if not received, use Pierre Rgnl altimeter setting and increase all MDAs 20 feet.</p> <p><b>▲</b> NA</p>	<p>MISSED APPROACH: Climb to 4400 direct DAWSN and hold.</p>
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AWOS-3P <b>118.025</b>	MINNEAPOLIS CENTER <b>125.1 269.1</b>	GCO <b>121.725</b>	UNICOM <b>122.8</b> (CTAF) <b>0</b>
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ELEV 1695	TDZE 1684
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CATEGORY	A	B	C	D
LNNAV MDA	2220-1	536 (600-1)	NA	
CIRCLING	2360-1	665 (700-1)	NA	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>97529</b> <b>W17A</b>	APP CRS <b>180°</b>	Rwy Idg TDZE <b>1279</b> Apt Elev <b>1279</b>	<b>4002</b>
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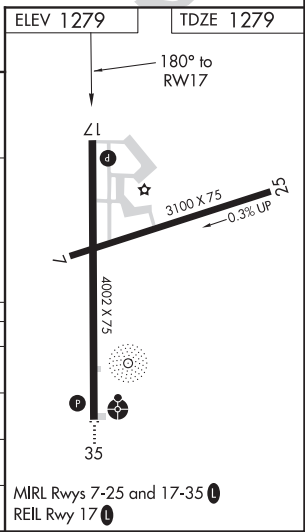
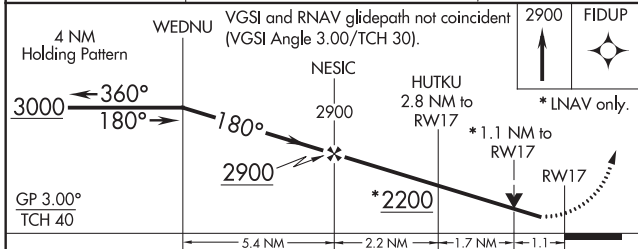
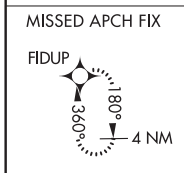
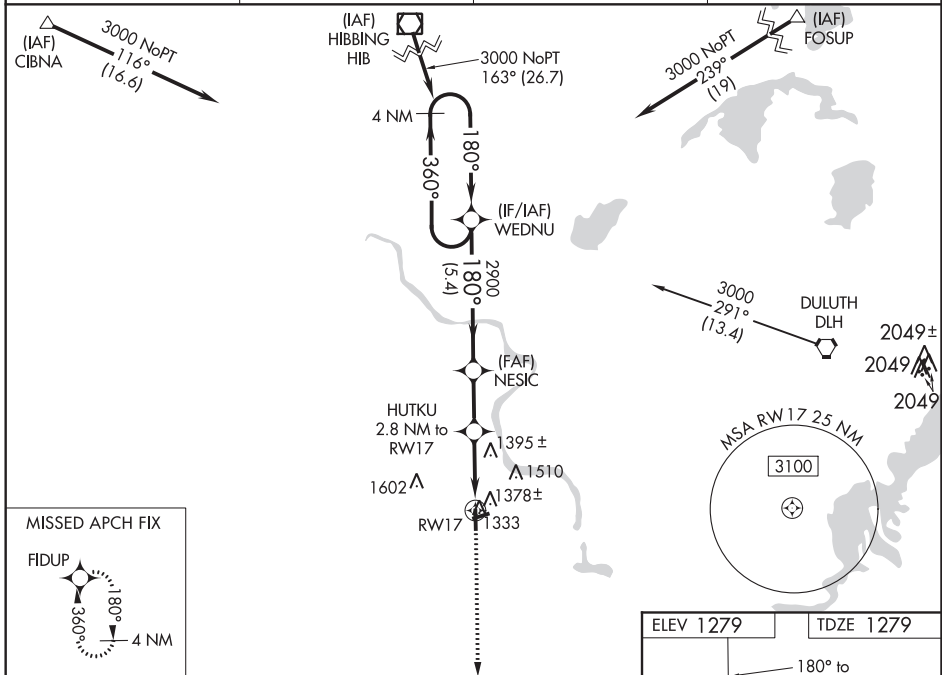
# RNAV (GPS) RWY 17

CLOQUET CARLTON COUNTY (COQ)

**⚠** Baro-VNAV NA when using Duluth altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA. VDP NA with Duluth altimeter setting. When local altimeter setting not received, use Duluth Intl altimeter setting and increase all DA/MDA 60 feet; increase LPV all Cats visibility 1/8 and LNAV and Circling Cat C visibility 1/4 mile. Night landing: Rwy 7, 25 NA.

**⚠** MISSED APPROACH: Climb to 2900 direct FIDUP and hold.

AWOS-3 <b>118.525</b>	DULUTH APP CON <b>125.45 233.7</b>	CLNC DEL <b>122.15</b>	UNICOM <b>122.8 (CTAF) ①</b>
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CATEGORY	A	B	C	D
LPV DA	1557-1	278 (300-1)		NA
LNAV/VNAV DA	1529-1	250 (300-1)		NA
LNAV MDA	1660-1	381 (400-1)	1660-1 1/8 381 (400-1 1/8)	NA
CIRCLING	1700-1 421 (500-1)	1780-1 501 (600-1)	1860-1 1/2 581 (600-1 1/2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>82429</b> W35A	APP CRS <b>360°</b>	Rwy Idg TDZE Apt Elev	<b>4002</b> <b>1279</b> <b>1279</b>
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# RNAV (GPS) RWY 35

CLOQUET CARLTON COUNTY (COQ)

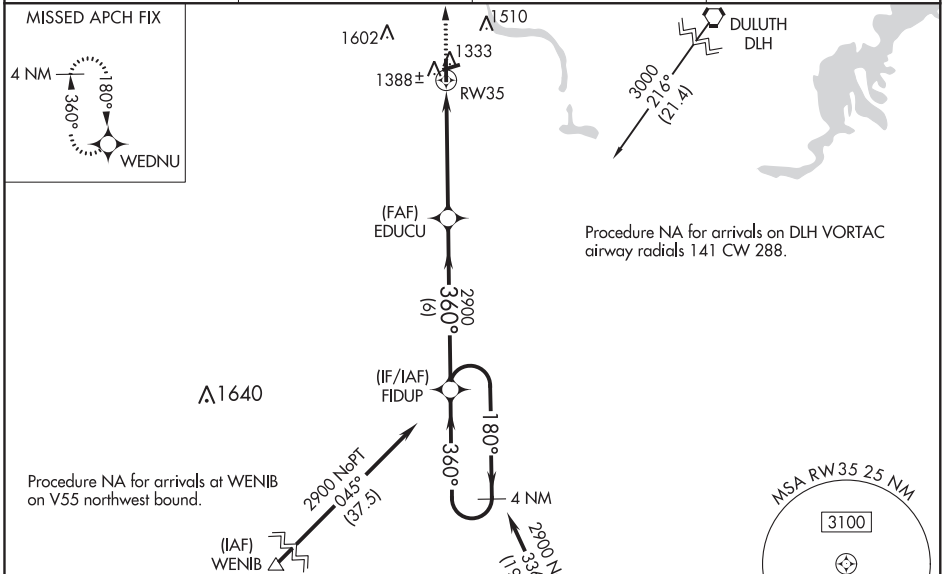
**⚠** Baro-VNAV NA when using Duluth Intl altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. VDP NA when using Duluth Intl altimeter setting. When local altimeter setting not received, use Duluth Intl altimeter setting and increase all DA/MDA 60 feet; increase LNAV/VNAV all Cats visibility 1/8, LNAV and Circling Cat C visibility 1/4 mile. Inop table does not apply. Night landing: Rwy 7, 25 NA.

ODALS

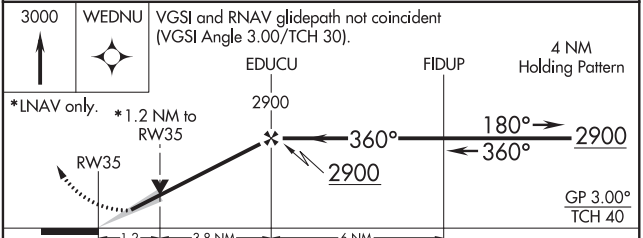
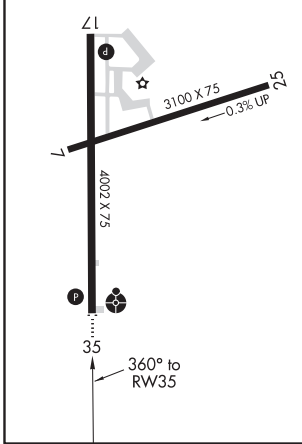


MISSED APPROACH: Climb to 3000 direct WEDNU and hold.

AWOS-3 <b>118.525</b>	DULUTH APP CON <b>125.45 233.7</b>	CLNC DEL <b>122.15</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1279	TDZE 1279
MIRL Rwy 7-25 and 17-35	
REIL Rwy 17	



CATEGORY	A	B	C	D
LPV DA	1529-1	250 (300-1)		NA
LNAV/VNAV DA	1545-1	266 (300-1)		NA
LNAV MDA	1680-1	401 (500-1)	1680-1/8 401 (500-1/8)	NA
CIRCLING	1700-1 421 (500-1)	1780-1 501 (600-1)	1860-1/2 581 (600-1/2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



NDB COQ <b>335</b>	APP CRS <b>174°</b>	Rwy Idg TDZE Apt Elev	<b>4002</b> <b>1279</b> <b>1279</b>
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# NDB RWY 17

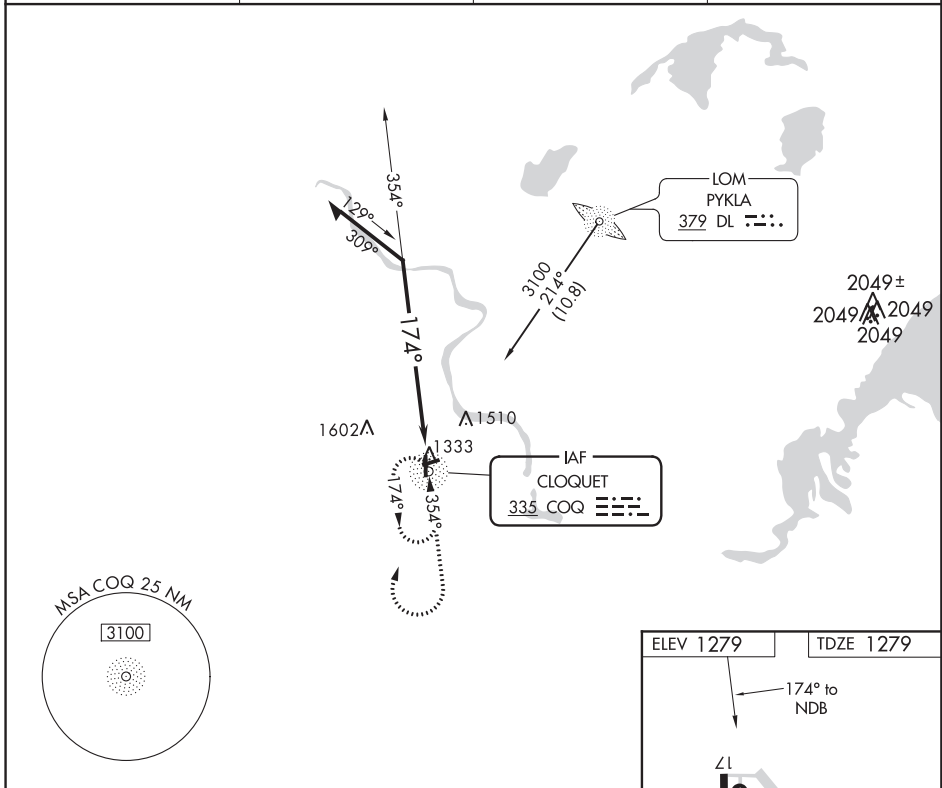
CLOQUET CARLTON COUNTY (COQ)

**▼** Helicopter visibility reduction below 3/4 SM NA. When local altimeter setting not received, use Duluth Intl altimeter setting and increase all MDA 60 feet; increase S-17 Cat B and Circling Cat B/C visibility 1/4 mile. Night landing: Rwy 7, 25 NA.

**▲ NA**

**MISSED APPROACH:** Climb to 2700 then climbing right turn to 3100 direct COQ NDB and hold.

AWOS-3 <b>118.525</b>	DULUTH APP CON <b>125.45 233.7</b>	CLNC DEL <b>122.15</b>	UNICOM <b>122.8 (CTAF)</b> <b>①</b>
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Remain within 10 NM

COQ NDB

3100

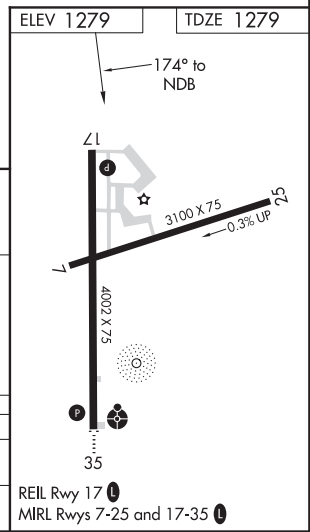
354°

174°

2700

3100

COQ



CATEGORY	A	B	C	D
S-17	1960-1	681 (700-1)	1960-2 681 (700-2)	NA
CIRCLING	1960-1	681 (700-1)	1960-2 681 (700-2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

CLOQUET, MINNESOTA

AL-5478 (FAA)

16315

NDB COQ	APP CRS	Rwy Idg	<b>4002</b>
<b>335</b>	<b>009°</b>	TDZE	<b>1279</b>
		Apt Elev	<b>1279</b>

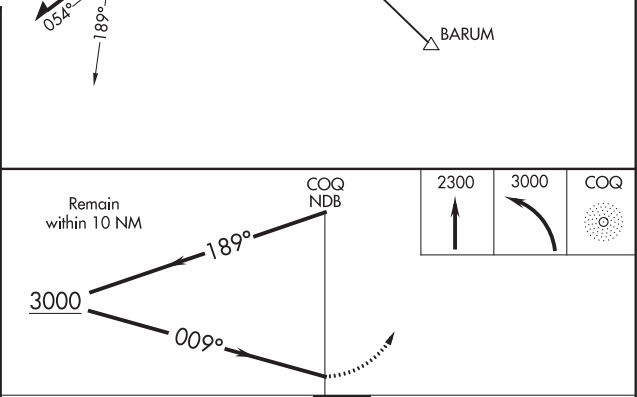
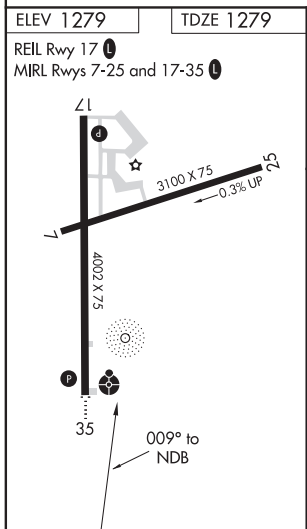
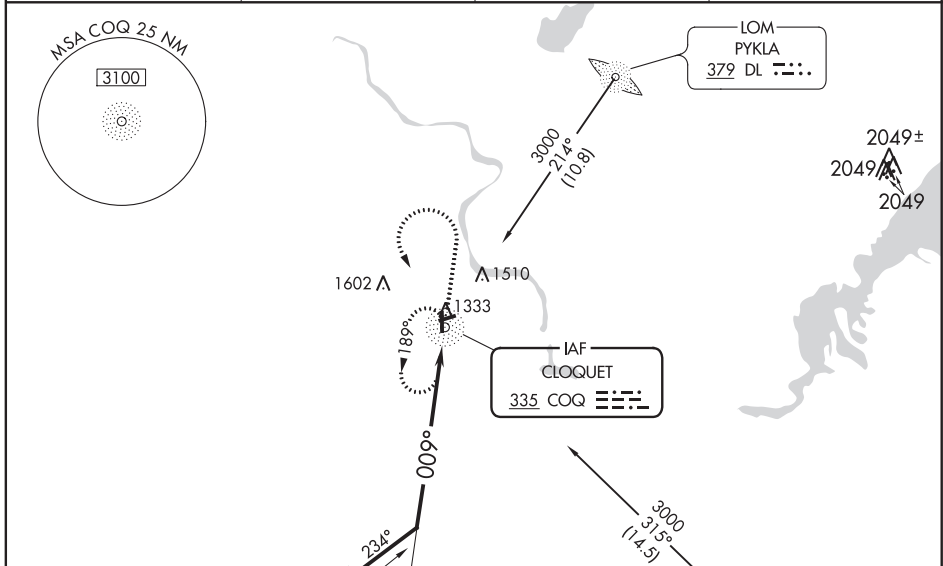
# NDB RWY 35

CLOQUET CARLTON COUNTY (COQ)

**NA** When local altimeter setting not received, use Duluth Intl altimeter setting and increase all MDA 60 feet; increase S-35 and Circling Cat C visibility 1/8 mile. Inoperative table does not apply to S-35 Cat A/B. For inoperative ODALS, increase S-35 Cat C visibility to 1 3/4 mile. For inoperative ODALS when using Duluth Intl altimeter setting increase S-35 Cat C visibility to 1 1/8 mile. Night Landing: Rwy 7, 25 NA.

**ODALS** MISSED APPROACH: Climb to 2300 then climbing left turn to 3000 direct COQ NDB and hold, continue climb-in-hold to 3000.

AWOS-3 <b>118.525</b>	DULUTH APP CON <b>125.45 233.7</b>	CLNC DEL <b>122.15</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
S-35	1860-1	581 (600-1)	1860-1 1/8 581 (600-1 1/8)	NA
CIRCLING	1860-1	581 (600-1)	1860-1 1/4 581 (600-1 1/4)	NA

CLOQUET, MINNESOTA  
Amdt 5A 08JAN15

46°42'N-92°30'W

# CLOQUET CARLTON COUNTY (COQ)

## NDB RWY 35

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>58127</b> <b>W13A</b>	APP CRS <b>135°</b>	Rwy Idg TDZE Apt Elev	<b>4000</b> <b>1329</b> <b>1329</b>
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# RNAV (GPS) RWY 13

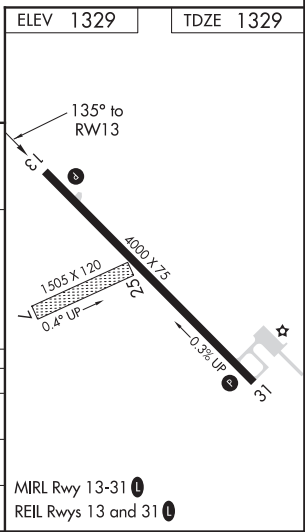
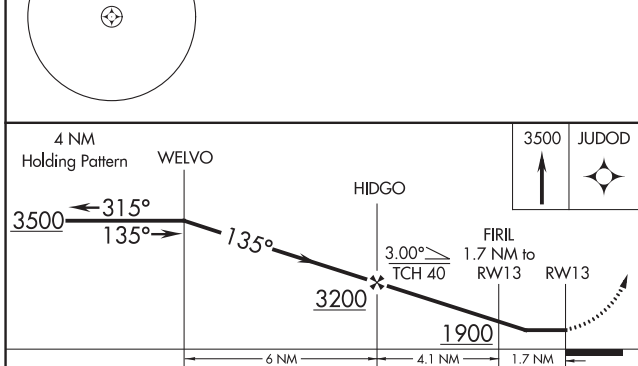
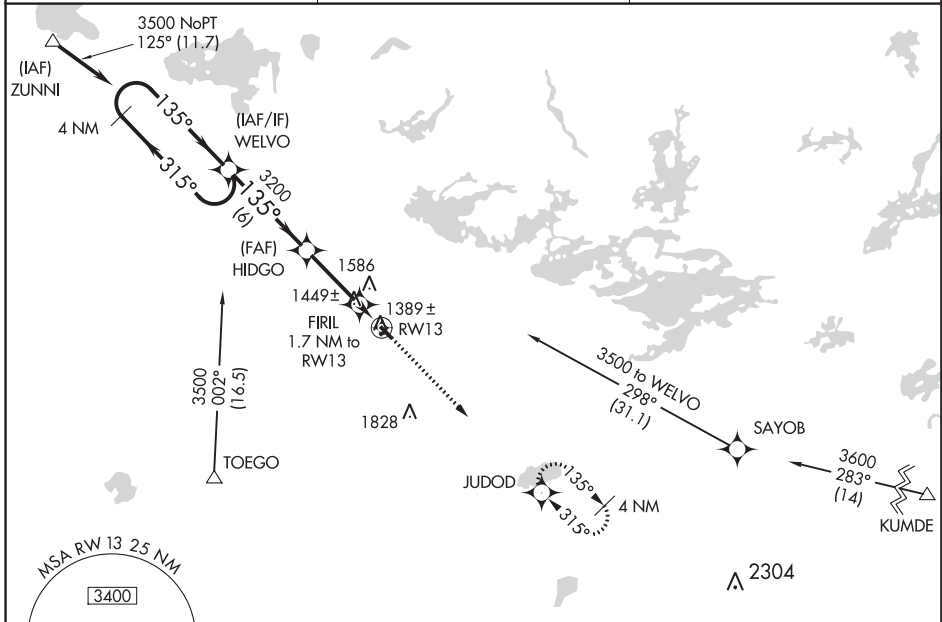
COOK MUNI (CQM)

**⚠** When VGSI inop, Circling Rwy 31 NA at night. When VGSI inop, Straight-In/ Circling Rwy 13 procedure NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Orr altimeter setting and increase all MDA 40 feet.

**❄** -37°C/-35°F

MISSED APPROACH: Climb to 3500 direct JUDOD hold.

AWOS-3 <b>118.175</b>	PRINCETON RADIO <b>122.45</b>	CTAF <b>122.9</b> <b>①</b>
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CATEGORY	A	B	C	D
LP MDA	1640-1	311 (400-1)		NA
LNAV MDA	1660-1	331 (400-1)		NA
CIRCLING	1760-1 431 (500-1)	1780-1 451 (500-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

COOK, MINNESOTA

AL-9017 (FAA)

16091

WAAS CH <b>78426</b> <b>W31A</b>	APP CRS <b>315°</b>	Rwy Idg TDZE Apt Elev	<b>4000</b> <b>1328</b> <b>1329</b>
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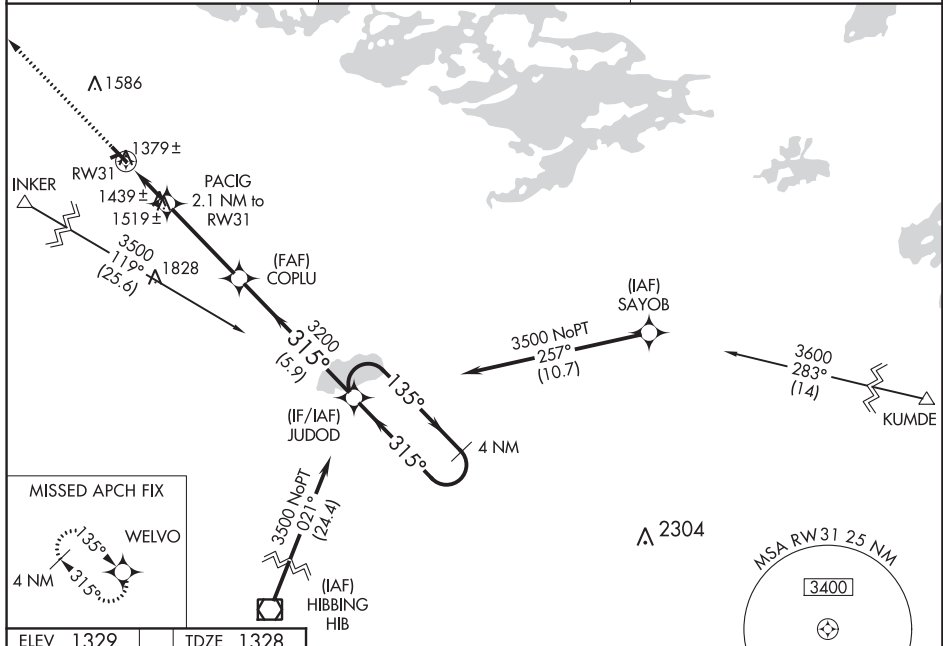
# RNAV (GPS) RWY 31

COOK MUNI (CQM)

When VGSI inop, Circling Rwy 13 NA at night. When VGSI inop, Straight-In/ Circling Rwy 31 procedure NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Orr altimeter setting and increase all MDA 40 feet.

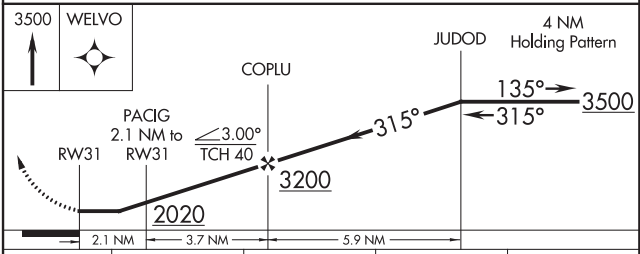
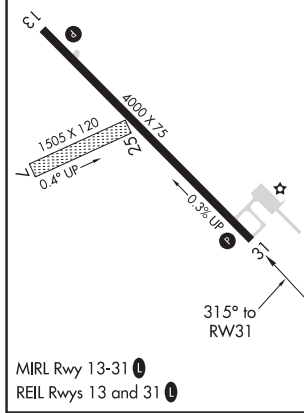
MISSED APPROACH: Climb to 3500 direct WELVO and hold.

AWOS-3 <b>118,175</b>	PRINCETON RADIO <b>122,45</b>	CTAF <b>122,9</b>
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ELEV 1329	TDZE 1328
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Procedure NA for arrivals at HIB VOR/DME on V217-505 southeast bound.



CATEGORY	A	B	C	D
LP MDA	1740-1	412 (500-1)		NA
LNAV MDA	1760-1	432 (500-1)		NA
CIRCLING	1760-1 431 (500-1)	1780-1 451 (500-1)		NA

COOK, MINNESOTA  
Amdt 1A 02APR15

47°49'N-92°41'W

# COOK MUNI (CQM) RNAV (GPS) RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# RNAV (GPS) RWY 13

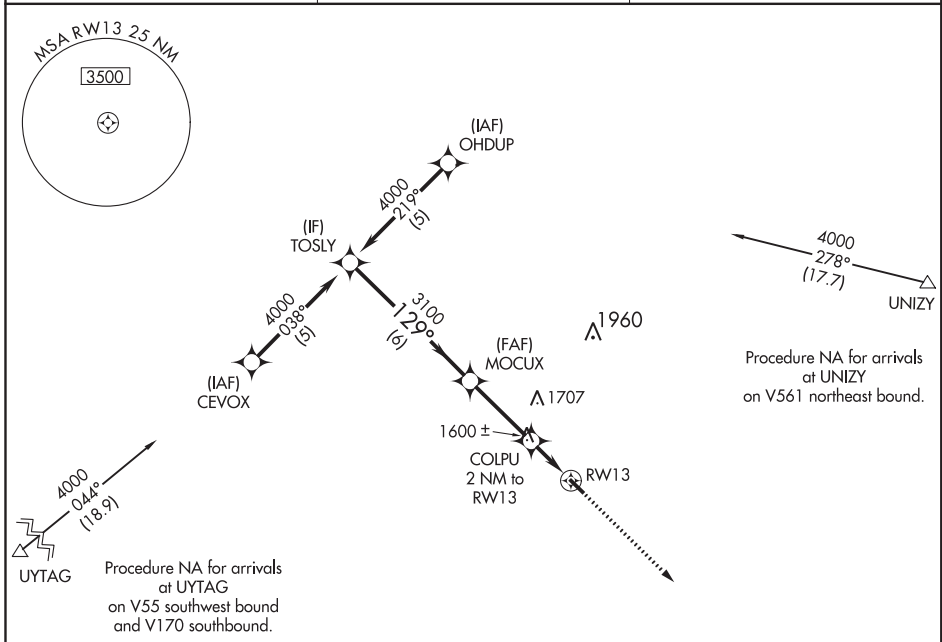
COOPERSTOWN MUNI (S32)

APP CRS <b>129°</b>	Rwy Idg TDZE Apt Elev	<b>3500</b> <b>1424</b> <b>1424</b>
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**NA** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Jamestown altimeter setting and increase all MDA 100 feet and increase LNAV Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 3100 direct RAKGU and hold.

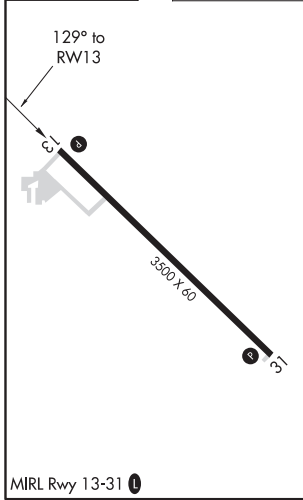
AWOS-3 <b>118.75</b>	GRAND FORKS RADIO <b>123.6</b>	CTAF <b>122.9</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1424	TDZE 1424
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TOSLY		MOCUX		COLPU 2 NM to RWY 13		RAKGU	
4000		3100		2100		3100	
6 NM		3.1 NM		2 NM		4 NM	
CATEGORY	A	B	C	D			
LNAV MDA	1860-1	436 (500-1)	1860-1¼ 436 (500-1¼)	NA			
CIRCLING	1880-1	456 (500-1)	1880-1½ 456 (500-1½)	NA			

VGSI and descent angles not coincident (VGSI Angle 3.00/TCH 25).

Procedure Turn NA

3.04° TCH 40

COOPERSTOWN, NORTH DAKOTA

AL-9020 (FAA)

15232

# RNAV (GPS) RWY 31

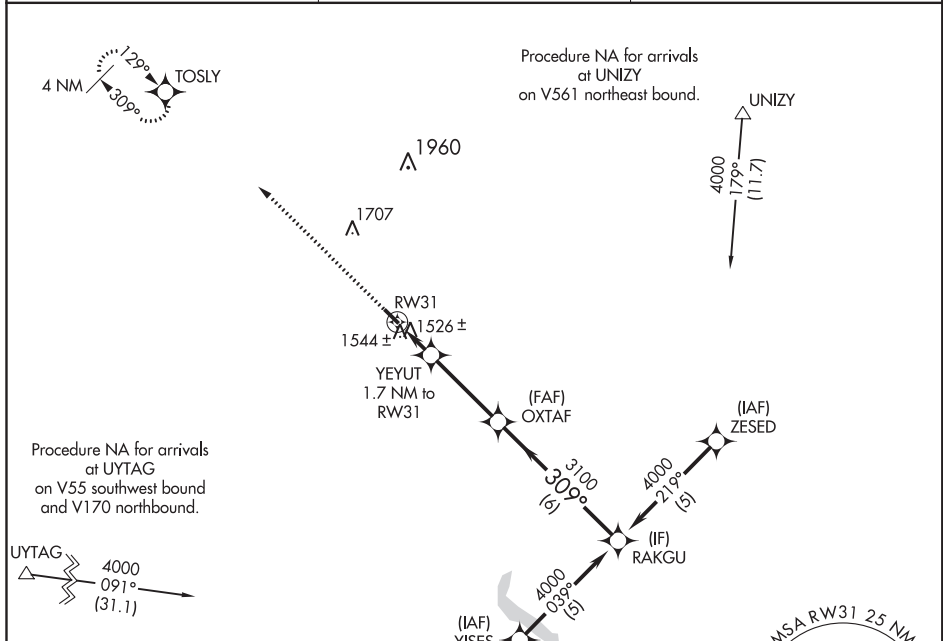
COOPERSTOWN MUNI (S32)

APP CRS	Rwy Idg	<b>3500</b>
<b>309°</b>	TDZE	<b>1424</b>
	Apt Elev	<b>1424</b>

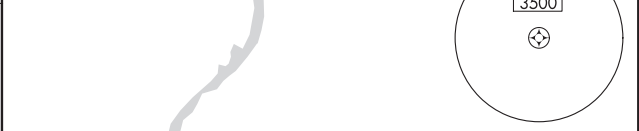
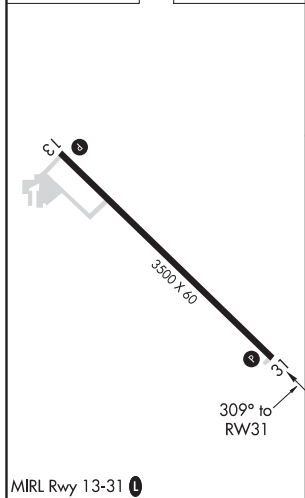
**NA** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Jamestown altimeter setting and increase all MDA 100 feet and increase LNAV Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 3200 direct TOSLY and hold.

AWOS-3 <b>118.75</b>	GRAND FORKS RADIO <b>123.6</b>	CTAF <b>122.9</b>
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ELEV 1424	TDZE 1424
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3200	TOSLY	VGSI and descent angles not coincident (VGSI Angle 3.00/TCH 25).	RAKGU
2000	YEYUT 1.7 NM to RW31	3.04° TCH 40	4000
3100			Procedure Turn NA
	Distances: 1.7 NM, 3.4 NM, 6 NM		

CATEGORY	A	B	C	D
LNAV MDA	1800-1		376 (400-1)	NA
CIRCLING	1880-1	456 (500-1)	1880-1½ 456 (500-1½)	NA

COOPERSTOWN, NORTH DAKOTA  
Orig 18NOV10

47°25'N-98°06'W

# COOPERSTOWN MUNI (S32) RNAV (GPS) RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>72704</b> <b>W13A</b>	APP CRS <b>128°</b>	Rwy Idg TDZE Apt Elev	<b>4300</b> <b>896</b> <b>900</b>
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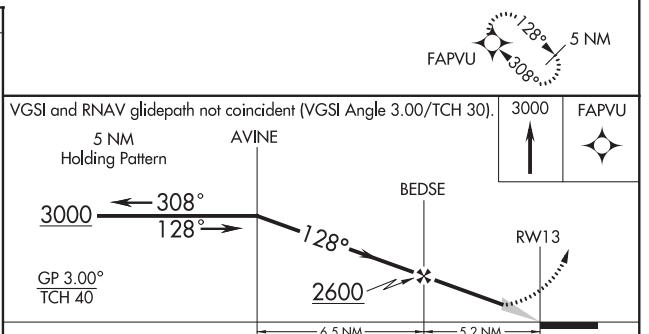
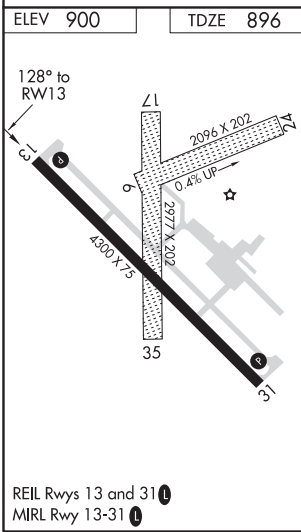
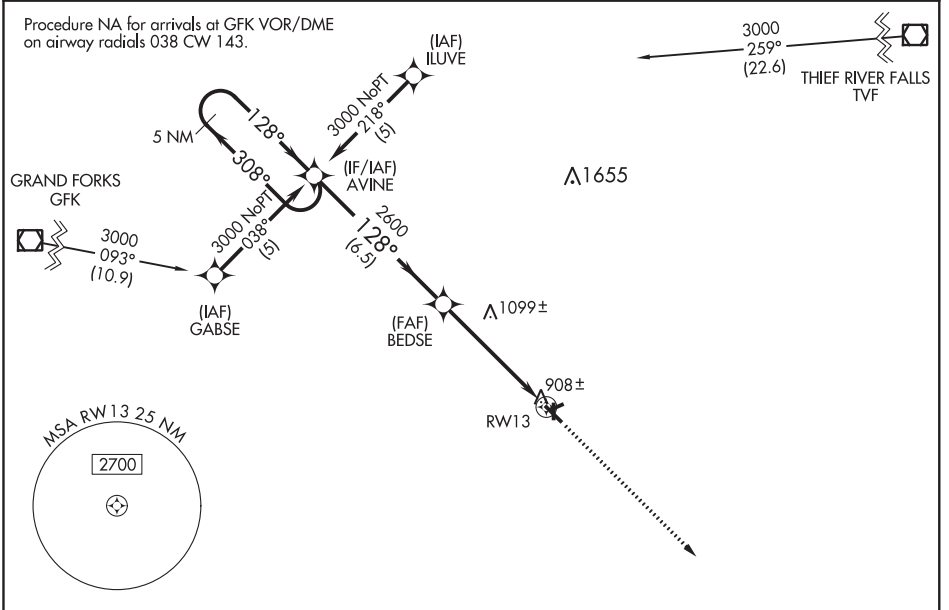
# RNAV (GPS) RWY 13

CROOKSTON MUNI-KIRKWOOD FIELD (CKN)

**⚠** Baro-VNAV NA when using Grand Forks altimeter setting.  
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA.  
 If local altimeter setting not received, use Grand Forks altimeter setting and increase all DAs 62 feet and all MDAs 80 feet.

MISSED APPROACH: Climb to 3000 direct FAPVU and hold.

AWOS-3 <b>126.425</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	CLNC DEL <b>118.15</b>	UNICOM <b>122.7 (CTAF) ①</b>
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CATEGORY	A	B	C	D
LPV DA	1146-1	250 (300-1)		NA
LNAV/VNAV DA	1210-1	314 (400-1)		NA
LNAV MDA	1360-1	464 (500-1)	1360-1¼ 464 (500-1¼)	NA
CIRCLING	1360-1	460 (500-1)	1360-1½ 460 (500-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>69304</b> <b>W31A</b>	APP CRS <b>308°</b>	Rwy Idg <b>4300</b> TDZE <b>897</b> Apt Elev <b>900</b>
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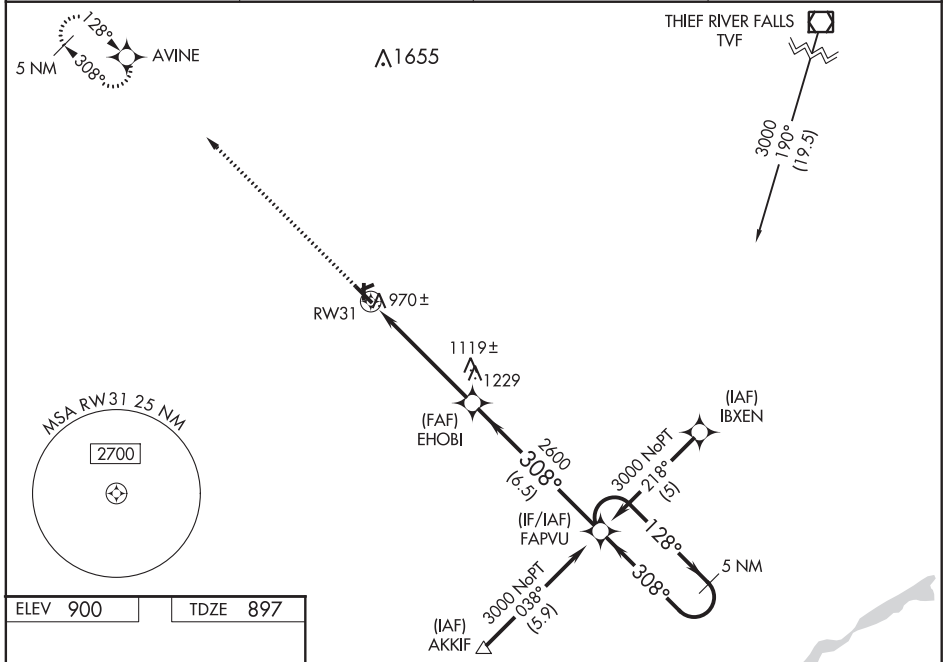
# RNAV (GPS) RWY 31

CROOKSTON MUNI-KIRKWOOD FIELD (CKN)

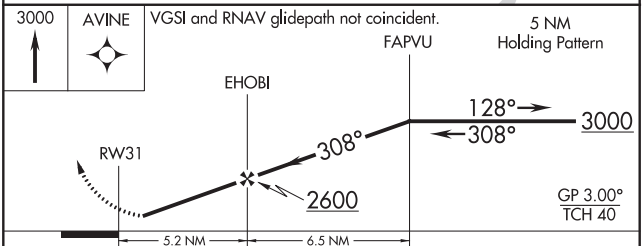
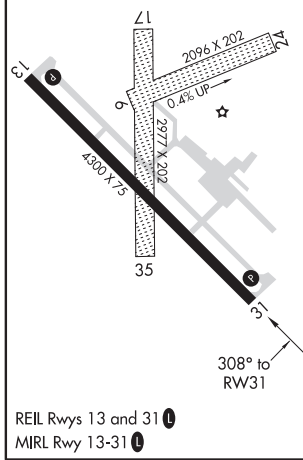
**⚠** Baro-VNAV NA when using Grand Forks altimeter setting.  
 For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F).  
 If local altimeter setting not received, use Grand Forks altimeter setting and increase all DAs 62 feet and all MDAs 80 feet.  
 DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3000 direct AVINE and hold.

AWOS-3 <b>126.425</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	CLNC DEL <b>118.15</b>	UNICOM <b>122.7 (CTAF)</b>
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ELEV 900	TDZE 897
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CATEGORY	A	B	C	D
LPV DA	1157-1 260 (300-1)			NA
LNAV/VNAV DA	1320-1½ 423 (500-1½)			NA
LNAV MDA	1380-1	483 (500-1)	1380-1¼ 483 (500-1¼)	NA
CIRCLING	1380-1	480 (500-1)	1380-1½ 480 (500-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



VOR/DME GFK <b>114.3</b> Chan <b>90</b>	APP CRS <b>097°</b>	Rwy Idg TDZE Apt Elev	<b>4300</b> <b>896</b> <b>900</b>
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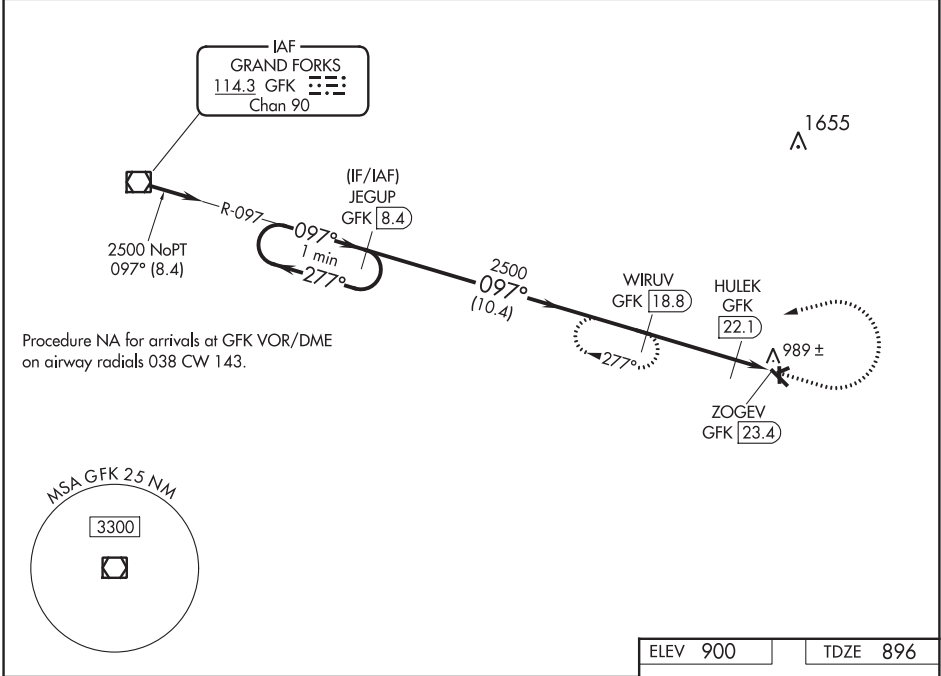
# VOR/DME RWY 13

CROOKSTON MUNI-KIRKWOOD FIELD (CKN)

**⚠** When local altimeter setting not received, use Grand Forks Intl altimeter setting.

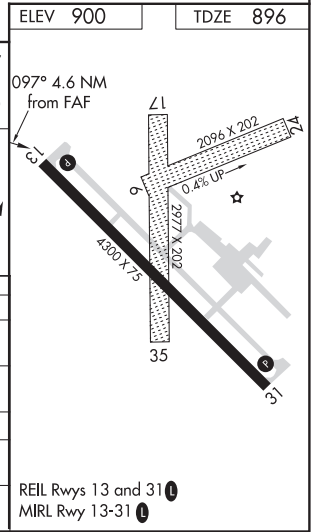
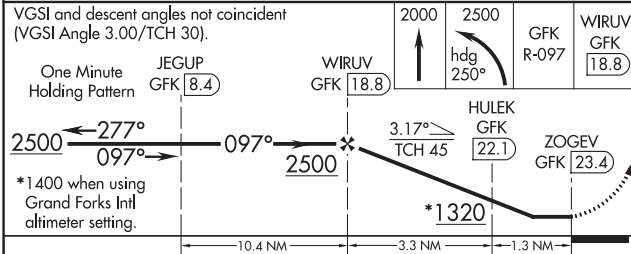
**MISSED APPROACH:** Climb to 2000 then climbing left turn to 2500 heading 250° and GFK VOR/DME R-097 to WIRUV/GFK 18.8 DME and hold.

AWOS-3 <b>126.425</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	CLNC DEL <b>118.15</b>	UNICOM <b>122.7 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D
S-13	1240-1 344 (400-1)			NA
CIRCLING	1320-1 420 (500-1)	1360-1 460 (500-1)	1360-1½ 460 (500-1½)	NA
GRAND FORKS INTL ALTIMETER MINIMUMS				
S-13	1320-1 424 (500-1)	1320-1¼ 424 (500-1¼)		NA
CIRCLING	1400-1 500 (500-1)	1400-1½ 500 (500-1½)		NA

CROOKSTON, MINNESOTA

AL-5682 (FAA)

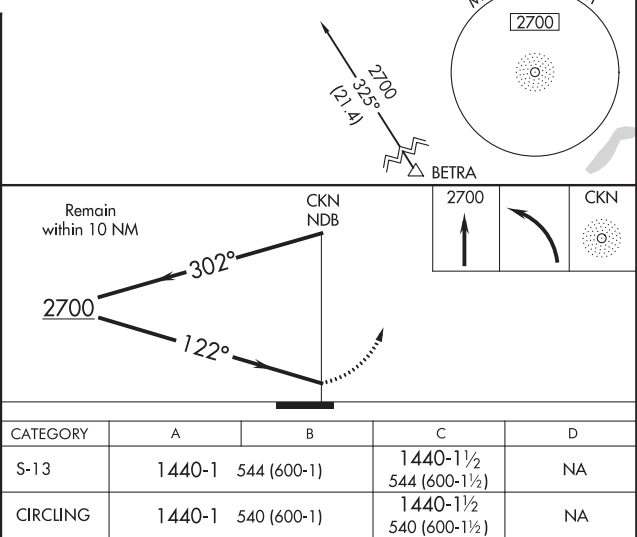
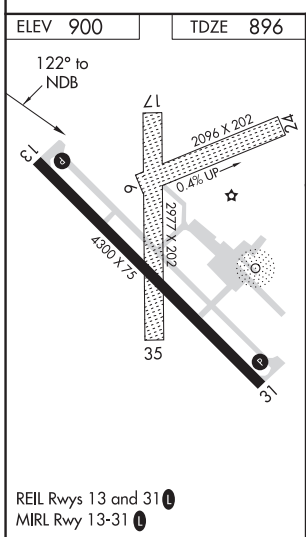
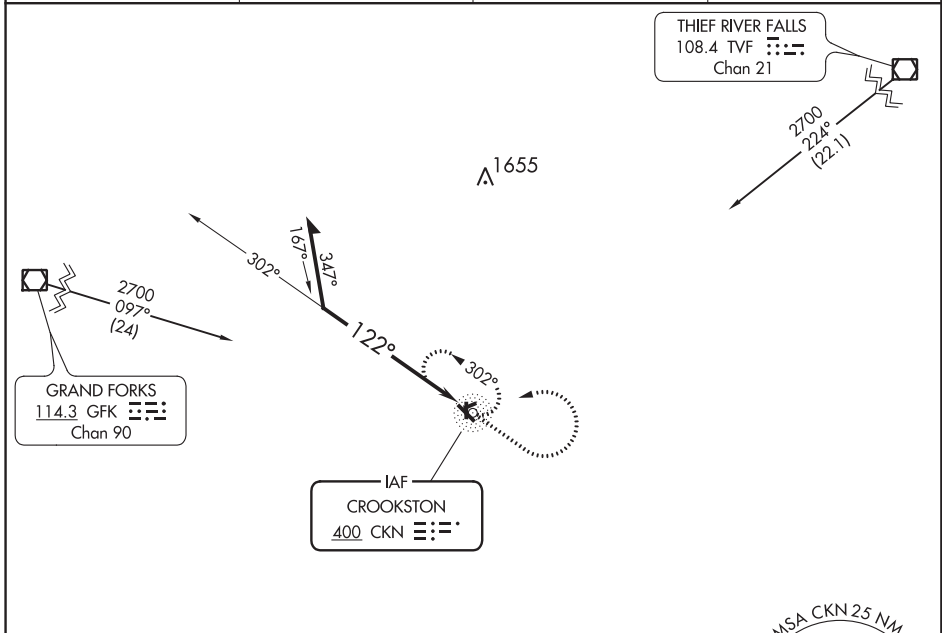
15232

NDB CKN <b>400</b>	APP CRS <b>122°</b>	Rwy Idg TDZE Apt Elev	<b>4300</b> <b>896</b> <b>900</b>
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# NDB RWY 13

CROOKSTON MUNI-KIRKWOOD FIELD (CKN)

<p><b>NA</b> When local altimeter setting not received, use Grand Forks Intl altimeter setting and increase all MDA 80 feet, increase all Cat C visibilities ¼ mile.</p>		<p>MISSED APPROACH: Climb to 2700 then left turn direct CKN NDB and hold.</p>	
AWOS-3 <b>126.425</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	CLNC DEL <b>118.15</b>	UNICOM <b>122.7 (CTAF)</b>



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

CROOKSTON, MINNESOTA  
Amdt 9 03JUN10

CROOKSTON MUNI-KIRKWOOD FIELD (CKN)  
47°51'N-96°37'W

# NDB RWY 13

APP CRS <b>304°</b>	Rwy Idg <b>3800</b>
	TDZE <b>1948</b>
	Apt Elev <b>1950</b>

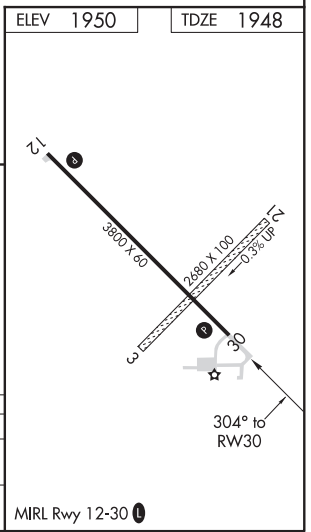
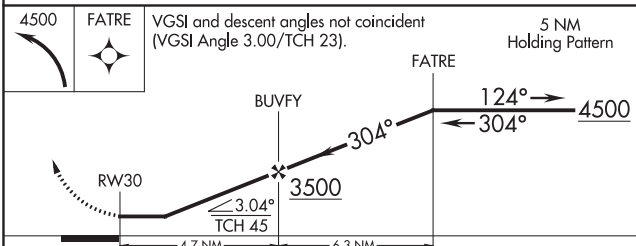
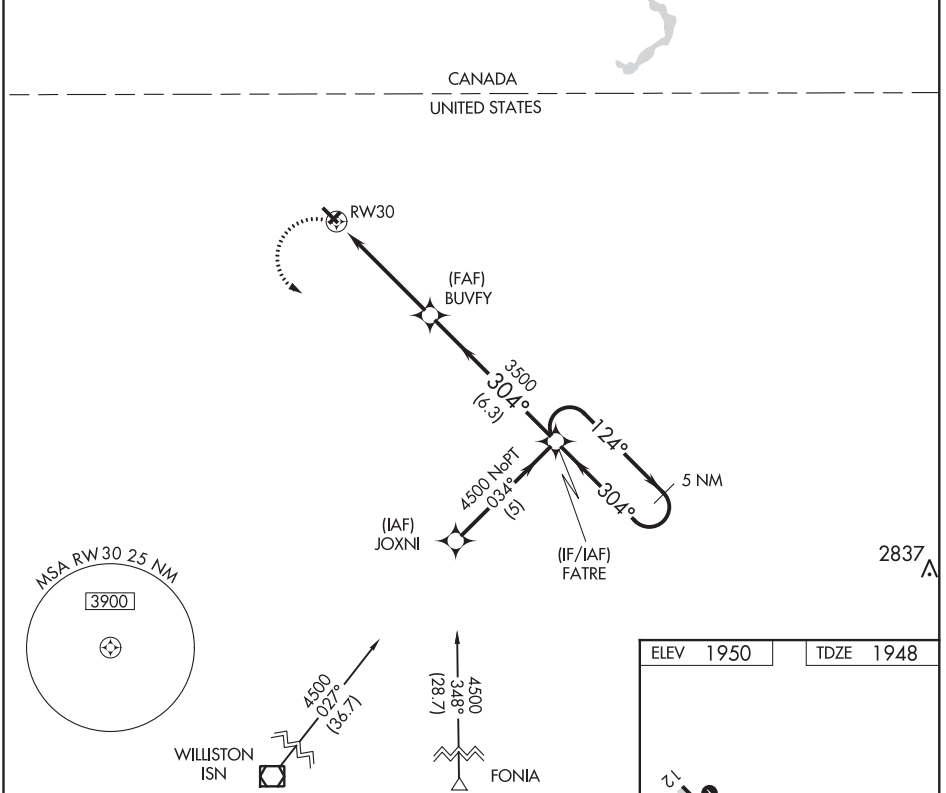
# RNAV (GPS) RWY 30

CROSBY MUNI (D50)

**▽** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Williston altimeter setting and increase all MDA 120 feet and increase LNAV Cat C and D visibility 1/4 mile, circling Cat C and D visibility 1/4 mile.

**MISSED APPROACH:**  
Climbing left turn to 4500 direct FATRE and hold.

AWOS-3 <b>118.025</b>	SALT LAKE CITY CENTER <b>126.85 305.2</b>	CTAF <b>122.9 0</b>
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CATEGORY	A	B	C	D
LNAV MDA	2560-1	612 (700-1)	2560-1 3/4 612 (700-1 3/4)	2560-2 612 (700-2)
CIRCLING	2560-1	610 (700-1)	2560-1 3/4 610 (700-1 3/4)	2560-2 610 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

APP CRS <b>135°</b>	Rwy Idg <b>4500</b>
	TDZE <b>1397</b>
	Apt Elev <b>1397</b>

# RNAV (GPS) RWY 13

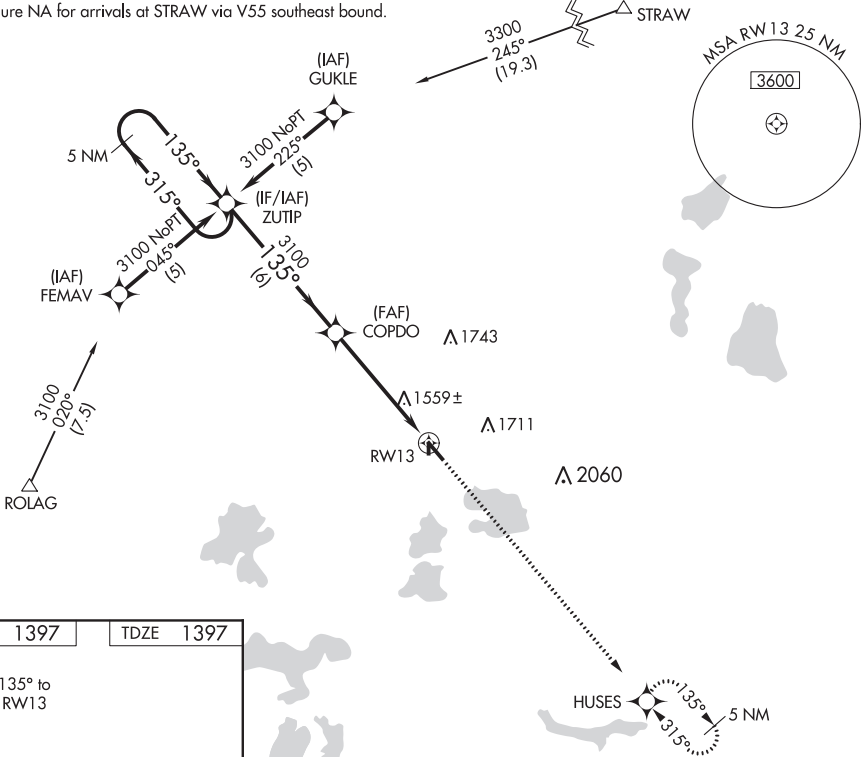
DETROIT LAKES-WETHING FIELD (DTL)

**⚠** When VGSI inoperative, straight-in/circling Rwy 13 procedure NA at night.  
**⚠** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.  
 If local altimeter setting not received, use Park Rapids altimeter setting and increase DA/MDAs 100 feet.

MISSED APPROACH: Climb to 3100 direct HUSES and hold.

AWOS-3 <b>111.2</b>	PRINCETON RADIO <b>122.5</b>	UNICOM <b>122.8 (CTAF)</b>
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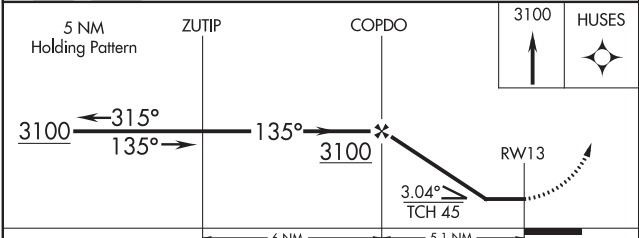
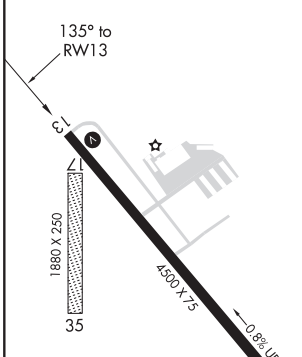
Procedure NA for arrivals at STRAW via V55 southeast bound.



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1397	TDZE 1397
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CATEGORY	A	B	C	D
LNAV MDA	1820-1	423 (500-1)	1820-1¼	423 (500-1¼)
CIRCLING	1880-1 483 (500-1)	1940-1 543 (600-1)	1940-1½ 543 (600-1½)	2080-2¼ 683 (700-2¼)

WAAS CH <b>86704</b> <b>W31A</b>	APP CRS <b>315°</b>	Rwy Idg <b>4500</b> TDZE <b>1390</b> Apt Elev <b>1397</b>
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# RNAV (GPS) RWY 31

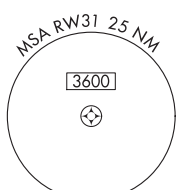
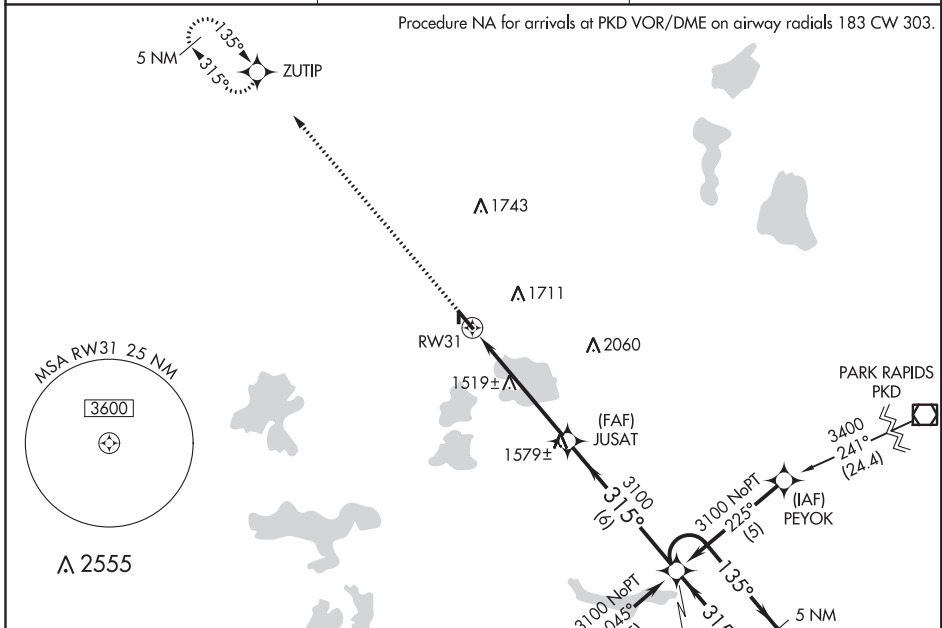
DETROIT LAKES-WETHING FIELD (DTL)

**⚠** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. VDP NA when using Park Rapids altimeter setting. If local altimeter setting not received, use Park Rapids altimeter setting and increase DA/MDAs 100 feet.

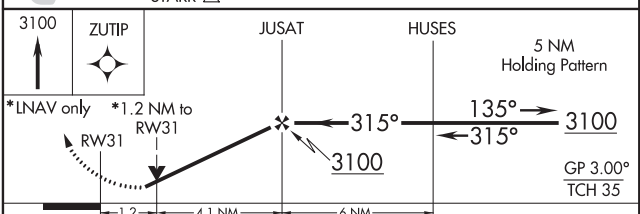
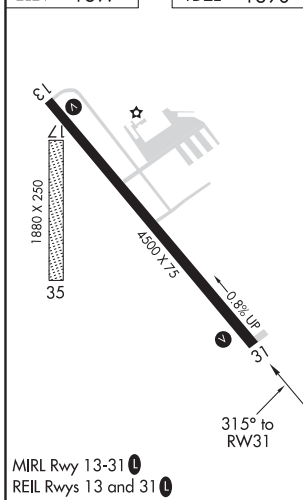
MISSED APPROACH: Climb to 3100 direct ZUTIP and hold.

AWOS-3 <b>111.2</b>	PRINCETON RADIO <b>122.5</b>	UNICOM <b>122.8</b> (CTAF) <b>0</b>
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Procedure NA for arrivals at PKD VOR/DME on airway radials 183 CW 303.



ELEV 1397	TDZE 1390
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CATEGORY	A	B	C	D
LPV DA	1654-1 264 (300-1)			
LNAV MDA	1780-1 390 (400-1)			1780-1 ¼ 390 (400-1 ¼)
CIRCLING	1880-1 483 (500-1)	1940-1 543 (600-1)	1940-1 ½ 543 (600-1 ½)	2080-2 ¼ 683 (700-2 ¼)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME DTL <b>111.2</b> Chan <b>49</b>	APP CRS <b>141°</b>	Rwy Idg TDZE Apt Elev	<b>4500</b> <b>1397</b> <b>1397</b>
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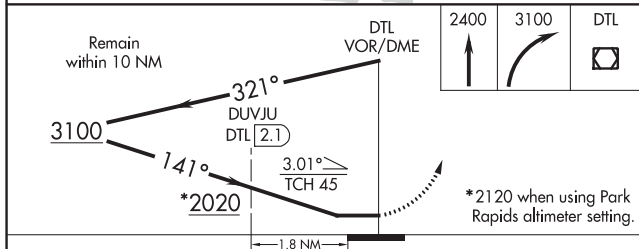
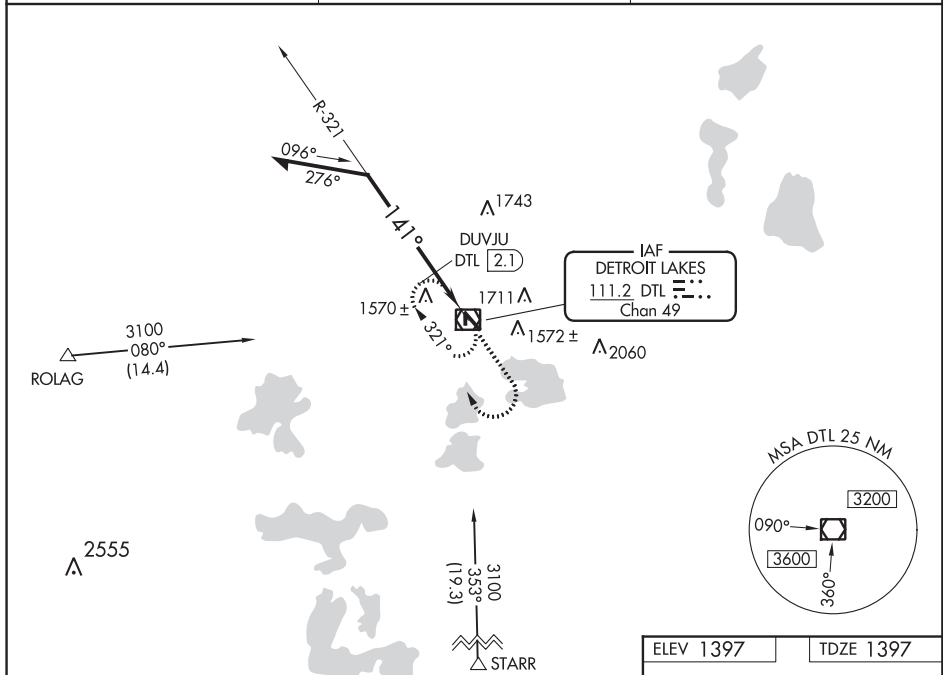
# VOR RWY 13

DETROIT LAKES-WETHING FIELD (DTL)

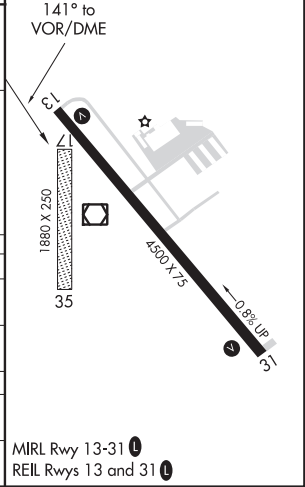
**NA** When local alimeter setting not received, use Park Rapids alimeter setting and increase all MDA 100 feet, increase S-13 and Circling Cats C/D visibility ¼ mile. Increase DUVJU fix minimums S-13 and Circling Cats C/D visibility ¼ mile. Helicopter visibility reduction below 1 SM NA. Procedure NA at night.

**MISSED APPROACH:** Climb to 2400 then climbing right turn to 3100 direct DTL VOR/DME and hold.

AWOS-3 <b>111.2</b>	PRINCETON RADIO <b>122.5</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1397	TDZE 1397
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CATEGORY	A	B	C	D
S-13	2020-1	623 (700-1)	2020-1¾	623 (700-1¾)
CIRCLING	2020-1	623 (700-1)	2020-1¾	2080-2¼ 623 (700-1¾) 683 (700-2¼)
DUVJU FIX MINIMUMS				
S-13	1820-1	423 (500-1)	1820-1¼	423 (500-1¼)
CIRCLING	1880-1 483 (500-1)	1940-1 543 (600-1)	1940-1½ 543 (600-1½)	2080-2¼ 683 (700-2¼)

# VOR RWY 13

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME DTL <b>111.2</b> Chan <b>49</b>	APP CRS <b>310°</b>	Rwy Idg TDZE Apt Elev	<b>4500</b> <b>1390</b> <b>1397</b>
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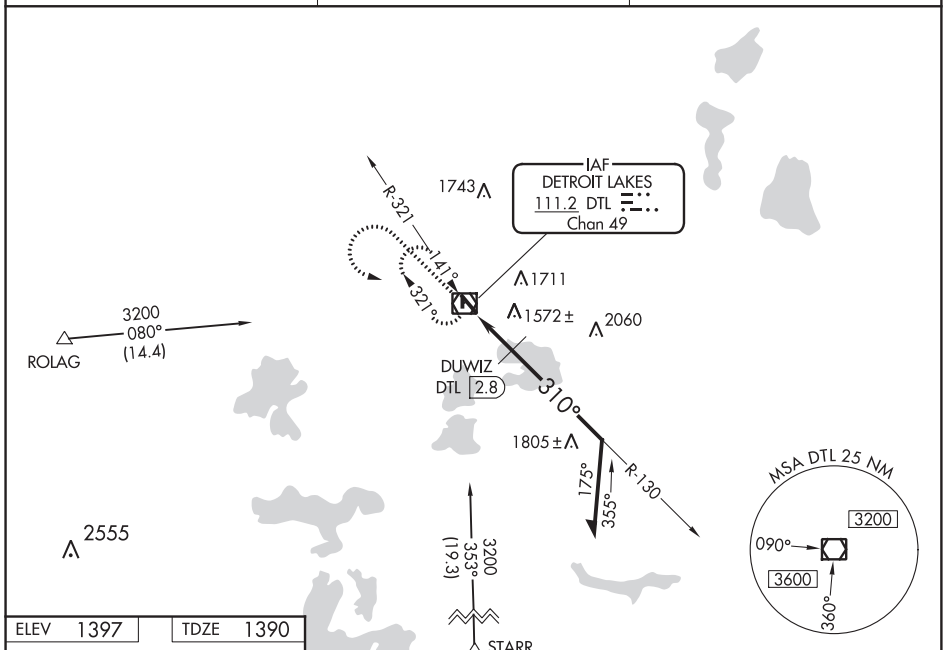
# VOR RWY 31

DETROIT LAKES-WETHING FIELD (DTL)

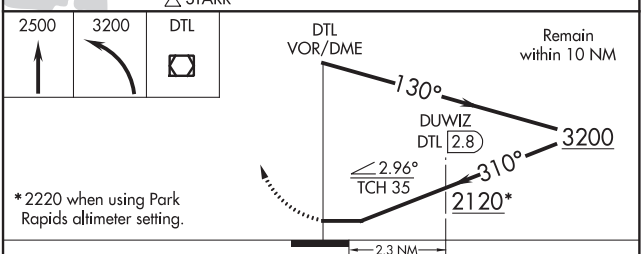
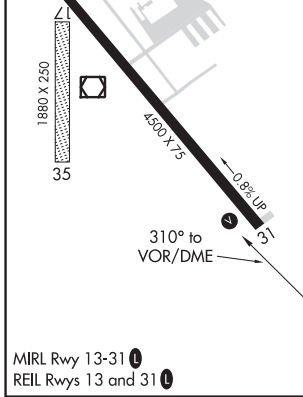
**NA** When local altimeter setting not received, use Park Rapids altimeter setting and increase all MDA 100 feet, increase S-31 and Circling Cats C/D visibility ½ mile, Circling Cat A visibility ¼ mile, increase DUVWIZ fix minimums S-31 Cat C, D visibility ⅓ mile, Circling Cat C visibility ¼ mile and Cat D ½ mile. Visibility reduction by helicopters NA. Procedure NA at night.

**MISSED APPROACH:** Climb to 2500 then climbing left turn to 3200 direct DTL VOR/DME and hold.

AWOS-3 <b>111.2</b>	PRINCETON RADIO <b>122.5</b>	UNICOM <b>122.8</b> (CTAF) <b>1</b>
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ELEV 1397	TDZE 1390
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CATEGORY	A	B	C	D
S-31	2120-1 730 (800-1)	2120-1¼ 730 (800-1¼)	2120-2 730 (800-2)	2120-2½ 723 (800-2½)
CIRCLING	2120-1 723 (800-1)	2120-1¼ 723 (800-1¼)	2120-2 723 (800-2)	2120-2½ 723 (800-2½)
DUWIZ FIX MINIMUMS				
S-31	1880-1	490 (500-1)	1880-1⅓	490 (500-1⅓)
CIRCLING	1880-1 483 (500-1)	1940-1 543 (600-1)	1940-1½ 543 (600-1½)	2080-2¼ 683 (700-2¼)

NC-1, 10 NOV 2016 to 05 JAN 2017


NC-1, 10 NOV 2016 to 05 JAN 2017

LOC I-VKE <b>108.7</b>	APP CRS <b>311°</b>	Rwy Idg <b>6401</b>	TDZE <b>1450</b>
		Apt Elev <b>1470</b>	

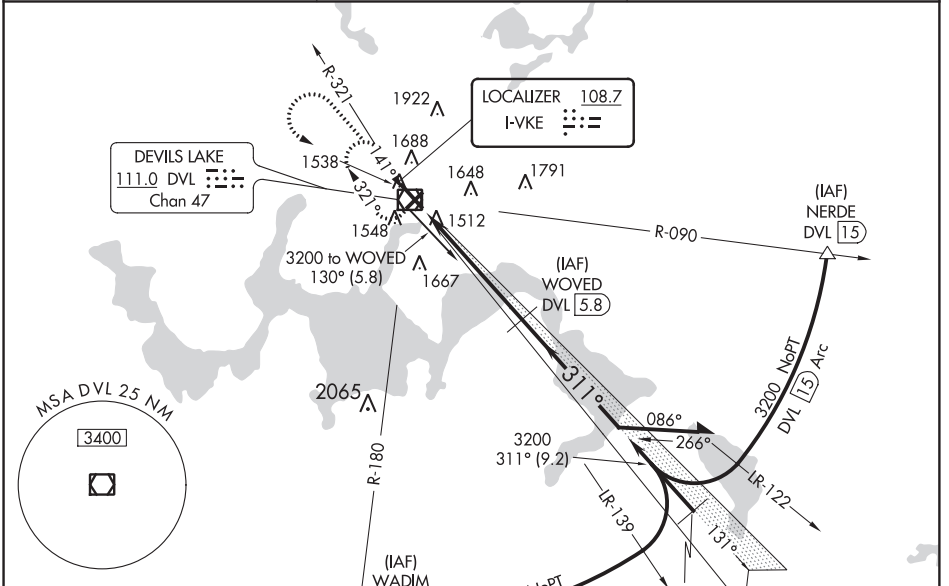
# ILS or LOC/DME RWY 31

DEVILS LAKE RGNL (DVL)

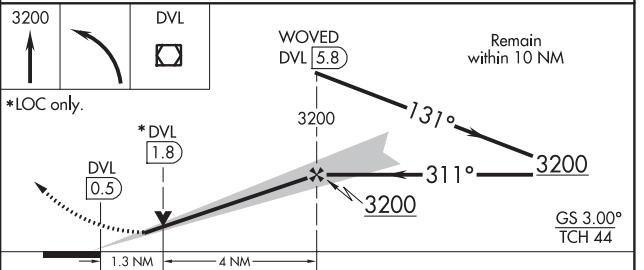
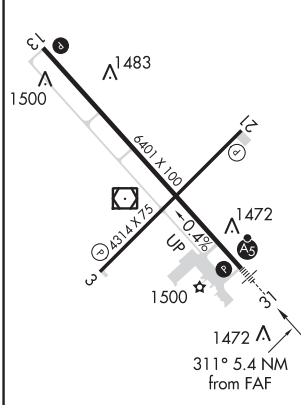
**NA** When local altimeter setting not received, use Cando altimeter setting and increase all DA 63 feet and all MDA 80 feet and increase S-LOC 31 Cat C/D and Circling Cat C/D visibility ¼ mile. For inop MALSRS when using Cando altimeter setting, increase S-ILS 31 all Cats visibility to ¾ mile and S-LOC 31 Cat C/D to 1½ mile. DME from DVL VOR/DME. Simultaneous reception of I-VKE and DVL DME required.

**MALSRS**  
  
 MISSED APPROACH: Climb to 3200 then left turn direct DVL VOR/DME and hold.

AWOS-3PT **125.875** GRAND FORKS RADIO **122.3** UNICOM **122.8(CTAF)**



ELEV 1470 TDZE 1450



CATEGORY	A	B	C	D
S-ILS 31		1650-½	200 (200-½)	
S-LOC 31		1780-½	330 (400-½)	
<b>C</b> CIRCLING	2000-1	530 (600-1)	2240-2¼ 770 (800-2¼)	2240-2½ 770 (800-2½)

HIRL Rwy 13-31  
 REIL Rwy 3, 13 and 21  
 MIRL Rwy 3-21

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>93608</b> <b>W03A</b>	APP CRS <b>038°</b>	Rwy Idg TDZE <b>1450</b> Apt Elev <b>1470</b>	<b>4314</b>
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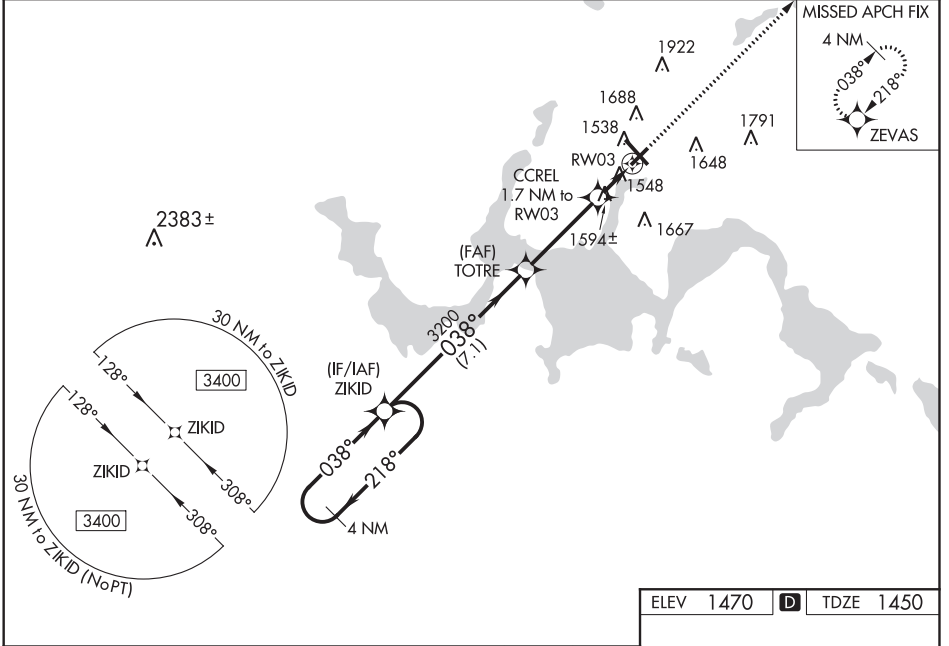
# RNAV (GPS) RWY 3

DEVILS LAKE RGNL (DVL)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Cando altimeter setting and increase all DA 63 feet, and all MDA 80 feet, increase LNAV/VNAV all Cats visibility 1/8 mile, LNAV and Circling Cat C and D visibility 1/4 mile. Helicopter visibility reduction below 3/8 SM NA. Baro-VNAV NA when using Cando altimeter setting.

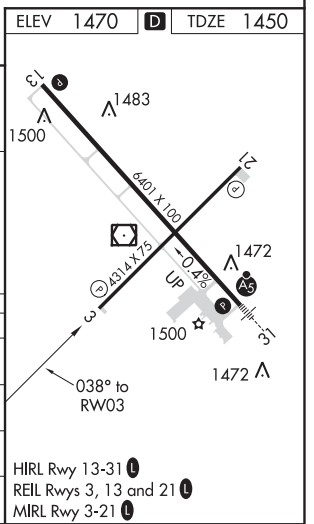
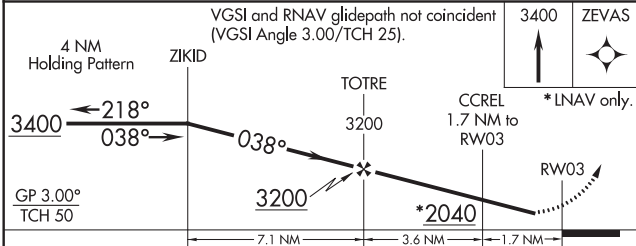
MISSED APPROACH: Climb to 3400 direct ZEVAS and hold.

AWOS-3PT <b>125.875</b>	GRAND FORKS RADIO <b>122.3</b>	UNICOM <b>122.8 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D
LPV DA	1700-1		250 (300-1)	
LNAV/VNAV DA	1714-1		264 (300-1)	
LNAV MDA	1860-1 410 (400-1)		1860-1 1/8 410 (400-1 1/8)	
<b>C</b> CIRCLING	2000-1 530 (600-1)		2240-2 1/4 770 (800-2 1/4) 2240-2 1/2 770 (800-2 1/2)	

HIRL Rwy 13-31  
REIL Rwy 3, 13 and 21  
MIRL Rwy 3-21

WAAS CH <b>78314</b> <b>W13A</b>	APP CRS <b>131°</b>	Rwy Idg <b>6401</b> TDZE <b>1470</b> Apt Elev <b>1470</b>
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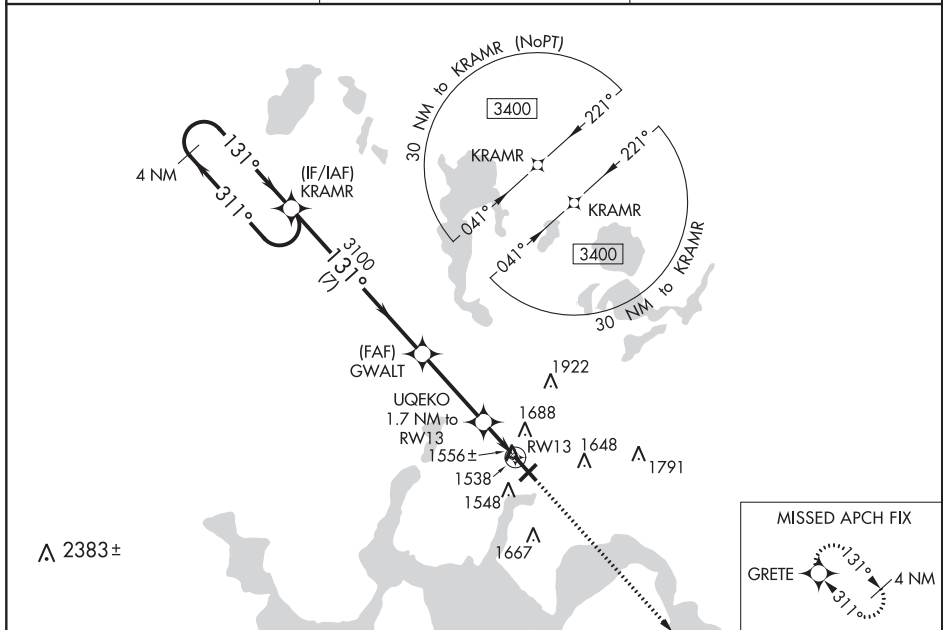
# RNAV (GPS) RWY 13

DEVILS LAKE RGNL (DVL)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Baro-VNAV and VDP NA when using Cando altimeter setting. When local altimeter setting not received, use Cando altimeter setting and increase all DA 63 feet and all MDA 80 feet, increase LPV and LNAV/VNAV all. Cats visibility ¼ mile, LNAV and Circling Cats C and D visibility ½ mile.

MISSED APPROACH: Climb to 3400 direct GRETE and hold.

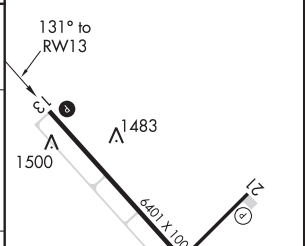
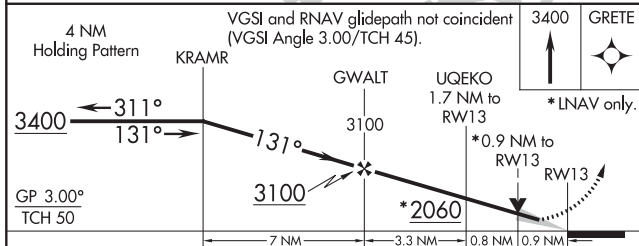
AWOS-3PT <b>125.875</b>	GRAND FORKS RADIO <b>122.3</b>	UNICOM <b>122.8 (CTAF)</b> <b>Ⓛ</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1470	<b>D</b>	TDZE 1470
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CATEGORY	A	B	C	D
LPV DA		1720-¾	250 (300-¾)	
LNAV/VNAV DA		1791-1	321 (400-1)	
LNAV MDA		1820-1	350 (400-1)	
<b>C</b> CIRCLING	2000-1	530 (600-1)	2240-2¼ 770 (800-2¼)	2240-2½ 770 (800-2½)

HIRL Rwy 13-31 **Ⓛ**

REIL Rws 3, 13, and 21 **Ⓛ**

MIRL Rwy 3-21 **Ⓛ**

1472 **Ⓛ**

WAAS CH <b>78417</b> <b>W21A</b>	APP CRS <b>218°</b>	Rwy Idg TDZE <b>1449</b> Apt Elev <b>1470</b>	<b>4314</b>
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# RNAV (GPS) RWY 21

DEVILS LAKE RGNL (DVL)

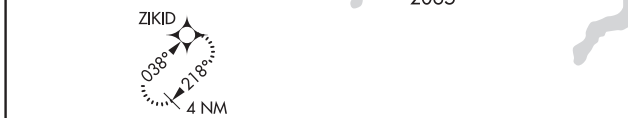
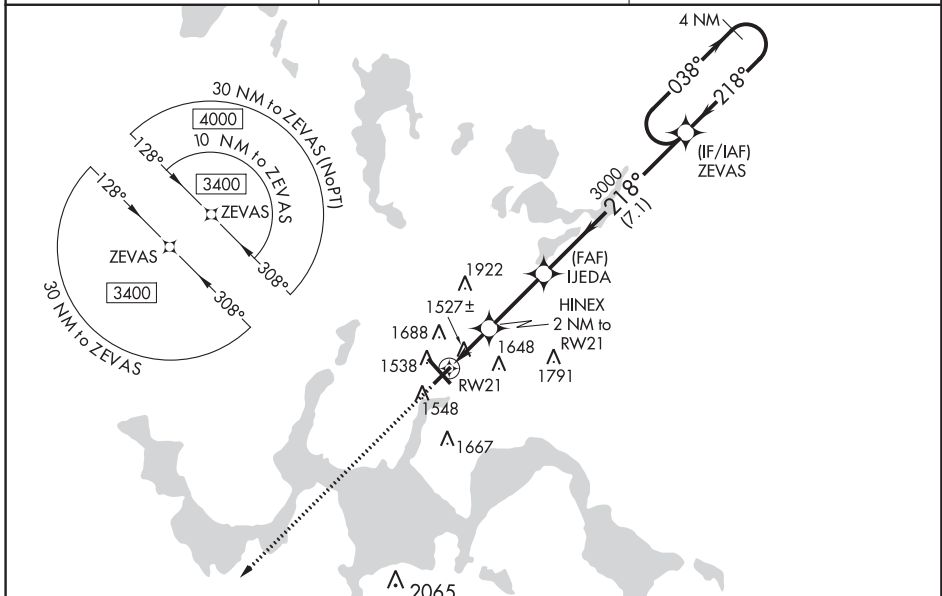
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA. Baro-VNAV NA when using Cando altimeter setting. VDP NA with Cando altimeter setting. When local altimeter setting not received, use Cando altimeter setting and increase all DA 63 feet, and all MDA 80 feet, increase LNAV and Circling Cats C and D visibility 1/4 mile.

**MISSED APPROACH:** Climb to 3400 direct ZIKID and hold.

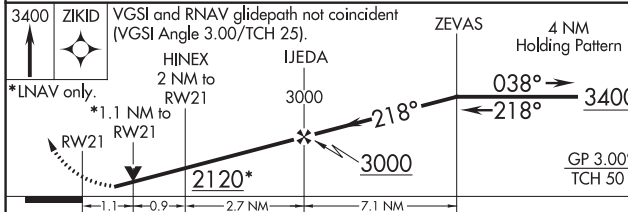
AWOS-3PT  
**125.875**

GRAND FORKS RADIO  
**122.3**

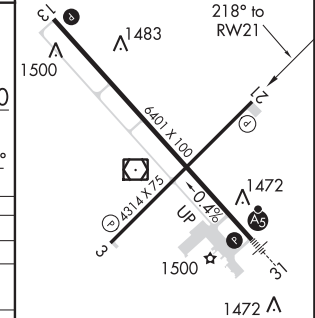
UNICOM  
**122.8 (CTAF) ①**



ELEV 1470	<b>D</b> TDZE 1449
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CATEGORY	A	B	C	D
LPV DA		1699-1	250 (300-1)	
LNAV/VNAV DA		1699-1	250 (300-1)	
LNAV MDA		1800-1	351 (400-1)	
<b>C</b> CIRCLING	2000-1	530 (600-1)	2240-2 1/4 770 (800-2 1/4)	2240-2 1/2 770 (800-2 1/2)



HIRL Rwy 13-31 ①  
REIL Rwy 3, 13 and 21 ①  
MIRL Rwy 3-21 ①

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>58314</b> <b>W31A</b>	APP CRS <b>311°</b>	Rwy ldg <b>6401</b> TDZE <b>1450</b> Apt Elev <b>1470</b>
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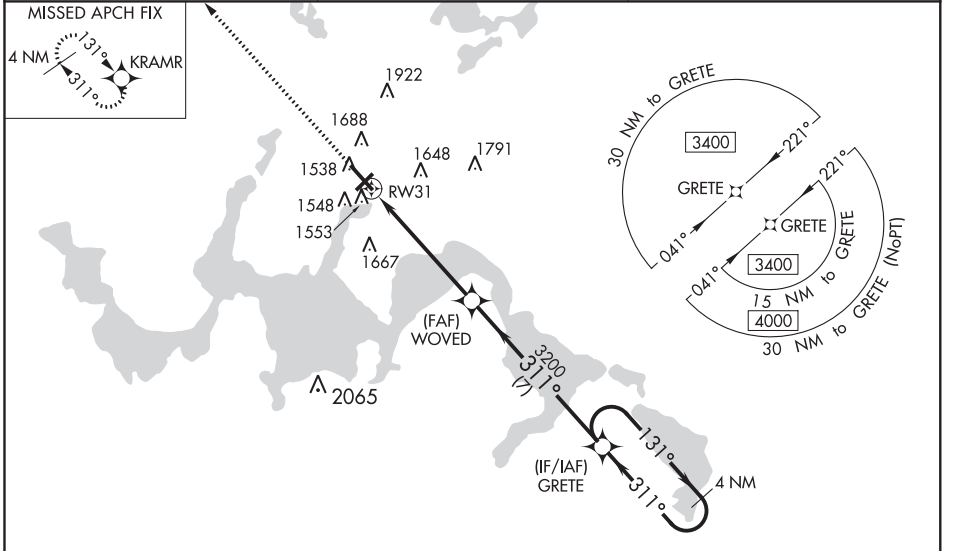
# RNAV (GPS) RWY 31

DEVILS LAKE RGNL (DVL)

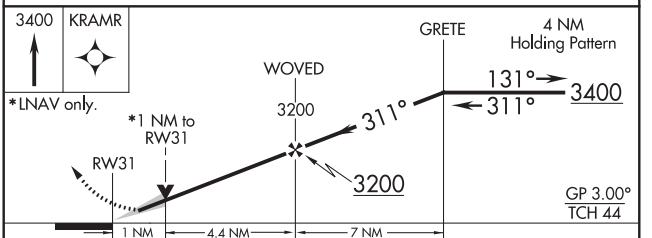
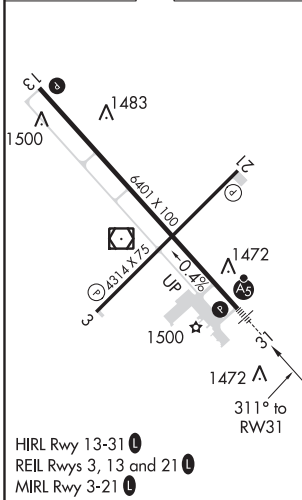
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Baro-VNAV and VDP NA when using Cando altimeter setting. For inop MALS, increase LNAV/VNAV all Cats visibility to ½, LNAV Cats C and D visibility to 1 mile. When local altimeter setting not received, use Cando altimeter setting and increase all DA 63 feet, and all MDA 80 feet, increase LNAV/VNAV all Cats visibility ½ mile, LNAV and Circling Cats C and D visibility ¼ mile. For inop MALS when using Cando altimeter setting, increase LPV all Cats visibility to ¾ mile.

**MALS** **MISSED APPROACH:** Climb to 3400 direct KRAMR and hold.

AWOS-3PT <b>125.875</b>	GRAND FORKS RADIO <b>122.3</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1470	<b>D</b>	TDZE 1450
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CATEGORY	A	B	C	D
LPV DA		1650-½	200 (200-½)	
LNAV/VNAV DA		1721-½	271 (300-½)	
LNAV MDA	1820-½	370 (400-½)	1820-⅝	370 (400-⅝)
<b>C</b> CIRCLING	2000-1	530 (600-1)	2240-2¼ 770 (800-2¼)	2240-2½ 770 (800-2½)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME DVL <b>111.0</b> Chan <b>47</b>	APP CRS <b>030°</b>	Rwy Idg <b>4314</b> TDZE <b>1450</b> Apt Elev <b>1470</b>
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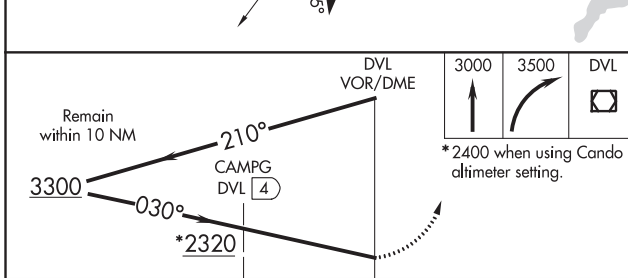
# VOR RWY 3

DEVILS LAKE RGNL (DVL)

**⚠** When local altimeter setting not received, use Cando altimeter setting and increase all MDA 80 feet, increase S-3 Cat A and Circling Cat C visibility ¼ mile, increase CAMPG FIX MINIMUMS S-3 Cats C/D visibility ⅜ mile and Circling Cats C/D ¼ mile. Helicopter visibility reduction below 1 SM NA.

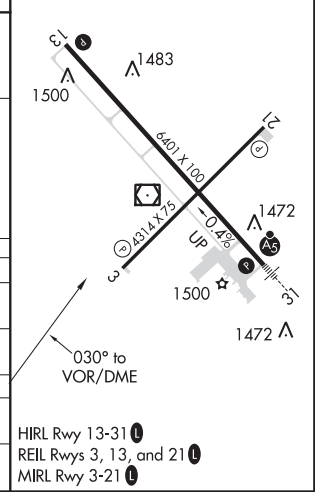
**MISSED APPROACH:** Climb to 3000 then climbing right turn to 3500 direct DVL VOR/DME and hold.

AWOS-3PT <b>125.875</b>	GRAND FORKS RADIO <b>122.3</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1470	<b>D</b>	TDZE 1450
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CATEGORY	A	B	C	D
S-3	2320-1 870 (900-1)	2320-1¼ 870 (900-1¼)	2320-2½	870 (900-2½)
<b>C</b> CIRCLING	2320-1¼	850 (900-1¼)	2320-2½ 850 (900-2½)	2320-2¾ 850 (900-2¾)
CAMPG FIX MINIMUMS				
S-3	1820-1 370 (400-1)			
<b>C</b> CIRCLING	2000-1	530 (600-1)	2240-2¼ 770 (800-2¼)	2240-2½ 770 (800-2½)



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME DVL <b>111.0</b> Chan <b>47</b>	APP CRS <b>138°</b>	Rwy Idg TDZE Apt Elev	<b>6401</b> <b>1470</b> <b>1470</b>
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**VOR RWY 13**  
DEVILS LAKE RGNL (DVL)

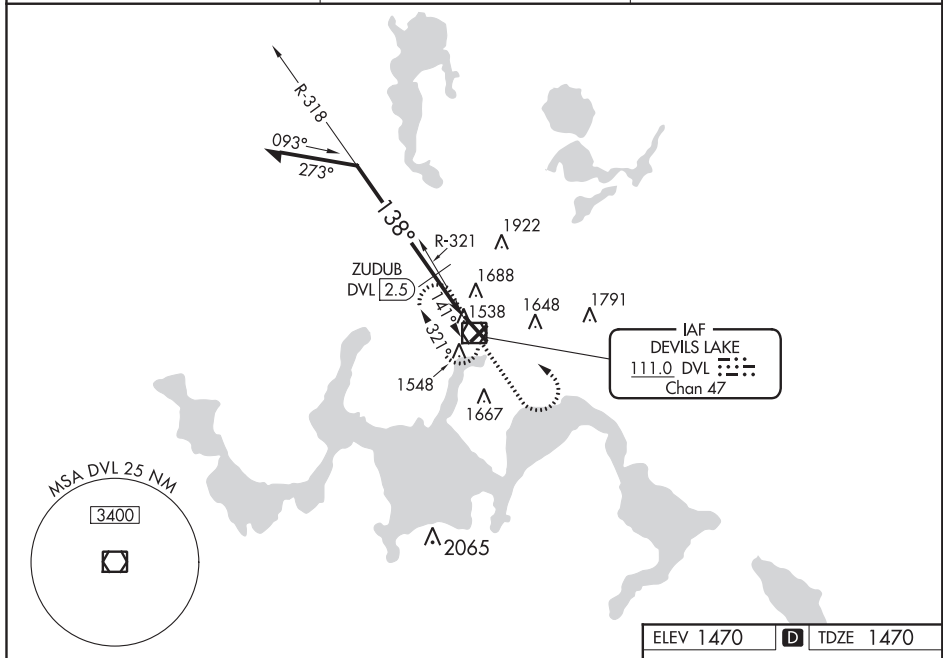
**⚠** VDP NA with Cando altimeter setting. When local altimeter setting not received, use Cando altimeter setting and increase all MDA 80 feet, and increase S-13 and Circling Cats C and D visibility ¼ mile, increase ZUDUB fix minimums S-13 and Circling Cats C and D visibility ¼ mile.

**MISSED APPROACH:** Climb to 3100 then left turn direct DVL VOR/DME and hold.

AWOS-3PT  
**125.875**

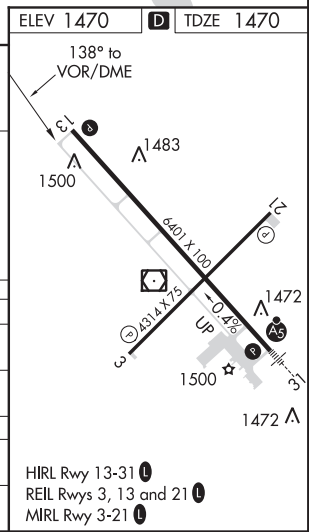
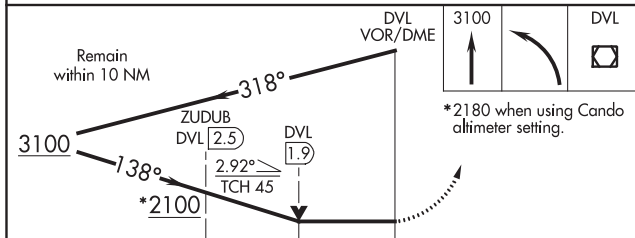
GRAND FORKS RADIO  
**122.3**

UNICOM  
**122.8 (CTAF) ①**



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A		B		C		D	
	2100-1	630 (700-1)	2100-1 3/4	630 (700-1 3/4)	2240-2 1/4	770 (800-2 1/4)	2240-2 1/2	770 (800-2 1/2)
S-13	2100-1	630 (700-1)	2100-1 3/4	630 (700-1 3/4)	2240-2 1/4	770 (800-2 1/4)	2240-2 1/2	770 (800-2 1/2)
<b>C</b> CIRCLING	2100-1	630 (700-1)	2240-2 1/4	770 (800-2 1/4)	2240-2 1/2	770 (800-2 1/2)		
<b>ZUDUB FIX MINIMUMS (DME REQUIRED)</b>								
S-13	1940-1	470 (500-1)	1940-1 3/8	470 (500-1 3/8)				
<b>C</b> CIRCLING	2000-1	530 (600-1)	2240-2 1/4	770 (800-2 1/4)	2240-2 1/2	770 (800-2 1/2)		

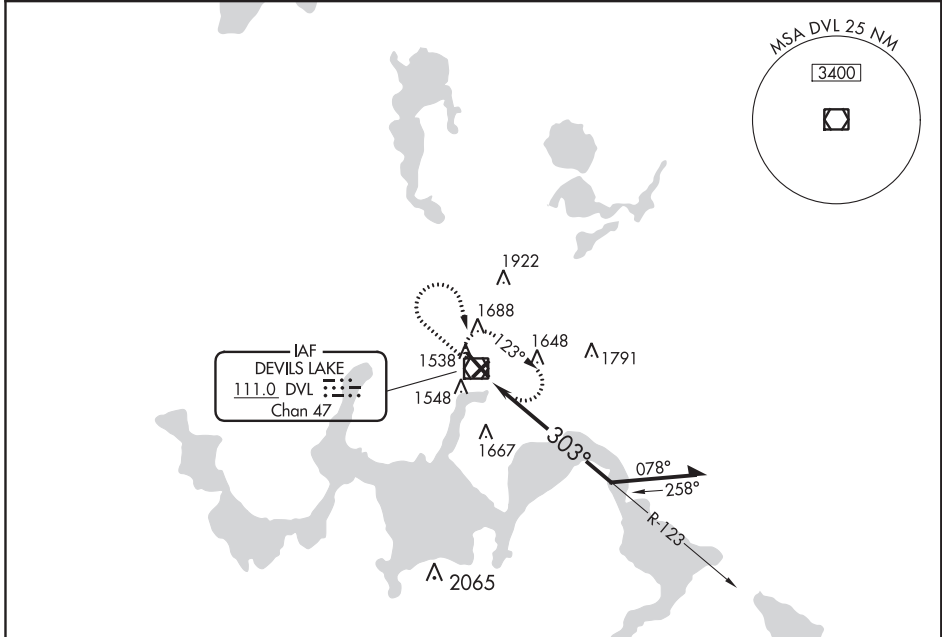
HIRL Rwy 13-31 ①  
REIL Rwys 3, 13 and 21 ①  
MIRL Rwy 3-21 ①

VOR/DME DVL <b>111.0</b> Chan <b>47</b>	APP CRS <b>303°</b>	Rwy Idg TDZE <b>1450</b> Apt Elev <b>1470</b>
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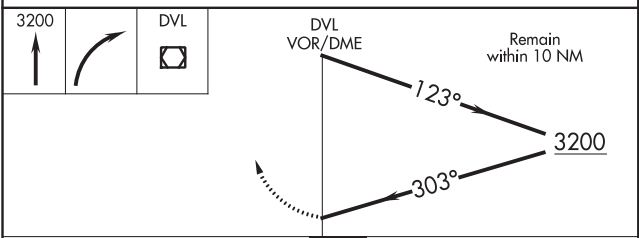
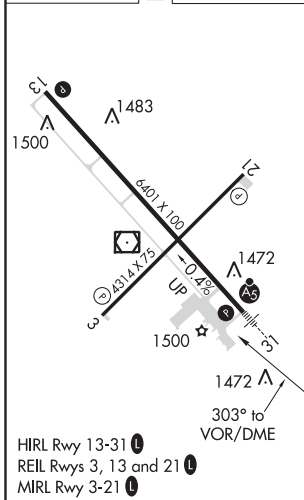
**VOR RWY 31**  
DEVILS LAKE RGNL (DVL)

<b>⚠</b> When local altimeter setting not received, use Cando altimeter setting and increase all MDA 80 feet, increase S-31 Cats C and D visibility 1/8 mile, and Circling Cats C and D visibility 1/4 mile.	MALSR <b>AS</b>	MISSED APPROACH: Climb to 3200 then right turn direct DVL VOR/DME and hold.
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AWOS-3PT <b>125,875</b>	GRAND FORKS RADIO <b>122.3</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1470	<b>D</b>	TDZE 1450
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CATEGORY	A	B	C	D
S-31	2020-1/2	570 (600-1/2)	2020-1/4	570 (600-1/4)
<b>C</b> CIRCLING	2020-1	550 (600-1)	2240-2 1/4 770 (800-2 1/4)	2240-2 1/2 770 (800-2 1/2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

16035

# AIRPORT DIAGRAM

AL-5305 (FAA)

DEVILS LAKE RGNL (DVL)  
DEVILS LAKE, NORTH DAKOTA

AWOS-3PT  
125.875  
CTAF/UNICOM  
122.8

**D**  
FIELD  
ELEV  
1470

48°07.5'N



JANUARY 2015  
ANNUAL RATE OF CHANGE  
0.1° W

ELEV  
1441



48°07.0'N

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV  
1450



RWY 03-21  
PCN 26 F/D/W/T  
S-30

RWY 13-31  
PCN 27 F/D/W/T  
S-75, D-130, 2S-175, 2D-190, C5-647

6401 X 100

4314 X 75

0.4% UP

ELEV  
1443



48°06.5'N

98°55.0'W



98°54.5'W

# AIRPORT DIAGRAM

16035

DEVILS LAKE, NORTH DAKOTA  
DEVILS LAKE RGNL (DVL)



LOC I-DIK <b>108.3</b>	APP CRS <b>320°</b>	Rwy Idg TDZE Apt Elev	<b>6399</b> <b>2591</b> <b>2592</b>
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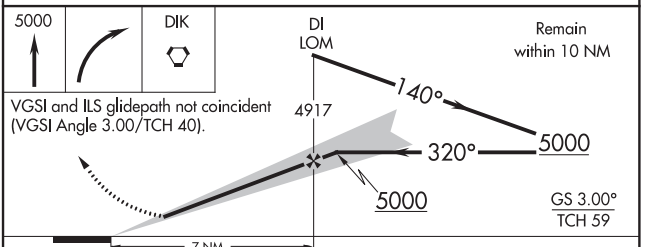
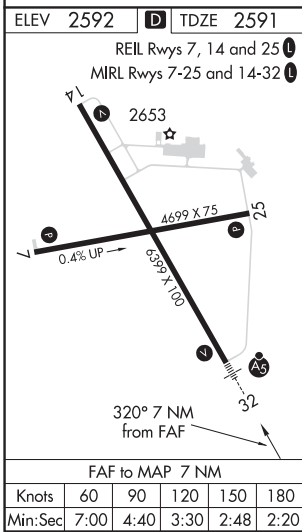
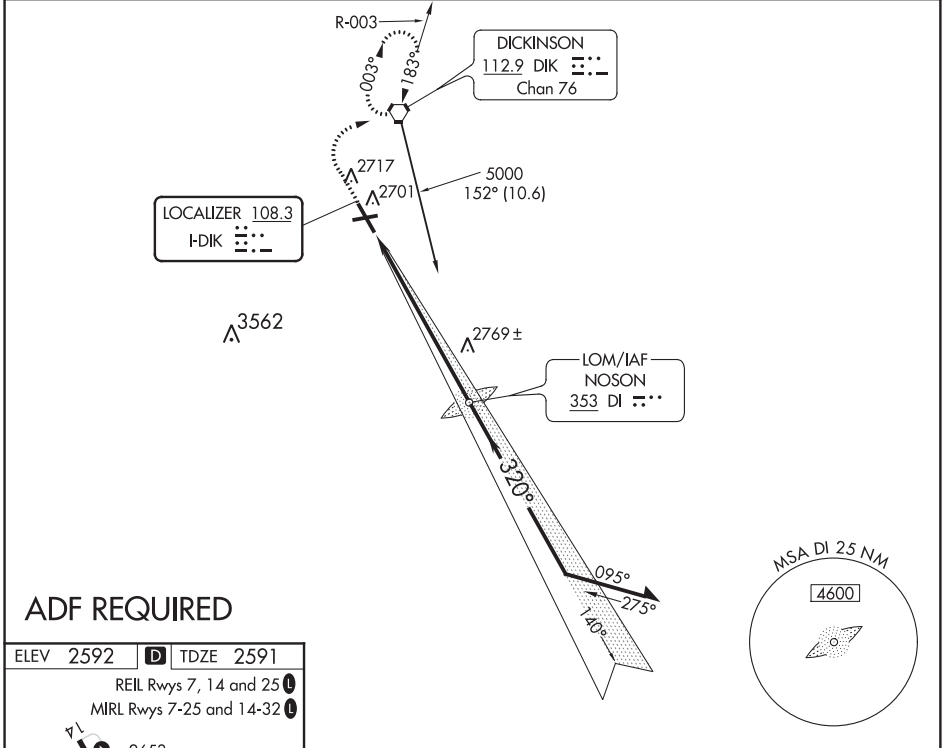
AL-120 (FAA)

# ILS or LOC RWY 32

DICKINSON-THEODORE ROOSEVELT RGNL (DIK)

<p><b>NA</b> -30°C/-22°F</p>	<p>If local altimeter not received, use Bowman Muni altimeter setting and increase S-ILS DA to 3058 and all MDAs 280 feet.</p>	<p>MALSR </p>	<p>MISSED APPROACH: Climb to 5000 then right turn direct DIK VORTAC and hold.</p>
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ASOS <b>118.375</b>	MINNEAPOLIS CENTER <b>124.25 380.3</b>	UNICOM <b>123.0 (CTAF)</b>
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CATEGORY	A	B	C	D
S-ILS 32	2791-1/2		200 (200-1/2)	
S-LOC 32	3080-1/2	489 (500-1/2)	3080-3/4 489 (500-3/4)	3080-1 489 (500-1)
CIRCLING	3080-1	488 (500-1)	3080-1 1/2 488 (500-1 1/2)	3160-2 568 (600-2)

# ILS or LOC RWY 32

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

DICKINSON, NORTH DAKOTA

AL-120 (FAA)

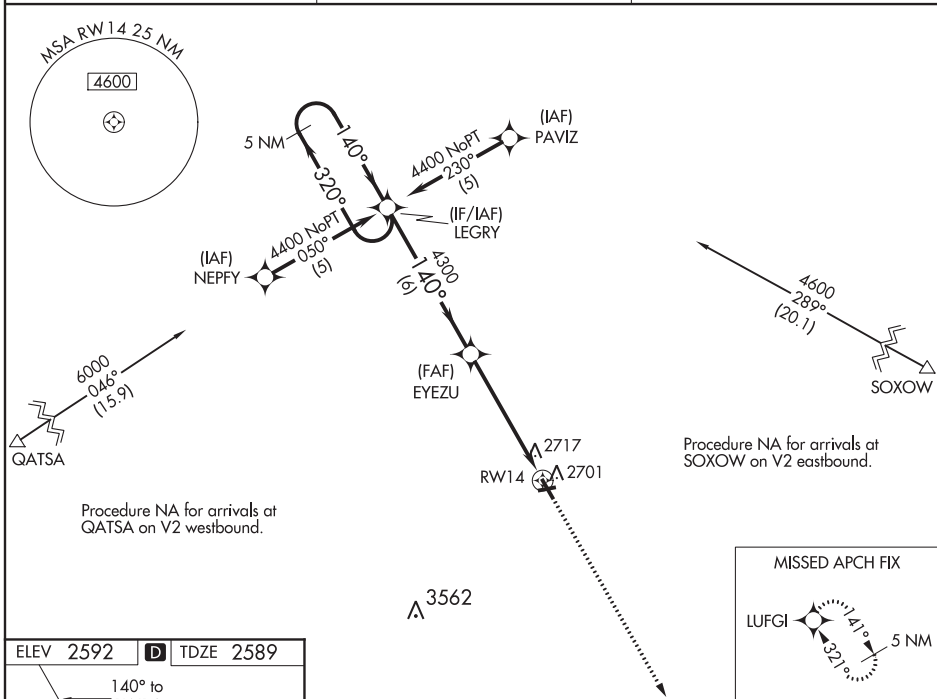
16091

WAAS CH <b>56211</b> <b>W14A</b>	APP CRS <b>140°</b>	Rwy Idg <b>6399</b>
		TDZE <b>2589</b>
		Apt Elev <b>2592</b>

# RNAV (GPS) RWY 14

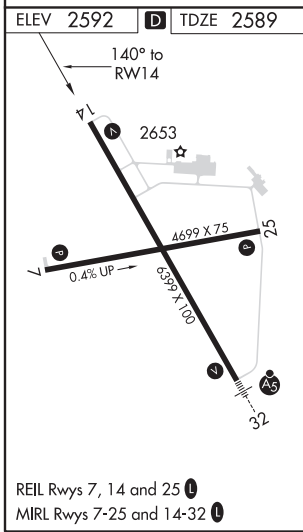
DICKINSON-THEODORE ROOSEVELT RGNL (DIK)

<p><b>⚠</b> DME/DME RNP-0.3 NA. Baro-VNAV NA below -20°C (-4°F). VDP and Baro/VNAV NA when using Bowman Muni altimeter setting. If local altimeter not received, use Bowman Muni altimeter setting and increase all DAs/MDAs 280 feet.</p> <p><b>⚠</b> -30°C/-22°F</p>	<p>MISSED APPROACH: Climb to 5000 direct LUFGI and hold.</p>	
<p>ASOS <b>118.375</b></p>	<p>MINNEAPOLIS CENTER <b>124.25 380.3</b></p>	<p>UNICOM <b>123.0 (CTAF) 0</b></p>



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



5 NM Holding Pattern	LEGRY	EYEZU	5000 LUFGI
4400 ← 320°	→ 140°	140°	*1.2 NM to RWY 14
GP 3.00°		4300	*INAV only.
TCH 40	6 NM	4 NM	1.2
CATEGORY	A	B	C
LPV DA	2840-1 251 (300-1)		
LNAV/VNAV DA	3060-1¼ 471 (500-1¼)		
LNAV MDA	3020-1 431 (500-1)	3020-1¼ 431 (500-1¼)	3020-1½ 431 (500-1½)
CIRCLING	3080-1¼ 488 (500-1¼)		3160-2 568 (600-2)

DICKINSON, NORTH DAKOTA  
Amdt 1 07JUL05

DICKINSON-THEODORE ROOSEVELT RGNL (DIK)  
46°48'N-102°48'W  
**RNAV (GPS) RWY 14**

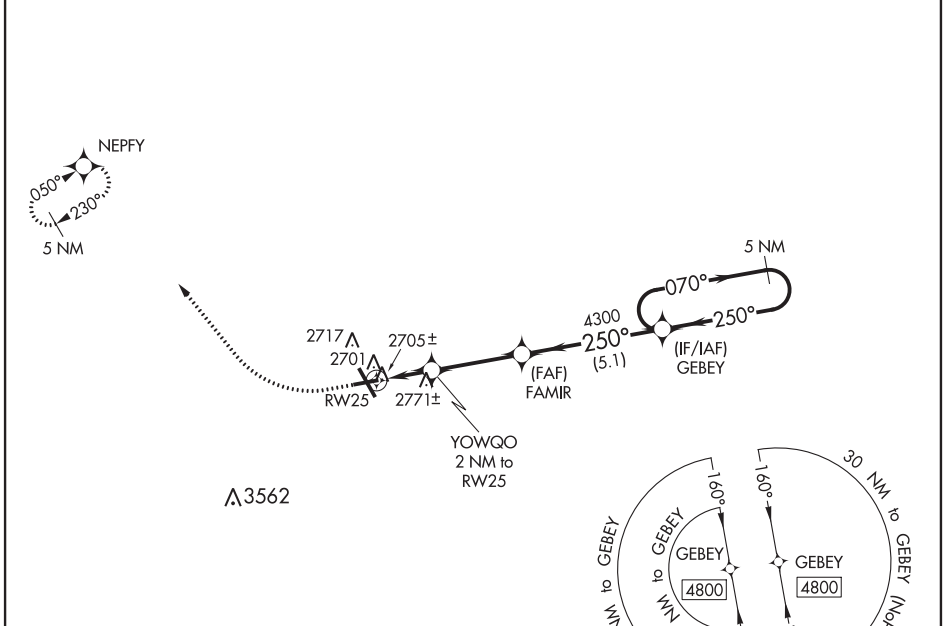
WAAS CH <b>82534</b> <b>W25A</b>	APP CRS <b>250°</b>	Rwy Idg <b>4699</b> TDZE <b>2592</b> Apt Elev <b>2592</b>
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# RNAV (GPS) RWY 25

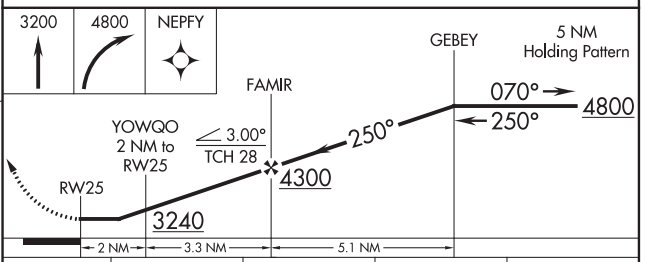
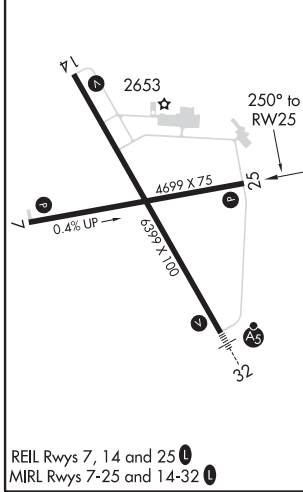
DICKINSON-THEODORE ROOSEVELT RGNL (DIK)

**⚠** When local altimeter setting not received, use Bowman altimeter setting and increase all MDA 160 feet and visibility Cats C and D ½ mile.  
**⚠** DME/DME RNP-0.3 NA. Rwy 25 Straight-in and Circling minimums NA at night. Helicopter visibility reduction below 1 SM NA.  
**⚠** MISSED APPROACH: Climb to 3200 then climbing right turn to 4800 direct NEPFY and hold.

ASOS <b>118.375</b>	MINNEAPOLIS CENTER <b>124.25 380.3</b>	UNICOM <b>123.0 (CTAF) 0</b>
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ELEV 2592	<b>D</b> TDZE 2592
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CATEGORY	A	B	C	D
LP MDA	2980-1	388 (400-1)	2980-1½	388 (400-1½)
LNAV MDA	3060-1	468 (500-1)	3060-1¾	468 (500-1¾)
<b>C</b> CIRCLING	3080-1 488 (500-1)	3100-1 508 (600-1)	3120-1½ 528 (600-1½)	3220-2 628 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

DICKINSON, NORTH DAKOTA

AL-120 (FAA)


16091

WAAS CH <b>45512</b> <b>W32A</b>	APP CRS <b>320°</b>	Rwy Idg TDZE Apt Elev	<b>6399</b> <b>2591</b> <b>2592</b>
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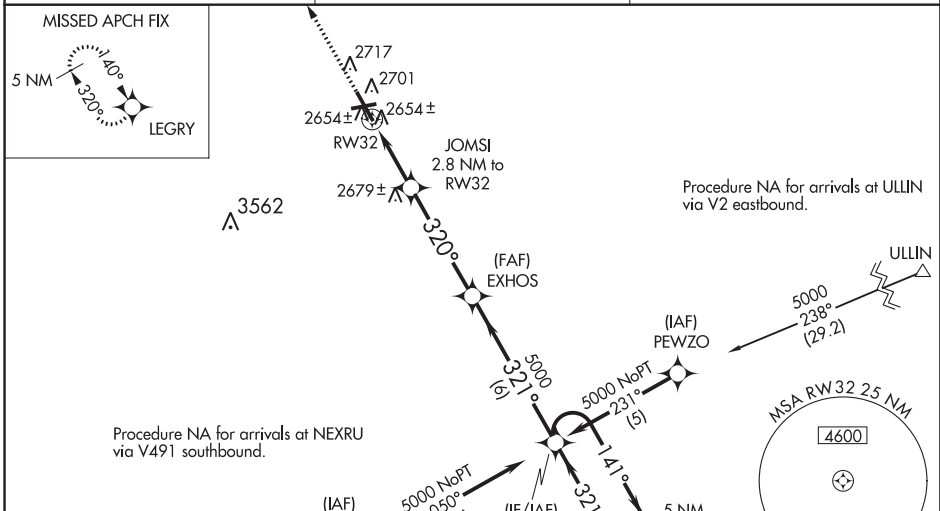
# RNAV (GPS) RWY 32

DICKINSON-THEODORE ROOSEVELT RGNL (DIK)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C (-4°F) or above 44°C (111°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Bowman altimeter setting and increase all DA 266 feet, all MDA 280 feet, increase LPV all Cats visibility 1/2 mile, LNAV/VNAV Cats A/B/C visibility 1 mile, Cat D visibility 3/4 mile, LNAV Cats C/D visibility 3/4 mile, Circling Cat B visibility 1/4 mile, Cats C/D visibility 3/4 mile. For inop MALSRS when using Bowman altimeter setting, increase LPV all Cats visibility to 1 1/2, LNAV/VNAV all Cats visibility to 2, LNAV Cat C visibility to 2 and Cat D visibility to 2 1/4. For inop MALSRS, increase LNAV/VNAV Cat D visibility to 1 and LNAV Cat D visibility to 1 1/4. VDP and Baro-VNAV NA when using Bowman altimeter setting.

**MALSRS**  
  
**MISSED APPROACH:**  
 Climb to 5000 direct LEGRY and hold.

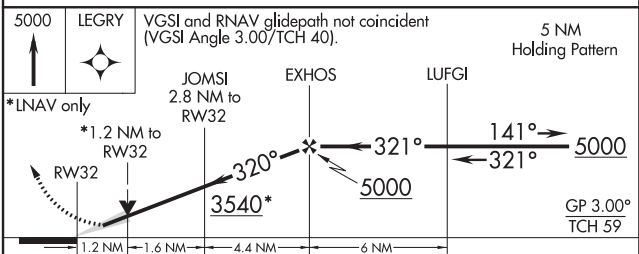
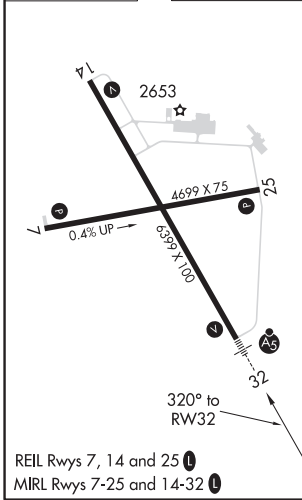
ASOS <b>118.375</b>	MINNEAPOLIS CENTER <b>124.25 380.3</b>	UNICOM <b>123.0 (CTAF) 1</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 2592	<b>D</b>	TDZE 2591
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CATEGORY	A	B	C	D
LPV DA	2791-1/2 200 (200-1/2)			
LNAV/VNAV DA	2924-1/2 333 (400-1/2)		2924-3/4 333 (400-3/4)	
LNAV MDA	3000-1/2 409 (500-1/2)	3000-3/4 409 (500-3/4)		3000-1 409 (500-1)
CIRCLING	3080-1 488 (500-1)	3080-1 1/2 488 (500-1 1/2)		3160-2 568 (600-2)

DICKINSON, NORTH DAKOTA  
 Amdt 2 17DEC09

DICKINSON-THEODORE ROOSEVELT RGNL (DIK)  
 46°48'N-102°48'W  
**RNAV (GPS) RWY 32**

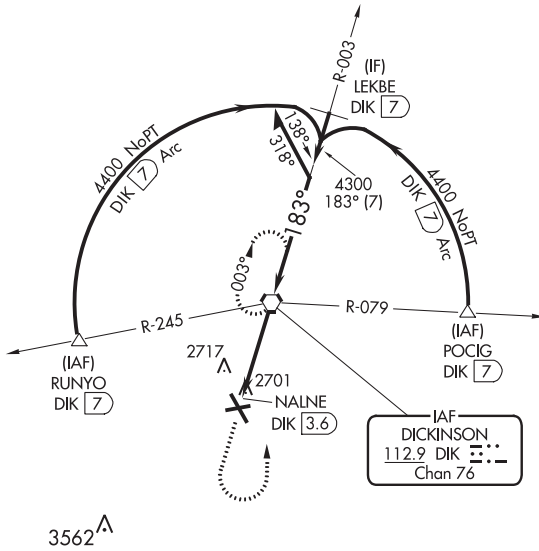
VORTAC DIK <b>112.9</b> Chan <b>76</b>	APP CRS <b>183°</b>	Rwy ldg TDZE Apt Elev <b>N/A</b> <b>N/A</b> <b>2592</b>
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**VOR-A**

DICKINSON-THEODORE ROOSEVELT RGNL (DIK)

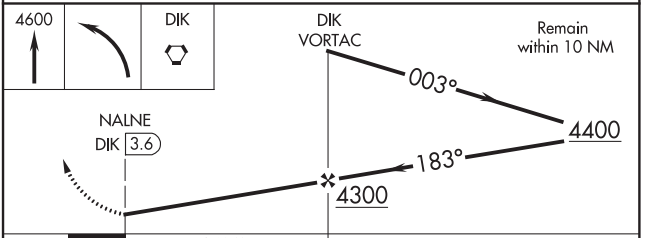
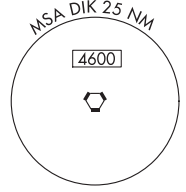
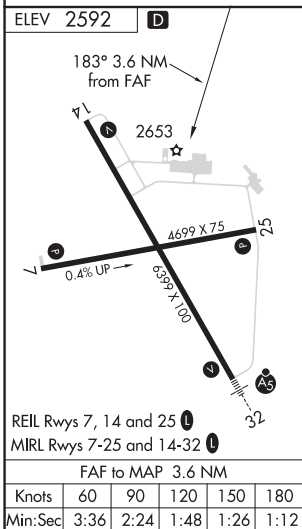
**▲** If local altimeter setting not received, use Bowman Muni altimeter setting and increase all MDAs 280 feet. **MISSED APPROACH:** Climb to 4600 then turn left direct DIK VORTAC and hold.

ASOS <b>118.375</b>	MINNEAPOLIS CENTER <b>124.25 380.3</b>	UNICOM <b>123.0 (CTAF) ①</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



FAF to MAP 3.6 NM		CATEGORY	A	B	C	D
Knots	60 90 120 150 180	CIRCLING	3080-1	488 (500-1)	3080-1½ 488 (500-1½)	3160-2 568 (600-2)
Min:Sec	3:36 2:24 1:48 1:26 1:12					

16091

# AIRPORT DIAGRAM

DICKINSON-THEODORE ROOSEVELT RGNL (DIK)  
AL-120 (FAA)  
DICKINSON, NORTH DAKOTA

ASOS  
118.375  
CTAF/UNICOM  
123.0

FIELD  
ELEV  
2592

**D** 46°48.5'N

VAR 7.7° E  
JANUARY 2015  
ANNUAL RATE OF CHANGE  
0.1°W

△ 2701

ELEV 2587

142.7°

HANGAR

FBO

HANGARS

MAINTENANCE  
BUILDING

TERMINAL

46°48.0'N

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 2572

072.0°  
0.4% UP

4699 X 75

6399 X 100

ELEV 2592

25  
252.0°

46°47.5'N

NC-1, 10 NOV 2016 to 05 JAN 2017

RWY 07-25  
PCN 5 F/D/W/T  
S-16, D-20  
RWY 14-32  
PCN 12 F/D/W/T  
S-30, D-37.5

ELEV 2591

31  
322.7°

102°48.5'W

102°48.0'W

102°47.5'W

# AIRPORT DIAGRAM

16091

DICKINSON, NORTH DAKOTA  
DICKINSON-THEODORE ROOSEVELT RGNL (DIK)

WAAS CH <b>97532</b> <b>W16A</b>	APP CRS <b>164°</b>	Rwy Idg TDZE Apt Elev	<b>4500</b> <b>1299</b> <b>1304</b>
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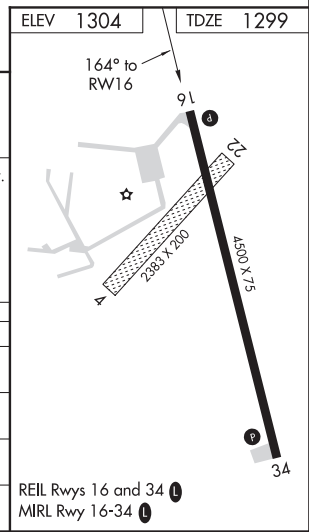
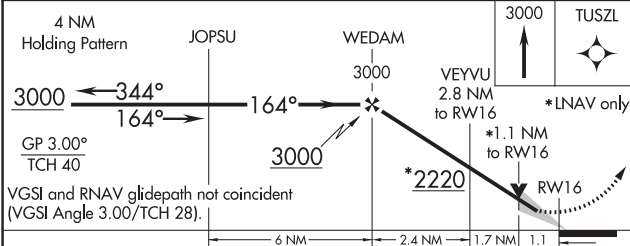
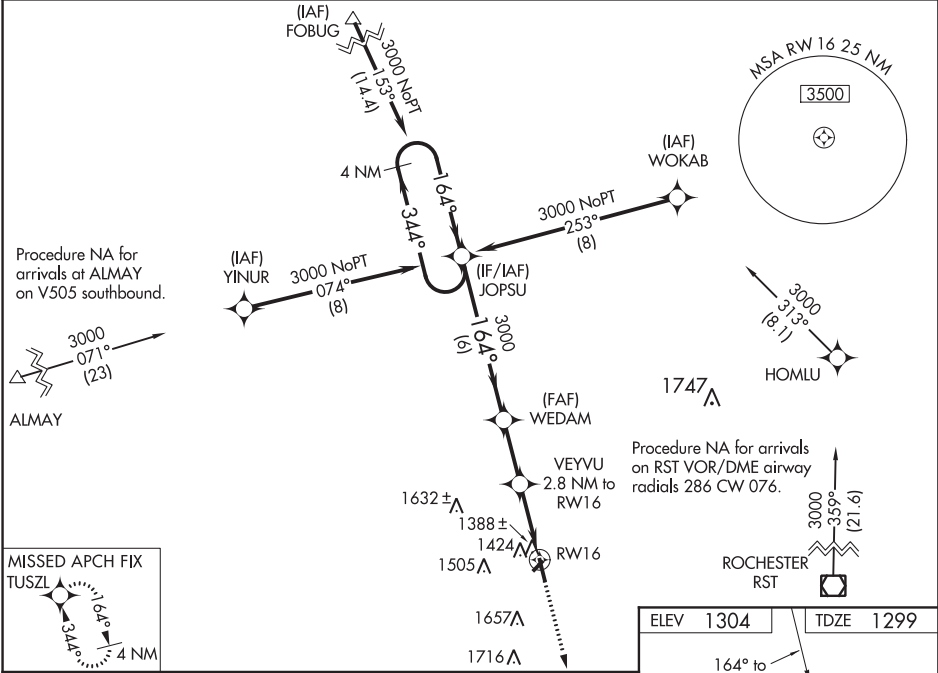
# RNAV (GPS) RWY 16

DODGE CENTER (TOB)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Baro-VNAV and VDP NA with Rochester Intl altimeter setting. When local altimeter setting not received, use Rochester Intl altimeter setting and increase all DA 39 feet and all MDA 40 feet, and increase LNAV/VNAV all Cats, LNAV Cat C visibility 1/8 mile, and Circling Cat C visibility 1/4 mile.

**MISSED APPROACH:**  
Climb to 3000 direct TUSZL and hold.

AWOS-3 <b>119.075</b>	ROCHESTER APP CON* <b>119.8 251.125</b>	CTAF <b>122.9</b>
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CATEGORY	A	B	C	D
LPV DA	1549-1	250 (300-1)		NA
LNAV/VNAV DA	1586-1	287 (300-1)		NA
LNAV MDA	1680-1	381 (400-1)	1680-1 1/8 381 (400-1 1/8)	NA
<b>C</b> CIRCLING	1960-1	656 (700-1)	1960-1 3/4 656 (700-1 3/4)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>45633</b> <b>W34A</b>	APP CRS <b>344°</b>	Rwy Idg TDZE Apt Elev	<b>4500</b> <b>1304</b> <b>1304</b>
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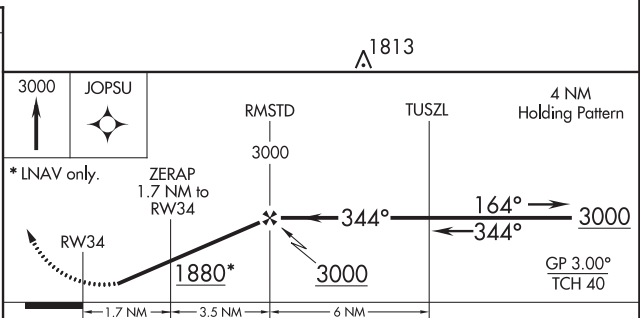
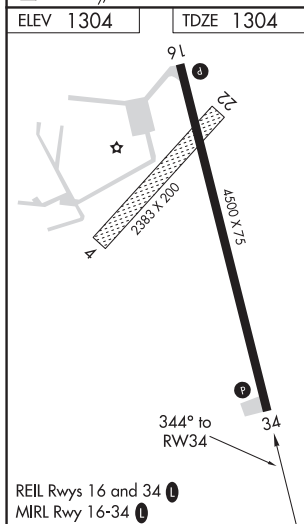
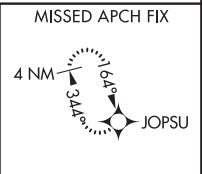
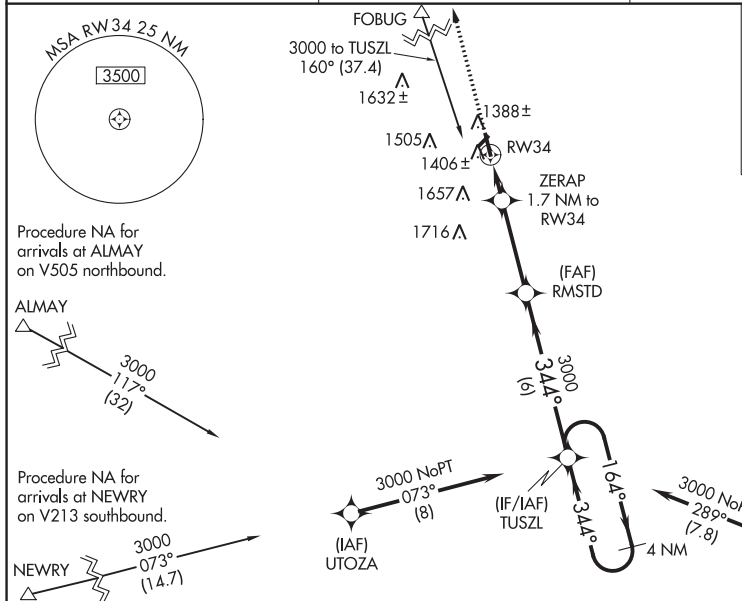
# RNAV (GPS) RWY 34

DODGE CENTER (TOB)

**⚠** Baro-VNAV NA when using Rochester Intl altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Rochester Intl altimeter setting and increase all DA 39 feet and all MDA 40 feet, and increase LNAV Cat C visibility 1/8 mile and Circling Cat C visibility 1/4 mile. Rwy 34 Straight-in and Circling minimums NA at night.

**MISSED APPROACH:**  
Climb to 3000 direct JOPSU and hold.

AWOS-3 <b>119.075</b>	ROCHESTER APP CON ★ <b>119.8 251.125</b>	CTAF <b>122.9</b>
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CATEGORY	A	B	C	D
LPV DA	1554-1	250 (300-1)		NA
LNAV/VNAV DA	1556-1	252 (300-1)		NA
LNAV MDA	1660-1	356 (400-1)		NA
<b>C</b> CIRCLING	1960-1	656 (700-1)	1960-1 <sup>3</sup> / <sub>4</sub> 656 (700-1 <sup>3</sup> / <sub>4</sub> )	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

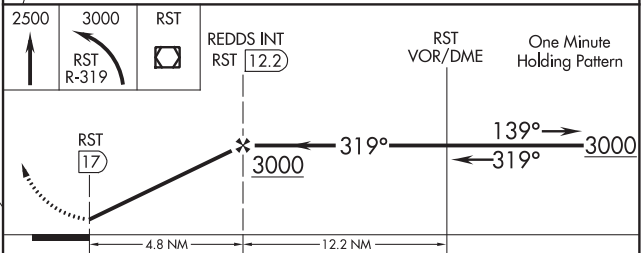
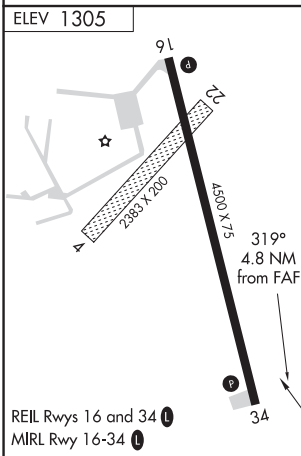
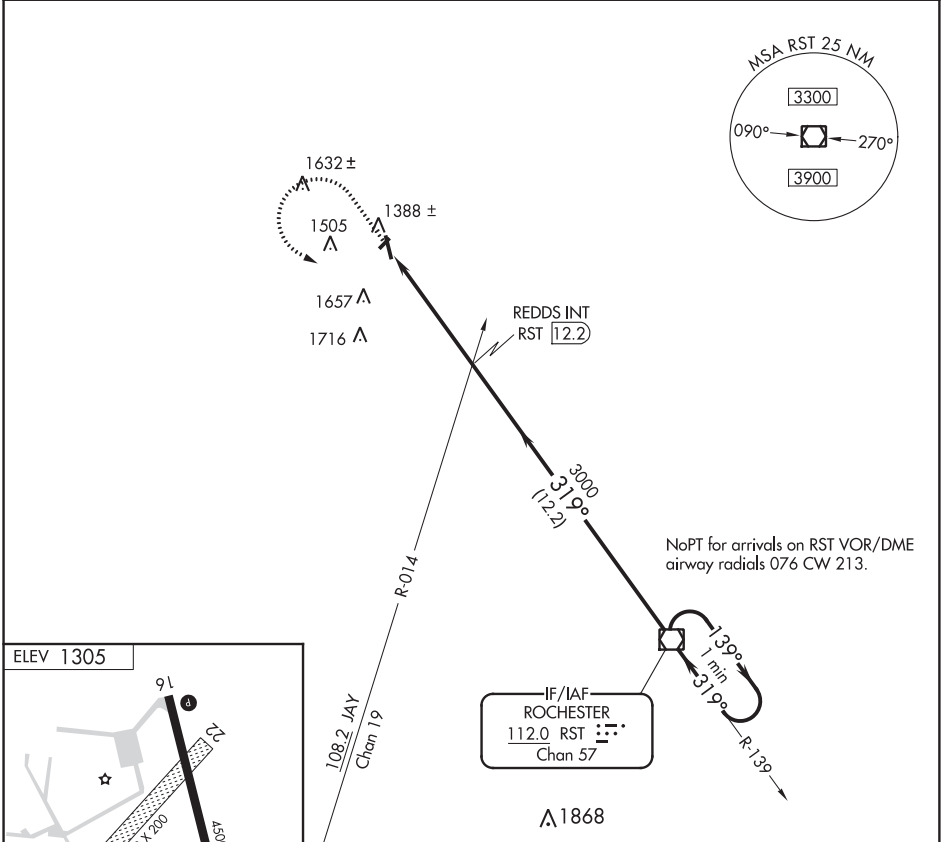


VOR/DME RST <b>112.0</b> Chan <b>57</b>	APP CRS <b>319°</b>	Rwy Idg TDZE Apt Elev <b>1305</b>	<b>N/A</b> <b>N/A</b>
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**VOR-A**  
DODGE CENTER (TOB)

**⚠** When local altimeter setting not received, use Rochester Intl altimeter setting and increase all MDA 40 feet. **MISSED APPROACH:** Climb to 2500 then climbing left turn to 3000 via RST VOR/DME R-319 to RST VOR/DME and hold.

AWOS-3 <b>119.075</b>	ROCHESTER APP CON * <b>119.8 251.125</b>	CTAF <b>122.9</b>
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FAF to MAP 4.8 NM					
Knots	60	90	120	150	180
Min:Sec	4:48	3:12	2:24	1:55	1:36
CATEGORY	A	B	C	D	
CIRCLING	1960-1 655 (700-1)	1980-1 675 (700-1)	2000-2 695 (700-2)	NA	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC I-DLH <b>110.3</b>	APP CRS <b>092°</b>	Rwy Idg <b>10162</b> TDZE <b>1428</b> Apt Elev <b>1428</b>
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# ILS or LOC RWY 9

DULUTH INTL (DLH)

**⚠** For inop ALSF, increase S-ILS 9 Cat E visibility to RVR 4000 and S-LOC 9 Cat C/D/E visibility to 1 1/2 mile. Circling NA for Cat E southeast of Rwy 3-27. ADF or RADAR required.

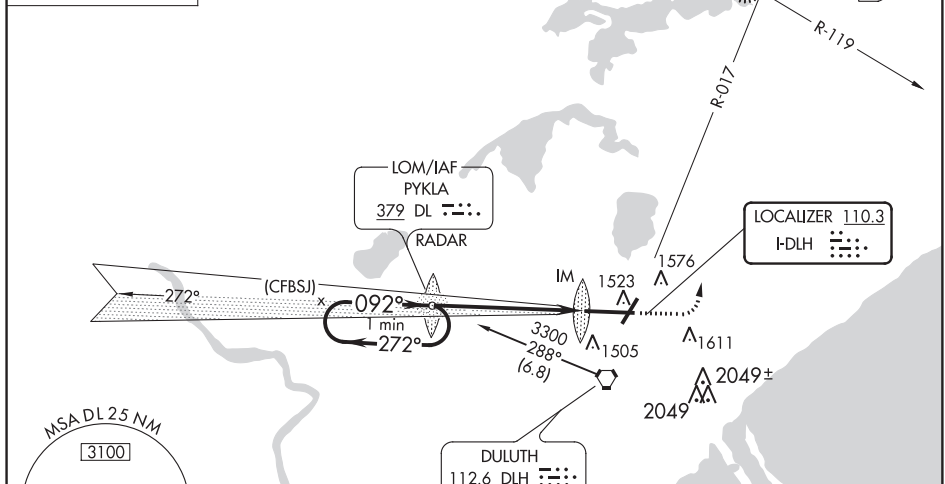
**ALSF-2** MISSED APPROACH: Climb to 3000 then climbing left turn to 4500 on heading 320° and DLH VORTAC R-017 to CHERL INT/DLH 15 DME and hold.

ATIS <b>124.1 270.1</b>	DULUTH APP CON <b>125.45 233.7</b>	DULUTH TOWER <b>118.3 257.8</b>	GND CON <b>121.9 348.6</b>
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ALTERNATE MISSED APCH FIX

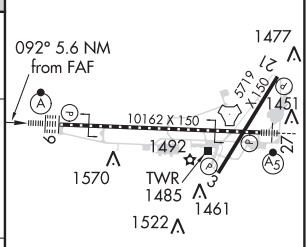
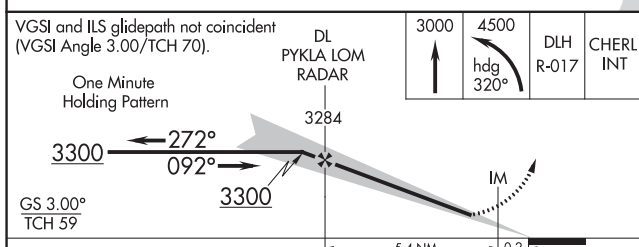
PYKLA  
DL ---  
379  
RADAR

**ADF or RADAR REQUIRED**



MSA DL 25 NM  
3100

ELEV 1428	<b>D</b> TDZE 1428
TDZ/CL Rwy 9	
REIL Rws 3 and 21	
HIRL Rws 3-21 and 9-27	



CATEGORY	A	B	C	D	E
S-ILS 9	1628/18 200 (200-1/2)				
S-LOC 9	1960/24	532 (600-1/2)	1960/55 532 (600-1 1/4)		
<b>C</b> CIRCLING	1960-1	532 (600-1)	1960-1 1/2 532 (600-1 1/2)	2400-3	972 (1000-3)

FAF to MAP 5.6 NM					
Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52

NC-1, 10 NOV 2016 to 05 JAN 2017


NC-1, 10 NOV 2016 to 05 JAN 2017

LOC I-JUD <b>108.7</b>	APP CRS <b>270°</b>	Rwy Idg <b>10162</b> TDZE <b>1421</b> Apt Elev <b>1428</b>
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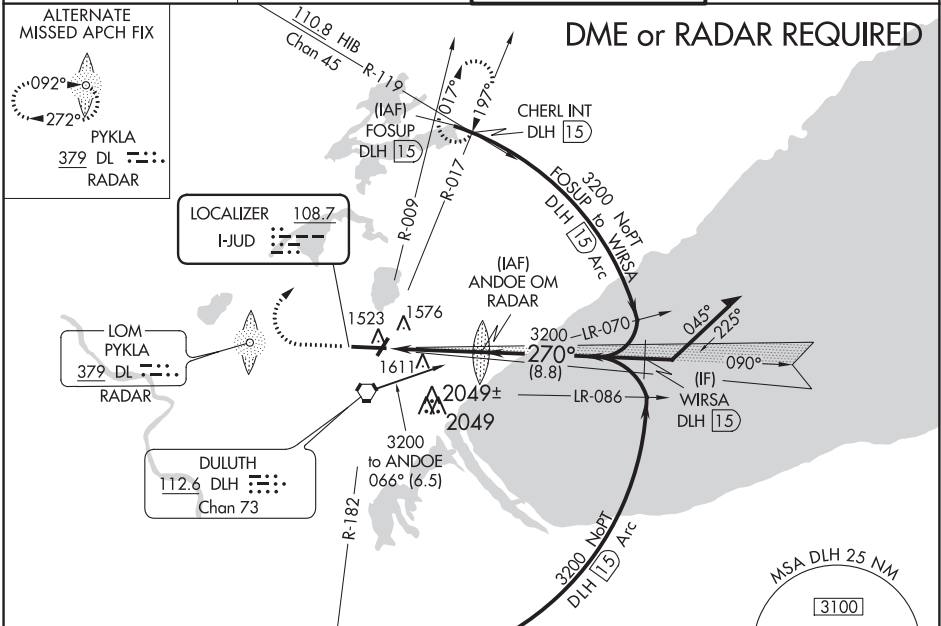
# ILS or LOC RWY 27

DULUTH INTL (DLH)

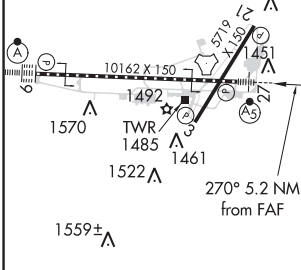
**⚠** Inop table does not apply to S-ILS 27. Circling NA for Cat E southeast of Rwy 3-27. For inop MALS/R, increase S-LOC 27 Cat E visibility to 1 3/8 mile.

**MALS/R**  
 MISSED APPROACH: Climb to 3000 then climbing right turn to 4500 on heading 060° and on DLH VORTAC R-017 to CHERL INT/DLH 15 DME and hold.

ATIS <b>124.1 270.1</b>	DULUTH APP CON <b>125.45 233.7</b>	DULUTH TOWER <b>118.3 257.8</b>	GND CON <b>121.9 348.6</b>
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ELEV 1428	<b>D</b>	TDZE 1421
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TDZ/CL Rwy 9  
 REIL Rwys 3 and 21  
 HIRL Rwys 3-21 and 9-27  
 FAF to MAP 5.2 NM

Knots	60	90	120	150	180
Min:Sec	5:12	3:28	2:36	2:05	1:44

3000	4500	DLH R-017	CHERL INT	ANDOE OM RADAR	Remain within 15 NM
VGSi and ILS glidepath not coincident (VGSi Angle 3.00/TCH 96).					

CATEGORY	A	B	C	D	E
S-ILS 27	1621/40	200 (200-3/4)	1651/40	230 (300-3/4)	
S-LOC 27	1860/24	439 (500-1/2)	1860/45	439 (500-3/8)	
<b>C</b> CIRCLING	1880-1 452 (500-1)	1900-1 472 (500-1)	1940-1 1/2 512 (600-1 1/2)	2400-3	972 (1000-3)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

DULUTH, MINNESOTA

AL-125 (FAA)

16315

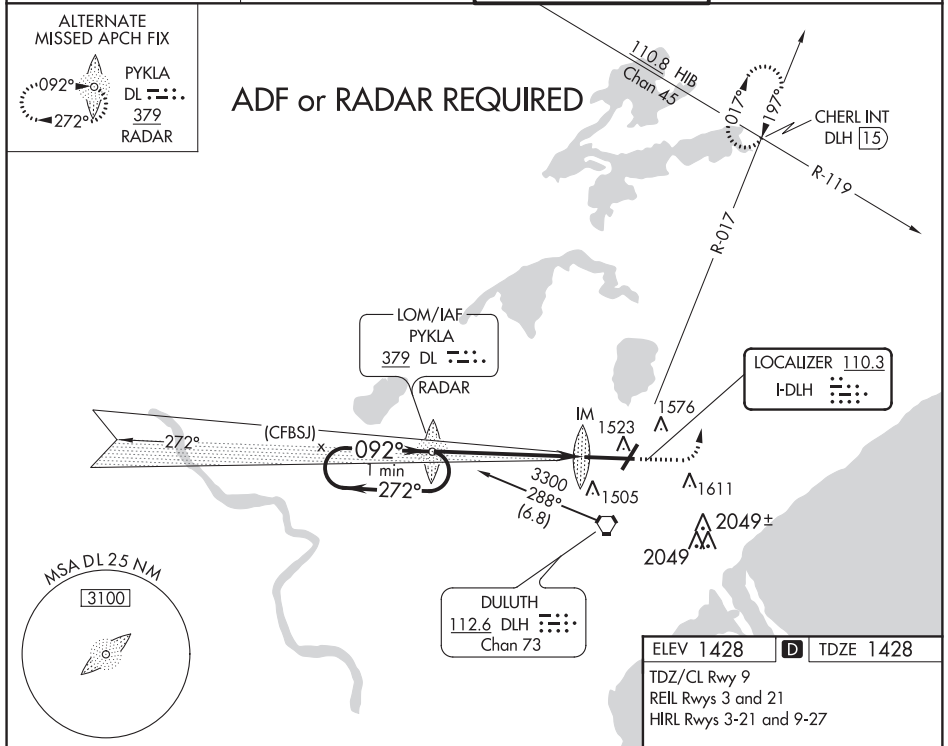
LOC I-DLH <b>110.3</b>	APP CRS <b>092°</b>	Rwy Idg <b>10162</b> TDZE <b>1428</b> Apt Elev <b>1428</b>
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# ILS RWY 9 (SA CAT I)

DULUTH INTL (DLH)

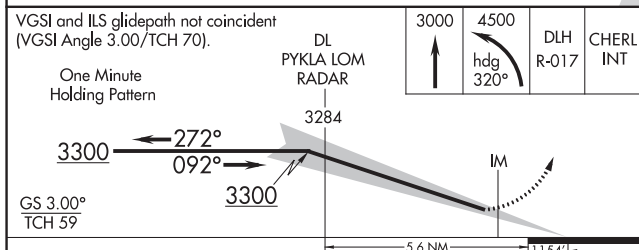
<p>Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DA. ADF or RADAR required.</p>	<p>ALSF-2</p>	<p>MISSED APPROACH: Climb to 3000 then climbing left turn to 4500 on heading 320° and DLH VORTAC R-017 to CHERL INT/DLH 15 DME and hold.</p>
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<p>ATIS <b>124.1 270.1</b></p>	<p>DULUTH APP CON <b>125.45 233.7</b></p>	<p>DULUTH TOWER <b>118.3 257.8</b></p>	<p>GND CON <b>121.9 348.6</b></p>
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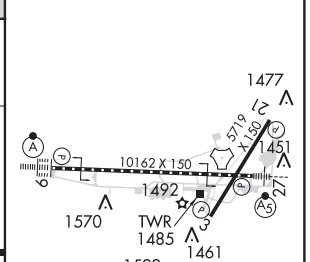


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 1428	<b>D</b> TDZE 1428
<p>TDZ/CL Rwy 9 REIL Rwy 3 and 21 HIRL Rwy 3-21 and 9-27</p>	



CATEGORY	A	B	C	D
S-ILS 9	RA 144/14 150 DA 1578			

**SA CATEGORY I ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED**

DULUTH, MINNESOTA  
Amdt 22A 24JUL14

46°51'N-92°12'W

DULUTH INTL (DLH)  
**ILS RWY 9 (SA CAT I)**

LOC I-DLH <b>110.3</b>	APP CRS <b>092°</b>	Rwy Idg TDZE Apt Elev	<b>10162</b> <b>1428</b> <b>1428</b>
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# ILS RWY 9 (CAT II)

DULUTH INTL (DLH)

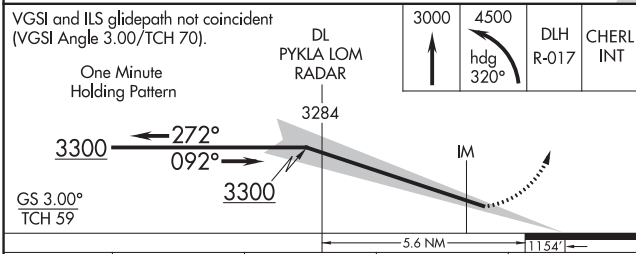
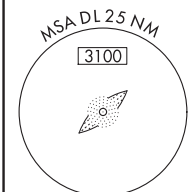
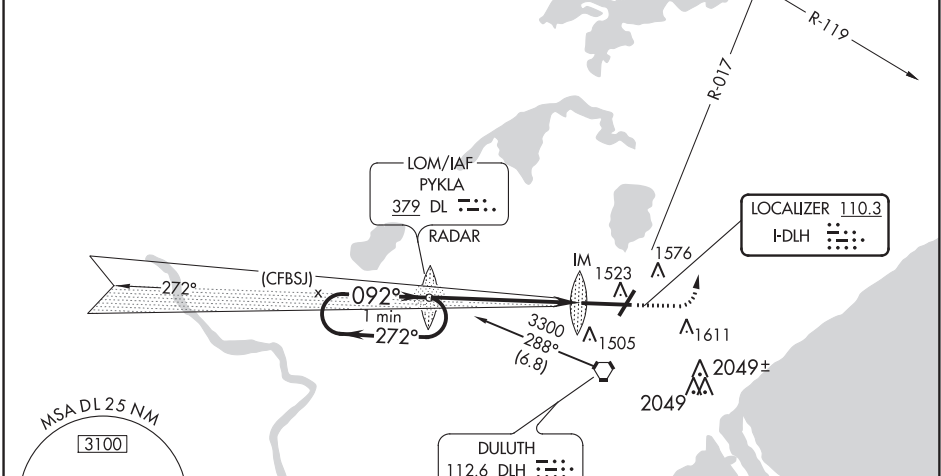
 ADF or RADAR required.	ALSF-2	MISSED APPROACH: Climb to 3000 then climbing left turn to 4500 on heading 320° and DLH VORTAC R-017 to CHERL INT/DLH 1.5 DME and hold.
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ATIS <b>124.1 270.1</b>	DULUTH APP CON <b>125.45 233.7</b>	DULUTH TOWER <b>118.3 257.8</b>	GND CON <b>121.9 348.6</b>
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ALTERNATE MISSED APCH FIX

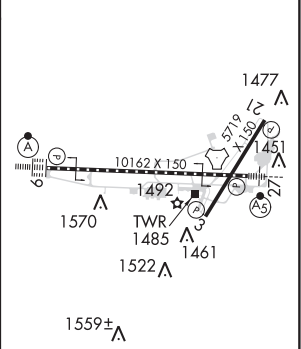
PYKLA  
DL 379  
RADAR

**ADF or RADAR REQUIRED**



ELEV 1428	TDZE 1428
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TDZ/CL Rwy 9  
REIL Rwys 3 and 21  
HIRL Rwys 3-21 and 9-27



CATEGORY	A	B	C	D
S-ILS 9	RA 101/12 100 DA 1528			

**CATEGORY II ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



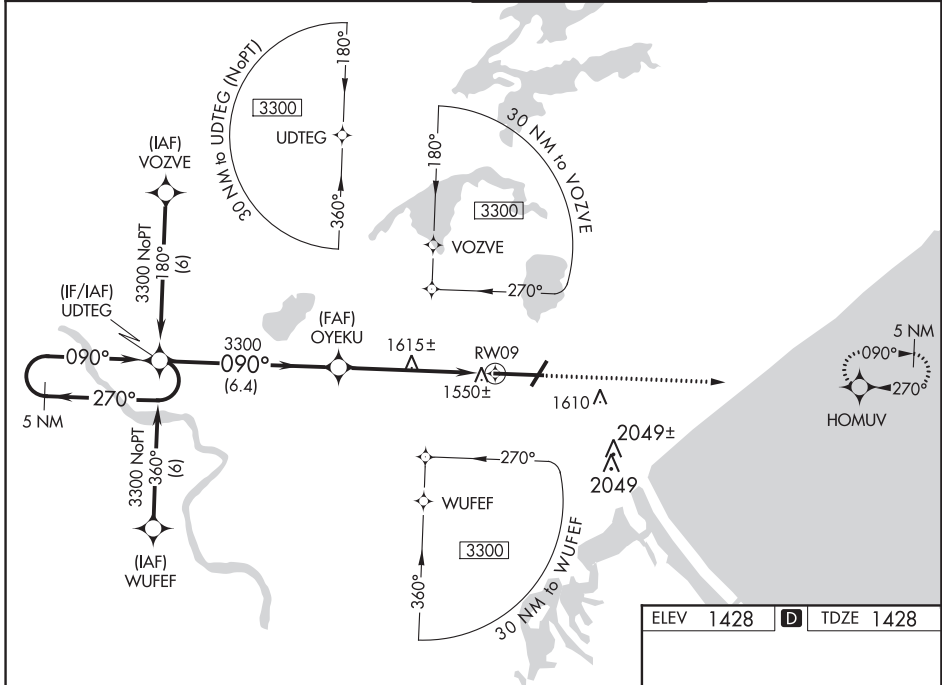
WAAS CH <b>90502</b> <b>W09A</b>	APP CRS <b>090°</b>	Rwy ldg <b>10162</b> TDZE <b>1428</b> Apt Elev <b>1428</b>
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# RNAV (GPS) RWY 9

DULUTH INTL (DLH)

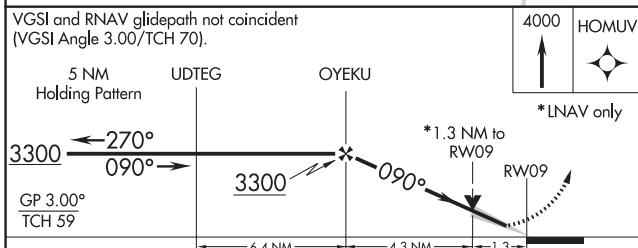
<p><b>⚠</b> DME/DME RNP-0.3 NA. Circling NA for Cat E southeast of Rwy 3 and 27. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (115°F).</p> <p><b>ASR</b> For inop ALSF-2, increase LPV Cat E visibility to 3/4, LNAV/VNAV all Cats visibility to 1/2 and LNAV Cat E visibility to 1 1/2.</p>	<p>ALSF-2</p>	<p>MISSED APPROACH: Climb to 4000 direct HOMUV and hold.</p>

ATIS <b>124.1 270.1</b>	DULUTH APP CON <b>125.45 233.7</b>	DULUTH TOWER <b>118.3 257.8</b>	GND CON <b>121.9 348.6</b>
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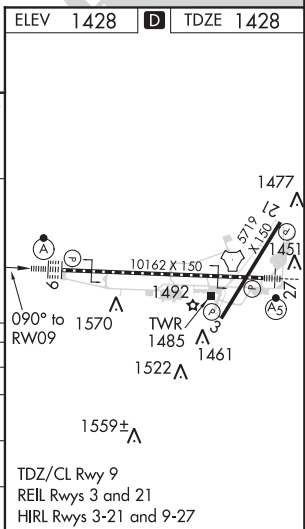


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D	E
LPV DA		1628/24	200 (200-1/2)		
LNAV/VNAV DA		1860/50	432 (500-1)		
LNAV MDA	1880/24	452 (500-1/2)	1880/40 452 (500-3/4)	1880/50	452 (500-1)
<b>C</b> CIRCLING	1880-1 452 (500-1)	1900-1 472 (500-1)	1940-1 1/2 512 (600-1 1/2)	2400-3	972 (1000-3)



DULUTH, MINNESOTA

AL-125 (FAA)

16315

WAAS CH <b>40114</b> <b>W21A</b>	APP CRS <b>210°</b>	Rwy Idg TDZE <b>1420</b> Apt Elev <b>1428</b>
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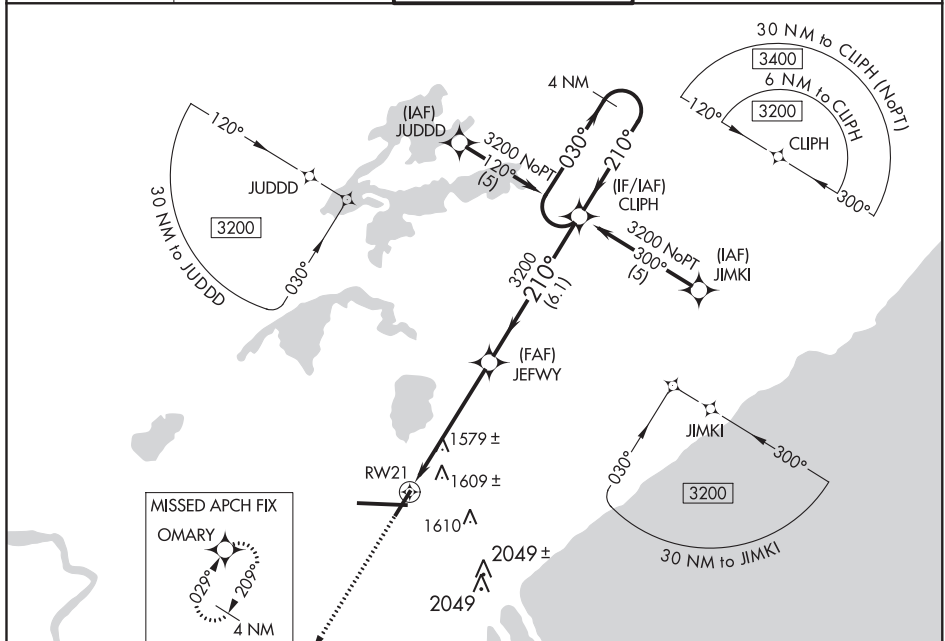
# RNAV (GPS) RWY 21

DULUTH INTL (DLH)

**ASR** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 3200 direct OMARY and hold.

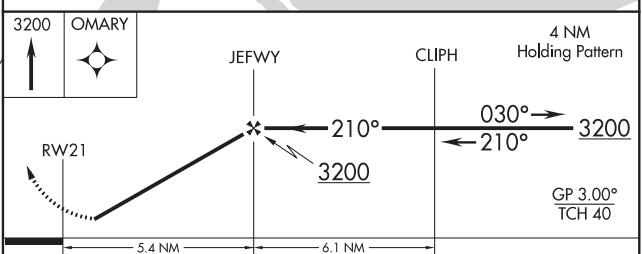
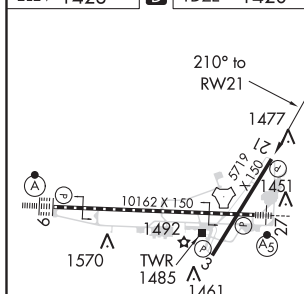
ATIS <b>124.1 270.1</b>	DULUTH APP CON <b>125.45 233.7</b>	DULUTH TOWER <b>118.3 257.8</b>	GND CON <b>121.9 348.6</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1428	<b>D</b>	TDZE 1420
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CATEGORY	A	B	C	D
LPV DA	1708-1 288 (300-1)			
LNAV/VNAV DA	1927-1¾ 507 (500-1¾)			
LNAV MDA	1840-1	420 (500-1)	1840-1¼	420 (500-1¼)
<b>C</b> CIRCLING	1880-1 452 (500-1)	1900-1 472 (500-1)	1940-1½ 512 (600-1½)	2400-3 972 (1000-3)

TDZ/CL Rwy 9  
REIL Rwy 3 and 21  
HIRL Rwy 3-21 and 9-27

DULUTH, MINNESOTA  
Orig-A 11DEC14

46°51'N-92°12'W

# DULUTH INTL (DLH) RNAV (GPS) RWY 21







VORTAC DLH <b>112.6</b> Chan 73	APP CRS <b>012°</b>	Rwy Idg TDZE <b>1420</b> Apt Elev <b>1428</b>
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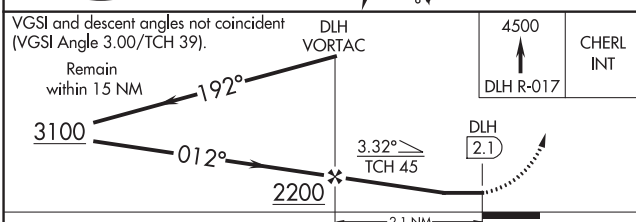
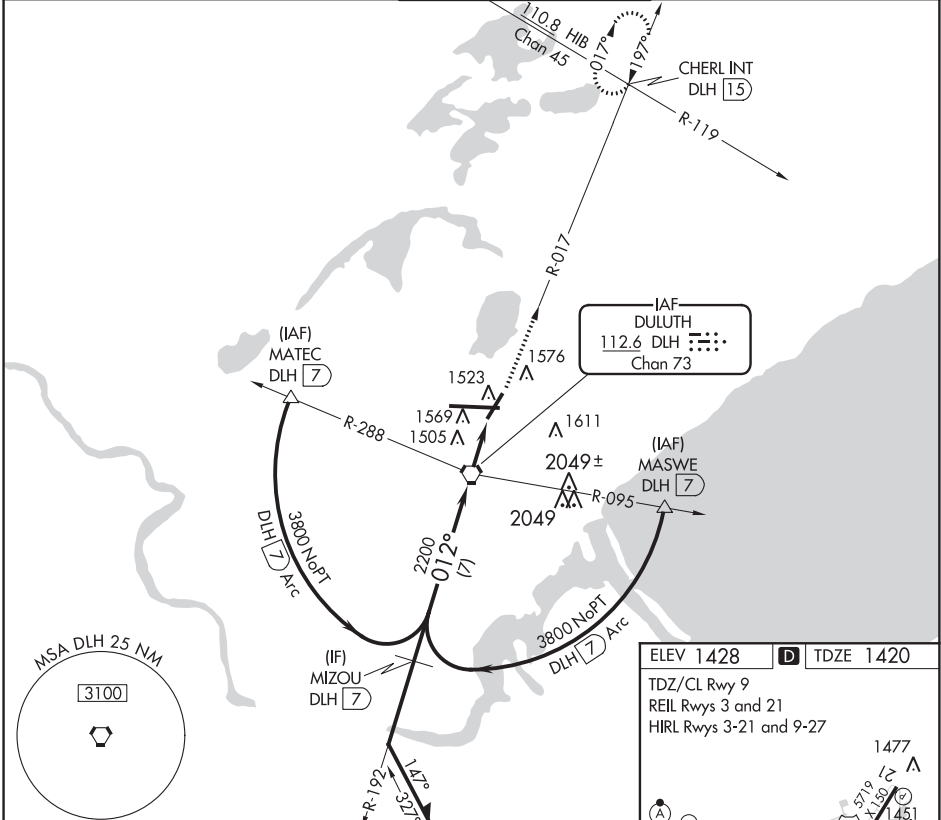
# VOR or TACAN RWY 3

DULUTH INTL (DLH)

**⚠** Circling NA for Cat E southeast of Rwy 3-27.  
**ASR** Rwy 3 Straight-in and Circling minimums NA at night.  
 Helicopter visibility reduction below 1 SM NA.

**MISSED APPROACH:** Climb to 4500 on DLH VORTAC R-017 to CHERL INT/DLH 15 DME and hold.

ATIS <b>124.1 270.1</b>	DULUTH APP CON <b>125.45 233.7</b>	DULUTH TOWER <b>118.3 257.8</b>	GND CON <b>121.9 348.6</b>
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ELEV 1428 TDZE 1420

TDZ/CL Rwy 9  
 REIL Rws 3 and 21  
 HIRL Rws 3-21 and 9-27

FAF to MAP 2.1 NM

Knots	60	90	120	150	180
Min:Sec	2:06	1:24	1:03	0:50	0:42

CATEGORY	A	B	C	D	E
S-3	1820-1	400 (400-1)	1820-1½	400 (400-1½)	
<b>C</b> CIRCLING	1880-1 452 (500-1)	1900-1 472 (500-1)	1940-1½ 512 (600-1½)	NA	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

DULUTH, MINNESOTA

# TACAN RWY 9

TACAN LKI Chan 11	APCH CRS 087°	Rwy Ldg 10,162 THRE 1428 Arpt Elev 1428
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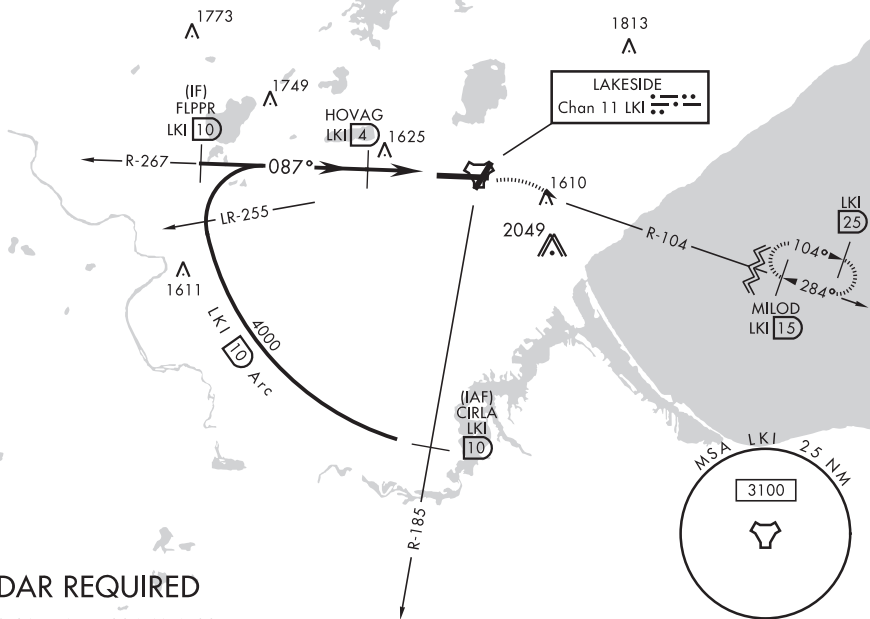
AL-125 [USAF]

DULUTH INTL (KDLH)

<p>▼</p> <p>*When ALS inop, increase CAT E vis to 1½ miles. **Circling NA for CAT E SE of Rwy 3 and 27.</p>	<p>ALSF-2</p>	<p>MISSED APPROACH: Climb to 2500 then climbing right turn to 4000 via LKI R-104 to MILOD (15° DME) and hold.</p>
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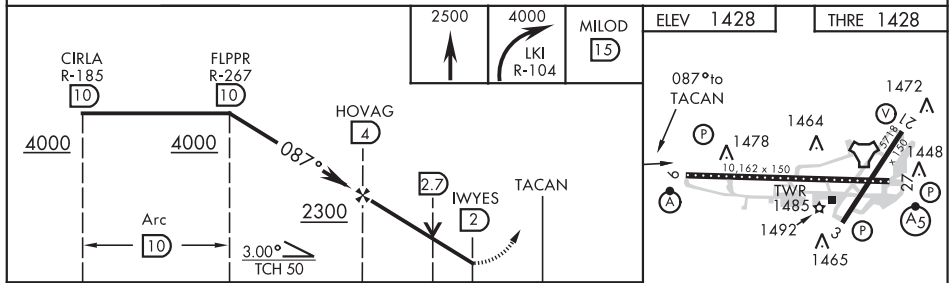
<p>ATIS</p> <p>124.1 270.1</p>	<p>DULUTH APP CON</p> <p>125.45 255.9</p>	<p>DULUTH TOWER</p> <p>118.3 257.8</p>	<p>GND CON</p> <p>121.9 348.6</p>
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CAUTION:  
Do not select channel 73 "DLH" for channel 11 "LKI".  
Towers 2049' on R-099 channel 73 "DLH".

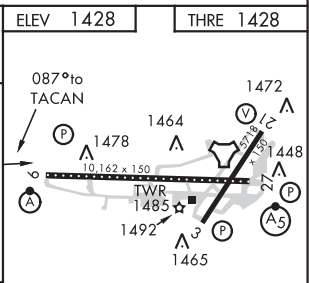


## RADAR REQUIRED

EMERG SAFE ALT 100 NM 4100



CATEGORY	A	B	C	D	E
S-9*	1880/24 452 (500-½)		1880/45 452 (500-1)		
CIRCLING**	1920-1 492 (500-1)		1920-1½ 492 (500-1½)	1980-2 552 (600-2)	2060-2¼ 632 (700-2¼)



TDZL/CL Rwy 9-27  
REIL Rwy 3 and 21  
HIRL Rwy 3-21 and 9-27

DULUTH, MINNESOTA  
Amdt 3 15232

46°51'N-92°12'W

DULUTH INTL (KDLH)

# TACAN RWY 9

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

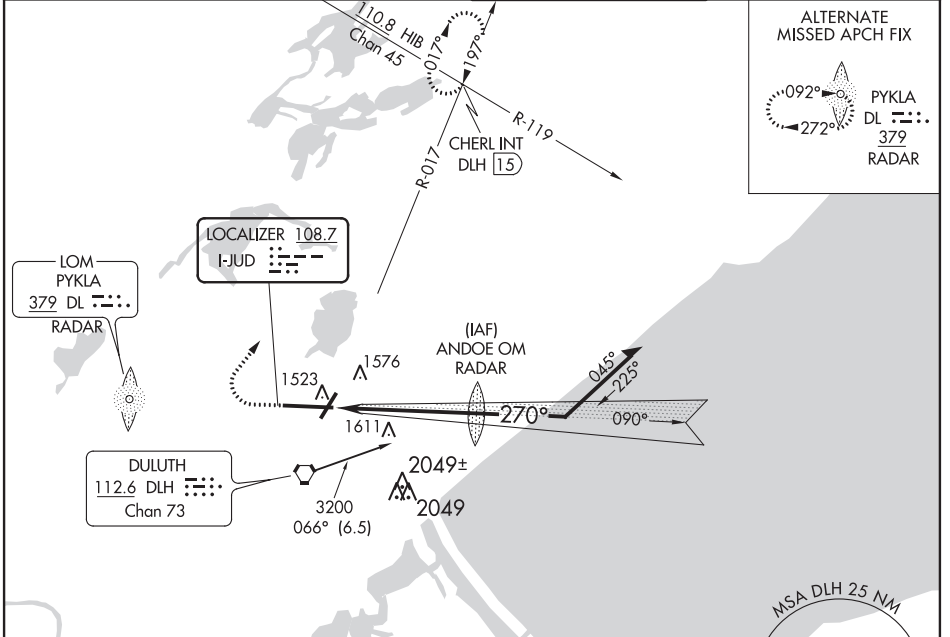
LOC I-JUD <b>108.7</b>	APP CRS <b>270°</b>	Rwy Idg <b>10162</b>
		TDZE <b>1421</b>
		Apt Elev <b>1428</b>

# COPTER ILS or LOC RWY 27

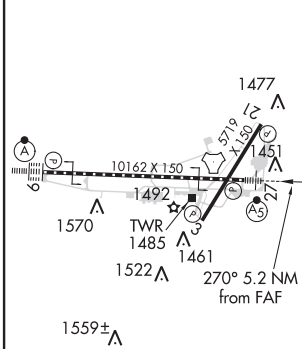
DULUTH INTL (DLH)

ASR Inop table does not apply to H-ILS 27. For inop MALSR, increase H-LOC 27 visibility to RVR 2400.	MALSR 	MISSED APPROACH: Climb to 3000 then climbing right turn to 4500 on heading 060° and on DLH VORTAC R-017 to CHERL INT/DLH 15 DME and hold.
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ATIS <b>124.1 270.1</b>	DULUTH APP CON <b>125.45 233.7</b>	DULUTH TOWER <b>118.3 257.8</b>	GND CON <b>121.9 348.6</b>
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ELEV 1428	<b>D</b>	TDZE 1421
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TDZ/CL Rwy 9					
REIL Rwys 3 and 21					
HIRL Rwys 3-21 and 9-27					
FAF to MAP 5.2 NM					
Knots	45	60	75	90	105
Min:Sec	6:56	5:12	4:10	3:28	2:58

3000 4500 hdg 060° DLH R-017 CHERL INT ANDOE OM RADAR Remain within 5 NM VGSi and ILS glidepath not coincident (VGSi Angle 3.00/TCH 96). 3180 090° 270° 3200 3200 GS 3.00° TCH 85 5.2 NM		CATEGORY COPTER	
		H-ILS 27	1621/20 200 (200-½)
H-LOC 27	1860/12 439 (500-½)		

# COPTER ILS or LOC RWY 27

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

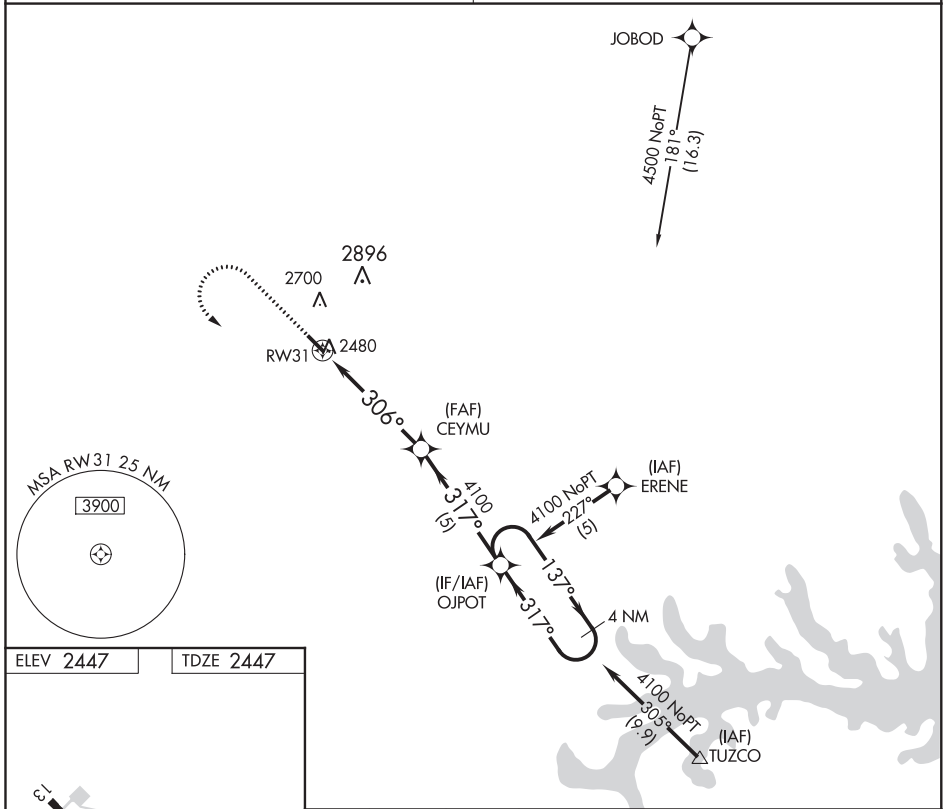


APP CRS <b>306°</b>	Rwy Idg <b>4200</b> TDZE <b>2447</b> Apt Elev <b>2447</b>
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# RNAV (GPS) RWY 31

CHEYENNE EAGLE BUTTE (84D)

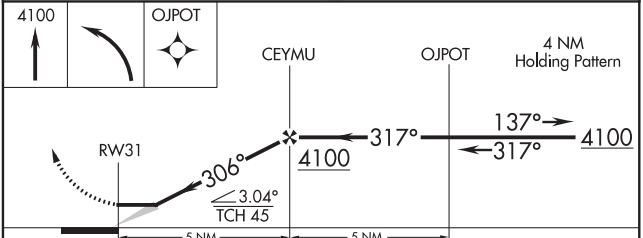
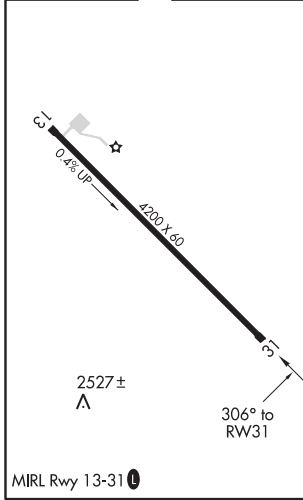
<p><b>▽</b> GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.</p> <p><b>▲ NA</b> Use Pierre altimeter setting.</p>	<p>MISSED APPROACH: Climb to 4100 then turn left direct OJPOT WP and hold.</p>
<p>MINNEAPOLIS CENTER <b>135.25 256.7</b></p>	<p>AUNICOM <b>122.8 (CTAF) 0</b></p>



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 2447	TDZE 2447
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CATEGORY	A	B	C	D
LNAV MDA	3020-1	573 (600-1)	NA	
CIRCLING	3240-1 793 (800-1)	3240-1½ 793 (800-1½)	NA	

WAAS CH <b>86636</b> <b>W14A</b>	APP CRS <b>144°</b>	Rwy Idg TDZE Apt Elev	<b>3600</b> <b>1601</b> <b>1604</b>
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# RNAV (GPS) RWY 14

EDGELEY MUNI (51D)

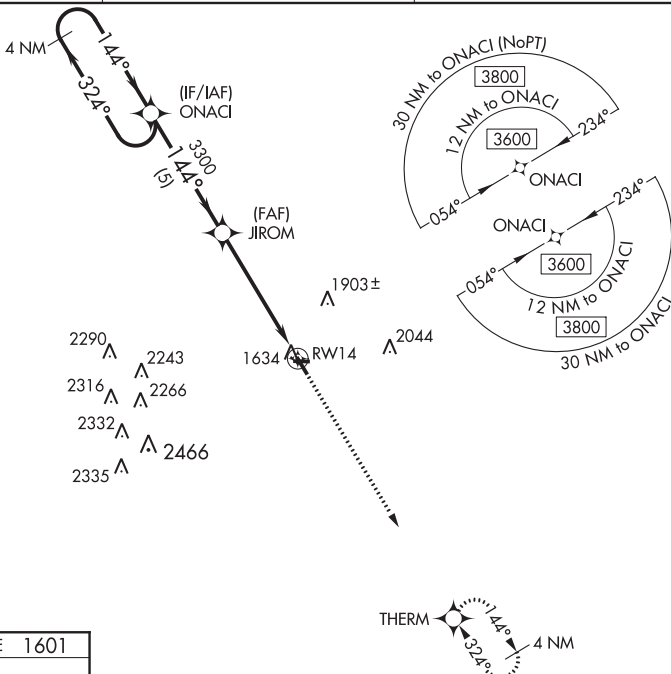
**Baro-VNAV NA.** Use Jamestown altimeter setting; when not received, use Oakes altimeter setting and increase all DA 10 feet and all MDA 20 feet; increase LPV and LNAV/VNAV all Cats visibility 1/8 mile. DME/DME RNP-0.3 NA. Procedure NA at night. Circling NA to Rws 9 and 27.

MISSED APPROACH: Climb to 3600 direct THERM and hold.

JAMESTOWN ASOS  
**118.425**

MINNEAPOLIS CENTER  
**124.2 270.3**

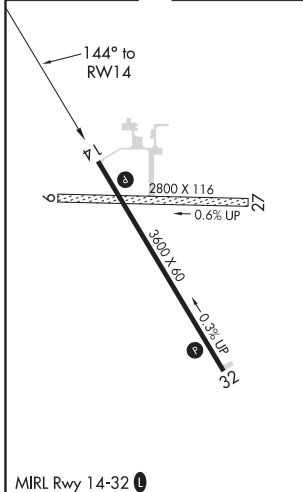
UNICOM  
**122.8 (CTAF)**



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1604	TDZE 1601
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VGSi and RNAV glidepath not coincident (VGSi Angle 3.00/TCH 27).			
4 NM Holding Pattern	ONACI	JIROM	THERM
3600 ← 324°	← 144° →	3300	3600 ↑
GP 3.00°		3300	
TCH 40			
	5 NM	5.2 NM	
3600			THERM
CATEGORY	A	B	C
LPV DA	1946-1 1/8	345 (400-1 1/8)	NA
LNAV/VNAV DA	1946-1 1/8	345 (400-1 1/8)	NA
LNAV MDA	2200-1	599 (600-1)	NA
<b>C</b> CIRCLING	2200-1	596 (600-1)	NA



WAAS CH <b>45936</b> <b>W32A</b>	APP CRS <b>324°</b>	Rwy Idg TDZE Apt Elev	<b>3600</b> <b>1600</b> <b>1604</b>
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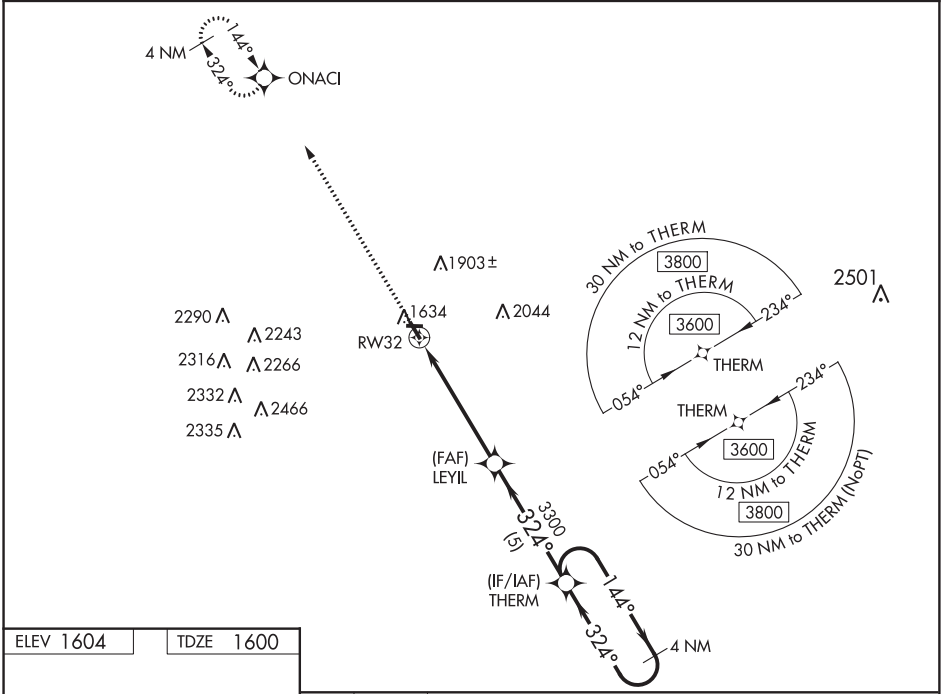
# RNAV (GPS) RWY 32

EDGELEY MUNI (51D)

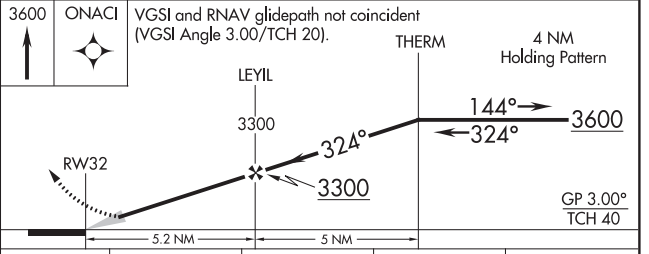
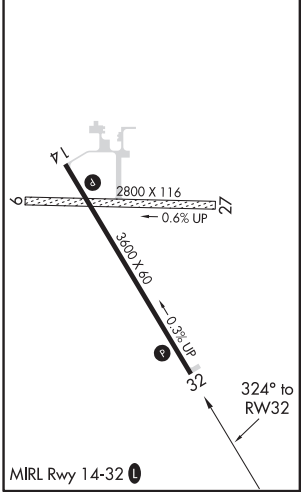
**NA** Baro-VNAV NA. Use Jamestown altimeter setting; when not received, use Oakes altimeter setting and increase all DA 10 feet and all MDA 20 feet; increase LNAV/VNAV all Cats visibility 1/8 mile. DME/DME RNP-0.3 NA. Procedure NA at night. Circling NA to Rwy 9 and 27.

MISSED APPROACH: Climb to 3600 direct ONACI and hold.

JAMESTOWN ASOS <b>118.425</b>	MINNEAPOLIS CENTER <b>124.2 270.3</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1604	TDZE 1600
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CATEGORY	A	B	C	D
LPV DA	1895-1	295 (300-1)	NA	
LNAV/VNAV DA	1945-1 1/8	345 (400-1 1/8)	NA	
LNAV MDA	2140-1	540 (600-1)	NA	
<b>C</b> CIRCLING	2140-1 536 (600-1)	2160-1 556 (600-1)	NA	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELBOW LAKE, MINNESOTA

AL-10404 (FAA)

16091

WAAS CH <b>49231</b> <b>W14A</b>	APP CRS <b>138°</b>	Rwy Idg <b>3401</b> TDZE <b>1206</b> Apt Elev <b>1206</b>
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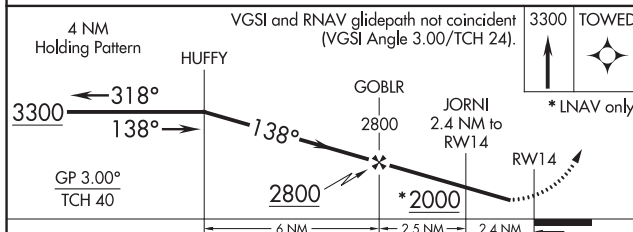
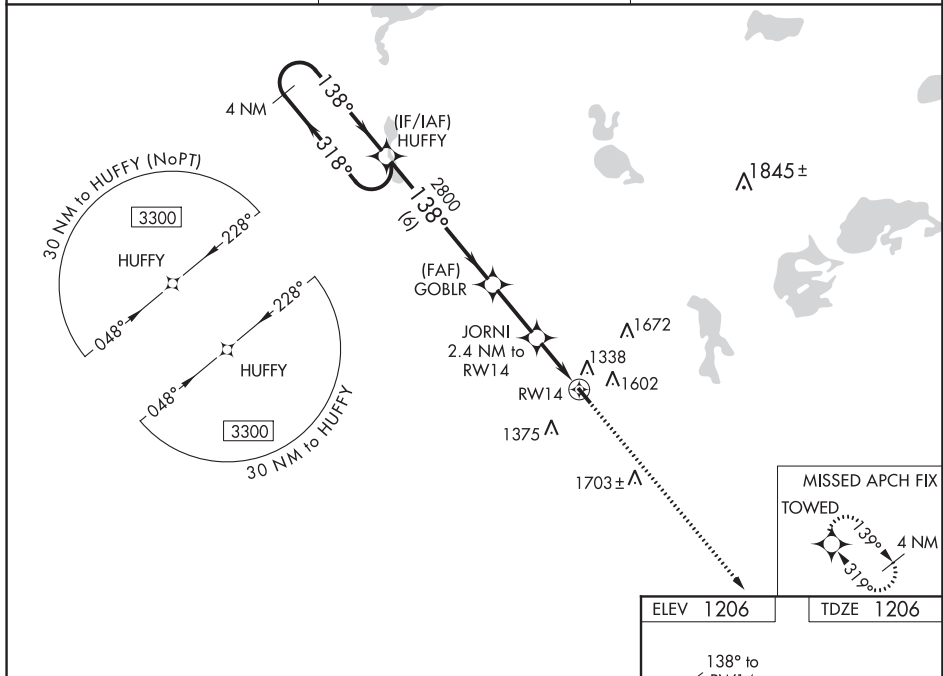
# RNAV (GPS) RWY 14

ELBOW LAKE MUNI - PRIDE OF THE PRAIRIE (Y63)

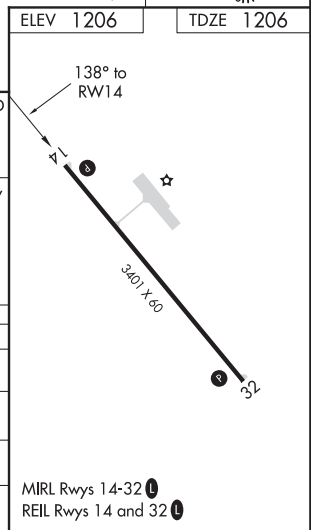
**⚠** Baro-VNAV NA when using Fergus Falls altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). Circling NA northeast of Rwy 14-32. Procedure NA at night. DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Fergus Falls altimeter setting and increase all DA 48 feet and all MDA 60 feet. Increase LNAV/VNAV all Cats visibility to 1 3/8 mile.

**⚠** MISSED APPROACH: Climb to 3300 direct TOWED and hold.

AWOS-3 <b>118.075</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	CTAF <b>122.9</b>
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CATEGORY	A	B	C	D
LPV DA	1456-1	250 (300-1)		NA
LNAV/VNAV DA	1557-1 1/8	351 (400-1 1/8)		NA
LNAV MDA	1600-1	394 (400-1)		NA
CIRCLING	1600-1 394 (400-1)	1660-1 454 (500-1)		NA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELBOW LAKE, MINNESOTA  
Orig-A 28MAY15

ELBOW LAKE MUNI - PRIDE OF THE PRAIRIE (Y63)  
45°59'N-96°00'W

# RNAV (GPS) RWY 14

WAAS CH <b>53731</b> <b>W32A</b>	APP CRS <b>319°</b>	Rwy Idg <b>3401</b>
		TDZE <b>1206</b>
		Apt Elev <b>1206</b>

# RNAV (GPS) RWY 32

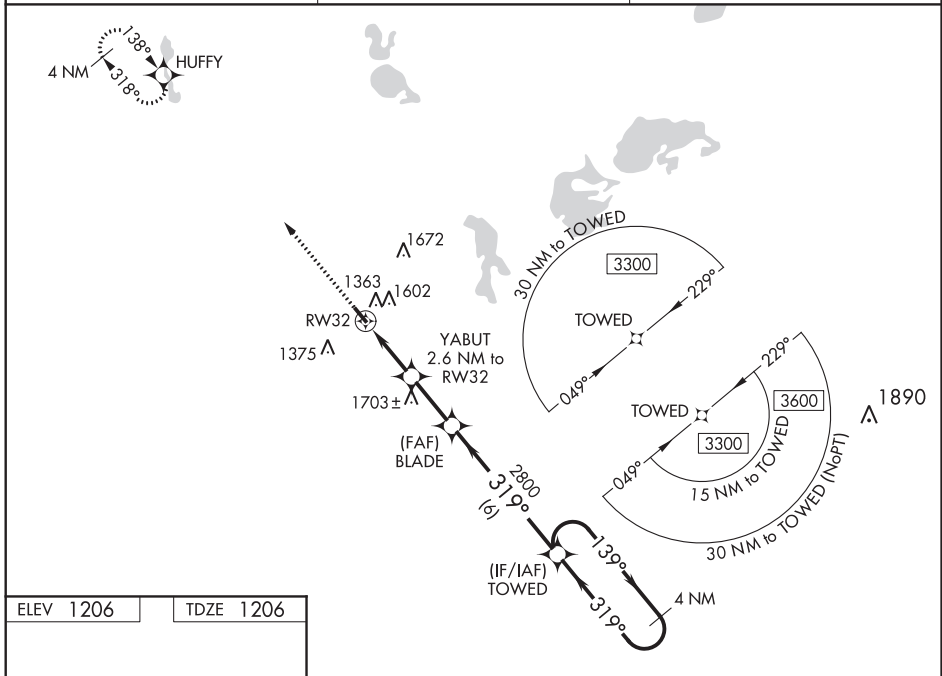
ELBOW LAKE MUNI - PRIDE OF THE PRAIRIE (Y63)

**⚠** Baro-VNAV NA when using Fergus Falls altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). Circling NA northeast of Rwy 14-32. DME/DME RNP-0.3 NA. Procedure NA at night. Helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Fergus Falls altimeter setting and increase all DA 48 feet and all MDA 60 feet. Increase LNAV/VNAV all Cats visibility to 1 1/2 mile.

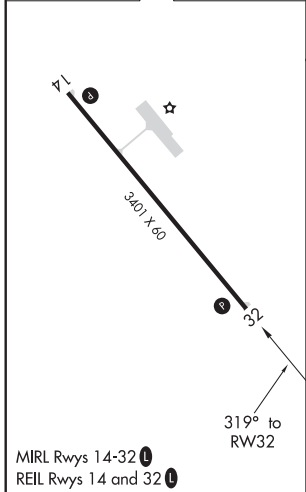
**⚠ NA**

**MISSED APPROACH:** Climb to 3300 direct HUFFY and hold.

AWOS-3 <b>118.075</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	CTAF <b>122.9</b>
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ELEV 1206	TDZE 1206
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3300 HUFFY VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 26). 4 NM Holding Pattern

\* LNAV only

YABUT 2.6 NM to RW32 BLADE 2800

RW32 2060\* 2800

GP 3.00° TCH 40

2.6 NM 2.3 NM 6 NM

CATEGORY	A	B	C	D
LPV DA	1456-1	250 (300-1)		NA
LNAV/VNAV DA	1595-1 3/8	389 (400-1 1/2)		NA
LNAV MDA	1580-1	374 (400-1)		NA
CIRCLING	1600-1 394 (400-1)	1660-1 454 (500-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

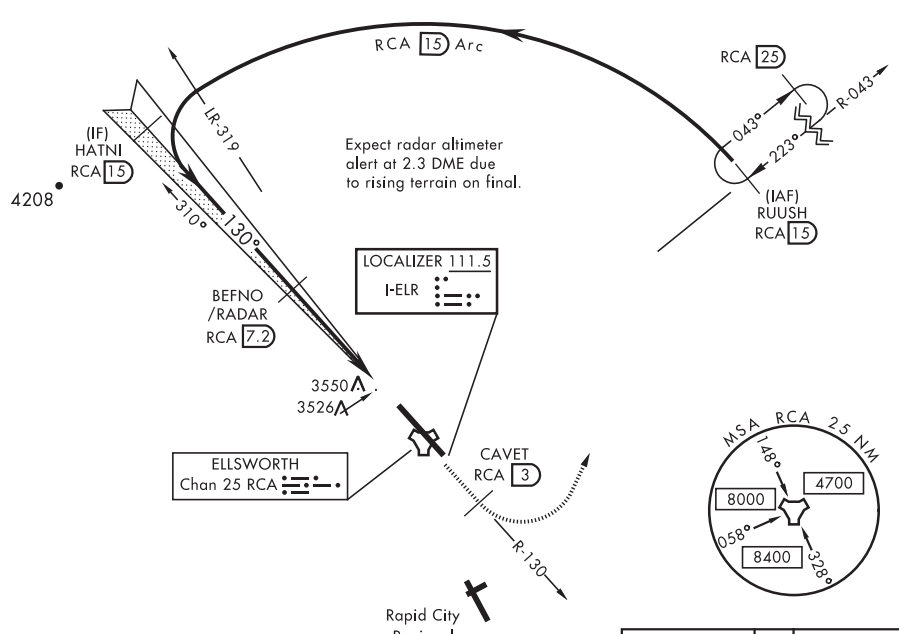
RAPID CITY, SOUTH DAKOTA

# ILS or LOC Y RWY 13

LOC I-ELR <b>111.5</b>	APCH CRS <b>130°</b>	Rwy Idg <b>13,497</b> TDZE <b>3276</b> Arprt Elev <b>3276</b>	AL-343 [USAF]	ELLSWORTH AFB (KRCA)
▼ *When ALS inop, increase RVR to 40 and vis to 3/4 mile. **When ALS inop, increase CAT AB RVR to 55 and vis to 1 mile, CAT CDE vis to 1 1/2 miles.			ALS-1 	MISSED APPROACH: Track outbound RCA R-130 to 3 DME (CAVET), then turn left to join RCA R-043 to 15 DME (RUUSH) and hold. Maintain 6000.

ATIS * <b>120.625 269.9</b>	ELLSWORTH APP CON <b>119.5 259.1</b>	ELLSWORTH TOWER * <b>126.05 253.5</b>	GND CON <b>121.8 275.8</b>
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\*\*\* CAT E circling restricted to 28th BW aircraft only;  
28th BW aircraft will remain within Class D airspace.



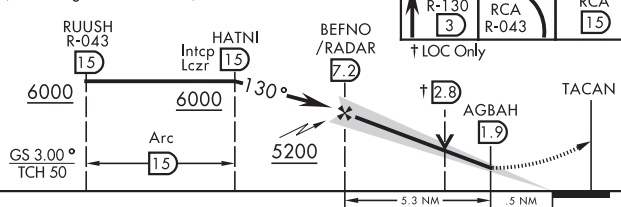
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

## RADAR or DME REQUIRED

EMERG SAFE ALT 100 NM 9800

VGSI and ILS glidepath not coincident (VGSI Angle 3.00 TCH 62).



ELEV 3276	TDZE 3276
130° 5.8 NM from FAF	
HIRL Rwy 13-31	
FAF to MAP 5.3 NM	
Knots	60 90 120 150 180
Min:Sec	5:18 3:32 2:39 2:07 1:46

CATEGORY	A	B	C	D	E
S-ILS 13 *	3476/24		200	(200-1/2)	
S-LOC 13 **	3780/24	504 (600-1/2)	3780/55	504 (600-1)	
CIRCLING ***	3860-1 584 (600-1)	3880-1 604 (700-1)	3880-1 3/4 604 (700-1 3/4)	3980-2 1/4 704 (800-2 1/4)	4040-2 3/4 764 (800-2 3/4)

RAPID CITY, SOUTH DAKOTA 44°09'N-103°06'W ELLSWORTH AFB (KRCA)

Amdt 1 15SEP16

# ILS or LOC Y RWY 13

RAPID CITY, SOUTH DAKOTA

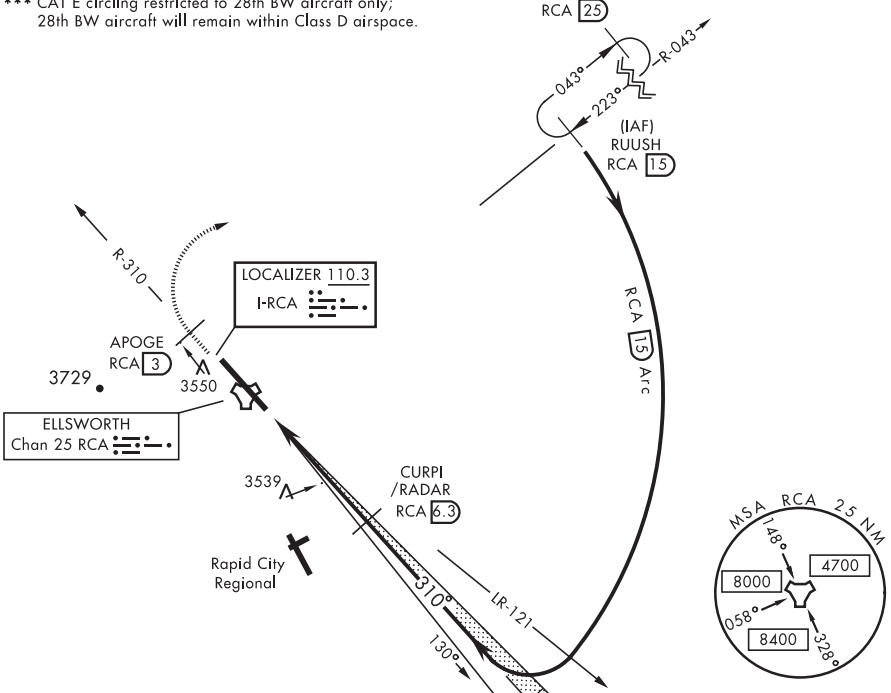
# ILS or LOC Y RWY 31

LOC I-RCA <b>110.3</b>	APCH CRS <b>310°</b>	Rwy ldg <b>13,497</b> TDZE <b>3192</b> Arpt Elev <b>3276</b>	AL-343 [USAF]	ELLSWORTH AFB (KRCA)
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▼ \* When ALS inop, increase RVR to 40 and vis to 3/8 mile.  
▼ \* When ALS inop, increase CAT AB RVR to 55 and vis to 1 mile, CAT CDE vis to 1 1/8 miles.

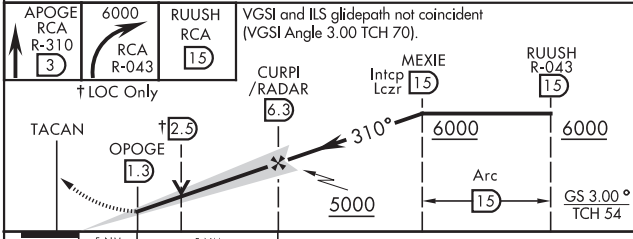
ATIS ★ <b>120.625 269.9</b>	ELLSWORTH APP CON <b>119.5 259.1</b>	ELLSWORTH TOWER ★ <b>126.05 253.5</b>	GND CON <b>121.8 275.8</b>
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\*\*\* CAT E circling restricted to 28th BW aircraft only; 28th BW aircraft will remain within Class D airspace.



## RADAR or DME REQUIRED

EMERG SAFE ALT 100 NM 9800



ELEV 3276	TDZE 3192
HIRL Rwy 13-31	

FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

CATEGORY	A	B	C	D	E
S-ILS 31*	3392/24		200	(200-1/2)	
S-LOC 31**	3800/24	608 (600-1/2)	3800-1 3/8	608 (600-1 3/8)	
CIRCLING ***	3860-1	3880-1	3880-1 3/8	3980-2 1/4	4040-2 3/4
	584 (600-1)	604 (700-1)	604 (700-1 3/8)	704 (800-2 1/4)	764 (800-2 3/4)

RAPID CITY, SOUTH DAKOTA 44°09'N-103°06'W ELLSWORTH AFB (KRCA)

Amtd 1 15SEP16

# ILS or LOC Y RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

RAPID CITY, SOUTH DAKOTA

# TACAN Y RWY 13

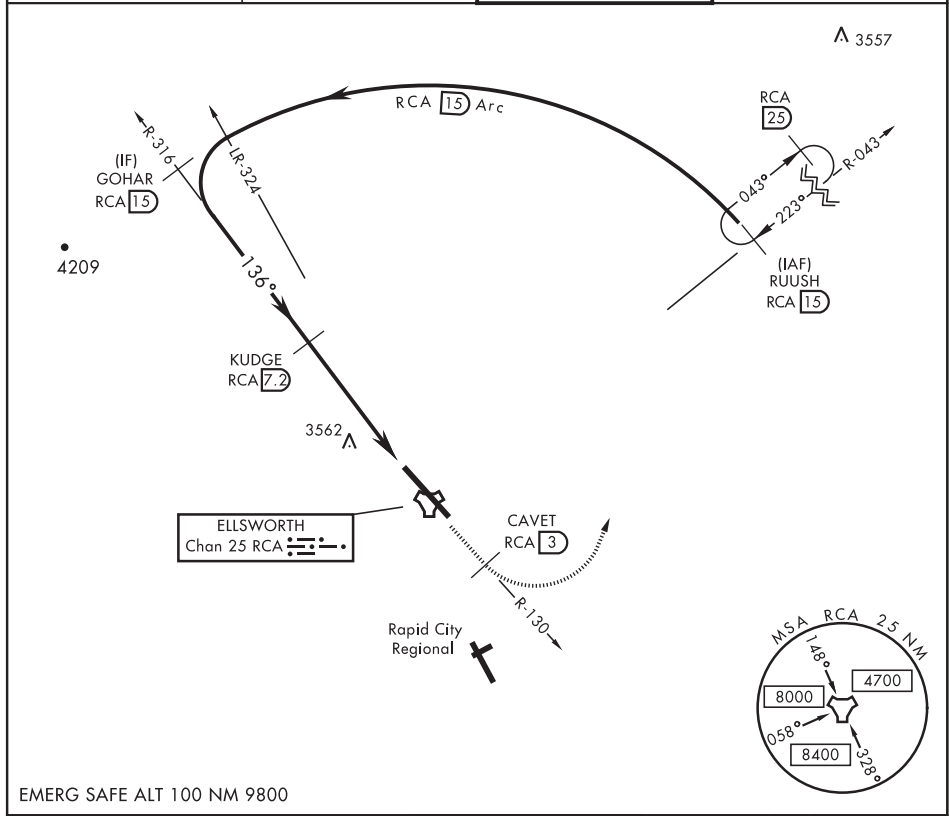
TACAN RCA Chan <b>25</b>	APCH CRS <b>136°</b>	Rwy ldg <b>13,497</b> TDZE <b>3276</b> Arpt Elev <b>3276</b>	AL-343 [USAF]	ELLSWORTH AFB (KRCA)
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▼ \*When ALS inop, increase CAT AB RVR to 55 and vis to 1 mile, CAT CDE vis to 1½ miles.  
 \*\*CAT E circling restricted to 28th BW aircraft only; 28th BW aircraft will remain within Class D airspace.



MISSED APPROACH: Track outbound RCA R-130 to 3 DME (CAVET), then turn left to join RCA R-043 to RCA 15 DME (RUUSH) and hold. Maintain 6000.

ATIS ★ <b>120.625 269.9</b>	ELLSWORTH APP CON <b>119.5 259.1</b>	ELLSWORTH TOWER ★ <b>126.05 253.5</b>	GND CON <b>121.8 275.8</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

EMERG SAFE ALT 100 NM 9800

RUUSH R-043 15	GOHAR R-316 15	KUDGE 7.2	CAVET RCA R-130 3	6000 RCA R-043	RUUSH RCA 15	ELEV 3276	TDZE 3276
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3.05° TCH 62

6000

6000

136°

5200

2.9

TUTGE 1.9

TACAN

5.3 NM

.5 NM

136° to TACAN

13,497 x 300

0.7% DOWN

3348

TWR

HIRL Rwy 13-31

CATEGORY	A	B	C	D	E
S-13 *	3820/24	544 (600-½)	3820/60	544	(600-1½)
CIRCLING **	3860-1 584 (600-1)	3880-1 604 (700-1)	3880-1¾ 604 (700-1¾)	3980-2¼ 704 (800-2¼)	4040-2¾ 764 (800-2¾)

RAPID CITY, SOUTH DAKOTA      44°09'N-103°06'W      ELLSWORTH AFB (KRCA)

Amdt 1 15SEP16

# TACAN Y RWY 13

RAPID CITY, SOUTH DAKOTA

# TACAN Y RWY 31

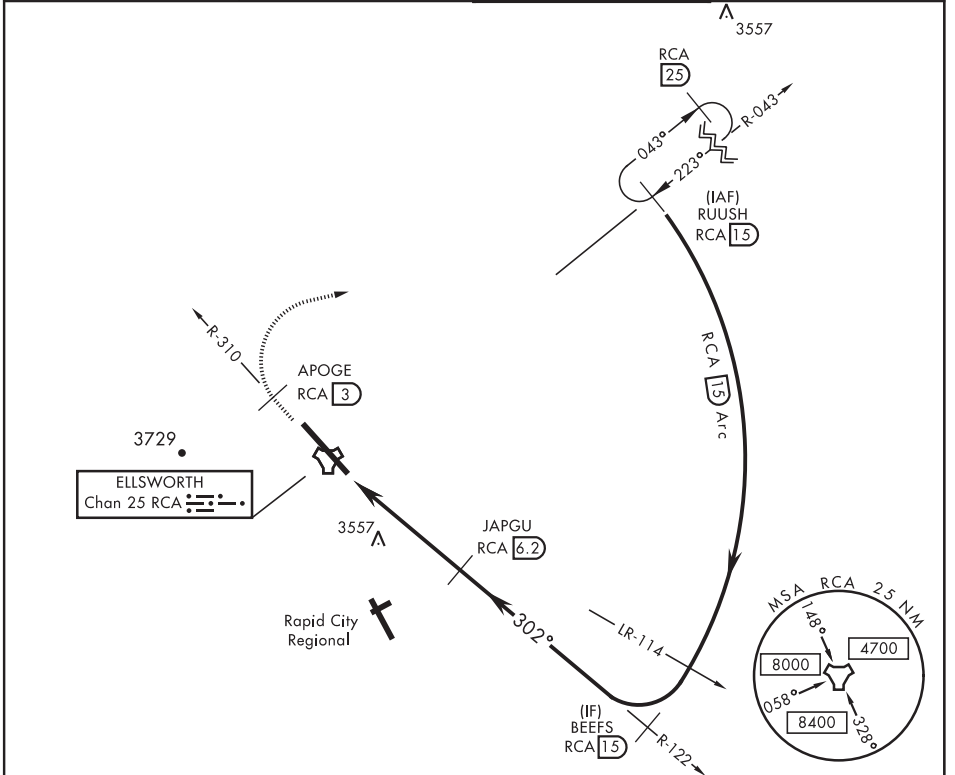
TACAN RCA Chan 25	APCH CRS 302°	Rwy ldg 13,497 TDZE 3192 Arprt Elev 3276	AL-343 [USAF]	ELLSWORTH AFB (KRCA)
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▼ \* When ALS inop, increase CAT AB RVR to 55 and vis to 1 mile, increase CAT CDE vis to 1¼ mile.  
\*\* CAT E circling restricted to 28th BW aircraft only; 28th BW aircraft will remain within Class D airspace.



MISSED APPROACH: Track outbound RCA R-310 to 3 DME (APOGE), then turn right to join RCA R-043 to 15 DME (RUUSH) and hold. Maintain 6000.

ATIS ★ 120.625 269.9	ELLSWORTH APP CON 119.5 259.1	ELLSWORTH TOWER ★ 126.05 253.5	GND CON 121.8 275.8
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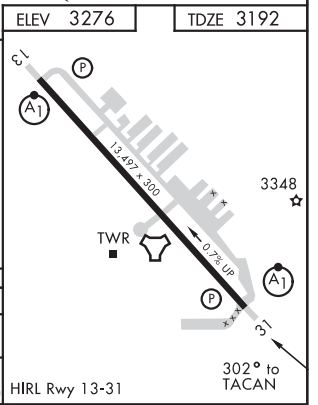


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

EMERG SAFE ALT 100 NM 9800

APOGE RCA R-310 [3]	6000	RUUSH RCA [15]	BEEFS R-122 [15]	RUUSH R-043 [15]	
TACAN	IYODO [2.6]	JAGPU [6.2]	6000	6000	
5 NM	4.9 NM	5000	3.06°	TCH 70	
CATEGORY	A	B	C	D	E
S-31*	3820/24	628 (600-½)	3820-1⅜	628 (600-1⅜)	
<b>C</b> CIRCLING**	3860-1 584 (600-1)	3880-1 604 (700-1)	3880-1⅞ 604 (700-1⅞)	3980-2¼ 704 (800-2¼)	4040-2¾ 764 (800-2¾)



RAPID CITY, SOUTH DAKOTA      44°09'N-103°06'W      ELLSWORTH AFB (KRCA)

Amdt 1 15SEP16

# TACAN Y RWY 31

RAPID CITY, SOUTH DAKOTA

# TACAN A

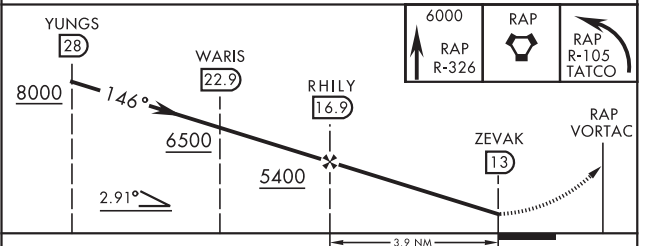
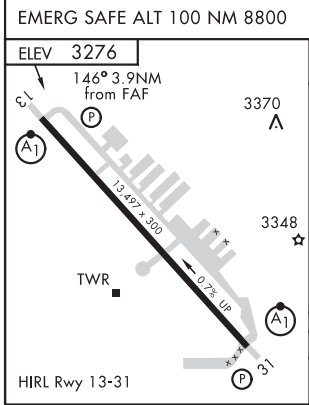
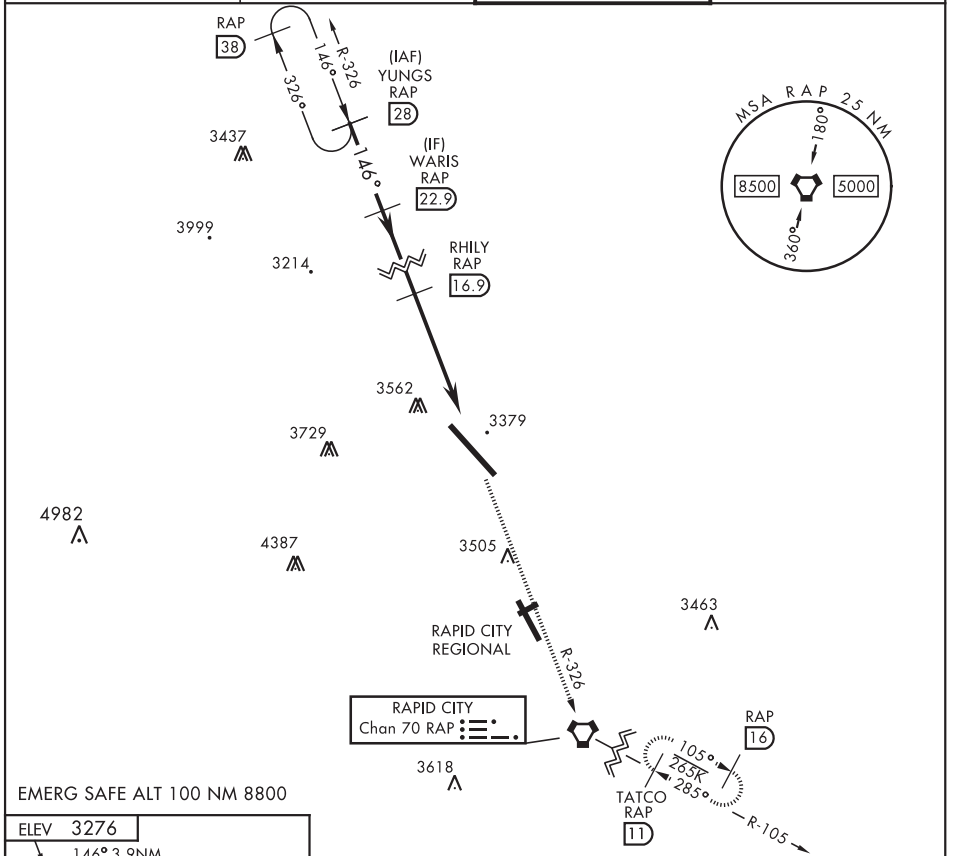
VORTAC RAP Chan <b>70</b>	APCH CRS <b>146°</b>	Rwy ldg THRE <b>13,497</b> Arprt Elev <b>3276</b>
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AL-343 [USAF]

ELLSWORTH AFB (KRCA)

**▼** \*CAT E circling restricted to 28th BW aircraft only; 28th BW, aircraft will remain within Class D airspace. **(A1)** **T** MISSED APPROACH: Track inbound RAP R-326 to RAP VORTAC then turn left to join RAP R-105 outbound to RAP 11 DME and hold. Maintain 6000.

ATIS ★ <b>120.625 269.9</b>	ELLSWORTH APP CON <b>119.5 259.1</b>	ELLSWORTH TOWER ★ <b>126.05 253.5</b>	GND CON <b>121.8 275.8</b>
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CATEGORY	A	B	C	D	E
<b>CIRCLING*</b>	3860-1 $\frac{3}{4}$ 584 (600-1 $\frac{3}{4}$ )	3880-1 $\frac{3}{4}$ 604 (700-1 $\frac{3}{4}$ )	3880-1 $\frac{3}{4}$ 604 (700-1 $\frac{3}{4}$ )	3980-2 $\frac{1}{4}$ 704 (800-2 $\frac{1}{4}$ )	4040-2 $\frac{3}{4}$ 764 (800-2 $\frac{3}{4}$ )

RAPID CITY, SOUTH DAKOTA  
Amdt 1 30APR15

44°09'N-103°06'W

ELLSWORTH AFB (KRCA)

# TACAN A

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



# AIRPORT DIAGRAM

AFD-343 [USAF]

ELLSWORTH AFB (KRCA)

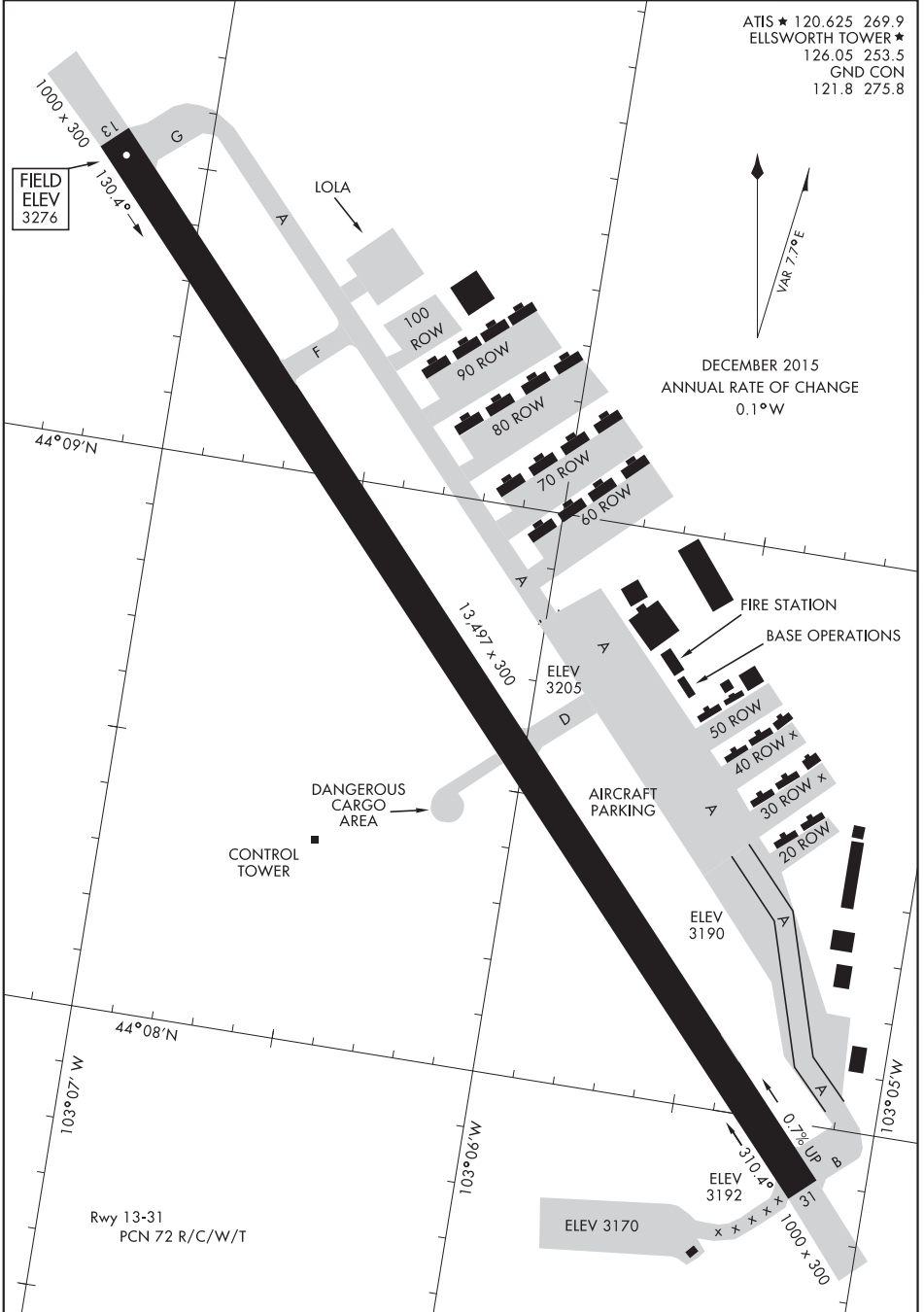
RAPID CITY, SOUTH DAKOTA

ATIS ★ 120.625 269.9  
 ELLSWORTH TOWER ★  
 126.05 253.5  
 GND CON  
 121.8 275.8

FIELD  
 ELEV  
 3276



DECEMBER 2015  
 ANNUAL RATE OF CHANGE  
 0.1°W



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

Rwy 13-31  
 PCN 72 R/C/W/T

# AIRPORT DIAGRAM

RAPID CITY, SOUTH DAKOTA  
 ELLSWORTH AFB (KRCA)

16259

# ELLSWORTH-THREE DEPARTURE (RCA3•RCA)

ELLSWORTH AFB (KRCA)

RAPID CITY, SOUTH DAKOTA

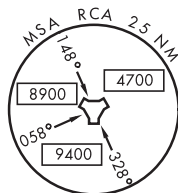
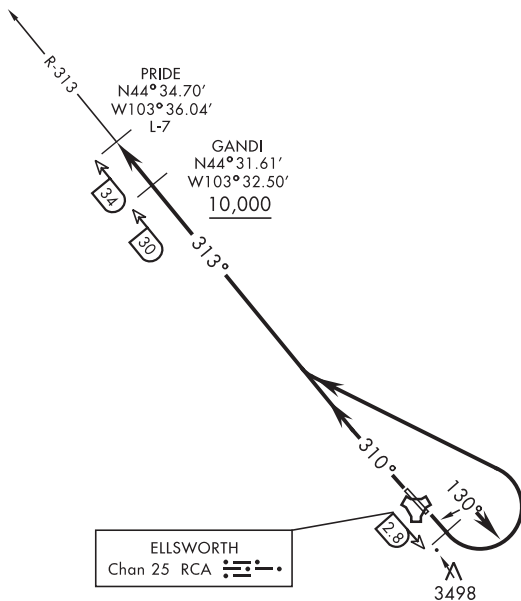
ATIS ★ 120.625 269.9  
 GND CON  
 121.8 275.8  
 ELLSWORTH TOWER ★  
 126.05 253.5  
 ELLSWORTH DEP CON  
 119.5 289.4  
 DENVER CENTER  
 127.95 338.2  
 ELLSWORTH APP CON  
 119.5 259.1

SHL-343 [USAF]

Rwy	Knots	60	120	180	240	300	360
13	V/V(fpm)	221	442	663	884	1105	1326
31	V/V(fpm)	236	472	708	944	1180	1416

ATC Climb Rate to 10,000

CAUTION:  
 Traffic transiting  
 IR-492 between  
 10,000 and 16,000.



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



## DEPARTURE ROUTE DESCRIPTION

TAKE-OFF RWY 13: Track 130° until RCA TACAN 2.8 DME. Turn left to intercept RCA R-313 outbound to PRIDE. Cross GANDI at or above 10,000.

TAKE-OFF RWY 31: Track 310° to intercept RCA TACAN R-313 outbound to PRIDE. Cross GANDI at or above 10,000.

# ELLSWORTH-THREE DEPARTURE (RCA3•RCA)

RAPID CITY, SOUTH DAKOTA

ELLSWORTH AFB (KRCA)

Orig 15SEP16



WAAS CH <b>86827</b> <b>W12A</b>	APP CRS <b>120°</b>	Rwy Idg TDZE <b>1452</b> Apt Elev <b>1456</b>	<b>5596</b>
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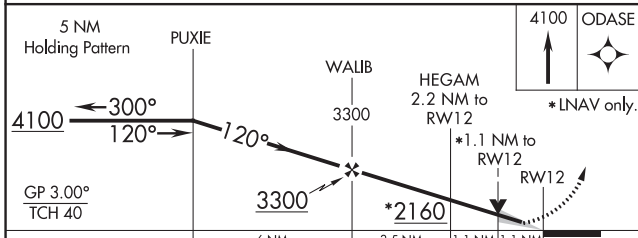
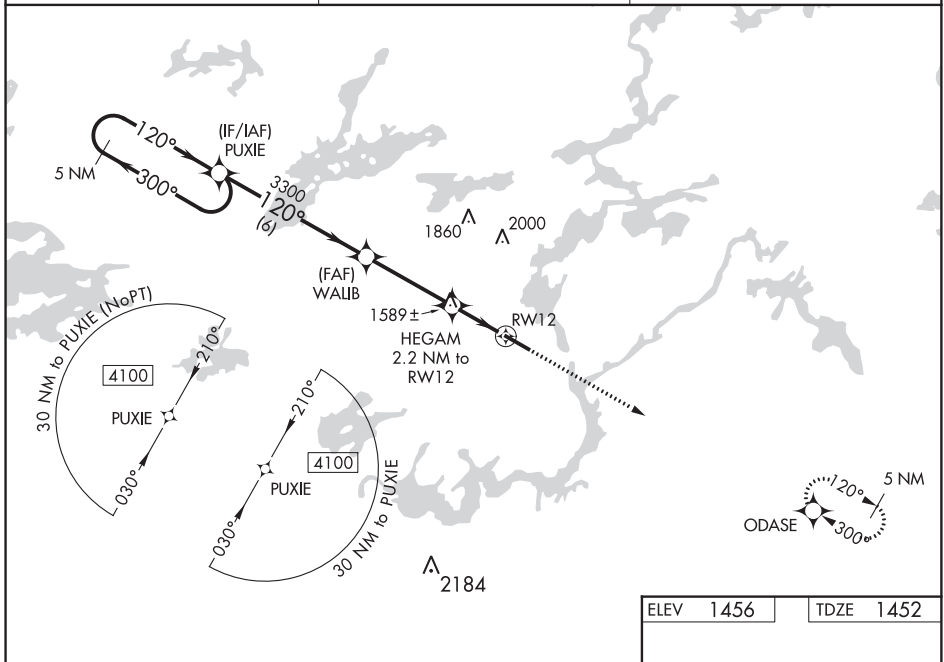
# RNAV (GPS) RWY 12

ELY MUNI (ELO)

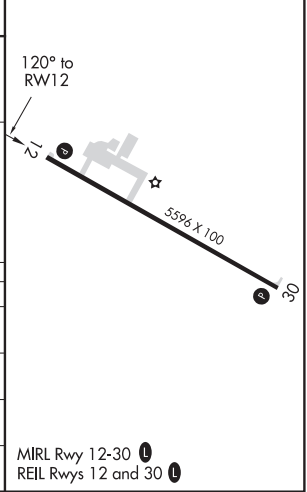
**⚠** Baro-VNAV NA when using Cook altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 34°C (93°F). DME/DME RNP-0.3 NA. VDP NA when using Cook altimeter setting. When local altimeter setting not received, use Cook altimeter setting and increase all DA/MDA 100 feet; increase LPV visibility ¼ mile all Cats, LNAV/VNAV visibility ⅓ mile all Cats, and LNAV Cat C and D visibility ½ mile.

**MISSED APPROACH:**  
Climb to 4100 direct ODASE and hold.

AWOS-3 <b>132.025</b>	PRINCETON RADIO <b>122.1R</b>	UNICOM <b>122.8 (CTAF)</b> <b>0</b>
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ELEV 1456	TDZE 1452
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CATEGORY	A	B	C	D
LPV DA		1652-1	200 (200-1)	
LNAV/VNAV DA		1726-1	274 (300-1)	
LNAV MDA	1840-1	388 (400-1)	1840-1 1/8	388 (400-1 1/8)
CIRCLING	1920-1	464 (500-1)	1940-1 1/2	2020-2 564 (600-2)

MIRL Rwy 12-30 **0**  
REIL Rwy 12 and 30 **0**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELY, MINNESOTA

AL-5974 (FAA)

15316

WAAS CH <b>93627</b> <b>W30A</b>	APP CRS <b>300°</b>	Rwy Idg TDZE Apt Elev	<b>5596</b> <b>1456</b> <b>1456</b>
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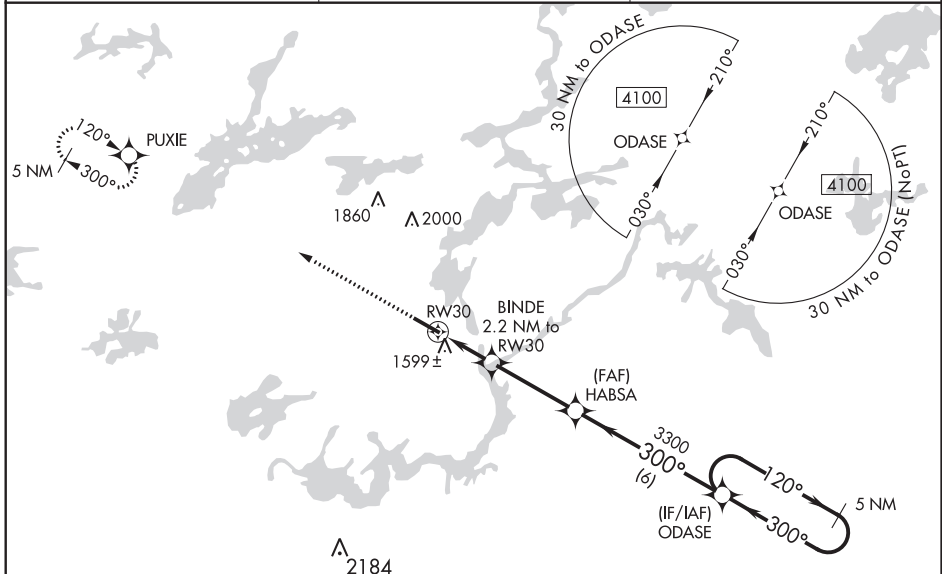
# RNAV (GPS) RWY 30

ELY MUNI (E.L.O)

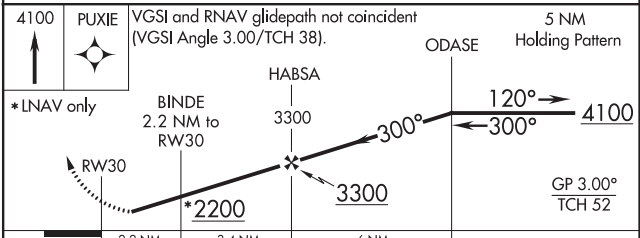
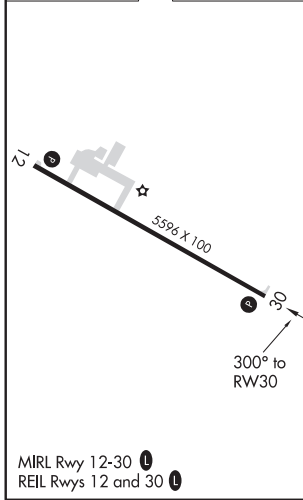
**⚠** Baro-VNAV NA when using Cook altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 34°C (93°F).  
**⚠** DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA.  
 When local altimeter setting not received, use Cook altimeter setting and increase all DA/MDA 100 feet; increase LPV visibility 1/8 mile all Cats, LNAV/VNAV visibility 3/8 mile all Cats, and LNAV Cat C/D visibility 1/4 mile.

**MISSED APPROACH:**  
Climb to 4100 direct PUXIE and hold.

AWOS-3 <b>132.025</b>	PRINCETON RADIO <b>122.1R</b>	UNICOM <b>122.8</b> (CTAF) <b>📶</b>
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ELEV 1456	TDZE 1456
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CATEGORY	A	B	C	D
LPV DA		1706-1	250 (300-1)	
LNAV/VNAV DA		1780-1	324 (400-1)	
LNAV MDA	1860-1	404 (500-1)	1860-1 1/8	404 (500-1 1/8)
CIRCLING	1920-1	464 (500-1)	1940-1 1/2 484 (500-1 1/2)	2020-2 564 (600-2)

ELY, MINNESOTA  
Amdt 1B 12NOV15

47°49'N-91°50'W

# ELY MUNI (E.L.O)

## RNAV (GPS) RWY 30

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

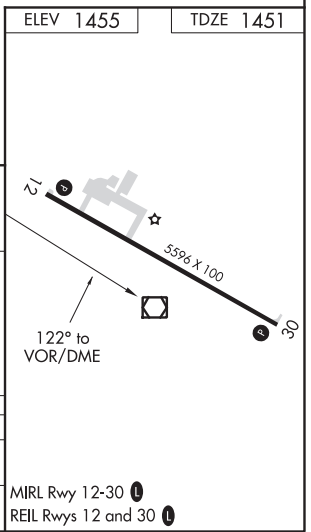
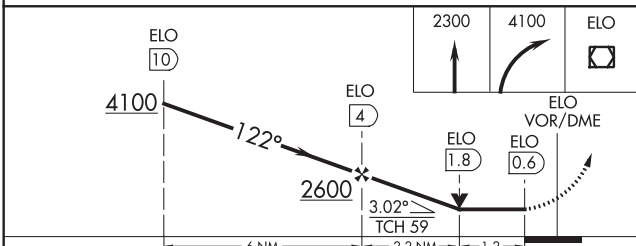
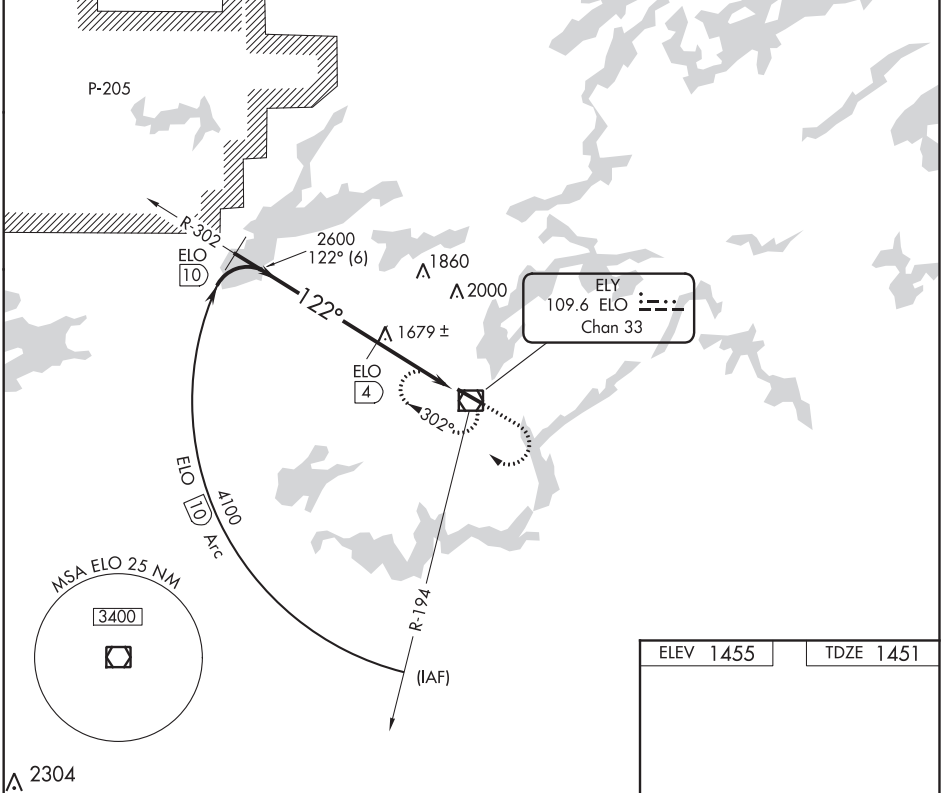
VOR/DME ELO <b>109.6</b> Chan <b>33</b>	APP CRS <b>122°</b>	Rwy Idg TDZE Apt Elev <b>5596</b> <b>1451</b> <b>1455</b>
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# VOR/DME RWY 12

ELY MUNI (ELO)

**MISSED APPROACH:** Climb to 2300 then climbing right turn to 4100 direct ELO VOR/DME and hold.

AWOS-3 <b>132.025</b>	PRINCETON RADIO <b>122.1R</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
S-12	1900-1	449 (500-1)	1900-1¼ 449 (500-1¼)	1900-1½ 449 (500-1½)
CIRCLING	1920-1	465 (500-1)	1940-1½ 485 (500-1½)	2020-2 565 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELY, MINNESOTA

AL-5974 (FAA)

15176

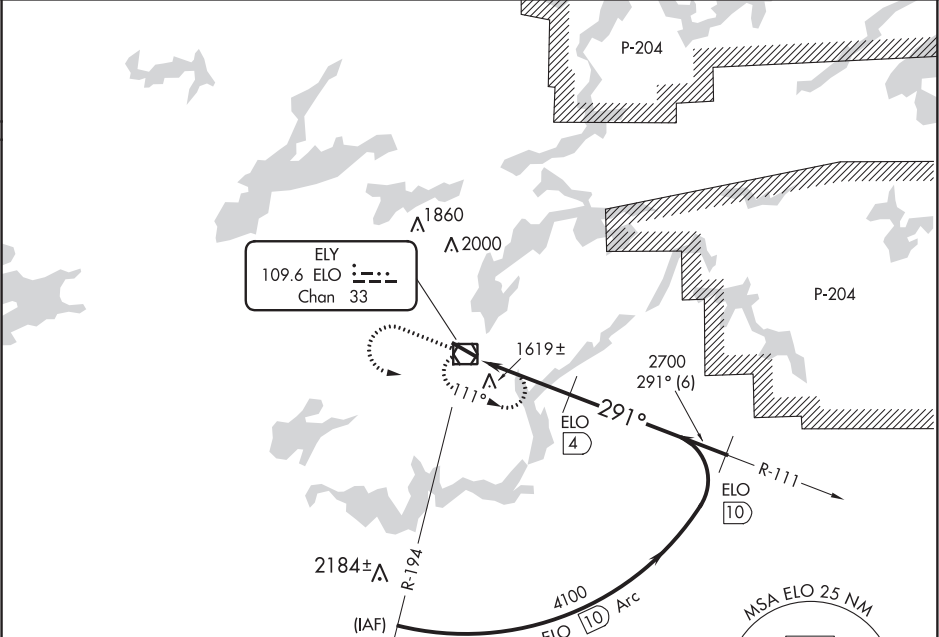
VOR/DME ELO	APP CRS	Rwy Idg	<b>5596</b>
<b>109.6</b>	<b>291°</b>	TDZE	<b>1456</b>
Chan <b>33</b>		Apt Elev	<b>1455</b>

# VOR/DME RWY 30

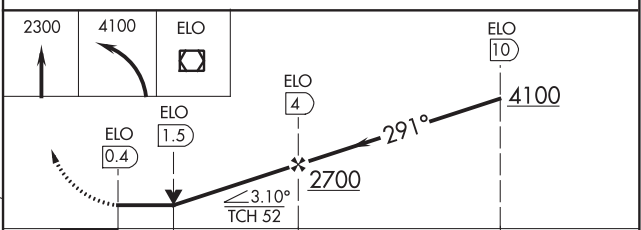
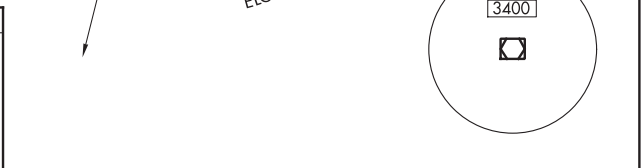
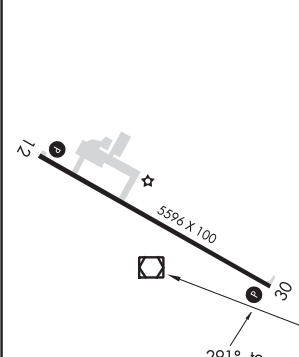
ELY MUNI (ELO)

-38°C/-36°F	MISSED APPROACH: Climb to 2300 then climbing left turn to 4100 direct ELO VOR/DME and hold.
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AWOS-3 <b>132.025</b>	PRINCETON RADIO <b>122.1R</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1455	TDZE 1456
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CATEGORY	A	B	C	D
S-30	1880-1	424 (500-1)	1880-1¼	424 (500-1¼)
CIRCLING	1920-1	465 (500-1)	1940-1½ 485 (500-1½)	2020-2 565 (600-2)

MIRL Rwy 12-30   
REIL Rws 12 and 30

ELY, MINNESOTA  
Amdt 5A 26JUN14

47°49'N-91°50'W

# ELY MUNI (ELO) VOR/DME RWY 30

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>57931</b> <b>W27A</b>	APP CRS <b>274°</b>	Rwy Idg TDZE Apt Elev	<b>4000</b> <b>1371</b> <b>1379</b>
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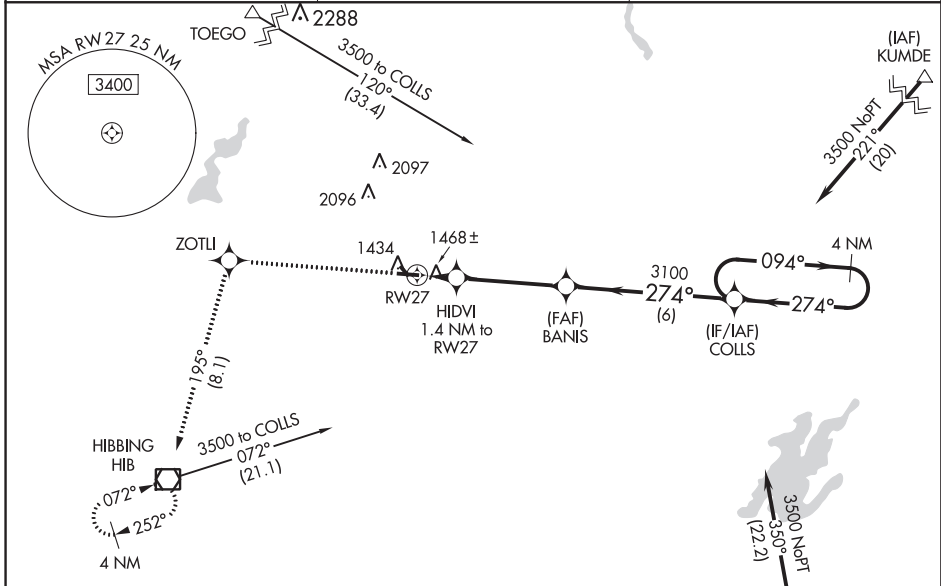
# RNAV (GPS) RWY 27

EVELETH-VIRGINIA MUNI (EVM)

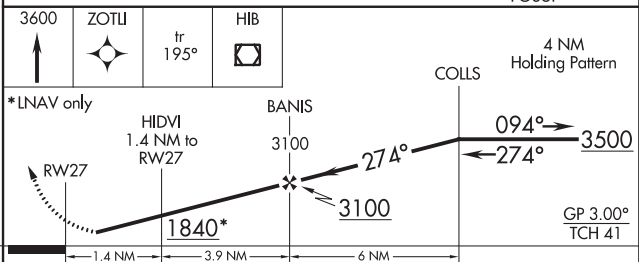
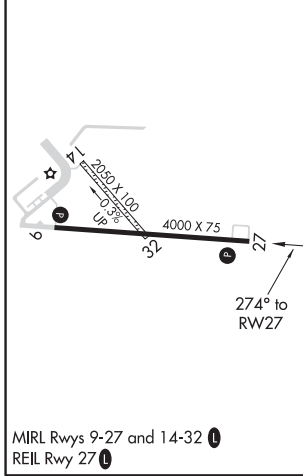
**Baro-VNAV NA** when using Hibbing altimeter setting. For uncompensated Baro-VNAV systems, procedure NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Hibbing altimeter setting and increase all DA 36 feet and all MDA 40 feet; increase LNAV Cat C/D visibility 1/8 and Circling Cat C/D visibility 1/4 mile. Procedure NA at night. Helicopter visibility reduction below 1 SM NA.

**MISSED APPROACH:**  
Climb to 3600 direct ZOTLI and on track 195° to HIB VOR/DME and hold.

AWOS-3 <b>108.2</b>	DULUTH APP CON <b>125.45 233.7</b>	UNICOM <b>122.7 (CTAF) 1</b>
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ELEV 1379	TDZE 1371
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CATEGORY	A	B	C	D
LPV DA		1626-1	255 (300-1)	
LNAV/VNAV DA		1650-1	279 (300-1)	
LNAV MDA		1720-1	349 (400-1)	
CIRCLING	1880-1 501 (600-1)	1940-1 561 (600-1)	1940-1 1/2 561 (600-1 1/2)	2040-2 661 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

EVELETH, MINNESOTA

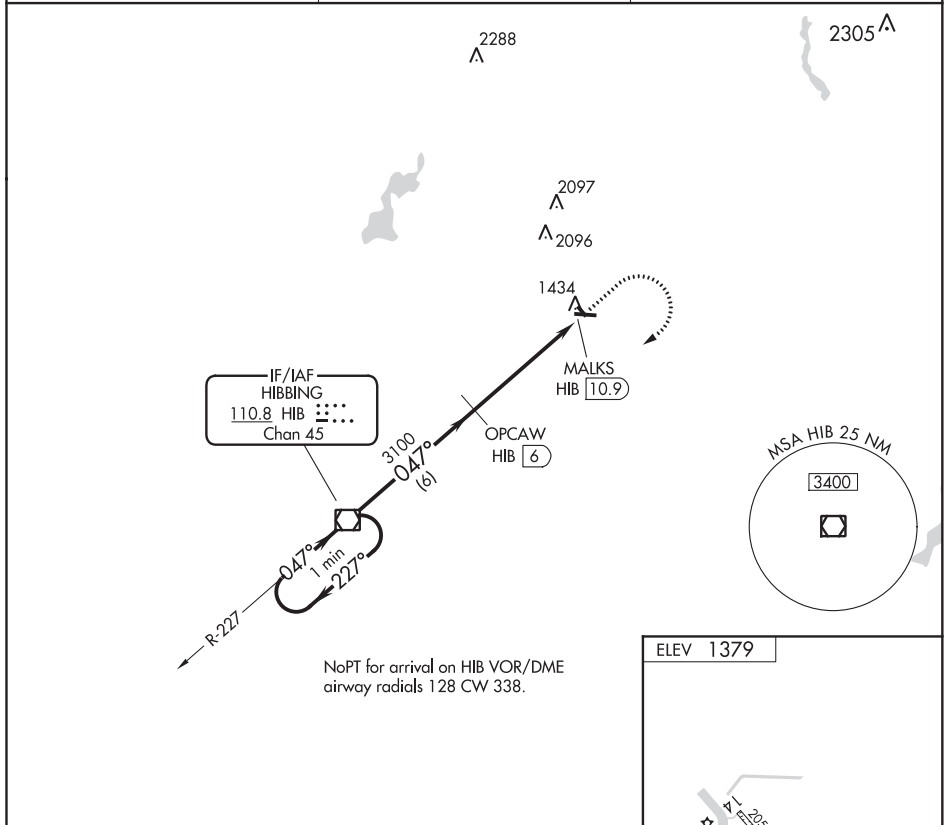
AL-5236 (FAA)

16315

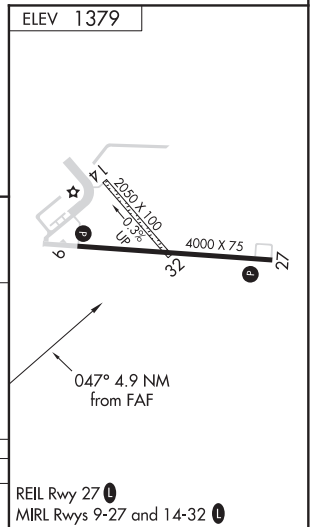
VOR/DME HIB <b>110.8</b> Chan 45	APP CRS <b>047°</b>	Rwy Idg TDZE Apt Elev <b>N/A</b> <b>N/A</b> <b>1379</b>
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**VOR/DME-A**  
EVELETH-VIRGINIA MUNI (EVM)

<p><b>⚠</b> When local altimeter setting not received, use Hibbing altimeter setting and increase all MDA 40 feet. Procedure NA at night. <b>✈</b> Helicopter visibility reduction below 1 SM NA.</p>	<p>MISSED APPROACH: Climb to 3100 then right turn direct HIB VOR/DME and hold.</p>
<p>AWOS-3 <b>108.2</b></p>	<p>DULUTH APP CON <b>125.45 233.7</b></p>
<p>UNICOM <b>122.7 (CTAF) Ⓛ</b></p>	



NoPT for arrival on HIB VOR/DME airway radials 128 CW 338.



One Minute Holding Pattern	HIB VOR/DME	OPCA W HIB (6)	3100	HIB
<p>3100 ← 227° / 047° →</p>		<p>3100</p>		
<p>6 NM</p>		<p>4.9 NM</p>		
CATEGORY	A	B	C	D
CIRCLING	2120-1	741 (800-1)	2120-2¼ 741 (800-2¼)	2120-2½ 741 (800-2½)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

EVELETH, MINNESOTA  
Amdt 2 07MAR13

47°25'N-92°30'W

EVELETH-VIRGINIA MUNI (EVM)  
**VOR/DME-A**



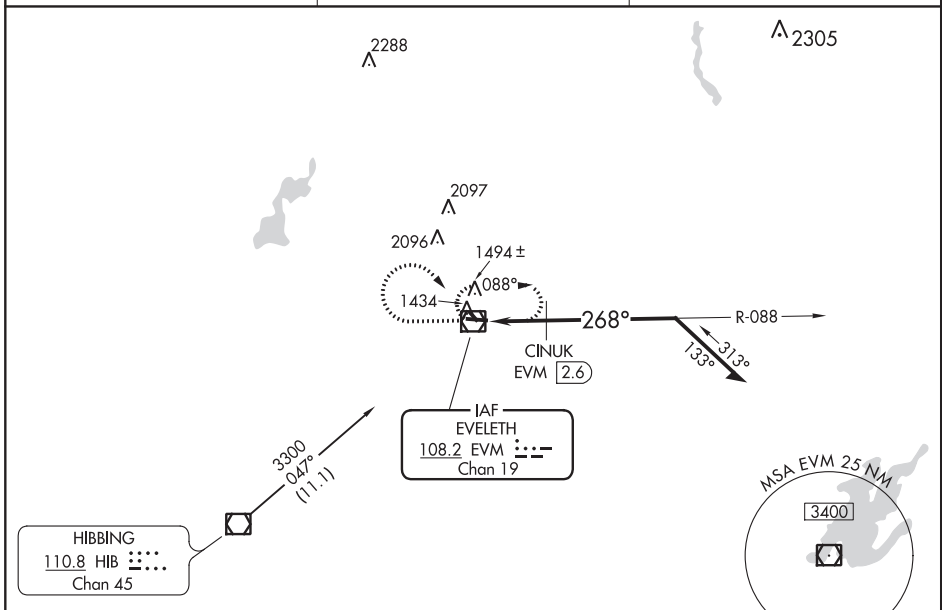
VOR/DME EVM <b>108.2</b> Chan <b>19</b>	APP CRS <b>268°</b>	Rwy ldg TDZE Apt Elev	<b>4000</b> <b>1371</b> <b>1379</b>
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**VOR RWY 27**  
EVELETH-VIRGINIA MUNI (EVM)

When local altimeter setting not received, use Hibbing altimeter setting and increase all MDA 40 feet; increase S-27 and Circling Cat B/C/D visibility ½ mile. Increase CINUK fix minimums S-27 and Circling Cat C/D visibility ¼ mile. Procedure NA at night. Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 3300 then right turn direct EVM VOR/DME and hold.

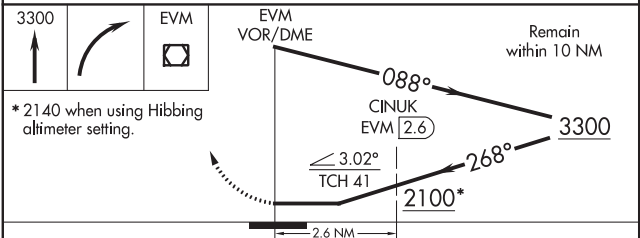
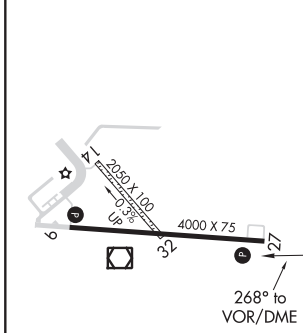
AWOS-3 <b>108.2</b>	DULUTH APP CON <b>125,45 233.7</b>	UNICOM <b>122.7 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1379	TDZE 1371
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CATEGORY	A	B	C	D
S-27	2100-1	729 (800-1)	2100-2	729 (800-2)
CIRCLING	2100-1	721 (800-1)	2100-2 721 (800-2)	2100-2¼ 721 (800-2¼)
CINUK FIX MINIMUMS (DME REQUIRED)				
S-27	1760-1	389 (400-1)	1760-1½	389 (400-1½)
CIRCLING	1880-1 501 (600-1)	1940-1 561 (600-1)	1940-1½ 561 (600-1½)	2040-2 661 (700-2)

REIL Rwy 27  
MIRL Rwys 9-27 and 14-32

FAIRMONT, MINNESOTA

AL-5353 (FAA)

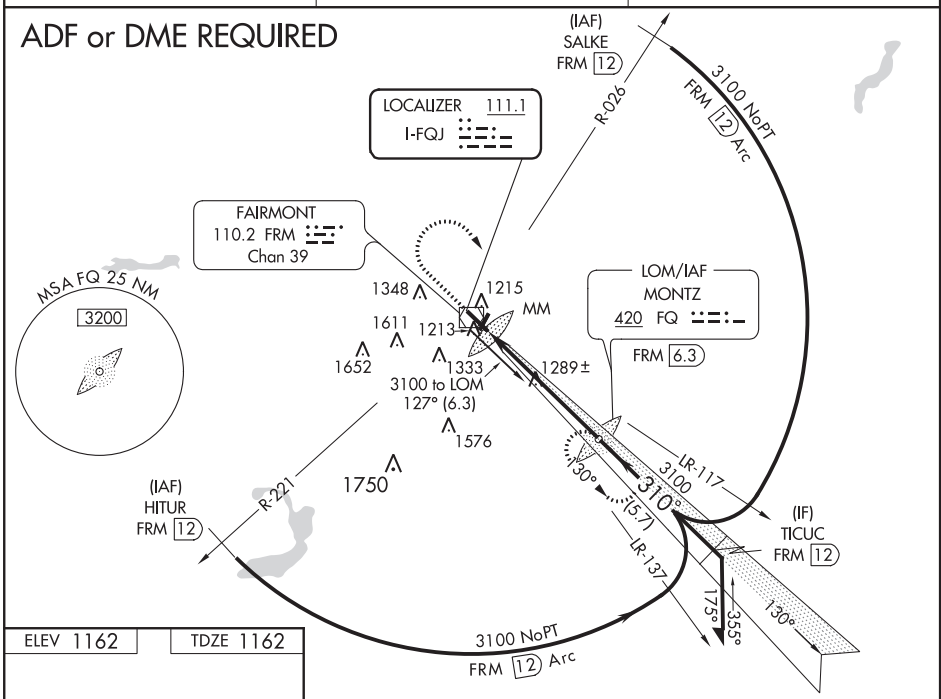
16315

LOC I-FQJ	APP CRS	Rwy Idg	<b>5503</b>
<b>111.1</b>	<b>310°</b>	TDZE	<b>1162</b>
		Apt Elev	<b>1162</b>

ILS or LOC RWY 31  
FAIRMONT MUNI (F.RM)

<b>ADF required.</b> <b>NA</b> Autopilot coupled approach NA below 1480 feet MSL. S-LOC-31: For inoperative MALS increase Cats A, B, and C visibility to 1, Cat D visibility to 1¼.	<b>MALS</b> 	<b>MISSED APPROACH:</b> Climb to 2500 then climbing right turn to 3100 direct MONTZ LOM/ FRM 6.3 DME and hold.
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AWOS-3PT <b>120.025</b>	MINNEAPOLIS CENTER <b>127.75 257.7</b>	UNICOM <b>122.8 (CTAF) ①</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1162    TDZE 1162

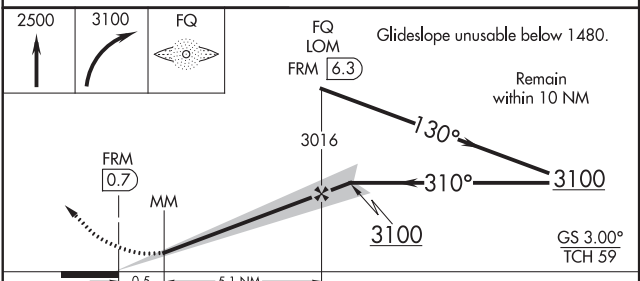
HIRL Rwy 13-31 ① 310° 5.6 NM from FAF

MIRL Rwy 2-20 ①

REIL Rwys 2, 13 and 20 ①

FAF to MAP 5.6 NM

Knots	60	90	120	150	180
Min:Sec	5:36	3:44	2:48	2:14	1:52



CATEGORY	A	B	C	D
S-ILS 31		1480-¾	318 (400-¾)	
S-LOC 31		1540-¾	378 (400-¾)	
CIRCLING	1640-1	478 (500-1)	1640-1½ 478 (500-1½)	1720-2 558 (600-2)

FAIRMONT, MINNESOTA  
Orig-E 28APR16

43°39'N-94°25'W

FAIRMONT MUNI (F.RM)  
ILS or LOC RWY 31

WAAS CH <b>45812</b> <b>W13A</b>	APP CRS <b>130°</b>	Rwy Idg TDZE Apt Elev	<b>5503</b> <b>1162</b> <b>1162</b>
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# RNAV (GPS) RWY 13

FAIRMONT MUNI (FRM)

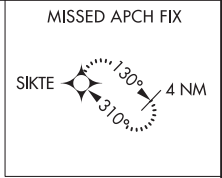
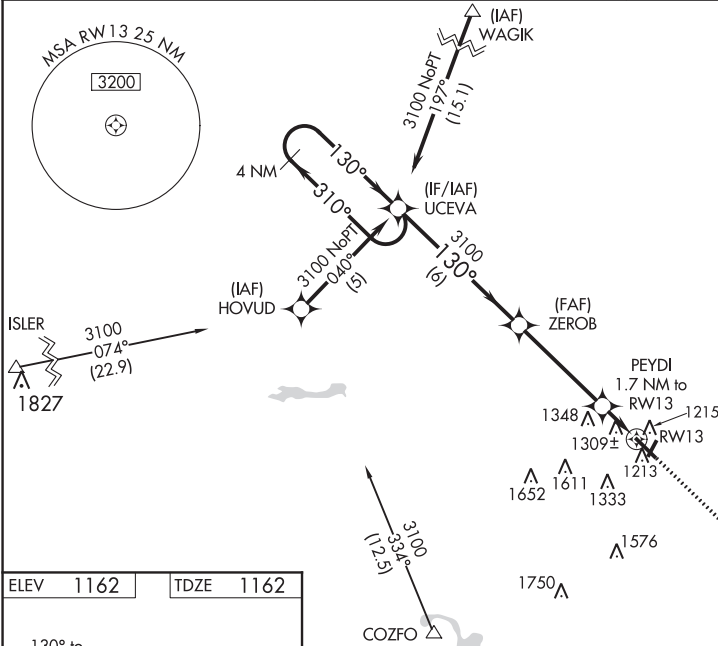
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA.  
**⚠** Visibility reduction by helicopters NA. When local altimeter setting not received, use St. James altimeter setting and increase all DA 63 feet and all MDA 80 feet, increase LPV all Cats visibility and LNAV Cat C/D visibility ¼ mile. Baro-VNAV and VDP NA when using St. James altimeter setting.

MISSED APPROACH: Climb to 3100 direct SIKTE and hold.

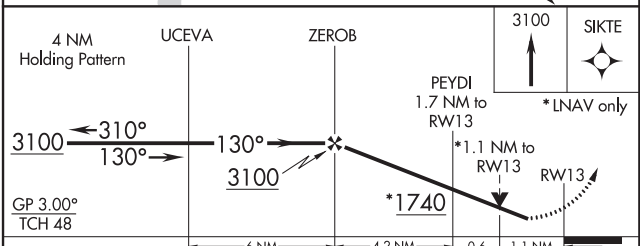
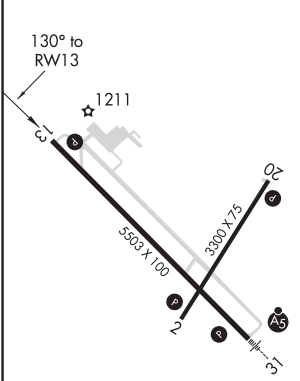
AWOS-3PT  
**120.025**

MINNEAPOLIS CENTER  
**127.75 257.7**

UNICOM  
**122.8 (CTAF) 0**



ELEV 1162	TDZE 1162
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GP 3.00° TCH 48	A		B	C	D
6 NM	4.2 NM		0.6	1.1 NM	
CATEGORY	A		B	C	D
LPV DA	1460-1 298 (300-1)				
LNAV/VNAV DA	1695-2 533 (600-2)				
LNAV MDA	1560-1 398 (400-1)		1560-1¼ 398 (400-1¼)		
CIRCLING	1640-1 478 (500-1)		1640-1½ 478 (500-1½)		1720-2 558 (600-2)

HIRL Rwy 13-31  
 MIRL Rwy 2-20  
 REIL Rwy 2, 13 and 20

FAIRMONT, MINNESOTA  
 Orig 07MAY09

43°39'N-94°25'W  
 155

# FAIRMONT MUNI (FRM) RNAV (GPS) RWY 13

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

FAIRMONT, MINNESOTA

AL-5353 (FAA)

16315

WAAS CH <b>90412</b> W31A	APP CRS <b>310°</b>	Rwy Idg TDZE Apt Elev	<b>5503</b> <b>1162</b> <b>1162</b>
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# RNAV (GPS) RWY 31

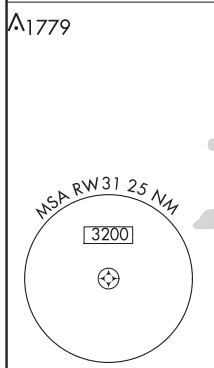
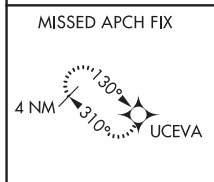
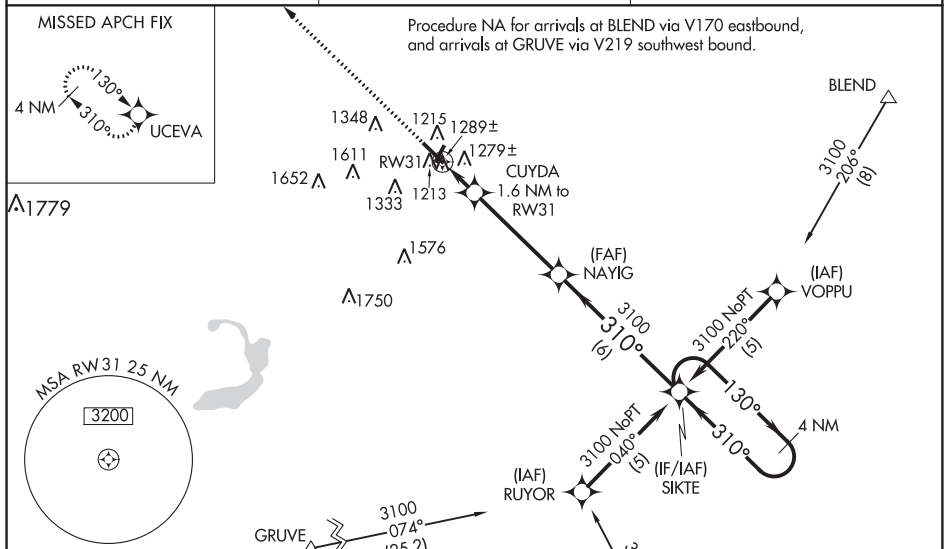
FAIRMONT MUNI (FRM)

**⚠** For inoperative MALSR, increase LPV all Cats visibility to 1 mile and LNAV Cat D visibility to 1 1/4 mile. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use St. James altimeter setting and increase all DA 63 feet and all MDA 80 feet, increase LPV and LNAV/VNAV all Cats visibility and LNAV Cat C visibility 1/4 mile. Baro-VNAV NA when using St. James altimeter setting. For inoperative MALSR when using St. James altimeter setting, increase LPV all Cats visibility 1/2 mile.

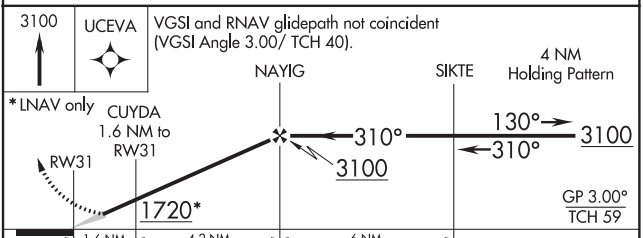
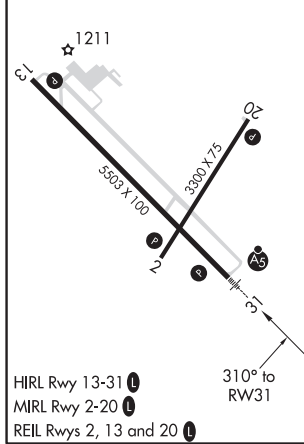


MISSED APPROACH: Climb to 3100 direct UCEVA and hold.

AWOS-3PT <b>120.025</b>	MINNEAPOLIS CENTER <b>127.75 257.7</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1162	TDZE 1162
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CATEGORY	A	B	C	D
LPV DA	1467-1/2		305 (400-1/2)	
LNAV/VNAV DA	1581-1		419 (500-1)	
LNAV MDA	1560-1/2		398 (400-1/2)	
CIRCLING	1640-1		1640-1 1/2	1720-2
	478 (500-1)		478 (500-1 1/2)	558 (600-2)

FAIRMONT, MINNESOTA  
Orig 07MAY09

43°39'N-94°25'W

# FAIRMONT MUNI (FRM) RNP (GPS) RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME FRM <b>110.2</b> Chan <b>39</b>	APP CRS <b>132°</b>	Rwy Idg TDZE Apt Elev	<b>5503</b> <b>1162</b> <b>1162</b>
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# VOR/DME RWY 13

FAIRMONT MUNI (FRM)

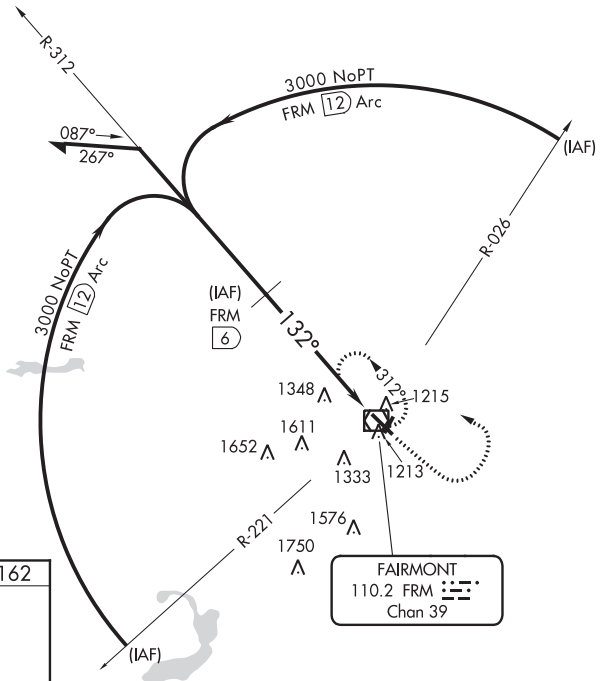
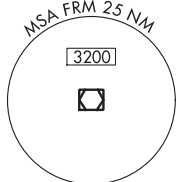
MISSED APPROACH: Climb to 2500 then climbing left turn to 3000 direct FRM VOR/DME and hold.

AWOS-3PT  
**120.025**

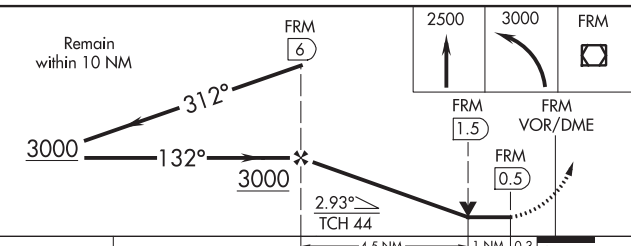
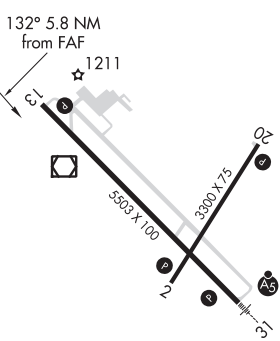
MINNEAPOLIS CENTER  
**127.75 257.7**

UNICOM  
**122.8 (CTAF)**

A2166



ELEV 1162 TDZE 1162



CATEGORY	A	B	C	D
S-13	1620-1 458 (500-1)	1620-1¼ 458 (500-1¼)	1620-1½ 458 (500-1½)	1620-1½ 458 (500-1½)
CIRCLING	1660-1 498 (500-1)	1660-1½ 498 (500-1½)	1720-2 558 (600-2)	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

FAIRMONT, MINNESOTA

AL-5353 (FAA)

16315

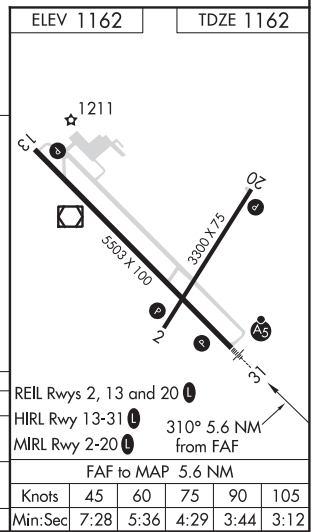
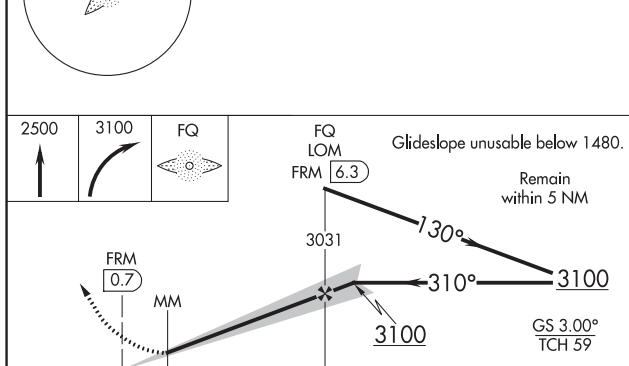
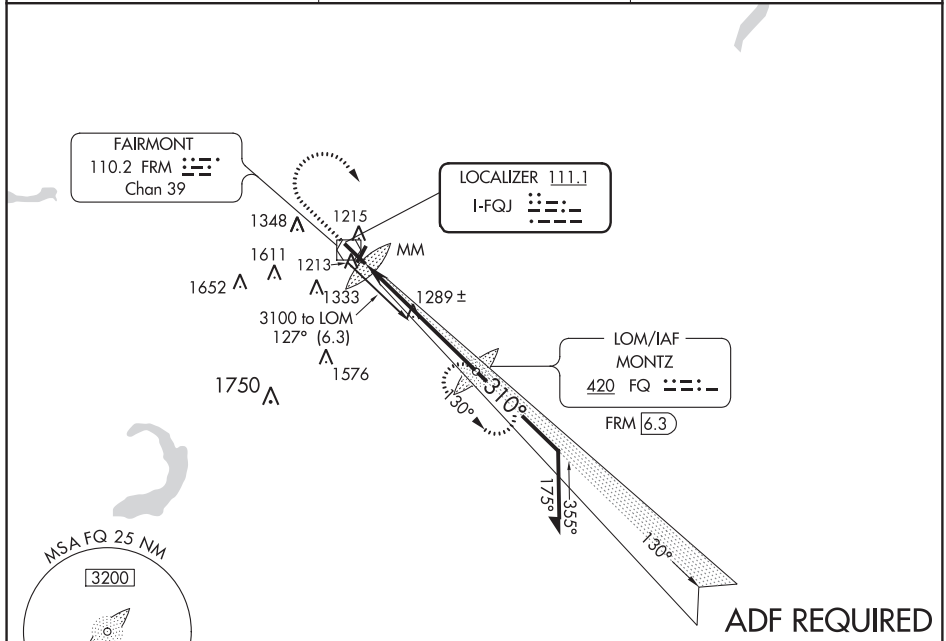
LOC I-FQJ <b>111.1</b>	APP CRS <b>310°</b>	Rwy Idg <b>5503</b>
		TDZE <b>1162</b>
		Apt Elev <b>1162</b>

# COPTER ILS RWY 31

FAIRMONT MUNI (F.R.M)

<p>▼ For inoperative MALS R increase visibility to ½ mile.</p> <p>▲ NA ADF Required.</p>	<p>MALS R</p>	<p>MISSED APPROACH: Climb to 2500 then climbing right turn to 3100 direct MONTZ LOM and hold.</p>
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AWOS-3PT <b>120.025</b>	MINNEAPOLIS CENTER <b>127.75 257.7</b>	UNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	COPTER	B	C	D
S-ILS 31	1480-3/8 318 (400-3/8)		NA	
S-LOC 31	1540-1/4 378 (400-1/4)		NA	
CIRCLING			NA	

FAIRMONT, MINNESOTA  
Orig-B 28APR16

43°39'N-94°25'W

# FAIRMONT MUNI (F.R.M) COPTER ILS RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017


NC-1, 10 NOV 2016 to 05 JAN 2017

LOC I-AAM <b>108.9</b>	APP CRS <b>176°</b>	Rwy Idg <b>9001</b>
		TDZE <b>900</b>
		Apt Elev <b>901</b>

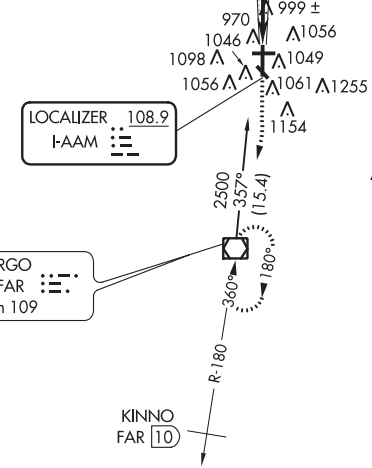
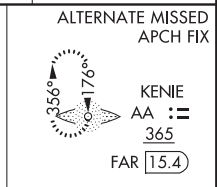
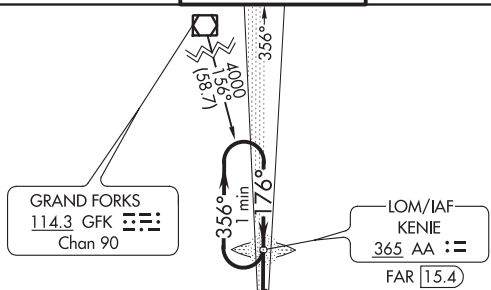
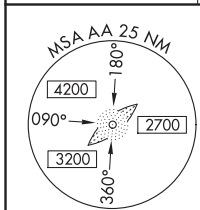
# ILS or LOC RWY 18

HECTOR INTL (FAR)

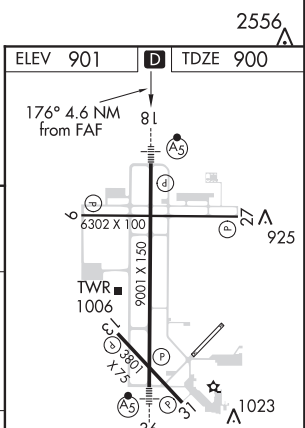
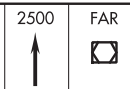
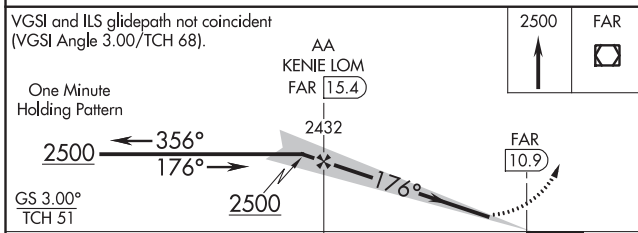
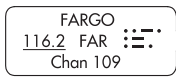
**⚠** For inop MALSR, increase S-ILS 18 Cat E visibility to RVR 4000, and S-LOC 18 Cat E visibility to RVR 5000.  
**⚠** \* Visibility Cat A/B/C/D RVR 1800 authorized with the use of FD or AP or HUD to DA.  
**⚠** -25°C/-13°F ASR

**MALSR**  
  
**MISSED APPROACH:** Climb to 2500 direct FAR VOR/DME and hold.

ATIS <b>124.5 379.2</b>	FARGO APP CON <b>120.4 377.15</b>	FARGO TOWER <b>133.8 290.4</b>	GND CON <b>121.9 348.6</b>	CLNC DEL <b>121.9 348.6</b>
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**ADF or DME REQUIRED**



CATEGORY	A	B	C	D	E
S-ILS 18	*1100/24 200 (200-½)				
S-LOC 18	1260/24	360 (400-½)	1260/40		360 (400-¾)
CIRCLING	1380-1	479 (500-1)	1520-1¾ 619 (700-1¾)	1620-2¼ 719 (800-2¼)	1620-2½ 719 (800-2½)

HIRL Rwy 18-36  
 REIL Rws 9 and 27  
 MIRL Rws 9-27 and 13-31  
 FAF to MAP 4.6 NM

Knots	60	90	120	150	180
Min:Sec	4:36	3:04	2:18	1:50	1:32

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC I-FAR <b>110.3</b>	APP CRS <b>356°</b>	Rwy ldg <b>9001</b>
		TDZE <b>899</b>
		Apt Elev <b>901</b>

# ILS or LOC RWY 36

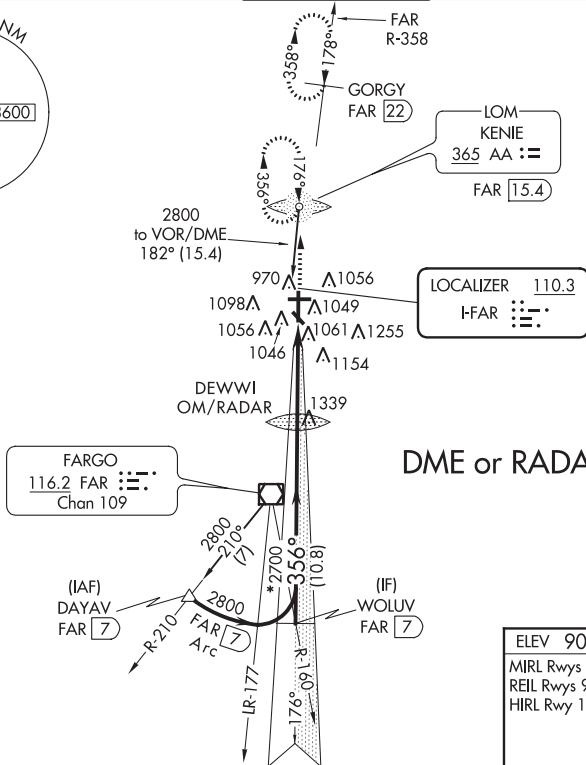
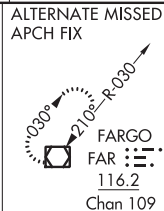
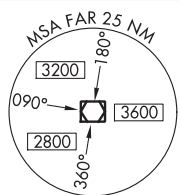
## HECTOR INTL (FAR)

ADF or DME required. For inop MALSR, increase S-ILS 36 Cat E visibility to RVR 4000 and S-LOC 36 Cat C/D/E visibility to 1 $\frac{1}{2}$ . # Visibility Cat A/B/C/D RVR 1800 authorized with the use of FD or AP or HUD to DA.



MISSED APPROACH: Climb to 2500 direct KENIE LOM and hold (DME aircraft climb to 4000 on FAR VOR/DME R-358 to GORGY/22 DME and hold N, RT, 178° inbound, continue climb to 4000).

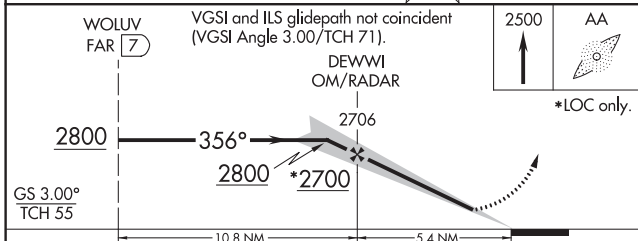
ATIS <b>124.5 379.2</b>	FARGO APP CON <b>120.4 377.15</b>	FARGO TOWER <b>133.8 290.4</b>	GND CON <b>121.9 348.6</b>	CLNC DEL <b>121.9 348.6</b>
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**DME or RADAR REQUIRED**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 901	TDZE 899
MIRL Rwys 9-27 and 13-31	
REIL Rwys 9 and 27	
HIRL Rwy 18-36 81	
FAF to MAP 5.4 NM	
Knots	60 90 120 150 180
Min:Sec	5:24 3:36 2:42 2:10 1:48

CATEGORY	A	B	C	D	E
S-ILS 36		#1099/24	200 (200- $\frac{1}{2}$ )		
S-LOC 36	1360/24	461 (500- $\frac{1}{2}$ )	1360/50	461 (500-1)	
CIRCLING	1380-1	479 (500-1)	1520-1 $\frac{3}{4}$ 619 (700-1 $\frac{3}{4}$ )	1620-2 $\frac{1}{4}$ 719 (800-2 $\frac{1}{4}$ )	1620-2 $\frac{1}{2}$ 719 (800-2 $\frac{1}{2}$ )



WAAS CH <b>97433</b> <b>W09A</b>	APP CRS <b>086°</b>	Rwy Idg TDZE Apt Elev	<b>6302</b> <b>900</b> <b>901</b>
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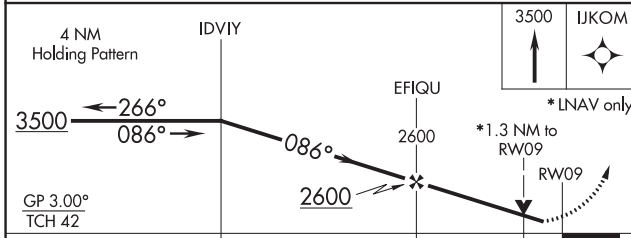
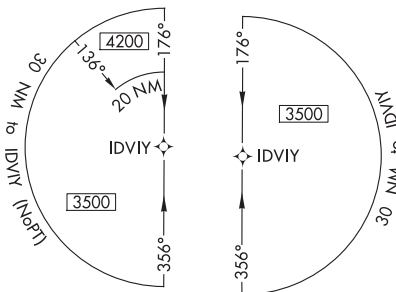
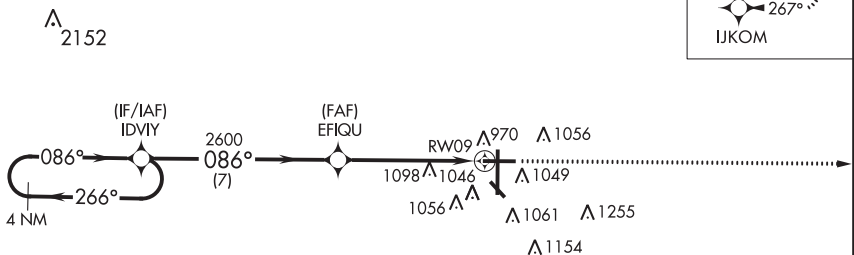
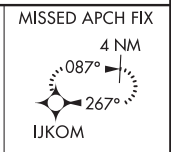
# RNAV (GPS) RWY 9

HECTOR INTL (F.A.R.)

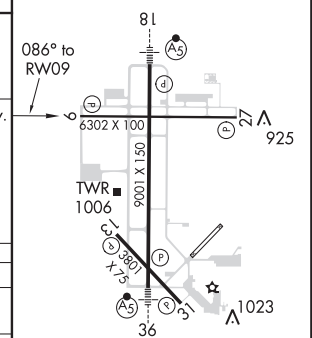
Baro-VNAV NA.  
DME/DME RNP-0.3 NA.  
-25°C/-13°F  
ASR  
Helicopter visibility reduction below ¾ SM not authorized.

MISSED APPROACH: Climb to 3500 direct IJKOM and hold.

ATIS <b>124.5 379.2</b>	FARGO APP CON <b>120.4 377.15</b>	FARGO TOWER <b>133.8 290.4</b>	GND CON <b>121.9 348.6</b>	CLNC DEL <b>121.9 348.6</b>
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ELEV 901	<b>D</b> TDZE 900
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CATEGORY	A	B	C	D
LPV DA		1150-¾	250 (300-¾)	
LNAV/VNAV DA		1171-7/8	271 (300-7/8)	
LNAV MDA	1360-1	460 (500-1)	1360-1¾	460 (500-1¾)
<b>C</b> CIRCLING	1380-1	479 (500-1)	1520-1¾ 619 (700-1¾)	1620-2¼ 719 (800-2¼)

HIRL Rwy 18-36  
REIL Rwy 9 and 27  
MIRL Rwy 9-27 and 13-31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

FARGO, NORTH DAKOTA

AL-144 (FAA)


16315

WAAS CH <b>40006</b> W18A	APP CRS <b>176°</b>	Rwy Idg TDZE Apt Elev <b>9001</b> <b>900</b> <b>901</b>
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# RNAV (GPS) RWY 18

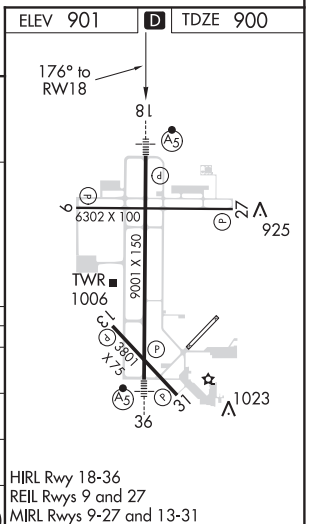
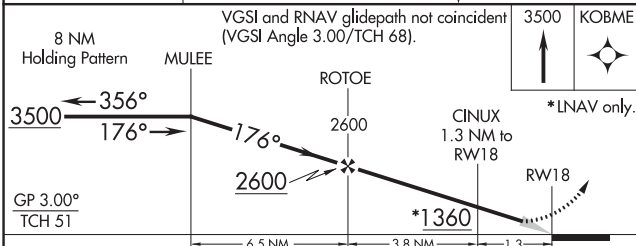
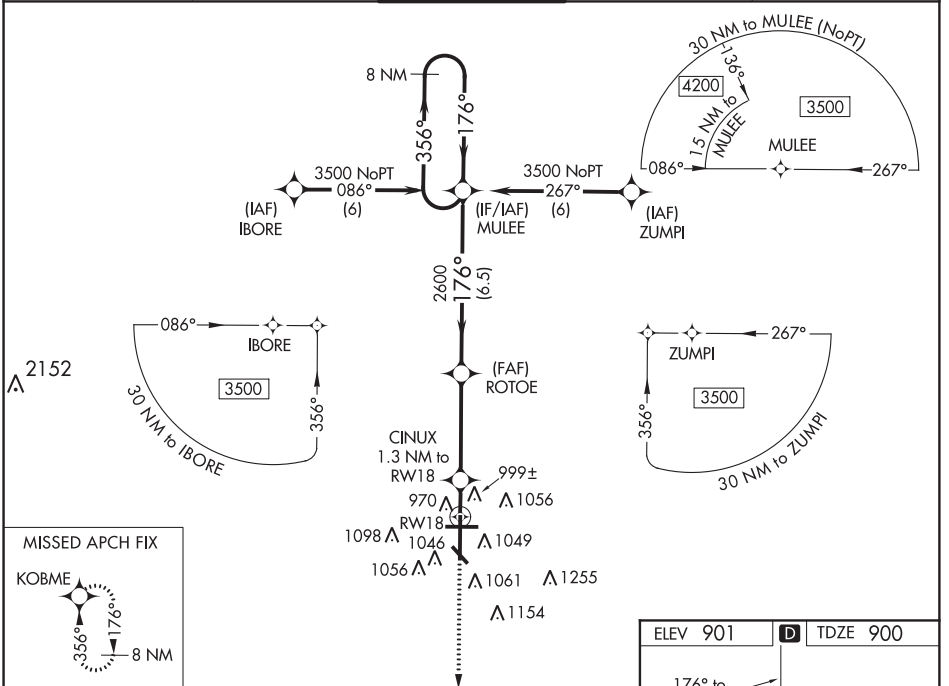
HECTOR INTL (FAR)

**⚠** For inoperative MALSR, increase LPV Cat E visibility to RVR 4000 and LNAV/VNAV Cat E and LNAV Cat D and E to RVR 6000.  
**⚠** -25°C/-13°F DME/DME RNP-0.3 NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F).  
**ASR**

MALSR 

MISSED APPROACH: Climb to 3500 direct KOBME and hold.

ATIS <b>124.5 379.2</b>	FARGO APP CON <b>120.4 377.15</b>	FARGO TOWER <b>133.8 290.4</b>	GND CON <b>121.9 348.6</b>	CLNC DEL <b>121.9 348.6</b>
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CATEGORY	A	B	C	D	E
LPV DA		1100/24	200 (200-½)		
LNAV/VNAV DA		1272/40	372 (400-¾)		
LNAV MDA	1260/24	360 (400-½)		1260/50	360 (400-1)
CIRCLING	1380-1	479 (500-1)	1520-1¾ 619 (700-1¾)	1620-2¼ 719 (800-2¼)	1620-2½ 719 (700-2½)

FARGO, NORTH DAKOTA  
 Amdt 1A 12NOV15

46°55'N-96°49'W

# RNAV (GPS) RWY 18

HECTOR INTL (FAR)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>65733</b> <b>W27A</b>	APP CRS <b>267°</b>	Rwy Idg TDZE Apt Elev	<b>6302</b> <b>899</b> <b>901</b>
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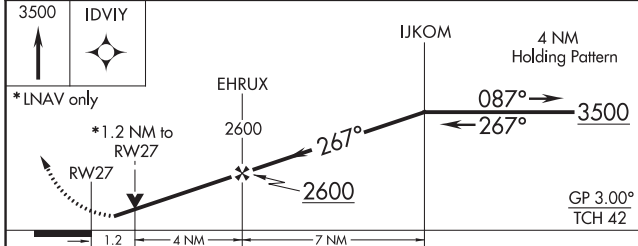
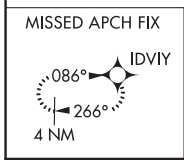
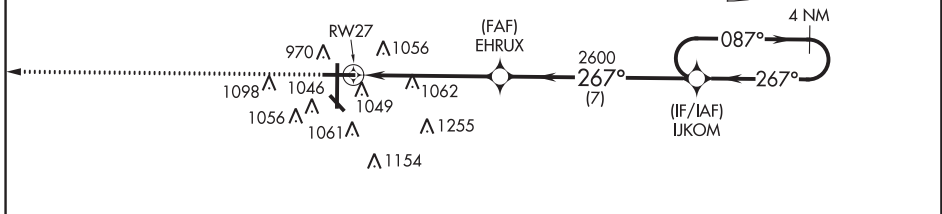
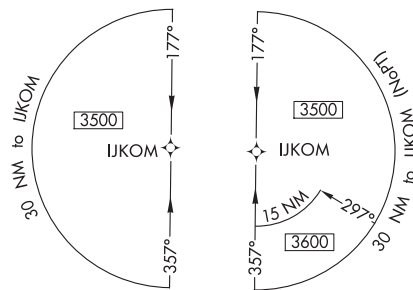
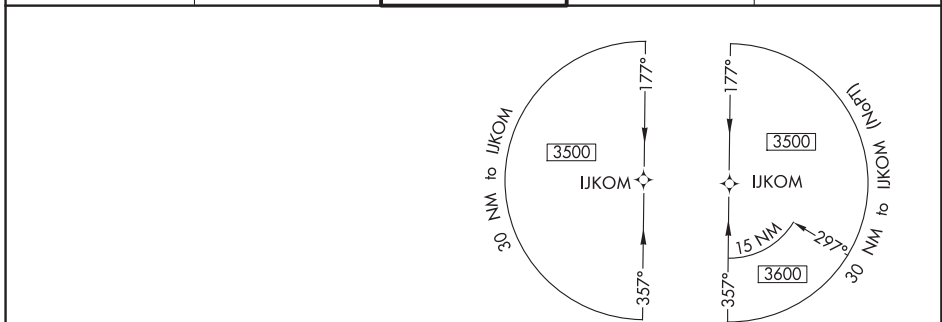
# RNAV (GPS) RWY 27

HECTOR INTL (FAR)

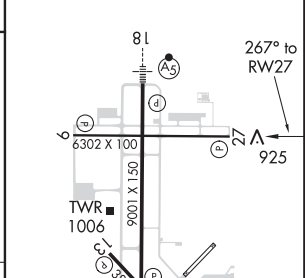
Baro-VNAV NA.  
DME/DME RNP-0.3 NA.  
-25°C/-13°F Helicopter visibility reduction below 3/4 SM not authorized.  
ASR

MISSED APPROACH: Climb to 3500 direct IDVY and hold.

ATIS <b>124.5 379.2</b>	FARGO APP CON <b>120.4 377.15</b>	FARGO TOWER <b>133.8 290.4</b>	GND CON <b>121.9 348.6</b>	CLNC DEL <b>121.9 348.6</b>
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ELEV 901	<b>D</b> TDZE 899
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CATEGORY	A	B	C	D
LPV DA		1149-3/4	250 (300-3/4)	
LNAV/VNAV DA		1231-1 1/8	332 (400-1 1/8)	
LNAV MDA	1320-1	421 (500-1)	1320-1 1/4	421 (500-1 1/4)
<b>C</b> CIRCLING	1380-1	479 (500-1)	1520-1 3/4	1620-2 1/4
			619 (700-1 3/4)	719 (800-2 1/4)

HIRL Rwy 18-36  
REIL Rwy 9 and 27  
MIRL Rwy 9-27 and 13-31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

FARGO, NORTH DAKOTA

AL-144 (FAA)

16315

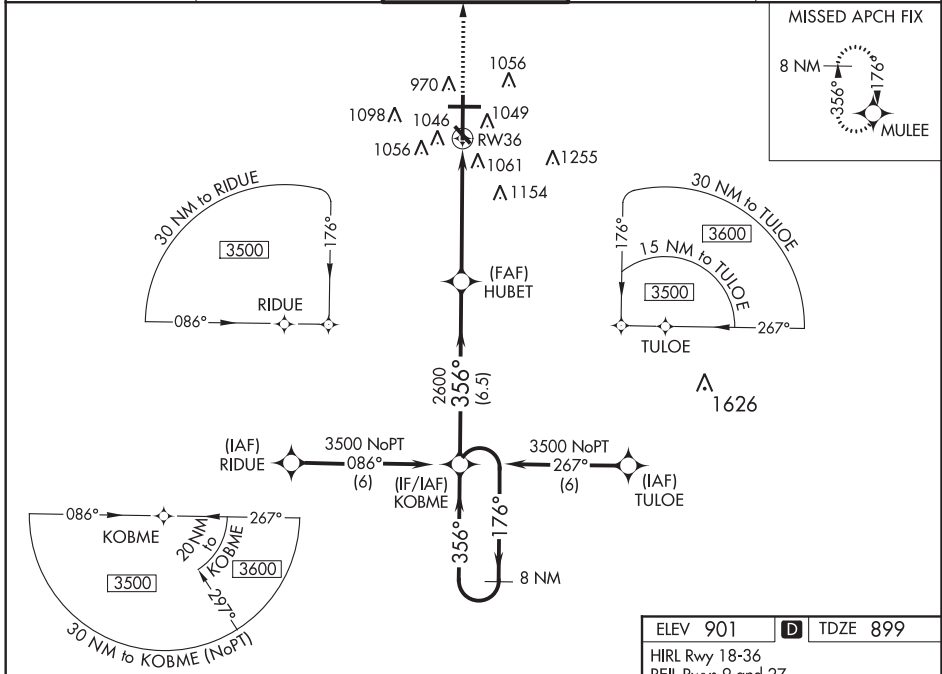
WAAS CH <b>50106</b> <b>W36A</b>	APP CRS <b>356°</b>	Rwy Idg <b>9001</b> TDZE <b>899</b> Apt Elev <b>901</b>
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# RNAV (GPS) RWY 36

HECTOR INTL (F.A.R.)

<p>DME/DME RNP -0.3 NA. Baro-VNAV NA below -16°C (4°F). For inoperative MALSR, increase LPV Cat E visibility to RVR 4000, and increase LNAV/VNAV and LNAV Cat E visibility to 1¼ mile.</p> <p>ASR</p>	<p>MALSR</p>	<p>MISSED APPROACH: Climb to 3500 direct MULEE and hold.</p>
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ATIS <b>124.5 379.2</b>	FARGO APP CON <b>120.4 377.15</b>	FARGO TOWER <b>133.8 290.4</b>	GND CON <b>121.9 348.6</b>	CLNC DEL <b>121.9 348.6</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

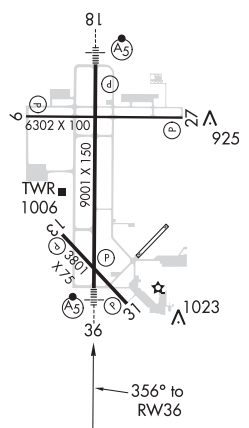
<p>8 NM Holding Pattern</p> <p>3500 ← 176° → 356° → 356° → 2600</p> <p>GP 3.00° TCH 55</p>		<p>VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 71).</p> <p>3500 MULEE</p> <p>*1.4 NM to RW36</p> <p>*LNAV only.</p>	<p>ELEV 901</p> <p>TDZE 899</p> <p>HIRL Rwy 18-36</p> <p>REIL Rwy 9 and 27</p> <p>MIRL Rwy 9-27 and 13-31</p>		
<p>8 NM Holding Pattern</p> <p>3500 ← 176° → 356° → 356° → 2600</p> <p>GP 3.00° TCH 55</p>		<p>VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 71).</p> <p>3500 MULEE</p> <p>*1.4 NM to RW36</p> <p>*LNAV only.</p>	<p>ELEV 901</p> <p>TDZE 899</p> <p>HIRL Rwy 18-36</p> <p>REIL Rwy 9 and 27</p> <p>MIRL Rwy 9-27 and 13-31</p>		
CATEGORY	A	B	C	D	E
LPV DA	1150/24 251 (300-½)				
LNAV/VNAV DA	1360/50 461 (500-1)				1360/60 461 (500-1¼)
LNAV MDA	1420/24 521 (600-½)	1420/50 521 (600-1)	1420/60 521 (600-1¼)		
CIRCLING	1420-1 519 (600-1)	1520-1¾ 619 (700-1¾)	1620-2¼ 719 (800-2¼)	1620-2½ 719 (800-2½)	

FARGO, NORTH DAKOTA  
Orig-B 12NOV15

46°55'N-96°49'W

# RNAV (GPS) RWY 36

HECTOR INTL (F.A.R.)



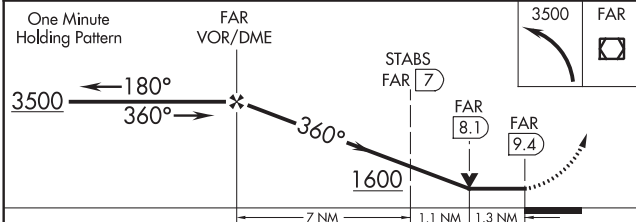
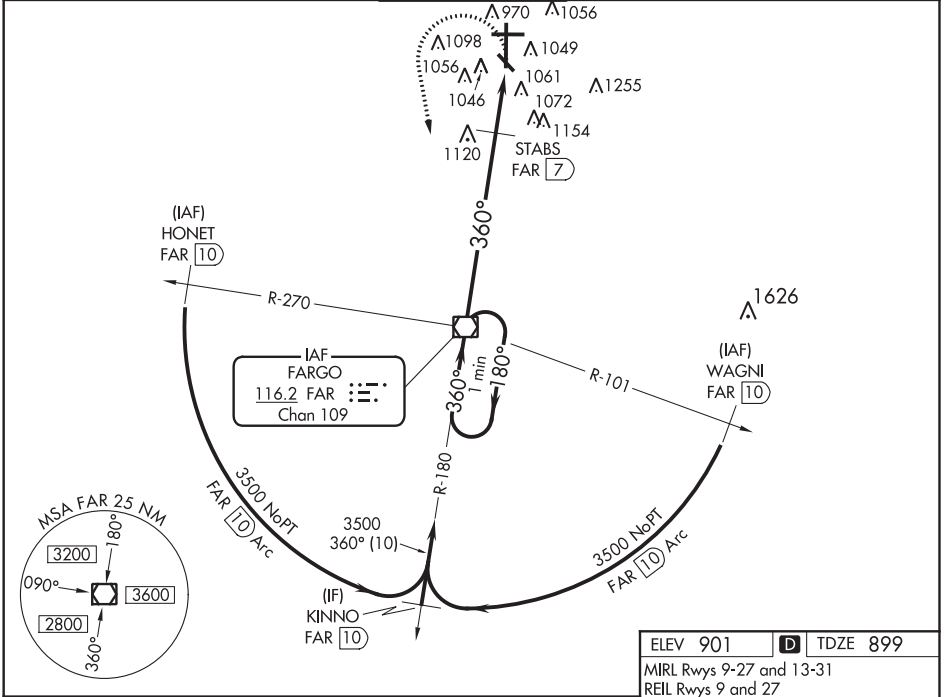
VOR/DME FAR	APP CRS	Rwy Idg	<b>9001</b>
<b>116.2</b>	<b>360°</b>	TDZE	<b>899</b>
Chan <b>109</b>		Apt Elev	<b>901</b>

# VOR RWY 36

HECTOR INTL (FAR)

	For inop MALS, increase S-36 Cat E visibility to 2½ miles. STABS FIX MINIMUMS: For inop MALS, increase S-36 Cat E visibility to 1¾ mile.		MISSED APPROACH: Climbing left turn to 3500 direct FAR VOR/DME and hold.

ATIS <b>124.5 379.2</b>	FARGO APP CON <b>120.4 377.15</b>	FARGO TOWER <b>133.8 290.4</b>	GND CON <b>121.9 348.6</b>	CLNC DEL <b>121.9 348.6</b>
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ELEV 901 **D** TDZE 899

MIRL Rwy 9-27 and 13-31  
REIL Rwy 9 and 27  
HIRL Rwy 18-36

360° 9.4 NM from FAF

FAR to MAP 9.4 NM	Knots	60	90	120	150	180
	Min:Sec	9:24	6:16	4:42	3:46	3:08

CATEGORY	A	B	C	D	E
S-36	1600/24	701 (700-½)	1600-1½ 701 (700-1½)	1600-1¾ 701 (700-1¾)	1600-2 701 (700-2)
CIRCLING	1600-1	699 (700-1)	1600-2 699 (700-2)	1620-2¼ 719 (700-2¼)	1620-2½ 719 (700-2½)
STABS FIX MINIMUMS					
S-36	1380/24	481 (500-½)	1380/40 481 (500-¾)	1380/50 481 (500-1)	1380/60 481 (500-1¼)
CIRCLING	1380-1	479 (500-1)	1520-1¾ 619 (700-1¾)	1620-2¼ 719 (800-2¼)	1620-2½ 719 (800-2½)

NC-1, 10 NOV 2016 to 05 JAN 2017

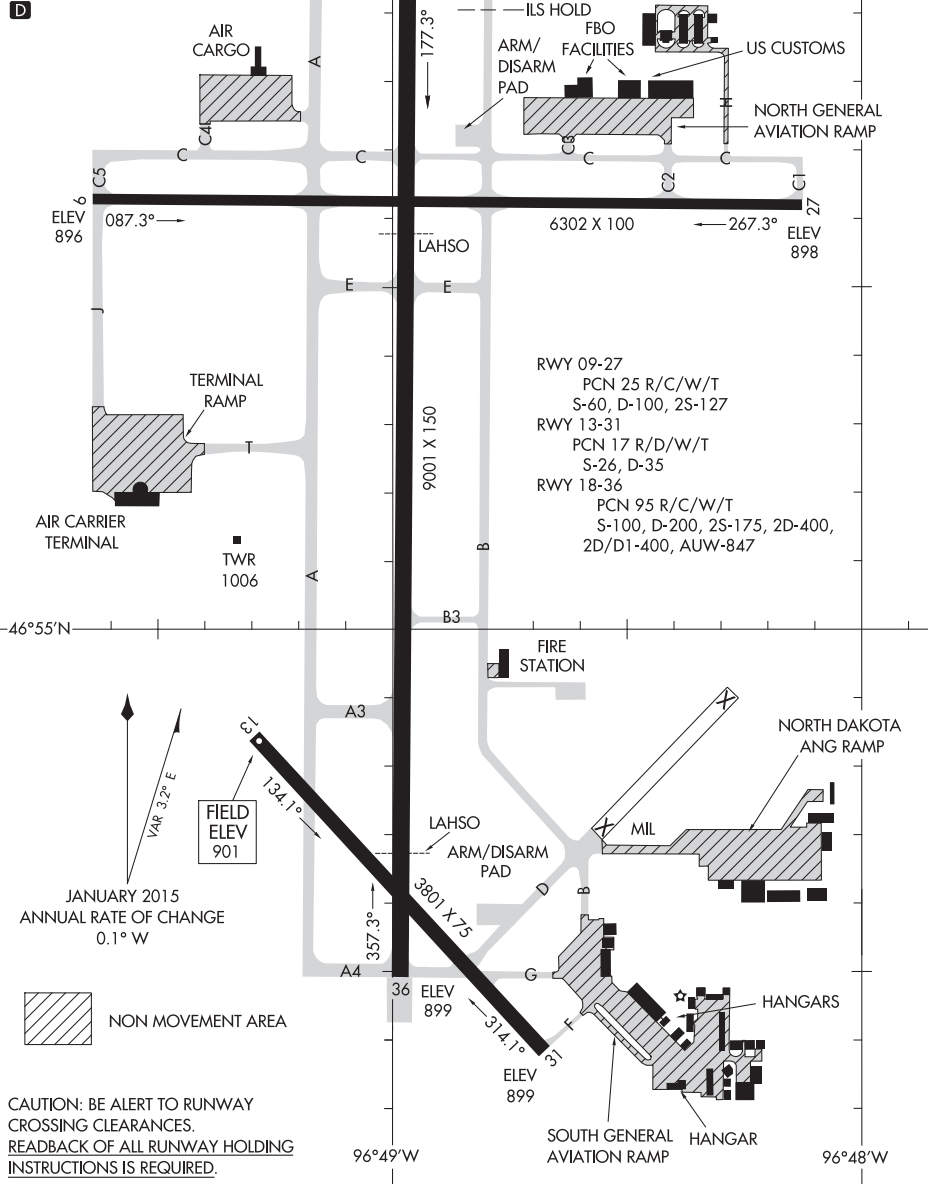
NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

HECTOR INTL (F.A.R.)  
FARGO, NORTH DAKOTA

AL-144 (FAA)

ATIS  
124.5 379.2  
FARGO TOWER  
133.8 290.4  
GND CON  
121.9 348.6  
CLNC DEL  
121.9 348.6



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

FARGO, NORTH DAKOTA  
HECTOR INTL (F.A.R.)

WAAS CH <b>81932</b> <b>W12A</b>	APP CRS <b>125°</b>	Rwy Idg TDZE Apt Elev	<b>4257</b> <b>1060</b> <b>1060</b>
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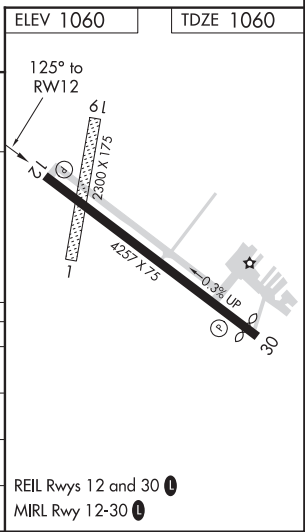
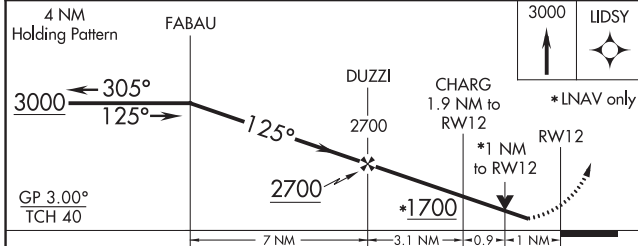
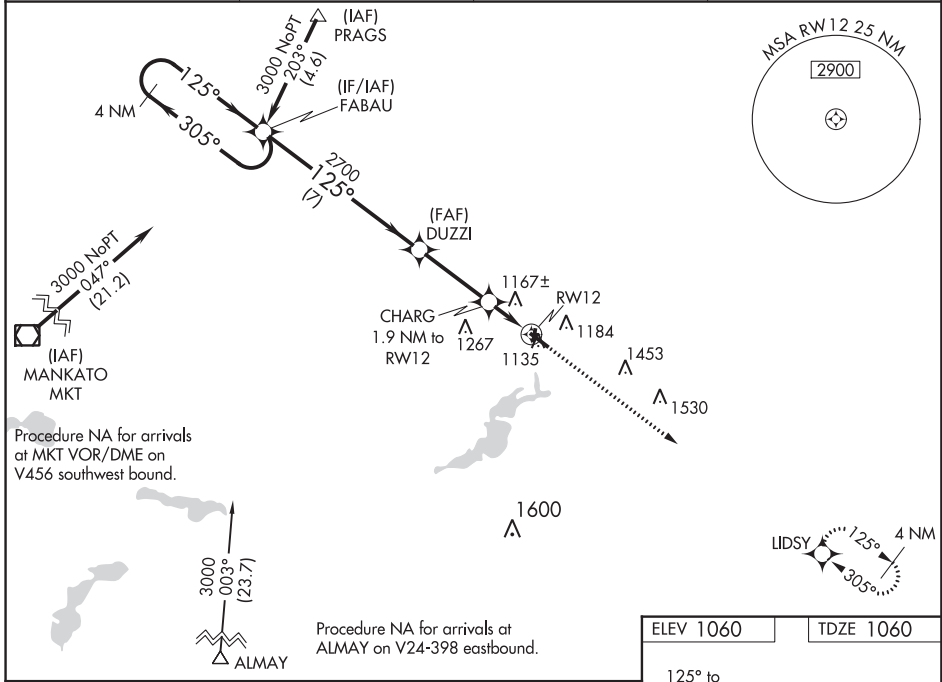
# RNAV (GPS) RWY 12

FARIBAULT MUNI (F'BL)

▼ Baro-VNAV and VDP NA when using Owatonna altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Owatonna altimeter setting and increase all DA 41 feet and all MDA 60 feet; increase LNAV Cat C visibility ½ mile. Helicopter visibility reduction below ¾ SM NA. Circling to Rwy 1, 19 NA.

MISSED APPROACH:  
Climb to 3000 direct  
LIDSY and hold.

AWOS-3 <b>111.2</b>	MINNEAPOLIS APP CON <b>134.7 284.7</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
LPV DA		1310-1 250 (300-1)		NA
LNAV/VNAV DA		1331-1 271 (300-1)		NA
LNAV MDA		1420-1 360 (400-1)		NA
CIRCLING	1520-1 460 (500-1)		1520-1½ 460 (500-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

FARIBAULT, MINNESOTA

AL-5425 (FAA)

15316

WAAS CH <b>61032</b> <b>W30A</b>	APP CRS <b>305°</b>	Rwy Idg TDZE <b>1056</b> Apt Elev <b>1060</b>	<b>4027</b>
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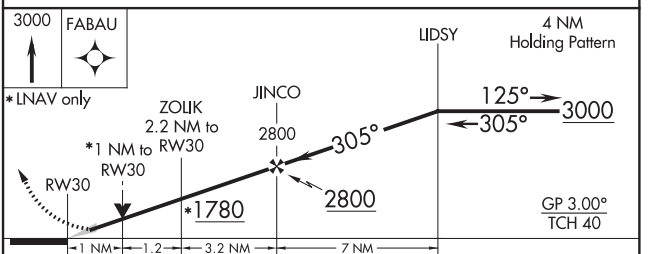
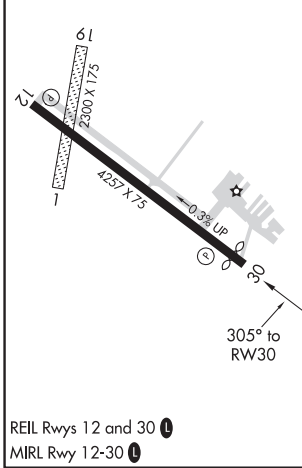
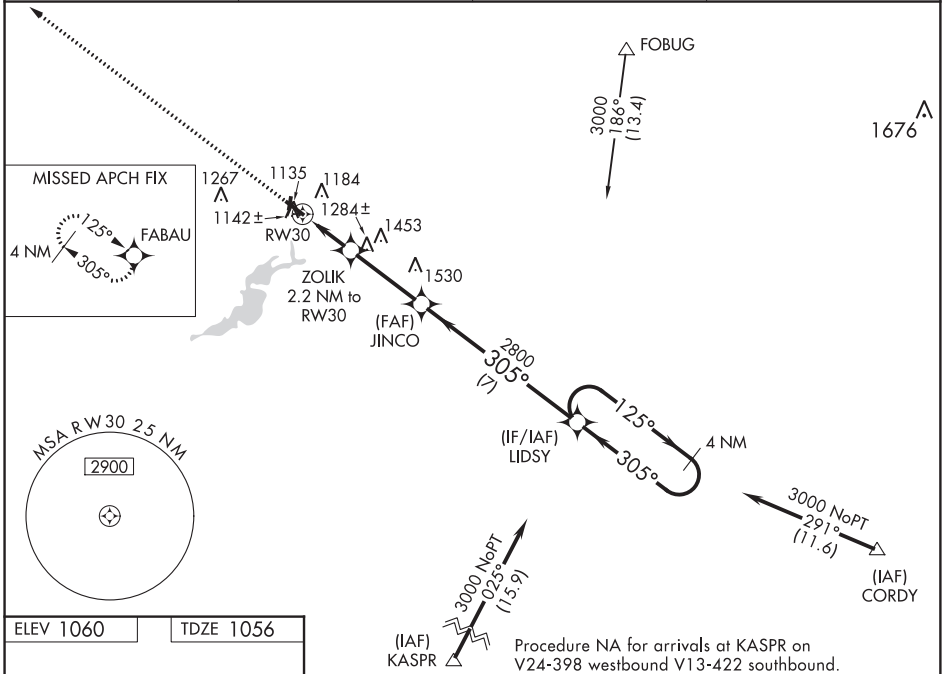
# RNAV (GPS) RWY 30

FARIBAULT MUNI (F'BL)

**⚠** Baro-VNAV and VDP NA when using Owatonna altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Owatonna altimeter setting and increase all DA 41 feet and all MDA 60 feet; increase LNAV Cat C visibility 1/8 mile. Circling to Rwy 1, 19 NA.

**MISSED APPROACH:** Climb to 3000 direct FABAU and hold.

AWOS-3 <b>111.2</b>	MINNEAPOLIS APP CON <b>134.7 284.7</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
LPV DA		1306-1 250 (300-1)		NA
LNAV/VNAV DA		1306-1 250 (300-1)		NA
LNAV MDA		1400-1 344 (400-1)		NA
CIRCLING	1520-1	460 (500-1)	1520-1½ 460 (500-1½)	NA

FARIBAULT, MINNESOTA  
Amdt 1B 12NOV15

44°20'N-93°19'W

# RNAV (GPS) RWY 30

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



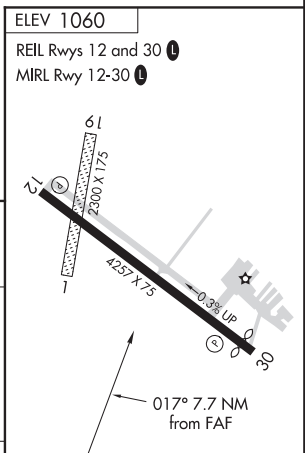
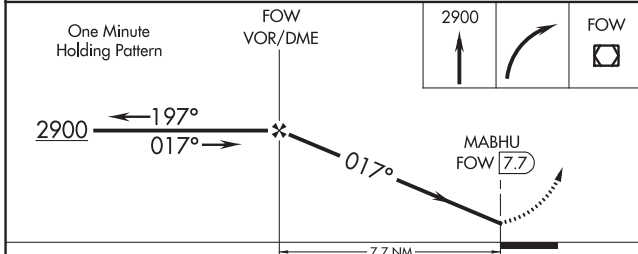
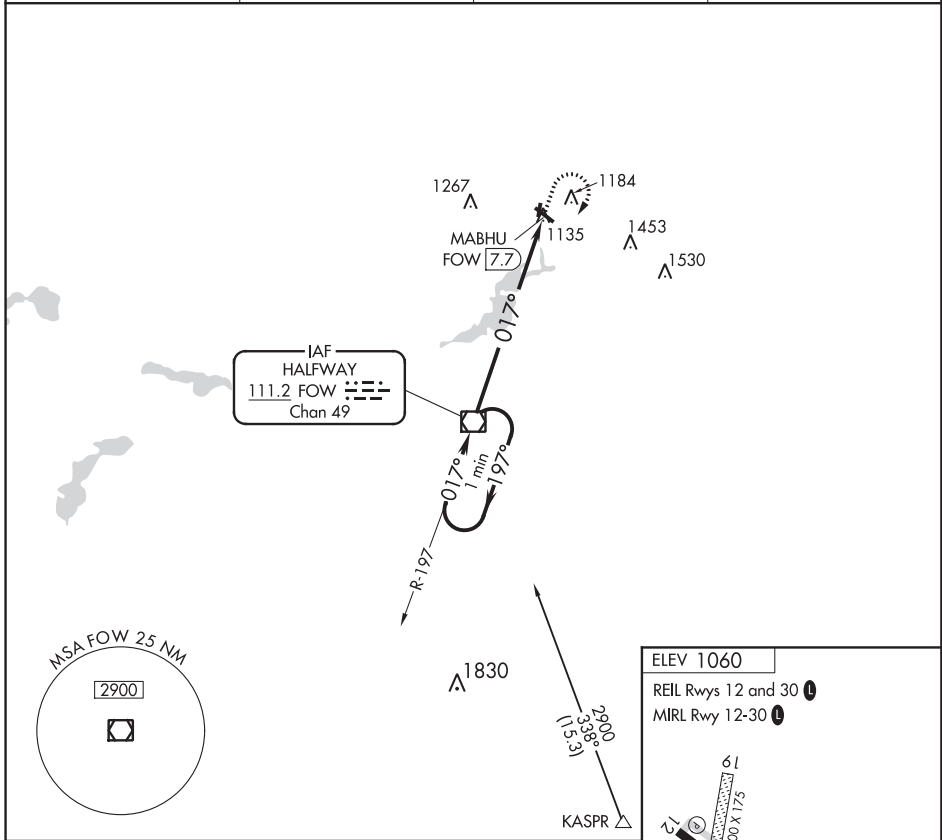
VOR/DME FOW <b>111.2</b> Chan <b>49</b>	APP CRS <b>017°</b>	Rwy Idg TDZE Apt Elev	<b>N/A</b> <b>N/A</b> <b>1060</b>
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**VOR-A**  
FARIBAULT MUNI (F'BL)

**NA** When local altimeter setting not received, use Owatonna altimeter setting and increase all MDA 60 feet, and Cat C visibility ¼ mile. Circling to Rwy 1, 19 NA.

**MISSED APPROACH:** Climb to 2900 then right turn direct FOW VOR/DME and hold.

AWOS-3 <b>111.2</b>	MINNEAPOLIS APP CON <b>134.7 284.7</b>	GCO <b>121.725</b>	UNICOM <b>122.8</b> (CTAF) <b>0</b>
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CATEGORY	A	B	C	D	FAF to MAP 7.7 NM					
CIRCLING	1680-1	620 (700-1)	1680-1¾ 620 (700-1¾)	NA	Knots	60	90	120	150	180
					Min:Sec	7:42	5:08	3:51	3:05	2:34

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC I-FFM <b>111.5</b>	APP CRS <b>308°</b>	Rwy Idg <b>5639</b>
		TDZE <b>1182</b>
		Apt Elev <b>1183</b>

# ILS or LOC RWY 31

FERGUS FALLS MUNI-EINAR MICKELSON FIELD (FFM)

**⚠** When local altimeter setting not received, use Wheaton altimeter setting and increase all DA 102 feet and all MDA 120 feet, increase S-LOC 31 and Circling Cat C and D visibility ½ mile. For inoperative MALS, increase S-LOC 31 Cat D visibility ¼ mile. For inoperative MALS, increase S-LOC 31 Cat D visibility ¼ mile. For inoperative MALS when using Wheaton altimeter setting, increase S-ILS 31 all Cats visibility ½ mile. GS unusable for coupled approaches below 1400.

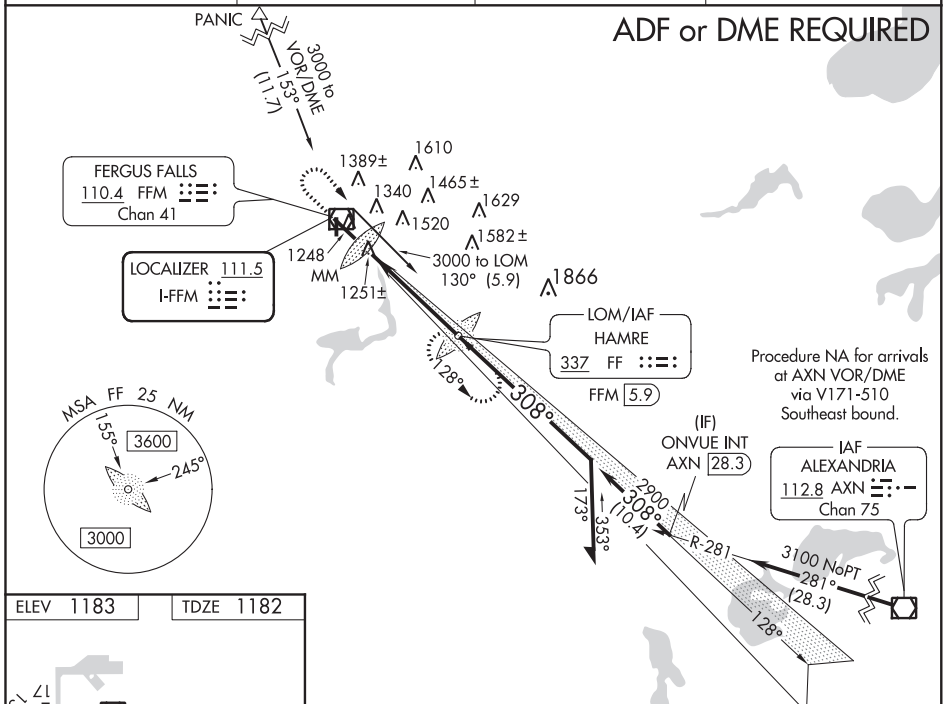
MALS



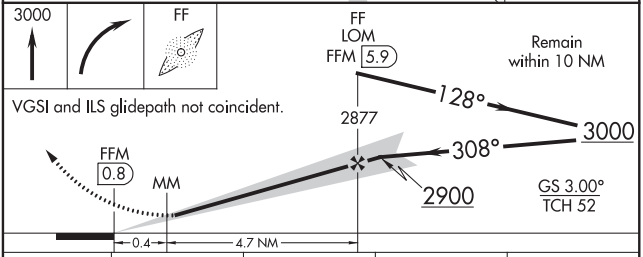
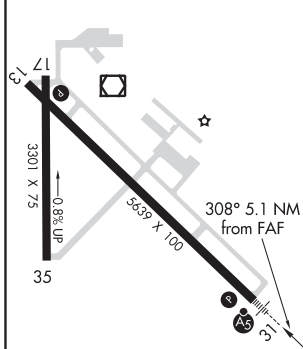
**MISSED APPROACH:** Climb to 3000 then right turn direct HAMRE LOM/FFM 5.9 DME and hold.

AWOS-3 <b>110.4</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	PRINCETON RADIO <b>122.35</b>	UNICOM <b>122.8 (CTAF) 0</b>
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## ADF or DME REQUIRED



ELEV <b>1183</b>	TDZE <b>1182</b>
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CATEGORY	A	B	C	D
S-ILS 31	1382-½ 200 (200-½)			
S-LOC 31	1520-½ 338 (400-½)		1520-¾ 338 (400-¾)	
CIRCLING	1640-1 457 (500-1)	1740-1 557 (600-1)	1740-1½ 557 (600-1½)	1880-2¼ 697 (700-2¼)

FERGUS FALLS, MINNESOTA  
Amdt 2 27AUG09

46°17'N-96°09'W

## ILS or LOC RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>65920</b> <b>W13A</b>	APP CRS <b>128°</b>	Rwy Idg <b>5639</b> TDZE <b>1182</b> Apt Elev <b>1183</b>
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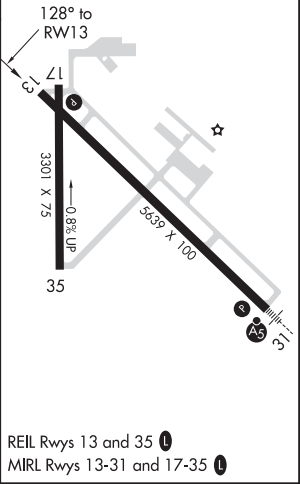
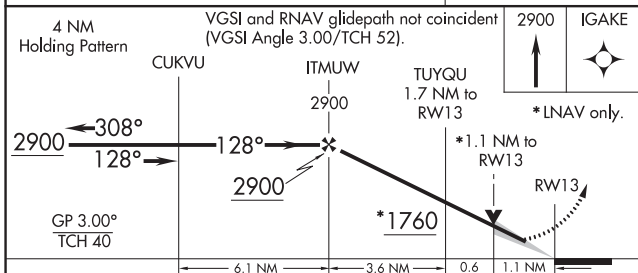
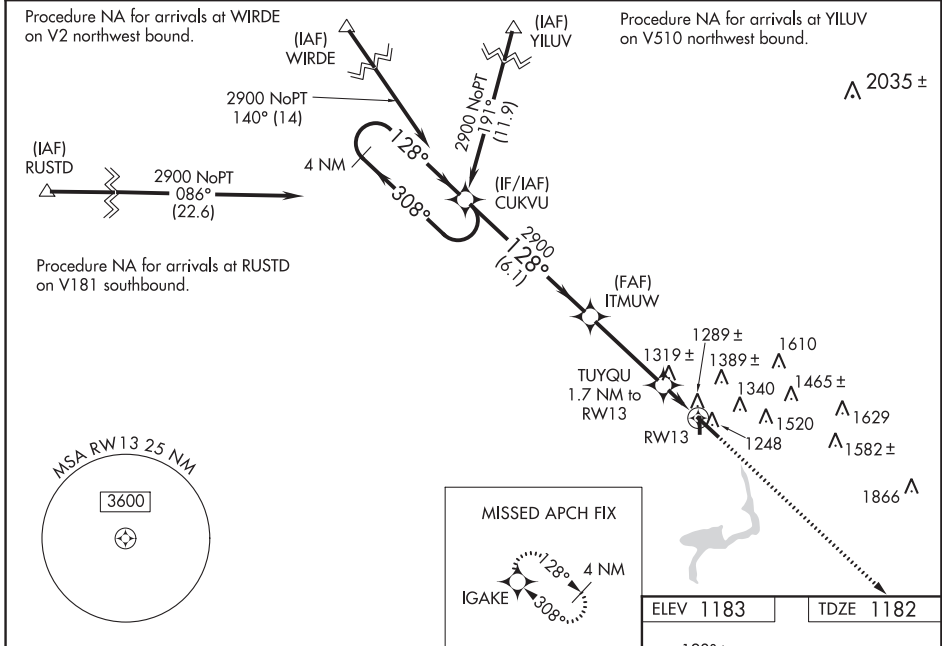
# RNAV (GPS) RWY 13

FERGUS FALLS MUNI-EINAR MICKELSON FIELD (F'FM)

For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 36°C (96°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Wahpeton altimeter setting, and increase all DA 74 feet, increase all MDA 80 feet. Increase LPV 1/8 all Cats, and LNAV/VNAV visibility 1/4 mile all Cats; increase LNAV Cat C and D and Circling Cat C and D visibility 1/4 mile. Baro-VNAV and VDP NA when using Wahpeton altimeter setting.

**MISSED APPROACH:**  
Climb to 2900 direct IGAKE and hold.

AWOS-3 <b>110.4</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	PRINCETON RADIO <b>122.35</b>	UNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LPV DA		1382-3/4	200 (200-3/4)	
LNAV/VNAV DA		1470-7/8	288 (300-7/8)	
LNAV MDA	1580-1	398 (400-1)	1580-1 1/8	398 (400-1 1/8)
CIRCLING	1640-1 457 (500-1)	1740-1 557 (600-1)	1740-1 1/2 557 (600-1 1/2)	1880-2 1/4 697 (700-2 1/4)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>42614</b> <b>W31A</b>	APP CRS <b>308°</b>	Rwy Idg <b>5639</b> TDZE <b>1182</b> Apt Elev <b>1183</b>
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# RNAV (GPS) RWY 31

FERGUS FALLS MUNI-EINAR MICKELSON FIELD (F'FM)

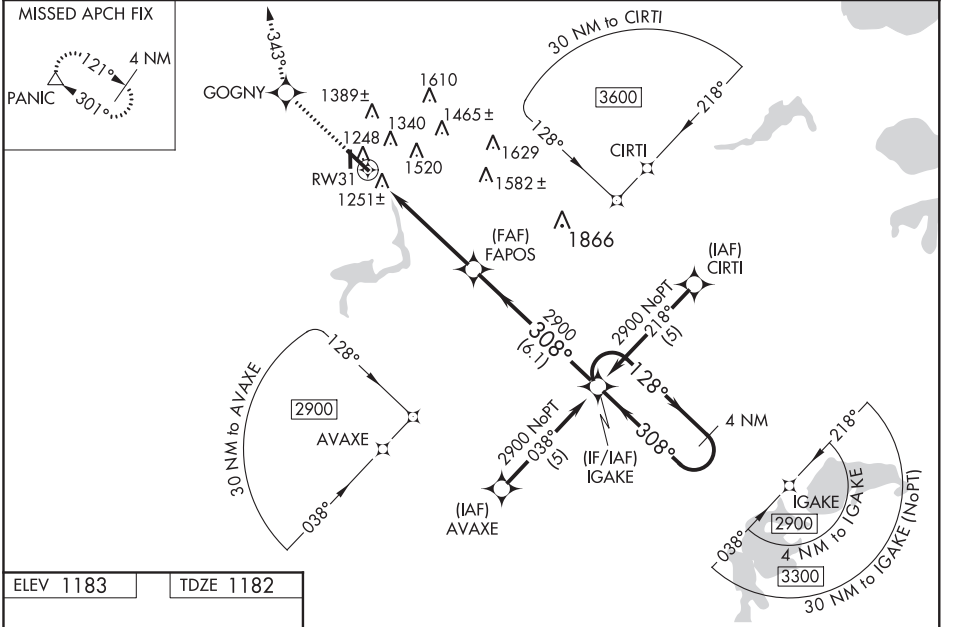
**⚠** Inoperative table does not apply to LNAV Cat D. Baro-VNAV NA when using Wheaton altimeter setting. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Wheaton altimeter setting and increase all DA 102 feet and all MDA 120 feet, LNAV/VNAV all Cats and Circling Cats C and D visibility ½ mile and LNAV Cat C ¼ mile. For inoperative MALSR when using Wheaton altimeter setting, increase LPV all Cats visibility ½ mile.

MALSR

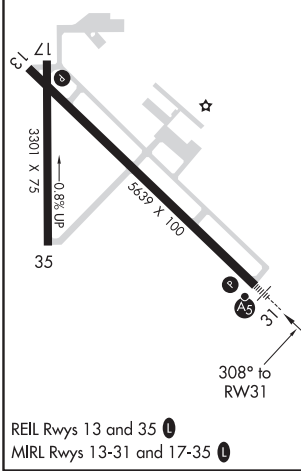


**MISSED APPROACH:**  
Climb to 3000 direct GOGNY and via track 343° to PANIC and hold.

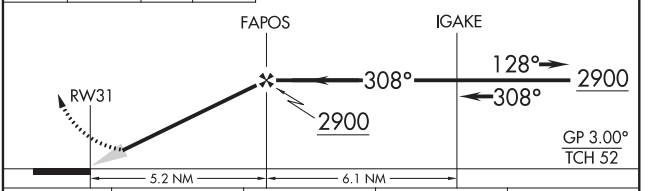
AWOS-3 <b>110.4</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	PRINCETON RADIO <b>122.35</b>	UNICOM <b>122.8 (CTAF)</b> <b>0</b>
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ELEV <b>1183</b>	TDZE <b>1182</b>
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3000	GOGNY	tr	PANIC	VGSI and RNAV glidepath not coincident.	4 NM Holding Pattern
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CATEGORY	A	B	C	D
LPV DA		1382-½	200 (200-½)	
LNAV/VNAV DA		1545-¾	363 (400-¾)	
LNAV MDA		1520-½	338 (400-½)	1520-1 338 (400-1)
CIRCLING	1640-1 457 (500-1)	1740-1 557 (600-1)	1740-1½ 557 (600-1½)	1880-2¼ 697 (700-2¼)

FERGUS FALLS, MINNESOTA  
Orig 27AUG09

FERGUS FALLS MUNI-EINAR MICKELSON FIELD (F'FM)  
46°17'N-96°09'W  
**RNAV (GPS) RWY 31**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

APP CRS	Rwy Idg	<b>3301</b>
<b>354°</b>	TDZE	<b>1182</b>
	Apt Elev	<b>1183</b>

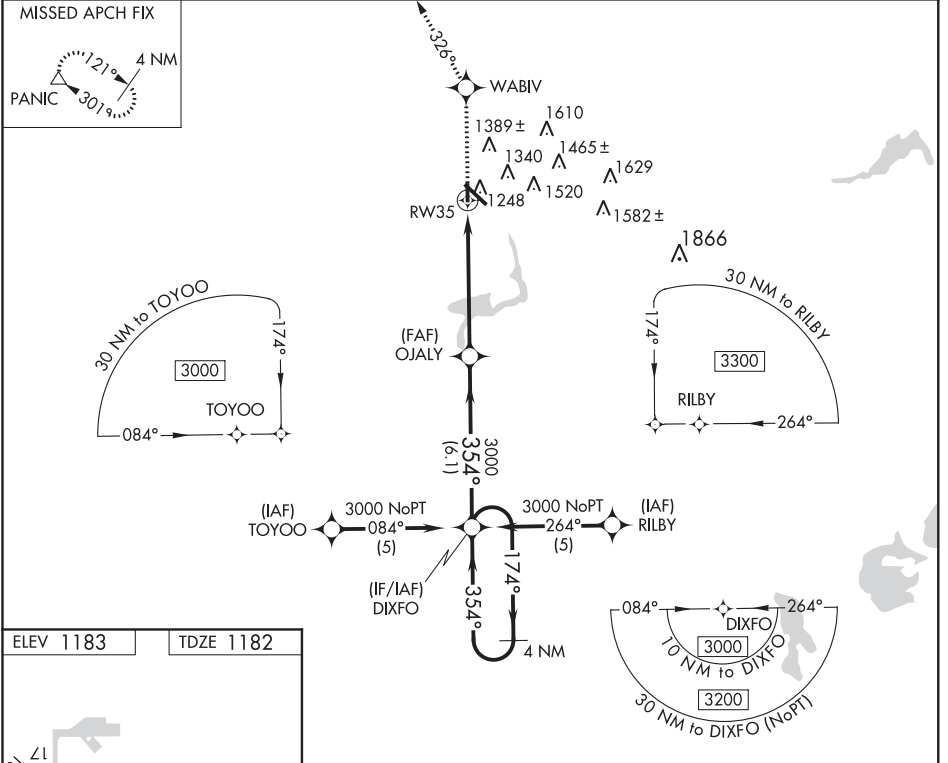
# RNAV (GPS) RWY 35

FERGUS FALLS MUNI-EINAR MICKELSON FIELD (F<sup>F</sup>M)

**▼** DME/DME RNP-0.3 NA. When local altimeter setting not received, use Wheaton altimeter setting and increase all MDA 120 feet and LNAV Cat C visibility ¼ mile, Circling Cat C ½ mile. VDP NA when using Wheaton altimeter setting.

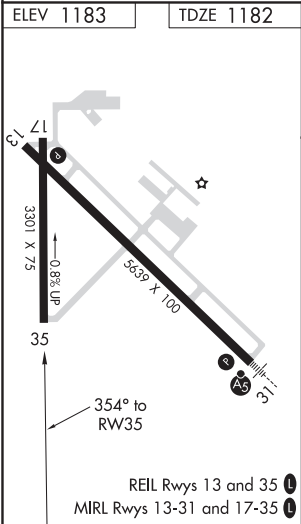
**▲** MISSED APPROACH: Climb to 3000 direct WABIV and via track 326° to PANIC and hold.

AWOS-3 <b>110.4</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	PRINCETON RADIO <b>122.35</b>	UNICOM <b>122.8 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



3000	WABIV	tr 326°	PANIC	4 NM Holding Pattern
CATEGORY	A	B	C	D
LNAV MDA	1500-1 318 (400-1)			NA
CIRCLING	1640-1 457 (500-1)	1740-1 557 (600-1)	1740-1½ 557 (600-1½)	NA

VOR/DME FFM <b>110.4</b> Chan <b>41</b>	APP CRS <b>115°</b>	Rwy Idg TDZE <b>1182</b> Apt Elev <b>1183</b>
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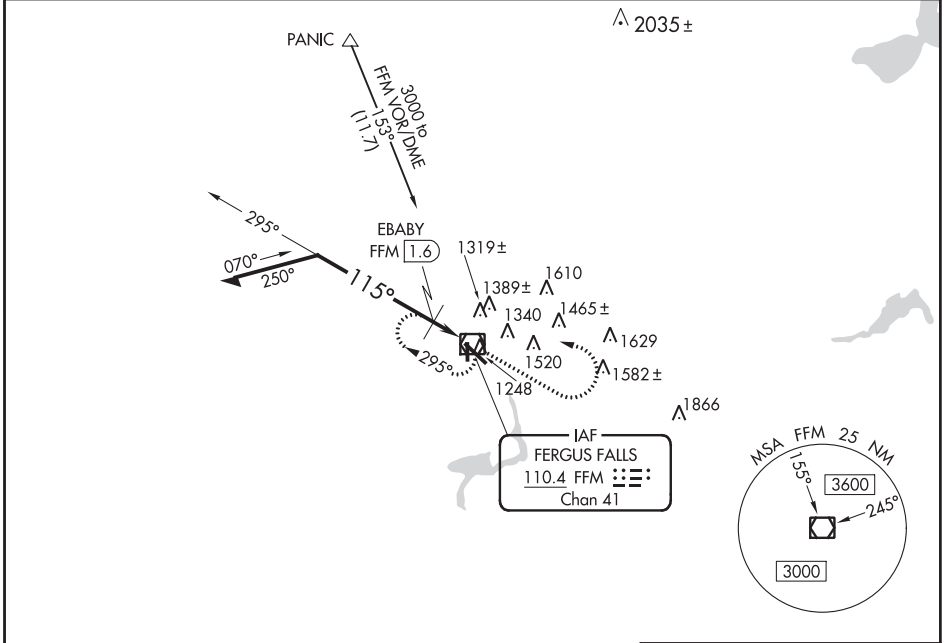
# VOR RWY 13

FERGUS FALLS MUNI-EINAR MICKELSON FIELD (FFM)

**NA** Cat D straight-in minima NA when using Wheaton altimeter setting. When local altimeter setting not received, use Wheaton altimeter setting and increase all MDA 120 feet, and S-13 Cat C and D visibility ½ mile, Circling Cat C and D visibility ½ mile, increase EBABY fix minimums S-13 and Circling Cat C and D visibility ½ mile.

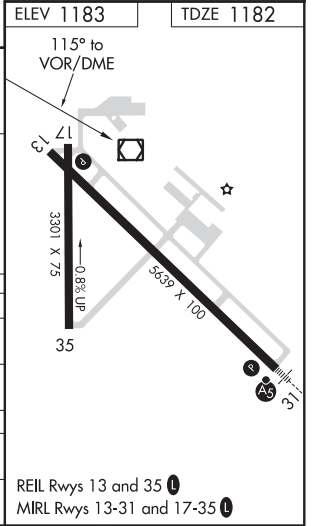
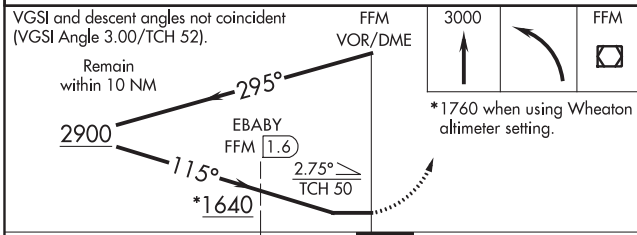
**MISSED APPROACH:** Climb to 3000 then left turn direct FFM VOR/DME and hold.

AWOS-3 <b>110.4</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	PRINCETON RADIO <b>122.35</b>	UNICOM <b>122.8 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D
S-13	1640-1	458 (500-1)	1640-1¼ 458 (500-1¼)	1640-1½ 458 (500-1½)
CIRCLING	1640-1 457 (500-1)	1740-1 557 (600-1)	1740-1½ 557 (600-1½)	1880-2¼ 697 (700-2¼)
EBABY FIX MINIMUMS				
S-13	1580-1 398 (400-1)			1580-1¼ 398 (400-1¼)
CIRCLING	1640-1 457 (500-1)	1740-1 557 (600-1)	1740-1½ 557 (600-1½)	1880-2¼ 697 (700-2¼)

WAAS CH <b>82226</b> <b>W16A</b>	APP CRS <b>164°</b>	Rwy Idg TDZE <b>1277</b> Apt Elev <b>1279</b>	<b>3502</b>
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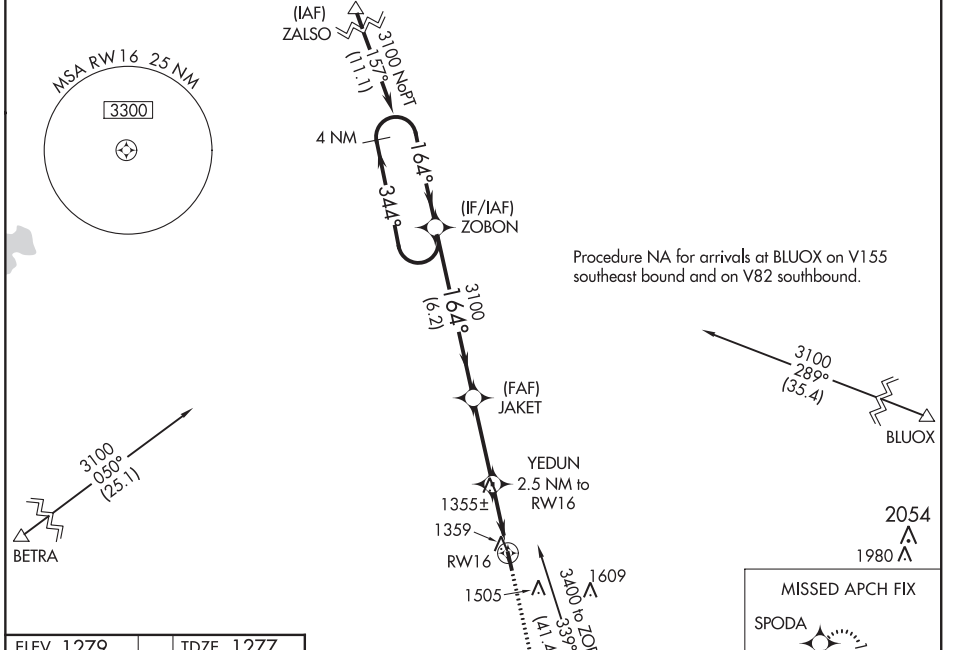
# RNAV (GPS) RWY 16

FOSSTON MUNI (F'SE)

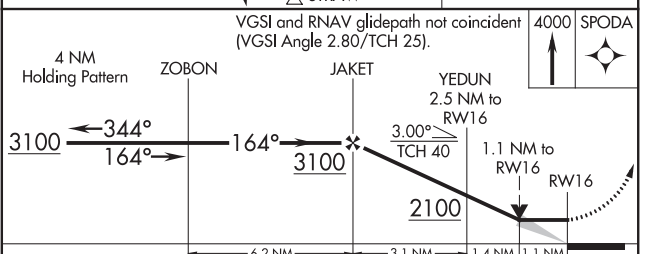
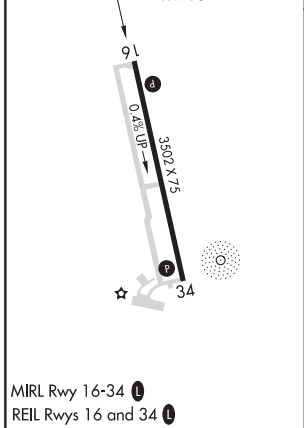
**⚠** When local altimeter setting not received, use Thief River Falls Rgnl altimeter setting and increase all MDA 100 feet and increase LP and LNAV Cat C visibility  $\frac{3}{8}$  mile, Circling Cat C visibility  $\frac{1}{2}$  mile. DME/DME RNP-0.3 NA. VDP NA with Thief River Falls Rgnl altimeter setting.

**⚠** MISSED APPROACH: Climb to 4000 direct SPODA and hold.

AWOS-3 <b>224</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	GCO <b>121.725</b>	CTAF <b>122.9</b>
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ELEV 1279	TDZE 1277
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CATEGORY	A	B	C	D
LP MDA	1620-1	343 (400-1)		NA
LNAV MDA	1640-1	363 (400-1)		NA
CIRCLING	1860-1	581 (600-1)	1860-1½ 581 (600-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>90326</b> <b>W34A</b>	APP CRS <b>344°</b>	Rwy Idg TDZE Apt Elev	<b>3502</b> <b>1279</b> <b>1279</b>
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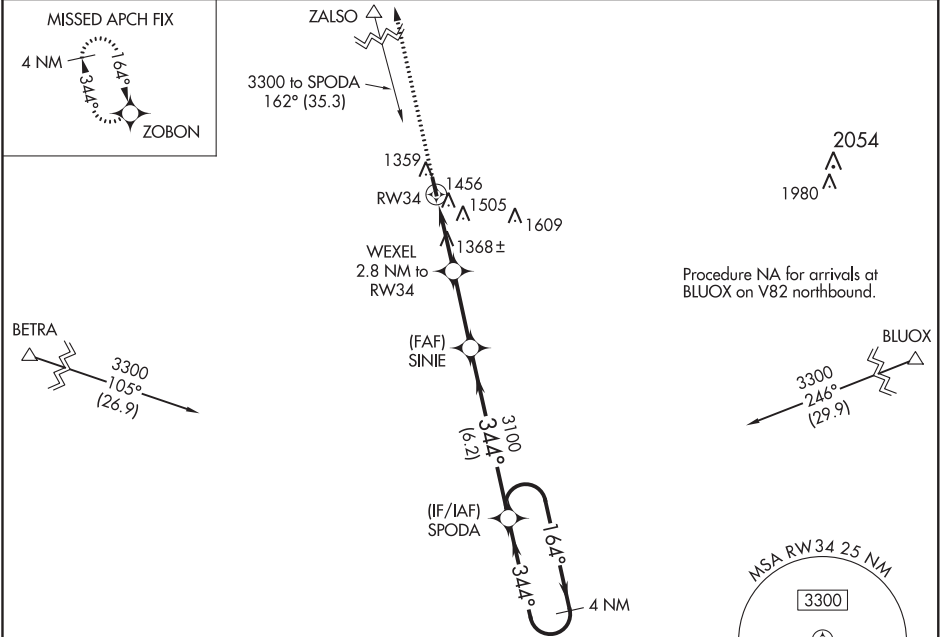
# RNAV (GPS) RWY 34

FOSSTON MUNI (F'SE)

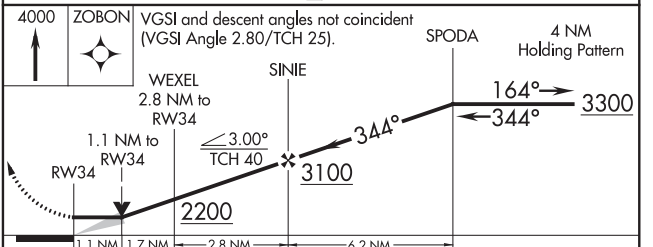
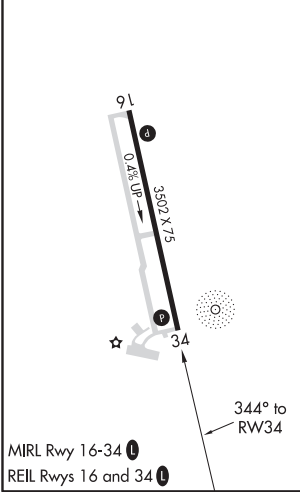
**⚠** When local altimeter setting not received, use Thief River Falls Rgnl altimeter setting and increase all MDA 100 feet and increase LP and LNAV Cat C visibility  $\frac{3}{8}$  mile, increase Circling Cat C visibility  $\frac{1}{2}$  mile. DME/DME RNP-0.3 NA.

**⚠** MISSED APPROACH: Climb to 4000 direct ZOBON and hold.

AWOS-3 <b>224</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	GCO <b>121.725</b>	CTAF <b>122.9</b>
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ELEV 1279	TDZE 1279
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CATEGORY	A	B	C	D
LP MDA	1620-1 341 (400-1)			NA
LNAV MDA	1760-1	481 (500-1)	1760-1 $\frac{3}{8}$ 481 (500-1 $\frac{3}{8}$ )	NA
CIRCLING	1860-1	581 (600-1)	1860-1 $\frac{1}{2}$ 581 (600-1 $\frac{1}{2}$ )	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



NDB FSE <b>224</b>	APP CRS <b>356°</b>	Rwy ldg <b>3502</b>
		TDZE <b>1279</b>
		Apt Elev <b>1279</b>

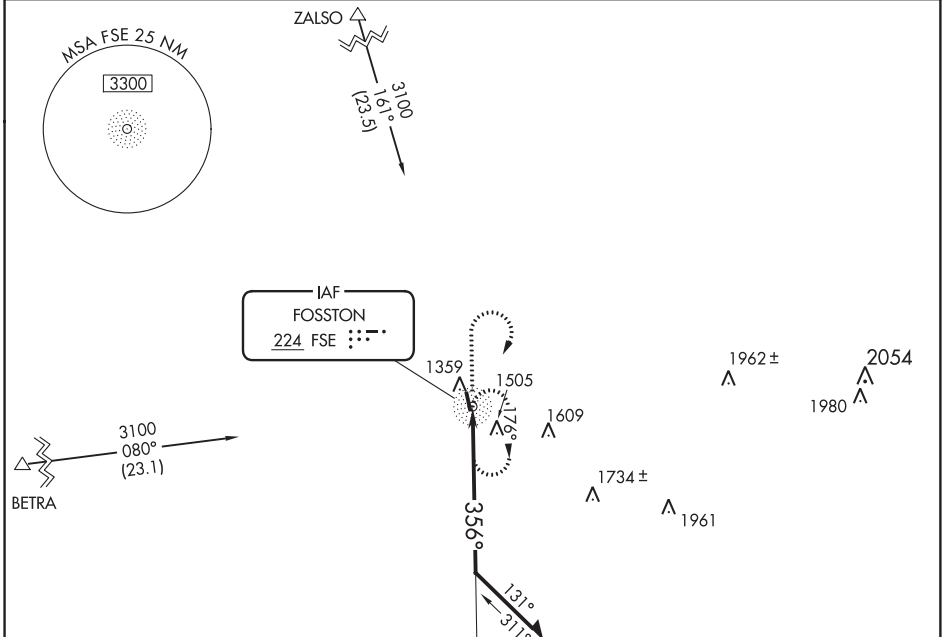
# NDB RWY 34

FOSSTON MUNI (FSE)

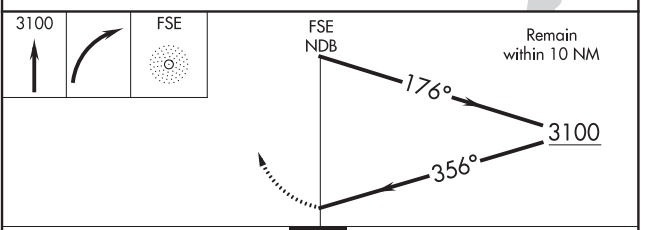
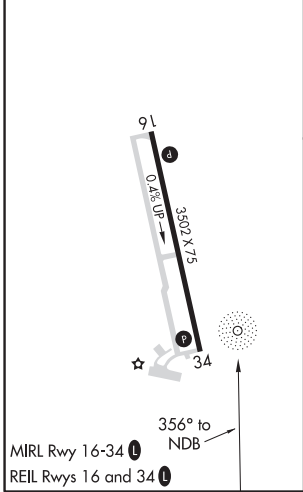
**⚠** When local altimeter setting not received, use Thief River Falls Rgnl altimeter setting and increase all MDA 100 feet and increase all Cat A and Circling Cat C visibility ¼ mile.

**⚠** MISSED APPROACH: Climb to 3100 then right turn direct FSE NDB and hold.

AWOS-3 <b>224</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	GCO <b>121.725</b>	CTAF <b>122.9</b> <b>Ⓛ</b>
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ELEV 1279	TDZE 1279
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CATEGORY	A	B	C	D
S-34	2060-1 781 (800-1)	2060-1¼ 781 (800-1¼)	2060-2½ 781 (800-2½)	NA
CIRCLING	2060-1 781 (800-1)	2060-1¼ 781 (800-1¼)	2060-2½ 781 (800-2½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

GARRISON, NORTH DAKOTA

AL-9383 (FAA)

16315

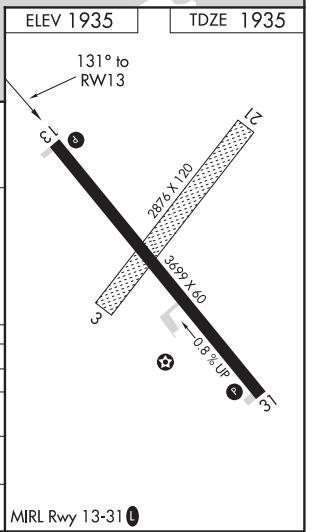
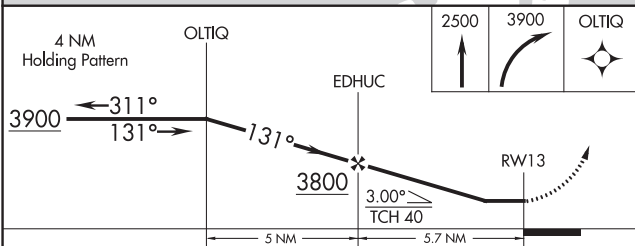
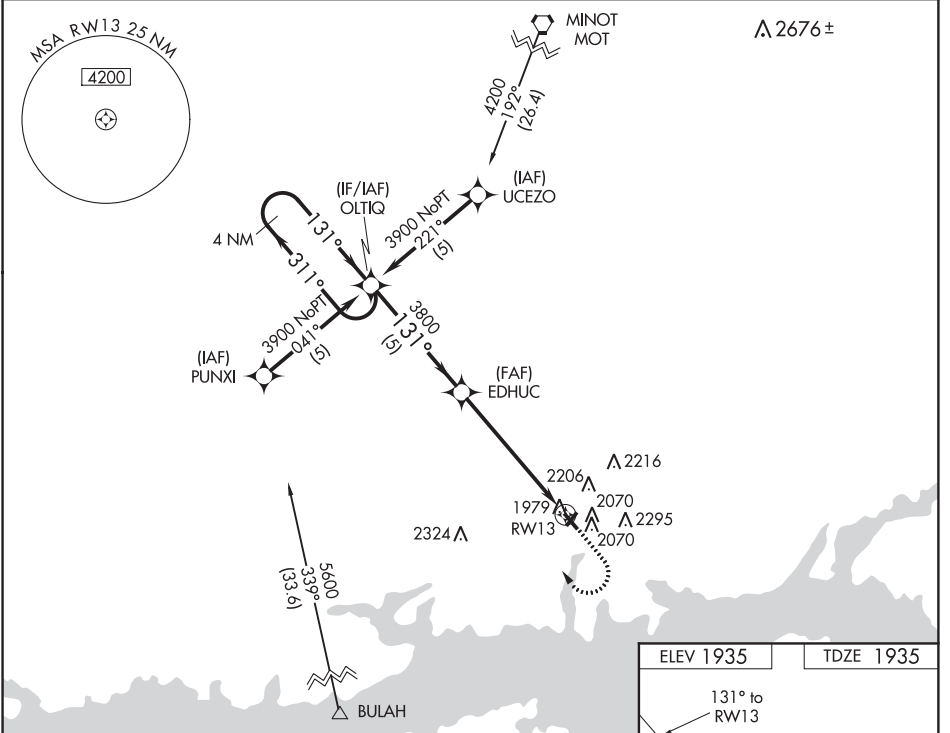
APP CRS	Rwy Idg	<b>3699</b>
<b>131°</b>	TDZE	<b>1935</b>
	Apt Elev	<b>1935</b>

# RNAV (GPS) RWY 13

GARRISON MUNI (D05)

<b>▽</b> DME/DME RNP 0.3- NA.	MISSED APPROACH: Climb to 2500 then climbing right turn to 3900 direct OLTIQ WP and hold.
<b>▲</b> NA Use Minot Intl altimeter setting.	

MINOT ASOS <b>118.725</b>	MINNEAPOLIS CENTER <b>127.6 279.6</b>	CTAF <b>122.9</b>
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CATEGORY	A	B	C	D
GLS DA			NA	
LNAV/VNAV DA			NA	
LNAV MDA	2500-1	565 (600-1)		NA
CIRCLING	2680-1 745 (800-1)	2680-1¼ 745 (800-1¼)		NA

GARRISON, NORTH DAKOTA  
Orig-A 16FEB06

47°39'N-101°26'W

# RNAV (GPS) RWY 13

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

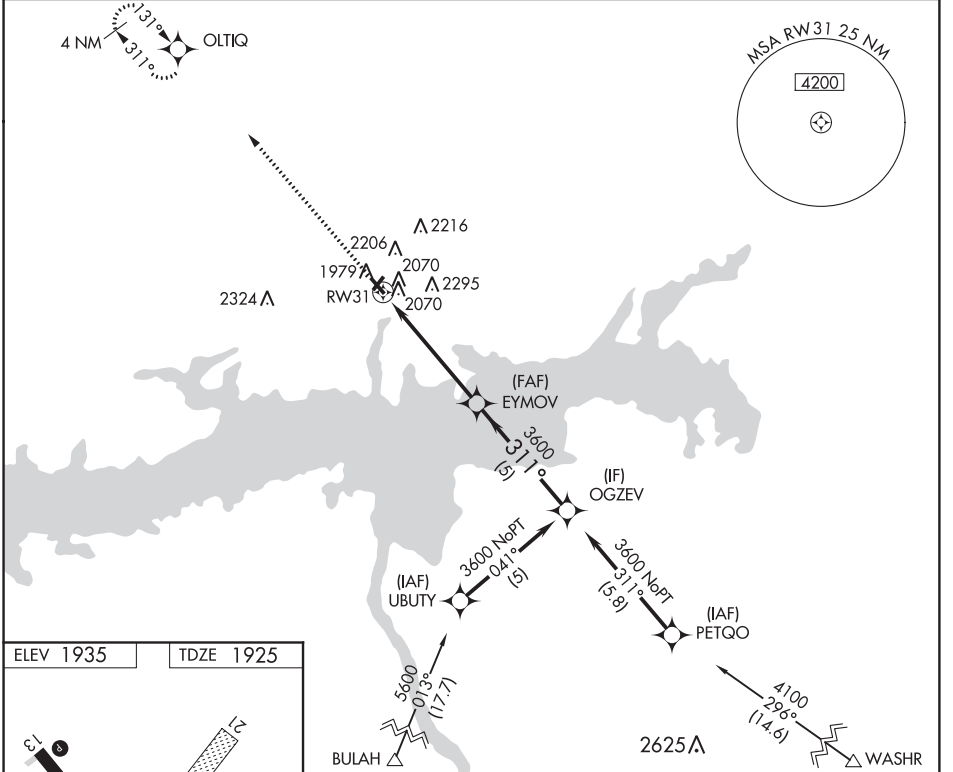
APP CRS	Rwy Idg	<b>3699</b>
<b>311°</b>	TDZE	<b>1925</b>
	Apt Elev	<b>1935</b>

# RNAV (GPS) RWY 31

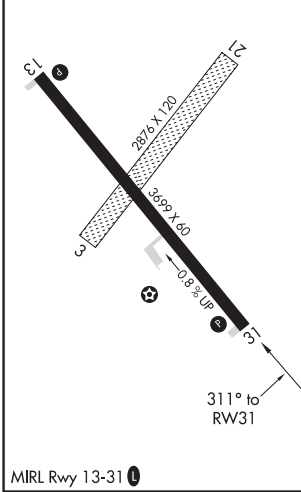
GARRISON MUNI (D05)

<b>▽</b> DME/DME RNP- 0.3 NA.	MISSED APPROACH: Climb to 3900 direct OLTIQ and hold.
<b>▲</b> NA Use Minot Intl altimeter setting.	

MINOT ASOS <b>118.725</b>	MINNEAPOLIS CENTER <b>127.6 279.6</b>	CTAF <b>122.9</b>
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ELEV 1935	TDZE 1925
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3900	OLTIQ	EYMOV	OGZEV
↑	✧		
RW31	311°	3600	311°
5.2 NM	3.00° TCH 40	5 NM	3600
Procedure Turn NA			
CATEGORY	A	B	C
GLS	DA	NA	
LNAV/VNAV	DA		
LNAV MDA	2560-1	635 (700-1)	NA
CIRCLING	2680-1 745 (800-1)	2680-1¼ 745 (800-1¼)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

GETTYSBURG, SOUTH DAKOTA

AL-9032 (FAA)

16035

WAAS CH <b>93921</b> <b>W13A</b>	APP CRS <b>135°</b>	Rwy Idg <b>4400</b> TDZE <b>2061</b> Apt Elev <b>2062</b>
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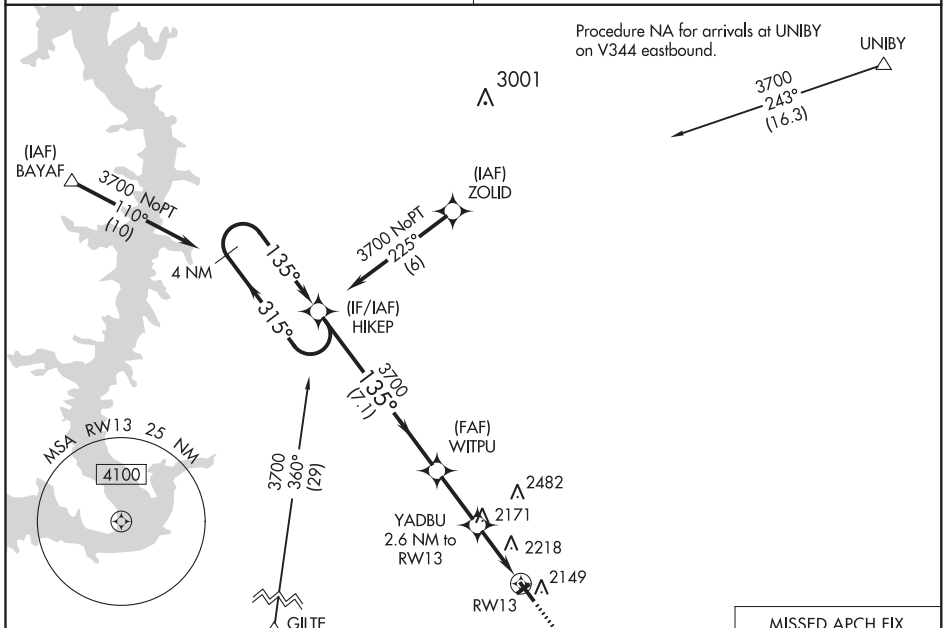
# RNAV (GPS) RWY 13

GETTYSBURG MUNI (ØD8)

**NA** DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. Procedure NA at night. Use Pierre altimeter setting; when not received, use Moberidge altimeter setting and increase all MDA 20 feet. Increase LP, LNAV and Circling Cat C visibility 1/8 mile.

MISSED APPROACH: Climb to 3500 direct ZEWOX and hold.

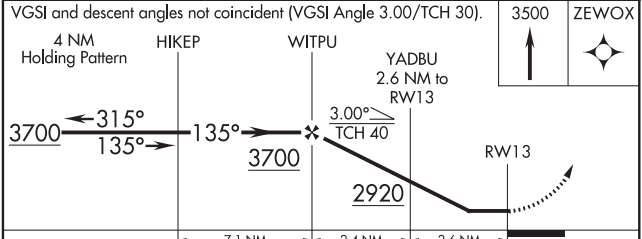
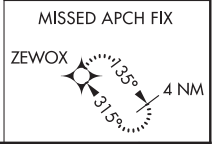
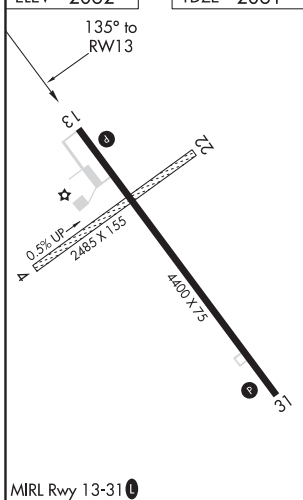
MINNEAPOLIS CENTER <b>125.1 269.1</b>	UNICOM <b>122.8 (CTAF) Ø</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV <b>2062</b>	TDZE <b>2061</b>
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CATEGORY	A	B	C	D
LP MDA	2560-1	499 (500-1)	2560-1 3/8 499 (500-1 3/8)	NA
LNAV MDA	2620-1	559 (600-1)	2620-1 1/8 559 (600-1 1/8)	NA
<b>C</b> CIRCLING	2660-1	598 (600-1)	2660-1 5/8 598 (600-1 5/8)	NA

GETTYSBURG, SOUTH DAKOTA  
Amdt 2A 05MAR15

44°59'N-99°57'W

GETTYSBURG MUNI (ØD8)  
**RNAV (GPS) RWY 13**

WAAS CH <b>56422</b> W31A	APP CRS <b>315°</b>	Rwy Idg <b>4400</b> TDZE <b>2061</b> Apt Elev <b>2062</b>
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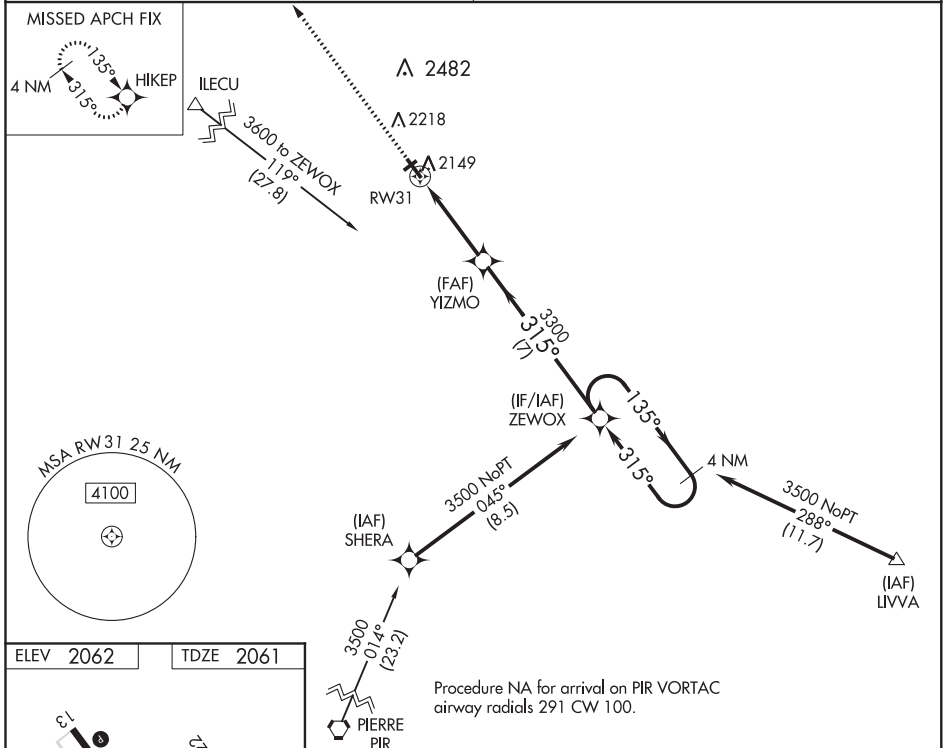
# RNAV (GPS) RWY 31

GETTYSBURG MUNI (ØD8)

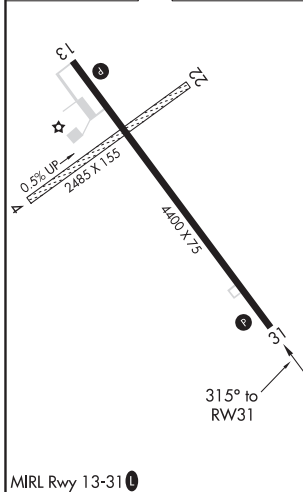
**NA** DME/DME RNP-0.3 NA. Procedure NA at night. Use Pierre altimeter setting; when not received, use Mobridge altimeter setting and increase all MDA 20 feet. Increase LP Cat C visibility 1/8 mile and Circling Cat C visibility 1/4 mile.

MISSED APPROACH: Climb to 3700 direct HIKEP and hold.

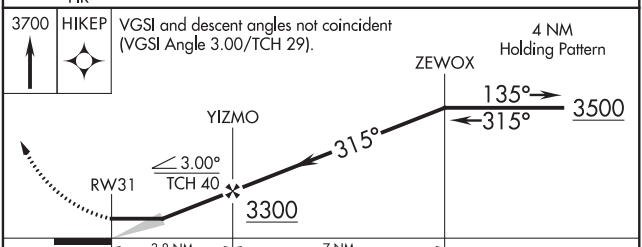
MINNEAPOLIS CENTER <b>125.1 269.1</b>	UNICOM <b>122.8 (CTAF) Ø</b>
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ELEV 2062	TDZE 2061
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GETTYSBURG, SOUTH DAKOTA  
Amdt 2A 05MAR15



CATEGORY	A	B	C	D
LP MDA	2460-1	399 (400-1)	2460-1 1/8 399 (400-1 1/8)	NA
LNAV MDA	2540-1	479 (500-1)	2540-1 3/8 479 (500-1 3/8)	NA
<b>C</b> CIRCLING	2660-1	598 (600-1)	2660-1 1/2 598 (600-1 1/2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>99437</b> <b>W13A</b>	APP CRS <b>123°</b>	Rwy Idg <b>3299</b> TDZE <b>993</b> Apt Elev <b>993</b>
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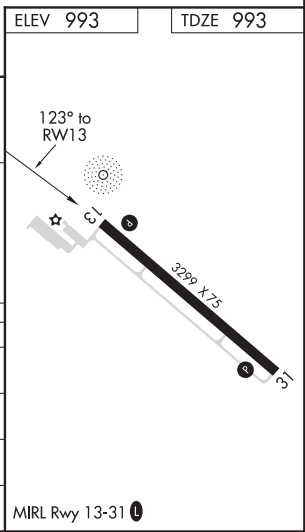
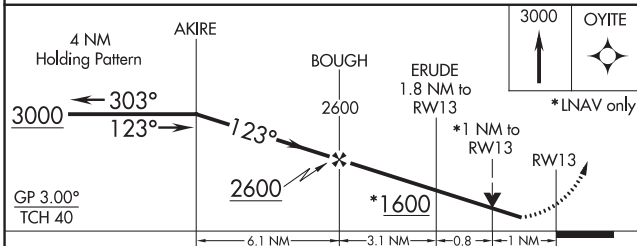
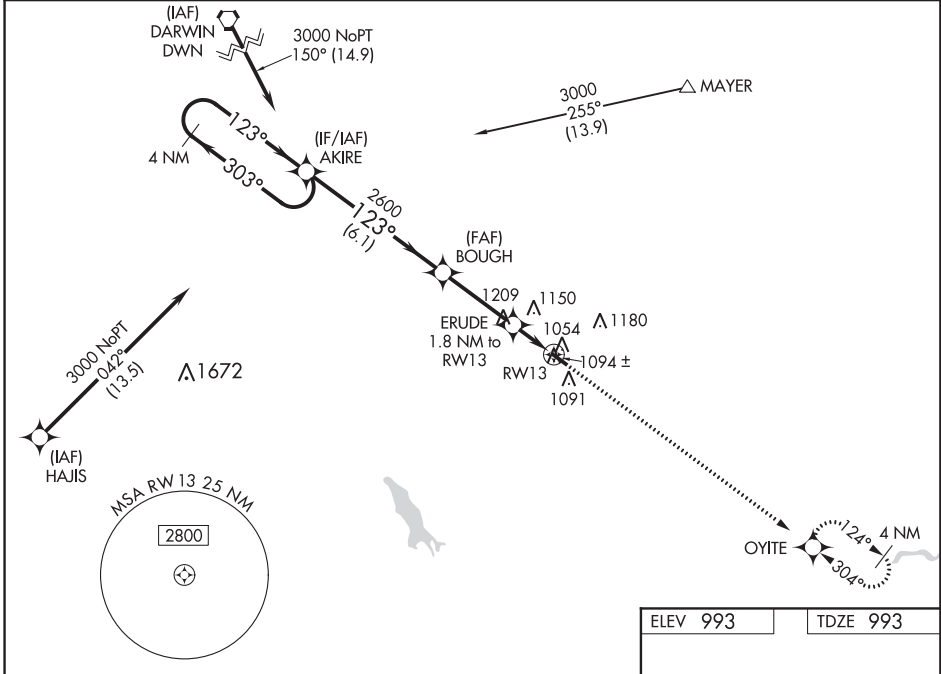
# RNAV (GPS) RWY 13

GLENCOE MUNI (GYL)

**⚠** Baro-VNAV NA when using Hutchinson altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. VDP NA with Hutchinson altimeter setting. Helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Hutchinson altimeter setting and increase all DA 43 feet and all MDA 60 feet, increase LPV Cat A/B visibility ¼ mile and LNAV/VNAV Cat A/B visibility ⅓ mile.

**⚠** MISSED APPROACH: Climb to 3000 direct OYITE and hold.

AWOS-3 <b>407</b>	MINNEAPOLIS APP CON <b>134.7 284.7</b>	UNICOM <b>122.8 (CTAF)</b> <b>📻</b>
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CATEGORY	A	B	C	D
LPV DA	1270-7/8	277 (300-7/8)		NA
LNAV/VNAV DA	1246-7/8	253 (300-7/8)		NA
LNAV MDA	1360-1	367 (400-1)		NA
<b>📻</b> CIRCLING	1420-1 427 (500-1)	1480-1 487 (500-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>48937</b> W31A	APP CRS <b>304°</b>	Rwy Idg <b>3299</b> TDZE <b>992</b> Apt Elev <b>993</b>
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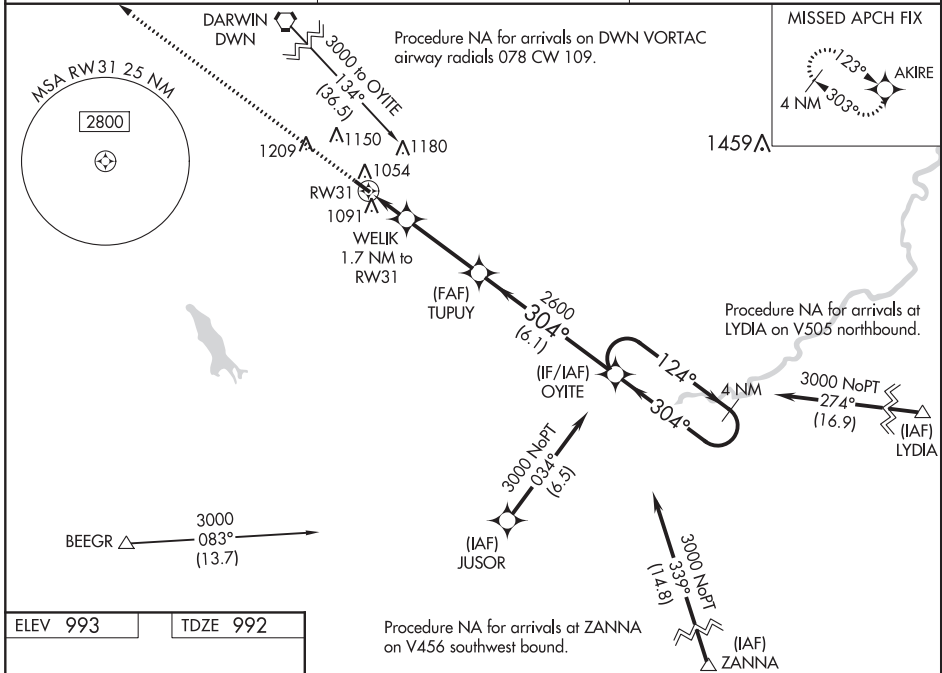
# RNAV (GPS) RWY 31

GLENCOE MUNI (GYL)

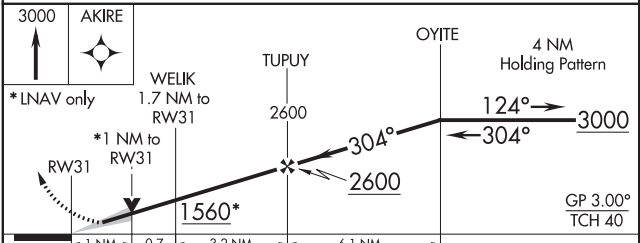
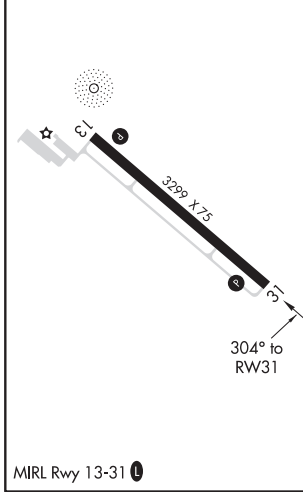
**⚠** Baro-VNAV NA when using Hutchinson altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME DME/RNP-0.3 NA. VDP NA with Hutchinson altimeter setting. When local altimeter setting not received, use Hutchinson altimeter setting and increase all DA 43 feet and all MDA 60 feet, increase LPV and LNAV/VNAV Cat A/B visibility 1/2 mile.

**⚠** MISSED APPROACH: Climb to 3000 direct AKIRE and hold.

AWOS-3 <b>407</b>	MINNEAPOLIS APP CON <b>134.7 284.7</b>	UNICOM <b>122.8 (CTAF)</b> <b>①</b>
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ELEV 993	TDZE 992
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	CATEGORY	A	B	C	D
LPV DA	DA	1242-7/8	250 (300-7/8)		NA
LNAV/VNAV DA	DA	1253-7/8	261 (300-7/8)		NA
LNAV MDA		1360-1	368 (400-1)		NA
<b>C</b> CIRCLING		1420-1 427 (500-1)	1480-1 487 (500-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

GLENCOE, MINNESOTA

AL-9354 (FAA)

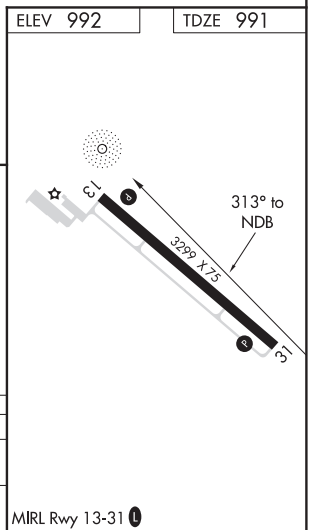
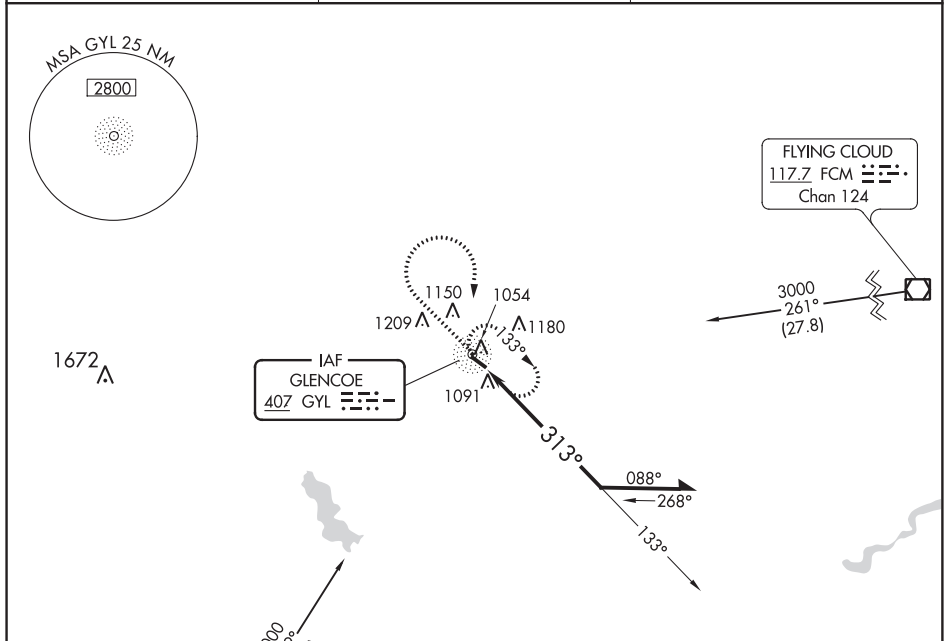
16035

NDB GYL <b>407</b>	APP CRS <b>313°</b>	Rwy Idg TDZE Apt Elev	<b>3299</b> <b>991</b> <b>992</b>
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**NDB RWY 31**  
GLENCOE MUNI (GYL)

**▽** Visibility reduction by helicopters NA. When local alimeter setting not received, use Hutchison altimeter setting and increase cll MDA 60 feet.  
**△** NA MISSED APPROACH: Climb to 2000 then climbing right turn to 3000 direct GYL NDB and hold, continue climb-in-hold to 3000.

AWOS-3 <b>407</b>	MINNEAPOLIS APP CON <b>134.7 284.7</b>	UNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	A	B	C	D
S-31	1580-1	589 (600-1)	NA	
CIRCLING	1580-1	588 (600-1)	NA	

GLENCOE, MINNESOTA  
Amdt 1 11FEB10

44°45'N-94°05'W

GLENCOE MUNI (GYL)  
**NDB RWY 31**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>70333</b> <b>W15A</b>	APP CRS <b>158°</b>	Rwy Idg TDZE Apt Elev	<b>4500</b> <b>1391</b> <b>1394</b>
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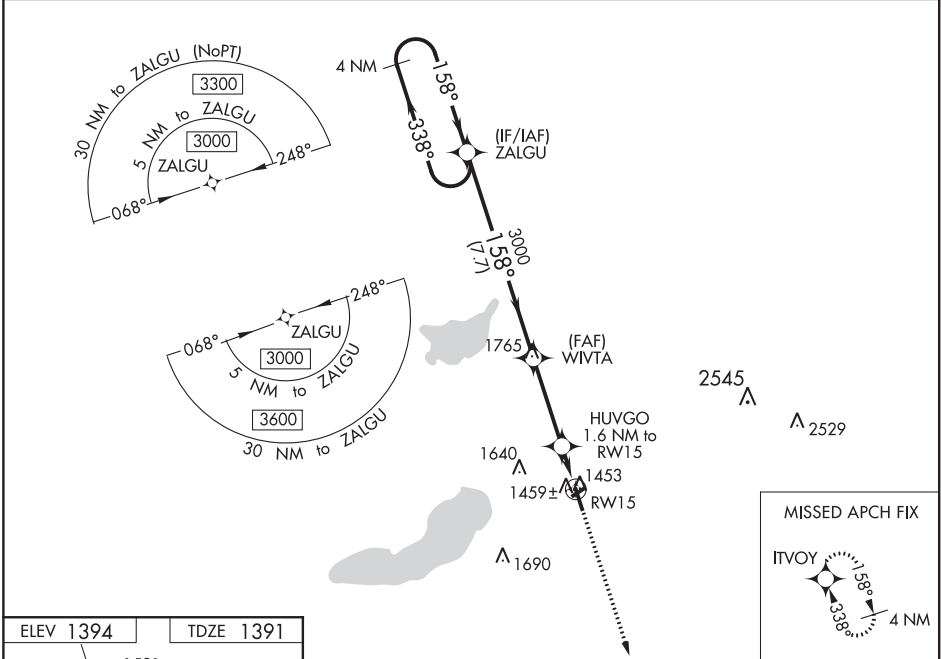
# RNAV (GPS) RWY 15

GLENWOOD MUNI (GHW)

**⚠** For uncompassed Baro-VNAV systems, LNAV/VNAV NA below -17°C (-2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Alexandria altimeter setting and increase DA 36 feet and all MDA 40 feet. Baro-VNAV and VDP NA when using Alexandria altimeter setting. Circling NA to Rwy's 5/23.

**MISSED APPROACH:**  
Climb to 3000 direct ITVOY and hold.

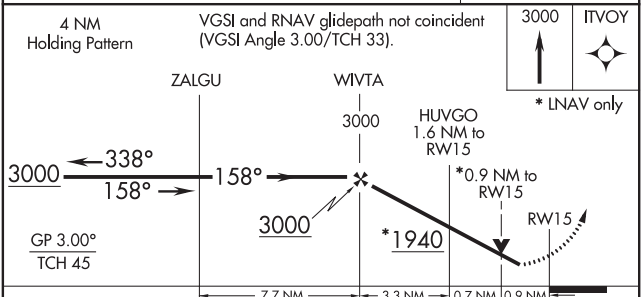
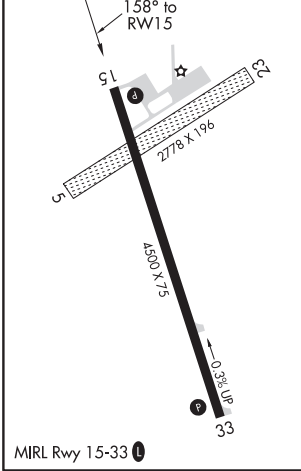
AWOS-3 <b>118.925</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	GCO <b>121.725</b>	CTAF <b>122.9</b> <b>Ⓛ</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1394	TDZE 1391
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CATEGORY	A	B	C	D
LPV DA	1641-1	250 (300-1)		NA
LNAV/ VNAV DA	1641-1	250 (300-1)		NA
LNAV MDA	1720-1	329 (400-1)		NA
CIRCLING	1840-1 446 (500-1)	1860-1 466 (500-1)	1860-1½ 466 (500-1½)	NA

GLENWOOD, MINNESOTA

AL-6556 (FAA)

16147

WAAS CH <b>77931</b> <b>W33A</b>	APP CRS <b>338°</b>	Rwy Idg TDZE Apt Elev	<b>4500</b> <b>1384</b> <b>1394</b>
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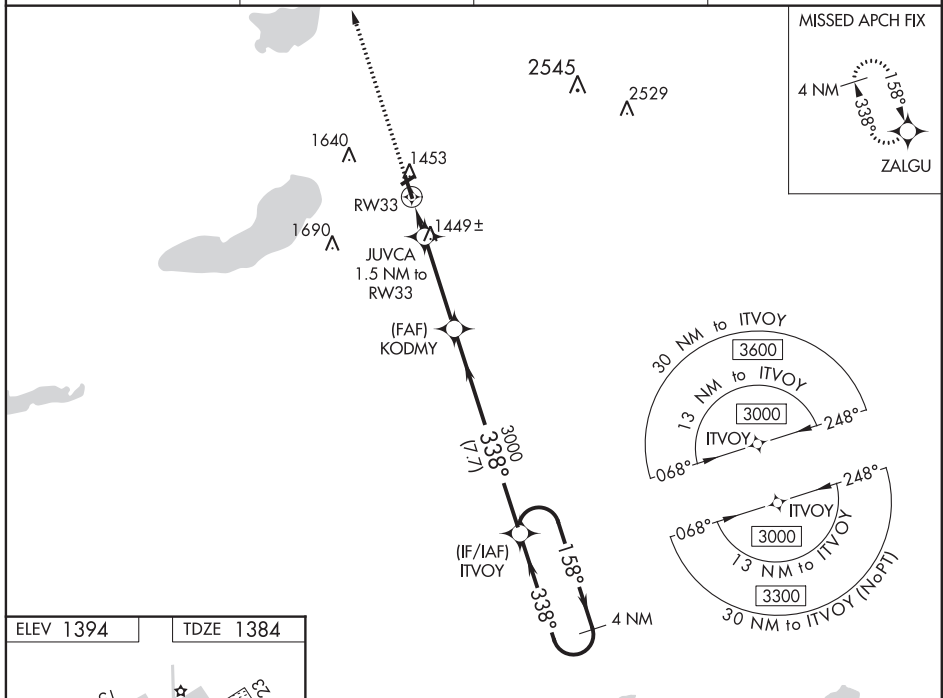
# RNAV (GPS) RWY 33

GLENWOOD MUNI (GHW)

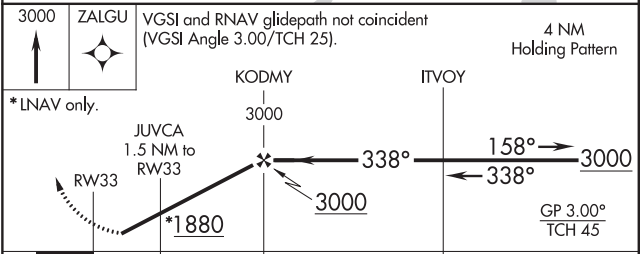
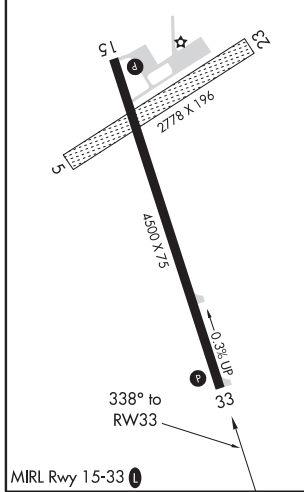
**⚠** Baro-VNAV NA when using Alexandria altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Alexandria altimeter setting and increase all DA 36 feet and all MDA 40 feet. Circling NA to Rwy 5/23.

**⚠** MISSED APPROACH: Climb to 3000 direct ZALGU and hold.

AWOS-3 <b>118.925</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	GCO <b>121.725</b>	CTAF <b>122.9</b> <b>0</b>
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ELEV 1394	TDZE 1384
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CATEGORY	A	B	C	D
LPV DA		1634-1 250 (300-1)		NA
LNAV/VNAV DA		1634-1 250 (300-1)		NA
LNAV MDA		1700-1 316 (400-1)		NA
CIRCLING	1840-1	1860-1	1860-1½	NA
	446 (500-1)	466 (500-1)	466 (500-1½)	

GLENWOOD, MINNESOTA  
Amdt 1B 15OCT15

45°39'N-95°19'W

# GLENWOOD MUNI (GHW) RNAV (GPS) RWY 33

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME AXN <b>112.8</b> Chan <b>75</b>	APP CRS <b>003°</b>	Rwy Idg <b>4500</b> TDZE <b>1388</b> Apt Elev <b>1393</b>
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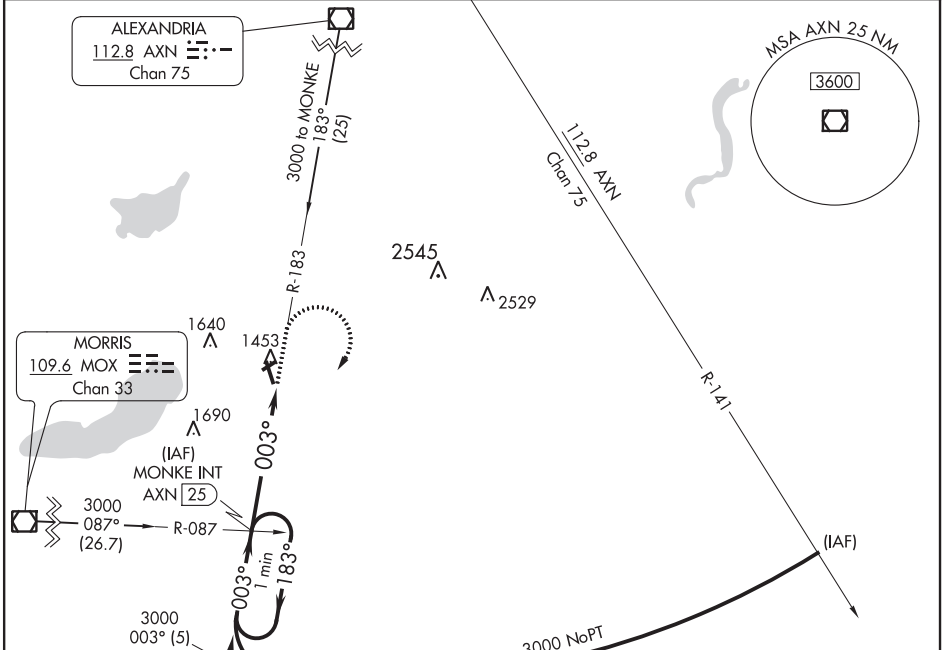
# VOR RWY 33

GLENWOOD MUNI (GHW)

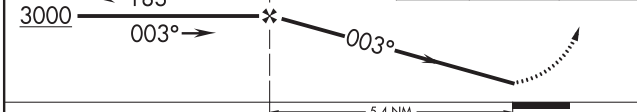
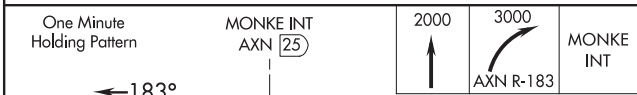
**V** Circling to Rwy 5/23 NA. When local altimeter setting not received, use Alexandria altimeter setting and increase all MDA 40 feet and S-33 Cat C visibility 1/4 mile.

**NA** MISSED APPROACH: Climb to 2000, then climbing right turn to 3000 via AXN R-183 to MONKE INT/25 DME and hold.

AWOS-3 <b>118.925</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	GCO <b>121.725</b>	CTAF <b>122.90</b>
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ELEV 1393	TDZE 1388
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CATEGORY	A	B	C	D
S-33	1880-1	492 (500-1)	1880-1 1/4 492 (500-1 1/4)	NA
CIRCLING	1880-1	487 (500-1)	1880-1 1/2 487 (500-1 1/2)	NA

MIRL Rwy 15-33

FAF to MAP 5.4 NM

Knots	60	90	120	150	180
Min:Sec	5:24	3:36	2:42	2:10	1:48

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>53518</b> W17A	APP CRS <b>174°</b>	Rwy Idg TDZE Apt Elev	<b>3898</b> <b>822</b> <b>824</b>
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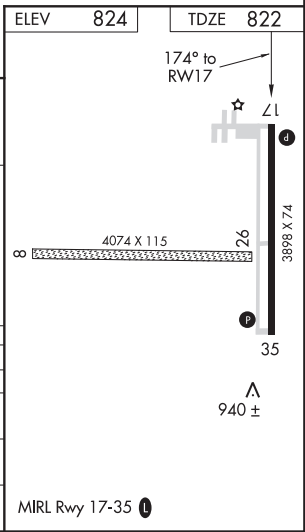
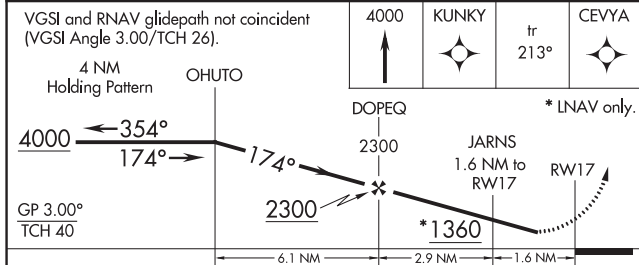
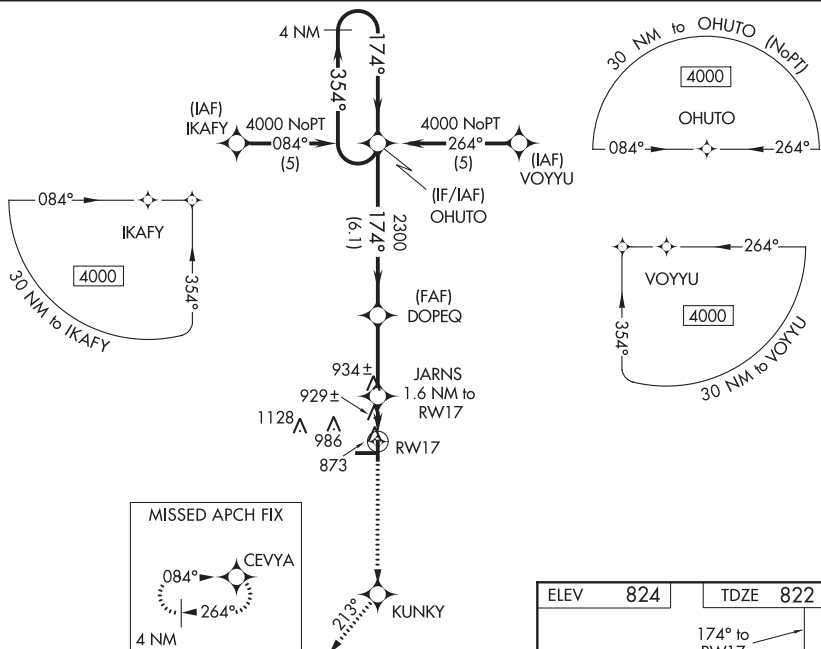
# RNAV (GPS) RWY 17

HUTSON FIELD (GAF)

**NA** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Grand Forks Intl altimeter setting and increase all DA 69 feet and all MDA 80 feet. Increase LPV and LNAV/VNAV all Cats and LNAV Cat C visibility ¼ mile. Baro-VNAV NA when using Grand Forks Intl altimeter setting.

**MISSED APPROACH:** Climb to 4000 direct KUNKY and on track 213° to CEVYA and hold, continue climb-in-hold to 4000.

AWOS-3 <b>118.625</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
LPV DA	1072-1	250 (300-1)		NA
LNAV/VNAV DA	1228-1½	406 (500-1½)		NA
LNAV MDA	1200-1	378 (400-1)		NA
CIRCLING	1340-1	516 (600-1)	1340-1½ 516 (600-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>82518</b> <b>W35A</b>	APP CRS <b>354°</b>	Rwy Idg <b>3898</b> TDZE <b>822</b> Apt Elev <b>824</b>
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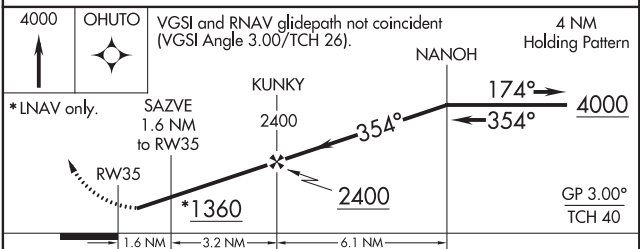
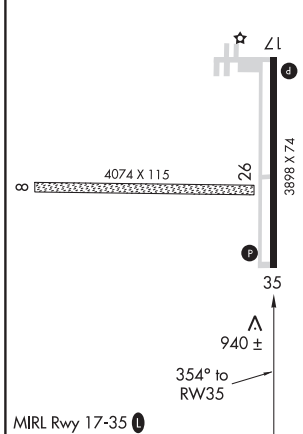
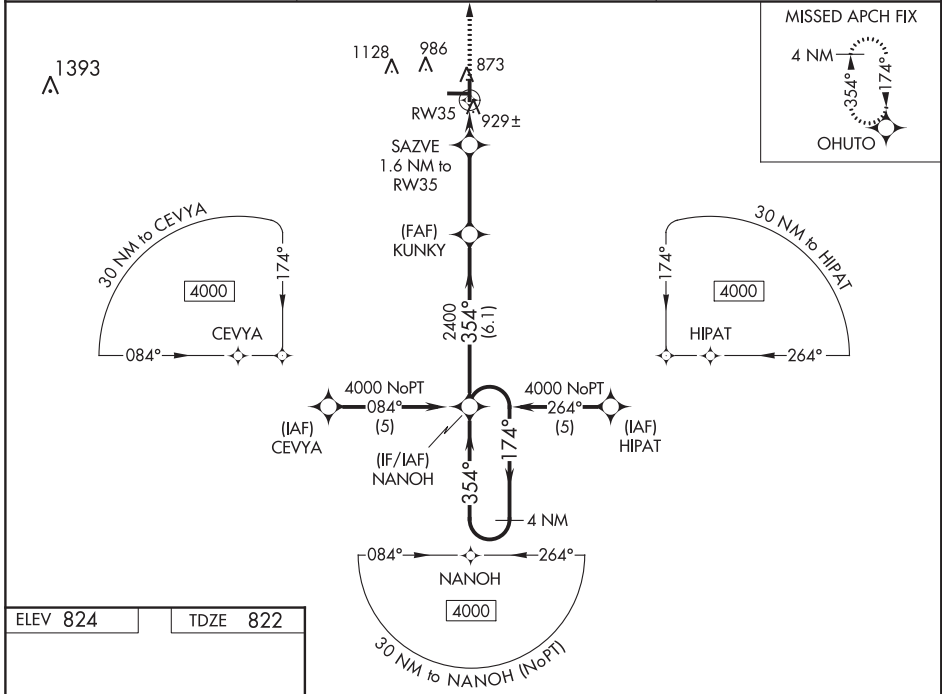
# RNAV (GPS) RWY 35

HUTSON FIELD (GAF)

**⚠ NA** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Grand Forks Intl altimeter setting and increase all DA 69 feet and all MDA 80 feet. Increase LPV and LNAV/VNAV all Cots and LNAV Cat C visibility ¼ mile. Baro-VNAV NA when using Grand Forks Intl altimeter setting.

MISSED APPROACH: Climb to 4000 direct OHUTO and hold, continue climb-in-hold to 4000.

AWOS-3 <b>118.625</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	UNICOM <b>122.8 (CTAF)</b> <b>📻</b>
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CATEGORY	A	B	C	D
LPV DA		1072-1	250 (300-1)	NA
LNAV/VNAV DA		1199-1¼	377 (400-1¼)	NA
LNAV MDA		1180-1	358 (400-1)	NA
CIRCLING	1340-1	516 (600-1)	1340-1½ 516 (600-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

GRAND FORKS, NORTH DAKOTA

AL-5187 (FAA)


16119

LOC/DME I-GFK <b>109.1</b> Chan 28	APP CRS <b>354°</b>	Rwy Idg TDZE Apt Elev	<b>7351</b> <b>845</b> <b>845</b>
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# ILS or LOC RWY 35L

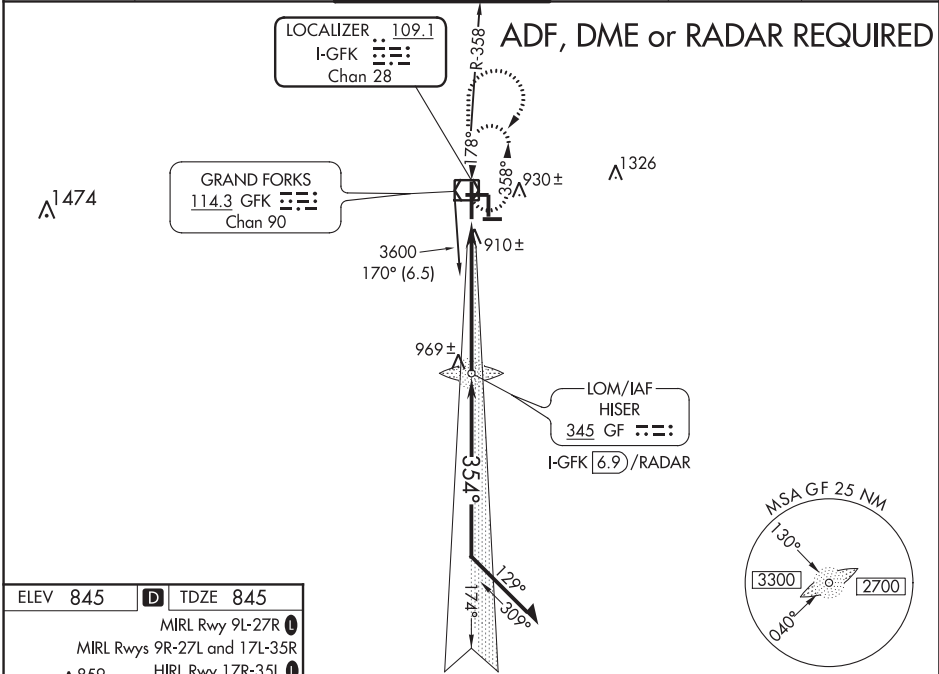
GRAND FORKS INTL (GFK)

**⚠** When local altimeter setting not received, use Crookston altimeter setting and increase all DA/MDA 80 feet; increase S-LOC 35L Cats C/D/E visibility 1/8 mile, and Circling Cat E visibility 1/4 mile. Procedure turn NA for Cat E aircraft, RADAR required. VDP NA with Crookston altimeter setting. For inop MALSRS, increase S-ILS 35L Cat E visibility to RVR 4000 and S-LOC 35L Cats C/D/E visibility to RVR 4500. For inop MALSRS when using Crookston altimeter setting, increase S-ILS 35L all Cats visibility to RVR 4500 and S-LOC 35L Cat E visibility to RVR 6000.

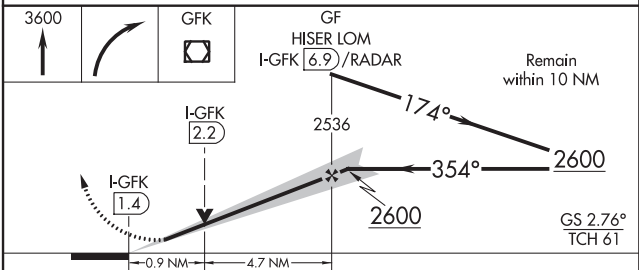
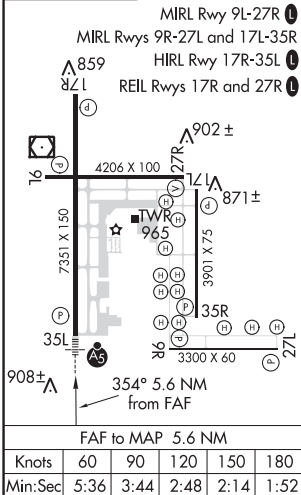
**MALSRS**  


**MISSED APPROACH:**  
Climb to 3600 then right turn direct GFK VOR/DME and hold.

ATIS <b>119.4</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	GRAND FORKS TOWER* <b>118.4 (CTAF) 350.35</b>	GND CON <b>124.575</b>	CLNC DEL <b>135.725</b>	UNICOM <b>122.95</b>
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ELEV 845 **D** TDZE 845



CATEGORY	A	B	C	D	E
S-ILS 35L		1045/24	200 (200-1/2)		
S-LOC 35L		1160/24	315 (400-1/2)		
CIRCLING	1280-1 435 (500-1)	1300-1 455 (500-1)	1300-1 1/2 455 (500-1 1/2)	1400-2 555 (600-2)	1520-2 1/2 675 (700-2 1/2)

GRAND FORKS, NORTH DAKOTA  
Amdt 12A 28APR16

47°57'N-97°10'W

# GRAND FORKS INTL (GFK)

## ILS or LOC RWY 35L

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>58104</b> <b>W09A</b>	APP CRS <b>084°</b>	Rwy Idg TDZE Apt Elev	<b>4206</b> <b>843</b> <b>845</b>
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# RNAV (GPS) RWY 9L

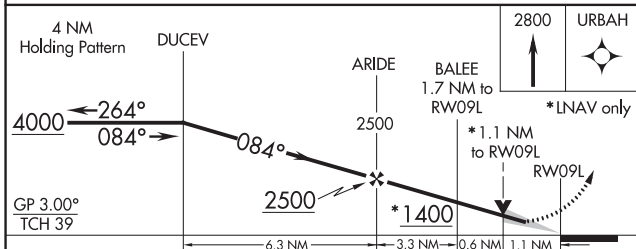
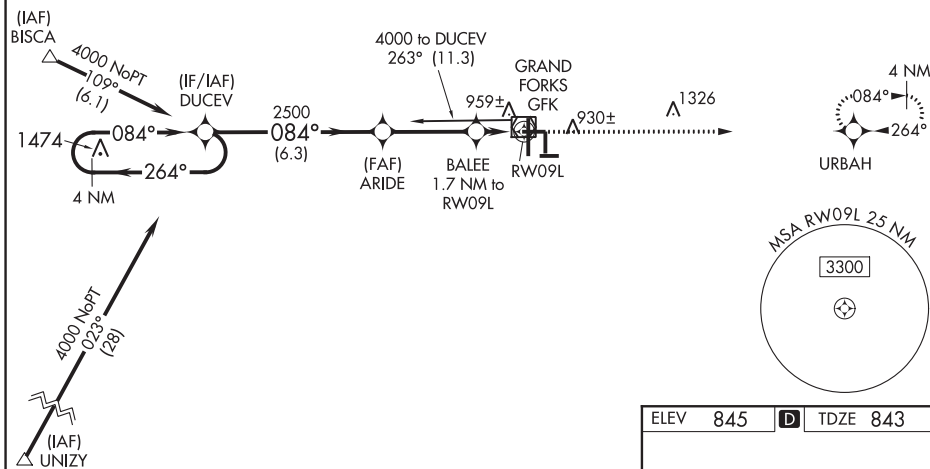
GRAND FORKS INTL (GFK)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Crookston altimeter setting and increase all DA 62 feet and all MDA 80 feet, increase LNAV/VNAV all Cats and LNAV Cat C/D visibilities 1/4 mile. Baro-VNAV and VDP NA when using Crookston altimeter setting.

MISSED APPROACH: Climb to 2800 direct URBAH and hold.

ATIS <b>119.4</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	GRAND FORKS TOWER* <b>118.4(CTAF) 0 350.35</b>	GND CON <b>124.575</b>	CLNC DEL <b>135.725</b>	UNICOM <b>122.95</b>
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Procedure NA for arrivals at GFK VOR/DME via V55 northeast bound.



ELEV 845	<b>D</b>	TDZE 843
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MIRL Rwy 9L-27R **Ⓛ**  
 MIRL Rwys 9R-27L and 17L-35R **Ⓛ**  
 HIRL Rwy 17R-35L **Ⓛ**  
 REIL Rwys 17R and 27R **Ⓛ**

CATEGORY	A	B	C	D
LPV DA	1093-1		250 (300-1)	
LNAV/VNAV DA	1238-1½		395 (400-1½)	
LNAV MDA	1220-1		377 (400-1)	1220-1¼ 377 (400-1¼)
CIRCLING	1280-1 435 (500-1)	1300-1 455 (500-1)	1300-1½ 455 (500-1½)	1400-2 555 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>63199</b> <b>W17A</b>	APP CRS <b>174°</b>	Rwy Idg TDZE <b>843</b> Apt Elev <b>845</b>	<b>7351</b> <b>843</b> <b>845</b>
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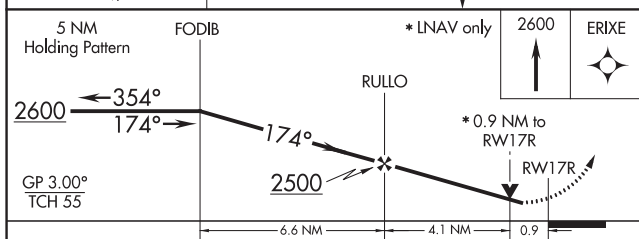
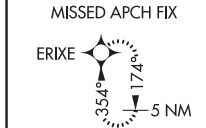
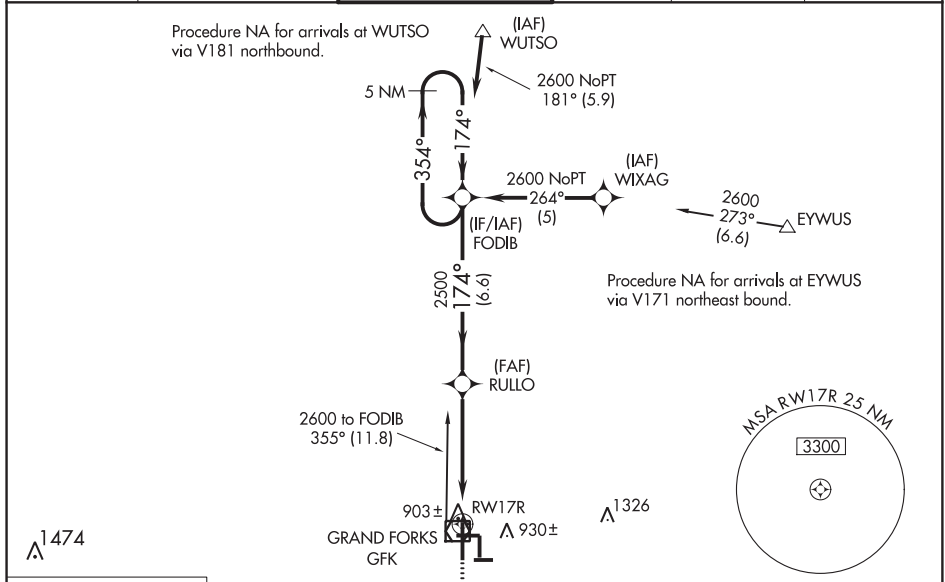
# RNAV (GPS) RWY 17R

GRAND FORKS INTL (GFK)

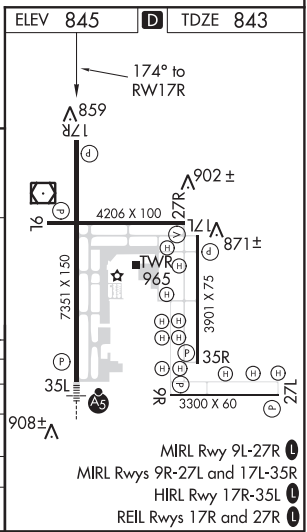
**⚠** DME/DME RNP -0.3 NA. When local altimeter setting not received, use Crockston altimeter setting and increase all DA/MDA 80 feet and increase LPV and LNAV/VNAV all Cats visibility ¼ mile and LNAV Cats C and D visibility ¼ mile. Baro-VNAV NA with Crockston altimeter setting. VDP NA with Crockston altimeter setting. Baro-VNAV NA below -16°C (5°F).

MISSED APPROACH: Climb to 2600 direct ERIXE and hold.

ATIS <b>119.4</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	GRAND FORKS TOWER* <b>118.4(CTAF) 350.35</b>	GND CON <b>124.575</b>	CLNC DEL <b>135.725</b>	UNICOM <b>122.95</b>
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CATEGORY	A	B	C	D
LPV DA		1107-1	264 (300-1)	
LNAV/VNAV DA		1157-1	314 (400-1)	
LNAV MDA		1180-1	337 (400-1)	
CIRCLING	1280-1 435 (500-1)	1300-1 455 (500-1)	1300-1½ 455 (500-1½)	1400-2 555 (600-2)



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>78104</b> <b>W27A</b>	APP CRS <b>264°</b>	Rwy Idg TDZE <b>843</b> Apt Elev <b>845</b>	<b>4206</b> <b>843</b> <b>845</b>
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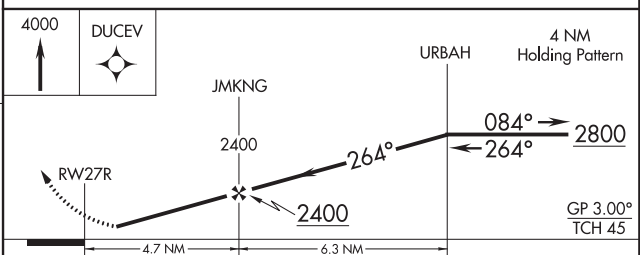
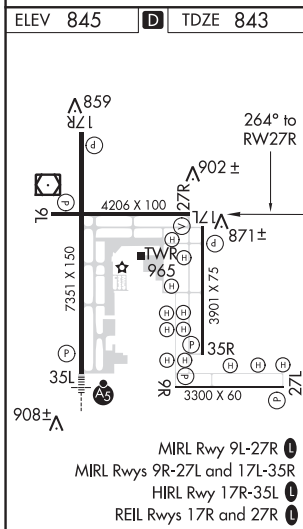
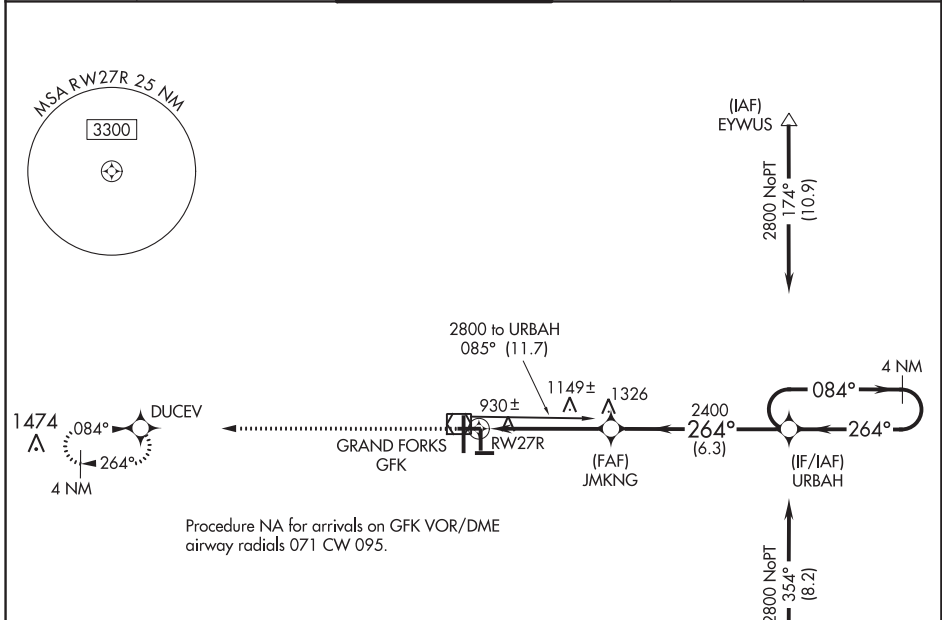
# RNAV (GPS) RWY 27R

GRAND FORKS INTL (GFK)

**▽** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.  
**△** When local altimeter setting not received, use Crookston altimeter setting and increase all DA 62 feet and all MDA 80 feet. Increase LNAV and Circling Cat C and D visibility ¼ mile.

**MISSED APPROACH:** Climb to 4000 direct DUCEV and hold, continue climb-in-hold to 4000.

ATIS <b>119.4</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	GRAND FORKS TOWER★ <b>118.4 (CTAF) 0 350.35</b>	GND CON <b>124.575</b>	CLNC DEL <b>135.725</b>	UNICOM <b>122.95</b>
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CATEGORY	A	B	C	D
LPV DA	1093-1		250 (300-1)	
LNAV MDA	1460-1	617 (700-1)	1460-1¾ 617 (700-1¾)	1460-2 617 (700-2)
CIRCLING	1460-1	615 (700-1)	1460-1¾ 615 (700-1¾)	1460-2 615 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>70313</b> <b>W35A</b>	APP CRS <b>354°</b>	Rwy Idg TDZE Apt Elev	<b>7351</b> <b>845</b> <b>845</b>
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# RNAV (GPS) RWY 35L

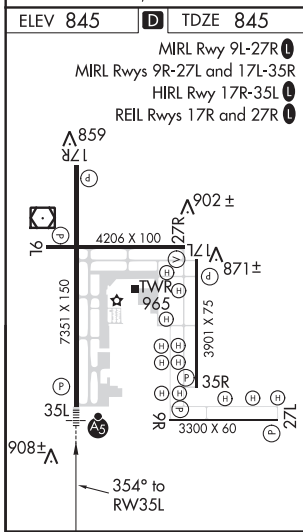
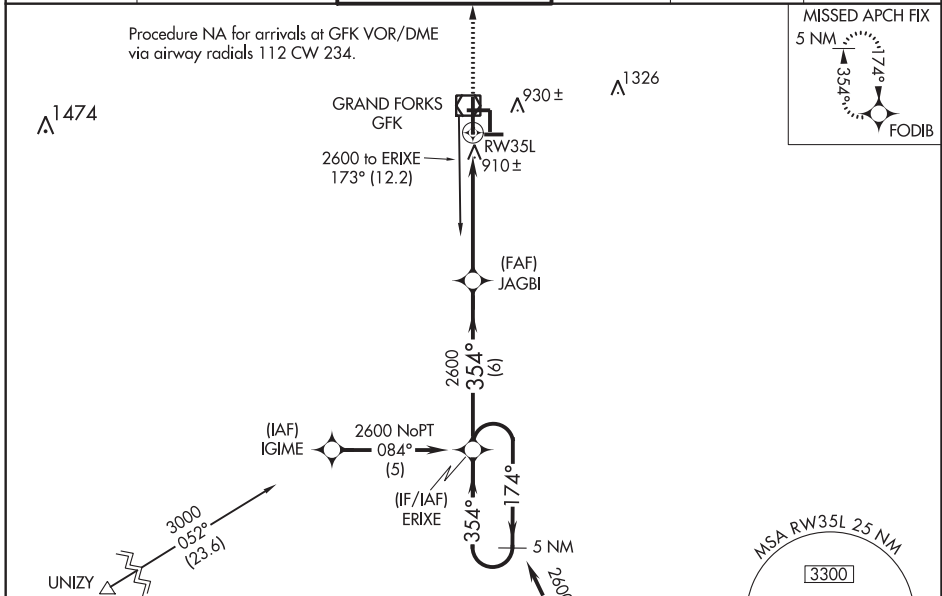
GRAND FORKS INTL (GFK)

**⚠** DME/DME RNP-0.3 NA. When local altimeter setting not received, use Crookston altimeter setting and increase all DA/MDA 80 feet; increase LPV all Cats visibility 1/8 mile, LNAV/VNAV all Cats and LNAV Cat C/D visibility 1/4 mile. VDP NA when using Crookston altimeter setting. Baro-VNAV NA below -16°C (4°F). Baro-VNAV NA when using Crookston altimeter setting. For inop MALS/R when using Crookston altimeter setting, increase LPV all Cats visibility to RVR 5000. For inop MALS/R visibility to RVR 6000.

**MALS/R**

**MISSED APPROACH:**  
Climb to 2600  
direct FODIB  
and hold.

ATIS <b>119.4</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	GRAND FORKS TOWER★ <b>118.4(CTAF) 350.35</b>	GND CON <b>124.575</b>	CLNC DEL <b>135.725</b>	UNICOM <b>122.95</b>
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2600	FODIB	VGSI and RNAV glidepath not coincident (VGSI Angle 2.76/TCH 61).	5 NM Holding Pattern	
*LNAV only		*0.9 NM to RW35L		
			GP 3.00° TCH 55	
CATEGORY	A	B	C	D
LPV DA		1095/50	250 (300-1)	
LNAV/VNAV DA		1174/30	329 (400-56)	
LNAV MDA	1180/24	335 (400-1/2)	1180/26	335 (400-56)
CIRCLING	1280-1 435 (500-1)	1300-1 455 (500-1)	1300-1 1/2 455 (500-1 1/2)	1400-2 555 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-GFK <b>109.1</b> Chan <b>28</b>	APP CRS <b>174°</b>	Rwy Idg TDZE Apt Elev	<b>7351</b> <b>843</b> <b>845</b>
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# LOC BC RWY 17R

GRAND FORKS INTL (GFK)

**⚠** Visibility reduction by helicopters NA. DME or RADAR or ADF required. When local altimeter setting not received, use Crookston altimeter setting and increase all MDA 80 feet, increase S-17R Cats C/D visibility and WUSIK fix minimums S-17R Cats C/D visibility ¼ mile.

**MISSED APPROACH:** Climb to 2600 via I-GFK south course to HISER LOM /I-GFK 6.9 DME/RADAR and hold.

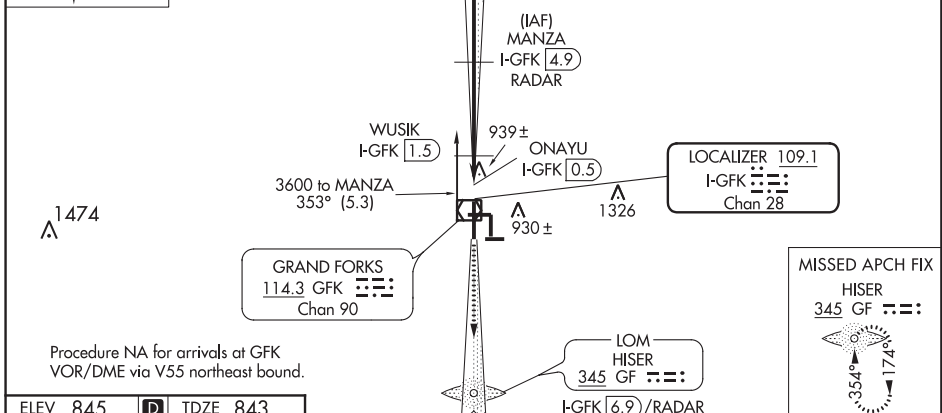
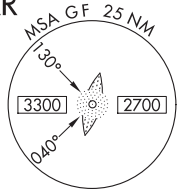
ATIS <b>119.4</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	GRAND FORKS TOWER* <b>118.4(CTAF) 350.35</b>	GND CON <b>124.575</b>	CLNC DEL <b>135.725</b>	UNICOM <b>122.95</b>
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**ALTERNATE MISSED APCH FIX**  
**GRAND FORKS**  
 114.3 GFK   
 Chan 90

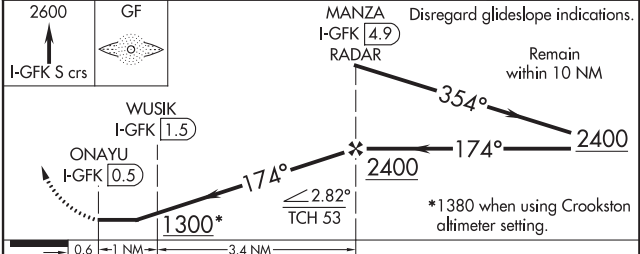
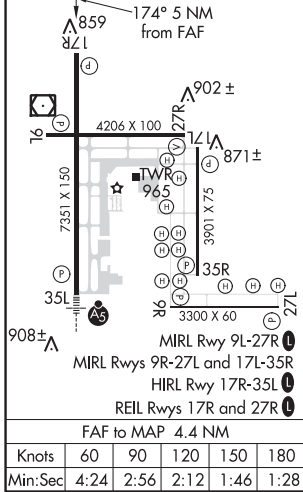
R-173

## BACK COURSE

## DME or RADAR REQUIRED



ELEV <b>845</b>	<b>D</b>	TDZE <b>843</b>
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CATEGORY	A	B	C	D
S-17R	1300-1	457 (500-1)	1300-1¼ 457 (500-1¼)	1300-1½ 457 (500-1½)
CIRCLING	1300-1	455 (500-1)	1300-1½ 455 (500-1½)	1400-2 555 (600-2)
<b>WUSIK FIX MINIMUMS</b>				
S-17R	1200-1 357 (400-1)			1200-1¼ 357 (400-1¼)
CIRCLING	1280-1 435 (500-1)	1300-1 455 (500-1)	1300-1½ 455 (500-1½)	1400-2 555 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME GFK <b>114.3</b> Chan <b>90</b>	APP CRS <b>183°</b>	Rwy Idg TDZE <b>843</b> Apt Elev <b>845</b>	<b>7351</b>
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# VOR RWY 17R

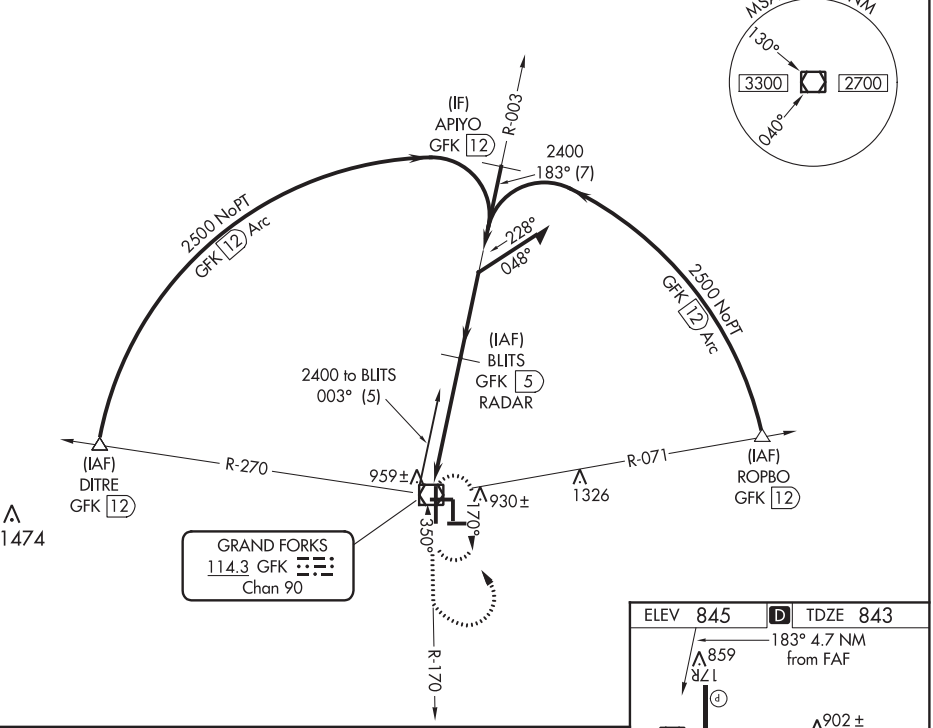
GRAND FORKS INTL (GFK)

**⚠** If local altimeter setting not received, use Crookston altimeter setting and increase all MDAs 80 feet.  
**⚠** VDP NA with Crookston altimeter setting.

MISSED APPROACH: Climb to 3600 via GFK R-170 then left turn direct GFK VOR/DME and hold.

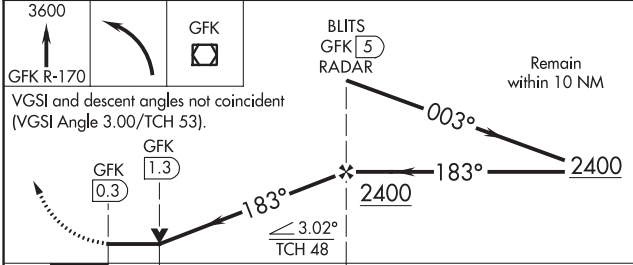
ATIS <b>119.4</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	GRAND FORKS TOWER* <b>118.4(CTAF) 350.35</b>	GND CON <b>124.575</b>	CLNC DEL <b>135.725</b>	UNICOM <b>122.95</b>
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## DME or RADAR REQUIRED



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV <b>845</b>	<b>D</b> TDZE <b>843</b>
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Knots	60	90	120	150	180
Min:Sec	4:42	3:08	2:21	1:53	1:34

CATEGORY	A	B	C	D
S-17R	1220-1	377 (400-1)		1220-1 1/4 377 (400-1 1/4)
CIRCLING	1280-1 435 (500-1)	1300-1 455 (500-1)	1300-1 1/2 455 (500-1 1/2)	1400-2 555 (600-2)

VOR/DME GFK <b>114.3</b> Chan 90	APP CRS <b>344°</b>	Rwy Idg TDZE Apt Elev	<b>7351</b> <b>845</b> <b>845</b>
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# VOR RWY 35L

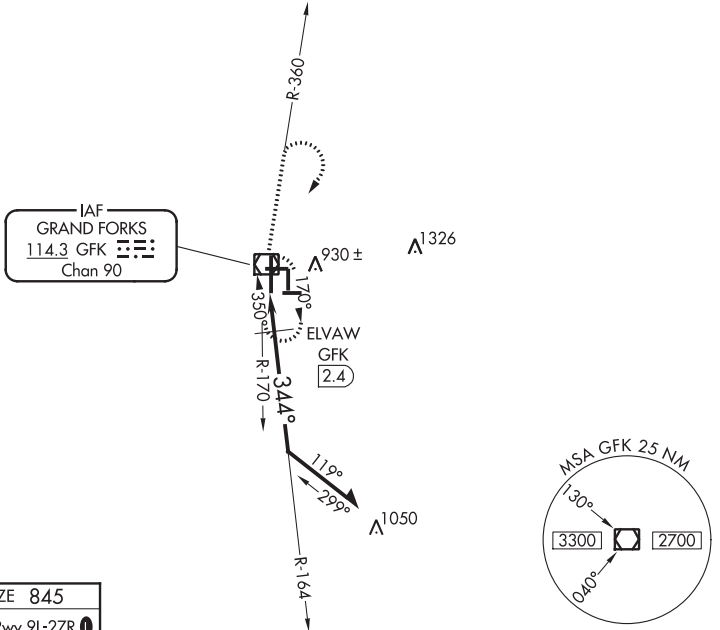
GRAND FORKS INTL (GFK)

**⚠** When local altimeter setting not received use Crookston altimeter setting and increase all MDA 80 feet; increase S-35L Cat C/D and Circling Cat C visibility 1/4 mile, and ELVAW fix minimums S-35L Cat C/D visibility 1/2 mile. For inop MALSRL, increase S-35L Cat C/D visibility to 1 1/2 mile. For inop MALSRL, increase ELVAW fix minimums S-35L Cat C/D visibility to RVR 5500.



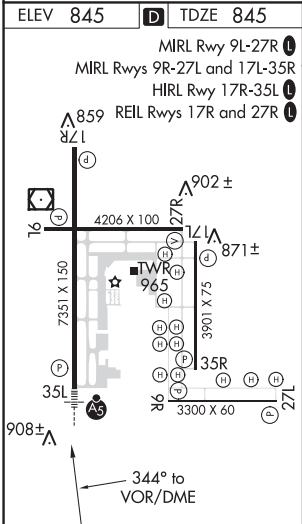
**MISSED APPROACH:** Climb to 1300 then climb to 3600 via GFK R-360 then right turn direct GFK VOR/DME and hold.

ATIS <b>119.4</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	GRAND FORKS TOWER* <b>118.4(CTAF) 350.35</b>	GND CON <b>124.575</b>	CLNC DEL <b>135.725</b>	UNICOM <b>122.95</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



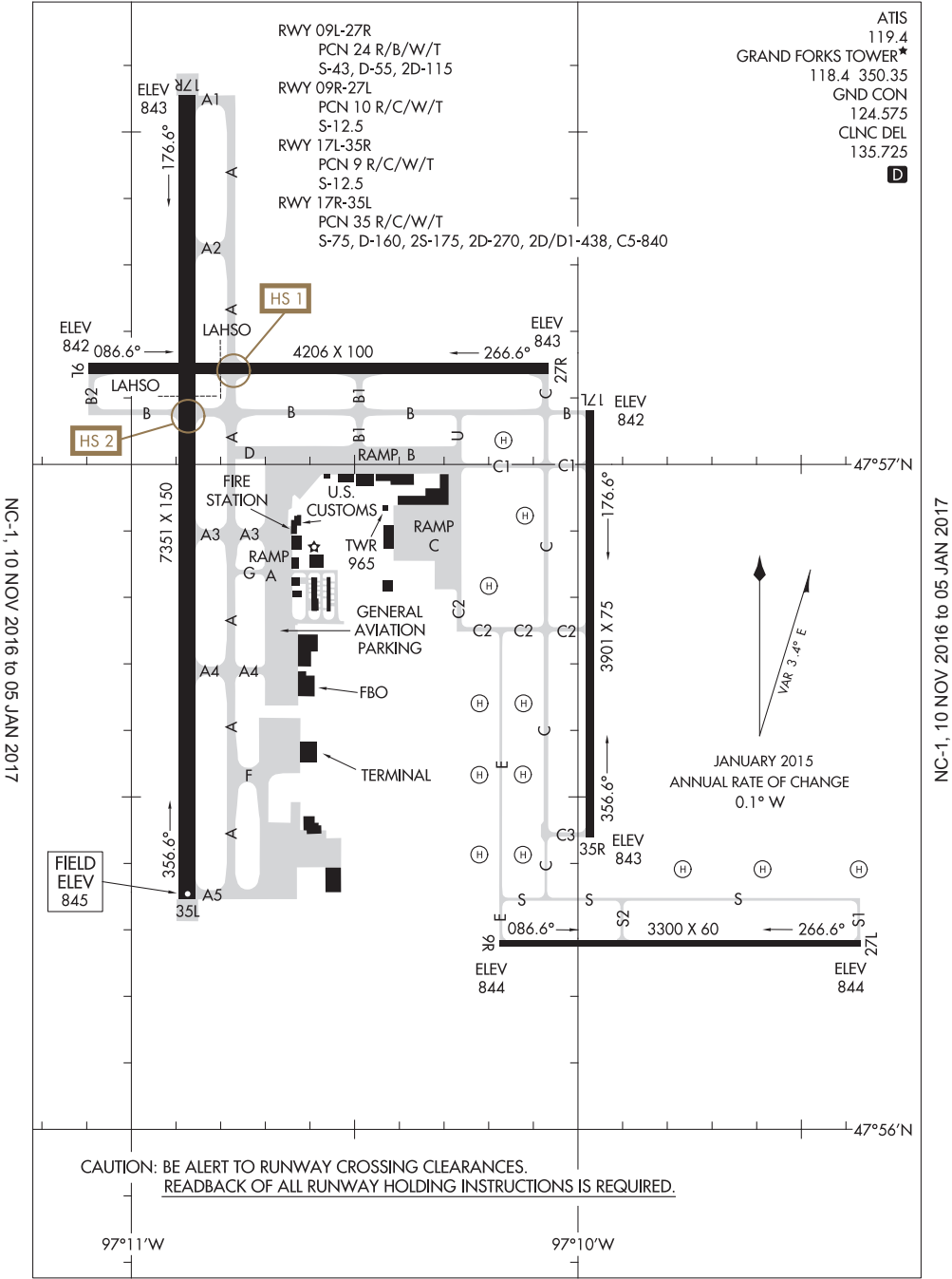
1300	3600	GFK	GFK VOR/DME	Remain within 10 NM
GFK R-360			ELVAW GFK 2.4	2500
VGSi and descent angles not coincident (VGSi Angle 2.76/TCH 61).			164°	344°
*1440 when using Crookston altimeter setting.			3.01° TCH 55	1360*
			1 NM - 1.4 NM	

CATEGORY	A	B	C	D
S-35L	1360/24	515 (600-1/2)	1360/55	515 (600-1 1/4)
CIRCLING	1360-1	515 (600-1)	1360-1 1/2 515 (600-1 1/2)	1400-2 555 (600-2)
ELVAW FIX MINIMUMS				
S-35L	1220/24	375 (400-1/2)	1220/40	375 (400-3/4)
CIRCLING	1280-1 435 (500-1)	1300-1 455 (500-1)	1300-1 1/4 455 (500-1 1/4)	1400-2 555 (600-2)

# AIRPORT DIAGRAM

AL-5187 (FAA)

GRAND FORKS INTL (GFK)  
GRAND FORKS, NORTH DAKOTA



NC-1, 10 NOV 2016 to 05 JAN 2017

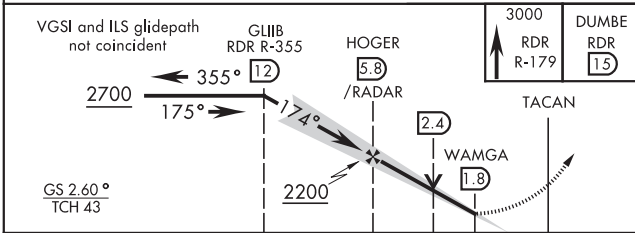
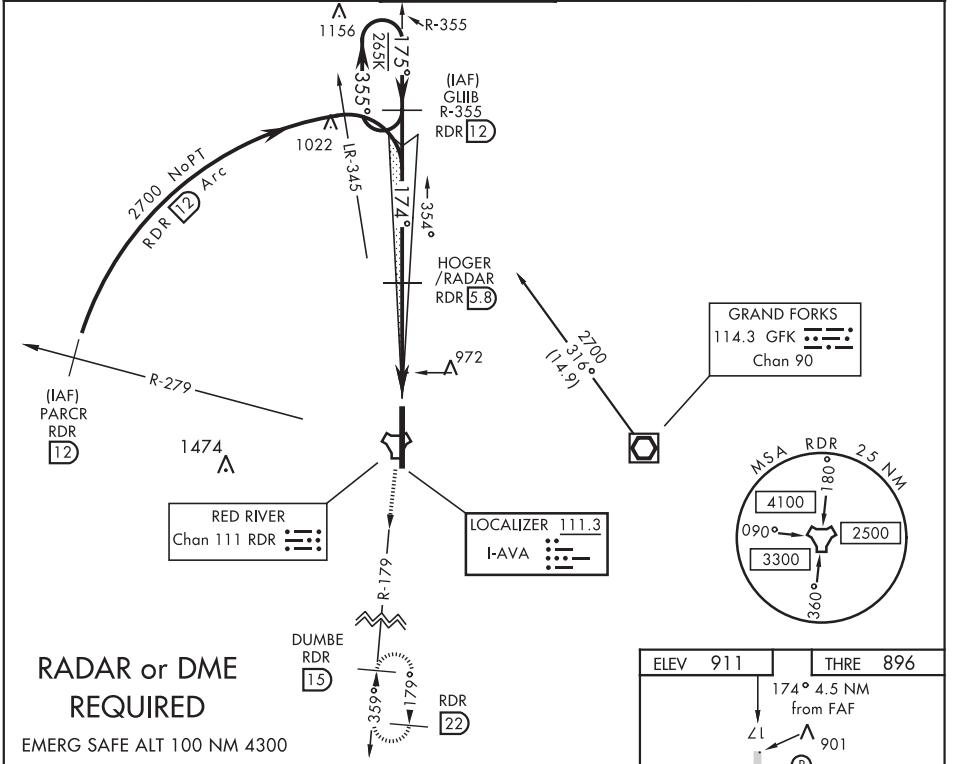
NC-1, 10 NOV 2016 to 05 JAN 2017

GRAND FORKS, NORTH DAKOTA

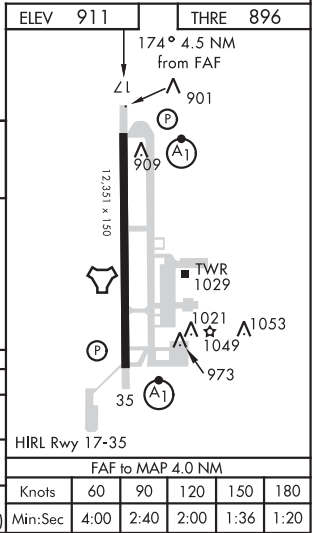
# ILS or LOC RWY 17

LOC I-AVA <b>111.3</b>	APCH CRS <b>174°</b>	Rwy Idg THRE 896 Arpt Elev 911	AL-5010 [USAF]	GRAND FORKS AFB (KRDR)
* When ALS inop, increase RVR to 40 and vis to 3/4 mile. ** When ALS inop, increase CAT ABCDE RVR to 55 and vis to 1 mile. *** Circling E of Rwy 17-35 not authorized.				ALSF-1 
MISSED APPROACH: Climb to 3000 on RDR TACAN R-179 to DUMBE and hold.				

ATIS ★ <b>273.45</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	RED RIVER TOWER ★ <b>124.9 349.0</b>	GND CON <b>119.15 275.8</b>	CLNC DEL <b>119.15 360.7</b>
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CATEGORY	A	B	C	D	E
S-ILS 17*	1096/24		200	(200-1/2)	
S-LOC 17**	1240/24	344 (400-1/2)	1240/30	344	(400-3/4)
CIRCLING***	1340-1 429 (500-1)	1380-1 469 (500-1)	1380-1 1/2 469 (500-1 1/2)	1480-2 569 (600-2)	2040-3 1129 (1200-3)



GRAND FORKS, NORTH DAKOTA      47°57'N-97°24'W      GRAND FORKS AFB (KRDR)

# ILS or LOC RWY 17

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

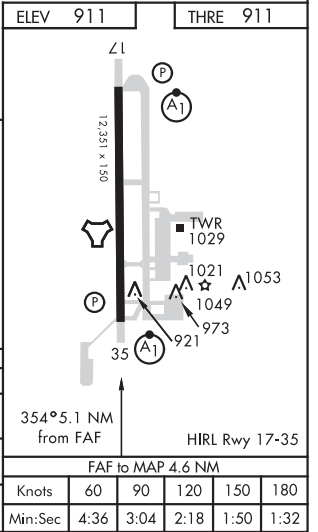
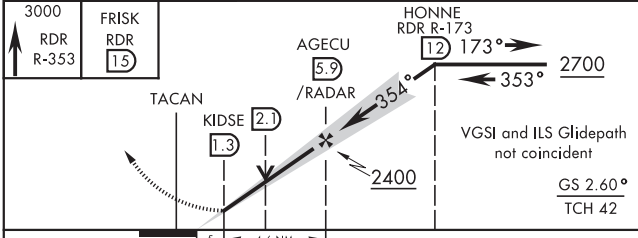
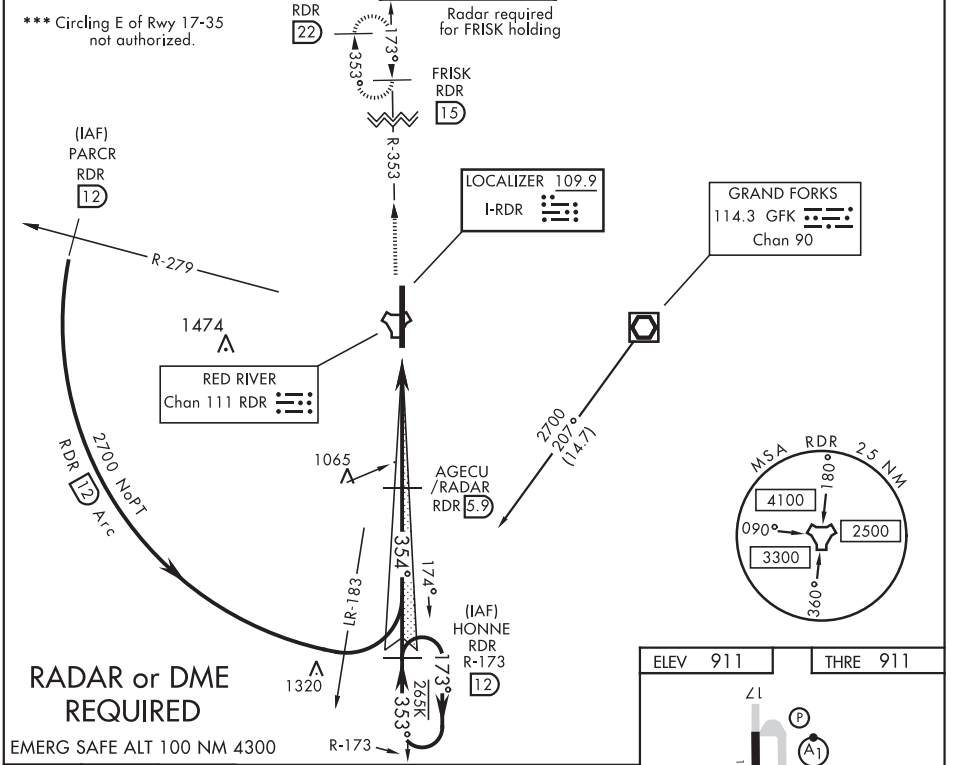
GRAND FORKS, NORTH DAKOTA

# ILS or LOC RWY 35

LOC I-RDR <b>109.9</b>	APCH CRS <b>354°</b>	Rwy Idg THRE Arpt Elev <b>12,351</b> <b>911</b> <b>911</b>	AL-5010 [USAF]	GRAND FORKS AFB (KRDR)
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<p>* When ALS inop, increase RVR to 40 and vis to <math>\frac{3}{8}</math> mile.                  ** When ALS inop, increase CAT AB RVR to 55 and vis to 1 mile, CAT CDE RVR to 60 and vis to <math>1\frac{1}{8}</math> miles.</p>	ALSF-1 	MISSED APPROACH: Climb to 3000 on RDR TACAN R-353 to FRISK and hold.
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ATIS * <b>273.45</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	RED RIVER TOWER * <b>124.9 349.0</b>	GND CON <b>119.15 275.8</b>	CLNC DEL <b>119.15 360.7</b>
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CATEGORY	A	B	C	D	E
S-ILS 35 *	1111/24		200	(200-1/2)	
S-LOC 35 **	1320/24	409 (500-1/2)	1320/40	409	(500-3/4)
CIRCLING ***	1340-1	1380-1	1380-1 1/2	1480-2	2040-3
	429 (500-1)	469 (500-1)	469 (500-1 1/2)	569 (600-2)	1129 (1200-3)

GRAND FORKS, NORTH DAKOTA      47°57'N-97°24'W      GRAND FORKS AFB (KRDR)

Amdt 2 26JUL12

# ILS or LOC RWY 35

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



# RNAV (GPS) RWY 17

APCH CRS **174°**  
 Rwy Idg **12,351**  
 THRE **896**  
 Arpt Elev **911**

AL-5010 [USAF]

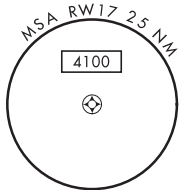
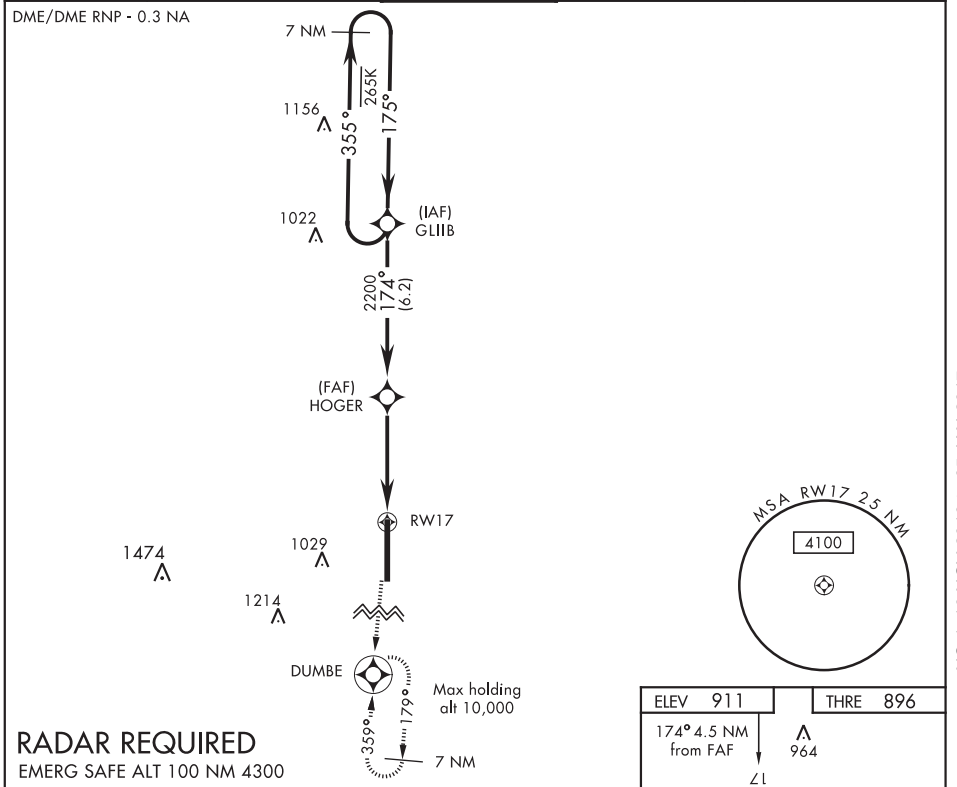
GRAND FORKS AFB (KRDR)

\* When ALS inop, increase CAT AB RVR to 55 and vis to 1 mile, CAT CDE vis to 1¼ miles.  
 \*\* Circling E of Rwy 17-35 not authorized.

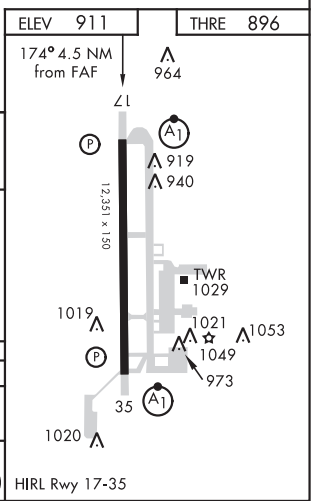
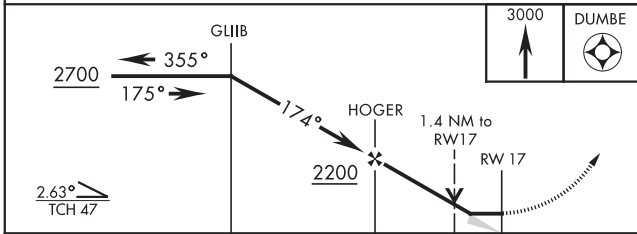


MISSED APPROACH: Climb to 3000 direct DUMBE and hold.

ATIS ★ <b>273.45</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	RED RIVER TOWER ★ <b>124.9 349.0</b>	GND CON <b>119.15 275.8</b>	CLNC DEL <b>119.15 360.7</b>
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**RADAR REQUIRED**  
 EMERG SAFE ALT 100 NM 4300



CATEGORY	A	B	C	D	E
LNAV MDA *	1320/24	424 (500-½)	1320/40	424	(500-¾)
CIRCLING **	1340-1 429 (500-1)	1380-1 469 (500-1)	1380-1½ 469 (500-1½)	1480-2 569 (600-2)	2040-3 1129 (1200-3)

GRAND FORKS, NORTH DAKOTA 47° 57' N-97° 24' W GRAND FORKS AFB (KRDR)

Orig 26JUL12

# RNAV (GPS) RWY 17

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

GRAND FORKS, NORTH DAKOTA

# RNAV (GPS) RWY 35

APCH CRS **354°**  
 Rwy Idg **12,351**  
 THRE **911**  
 Arpt Elev **911**

AL-5010 [USAF]

GRAND FORKS AFB (KRDR)

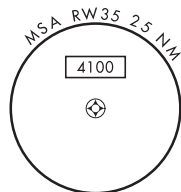
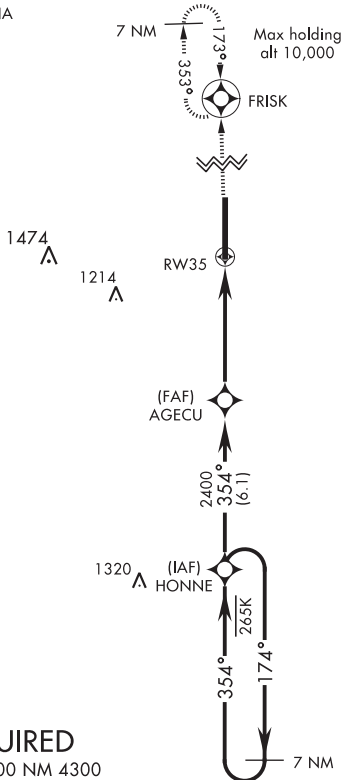
\* When ALS inop, increase CAT AB RVR to 55 and vis to 1 mile, CAT CDE vis to 1 3/8 miles.  
 \*\* Circling E of Rwy 17-35 not authorized.



MISSED APPROACH: Climb to 3000 direct FRISK and hold.

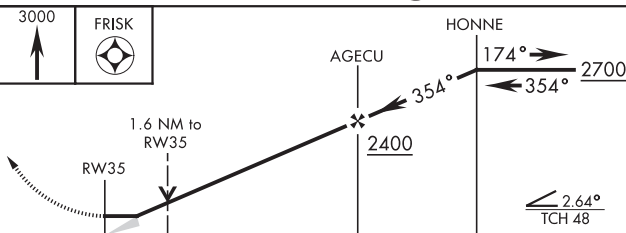
ATIS ★ <b>273.45</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	RED RIVER TOWER ★ <b>124.9 349.0</b>	GND CON <b>119.15 275.8</b>	CLNC DEL <b>119.15 360.7</b>
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DME/DME RNP - 0.3 NA

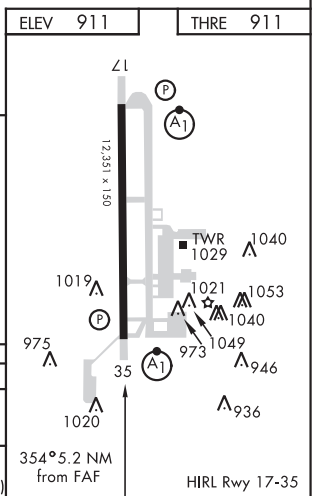


## RADAR REQUIRED

EMERG SAFE ALT 100 NM 4300



CATEGORY	A	B	C	D	E
LNAV MDA *	1400/24	489 (500-1/2)	1400/50	489	(500-1)
CIRCLING **	1400-1	489 (500-1)	1400-1 1/2 489 (500-1 1/2)	1480-2 569 (600-2)	2040-3 1129 (1200-3)



GRAND FORKS, NORTH DAKOTA

47°57'N-97°24'W

GRAND FORKS AFB (KRDR)

Orig 26JUL12

# RNAV (GPS) RWY 35

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

TACAN RDR Chan <b>111</b>	APCH CRS <b>179°</b>	Rwy Idg THRE <b>12,351</b> Arpt Elev <b>911</b>
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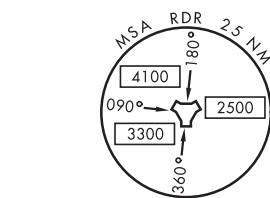
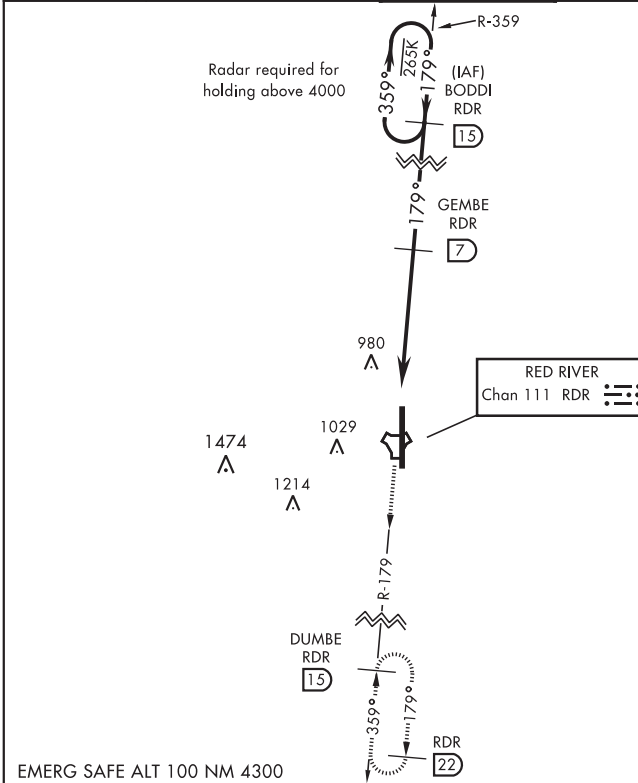
AL-5010 [USAF]

\* When ALS inop, increase CAT ABCDE  
RVR to 55 and vis to 1 mile.  
\*\* Circling E of Rwy 17-35 not authorized.

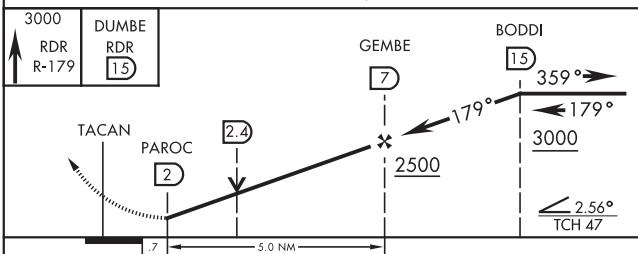


MISSED APPROACH: Climb to 3000 on  
RDR TACAN R-179 to DUMBE and hold.

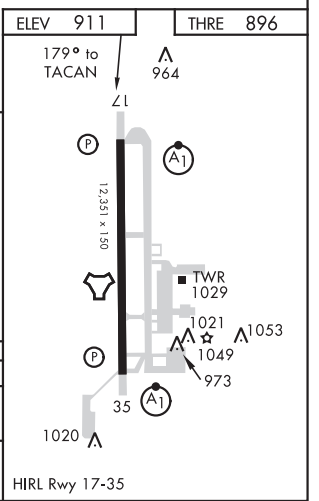
ATIS * <b>273.45</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	RED RIVER TOWER * <b>124.9 349.0</b>	GND CON <b>119.15 275.8</b>	CLNC DEL <b>119.15 360.7</b>
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EMERG SAFE ALT 100 NM 4300



CATEGORY	A	B	C	D	E
S-17 *	1240/24	344 (400-½)	1240/40	344	(400-¾)
CIRCLING **	1340-1 429 (500-1)	1380-1 469 (500-1)	1380-1½ 469 (500-1½)	1480-2 569 (600-2)	2040-3 1129 (1200-3)



NC-1, 10 NOV 2016 to 05 JAN 2017

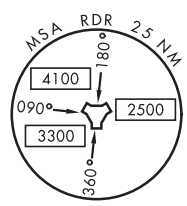
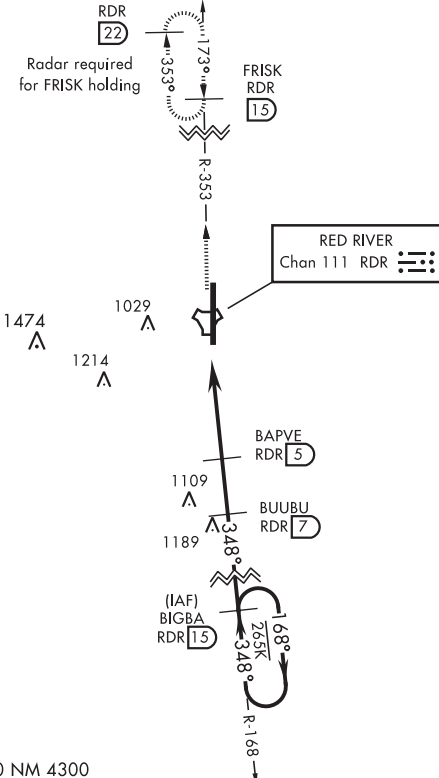
NC-1, 10 NOV 2016 to 05 JAN 2017

GRAND FORKS, NORTH DAKOTA

# TACAN RWY 35

GRAND FORKS AFB (KRDR)

TACAN RDR Chan <b>111</b>	APCH CRS <b>348°</b>	Rwy Idg THRE Arpt Elev <b>12,351</b> <b>911</b> <b>911</b>	AL-5010 [USAF]	ALSIF-1 	MISSED APPROACH: Climb to 3000 on RDR TACAN R-353 to FRISK and hold.
* When ALS inop, increase CAT AB RVR to 55 and vis to 1 mile, CAT CDE RVR to 60 and vis to 1½ miles. ** Circling E of Rwy 17-35 not authorized.					
ATIS * <b>273.45</b>	GRAND FORKS APP CON <b>118.1 318.1</b>	RED RIVER TOWER * <b>124.9 349.0</b>	GND CON <b>119.15 275.8</b>	CLNC DEL <b>119.15 360.7</b>	

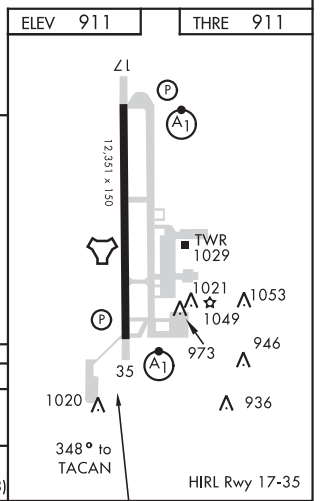


EMERG SAFE ALT 100 NM 4300

TACAN
 

3000 RDR R-353	FRISK RDR 15	BUUBU 7	BIGBA 15	168°
TACAN	MUDBE 1.4	BAPVE 5	2700	348°
6	3.6 NM	2 NM	3000	348°
			2100	2.55° TCH 48

CATEGORY	A	B	C	D	E
S-35 *	1320/24	409 (500-½)	1320/40	409	(500-¾)
CIRCLING **	1340-1 429 (500-1)	1380-1 469 (500-1)	1380-1½ 469 (500-1½)	1480-2 569 (600-2)	2040-3 1129 (1200-3)



GRAND FORKS, NORTH DAKOTA

47°57'N-97°24'W

GRAND FORKS AFB (KRDR)

Amdt 2 26JUL12

# TACAN RWY 35

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

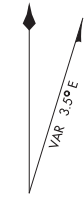
AFD-5010 [USAF]

GRAND FORKS AFB (KRDR)

GRAND FORKS, NORTH DAKOTA

ATIS ★  
 273.45  
 RED RIVER TOWER ★  
 124.9 349.0  
 GND CON  
 119.15 275.8  
 CLNC DEL  
 119.15 360.7

47° 59' N



NOVEMBER 2016  
 ANNUAL RATE OF CHANGE  
 0.1° W

1000 x 150

ELEV 896

176.5°

12,351 x 150

1014  
Λ

356.5°

FIELD  
ELEV  
911

0.91 x 0001

ELEV 900

Rwy 17-35  
PCN 125 R/B/W/T

47° 58' N

FIRE STATION

A4  
A

C RAMP  
CONTROL TOWER

ELEV 900

A3  
A2  
A1  
A

TANKS

47° 57' N

BASE OPS  
★

1053  
Λ

ELEV 900

B RAMP  
D

C

TANKS

N 25° 07'

N 7° 45'

N 25° 07'

# AIRPORT DIAGRAM

GRAND FORKS, NORTH DAKOTA

GRAND FORKS AFB (KRDR)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>45920</b> <b>W09A</b>	APP CRS <b>096°</b>	Rwy Idg TDZE Apt Elev	<b>4200</b> <b>1799</b> <b>1799</b>
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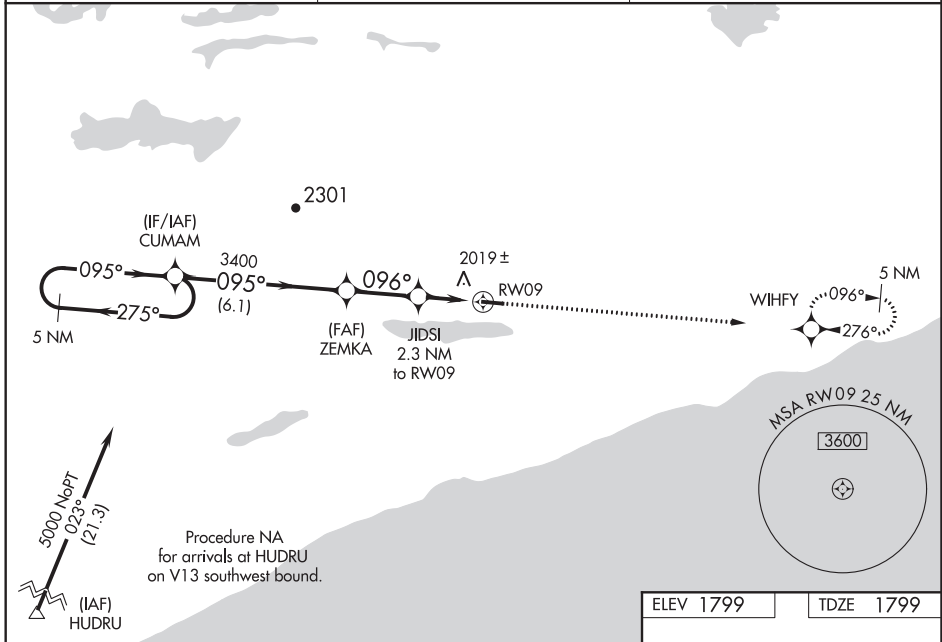
# RNAV (GPS) RWY 9

GRAND MARAIS/COOK COUNTY (CKC)

**⚠** Baro-VNAV NA when using Ely altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When VGSI inop, procedure NA at night. When local altimeter setting not received, use Ely altimeter setting and increase all DA 183 feet and MDA 200 feet; increase visibility LPV 3/8 mile all Cats, LNAV/VNAV 3/4 mile all Cats, LNAV Cat C 3/8 mile and Circling Cat C 3/4 mile.

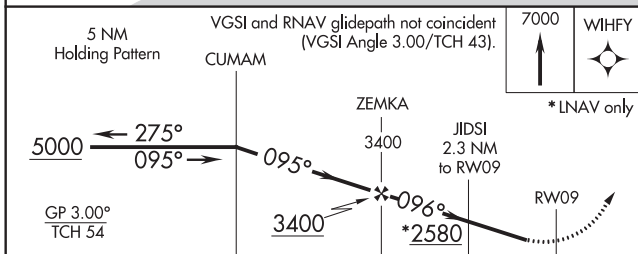
**⚠** MISSED APPROACH: Climb to 7000 direct WIHFY and hold, continue climb-in-hold to 7000.

AWOS-3 <b>119.925</b>	PRINCETON RADIO <b>122.3</b>	UNICOM <b>122.8 (CTAF) 0</b>
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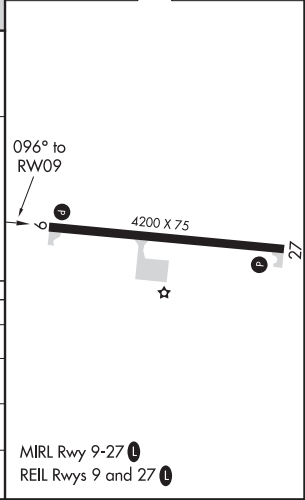
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 1799	TDZE 1799
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CATEGORY	A	B	C	D
LPV DA	2049-1	250 (300-1)		NA
LNAV/VNAV DA	2295-1 5/8	496 (500-1 5/8)		NA
LNAV MDA	2280-1	481 (500-1)	2280-1 3/8 481 (500-1 3/8)	NA
CIRCLING	2340-1	541 (600-1)	2340-1 1/2 541 (600-1 1/2)	NA



WAAS CH <b>69520</b> <b>W27A</b>	APP CRS <b>276°</b>	Rwy Idg TDZE Apt Elev	<b>4200</b> <b>1797</b> <b>1799</b>
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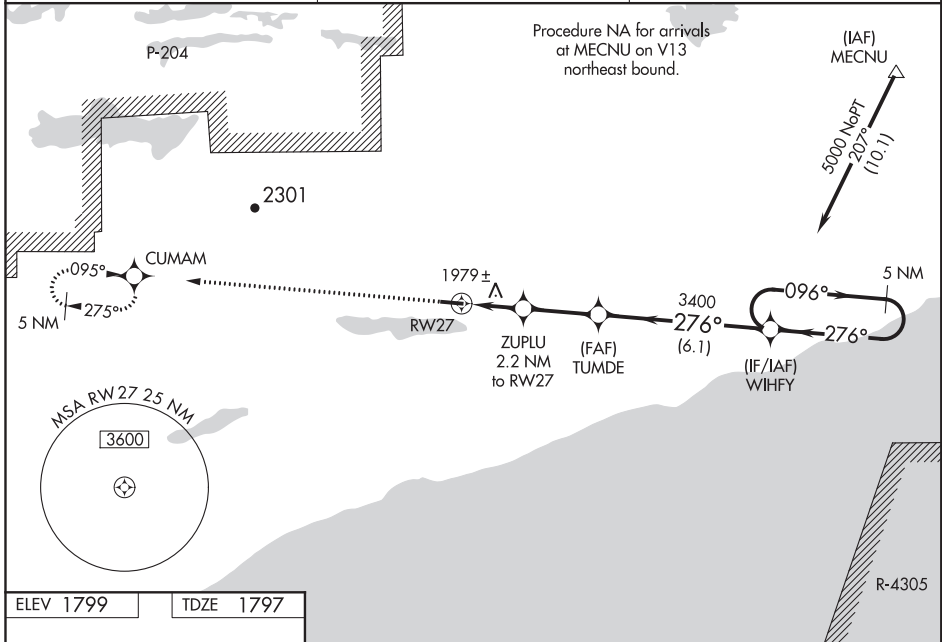
# RNAV (GPS) RWY 27

GRAND MARAIS/COOK COUNTY (CKC)

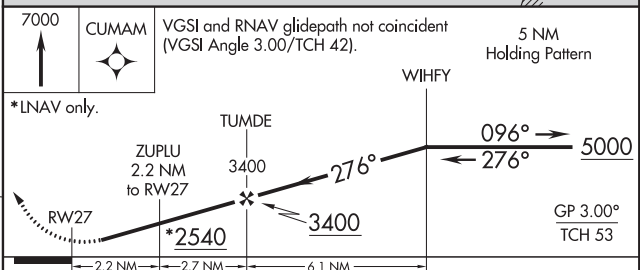
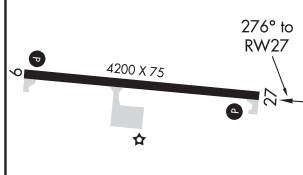
**⚠** Baro-VNAV NA when using Ely altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When VGSI inop, procedure **⚠** -30°C/-22°F NA at night. When local altimeter setting not received, use Ely altimeter setting and increase all DA 183 feet and MDA 200 feet; increase visibility LPV 3/8 mile all Cats, LNAV/VNAV 7/8 mile all Cats, LNAV Cat C 1/2 mile and Circling Cat C 3/4 mile.

**⚠** MISSED APPROACH: Climb to 7000 direct CUMAM and hold, continue climb-in-hold to 7000.

AWOS-3 <b>119.925</b>	PRINCETON RADIO <b>122.3</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1799	TDZE 1797
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CATEGORY	A	B	C	D
LPV DA	2047-1		250 (300-1)	NA
LNAV/VNAV DA	2299-1 <sup>5</sup> / <sub>8</sub>		502 (500-1 <sup>5</sup> / <sub>8</sub> )	NA
LNAV MDA	2240-1	443 (500-1)	2240-1 <sup>3</sup> / <sub>8</sub> 443 (500-1 <sup>3</sup> / <sub>8</sub> )	NA
CIRCLING	2340-1	541 (600-1)	2340-1 <sup>1</sup> / <sub>2</sub> 541 (600-1 <sup>1</sup> / <sub>2</sub> )	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

GRAND MARAIS, MINNESOTA

AL-5643 (FAA)

15344

NDB CKC <b>358</b>	APP CRS <b>285°</b>	Rwy Idg TDZE Apt Elev	<b>4200</b> <b>1797</b> <b>1799</b>
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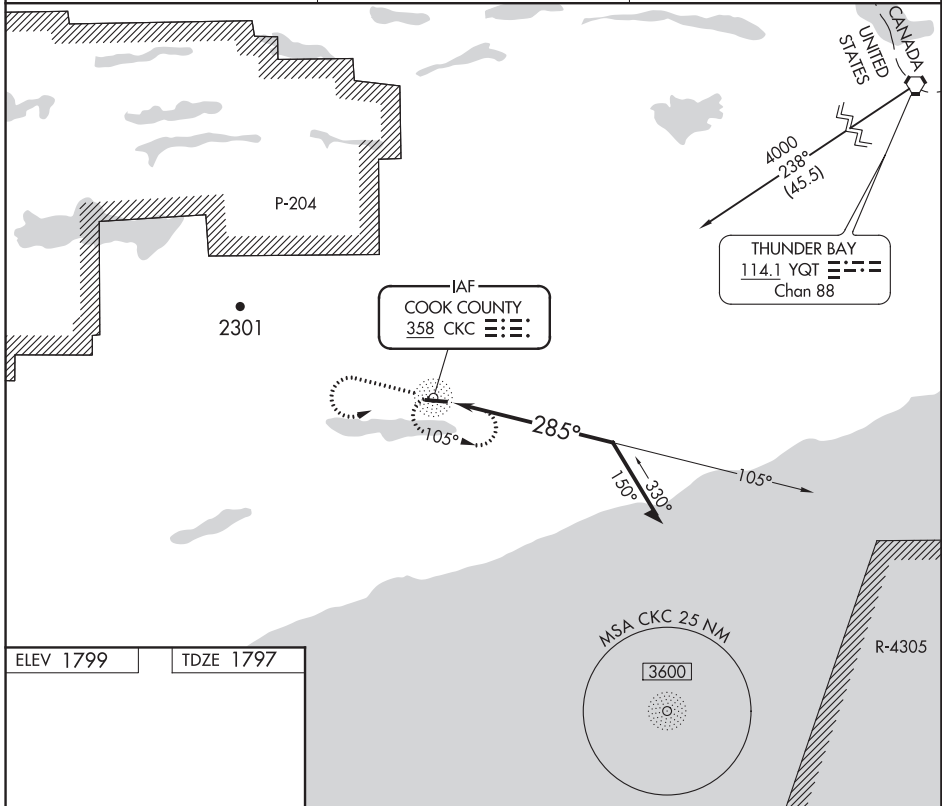
# NDB RWY 27

GRAND MARAIS/COOK COUNTY (CKC)

**⚠** When local altimeter setting not received, use Ely altimeter setting and increase all MDA 200 feet, increase S-27 and Circling Cat B visibility ¼ mile and Cat C visibility ¾ mile. Procedure NA at night. Helicopter visibility reduction below 1 SM NA.

**⚠ NA** MISSED APPROACH: Climb to 3000, then climbing left turn to 3500 direct CKC NDB and hold.

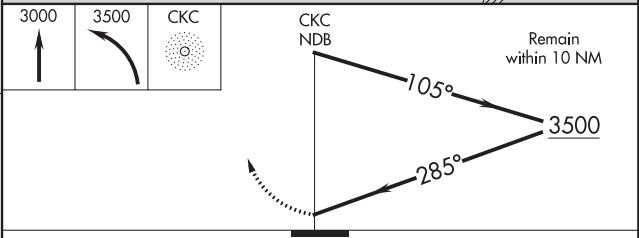
AWOS-3 <b>119.925</b>	PRINCETON RADIO <b>122.3</b>	UNICOM <b>122.8</b> (CTAF) <b>①</b>
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ELEV 1799	TDZE 1797
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**285° to NDB**  
**4200 X 75**  
**RWY 27**

MIRL Rwy 9-27 **①**  
REIL Rws 9 and 27 **①**



CATEGORY	A	B	C	D
S-27	2340-1	543 (600-1)	2340-1½ 543 (600-1½)	NA
CIRCLING	2340-1	541 (600-1)	2340-1½ 541 (600-1½)	NA

GRAND MARAIS, MINNESOTA  
Orig-D 17OCT13

47°50'N-90°23'W

# GRAND MARAIS/COOK COUNTY (CKC)

## NDB RWY 27

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



LOC I-GPZ <b>110.1</b>	APP CRS <b>344°</b>	Rwy Idg <b>5747</b> TDZE <b>1355</b> Apt Elev <b>1355</b>
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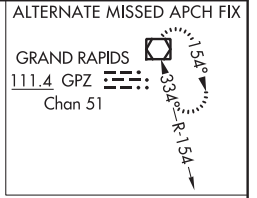
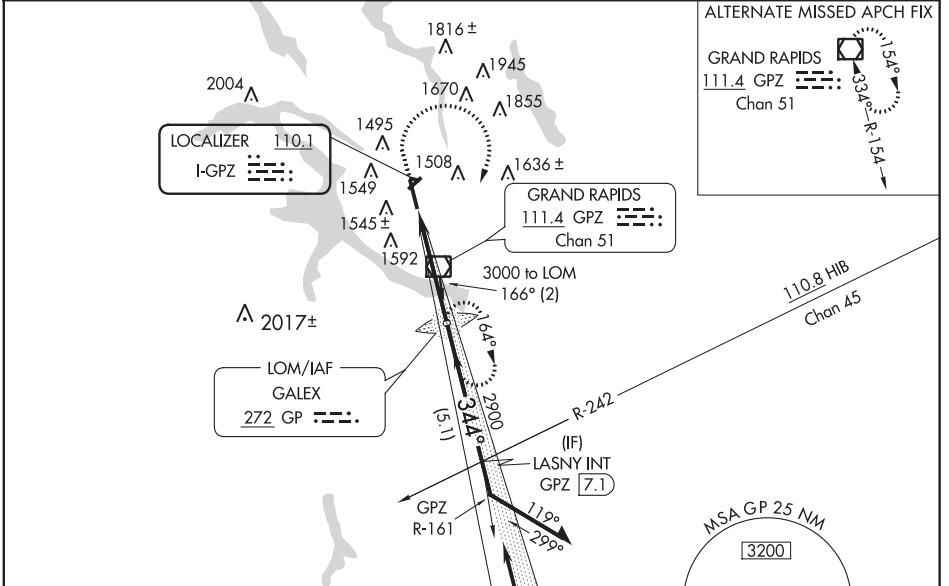
GRAND RAPIDS/  
ITASCA COUNTY-GORDON NEWSTROM FIELD (GPZ)

# ILS or LOC RWY 34

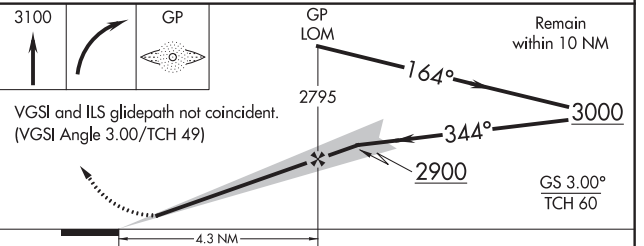
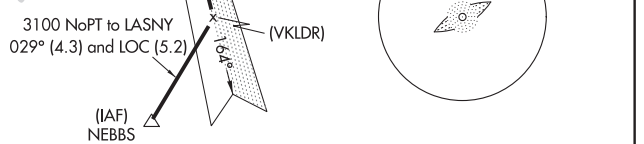
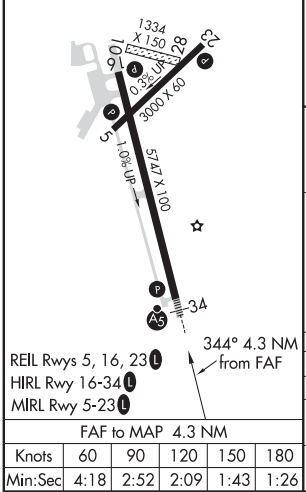
**⚠** When local altimeter setting not received, use Hibbing altimeter setting and increase all DA 68 feet and all MDA 80 feet. Increase S-LOC 34 Cats C/D visibility  $\frac{1}{8}$  mile and Circling Cat C visibility  $\frac{1}{4}$  mile. For inoperative MALSR, when using Hibbing altimeter setting, increase S-ILS 34 visibility all Cats to  $\frac{3}{8}$ . Circling NA to Rwys 10 and 28. Night Landing: Rwy 5 NA. For inoperative MALSR, increase S-LOC 34 Cat C/D visibility to  $1\frac{1}{8}$ .

**MALSR** MISSED APPROACH: Climb to 3100 then right turn direct GALEX LOM and hold (ADF Required).

AWOS-3PT <b>118.425</b>	MINNEAPOLIS CENTER <b>127.9 281.45</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1355	TDZE 1355
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CATEGORY	A	B	C	D
S-ILS 34	1555- $\frac{1}{2}$ 200 (200- $\frac{1}{2}$ )			
S-LOC 34	1820- $\frac{1}{2}$	465 (500- $\frac{1}{2}$ )	1820-1	465 (500-1)
CIRCLING	1900-1	545 (600-1)	1900-1 $\frac{1}{2}$	1920-2 565 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

GRAND RAPIDS, MINNESOTA

AL-5258 (FAA)

16203

APP CRS	Rwy Idg	<b>5747</b>
<b>164°</b>	TDZE	<b>1332</b>
	Apt Elev	<b>1355</b>

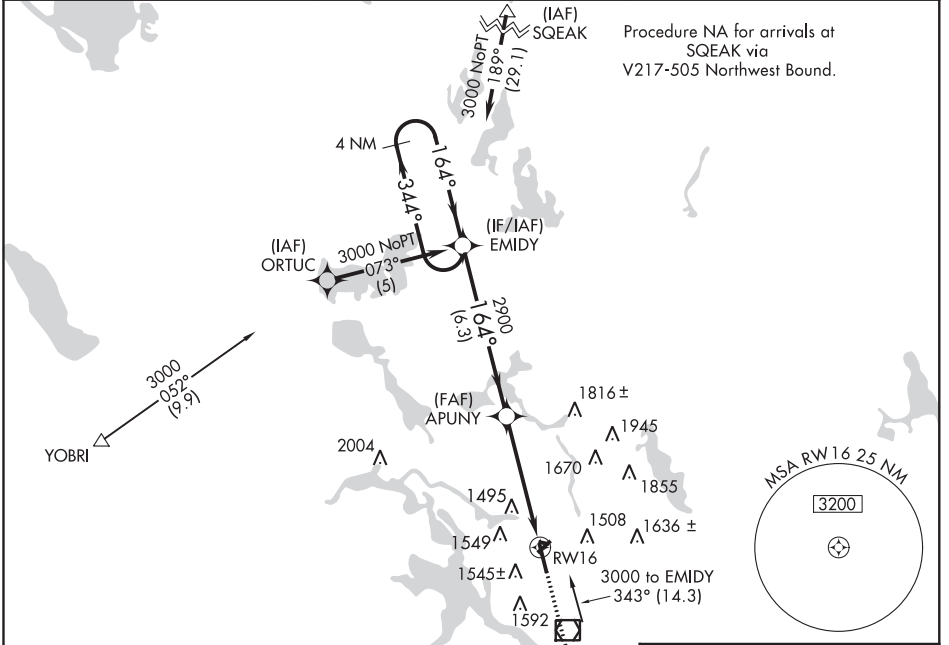
# RNAV (GPS) RWY 16

GRAND RAPIDS/ITASCA COUNTY-GORDON NEWSTROM FIELD (GPZ)

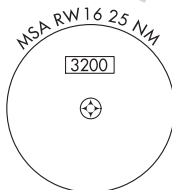
**⚠** Circling to Rwy 10-28 and 5-23 NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Hibbings altimeter setting and increase all MDA 80 feet and increase LNAV and Circling Cat C visibility ¼ mile.

**MISSED APPROACH:** Climb to 2900 direct ADIER and hold.

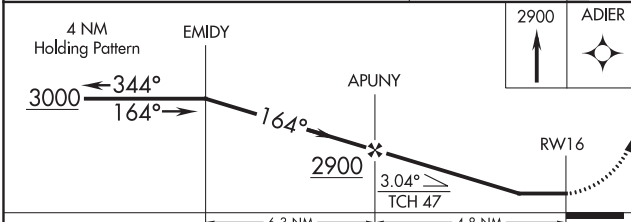
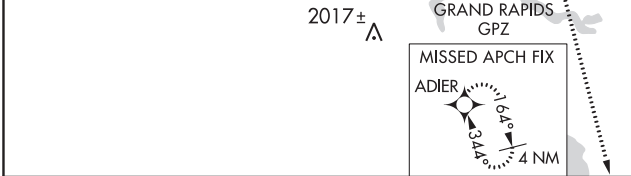
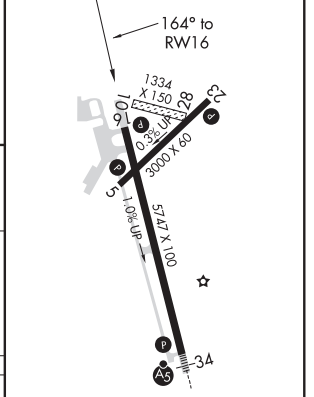
AWOS-3PT <b>118.425</b>	MINNEAPOLIS CENTER <b>127.9 281.45</b>	UNICOM <b>122.8 (CTAF) 0</b>
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Procedure NA for arrivals at SQUEAK via V217-505 Northwest Bound.



ELEV 1355	TDZE 1332
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CATEGORY	A	B	C	D
LNAV MDA	1760-1	428 (500-1)	1760-1¼ 428 (500-1¼)	1760-1½ 428 (500-1½)
CIRCLING	1900-1	545 (600-1)	1900-1½ 545 (600-1½)	1920-2 565 (600-2)

- MIRL Rwy 5-23
- HIRL Rwy 16-34
- REIL Rwy 5, 16, 23

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

GRAND RAPIDS, MINNESOTA  
Orig 07MAY09

GRAND RAPIDS/ITASCA COUNTY-GORDON NEWSTROM FIELD (GPZ)  
47°13'N - 93°31'W


# RNAV (GPS) RWY 16

WAAS CH <b>86412</b> <b>W34A</b>	APP CRS <b>344°</b>	Rwy Idg TDZE Apt Elev	<b>5747</b> <b>1355</b> <b>1355</b>
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GRAND RAPIDS/  
ITASCA COUNTY-GORDON NEWSTROM FIELD (GPZ)


# RNAV (GPS) RWY 34

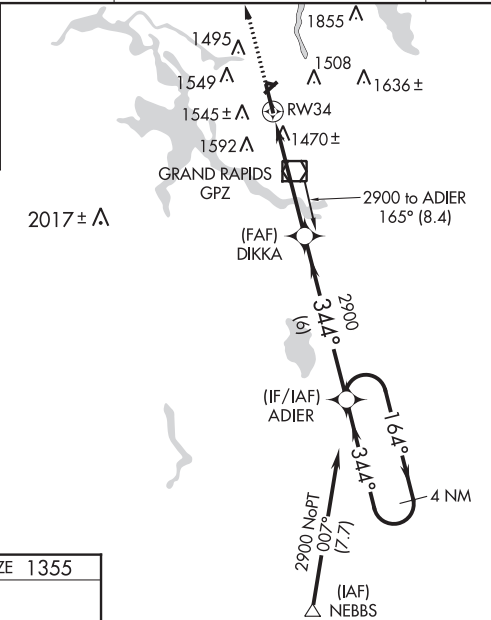
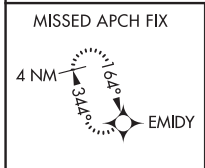
**⚠** Circling to Rwy 10-28 and 5-23 NA at night. For inoperative MALSRS increase LPV all Cats visibility to 1 mile. For inoperative MALSRS when using Hibbing altimeter setting, increase LPV all Cats visibility to 1 1/4 mile. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. Baro-VNAV and VDP NA when using Hibbing altimeter setting. When local altimeter setting not received, use Hibbing altimeter setting and increase all DA 68 feet and all MDA 80 feet, increase LPV all Cats, LNAV/VNAV all Cats, LNAV Cat D visibility 1/4 mile and Circling Cat C visibility 1/4 mile.

**MALSRS**  MISSED APPROACH: Climb to 3000 direct EMIDY and hold.

AWOS-3PT  
**118.425**

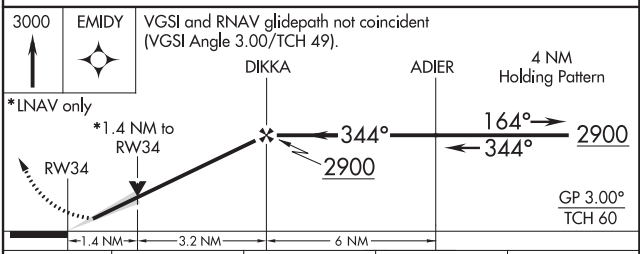
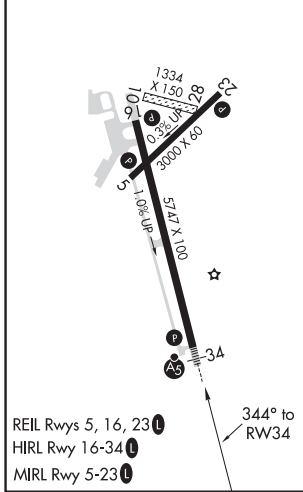
MINNEAPOLIS CENTER  
**127.9 281.45**

UNICOM  
**122.8 (CTAF)** 



Procedure NA for arrivals at GPZ VOR/DME via V430 Westbound and V161 Northbound.

ELEV 1355 TDZE 1355



CATEGORY	A	B	C	D
LPV DA	1682-1/2		327 (400-1/2)	
LNAV/VNAV DA	1927-1 1/2		572 (600-1 1/2)	
LNAV MDA	1860-1/2 505 (600-1/2)		1860-1 505 (600-1)	
CIRCLING	1900-1 545 (600-1)		1900-1 1/2 545 (600-1 1/2) 1920-2 565 (600-2)	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

GRAND RAPIDS, MINNESOTA

AL-5258 (FAA)


16203

VOR/DME GPZ <b>111.4</b> Chan 51	APP CRS <b>334°</b>	Rwy Idg TDZE Apt Elev	<b>5747</b> <b>1355</b> <b>1355</b>
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GRAND RAPIDS/  
ITASCA COUNTY-GORDON NEWSTROM FIELD (GPZ)

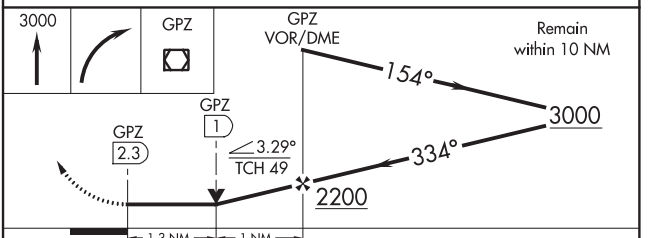
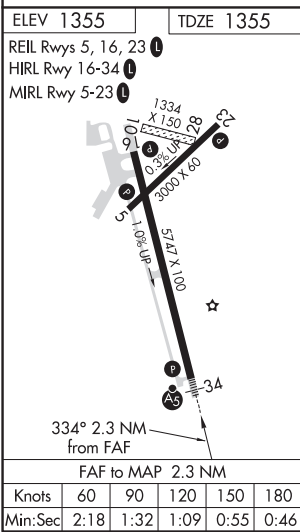
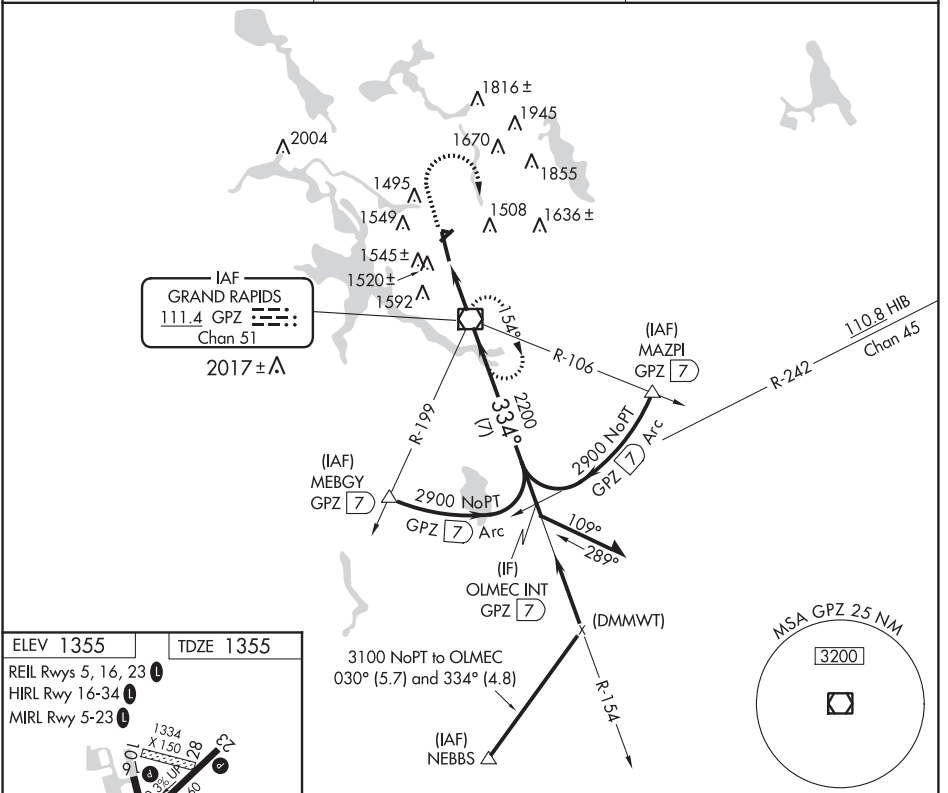
# VOR RWY 34

**⚠** Circling to Rwy 10-28 and 5-23 NA at night. When local olimeter setting not received, use Hibbings altimeter setting and increase all MDA 80 feet, increase S-34 Cat C and D and Circling Cat C visibility 1/4 mile. VDP NA when using Hibbings altimeter setting.

**MALS** 

**MISSED APPROACH:** Climb to 3000 then right turn direct GPZ VOR/DME and hold.

AWOS-3PT <b>118.425</b>	MINNEAPOLIS CENTER <b>127.9 281.45</b>	UNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	A	B	C	D
S-34	1800-1/2 445 (500-1/2)		1800-3/4 445 (500-3/4)	1800-1 445 (500-1)
CIRCLING	1900-1	545 (600-1)	1900-1/2 545 (600-1/2)	1920-2 565 (600-2)

GRAND RAPIDS, MINNESOTA  
Amdt 11 07MAY09

GRAND RAPIDS/ITASCA COUNTY-GORDON NEWSTROM FIELD (GPZ)  
47°13'N-93°31'W

# VOR RWY 34

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

APP CRS  
**333°**  
 Rwy Idg **3715**  
 TDZE **1045**  
 Apt Elev **1047**

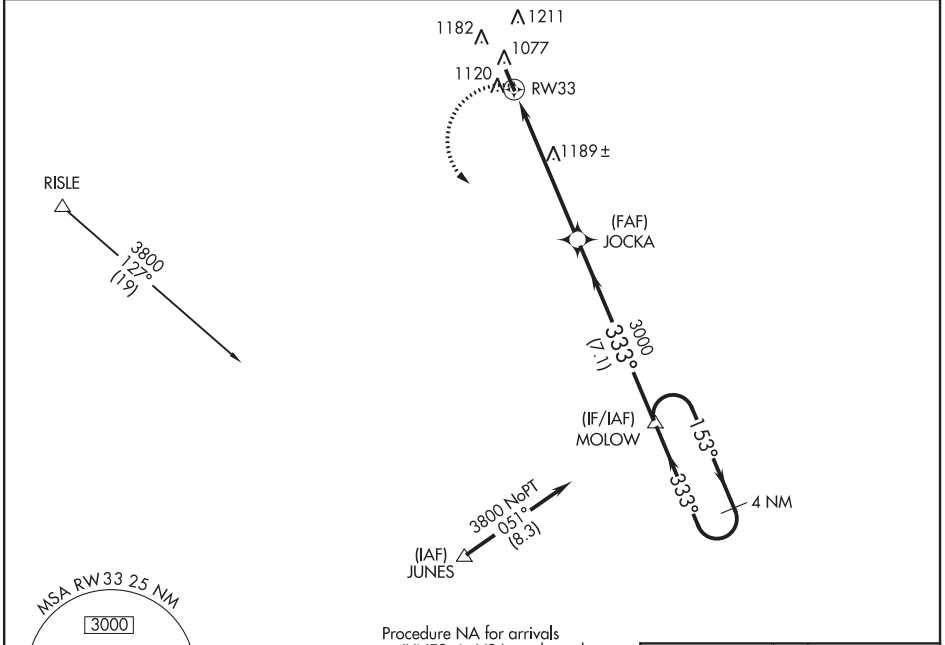
# RNAV (GPS) RWY 33

GRANITE FALLS MUNI/LENZEN-ROE-FAGEN MEMORIAL FIELD (GDB)

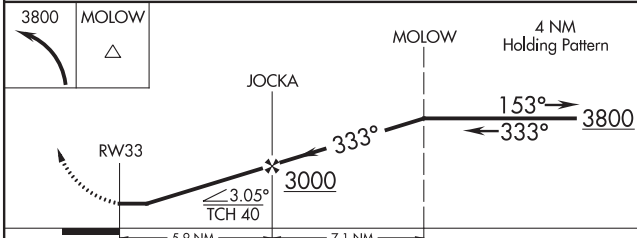
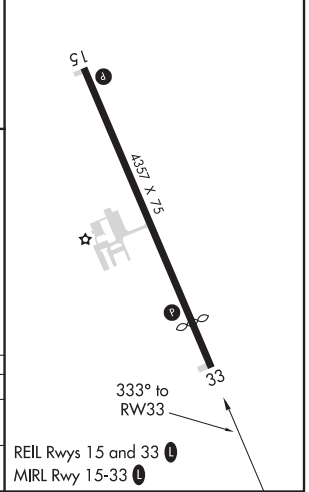
**V** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.  
**A** When local altimeter setting not received, use Montevideo  
**3** -35°C/-31°F altimeter setting and increase all MDA 40 feet.

MISSED APPROACH: Climbing left turn to 3800 direct MOLOW and hold.

AWOS-3 <b>120.1</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	GCO <b>121.725</b>	UNICOM <b>122.8</b> (CTAF) <b>0</b>
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ELEV 1047	TDZE 1045
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CATEGORY	A	B	C	D
LNNAV MDA	1480-1	435 (500-1)	1480-1¼ 435 (500-1¼)	1480-1½ 435 (500-1½)
CIRCLING	1480-1 433 (500-1)	1500-1 453 (500-1)	1500-1½ 453 (500-1½)	1600-2 553 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

GRANITE FALLS, MINNESOTA

AL-9306 (FAA)

16035

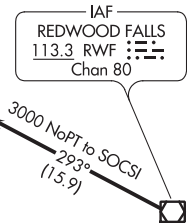
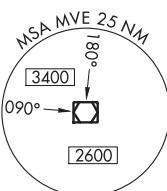
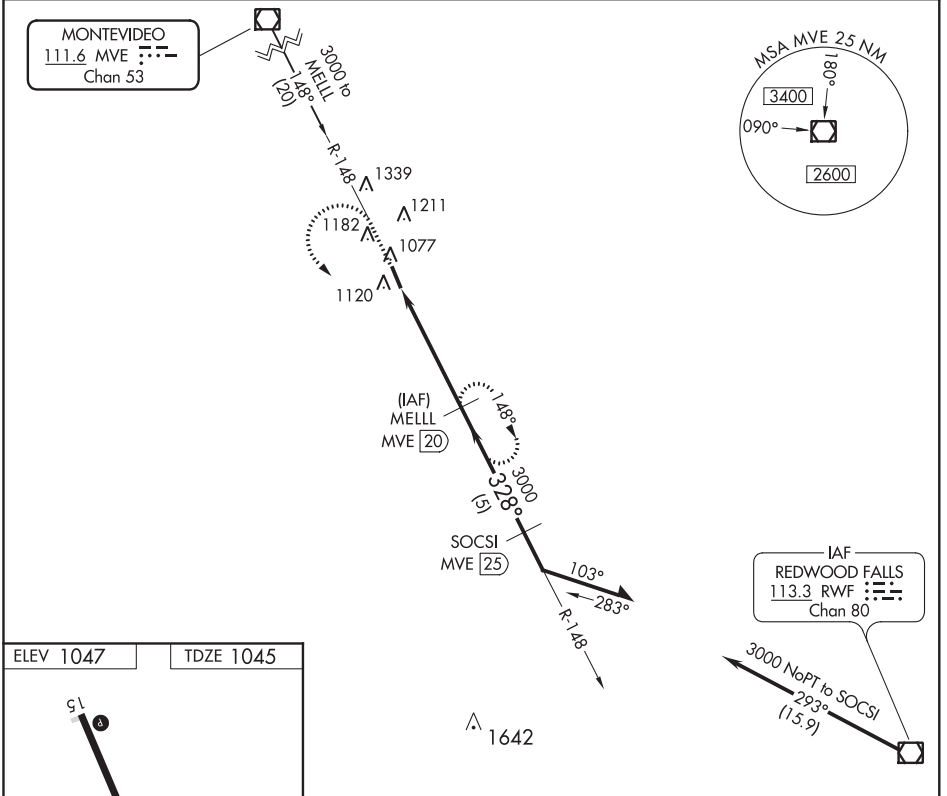
VOR/DME MVE <b>111.6</b> Chan 53	APP CRS <b>328°</b>	Rwy Idg <b>3715</b> TDZE <b>1045</b> Apt Elev <b>1047</b>
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# VOR/DME RWY 33

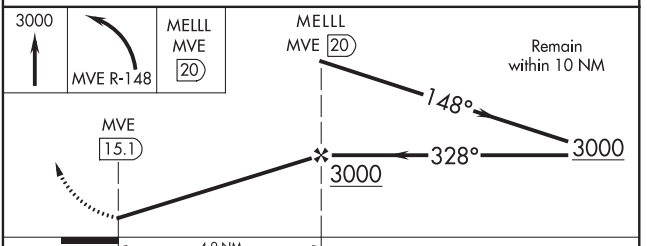
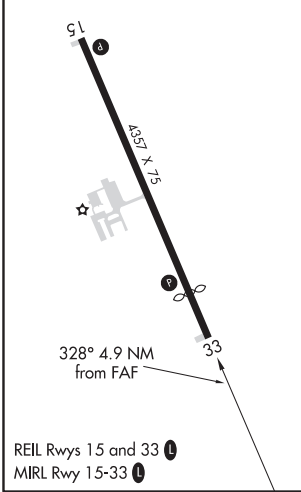
GRANITE FALLS MUNI/LENZEN-ROE-FAGEN MEMORIAL FIELD (GDB)

<p>NA</p> <p>-35°C/-31°F</p>	<p>When local altimeter setting not received, use Montevideo altimeter setting.</p>	<p>MISSED APPROACH: Climb to 3000, then left turn via R-148 to MELL/MVE 20 DME and hold.</p>
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AWOS-3 <b>120.1</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	GCO <b>121.725</b>	UNICOM <b>122.8</b> (CTAF) <b>0</b>
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ELEV 1047	TDZE 1045
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CATEGORY	A	B	C	D
S-33	1480-1	435 (500-1)	1480-1¼ 435 (500-1¼)	1480-1½ 435 (500-1½)
CIRCLING	1520-1	473 (500-1)	1520-1½ 473 (500-1½)	1600-2 553 (600-2)

GRANITE FALLS, MINNESOTA  
Orig-B 05JUN08

GRANITE FALLS MUNI/LENZEN-ROE-FAGEN MEMORIAL FIELD (GDB)  
44°45'N-95°33'W

# VOR/DME RWY 33

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

APP CRS	Rwy Idg	<b>3799</b>
<b>127°</b>	TDZE	<b>2170</b>
	Apt Elev	<b>2175</b>

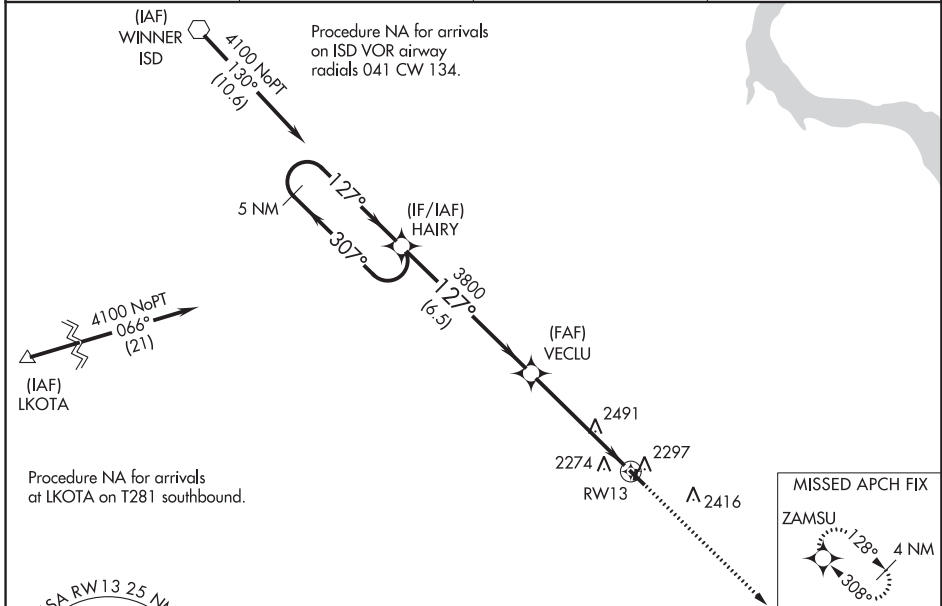
# RNAV (GPS) RWY 13

GREGORY MUNI-FLYNN FIELD (9D1)

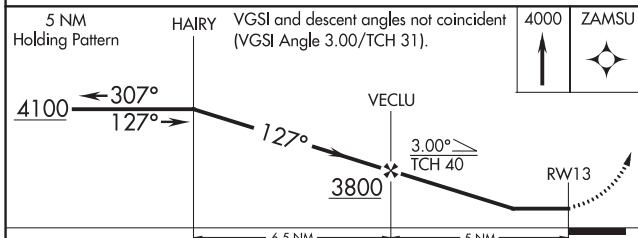
**▼** Helicopter visibility reduction below 1 SM NA. When VGSI inop, Straight-in/Circling Rwy 13 procedure NA at night. DME/DME RNP-0.3 NA. Use Winner altimeter setting; when not received, use Ainsworth altimeter setting and increase all MDA 100 feet and increase LNAV Cat B visibility ¼ mile and Cat D visibility ½ mile and increase Circling Cat B visibility ¼ mile and Cat C visibility ⅓ mile.

**▲ NA** MISSED APPROACH: Climb to 4000 direct ZAMSU and hold.

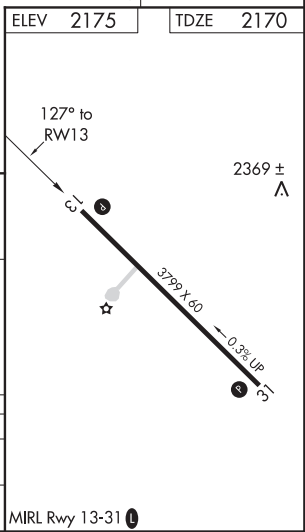
WINNER ASOS <b>126.775</b>	HURON RADIO <b>122.1R</b>	GCO <b>121.725</b>	AUNICOM <b>122.8 (CTAF) ①</b>
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ELEV	2175	TDZE	2170
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CATEGORY	A	B	C	D
LNAV MDA	2820-1	650 (700-1)	2820-1 ⅞ 650 (700-1 ⅞)	NA
CIRCLING	2820-1	645 (700-1)	2820-1 ⅞ 645 (700-1 ⅞)	NA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>77630</b> <b>W31A</b>	APP CRS <b>308°</b>	Rwy Idg TDZE Apt Elev	<b>3799</b> <b>2169</b> <b>2175</b>
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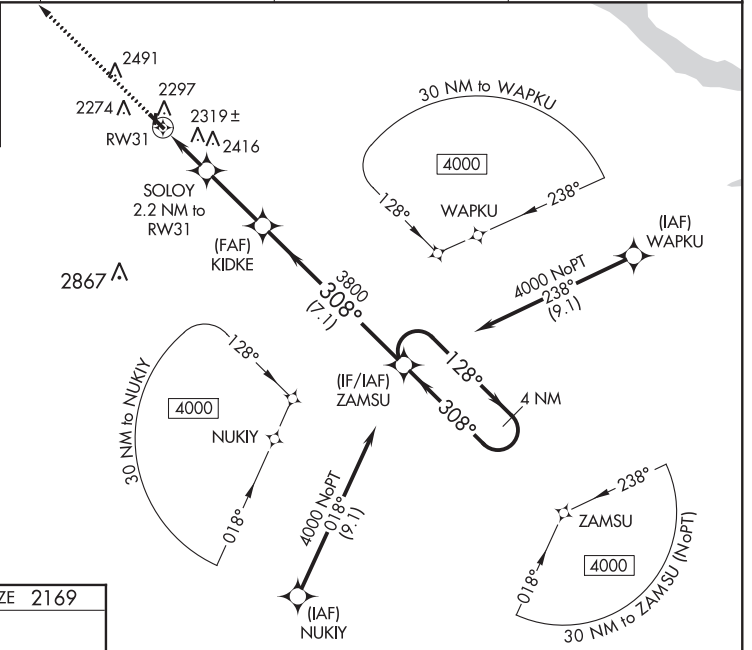
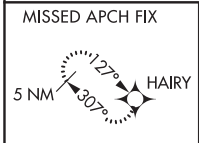
# RNAV (GPS) RWY 31

GREGORY MUNI-FLYNN FIELD (9D1)

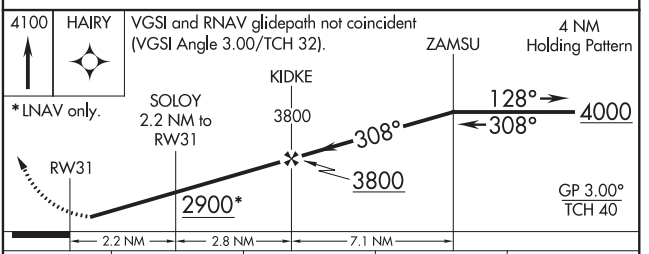
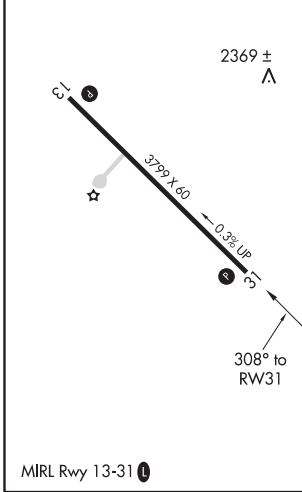
**⚠️ NA** Helicopter visibility reduction below 1 SM NA. When VGSI inoperative, Circling Rwy 13 NA at night. Baro-VNAV NA. When VGSI inoperative, Straight-in/Circling Rwy 31 procedure NA at night. DME/DME RNP-0.3 NA. Use Winner altimeter setting; when not received use Ainsworth altimeter setting and increase all DA 95 feet and all MDA 100 feet and increase LPV all Cats visibility ¼ mile, LNAV/VNAV all Cats visibility ⅓ mile, LNAV Cat C visibility ¼ mile and Circling Cat C visibility ½ mile.

**MISSED APPROACH:**  
Climb to 4100 direct HAIRY and hold.

WINNER ASOS <b>126.775</b>	HURON RADIO <b>122.1R</b>	GCO <b>121.725</b>	AUNICOM <b>122.8 (CTAF)</b> <b>📶</b>
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ELEV 2175	TDZE 2169
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CATEGORY	A	B	C	D
LPV DA	2489-1⅛ 320 (400-1⅛)			NA
LNAV/VNAV DA	2709-1⅞ 540 (600-1⅞)			NA
LNAV MDA	2640-1	471 (500-1)	2640-1⅜ 471 (500-1⅜)	NA
CIRCLING	2680-1 505 (600-1)	2760-1 585 (600-1)	2760-1½ 585 (600-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>93936</b> <b>W16A</b>	APP CRS <b>160°</b>	Rwy Idg TDZE Apt Elev	<b>5000</b> <b>1257</b> <b>1266</b>
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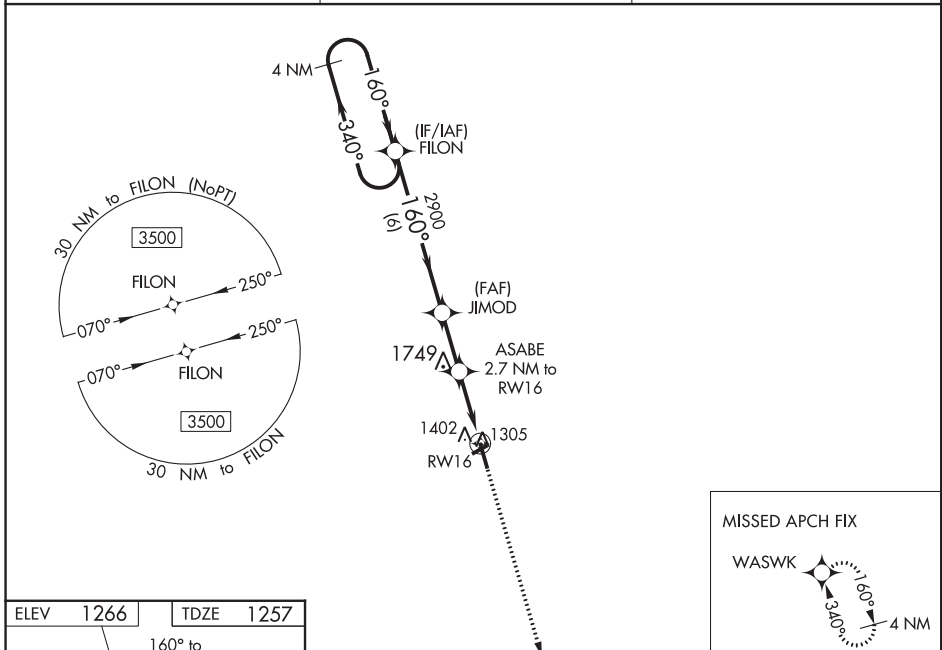
# RNAV (GPS) RWY 16

GWINNER-ROGER MELROE FIELD (GWR)

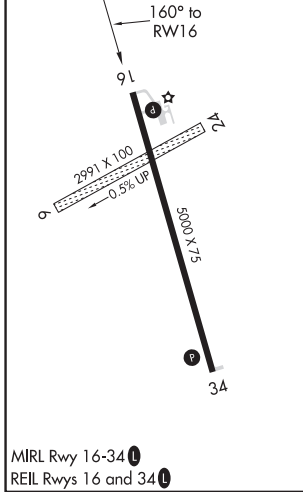
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 47°C (117°F). DME/DME RNP-0.3 NA. Night landing: Rwy 16, 24 NA. Baro-VNAV and VDP NA when using Fargo altimeter setting. When local altimeter setting not received, use Fargo altimeter setting and increase all DA 176 feet and all MDA 180 feet. Increase LPV all Cats, LNAV/VNAV all Cats, and LNAV Cat C/D visibility 5/8 mile, and Circling Cat C visibility 3/4 mile and Cat D visibility 1/2 mile.

**MISSED APPROACH:**  
Climb to 3500 direct WASWK and hold.

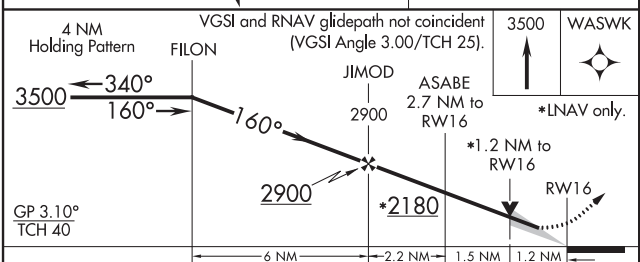
AWOS-3 <b>118.325</b>	MINNEAPOLIS CENTER <b>127.35 278.3</b>	UNICOM <b>122.7 (CTAF) 0</b>
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ELEV 1266	TDZE 1257
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MIRL Rwy 16-34  
REIL Rwy 16 and 34



CATEGORY	A	B	C	D
LPV DA		1507-3/4	250 (300-3/4)	
LNAV/VNAV DA		1534-7/8	277 (300-7/8)	
LNAV MDA	1660-1	403 (400-1)	1660-1 1/8	403 (400-1 1/8)
<b>C</b> CIRCLING	1720-1	454 (500-1)	1840-1 1/2 574 (600-1 1/2)	2060-2 1/2 794 (800-2 1/2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

GWINNER, NORTH DAKOTA

AL-6233 (FAA)

15232

WAAS CH <b>99317</b> <b>W34A</b>	APP CRS <b>340°</b>	Rwy Idg TDZE Apt Elev	<b>5000</b> <b>1257</b> <b>1266</b>
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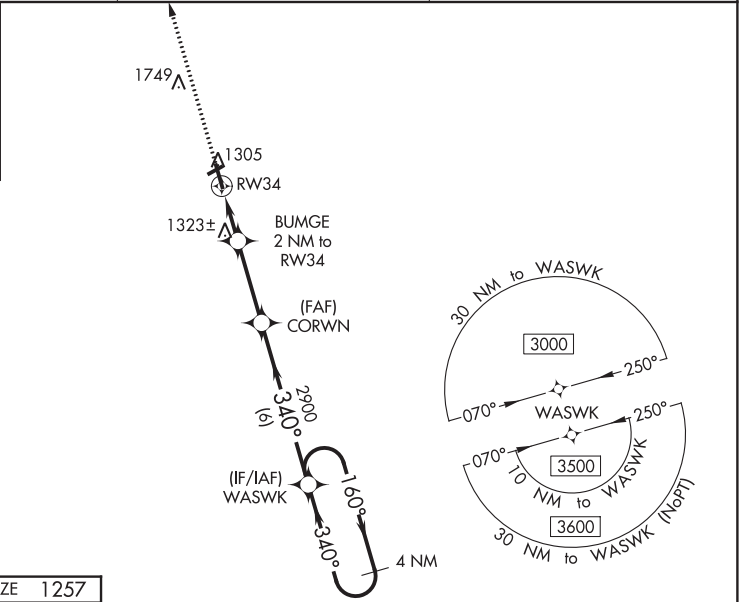
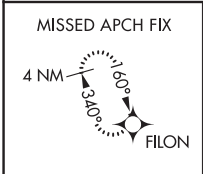
# RNAV (GPS) RWY 34

GWINNER-ROGER MELROE FIELD (GWR)

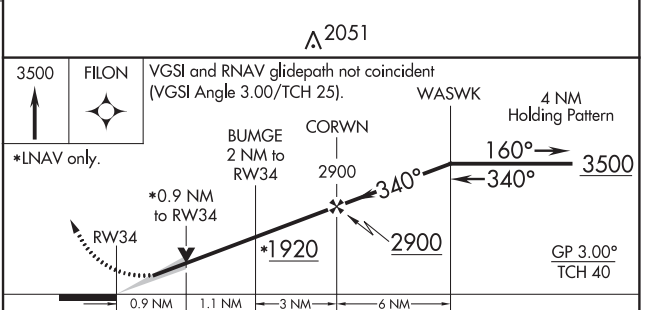
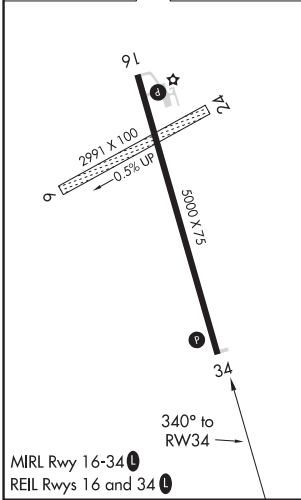
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received use Fargo altimeter setting and increase all DA 176 feet, all MDA 180 feet, increase LPV all Cats visibility 1/2 mile, LNAV/VNAV all Cats visibility 3/8 mile, increase LNAV Cat C/D visibility 3/8 mile and Circling Cat C visibility 3/4 mile and Cat D visibility 1/2 mile. Night Landing: Rwy 6, 24 NA. Baro-VNAV and VDP NA when using Fargo altimeter setting.

**MISSED APPROACH:**  
Climb to 3500 direct  
FILON and hold.

AWOS-3 <b>118.325</b>	MINNEAPOLIS CENTER <b>127.35 278.3</b>	UNICOM <b>122.7 (CTAF) 1</b>
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ELEV 1266	TDZE 1257
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CATEGORY	A	B	C	D
LPV DA		1457-3/4	200 (200-3/4)	
LNAV/VNAV DA		1507-7/8	250 (300-7/8)	
LNAV MDA		1580-1	323 (400-1)	
<b>C</b> CIRCLING	1720-1	454 (500-1)	1840-1 1/2 574 (600-1 1/2)	2060-2 1/2 794 (800-2 1/2)

GWINNER, NORTH DAKOTA  
Amdt 4 18SEP14

46°13'N-97°39'W

# RNAV (GPS) RWY 34

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>40333</b> <b>W13A</b>	APP CRS <b>135°</b>	Rwy Idg TDZE <b>820</b> Apt Elev <b>820</b>	<b>4007</b>
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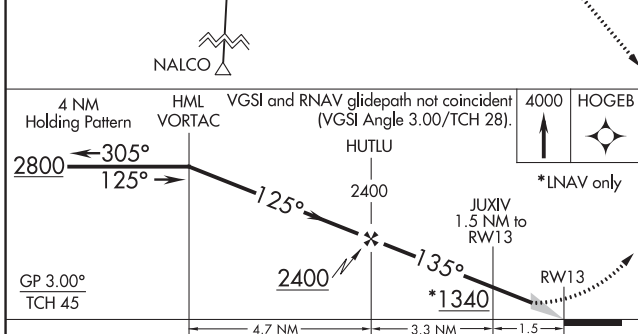
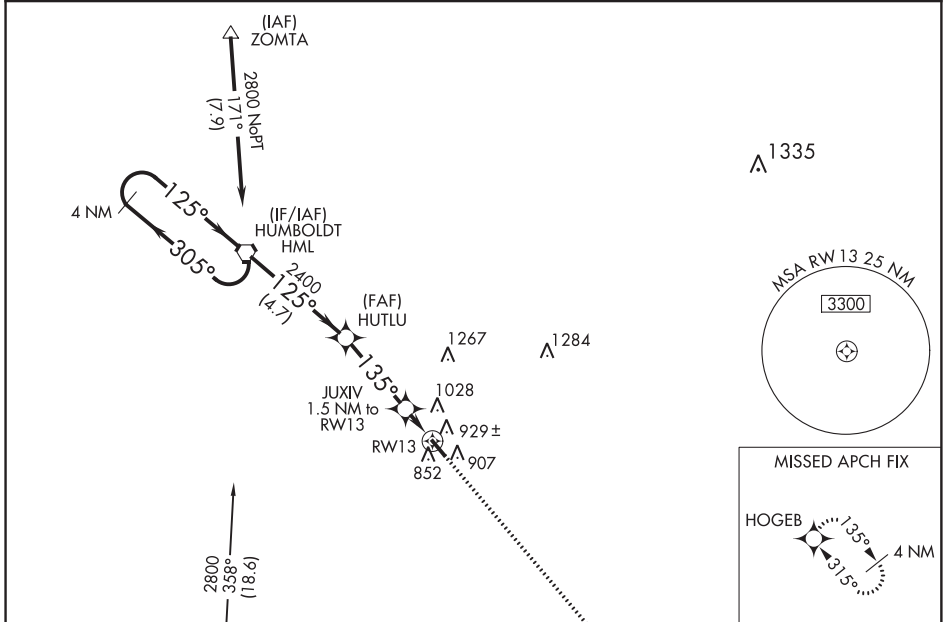
# RNAV (GPS) RWY 13

HALLOCK MUNI (HCO)

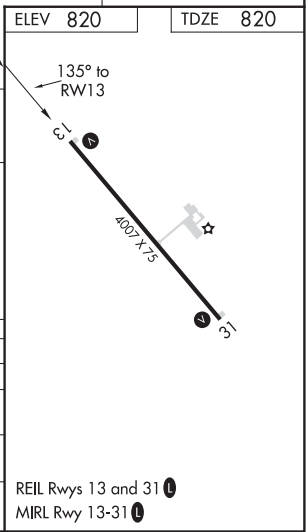
**Baro-VNAV NA. DME/DME RNP-0.3 NA.**  
 When local altimeter setting not received, use Grafton, ND altimeter setting and increase all DA 63 feet and all MDA 80 feet; increase LNAV/VNAV all Cats visibility 1/8 mile, LNAV Cat C visibility 3/8 mile; Circling Cat C visibility 1/4 mile.

**MISSED APPROACH:**  
 Climb to 4000 direct HOGEB and hold.

AWOS-3 <b>126.475</b>	MINNEAPOLIS CENTER <b>132.15 269.6</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
LPV DA	1070-1	250 (300-1)		NA
LNAV/VNAV DA	1213-1 3/8	393 (400-1 3/8)		NA
LNAV MDA	1180-1	360 (400-1)		NA
<b>C</b> CIRCLING	1380-1	560 (600-1)	1380-1 1/2 560 (600-1 1/2)	NA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

REIL Rwy 13 and 31  
 MIRL Rwy 13-31

WAAS CH <b>45933</b> <b>W31A</b>	APP CRS <b>315°</b>	Rwy Idg TDZE Apt Elev	<b>4007</b> <b>820</b> <b>820</b>
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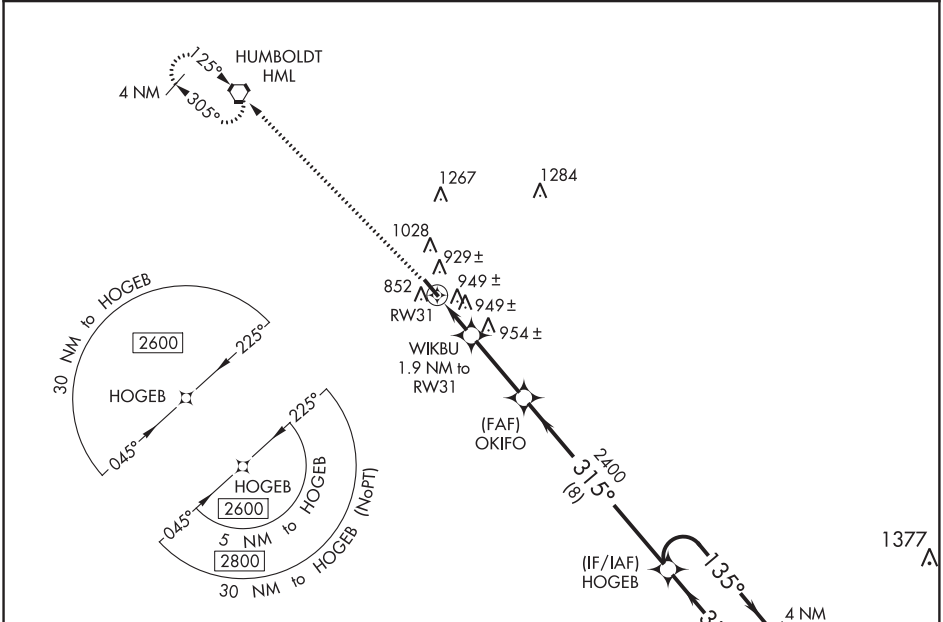
# RNAV (GPS) RWY 31

HALLOCK MUNI (HCO)

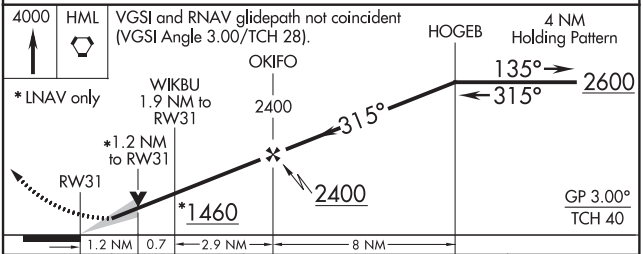
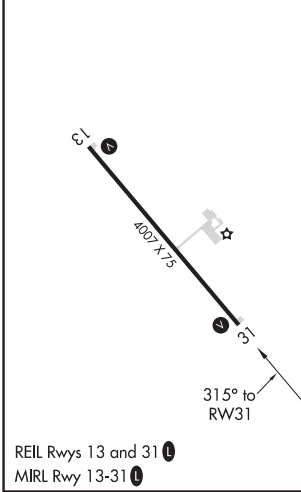
▼ Baro-VNAV NA. DME/DME RNP-0.3 NA. VDP NA with Grafton, ND altimeter setting.  
 ▲ When local altimeter setting not received, use Grafton, ND altimeter setting and increase all DA 63 feet and all MDA 80 feet; increase LNAV/VNAV all Cats, LNAV Cat C and Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 4000 direct HML VORTAC and hold, continue climb-in-hold to 4000.

AWOS-3 <b>126.475</b>	MINNEAPOLIS CENTER <b>132.15 269.6</b>	UNICOM <b>122.8 (CTAF) ①</b>
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ELEV 820	TDZE 820
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CATEGORY	A	B	C	D
LPV DA	1070-1	250 (300-1)		NA
LNAV/VNAV DA	1229-1 <sup>3</sup> / <sub>8</sub>	409 (500-1 <sup>3</sup> / <sub>8</sub> )		NA
LNAV MDA	1220-1	400 (400-1)	1220-1 <sup>1</sup> / <sub>8</sub> 400 (400-1 <sup>1</sup> / <sub>8</sub> )	NA
CIRCLING	1380-1	560 (600-1)	1380-1 <sup>1</sup> / <sub>2</sub> 560 (600-1 <sup>1</sup> / <sub>2</sub> )	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VORTAC HML <b>112.4</b> Chan <b>71</b>	APP CRS <b>306°</b>	Rwy Idg TDZE Apt Elev	<b>4007</b> <b>819</b> <b>819</b>
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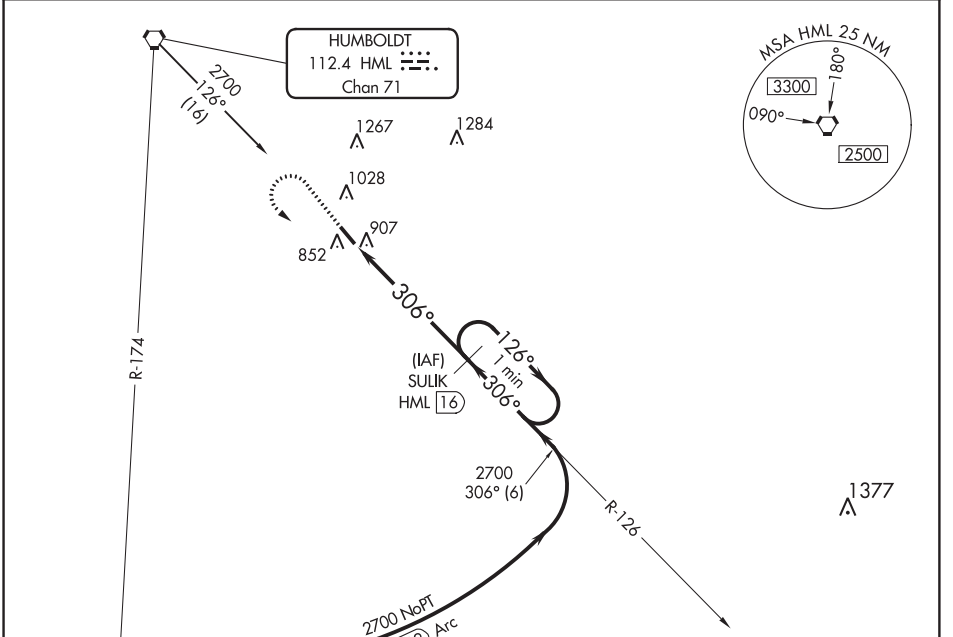
# VOR/DME RWY 31

HALLOCK MUNI (HCO)

**NA**

MISSED APPROACH: Climb to 2000 then climbing left turn to 2700 via HML R-126 to SULIK and hold.

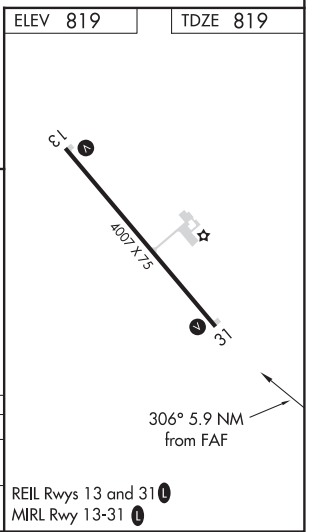
AWOS-3 <b>126.475</b>	MINNEAPOLIS CENTER <b>132.15 269.6</b>	UNICOM <b>122.8</b> (CTAF) <b>Q</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

2000	2700	SULIK	SULIK	
↑	HML R-126	HML 16	HML 16	One Minute Holding Pattern
	HML 10.2	HML 11.3	HML 126°/306°	2700
	1.2	4.7 NM	≤ 2.98° TCH 30	
CATEGORY	A	B	C	D
S-31	1220-1	401 (500-1)	1220-1¼	401 (500-1¼)
CIRCLING	1380-1	561 (600-1)	1380-1½	1380-2
			561 (600-1½)	561 (600-2)



APP CRS	Rwy Idg	<b>3600</b>
<b>112°</b>	TDZE	<b>1607</b>
	Apt Elev	<b>1607</b>

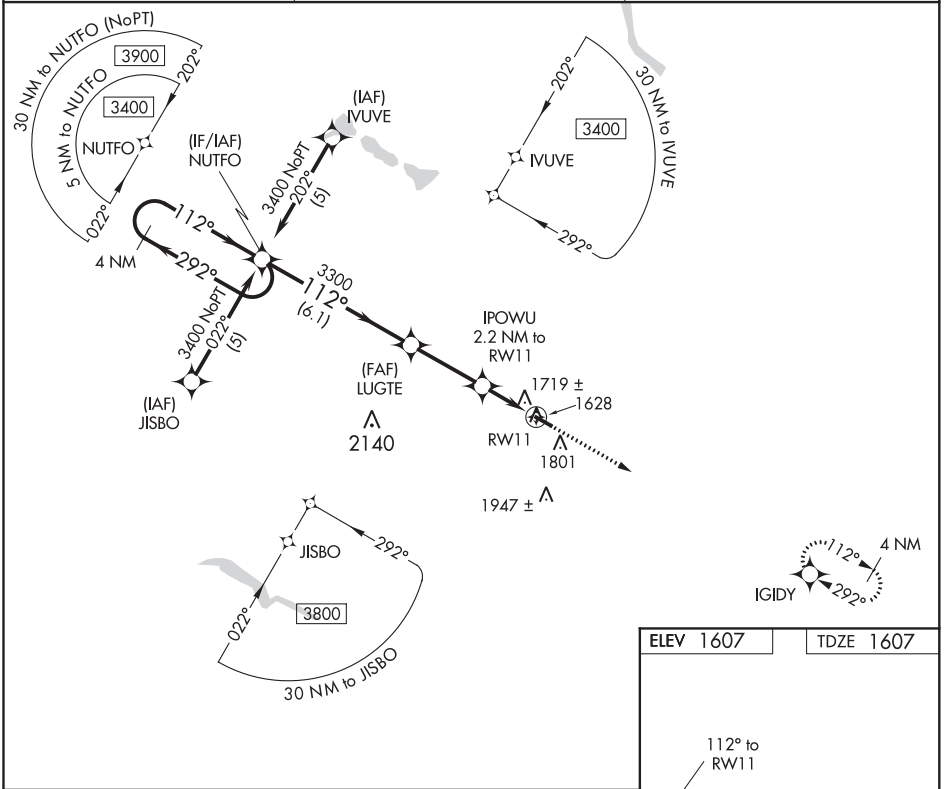
# RNAV (GPS) RWY 11

HARVEY MUNI (5H4)

**▽** DME/DME RNP-0.3 NA. Procedure NA at night.  
**▲** NA Visibility reduction by helicopters NA. When local altimeter setting not received; use Devil's Lake altimeter setting and increase all MDA 140 feet; increase LNAV Cat C visibility ½ mile and Circling Cat C visibility ¼ mile.

**MISSED APPROACH:** Climb to 3300 direct IGIDY and hold.

AWOS-3 <b>118.825</b>	MINNEAPOLIS CENTER <b>135.25 256.7</b>	UNICOM <b>122.8 (CTAF) 0</b>
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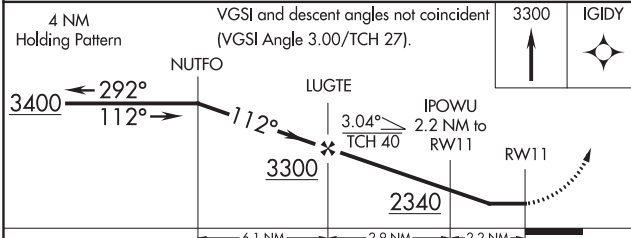


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1607	TDZE 1607
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**MIRL Rwy 11-29 0**



CATEGORY	A	B	C	D
LNAV MDA	1980-1 373 (400-1)			NA
CIRCLING	2100-1	493 (500-1)	2100-1½ 493 (500-1½)	NA

APP CRS	Rwy Idg	<b>3600</b>
<b>292°</b>	TDZE	<b>1607</b>
	Apt Elev	<b>1607</b>

# RNAV (GPS) RWY 29

HARVEY MUNI (5H4)

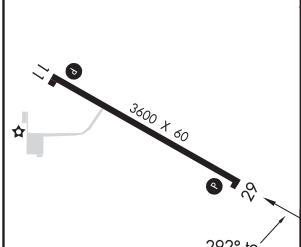
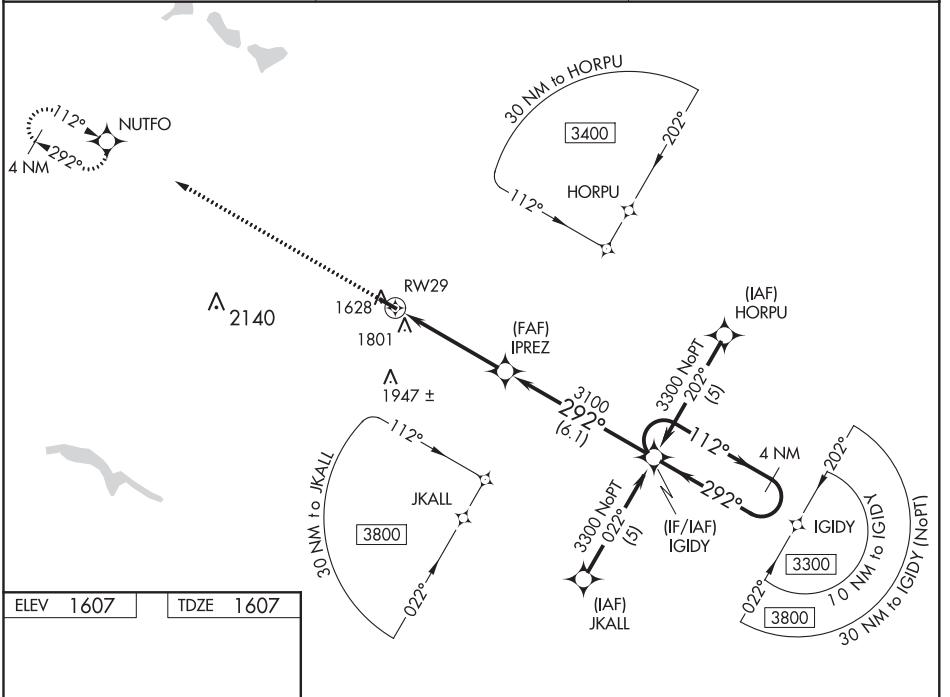
**NA** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). Circling to Rwy 11 NA at night. Baro-VNAV NA when using Devil's Lake altimeter setting. When local altimeter setting not received, use Devil's Lake altimeter setting and increase all DA 127 feet, and all MDA 140 feet; increase LNAV/VNAV visibility Cats A, B, C, and LNAV Cat C visibility ½ mile and Circling Cat C visibility ¼ mile. Procedure NA at night.

**MISSED APPROACH:**  
Climb to 3400 direct NUTFO and hold.

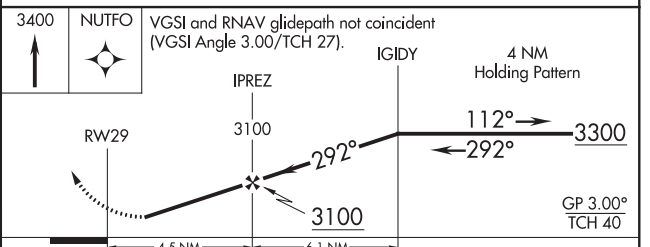
AWOS-3  
**118.825**

MINNEAPOLIS CENTER  
**135.25 256.7**

UNICOM  
**122.8 (CTAF) ①**



ELEV	1607	TDZE	1607
MIRL Rwy 11-29 ①			



CATEGORY	A	B	C	D
LNAV/VNAV DA	2119-1¾ 512 (600-1¾)			NA
LNAV MDA	2100-1	493 (500-1)	2100-1¼ 493 (500-1¼)	NA
CIRCLING	2100-1	493 (500-1)	2100-1½ 493 (500-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

HAWLEY, MINNESOTA

AL-6923 (FAA)

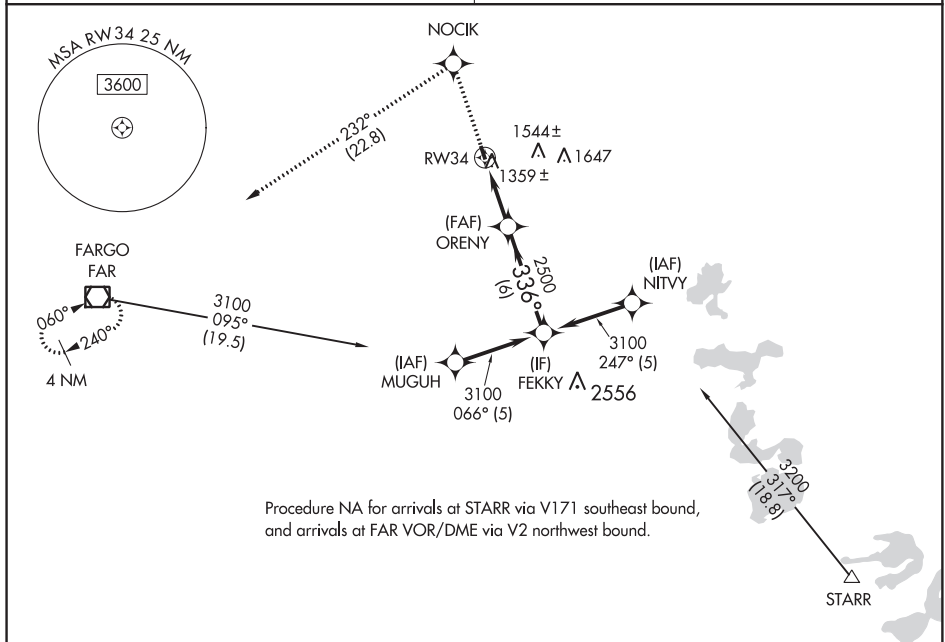
16315

APP CRS <b>336°</b>	Rwy Idg TDZE Apt Elev	<b>3398</b> <b>1207</b> <b>1210</b>
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# RNAV (GPS) RWY 34

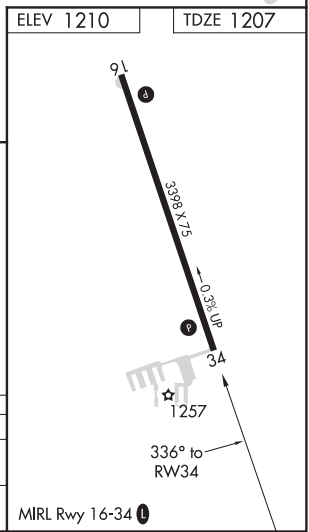
HAWLEY MUNI (Ø4Y)

<p><b>NA</b></p> <p>DME/DME RNP-0.3 NA. Use Fargo, ND altimeter setting.</p>	<p>MISSED APPROACH: Climb to 2700 direct NOCIK and left turn via 232° track to FAR VOR/DME and hold.</p>
<p>FARGO APP CON <b>120.4 377.15</b></p>	<p>UNICOM <b>122.8 (CTAF)</b></p>



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



<p>2700 ↑</p> <p>NOCIK</p> <p>232° tr</p> <p>FAR</p>	<p>FEKKY</p>			
<p>ORENY</p> <p>3100</p> <p>336°</p> <p>2500</p> <p>3.03° TCH 40</p> <p>3.9 NM</p> <p>6 NM</p>	<p>RW34</p>			
CATEGORY	A	B	C	D
RNAV MDA	1700-1	493 (500-1)	1700-1¼ 493 (500-1¼)	NA
CIRCLING	1760-1	550 (600-1)	1760-1½ 550 (600-1½)	NA

HAWLEY, MINNESOTA  
Orig-A 10NOV16

46°53'N-96°21'W

# RNAV (GPS) RWY 34

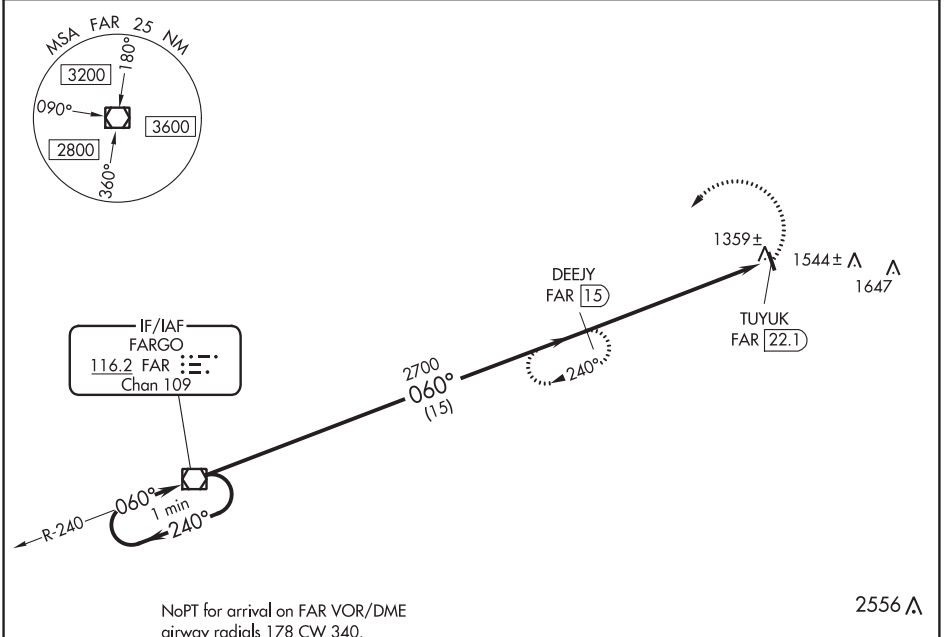
HAWLEY MUNI (Ø4Y)



VOR/DME FAR <b>116.2</b> Chan <b>109</b>	APP CRS <b>060°</b>	Rwy Idg TDZE Apt Elev <b>N/A</b> <b>N/A</b> <b>1210</b>
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**VOR/DME-A**  
HAWLEY MUNI (04Y)

<p>▼ Use Fargo, ND altimeter setting. ▲ NA</p>	<p>MISSED APPROACH: Climbing left turn to 2700 via FAR VOR/DME R-060 to DEEJY/15 DME and hold.</p>
<p>FARGO APP CON <b>120.4 377.15</b></p>	<p>UNICOM <b>122.8 (CTAF)</b></p>



One Minute Holding Pattern	FAR VOR/DME	DEEJY FAR 15	2700 FAR R-060	DEEJY FAR 15
2700 ← 240°	→ 060°	→ 2700	↘ 240°	
	15 NM	7.1 NM		
CATEGORY	A	B	C	D
CIRCLING	1760-1 550 (600-1)	1760-1¼ 550 (600-1¼)	1760-1½ 550 (600-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>48818</b> W14A	APP CRS <b>144°</b>	Rwy Idg TDZE <b>1787</b> Apt Elev <b>1814</b>
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# RNAV (GPS) RWY 14

MERCER COUNTY RGNL (HZE)

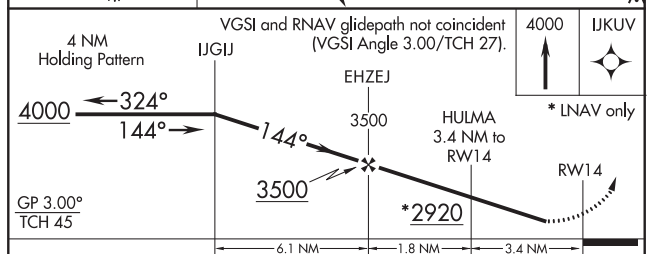
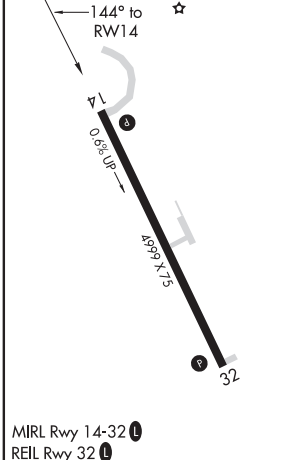
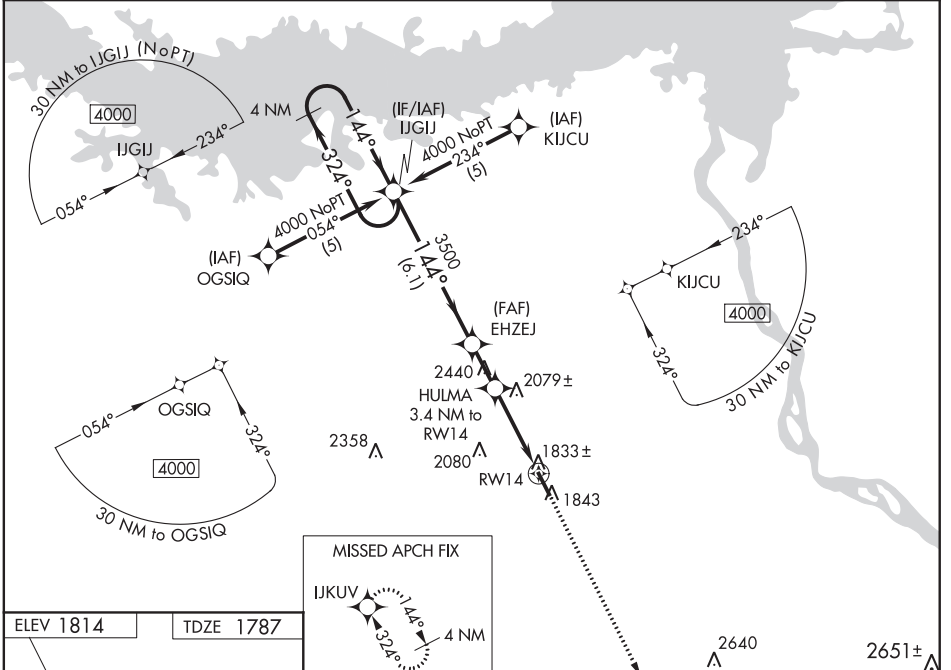
**⚠** When VGSI inoperative, procedure NA at night. Baro-VNAV NA. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Use Bismarck altimeter setting, when not received use Minot Intl altimeter setting and increase all DA 23 feet and all MDA 40 feet. Increase LPV and LNAV/VNAV visibility all Cats ¼ mile.

**⚠** NA

**❄** -41°C/-42°F

**MISSED APPROACH:** Climb to 4000 direct IJKUV and hold.

AWOS-3PT <b>118.675</b>	BISMARCK ASOS <b>119.35</b>	MINNEAPOLIS CENTER <b>124.25 380.3</b>	CTAF <b>122.8</b>
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CATEGORY	A	B	C	D
LPV DA	2165-1½		378 (400-1½)	NA
LNAV/VNAV DA	2231-1½		444 (500-1½)	NA
LNAV MDA	2460-1	673 (700-1)	2460-2 673 (700-2)	NA
CIRCLING	2460-1	646 (700-1)	2460-2 646 (700-2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>53318</b> <b>W32A</b>	APP CRS <b>324°</b>	Rwy Idg <b>4999</b> TDZE <b>1814</b> Apt Elev <b>1814</b>
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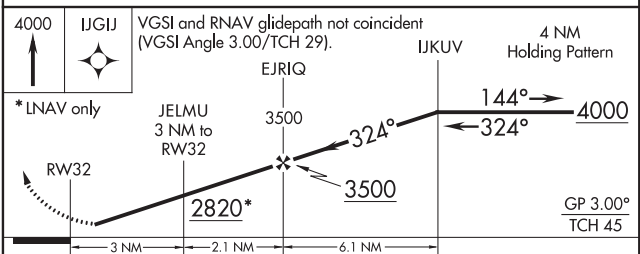
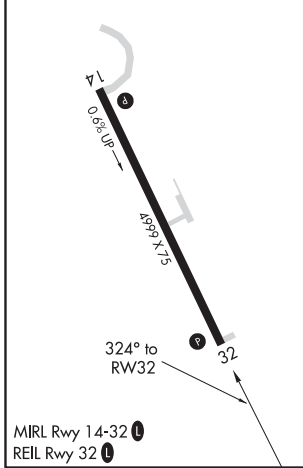
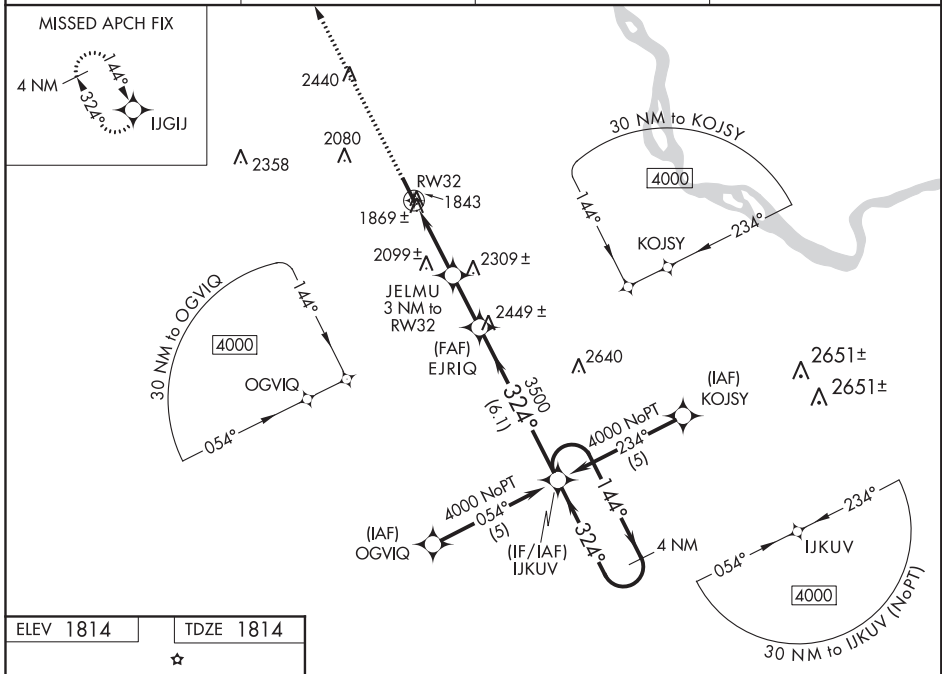
# RNAV (GPS) RWY 32

MERCER COUNTY RGNL (HZE)

When VGSi inoperative, procedure NA at night. Baro-VNAV NA.  
 DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.  
 Use Bismarck altimeter setting, when not received use Minot Int'l altimeter setting and increase all DA 23 feet and all MDA 40 feet.  
 -41°C/-42°F  
 Increase LPV all Cats, LNAV Cat C and Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 4000  
direct IJGIJ and hold.

AWOS-3PT <b>118.675</b>	BISMARCK ASOS <b>119.35</b>	MINNEAPOLIS CENTER <b>124.25 380.3</b>	CTAF <b>122.8</b>
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CATEGORY	A	B	C	D
LPV DA	2192-1½ 378 (400-1¼)			NA
LNAV/VNAV DA	2352-2 538 (600-2)			NA
LNAV MDA	2480-1 666 (700-1)	2480-1¼ 666 (700-1¼)		NA
CIRCLING	2480-1 666 (700-1)	2480-1¼ 666 (700-1¼)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

HETTINGER, NORTH DAKOTA

AL-6517 (FAA)

16147

WAAS CH <b>90140</b> <b>W12A</b>	APP CRS <b>128°</b>	Rwy Idg TDZE Apt Elev	<b>4652</b> <b>2706</b> <b>2706</b>
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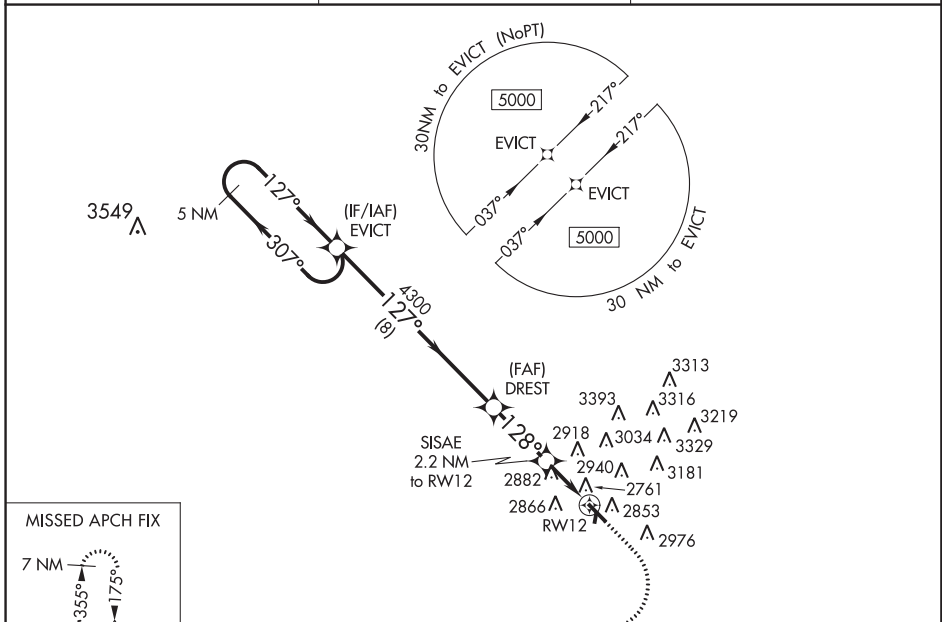
# RNAV (GPS) RWY 12

HETTINGER MUNI (HEI)

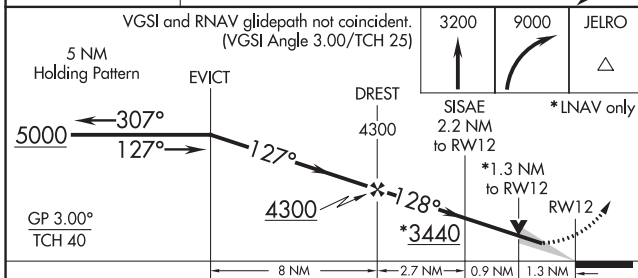
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C (-4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Circling NA northeast of Rwy 12-30. Circling NA to Rwys 17 and 35.

MISSED APPROACH: Climb to 3200, then climbing right turn to 9000 direct JELRO and hold, continue climb-in-hold to 9000.

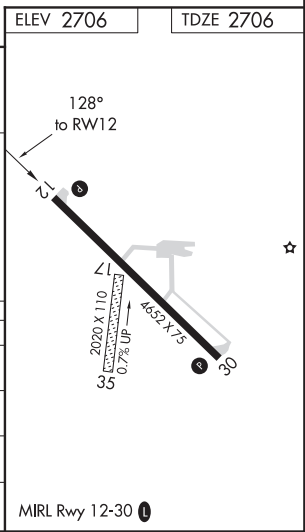
ASOS <b>119.925</b>	MINNEAPOLIS CENTER <b>124.25 380.3</b>	UNICOM <b>122.8 (CTAF)</b> <b>📻</b>
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ELEV 2706	TDZE 2706
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CATEGORY	A	B	C	D
LPV DA	2956-1		250 (300-1)	
LNAV/VNAV DA	3168-1½		462 (500-1½)	
LNAV MDA	3140-1	434 (500-1)	3140-1¼	434 (500-1¼)
<b>C</b> CIRCLING	3180-1 474 (500-1)	3240-1 534 (600-1)	3240-1½ 534 (600-1½)	3460-2½ 754 (800-2½)



HETTINGER, NORTH DAKOTA  
Orig 26MAY16

46°01'N-102°39'W

# HETTINGER MUNI (HEI) RNAV (GPS) RWY 12

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>82738</b> <b>W30A</b>	APP CRS <b>308°</b>	Rwy Idg <b>4652</b> TDZE <b>2706</b> Apt Elev <b>2706</b>
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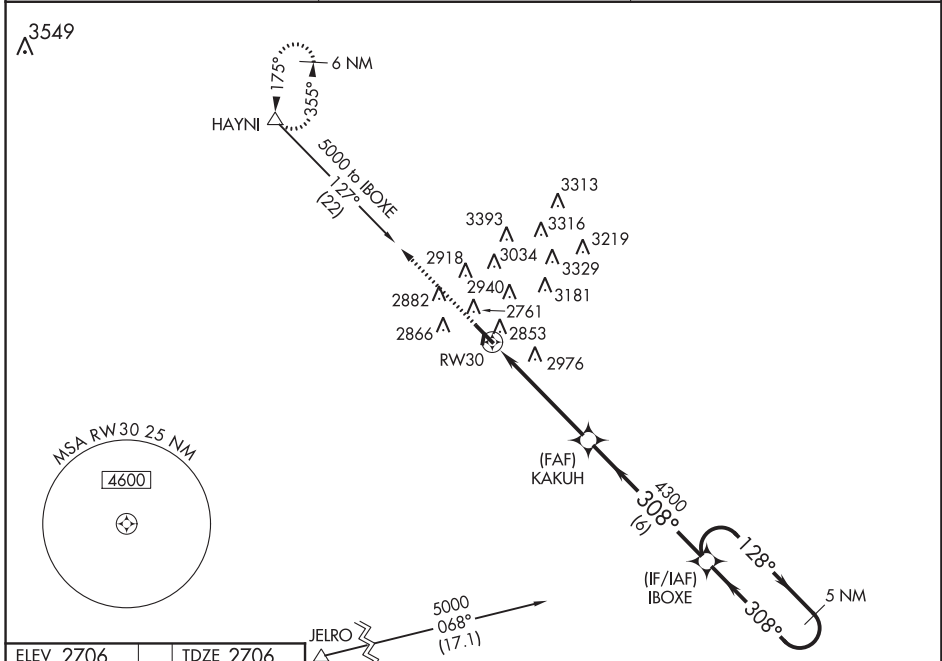
# RNAV (GPS) RWY 30

HETTINGER MUNI (HEI)

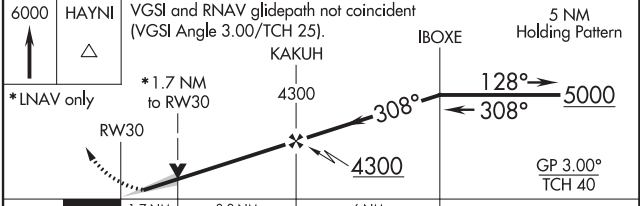
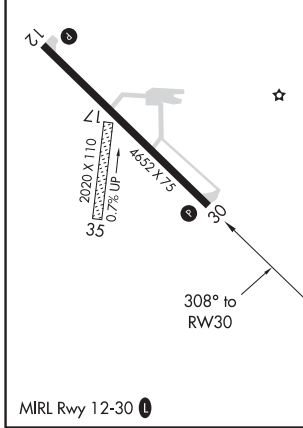
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C (-4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA.  
**⚠** Circling NA northeast of Rwy 12-30. Circling NA to Rwys 17 and 35.

MISSED APPROACH: Climb to 6000 direct HAYNI and hold, continue climb-in-hold to 6000.

ASOS <b>119.925</b>	MINNEAPOLIS CENTER <b>124.25 380.3</b>	UNICOM <b>122.8 (CTAF) ①</b>
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ELEV 2706	TDZE 2706
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CATEGORY	A	B	C	D
LPV DA	2956-1		250 (300-1)	
LNAV/VNAV DA	3233-1 $\frac{7}{8}$		527 (600-1 $\frac{7}{8}$ )	
LNAV MDA	3260-1	554 (600-1)	3260-1 $\frac{5}{8}$	554 (600-1 $\frac{5}{8}$ )
<b>C</b> CIRCLING	3260-1	554 (600-1)	3260-1 $\frac{5}{8}$ 554 (600-1 $\frac{5}{8}$ )	3460-2 $\frac{1}{2}$ 754 (800-2 $\frac{1}{2}$ )

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

HIBBING, MINNESOTA

AL-5159 (FAA)

16315

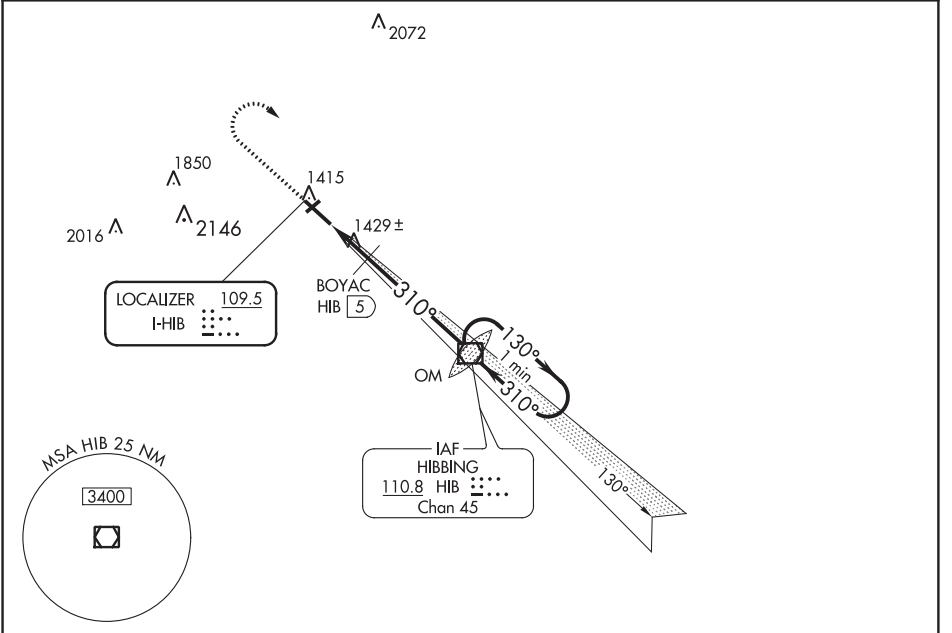
LOC I-HIB <b>109.5</b>	APP CRS <b>310°</b>	Rwy Idg <b>6758</b> TDZE <b>1343</b> Apt Elev <b>1353</b>
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# ILS or LOC RWY 31

RANGE RGNL (HIB)

-30°C/-22°F	For inop MALSR, increase BOYAC FIX minimums S-LOC 31 Cat D visibility to 1. # DME from HIB VOR/DME.	MALSR 	MISSED APPROACH: Climb to 2500 then climbing right turn to 3600 direct HIB VOR/DME and hold.
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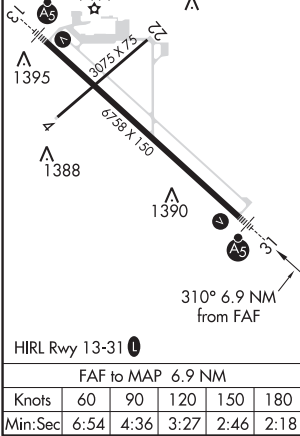
ASOS <b>126.425</b>	DULUTH APP CON <b>125.45 233.7</b>	CLNC DEL <b>127.4</b>	UNICOM <b>123.0 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1353	D	TDZE 1343	2500	3600	HIB	HIB VOR/DME OM	One Minute Holding Pattern
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	HIB 6.9	BOYAC HIB 5	3558	130°	3600	GS 2.90° TCH 60
*LOC only	1.9 NM	5 NM	1740*	310°	3600	
CATEGORY	A	B	C	D		
S-ILS 31	1543-½ 200 (200-½)					
S-LOC 31	1740-½ 397 (400-½)			1740-¾ 397 (400-¾)		
CIRCLING	1820-1 467 (500-1)	1840-1 487 (500-1)	1840-1½ 487 (500-1½)	1920-2 567 (600-2)		
# BOYAC FIX MINIMUMS						
S-LOC 31	1680-½ 337 (400-½)			1680-¾ 337 (400-¾)		
CIRCLING	1820-1 467 (500-1)	1840-1 487 (500-1)	1840-1½ 487 (500-1½)	1920-2 567 (600-2)		

HIBBING, MINNESOTA  
Amdt 13 27OCT05

47°23'N-92°50'W

# ILS or LOC RWY 31

RANGE RGNL (HIB)

LOC I-JAE <b>110.5</b>	APP CRS <b>130°</b>	Rwy Idg TDZE Apt Elev	<b>6758</b> <b>1354</b> <b>1354</b>
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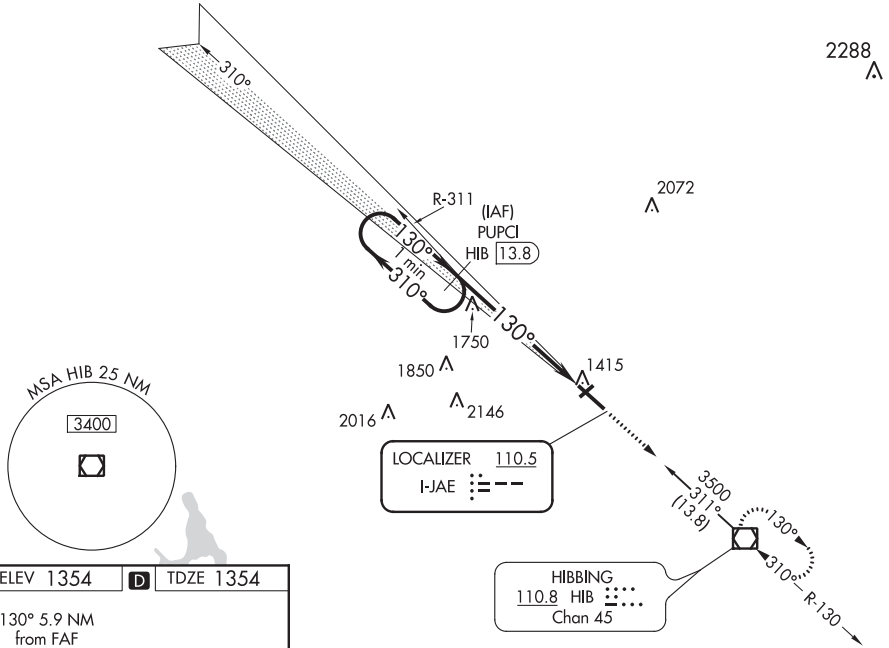
# ILS or LOC/DME RWY 13

RANGE RGNL (HIB)

Autopilot couple approach NA below 2388. -30°C/-22°F	MALSR	MISSED APPROACH: Climb to 3600 direct HIB VOR/DME and hold.
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ASOS <b>126.425</b>	DULUTH APP CON <b>125.45 233.7</b>	CLNC DEL <b>127.4</b>	UNICOM <b>123.0 (CTAF)</b>
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## DME REQUIRED



ELEV 1354	<b>D</b>	TDZE 1354
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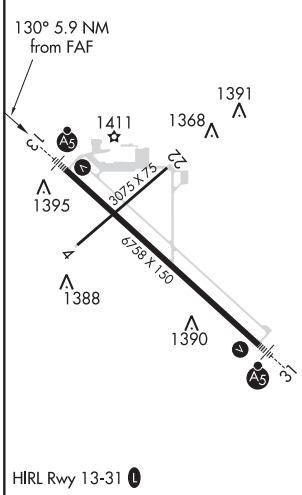


Diagram of the holding pattern and final approach segment:
 

- One Minute Holding Pattern at 3300 ft.
- Final approach slope: 3.00°.
- Threshold Crossing Height (TCH): 48 ft.
- Final approach distance: 5.9 NM.
- Altitudes: 3300, 3500.
- Localizer beam width: 3°.
- Localizer identifier: HIB 8.

CATEGORY	A	B	C	D
S-ILS 13	1554-1/2 200 (200-1/2)			
S-LOC 13	2060-1/2 706 (800-1/2)	2060-1 706 (800-1 1/2)	2060-1 706 (800-1 3/4)	2060-2 706 (800-2)
CIRCLING	2060-1 706 (800-1)	2060-1 706 (800-1 1/2)	2060-1 706 (800-1 1/2)	2060-2 706 (800-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

HIBBING, MINNESOTA

AL-5159 (FAA)

16315

APP CRS <b>047°</b>	Rwy Idg TDZE Apt Elev	<b>3075</b> <b>1350</b> <b>1353</b>
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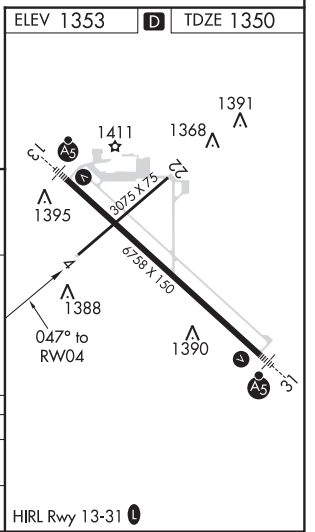
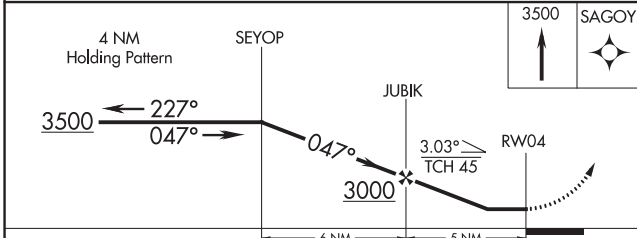
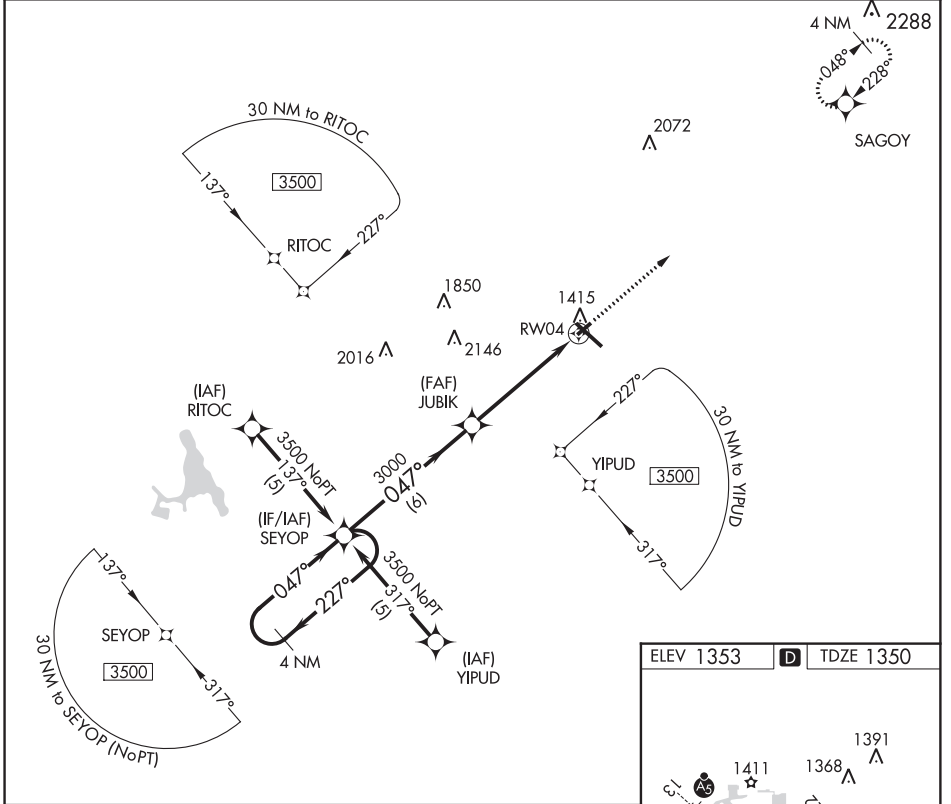
# RNAV (GPS) RWY 4

RANGE RGNL (HIB)

**⚠** Procedure not authorized at night.  
GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

**⚠** MISSED APPROACH: Climb to 3500 direct SAGOY WP and hold.

ASOS <b>126.425</b>	DULUTH APP CON <b>125.45 233.7</b>	CLNC DEL <b>127.4</b>	UNICOM <b>123.0 (CTAF)</b> <b>0</b>
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CATEGORY	A	B	C	D
LNAV MDA	1780-1	430 (500-1)	NA	
CIRCLING	1820-1 467 (500-1)	1840-1 487 (500-1)	NA	

HIBBING, MINNESOTA  
Orig 05AUG04

47°23'N-92°50'W

# RNAV (GPS) RWY 4

RANGE RGNL (HIB)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>69222</b> <b>W13A</b>	APP CRS <b>130°</b>	Rwy Idg TDZE Apt Elev	<b>6758</b> <b>1354</b> <b>1354</b>
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# RNAV (GPS) RWY 13

RANGE RGNL (HIB)

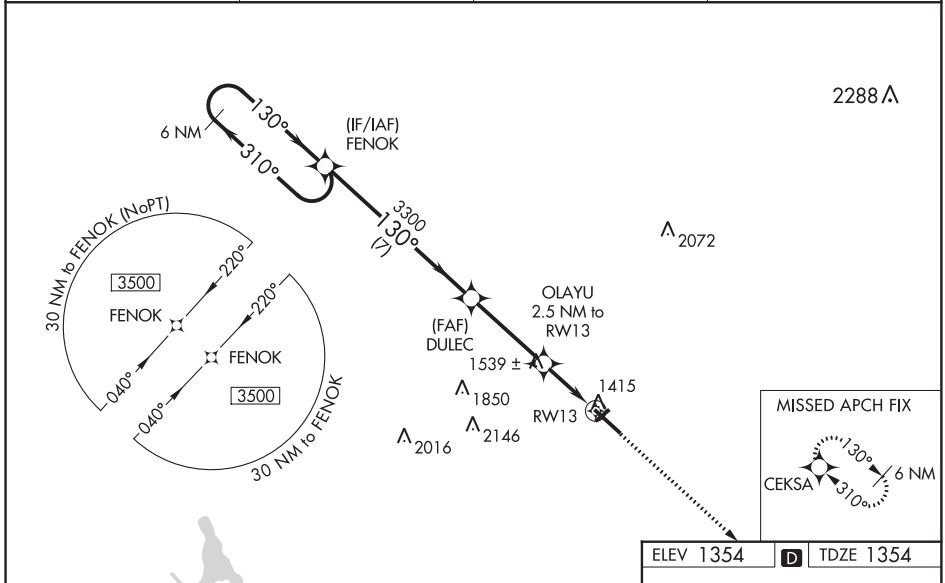
**⚠** Circling to Rwy 4 NA at night. DME/DME RNP-0.3 NA. VDP and Baro-VNAV NA when using Eveleth altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 35°C (95°F). Helicopter visibility reduction below ¾ SM NA. When local altimeter setting not received, use Eveleth altimeter setting and increase all DA 36 feet, and all MDA 40 feet, and increase LNAV Cat C/D visibility to 1 mile. Inop table does not apply to LPV and LNAV/VNAV all Cats. For inop MALSR, increase LNAV Cat A/B visibility to 1 mile. For inop MALSR when using Eveleth altimeter setting, increase LPV and LNAV/VNAV all Cats visibility to ¾.

**⚠** -30°C/-22°F



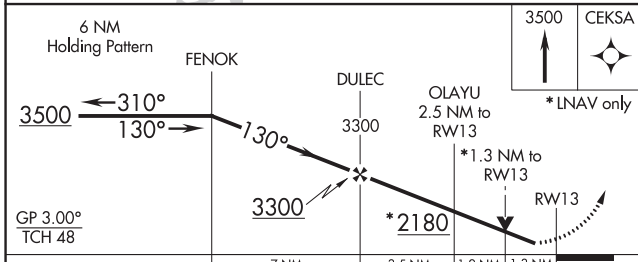
**MISSED APPROACH:**  
Climb to 3500 direct CEKSA and hold.

ASOS <b>126.425</b>	DULUTH APP CON <b>125.45 233.7</b>	CLNC DEL <b>127.4</b>	UNICOM <b>123.0 (CTAF) 0</b>
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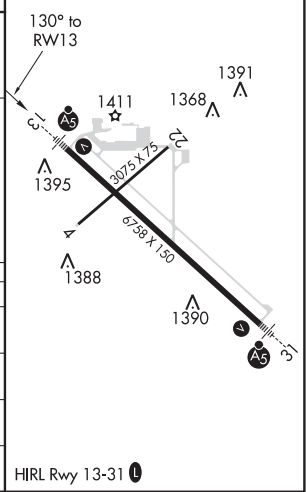


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 1354	<b>D</b>	TDZE 1354
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CATEGORY	A	B	C	D
LPV DA		1604-¾	250 (300-¾)	
LNAV/VNAV DA		1614-¾	260 (300-¾)	
LNAV MDA	1800-¾	446 (500-¾)	1800-7/8	446 (500-7/8)
CIRCLING	1820-1 466 (500-1)	1840-1 486 (500-1)	1840-1½ 486 (500-1½)	1920-2 566 (600-2)

HIBBING, MINNESOTA

AL-5159 (FAA)

16315

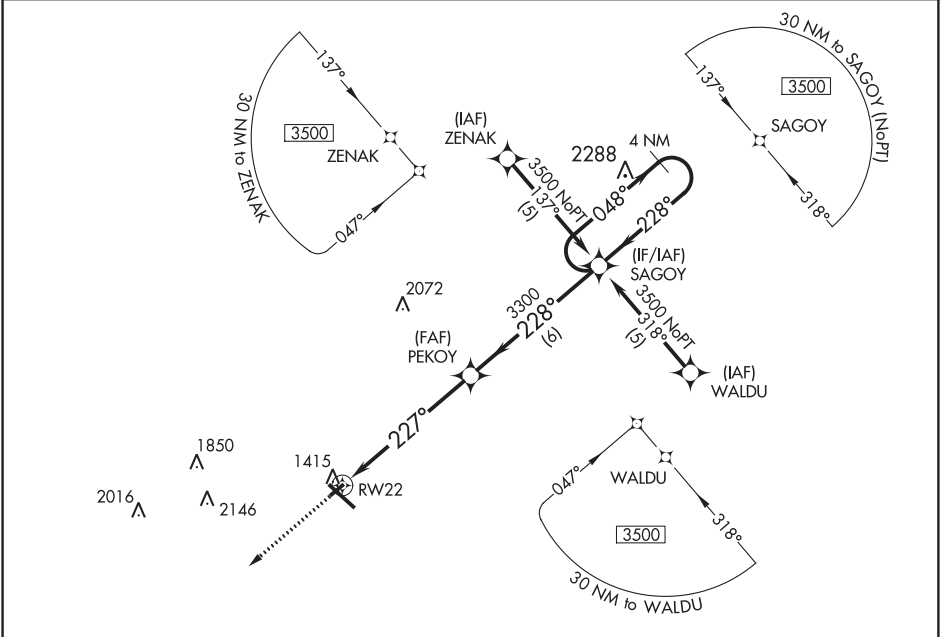
APP CRS <b>227°</b>	Rwy Idg TDZE Apt Elev	<b>3075</b> <b>1350</b> <b>1353</b>
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# RNAV (GPS) RWY 22

RANGE RGNL (HIB)

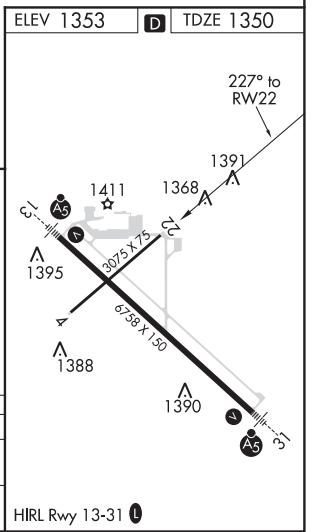
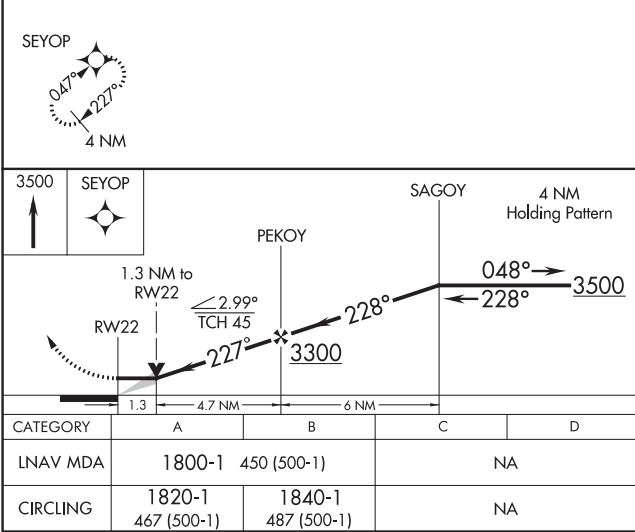
NA -30°C/-22°F	Procedure not authorized at night. GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.	MISSED APPROACH: Climb to 3500 direct SEYOP WP and hold.
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ASOS <b>126.425</b>	DULUTH APP CON <b>125.45 233.7</b>	CLNC DEL <b>127.4</b>	UNICOM <b>123.0 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



HIBBING, MINNESOTA  
 Orig-A 28OCT04

47°23'N - 92°50'W

RANGE RGNL (HIB)  
**RNAV (GPS) RWY 22**

WAAS CH <b>65722</b> <b>W31A</b>	APP CRS <b>310°</b>	Rwy Idg TDZE Apt Elev	<b>6758</b> <b>1345</b> <b>1354</b>
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# RNAV (GPS) RWY 31

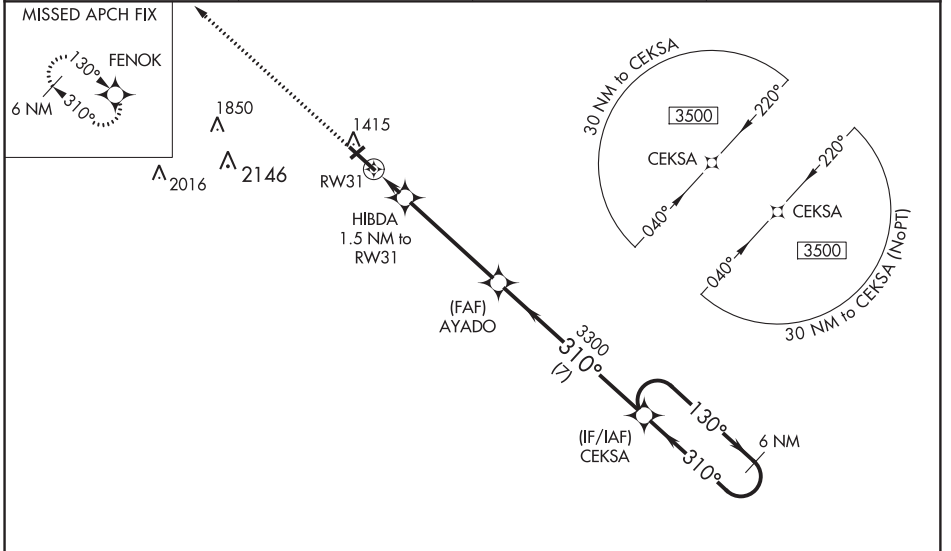
RANGE RGNL (HIB)

**▽** Circling to Rwy 4 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 35°C (95°F). DME/DME RNP-0.3 NA. VDP and Baro-VNAV NA when using Eveleth altimeter setting. When local altimeter setting not received, use Eveleth altimeter setting and increase all DA 36 feet and all MDA 40 feet. For inop MALSRs increase LNAV/VNAV all Cats visibility to ¾ mile, LNAV Cat C/D to 1 mile. For inop MALSRs when using Eveleth altimeter setting, increase LNAV/VNAV all Cats visibility to ⅞ mile.

**MALSR**  
A5

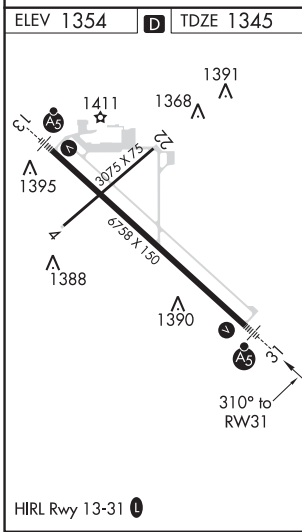
**MISSED APPROACH:**  
Climb to 3500 direct FENOK and hold.

ASOS <b>126.425</b>	DULUTH APP CON <b>125.45 233.7</b>	CLNC DEL <b>127.4</b>	UNICOM <b>123.0 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



3500	FENOK	VGSI and RNAV glidepath not coincident (VGSI Angle 2.90/TCH 60).		6 NM Holding Pattern
		HIBDA 1.5 NM to RW31	AYADO 3300	CEKSA
*LNAV only		*0.9 NM to RW31	*1860	3300
		0.9	0.6	4.5 NM
				7 NM
				130° → 3500
				← 310°
				GP 3.00° TCH 55
CATEGORY	A	B	C	D
LPV DA		1545-½	200 (200-½)	
LNAV/VNAV DA		1595-½	250 (300-½)	
LNAV MDA	1680-½	335 (400-½)	1680-⅝	335 (400-⅝)
CIRCLING	1820-1 466 (500-1)	1840-1 486 (500-1)	1840-1½ 486 (500-1½)	1920-2 566 (600-2)

16035

# AIRPORT DIAGRAM

AL-5159 (FAA)

RANGE RGNL (HIB)  
HIBBING, MINNESOTA

ASOS  
126.425  
CTAF/UNICOM  
123.000

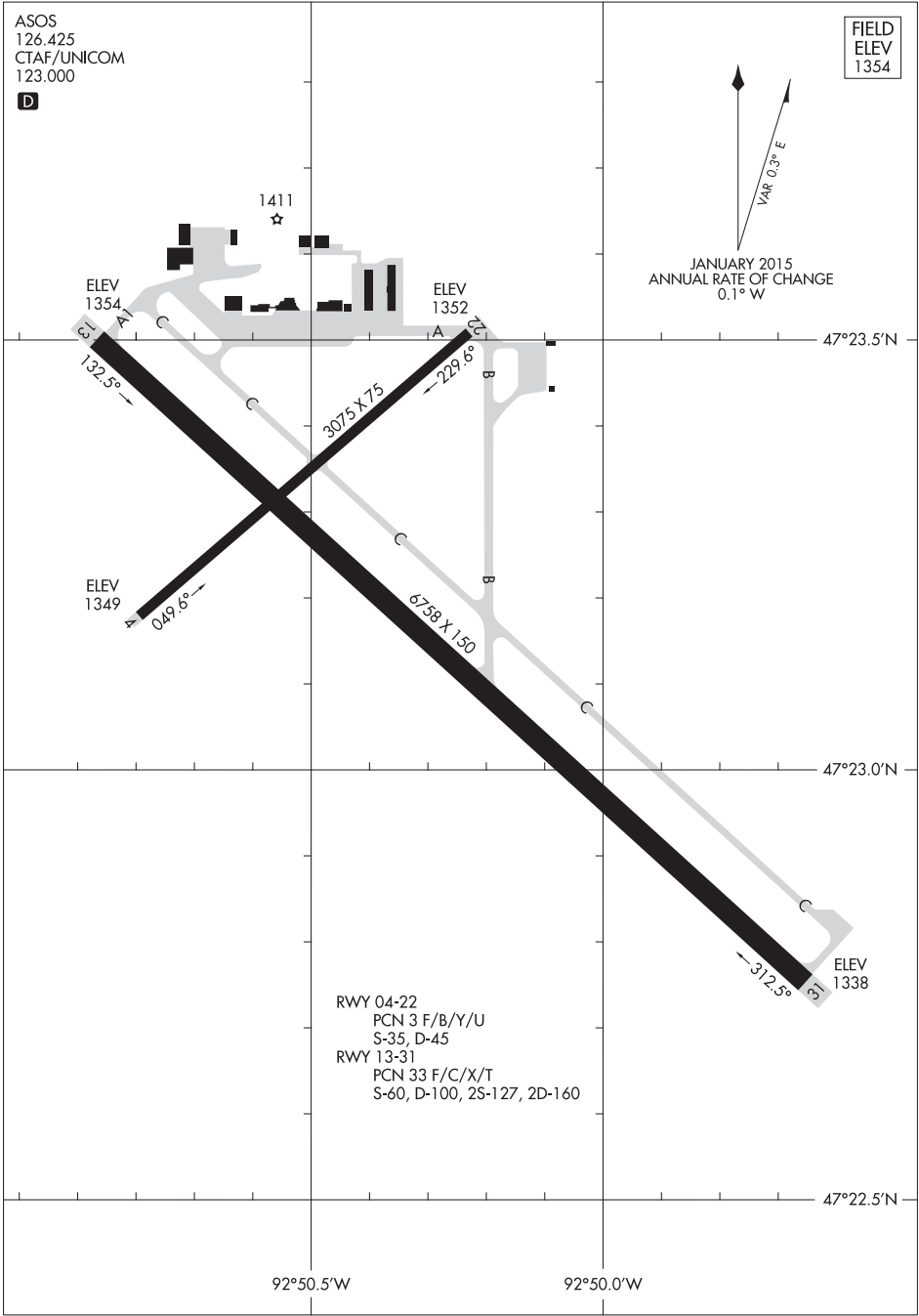


FIELD  
ELEV  
1354

JANUARY 2015  
ANNUAL RATE OF CHANGE  
0.1° W  
VAR 0.3° E

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



RWY 04-22  
PCN 3 F/B/Y/U  
S-35, D-45  
RWY 13-31  
PCN 33 F/C/X/T  
S-60, D-100, 2S-127, 2D-160

# AIRPORT DIAGRAM

16035

HIBBING, MINNESOTA  
RANGE RGNL (HIB)

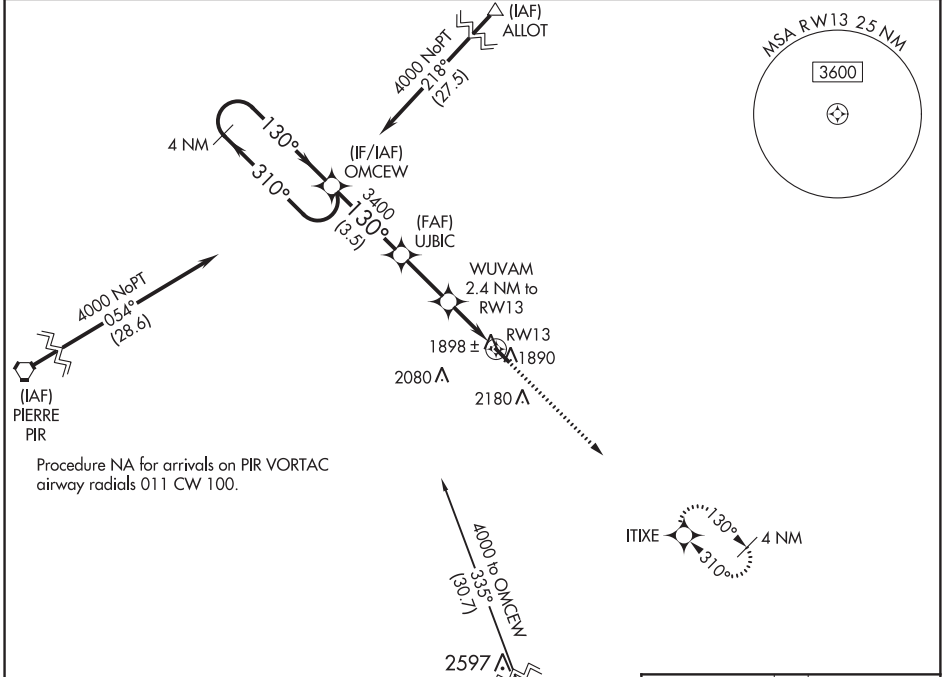
WAAS CH <b>72839</b> <b>W13A</b>	APP CRS <b>130°</b>	Rwy Idg TDZE Apt Elev	<b>3701</b> <b>1852</b> <b>1854</b>
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# RNAV (GPS) RWY 13

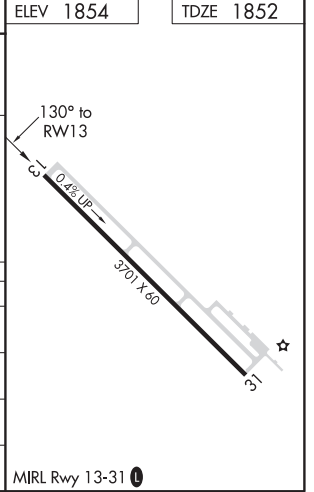
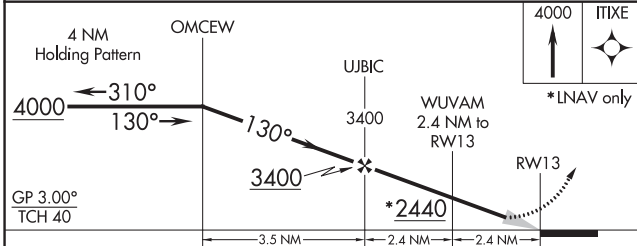
HIGHMORE MUNI (9D4)

NA Use Pierre altimeter setting, when not received, procedure NA. Baro-VNAV NA. DME/DME RNP-0.3 NA.	MISSED APPROACH: Climb to 4000 direct ITIXE and hold.

PIERRE RGNLASOS <b>119.025</b>	MINNEAPOLIS CENTER <b>125.1 269.1</b>	CTAF <b>122.9 0</b>
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ELEV 1854	TDZE 1852
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CATEGORY	A	B	C	D
LPV DA	2192-1½	351 (400-1½)		NA
LNAV/VNAV DA	2192-1½	351 (400-1½)		NA
LNAV MDA	2260-1	419 (500-1)		NA
CIRCLING	2460-1 606 (700-1)	2600-1 746 (800-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

HIGHMORE, SOUTH DAKOTA

AL-10432 (FAA)

16259

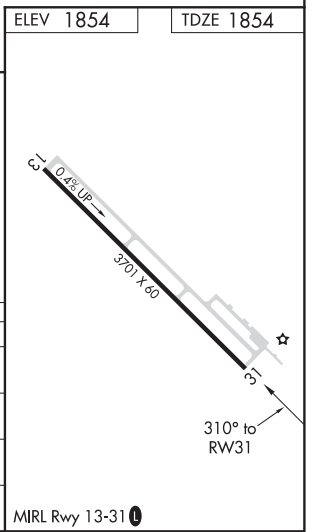
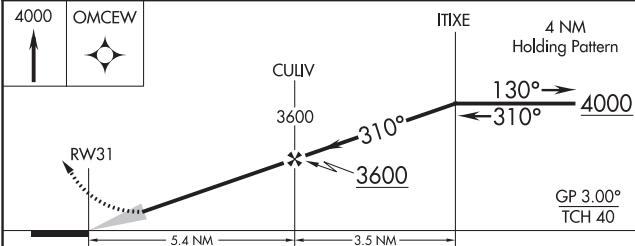
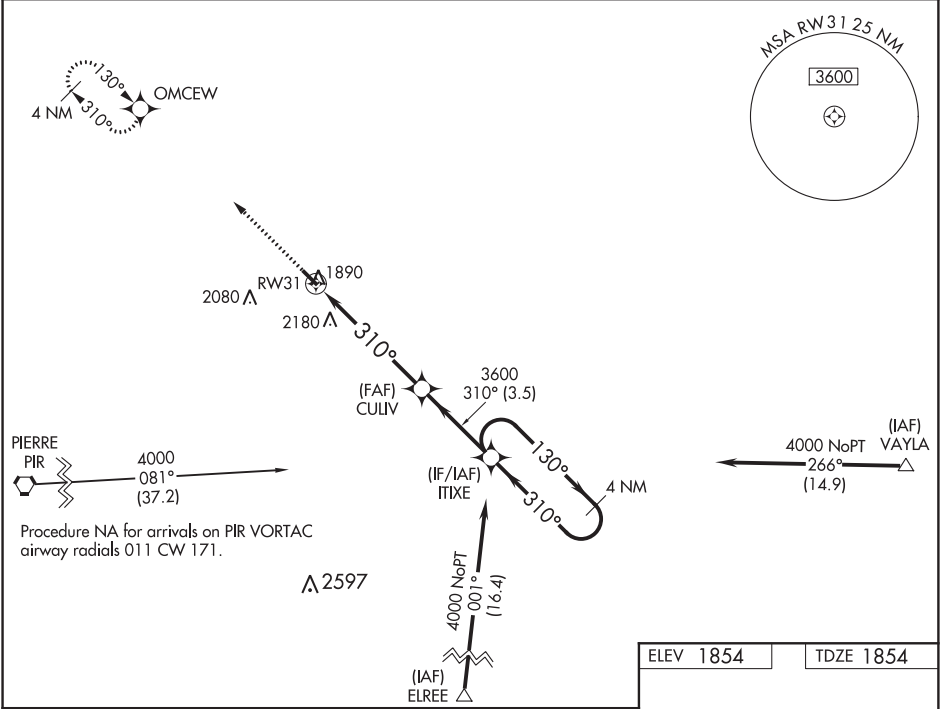
WAAS CH <b>40437</b> <b>W31A</b>	APP CRS <b>310°</b>	Rwy Idg TDZE Apt Elev	<b>3701</b> <b>1854</b> <b>1854</b>
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# RNAV (GPS) RWY 31

HIGHMORE MUNI (9D)

<p><b>NA</b> Baro-VNAV NA. DME/DME RNP-0.3 NA. Use Pierre altimeter setting; when not received, procedure NA.</p>	<p>MISSED APPROACH: Climb to 4000 direct OMCEW and hold.</p>
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<p>PIERRE RGNL ASOS <b>119.025</b></p>	<p>MINNEAPOLIS CENTER <b>125.1 269.1</b></p>	<p>CTAF <b>122.9</b></p>
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CATEGORY	A	B	C	D
LPV DA	2205-1 $\frac{1}{8}$	351 (400-1 $\frac{1}{8}$ )		NA
LNAV/VNAV DA	2519-2 $\frac{1}{2}$	665 (700-2 $\frac{1}{2}$ )		NA
LNAV MDA	2540-1	686 (700-1)		NA
<b>C</b> CIRCLING	2540-1 686 (700-1)	2600-1 746 (800-1)		NA

HIGHMORE, SOUTH DAKOTA  
Orig 15SEP16

44°32'N-99°27'W

# HIGHMORE MUNI (9D)

## RNAV (GPS) RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

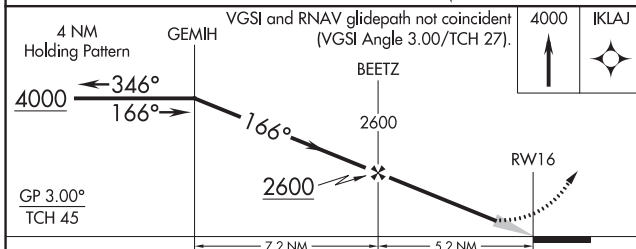
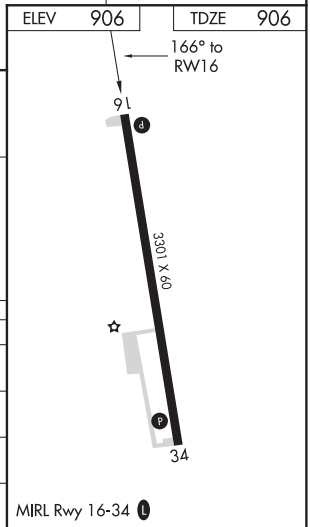
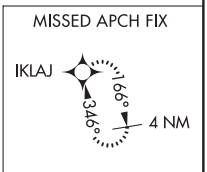
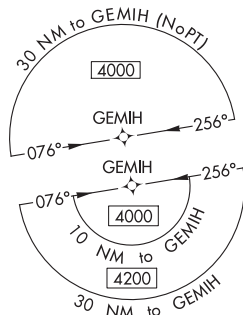
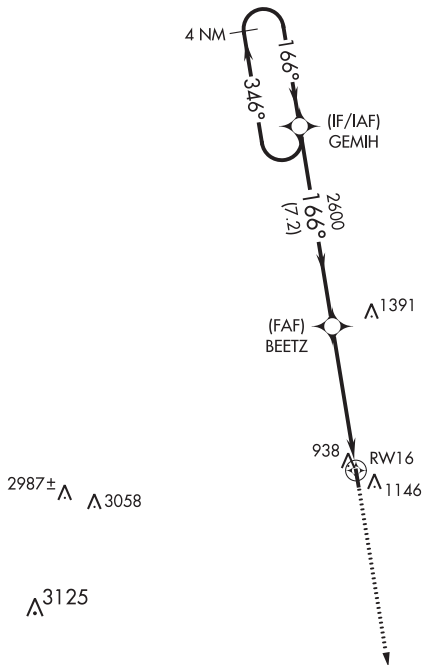
NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>86837</b> <b>W16A</b>	APP CRS <b>166°</b>	Rwy ldg TDZE Apt Elev	<b>3301</b> <b>906</b> <b>906</b>
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# RNAV (GPS) RWY 16

HILLSBORO MUNI (3H4)

<b>▽</b> Baro-VNAV NA. Use Fargo altimeter setting. <b>△</b> NA DME/DME RNP-0.3 NA.	MISSED APPROACH: Climb to 4000 direct IKLAJ and hold.	
FARGO ASOS <b>124.5</b>	FARGO APP CON <b>120.4 377.15</b>	CTAF <b>122.9 0</b>



CATEGORY	A	B	C	D
LPV DA	1222-1	316 (400-1)		NA
LNAV/VNAV DA	1255-1 $\frac{1}{8}$	349 (400-1 $\frac{1}{8}$ )		NA
LNAV MDA	1460-1	554 (600-1)	1460-1 $\frac{1}{8}$ 554 (600-1 $\frac{1}{8}$ )	NA
<b>C</b> CIRCLING	1520-1	614 (700-1)	1520-1 $\frac{3}{4}$ 614 (700-1 $\frac{3}{4}$ )	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>81937</b> <b>W34A</b>	APP CRS <b>346°</b>	Rwy Idg TDZE Apt Elev	<b>3301</b> <b>906</b> <b>906</b>
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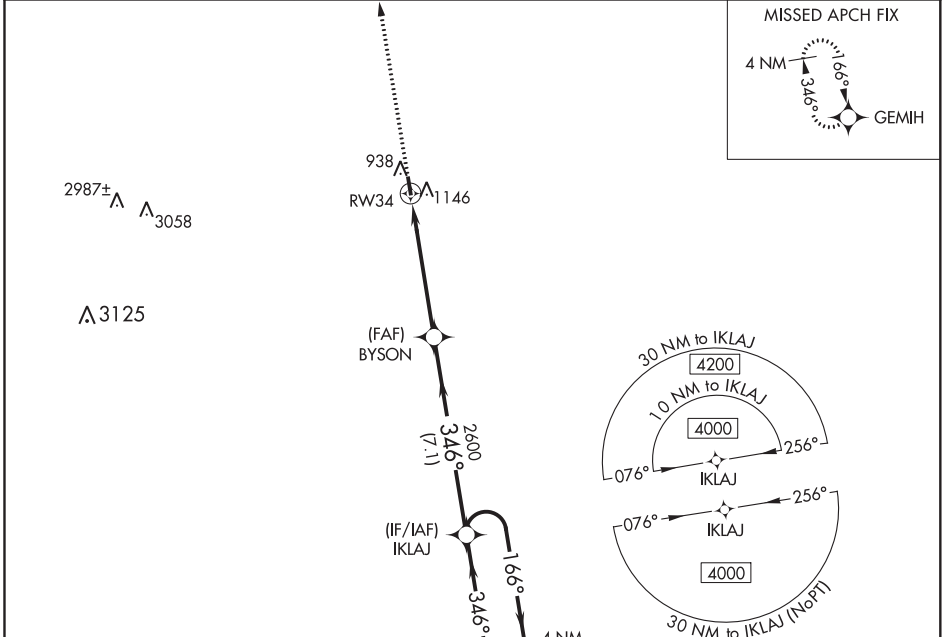
# RNAV (GPS) RWY 34

HILLSBORO MUNI (3H4)

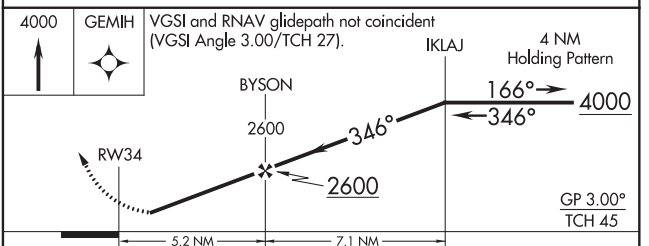
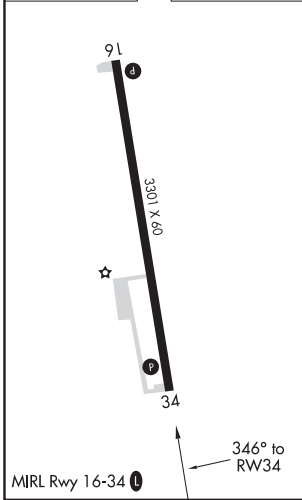
**▼** Use Fargo altimeter setting. DME/DME RNP-0.3 NA.  
**▲** NA Night Landing: Rwy 34 NA. Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 4000 direct GEMIH and hold.

FARGO ASOS <b>124.5</b>	FARGO APP CON <b>120.4 377.15</b>	CTAF <b>122.90</b>
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ELEV 906	TDZE 906
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CATEGORY	A	B	C	D
LPV DA	1222-1 316 (400-1)			NA
LNAV/VNAV DA	1362-1½ 456 (500-1½)			NA
LNAV MDA	1480-1	574 (600-1)	1480-1½ 574 (600-1½)	NA
<b>C</b> CIRCLING	1520-1	614 (700-1)	1520-1¾ 614 (700-1¾)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



APP CRS	Rwy Idg	<b>2561</b>
<b>065°</b>	TDZE	<b>1021</b>
	Apt Elev	<b>1021</b>

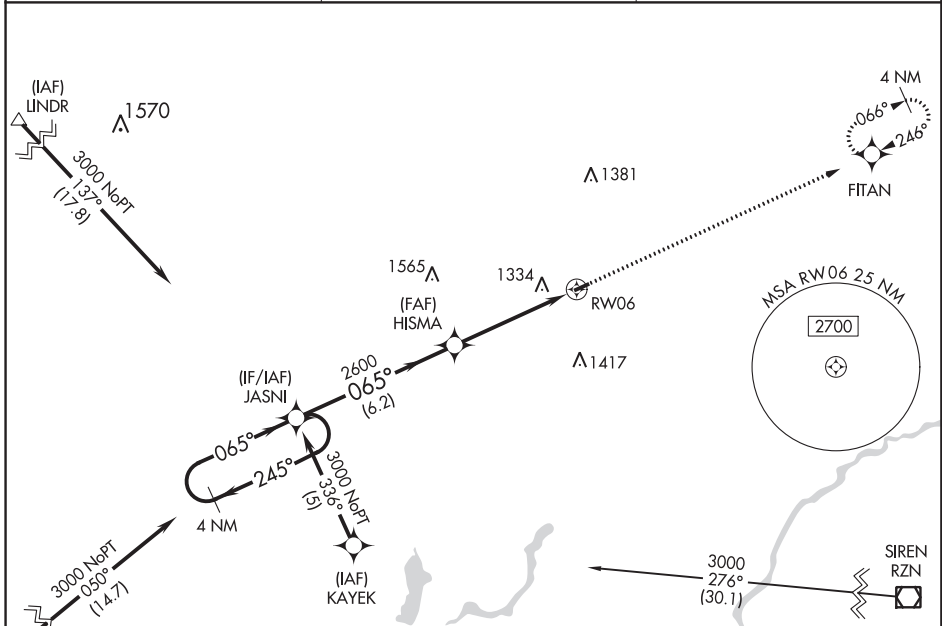
# RNAV (GPS) RWY 6

FIELD OF DREAMS (Ø4W)

**▽** DME/DME RNP-0.3 NA.  
**▲** NA VDP NA when using Mora altimeter setting.  
 When local altimeter setting not received, use Mora altimeter setting and increase all MDAs 60 feet.

**MISSED APPROACH:** Climb to 3000 direct FITAN and hold.

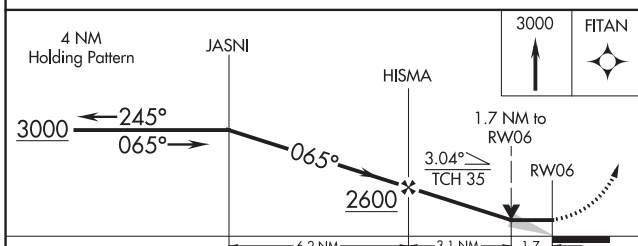
AWOS-3 <b>118.225</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	CTAF <b>122.9</b> <b>Ⓛ</b>
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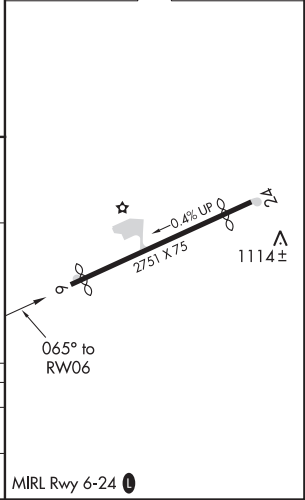
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

Procedure NA for arrivals at RZN VOR/DME via V505 and V13 northeast bound.



ELEV 1021	TDZE 1021
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CATEGORY	A	B	C	D
LNAV MDA	1600-1	579 (600-1)		NA
CIRCLING	1640-1	619 (700-1)		NA

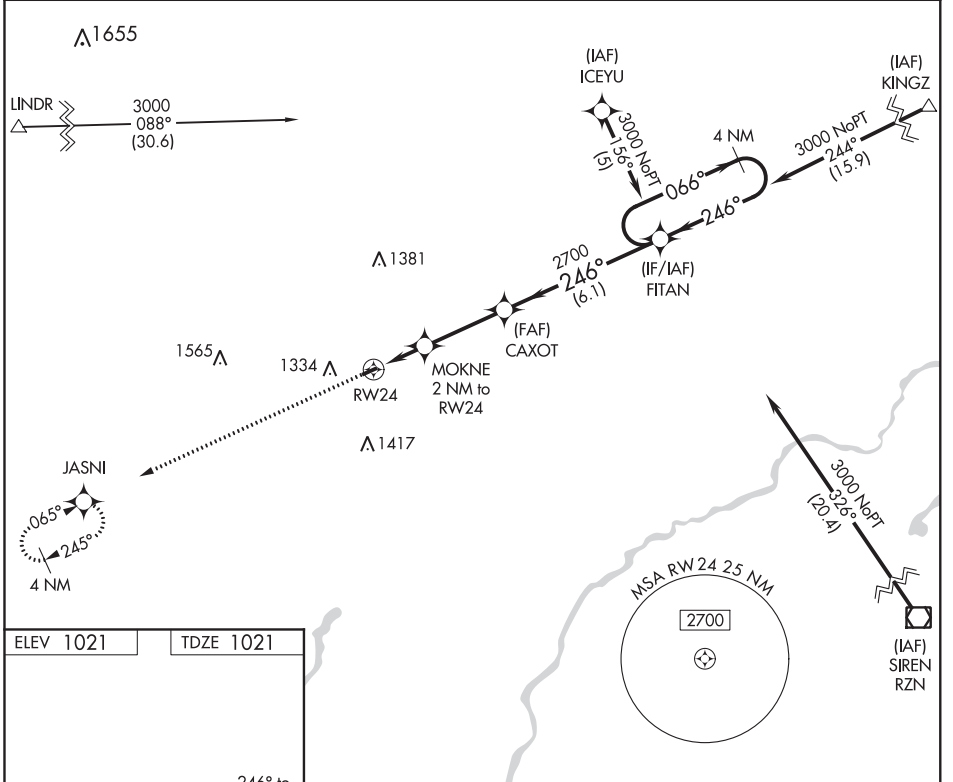
APP CRS <b>246°</b>	Rwy Idg <b>2357</b>
	TDZE <b>1021</b>
	Apt Elev <b>1021</b>

# RNAV (GPS) RWY 24

FIELD OF DREAMS (Ø4W)

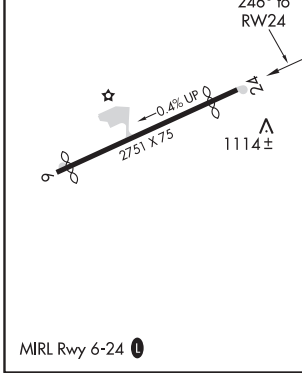
<p><b>▽</b> DME/DME RNP-0.3 NA.</p> <p><b>△</b> NA When local altimeter setting not received, use Mora altimeter setting and increase all MDAs 60 feet.</p> <p>VDP NA when using Mora altimeter setting.</p>	<p>MISSED APPROACH: Climb to 3000 direct JASNI and hold.</p>
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AWOS-3 <b>118.225</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	CTAF <b>122.9</b> <b>①</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



	3000	JASNI	MOKNE 2 NM to RW24	CAXOT	FITAN	4 NM Holding Pattern	3000
			1.3 NM to RW24	≤ 3.04° TCH 35	2700		
			1.3 NM	0.7	3.1 NM	6.1 NM	
CATEGORY	A	B	C	D			
LNAV MDA	1380-1	359 (400-1)		NA			
CIRCLING	1640-1	619 (700-1)		NA			

WAAS CH <b>99628</b> <b>W01A</b>	APP CRS <b>012°</b>	Rwy Idg TDZE Apt Elev	<b>4506</b> <b>3150</b> <b>3150</b>
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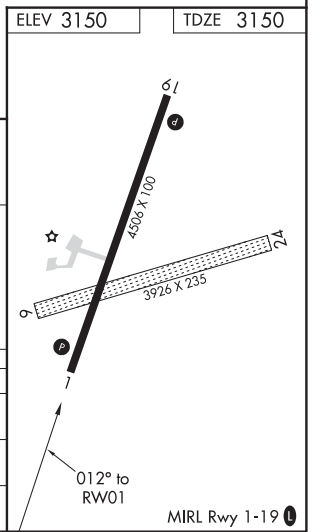
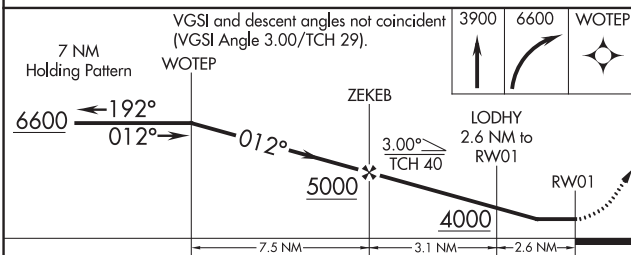
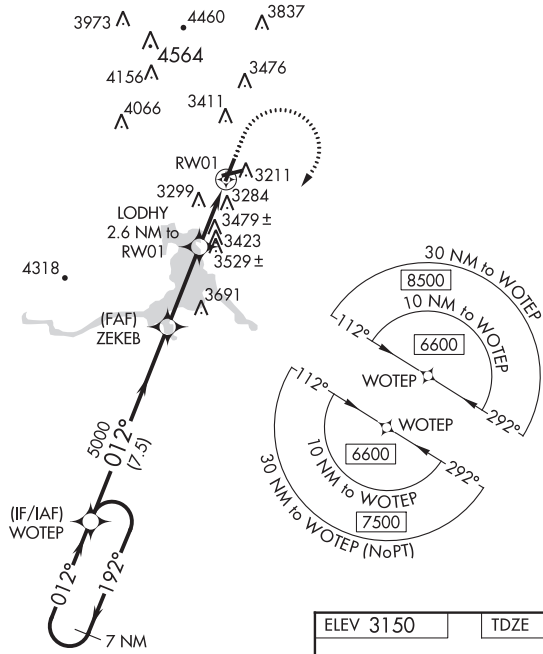
# RNAV (GPS) RWY 1

HOT SPRINGS MUNI (HSR)

**▽** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Circling NA west of Rwy 1-19. When VGSI inop, Circling/Straight-in Rwy 1 procedure NA at night. Use Chadron altimeter setting, when not received use Rapid City Regional altimeter setting and increase all MDA 20 feet, increase LNAV Cat C and Circling Cats B/C/D visibility ¼ mile.

**▲ NA** MISSED APPROACH: Climb to 3900, then climbing right turn to 6600 direct WOTEP and hold.

DENVER CENTER <b>127.95 338.2</b>	GCO <b>121.725</b>	AUNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LP MDA	3840-1 690 (700-1)		3840-2 690 (700-2)	
LNAV MDA	3880-1 730 (800-1)		3880-2 730 (800-2)	
CIRCLING	3880-1 730 (800-1)		3880-2 730 (800-2)	3900-2½ 750 (800-2½)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>56628</b> <b>W19A</b>	APP CRS <b>192°</b>	Rwy Idg TDZE Apt Elev	<b>4506</b> <b>3146</b> <b>3150</b>
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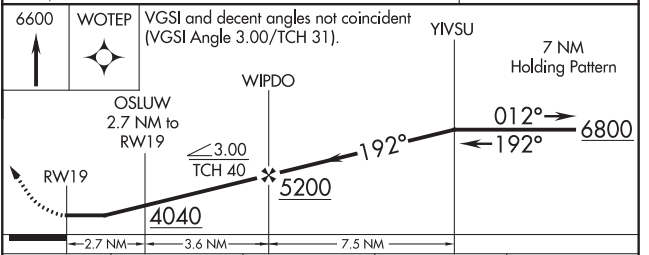
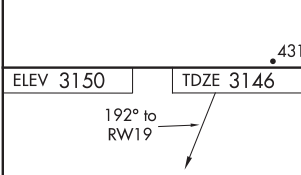
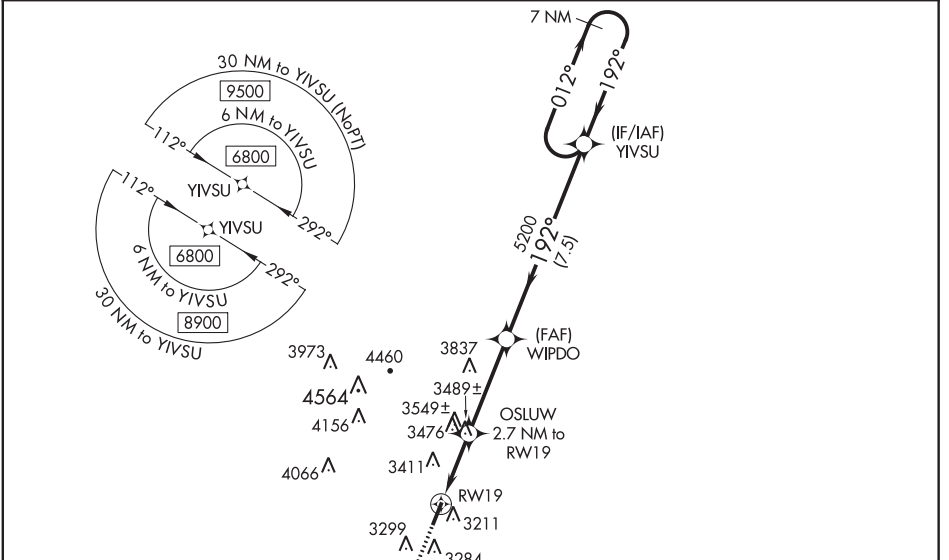
# RNAV (GPS) RWY 19

HOT SPRINGS MUNI (HSR)

**▼** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Circling NA west of Rwy 1-19.  
**▲** NA When VGSI inop, Circling/Straight-in Rwy 19 procedure NA at night. Use Chadron altimeter setting, when not received use Rapid City Rgnl altimeter setting and increase all MDA 20 feet, increase LNAV Cat C and D visibility 1/2 mile and Circling Cat C visibility 1/4 mile.

**MISSED APPROACH:**  
 Climb to 6600 direct WOTEP and hold.

DENVER CENTER <b>127.95 338.2</b>	GCO <b>121.725</b>	AUNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LP MDA	3840-1 694 (700-1)		3840-2 694 (700-2)	
LNAV MDA	3900-1 754 (800-1)	3900-1 754 (800-1 1/4)	3900-2 754 (800-2)	
CIRCLING	3900-1 750 (800-1)	3900-1 750 (800-1 1/4)	3900-2 750 (800-2 1/4)	3900-2 750 (800-2 1/2)

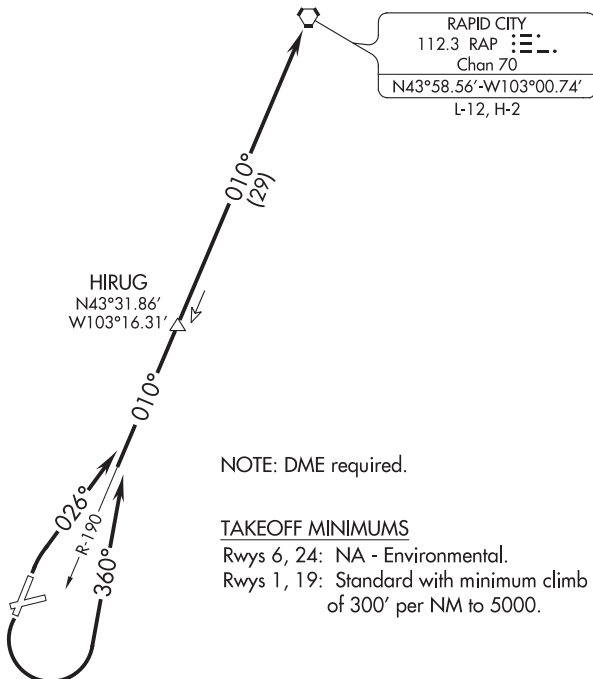
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# HOT SPRINGS TWO DEPARTURE

HOT SPRINGS MUNI (HSR)  
HOT SPRINGS, SOUTH DAKOTA

**TOP ALTITUDE:  
7000**



NOTE: DME required.

### TAKEOFF MINIMUMS

Rwys 6, 24: NA - Environmental.  
Rwys 1, 19: Standard with minimum climb of 300' per NM to 5000.

### TAKEOFF OBSTACLE NOTES

- Rwy 1: Terrain 55' from DER, 468' right of centerline, 3144' MSL.  
Vehicle on road beginning 312' from DER, left and right of centerline, up to 15' AGL/3154' MSL.  
Trees beginning 528' from DER, left and right of centerline, up to 100' AGL/3239' MSL.  
Trees 2.1 NM from DER, 3246' left of centerline, up to 100' AGL/3519' MSL.
- Rwy 19: Vehicle on road beginning 5' from DER, 369' left of centerline, up to 15' AGL/3161' MSL.  
Vehicle on road beginning 407' from DER, left and right of centerline, up to 15' AGL/3166' MSL.  
Poles beginning 607' from DER, left and right of centerline, up to 30' AGL/3181' MSL.  
Multiple trees and poles beginning 1875' from DER, left and right of centerline, up to 100' AGL/3281' MSL.  
Buildings 3031' from DER, 149' left of centerline, up to 20' AGL/3230' MSL.  
Fence beginning 3033' from DER, 559' left of centerline, up to 6' AGL/3236' MSL.  
Rising terrain beginning 3477' from DER, 545' left of centerline, up to 3241' MSL.  
Trees beginning 1.6 NM from DER, 764' left of centerline, up to 100' AGL/3489' MSL.  
Power lines beginning 1.4 NM from DER, 166' left of centerline, up to 120' AGL/3440' MSL.

NOTE: Chart not to scale.



### DEPARTURE ROUTE DESCRIPTION

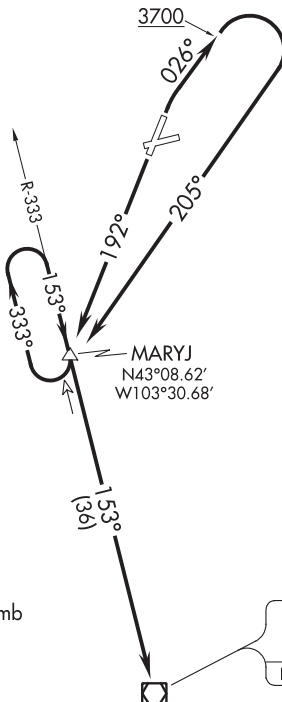
TAKEOFF RUNWAY 1: Climb heading 026° to intercept RAP VORTAC R-190 to RAP VORTAC, thence. . . .

TAKEOFF RUNWAY 19: Climbing left turn heading 360° to intercept RAP VORTAC R-190 to RAP VORTAC, thence. . . .

. . . .maintain 7000, expect filed altitude 10 minutes after departure.

# TOADSTOOL TWO DEPARTURE

**TOP ALTITUDE:  
7000**



NOTE: DME required.

### TAKEOFF MINIMUMS

Rwys 6, 24: NA - Environmental.  
Rwys 1, 19: Standard with minimum climb of 300' per NM to 7000.

### TAKEOFF OBSTACLE NOTES

- Rwy 1: Terrain 55' from DER, 468' right of centerline, 3144' MSL.  
Vehicle on road beginning 312' from DER, left and right of centerline, up to 15' AGL/3154' MSL.  
Trees beginning 528' from DER, left and right of centerline, up to 100' AGL/3239' MSL.  
Trees 2.1 NM from DER, 3246' left of centerline, up to 100' AGL/3519' MSL.
- Rwy 19: Vehicle on road beginning 5' from DER, 369' left of centerline, up to 15' AGL/3161' MSL.  
Vehicle on road beginning 407' from DER, left and right of centerline, up to 15' AGL/3166' MSL.  
Poles beginning 607' from DER, left and right of centerline, up to 30' AGL/3181' MSL.  
Multiple trees and poles beginning 1875' from DER, left and right of centerline, up to 100' AGL/3281' MSL.  
Buildings 3031' from DER, 149' left of centerline, up to 20' AGL/3230' MSL.  
Fence beginning 3033' from DER, 559' left of centerline, up to 6' AGL/3236' MSL.  
Rising terrain beginning 3477' from DER, 545' left of centerline, up to 3241' MSL.  
Trees beginning 1.6 NM from DER, 764' left of centerline, up to 100' AGL/3489' MSL.  
Power lines beginning 1.4 NM from DER, 166' left of centerline, up to 120' AGL/3440' MSL.

NOTE: Chart not to scale.

### DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 1: Climb heading 026° to 3700, then climbing right turn heading 205° to intercept TST VOR/DME R-333 to TST VOR/DME, thence. . . .

TAKEOFF RUNWAY 19: Climb heading 192° to intercept TST VOR/DME R-333 to TST VOR/DME, thence. . . .

. . . .maintain 7000, expect filed altitude 10 minutes after departure.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-HON <b>110.3</b> Chan <b>40</b>	APP CRS <b>121°</b>	Rwy Idg <b>7201</b> TDZE <b>1289</b> Apt Elev <b>1289</b>
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# ILS or LOC RWY 12

HURON RGNL (HON)

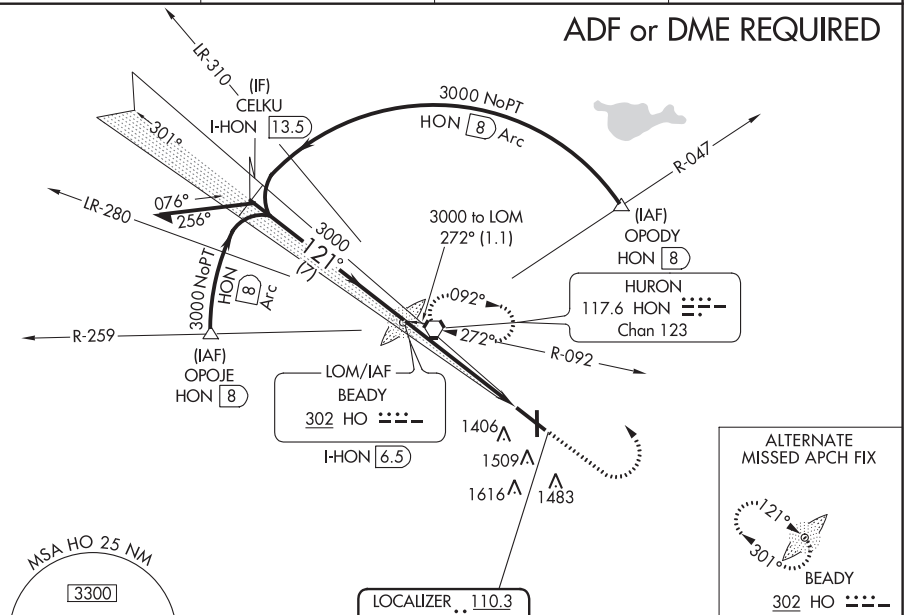
**⚠** For inoperative MALSR when using Mitchell altimeter setting increase S-ILS 12 all Cats visibility to 1 mile. When local altimeter setting not received, use Mitchell Muni altimeter setting and increase all DA 89 feet and all MDA 100 feet, increase S-LOC 12 Cats C and D visibility ¼ mile and Circling Cats C and D ¼ mile. VDP NA when using Mitchell altimeter setting.



MISSED APPROACH: Climb to 3000 then left turn direct HON VORTAC and hold.

ASOS <b>118.125</b>	MINNEAPOLIS CENTER <b>126.25 339.8</b>	CTAF <b>123.6</b>	UNICOM <b>123.0</b>
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## ADF or DME REQUIRED

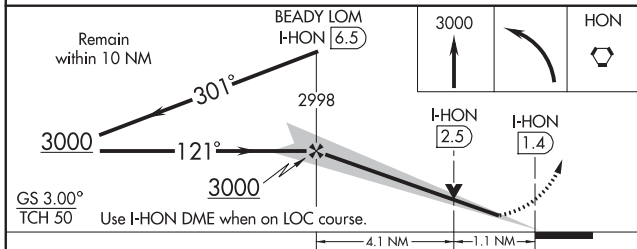


ELEV 1289 TDZE 1289

121° 5.1 NM from FAF HIRL Rwy 12-30  
MIRL Rwy 17-35  
REIL Rwys 17, 30 and 35

FAF to MAP 5.1 NM

Knots	60	90	120	150	180
Min:Sec	5:06	3:24	2:33	2:02	1:42



CATEGORY	A	B	C	D
S-ILS 12		1489-½	200 (200-½)	
S-LOC 12		1680-½	391 (400-½)	1680-¾ 391 (400-¾)
CIRCLING	1820-1	531 (600-1)	1820-1½ 531 (600-1½)	1980-2¼ 691 (700-2¼)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>70314</b> <b>W12A</b>	APP CRS <b>121°</b>	Rwy Idg TDZE <b>1289</b> Apt Elev <b>1289</b>	<b>7201</b>
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# RNAV (GPS) RWY 12

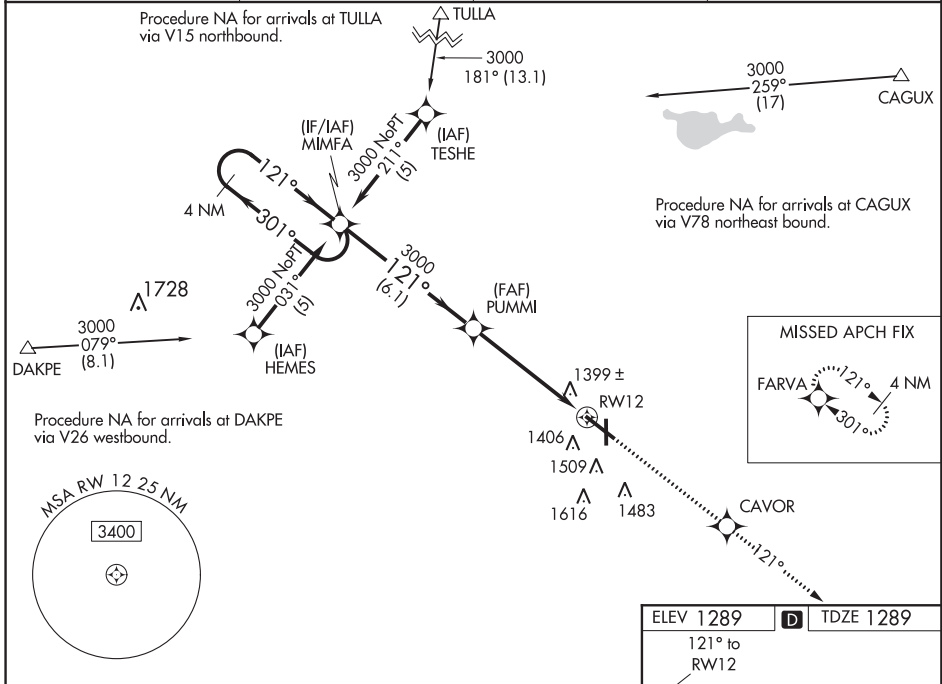
HURON RGNL (HON)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. Baro-VNAV and VDP NA when using Mitchell Muni altimeter setting. When local altimeter setting not received, use Mitchell Muni altimeter setting and increase all DA 89 feet and all MDA 100 feet. Increase LNAV/VNAV all Cats, LNAV and Circling Cat C/D visibility ¼ mile. For inoperative MALSR when using Mitchell Muni altimeter setting increase LPV all Cats visibility to 1 mile.



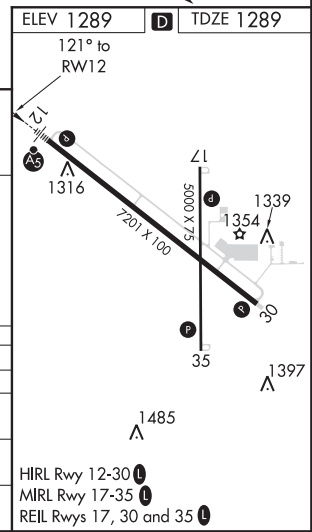
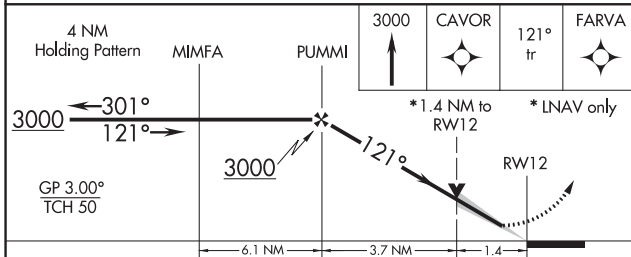
**MISSED APPROACH:**  
Climb to 3000 direct CAVOR and via 121° track to FARVA and hold.

ASOS <b>118.125</b>	MINNEAPOLIS CENTER <b>126.25 339.8</b>	CTAF <b>123.6</b>	UNICOM <b>123.0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D
LPV DA	1489-1/2 200 (200-1/2)			
LNAV/VNAV DA	1699-1 410 (500-1)		1699-1 1/2 410 (500-1 1/2)	
LNAV MDA	1780-1/2 491 (500-1/2)		1780-3/4 491 (500-3/4)	
CIRCLING	1820-1 531 (600-1)		1820-1 1/2 531 (600-1 1/2)	
			1780-1 491 (500-1)	
			1980-2 1/4 691 (700-2 1/4)	



WAAS CH <b>77514</b> <b>W30A</b>	APP CRS <b>301°</b>	Rwy Idg TDZE Apt Elev	<b>7201</b> <b>1286</b> <b>1289</b>
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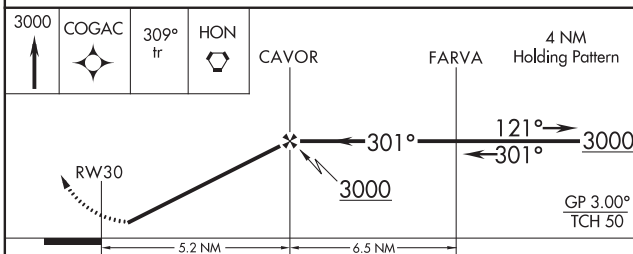
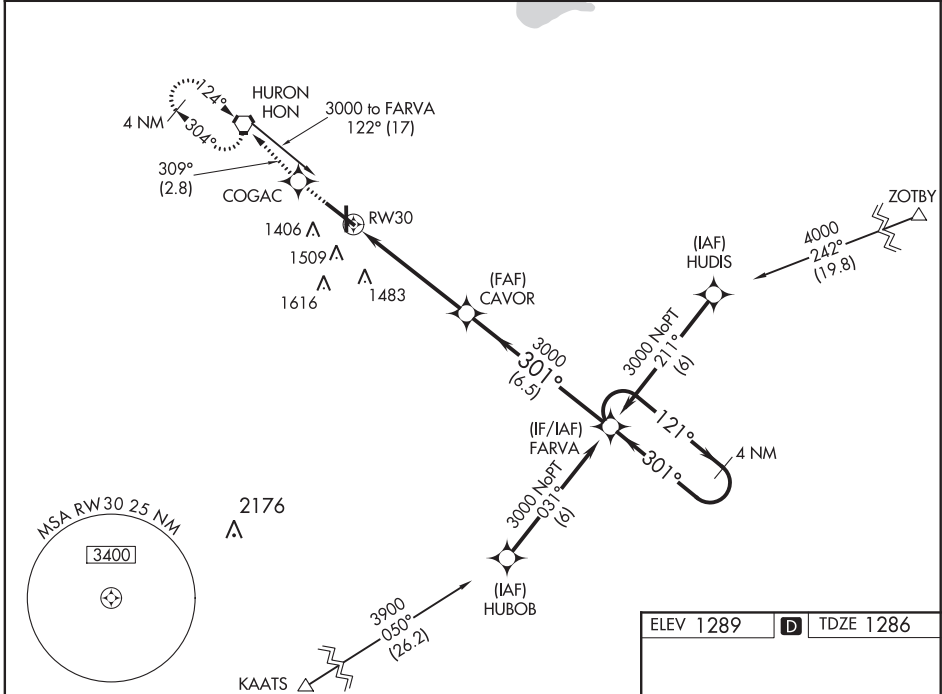
# RNAV (GPS) RWY 30

HURON RGNL (HON)

**⚠** DME/DME RNP-0.3 NA. When local altimeter setting not received, use Mitchell Muni altimeter setting and increase all DA 89 feet and all MDA 100 feet, increase LPV and LNAV/VNAV all Cats, LNAV Cats C/D, and Circling Cats C/D visibility ¼ mile. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). Baro-VNAV NA when using Mitchell Muni altimeter setting.

**⚠** MISSED APPROACH: Climb to 3000 direct COGAC and via 309° track to HON VORTAC and hold.

ASOS <b>118.125</b>	MINNEAPOLIS CENTER <b>126.25 339.8</b>	CTAF <b>123.6</b>	UNICOM <b>123.0</b>
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ELEV 1289	<b>D</b> TDZE 1286
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Detailed diagram of RWY 30 showing the runway layout, taxiway (X100), and various altitudes (1316, 1339, 1354, 1397, 1485). The diagram also shows the 301° track to RWY 30 and the 35° track to RWY 35.

HIRL Rwy 12-30  
MRL Rwy 17-35  
REL Rws 17, 30 and 35

CATEGORY	A	B	C	D
LPV DA	1559-1 273 (300-1)			
LNAV/VNAV DA	1721-1½ 435 (500-1½)			
LNAV MDA	1760-1 474 (500-1)	1760-1½ 474 (500-1½)	1760-1½ 474 (500-1½)	1760-1½ 474 (500-1½)
CIRCLING	1820-1 531 (600-1)	1820-1½ 531 (600-1½)	1820-1½ 531 (600-1½)	1980-2¼ 691 (700-2¼)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-HON <b>110.3</b> Chan 40	APP CRS <b>301°</b>	Rwy Idg TDZE Apt Elev	<b>7201</b> <b>1286</b> <b>1289</b>
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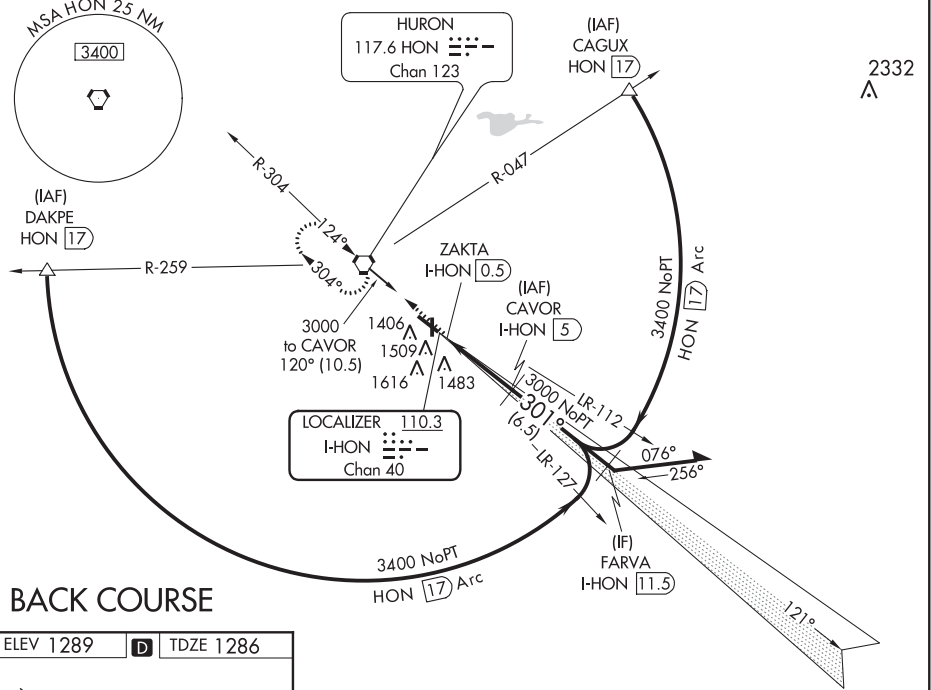
# LOC/DME BC RWY 30

HURON RGNL (HON)

**▼** If local altimeter setting not received, use Mitchell Muni altimeter setting and increase all MDAs 100 feet.

**MISSED APPROACH:** Climb to 3000 direct HON VORTAC and hold.

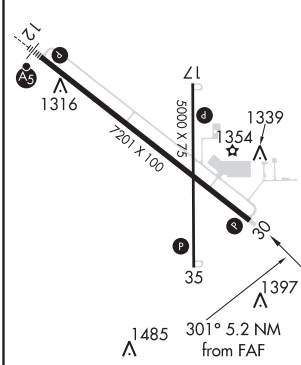
ASOS <b>118.125</b>	MINNEAPOLIS CENTER <b>126.25 339.8</b>	CTAF <b>123.6</b>	UNICOM <b>123.0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

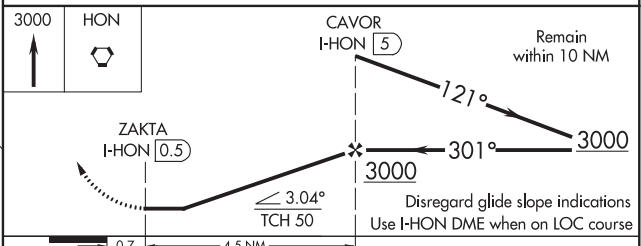
NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1289	<b>D</b>	TDZE 1286
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HIRL Rwy 12-30 **Ⓛ**  
 MIRL Rwy 17-35 **Ⓛ**  
 REIL Rwy 17, 30 and 35 **Ⓛ**

## DME REQUIRED



CATEGORY	A	B	C	D
S-30	1700-1	414 (500-1)	1700-1¼	414 (500-1¼)
CIRCLING	1820-1	531 (600-1)	1820-1½	1980-2¼ 531 (600-1½) 691 (700-2¼)

VORTAC HON <b>117.6</b> Chan <b>123</b>	APP CRS <b>124°</b>	Rwy Idg TDZE <b>1289</b> Apt Elev <b>1289</b>	<b>7201</b>
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# VOR RWY 12

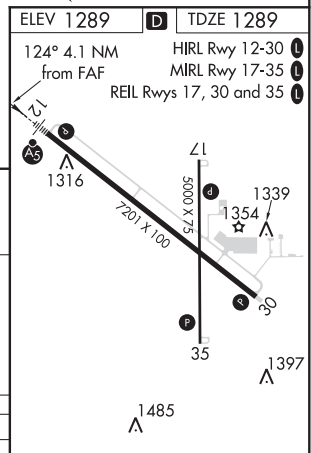
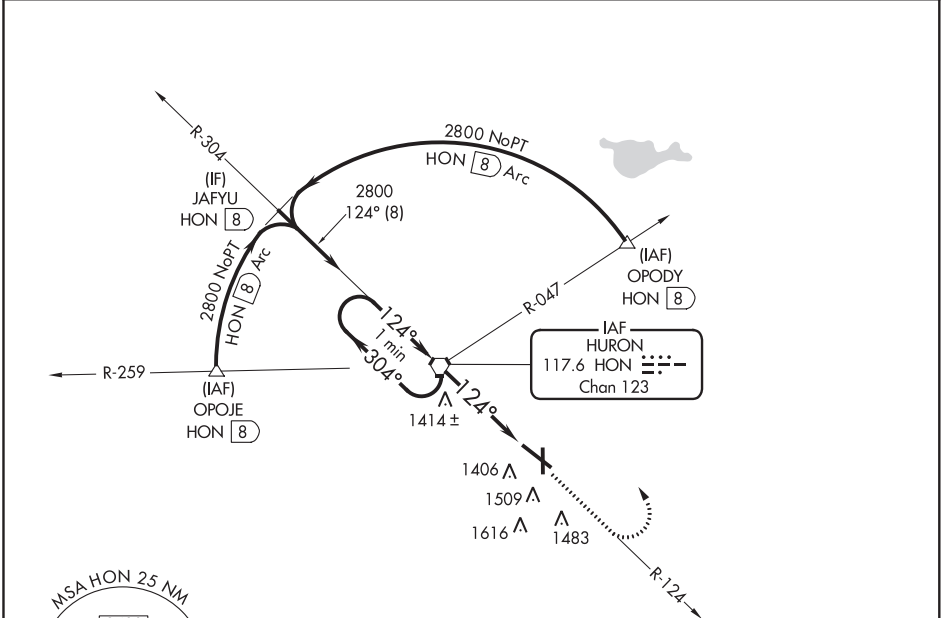
HURON RGNL (HON)

**⚠** When local altimeter setting not received, use Mitchell Muni altimeter setting and increase all MDA 100 feet, increase S-12 Cat C visibility ¼ mile and circling Cats C and D ½ mile. For inoperative MALSR increase S-12 Cat D visibility 1 ½ mile. VDP NA when using Mitchell Muni altimeter setting.



**MISSED APPROACH:** Climb to 3000 via HON VORTAC R-124 then left turn direct HON VORTAC and hold.

ASOS <b>118.125</b>	MINNEAPOLIS CENTER <b>126.25 339.8</b>	CTAF <b>123.6</b>	UNICOM <b>123.0</b>
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HON VORTAC			
One Minute Holding Pattern			
2800	← 304°	→ 124°	
VGS1 and descent angles not coincident (VGS1 Angle 3.00/TCH 50).		3.32°	TCH 50
		3.1 NM	1.1 NM

CATEGORY	A	B	C	D
S-12	1680-½ 391 (400-½)			1680-1 391 (400-1)
CIRCLING	1820-1	531 (600-1)	1820-1½ 531 (600-1½)	1980-2¼ 691 (700-2¼)

FAF to MAP 4.1 NM					
Knots	60	90	120	150	180
Min:Sec	4:06	2:44	2:03	1:38	1:22

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

AL-202 (FAA)

HURON RGNL (HON)  
HURON, SOUTH DAKOTA

ASOS  
118.125  
CTAF  
123.6  
UNICOM  
123.0

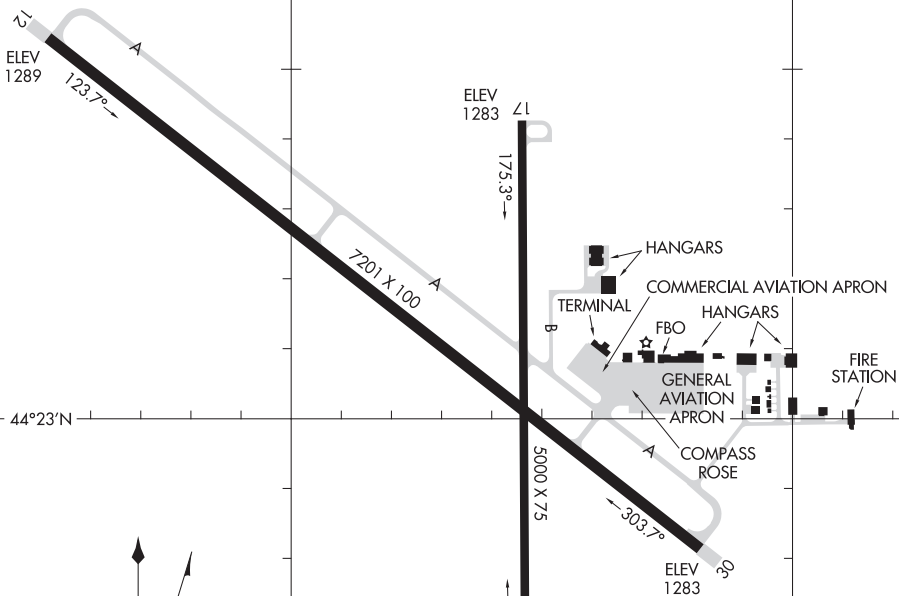
FIELD  
ELEV  
1289

44°24'N

RWY 12-30  
PCN 51 R/B/W/T  
S-75, D-150, 2S-175, 2D-280, 2D/2D2-395  
RWY 17-35  
PCN 11 R/C/W/T  
S-40, D-55

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 1289

ELEV 1283

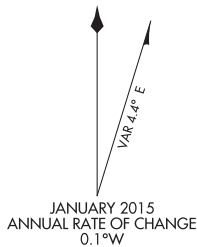
ELEV 1283

ELEV 1285

44°23'N

98°14'W

98°13'W



1397 A

# AIRPORT DIAGRAM

HURON, SOUTH DAKOTA  
HURON RGNL (HON)

WAAS CH <b>77622</b> <b>W15A</b>	APP CRS <b>148°</b>	Rwy Idg TDZE Apt Elev	<b>4000</b> <b>1061</b> <b>1062</b>
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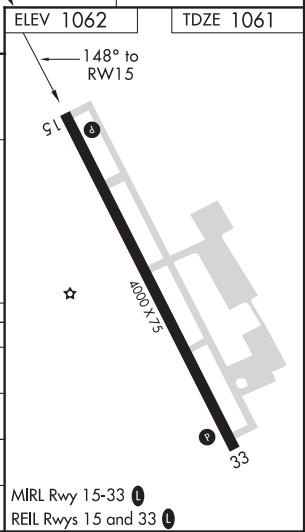
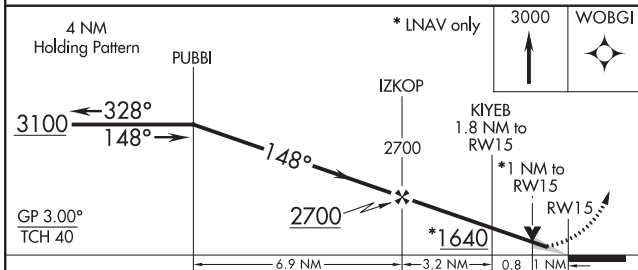
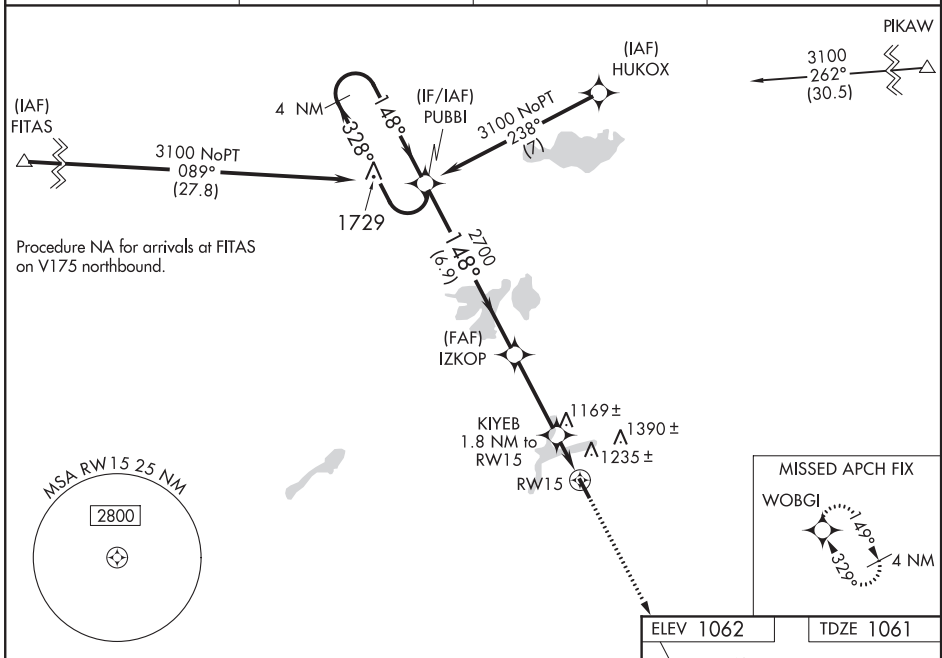
# RNAV (GPS) RWY 15

HUTCHINSON MUNI-BUTLER FIELD (HCD)

**⚠** Baro-VNAV NA when using Glencoe altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. VDP NA with Glencoe altimeter setting. When local altimeter setting not received, use Glencoe altimeter setting and increase all DA 43 feet and LPV and LNAV/VNAV all Cats visibility 1/8 mile; increase all MDA 60 feet and LNAV Cat C visibility 1/4 mile.

**MISSED APPROACH:** Climb to 3000 direct WOBGI and hold.

AWOS-3 <b>118.525</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	GCO <b>121.725</b>	UNICOM <b>122.8</b> (CTAF) <b>0</b>
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CATEGORY	A	B	C	D
LPV DA	1311-7/8	250 (300-7/8)		NA
LNAV/VNAV DA	1328-7/8	267 (300-7/8)		NA
LNAV MDA	1420-1	359 (400-1)		NA
CIRCLING	1540-1	478 (500-1)	1540-1 1/2 478 (500-1 1/2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>86322</b> W33A	APP CRS <b>329°</b>	Rwy Idg TDZE Apt Elev	<b>4000</b> <b>1062</b> <b>1062</b>
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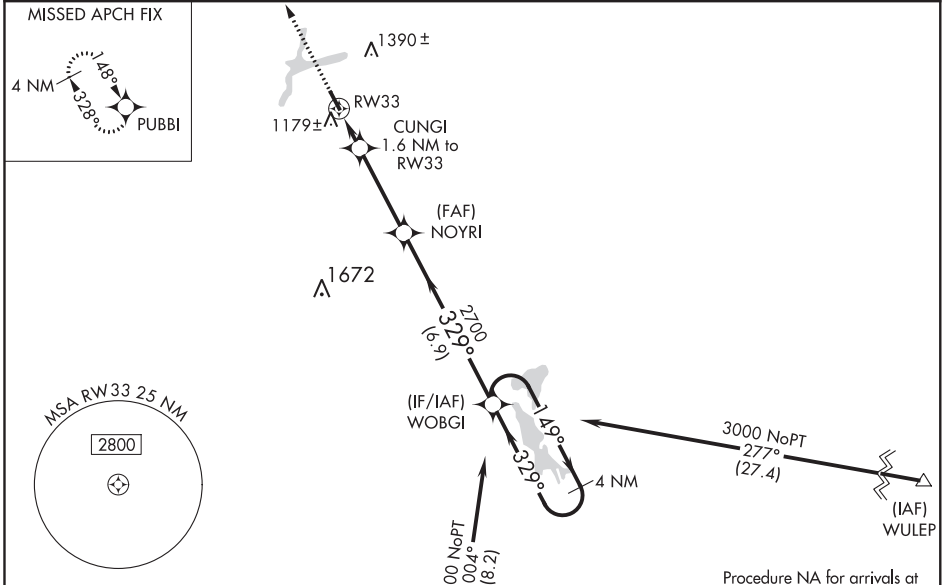
# RNAV (GPS) RWY 33

HUTCHINSON MUNI-BUTLER FIELD (HCD)

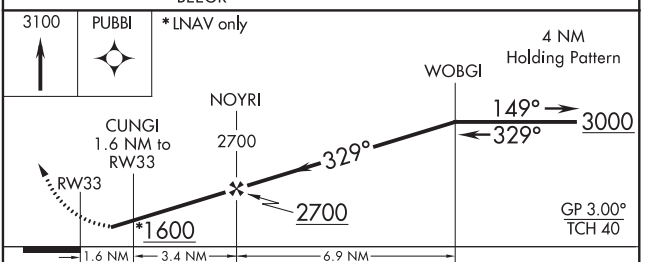
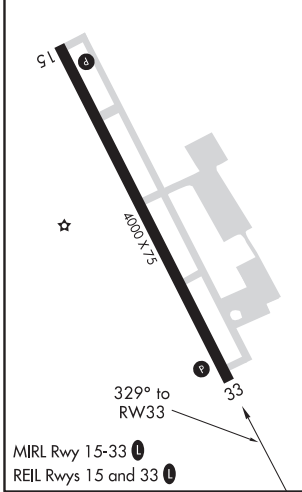
**⚠** Baro-VNAV NA when using Glencoe altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). When VGSI inoperative, Straight-in/Circling RWY 33 procedure NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Glencoe altimeter setting and increase all DA 43 feet and LNAV/VNAV all Cats visibility 1/8 mile; increase all MDA 60 feet and LNAV Cat C visibility 1/4 mile.

MISSED APPROACH: Climb to 3100 direct PUBBI and hold.

AWOS-3 <b>118.525</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1062	TDZE 1062
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CATEGORY	A	B	C	D
LPV DA		1 312-1	250 (300-1)	NA
LNAV/VNAV DA		1 349-1	287 (300-1)	NA
LNAV MDA		1 440-1	378 (400-1)	NA
CIRCLING	1 540-1	478 (500-1)	1 540-1½ 478 (500-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VORTAC DWN <b>109.0</b> Chan 27	APP CRS <b>340°</b>	Rwy Idg TDZE Apt Elev	<b>4000</b> <b>1062</b> <b>1062</b>
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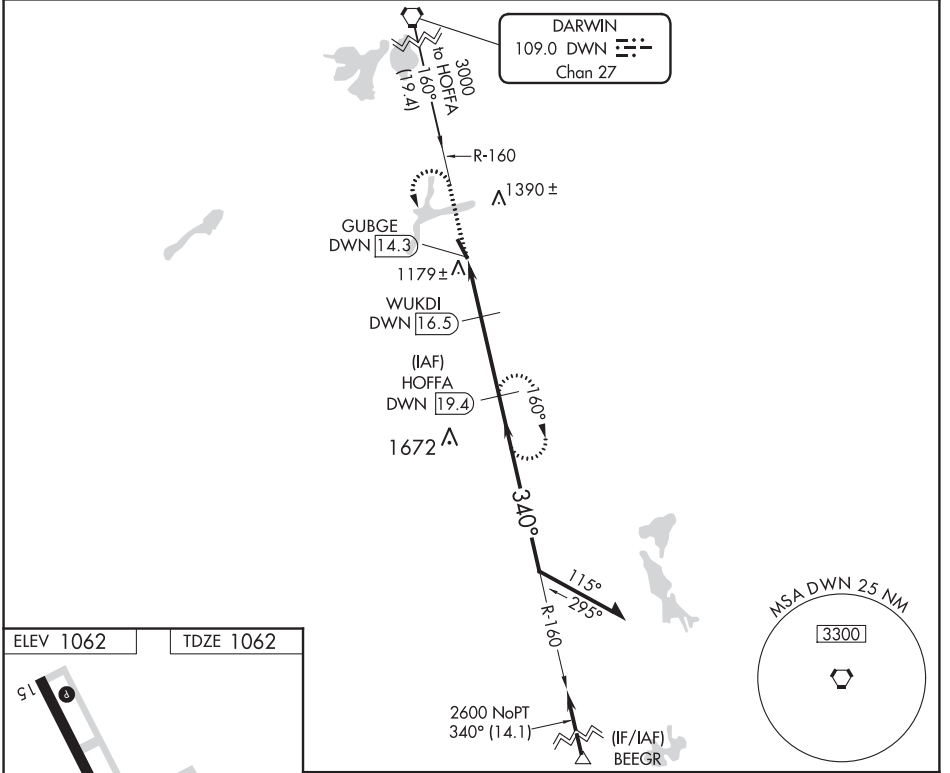
# VOR/DME RWY 33

HUTCHINSON MUNI-BUTLER FIELD (HCD)

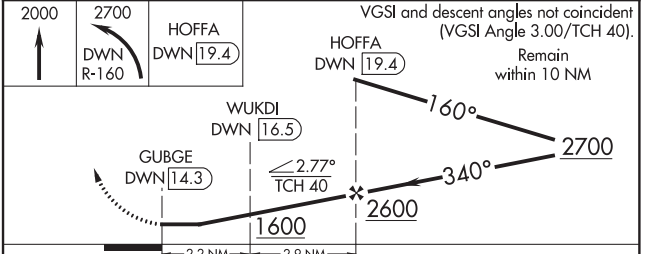
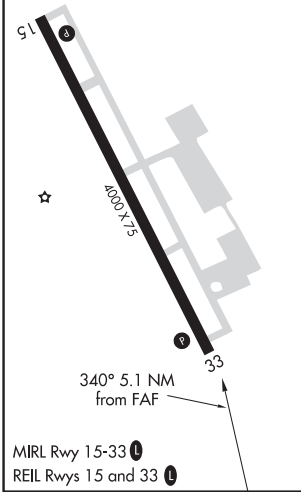
**⚠** When VGSI inoperative, Straight-in/Circling Rwy 33 procedure NA at night.  
**⚠** Visibility reduction by helicopters NA. When local altimeter setting not received, use Glencoe altimeter setting and increase all MDA 60 feet and S-33 Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 2000 then climbing left turn to 2700 on DWN VORTAC R-160 to HOFFA/19.4 DME and hold.

AWOS-3 <b>118.525</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	GCO <b>121.725</b>	UNICOM <b>122.8</b> (CTAF) <b>📻</b>
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ELEV 1062	TDZE 1062
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CATEGORY	A	B	C	D
S-33	1460-1	398 (400-1)	1460-1½ 398 (400-1½)	NA
CIRCLING	1540-1	478 (500-1)	1540-1½ 478 (500-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

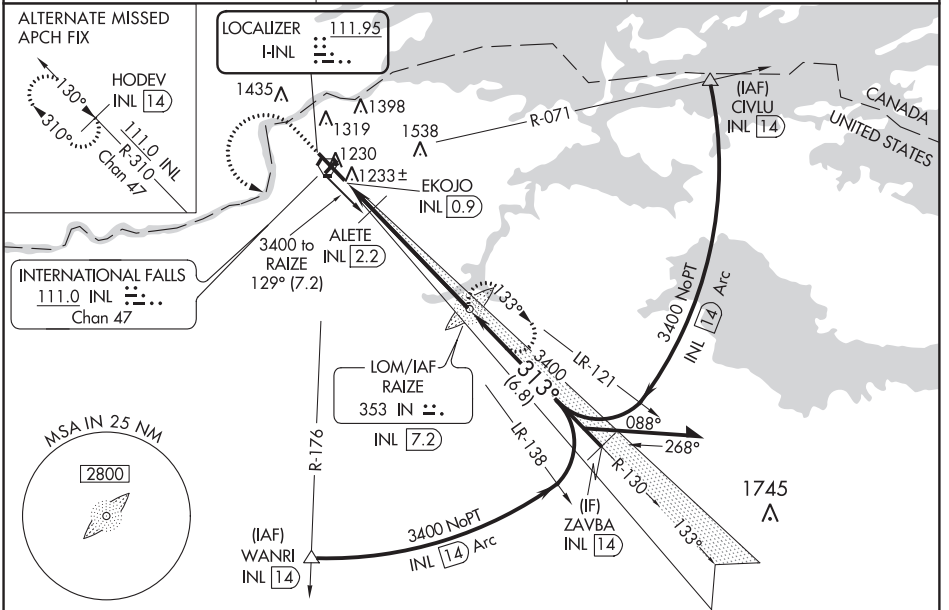
LOC I-INL <b>111.95</b>	APP CRS <b>313°</b>	Rwy Idg <b>7400</b>
		TDZE <b>1166</b>
		Apt Elev <b>1185</b>

**ILS or LOC RWY 31**  
FALLS INTL-EINARSON FIELD (INL)

**⚠** Circling to Rwy 4-22 NA at night. ADF required. Autopilot coupled approach NA below 2250 feet. When local altimeter setting not received, use Baudette altimeter setting and increase DA 127 feet and S-ILS visibility ¼ mile all Cats, increase all MDA 140 feet and increase all Cat C/D visibility ¼ mile. Caution opposing ILS continuously on.

**MALSR** MISSED APPROACH: Climb to 2500 then climbing left turn to 3400 direct RAIZE LOM/INL VORTAC 7.2 DME and hold.

ASOS <b>120.0</b>	MINNEAPOLIS CENTER <b>120.9 377.1</b>	UNICOM <b>122.8 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1185	<b>D</b>	TDZE 1166	2500	3400	IN	IN RAIZE LOM INL 7.2	Remain within 10 NM		
*1760 when using Baudette altimeter setting.		GS 3.00°		TCH 45					
CATEGORY		A		B		C		D	
S-ILS 31		1366-½		200 (200-½)					
S-LOC 31		1620-½ 454 (500-½)		1620-¾ 454 (500-¾)		1620-1 454 (500-1)			
CIRCLING		1620-1 435 (500-1)		1680-1 495 (500-1)		1680-1½ 495 (500-1½)		1780-2 595 (600-2)	
ALETE FIX MINIMUMS									
S-LOC 31		1520-½ 354 (400-½)		1520-¾ 354 (400-¾)		1520-1 354 (400-1)			
CIRCLING		1620-1 435 (500-1)		1680-1 495 (500-1)		1680-1½ 495 (500-1½)		1780-2 595 (600-2)	
FAF to MAP 6.3 NM									
Knots	60	90	120	150	180				
Min:Sec	6:18	4:12	3:09	2:31	2:06				




LOC I-ABK <b>109.1</b>	APP CRS <b>133°</b>	Rwy Idg <b>7400</b> TDZE <b>1184</b> Apt Elev <b>1185</b>
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# ILS or LOC/DME RWY 13

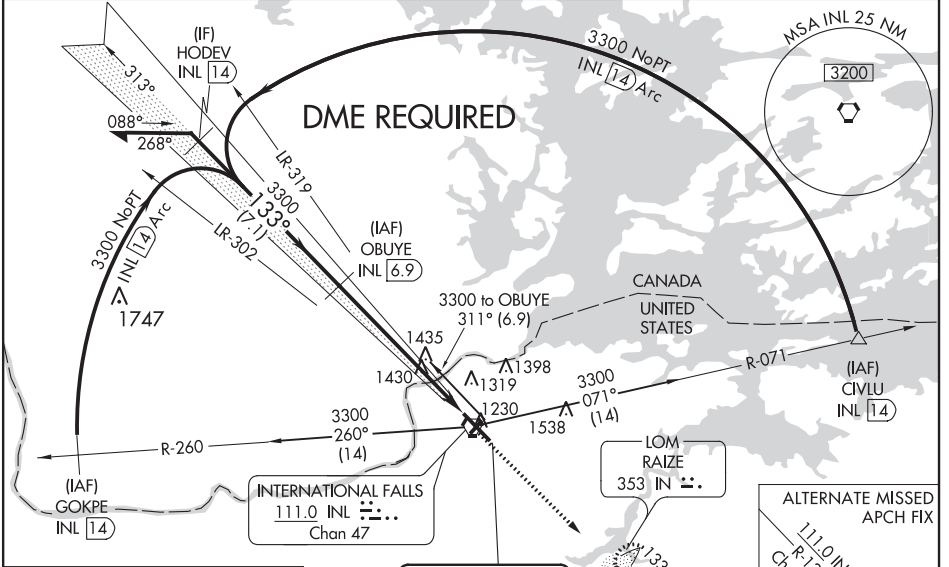
FALLS INTL-EINARSON FIELD (INL)

When local altimeter setting not received, use Baudette altimeter setting and increase DAs 127 feet and S-ILS 13 visibility 1/4 mile all Cats, increase all MDAs 140 feet and S-LOC 13 Cat B visibility 1/4 mile, Cat C and D 1/2 mile, increase Circling Cat B visibility 1/4 mile, Cat C and D 1/2 mile. For inoperative MALSR when using Baudette altimeter setting, increase S-ILS 13 visibility 1/2 mile all Cats. ADF required. Circling to Rwy 4-22 NA at night. DME from INL VORTAC. Simultaneous reception of I-ABK and INL DME required. Caution opposing ILS continuously on.

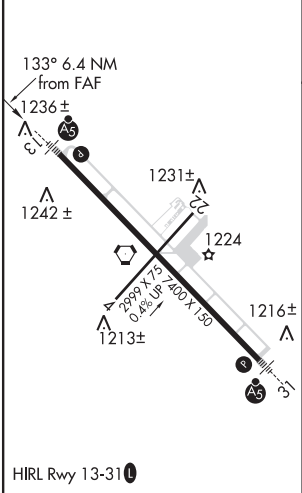
MALSR 

**MISSED APPROACH:**  
Climb to 3400 direct  
IN LOM and hold.

ASOS <b>120.0</b>	MINNEAPOLIS CENTER <b>120.9 377.1</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1185	<b>D</b>	TDZE 1184
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LOCALIZER **109.1**  
I-ABK

VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 52).

Remain within 10 NM

HODOVE INL 14

OBUYE INL 6.9

3300

3300

3300

3400 IN 

INL 0.5

CATEGORY	A	B	C	D
S-ILS 13	1384-1/2 200 (200-1/2)			
S-LOC 13	1820-1/2	636 (700-1/2)	1820-1 1/4 636 (700-1 1/4)	1820-1 1/2 636 (700-1 1/2)
CIRCLING	1820-1	635 (700-1)	1820-1 3/4 635 (700-1 3/4)	1820-2 635 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017


WAAS CH <b>53706</b> <b>W13A</b>	APP CRS <b>133°</b>	Rwy Idg <b>7400</b> TDZE <b>1184</b> Apt Elev <b>1185</b>
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# RNAV (GPS) RWY 13

FALLS INTL-EINARSON FIELD (INL)

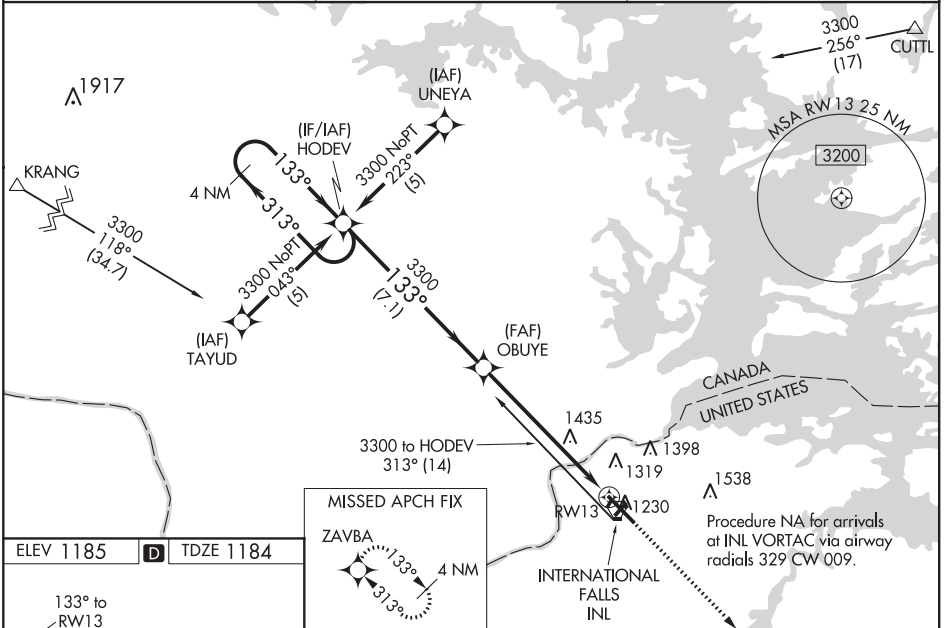
When local altimeter setting not received, use Baudette altimeter setting and increase all DAs 127 feet, increase LPV visibility ¼ mile all Cats, and LNAV/VNAV visibility ¾ mile all Cats, increase all MDAs 140 feet, increase LNAV Cat C and D visibility ½ mile, Circling Cat C visibility ½ mile and Cat D visibility ¼ mile. For inoperative MALS when using Baudette altimeter setting, increase LPV visibility ½ mile all Cats, inoperative table does not apply to LNAV/VNAV. VDP NA when using Baudette altimeter setting. Baro-VNAV NA when using Baudette altimeter setting. Circling to Rwy 4-22 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

MALS R

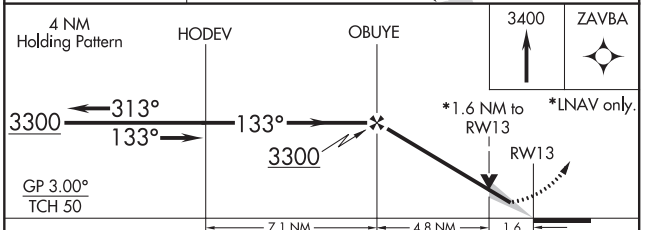
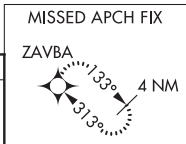
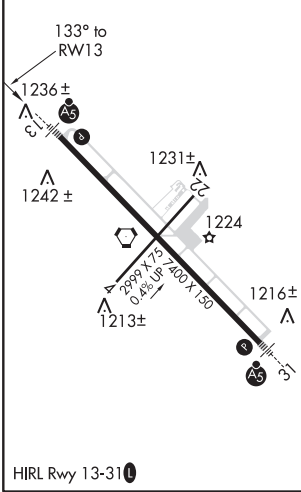


MISSED APPROACH:  
Climb to 3400 direct ZAVBA and hold.

ASOS <b>120.0</b>	MINNEAPOLIS CENTER <b>120.9 377.1</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1185	D	TDZE 1184
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CATEGORY	A	B	C	D
LPV DA		1434-½	250 (300-½)	
LNAV/VNAV DA		1669-1¼	485 (500-1¼)	
LNAV MDA	1760-½ 576 (600-½)		1760-1 576 (600-1)	1760-1¼ 576 (600-1¼)
CIRCLING	1760-1 575 (600-1)		1760-1½ 575 (600-1½)	1780-2 595 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017


NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>78406</b> W31A	APP CRS <b>313°</b>	Rwy Idg <b>7400</b> TDZE <b>1166</b> Apt Elev <b>1185</b>
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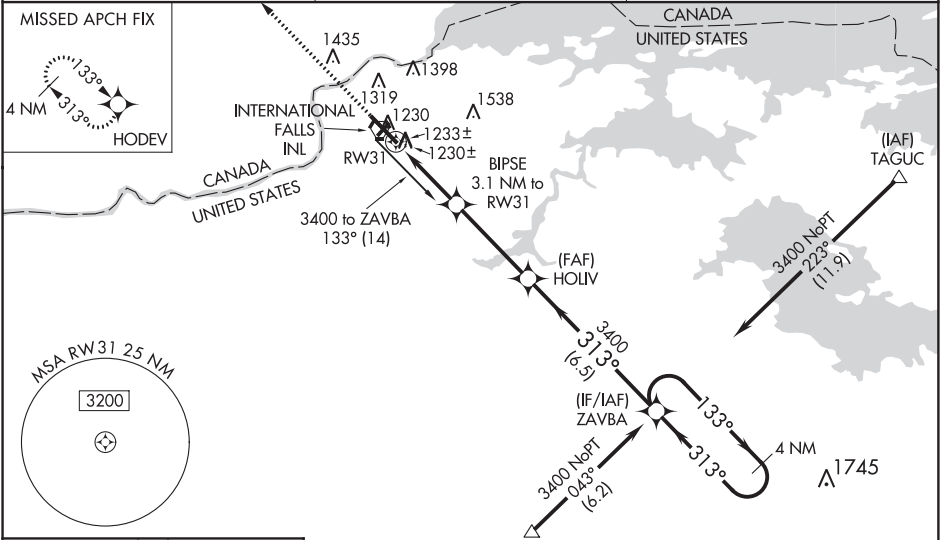
# RNAV (GPS) RWY 31

FALLS INTL-EINARSON FIELD (INL)

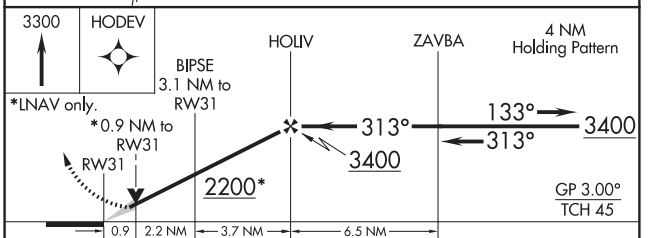
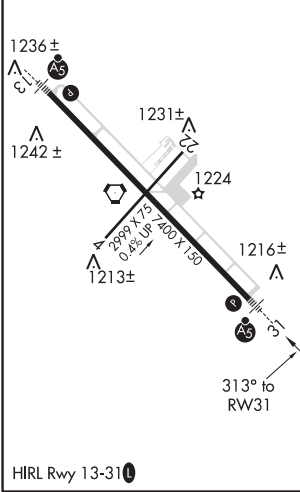
When local altimeter setting not received, use Baudette altimeter setting and increase all DAs 127 feet, and LPV and LNAV/VNAV visibility 1/2 mile all Cats, increase all MDAs 140 feet and LNAV Cat C visibility 1/4 mile and Circling Cat C and D visibility 1/4 mile. For inoperative MALS/R when using Baudette altimeter setting, increase LPV visibility 1/2 mile all Cats. For inoperative MALS/R, increase LPV visibility 1/2 mile all Cats, inoperative table does not apply to LNAV Cat D. VDP NA when using Baudette altimeter setting. Baro-VNAV NA when using Baudette altimeter setting. Circling to Rwy 4-22 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

MALS/R  
 MISSED APPROACH:  
 Climb to 3300 direct HODEV and hold.

ASOS <b>120.0</b>	MINNEAPOLIS CENTER <b>120.9 377.1</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1185	<b>D</b>	TDZE 1166
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CATEGORY	A	B	C	D
LPV DA		1462-1/2	296 (300-1/2)	
LNAV/VNAV DA		1500-3/4	334 (400-3/4)	
LNAV MDA		1500-1/2	334 (400-1/2)	1500-1 334 (400-1)
CIRCLING	1620-1 435 (500-1)	1680-1 495 (500-1)	1680-1 1/2 495 (500-1 1/2)	1780-2 595 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VORTAC INL <b>111.0</b> Chan <b>47</b>	APP CRS <b>134°</b>	Rwy Idg <b>7400</b> TDZE <b>1184</b> Apt Elev <b>1185</b>
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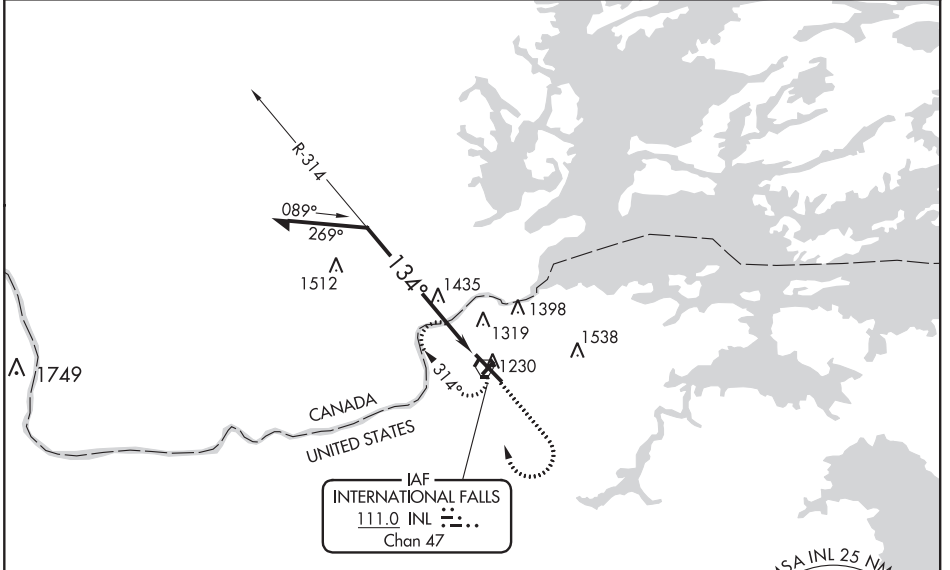
# VOR RWY 13

## FALLS INTL-EINARSON FIELD (INL)

Circling to Rwy 4-22 NA at night. VDP NA when using Baudette altimeter setting. When local altimeter setting not received, use Baudette altimeter setting and increase all MDAs 140 feet, and S-13 Cats A/B visibility ¼ mile, Cats C/D visibility ½ mile. Increase Circling Cat B visibility ½ mile, Cat C and D ½ mile. For inoperative MALSRS when using Baudette altimeter setting, increase S-13 Cat A visibility ¼ mile.

**MALSRS**  
 MISSED APPROACH: Climb to 2900 then right turn direct INL VORTAC and hold.

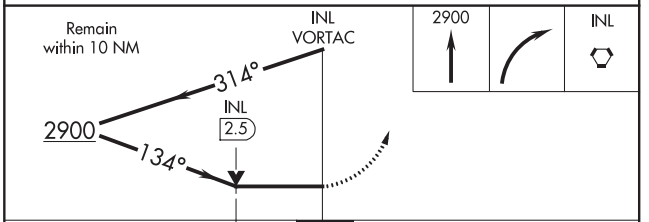
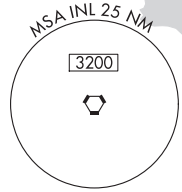
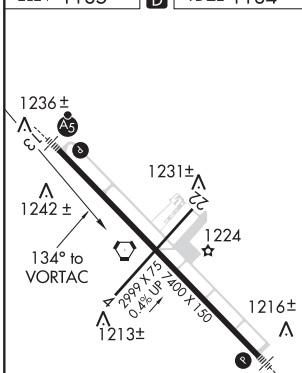
ASOS <b>120.0</b>	MINNEAPOLIS CENTER <b>120.9 377.1</b>	UNICOM <b>122.8</b> (CTAF)
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1185	<b>D</b>	TDZE 1184
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CATEGORY	A	B	C	D
S-13	1880-½ 696 (700-½)	1880-1½ 696 (700-1½)	1880-1½ 696 (700-1½)	1880-1¾ 696 (700-1¾)
CIRCLING	1880-1	695 (700-1)	1880-2 695 (700-2)	1880-2¼ 695 (700-2¼)

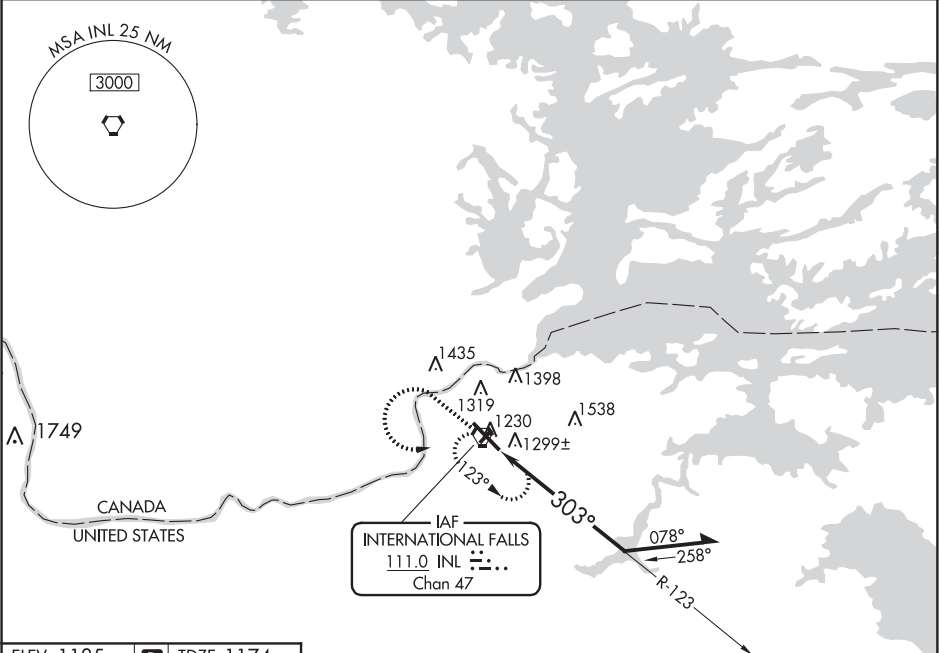
VORTAC INL <b>111.0</b> Chan 47	APP CRS <b>303°</b>	Rwy Idg TDZE Apt Elev <b>7400</b> <b>1174</b> <b>1185</b>
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# VOR RWY 31

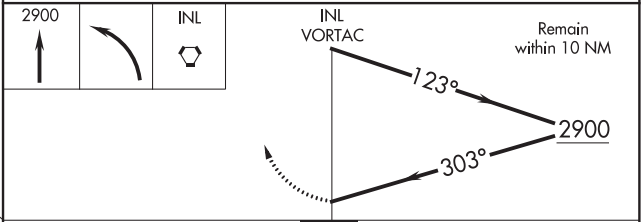
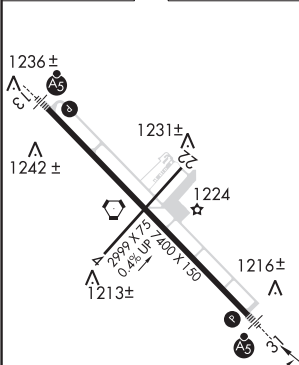
## FALLS INTL-EINARSON FIELD (INL)

For inoperative MALSR, increase S-31 Cat D visibility to 1¼. Circling to Rwy 4-22 NA at night.	MALSR	<b>MISSED APPROACH:</b> Climb to 2900 then left turn direct INL VORTAC and hold.
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ASOS <b>120.0</b>	MINNEAPOLIS CENTER <b>120.9 377.1</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1185		TDZE 1174
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CATEGORY	A	B	C	D
S-31	1600-½	426 (500-½)	1600-¾ 426 (500-¾)	1600-1 426 (500-1)
CIRCLING	1620-1 435 (500-1)	1680-1 495 (500-1)	1680-1½ 495 (500-1½)	1840-2 655 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC I-INL <b>111.95</b>	APP CRS <b>313°</b>	Rwy Idg TDZE Apt Elev	<b>7400</b> <b>1166</b> <b>1185</b>
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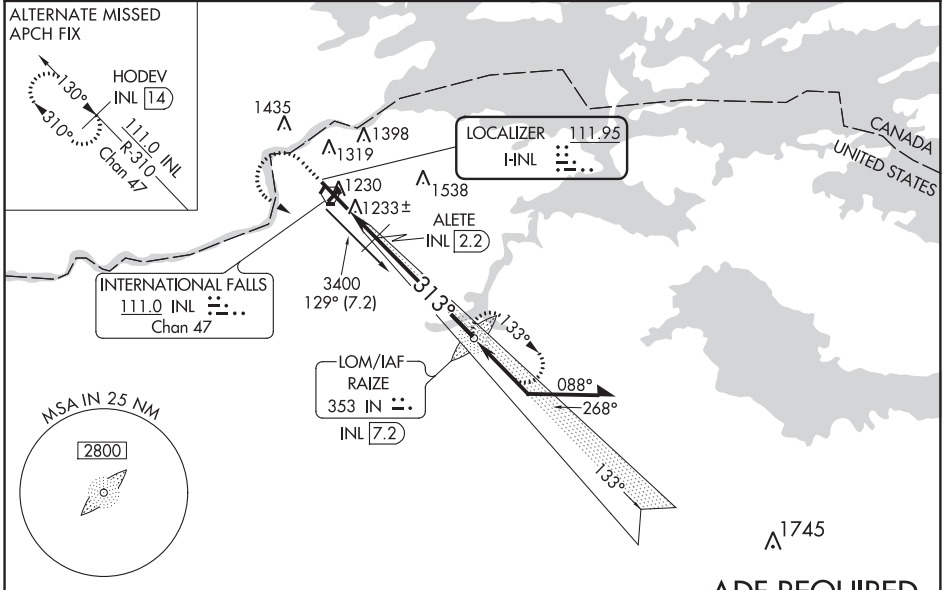
# COPTER ILS or LOC RWY 31

FALLS INTL-EINARSON FIELD (INL)

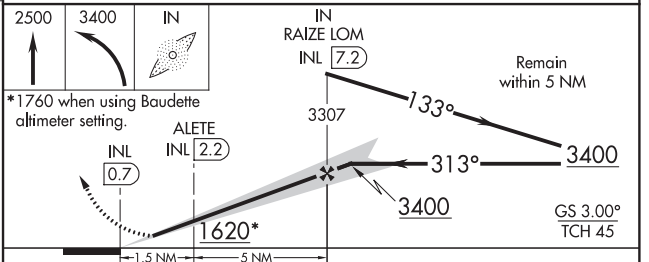
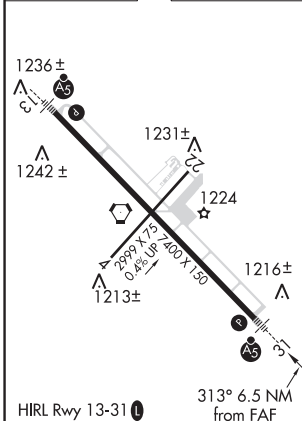
When local altimeter setting not received, use Baudette altimeter setting and increase DA 127 feet and ILS visibility  $\frac{3}{8}$  mile, increase all MDA 140 feet and LOC visibility  $\frac{3}{8}$  mile, increase ALETE fix minimums visibility  $\frac{1}{4}$  mile. For inoperative MALSRL, increase H-ILS 31 visibility to  $\frac{1}{2}$  mile. For inoperative MALSRL when using Baudette altimeter setting, increase H-ILS 31 visibility to  $\frac{1}{2}$  and H-LOC 31 visibility to 1 mile.

**MALSRL**  
Climb to 2500 then climbing left turn to 3400 direct RAIZE LOM and hold.

ASOS <b>120.0</b>	MINNEAPOLIS CENTER <b>120.9 377.1</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1185	<b>D</b>	TDZE 1166
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CATEGORY	COPTER	B	C	D
H-ILS 31	1366- $\frac{1}{4}$ 200 (200- $\frac{1}{4}$ )		NA	
H-LOC 31	1620- $\frac{3}{8}$ 454 (500- $\frac{3}{8}$ )		NA	
CIRCLING		NA		
ALETE FIX MINIMUMS				
H-LOC 31	1520- $\frac{1}{4}$ 354 (400- $\frac{1}{4}$ )		NA	
CIRCLING		NA		

FAF to MAP 6.5 NM					
Knots	45	60	75	90	105
Min:Sec	8:40	6:30	5:12	4:20	3:43

NC-1, 10 NOV 2016 to 05 JAN 2017

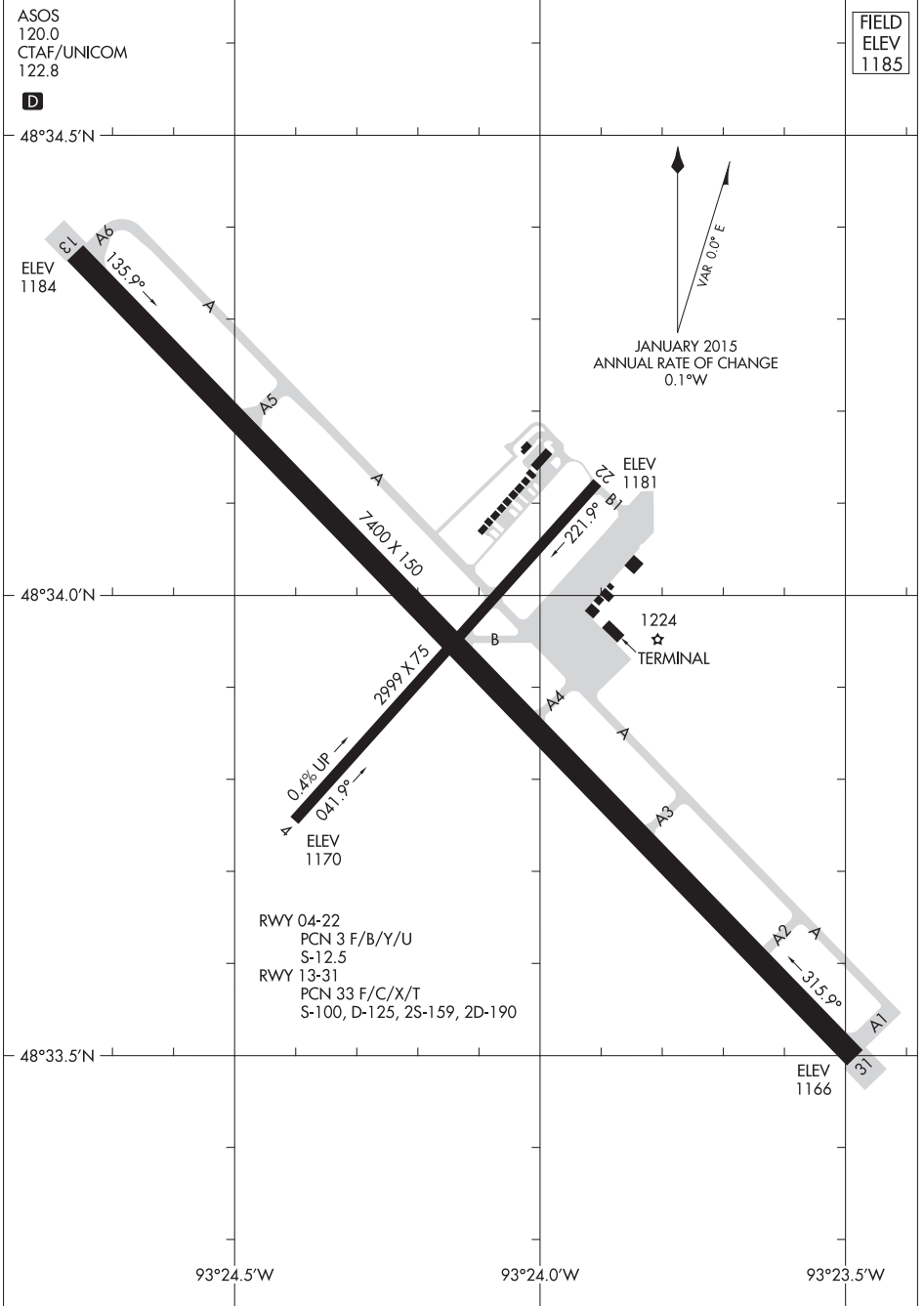
NC-1, 10 NOV 2016 to 05 JAN 2017

16259

# AIRPORT DIAGRAM

AL-5092 (FAA)

FALLS INTL-EINARSON FIELD (INL)  
INTERNATIONAL FALLS, MINNESOTA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

16259

INTERNATIONAL FALLS, MINNESOTA  
FALLS INTL-EINARSON FIELD (INL)

WAAS CH <b>97632</b> <b>W13A</b>	APP CRS <b>134°</b>	Rwy Idg TDZE Apt Elev	<b>3591</b> <b>1446</b> <b>1447</b>
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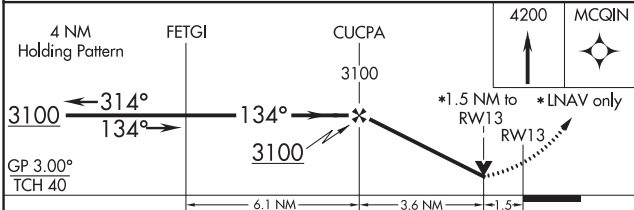
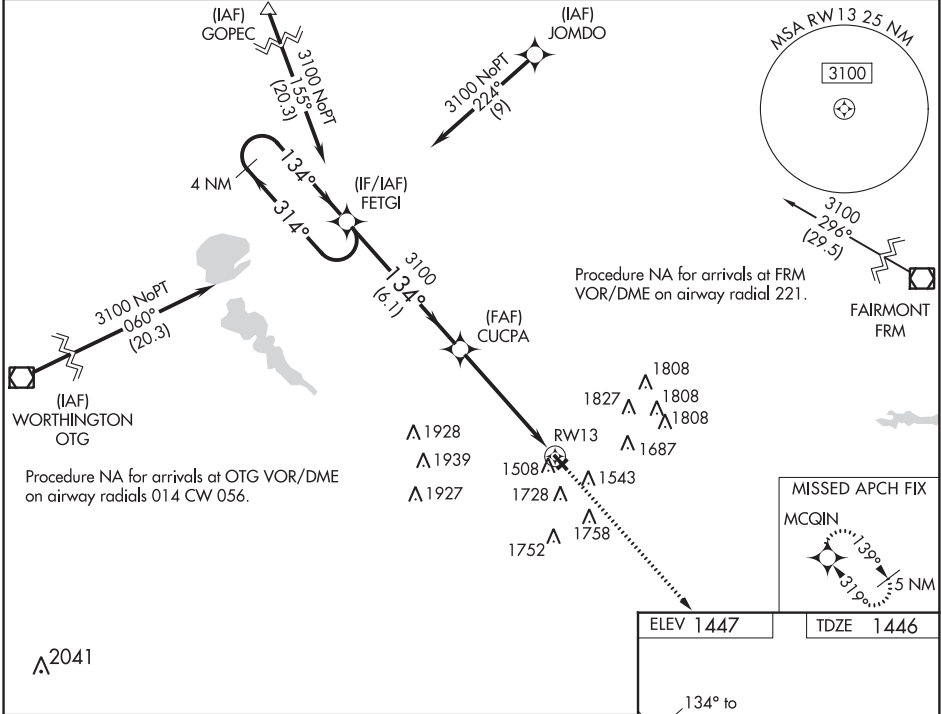
# RNAV (GPS) RWY 13

JACKSON MUNI (MJQ)

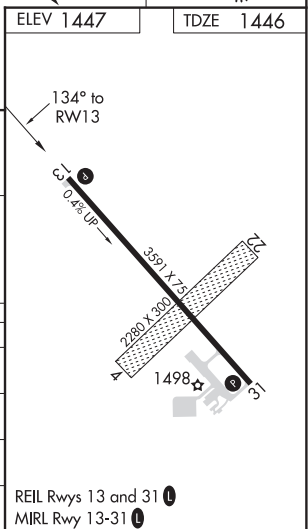
**Baro-VNAV NA.** DME/DME RNP-0.3 NA. When local altimeter setting not received, use Window altimeter setting and increase all DA 44 feet and all MDA 60 feet; increase LNAV/VNAV all Cats visibility 1/8 mile, LNAV and Circling Cat C visibility 1/4 mile. Helicopter visibility reduction below 3/4 SM NA. Circling Rwy 4, 22 NA.

**MISSED APPROACH:**  
Climb to 4200 direct MCQIN and hold.

AWOS-3 <b>118.1</b>	MINNEAPOLIS CENTER <b>127.75 257.7</b>	GCO <b>121.725</b>	UNICOM <b>122.8</b> (CTAF) <b>U</b>
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CATEGORY	A	B	C	D
LPV DA	1696-1	250 (300-1)		NA
LNAV/VNAV DA	1953-1 3/4	507 (500-1 3/4)		NA
LNAV MDA	1940-1	494 (500-1)	1940-1 1/8 494 (500-1 1/8)	NA
<b>C</b> CIRCLING	2100-1	653 (700-1)	2180-2 733 (800-2)	NA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>65932</b> <b>W31A</b>	APP CRS <b>315°</b>	Rwy Idg TDZE Apt Elev	<b>3591</b> <b>1447</b> <b>1447</b>
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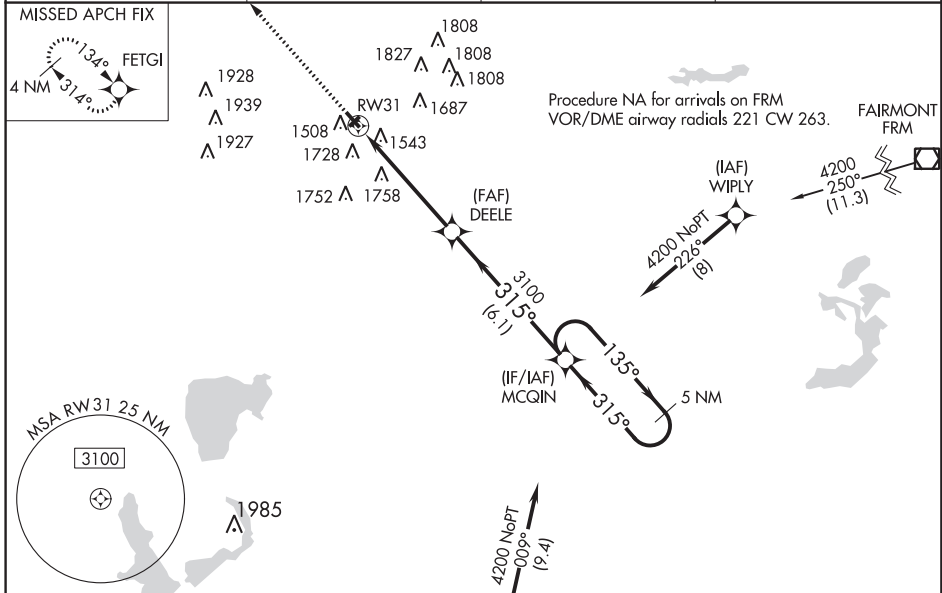
# RNAV (GPS) RWY 31

JACKSON MUNI (MJQ)

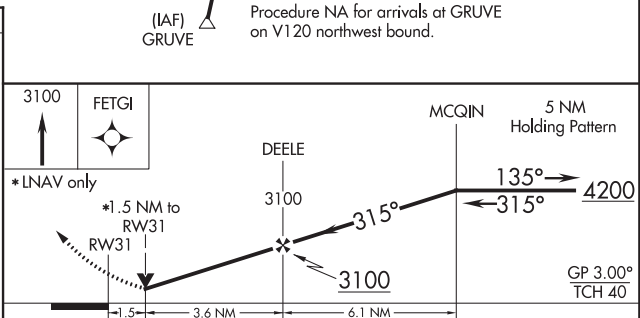
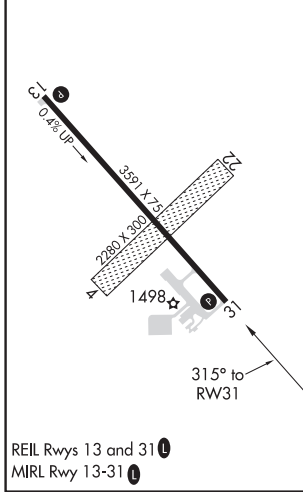
**Baro-VNAV NA** when using Windom altimeter setting. DME/DME RNP-0.3 NA. When local altimeter setting is not received, use Windom altimeter setting; increase all DA 44 feet and all MDA 60 feet; increase LNAV/VNAV all Cats visibility 1/8 mile, LNAV and Circling Cat C visibility 1/4 mile. Helicopter visibility reduction below 3/4 SM NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). Circling Rwy 4, 22 NA.

**MISSED APPROACH:** Climb to 3100 direct FETGI and hold.

AWOS-3 <b>118.1</b>	MINNEAPOLIS CENTER <b>127.75 257.7</b>	GCO <b>121.725</b>	UNICOM <b>122.8</b> (CTAF) <b>0</b>
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ELEV <b>1447</b>	TDZE <b>1447</b>
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CATEGORY	A	B	C	D
LPV DA	1697-1 250 (300-1)			NA
LNAV/VNAV DA	1890-1½ 443 (500-1½)			NA
LNAV MDA	1980-1	533 (600-1)	1980-1½ 533 (600-1½)	NA
<b>C</b> CIRCLING	2100-1	653 (700-1)	2180-2 733 (800-2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

JAMESTOWN, NORTH DAKOTA

AL-685 (FAA)

14317

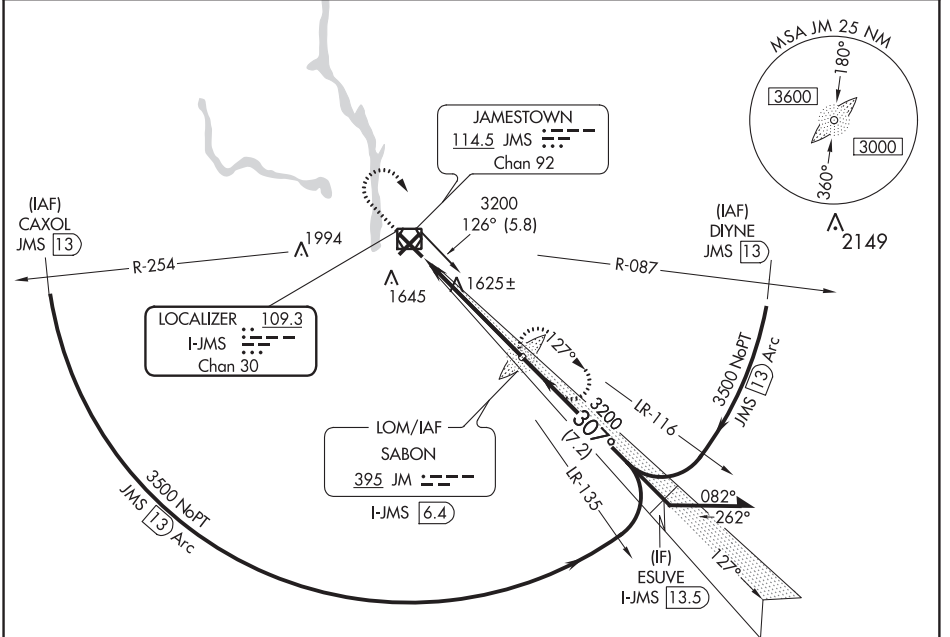
LOC/DME I-JMS <b>109.3</b> Chan 30	APP CRS <b>307°</b>	Rwy Idg <b>6502</b> TDZE <b>1498</b> Apt Elev <b>1500</b>
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# ILS or LOC RWY 31

JAMESTOWN RGNL (JMS)

NA	MALSR AS	MISSED APPROACH: Climb to 3200 then right turn direct SABON LOM/I-JMS 6.4 DME and hold.
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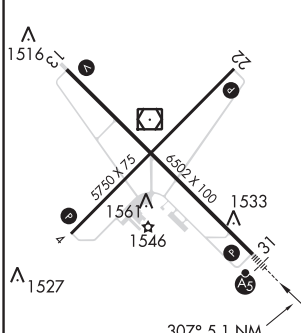
ASOS <b>118.425</b>	MINNEAPOLIS CENTER <b>124.2 270.3</b>	UNICOM <b>123.0 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

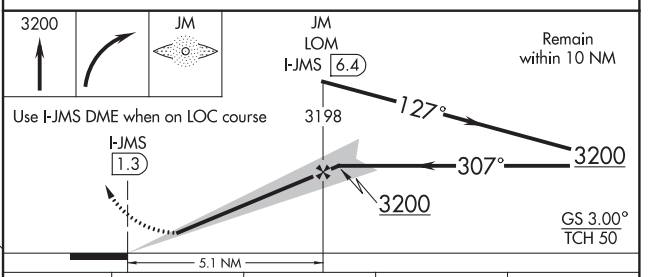
NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1500		TDZE 1498
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FAF to MAP 5.1 NM					
Knots	60	90	120	150	180
Min:Sec	5:06	3:24	2:33	2:02	1:42

## DME or ADF REQUIRED



CATEGORY	A	B	C	D
S-ILS 31	1698-1/2 200 (200-1/2)			
S-LOC 31	1880-1/2 385 (400-1/2)			1880-3/4 385 (400-3/4)
CIRCLING	1960-1 462 (500-1)		1960-1 1/2 462 (500-1 1/2) 2060-2 562 (600-2)	

JAMESTOWN, NORTH DAKOTA  
Amdt 7E 03JUL08

46°56'N-98°41'W

# JAMESTOWN RGNL (JMS)

## ILS or LOC RWY 31

WAAS CH <b>97505</b> <b>W04A</b>	APP CRS <b>037°</b>	Rwy Idg TDZE <b>1496</b> Apt Elev <b>1500</b>
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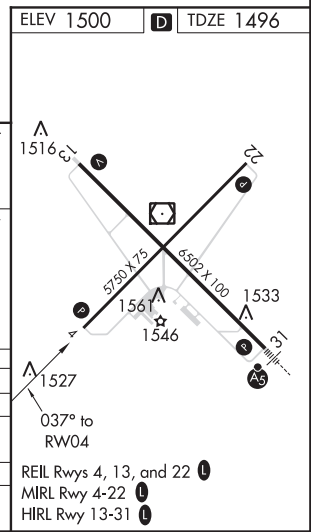
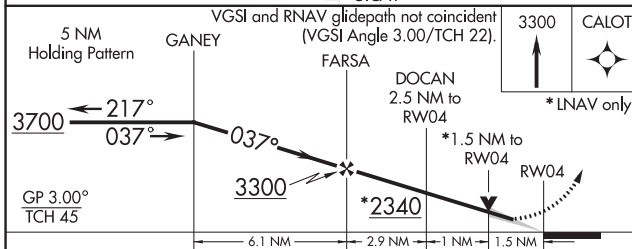
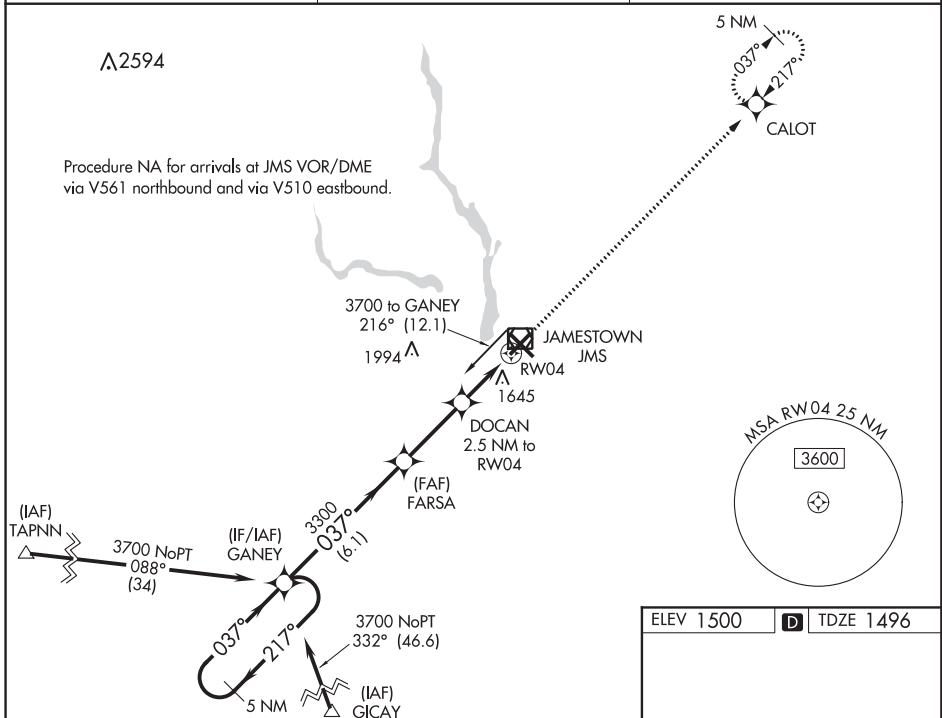
# RNAV (GPS) RWY 4

JAMESTOWN RGNL (JMS)

**⚠** Baro-VNAV NA when using Devils Lake altimeter setting.  
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 46°C (114°F).  
**W** DME/DME RNP-0.3 NA. VDP NA when using Devils Lake altimeter setting. If local altimeter setting not received, use Devils Lake altimeter setting and increase all DAs 172 feet and all MDAs 180 feet.

MISSED APPROACH: Climb to 3300 direct CALOT and hold.

ASOS <b>118.425</b>	MINNEAPOLIS CENTER <b>124.2 270.3</b>	UNICOM <b>123.0 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LPV DA	1746-1		250 (300-1)	
LNAV/VNAV DA	1930-1½		434 (500-1½)	
LNAV MDA	2000-1	504 (500-1)	2000-1½	504 (500-1½)
CIRCLING	2000-1	500 (500-1)	2000-1½	2060-2 560 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

JAMESTOWN, NORTH DAKOTA

AL-685 (FAA)

15232

WAAS CH <b>65805</b> <b>W13A</b>	APP CRS <b>127°</b>	Rwy Idg TDZE Apt Elev	<b>6502</b> <b>1500</b> <b>1500</b>
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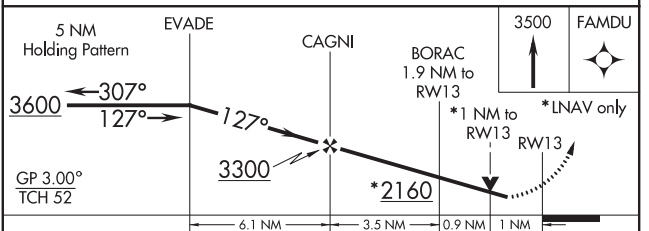
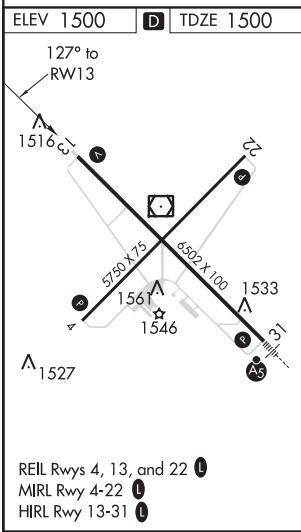
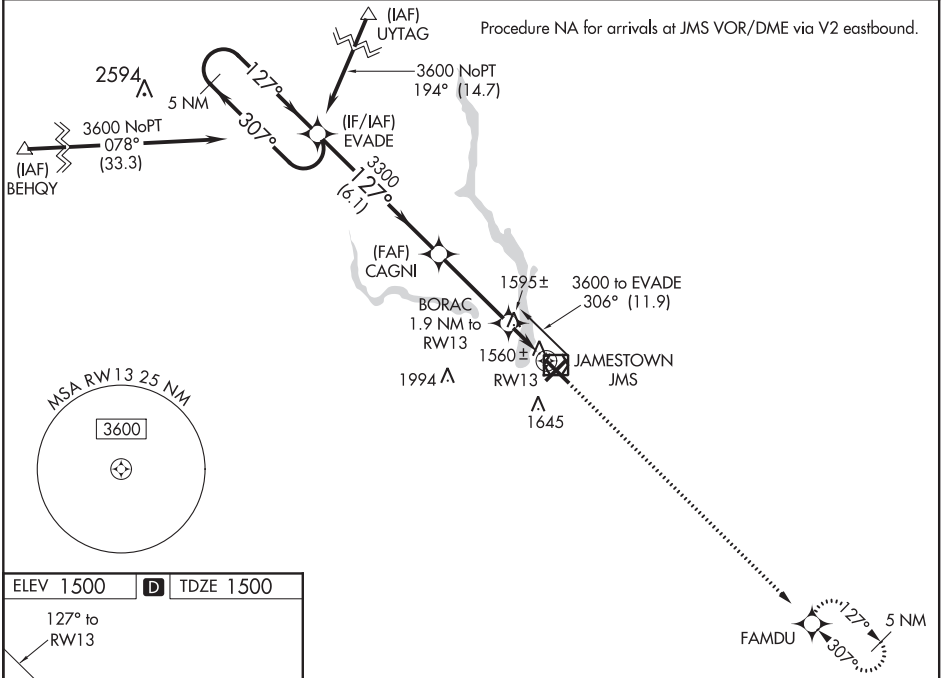
# RNAV (GPS) RWY 13

JAMESTOWN RGNL (JMS)

**⚠** Baro-VNAV NA when using Devils Lake altimeter setting.  
 For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 46°C (114°F).  
**⚠** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.  
**⚠** VDP NA when using Devils Lake altimeter setting.  
 If local altimeter setting not received, use Devils Lake altimeter setting and increase all DAs 172 feet and all MDAs 180 feet.

MISSED APPROACH: Climb to 3500 direct FAMDU and hold.

ASOS <b>118.425</b>	MINNEAPOLIS CENTER <b>124.2 270.3</b>	UNICOM <b>123.0 (CTAF) 1</b>
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CATEGORY	A	B	C	D
LPV DA		1787-1	287 (300-1)	
LNAV/VNAV DA		1820-1	320 (400-1)	
LNAV MDA		1860-1	360 (400-1)	1860-1½ 360 (400-1½)
CIRCLING	1960-1	460 (500-1)	1960-1½ 460 (500-1½)	2060-2 560 (600-2)

JAMESTOWN, NORTH DAKOTA  
 Orig 30AUG07

46°56'-98°41'W

# JAMESTOWN RGNL (JMS) RNAV (GPS) RWY 13

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>70505</b> <b>W22A</b>	APP CRS <b>217°</b>	Rwy Idg TDZE Apt Elev	<b>5750</b> <b>1500</b> <b>1500</b>
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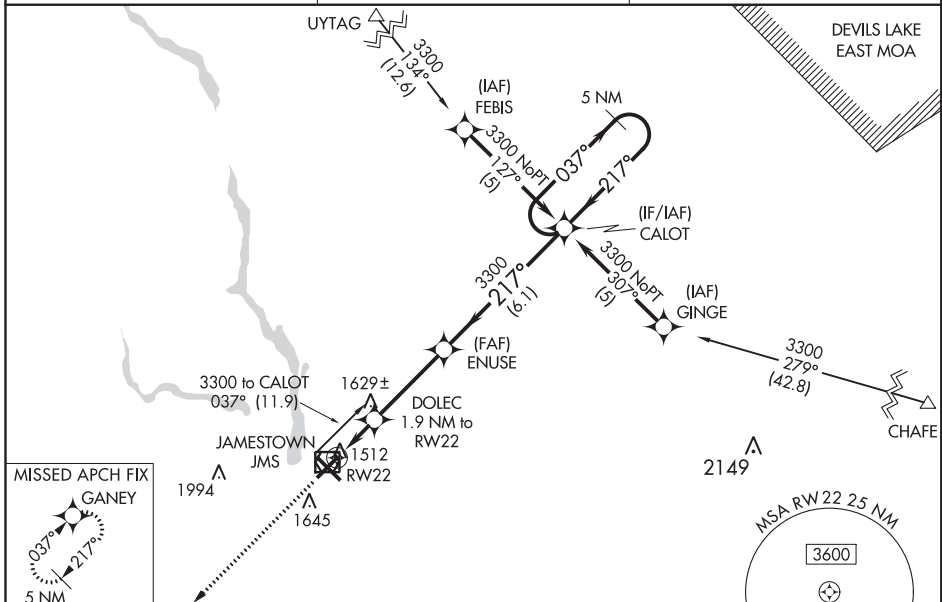
# RNAV (GPS) RWY 22

JAMESTOWN RGNL (JMS)

- ▼** Baro-VNAV NA when using Devils Lake altimeter setting.
- ▲** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 46°C (114°F).
- W** DME/DME RNP-0.3 NA. VDP NA when using Devils Lake altimeter setting. If local altimeter setting not received, use Devils Lake altimeter setting and increase all DAs 172 feet and all MDAs 180 feet.

MISSED APPROACH: Climb to 3700 direct GANEY and hold.

ASOS <b>118.425</b>	MINNEAPOLIS CENTER <b>124.2 270.3</b>	UNICOM <b>123.0 (CTAF) 0</b>
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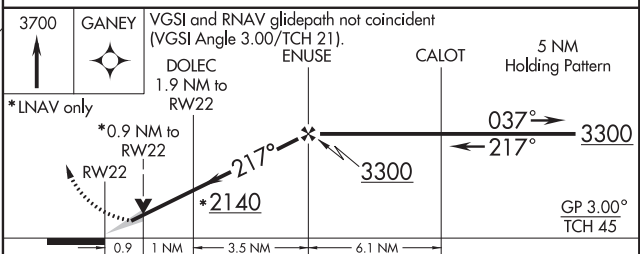
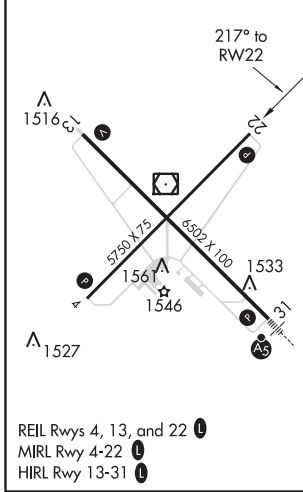


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1500	<b>D</b>	TDZE 1500
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Procedure NA for arrivals at JMS VOR/DME on airway radials 034 CW 087.



CATEGORY	A	B	C	D
LPV DA		1750-1	250 (300-1)	
LNAV/VNAV DA		1772-1	272 (300-1)	
LNAV MDA		1800-1	300 (300-1)	
CIRCLING	1960-1	460 (500-1)	1960-1½ 460 (500-1½)	2060-2 560 (600-2)

WAAS CH <b>66014</b> <b>W31A</b>	APP CRS <b>307°</b>	Rwy ldg <b>6502</b> TDZE <b>1498</b> Apt Elev <b>1500</b>
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# RNAV (GPS) RWY 31

JAMESTOWN RGNL (JMS)

**▼** For inoperative MALSR, increase LNAV Cat D visibility to 1¼ mile. Baro-VNAV NA when using Devils Lake altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Devils Lake altimeter setting and increase all DA 172 feet, all MDA 180 feet, increase LPV all Cats visibility ¼ mile, LNAV/VNAV all Cats visibility ½ mile, LNAV Cat C visibility ½ mile, Cat D visibility ¼ mile, Circling Cats C and D visibility ¼ mile. VDP NA with Devils Lake altimeter setting. For inoperative MALSR when using Devils Lake altimeter setting increase LPV all Cats visibility to 1¼ mile. Inoperative table does not apply to LNAV Cats C and D when using Devils Lake altimeter setting.

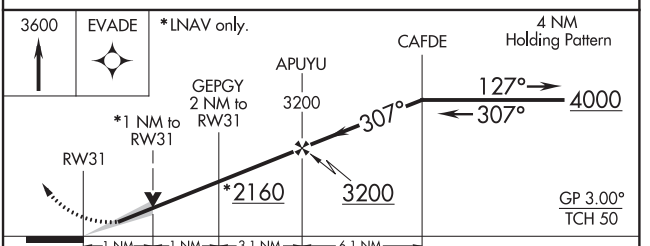
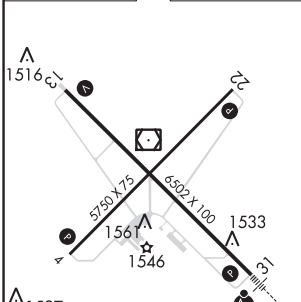
MALSR

MISSED APPROACH:  
Climb to 3600  
direct EVADE  
and hold.

ASOS <b>118,425</b>	MINNEAPOLIS CENTER <b>124.2 270.3</b>	UNICOM <b>123.0 (CTAF) 1</b>
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ELEV 1500	<b>D</b>	TDZE 1498
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CATEGORY	A	B	C	D
LPV DA		1698-½	200 (200-½)	
LNAV/VNAV DA		1836-¾	338 (400-¾)	
LNAV MDA		1880-½	382 (400-½)	1880-1 382 (400-1)
CIRCLING	1960-1	460 (500-1)	1960-1½ 460 (500-1½)	2060-2 560 (600-2)

JAMESTOWN, NORTH DAKOTA  
Orig 27AUG09

46°56'N-98°41'W

# JAMESTOWN RGNL (JMS) RNAV (GPS) RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

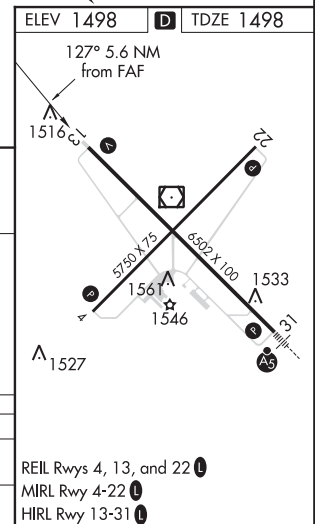
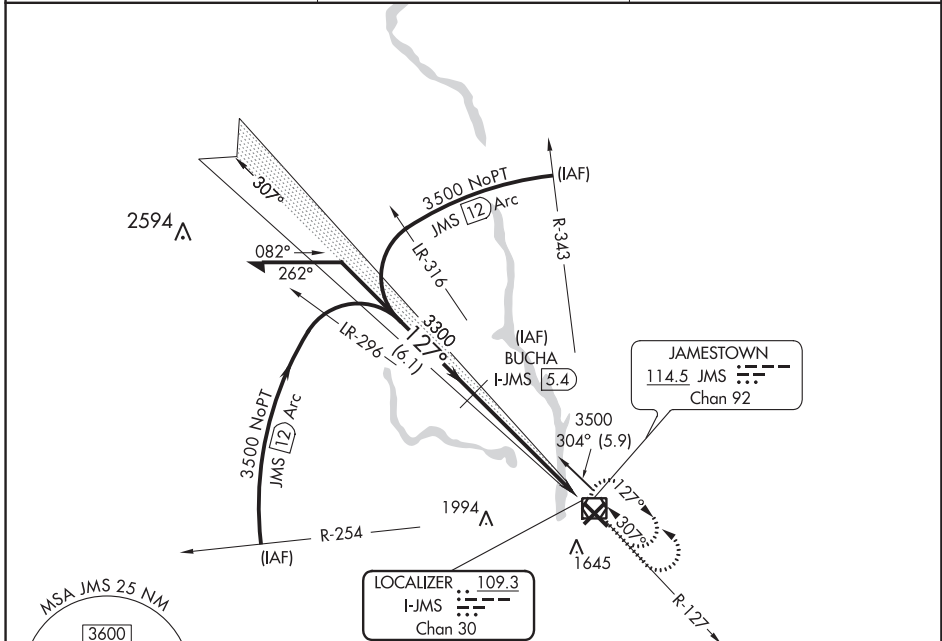
LOC/DME I-JMS <b>109.3</b> Chan <b>30</b>	APP CRS <b>127°</b>	Rwy Idg TDZE Apt Elev	<b>6502</b> <b>1498</b> <b>1498</b>
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# LOC/DME BC RWY 13

JAMESTOWN RGNL (JMS)

**NA** MISSED APPROACH: Climb to 3500 then left turn direct JMS VOR/DME and hold.

ASOS <b>118.425</b>	MINNEAPOLIS CENTER <b>124.2 270.3</b>	UNICOM <b>123.0</b> (CTAF) <b>1</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

JAMESTOWN, NORTH DAKOTA

AL-685 (FAA)

14317

VOR/DME JMS <b>114.5</b> Chan <b>92</b>	APP CRS <b>117°</b>	Rwy Idg TDZE Apt Elev	<b>6502</b> <b>1500</b> <b>1500</b>
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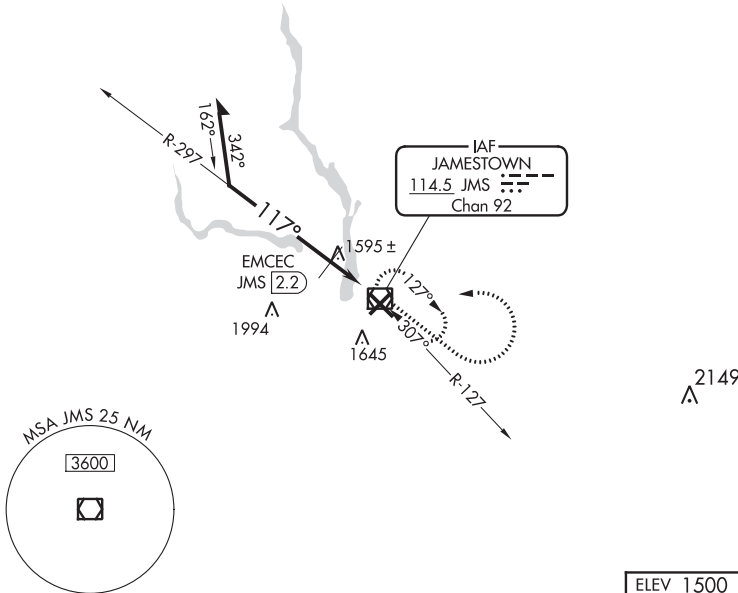
**VOR RWY 13**  
JAMESTOWN RGNL (JMS)

**▽** If local altimeter setting not received, procedure NA. Visibility reduction by helicopters NA. MISSED APPROACH: Climb to 3500 then left turn direct JMS VOR/DME and hold.

ASOS <b>118.425</b>	MINNEAPOLIS CENTER <b>124.2 270.3</b>	UNICOM <b>123.0</b> (CTAF) <b>ℓ</b>
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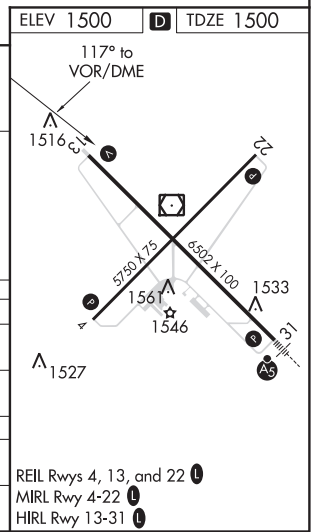
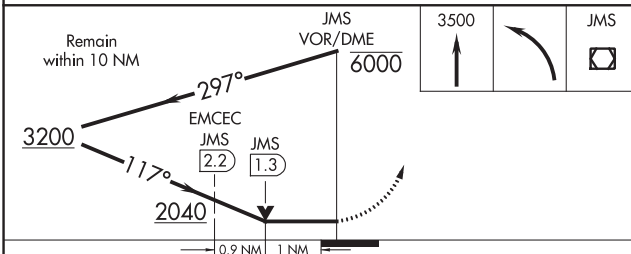
Procedure NA for arrivals at JMS VOR/DME via V561 northbound.

DEVILS LAKE  
EAST MOA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A		B		C		D	
	Alt	Vis	Alt	Vis	Alt	Vis	Alt	Vis
S-13	2040-1	540 (600-1)	2040-1½	540 (600-1½)	2040-1¾	540 (600-1¾)	2040-1¾	540 (600-1¾)
CIRCLING	2040-1	540 (600-1)	2040-1½	540 (600-1½)	2060-2	560 (600-2)	2060-2	560 (600-2)
EMCEC FIX MINIMUMS								
S-13	1860-1 360 (400-1)		1860-1¼		360 (400-1¼)			
CIRCLING	1960-1	460 (500-1)	1960-1½	460 (500-1½)	2060-2	560 (600-2)		

JAMESTOWN, NORTH DAKOTA  
Amdt 8 30AUG07

46°56'N-98°41'W

JAMESTOWN RGNL (JMS)  
**VOR RWY 13**



VOR/DME JMS <b>114.5</b> Chan <b>92</b>	APP CRS <b>311°</b>	Rwy Idg TDZE Apt Elev	<b>6502</b> <b>1498</b> <b>1500</b>
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# VOR RWY 31

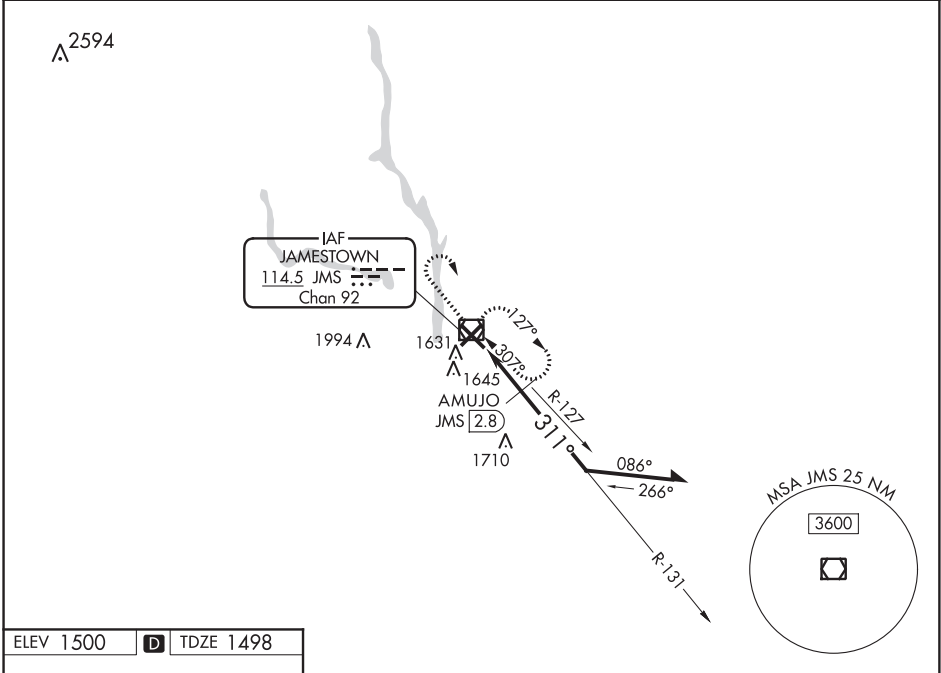
JAMESTOWN RGNL (JMS)

**⚠** For inoperative MALS/R, increase AMUJO FIX minimums S-31 Cat D visibility to 1¼ mile. VDP NA with Devils Lake altimeter setting. When local altimeter setting not received, use Devils Lake altimeter setting and increase all MDA 180 feet, increase S-31 Cats C and D visibility ¾ mile, Circling Cats C and D visibility ½ mile, increase AMUJO FIX minimums S-31 Cat C and Circling Cats C and D visibility ¼ mile.

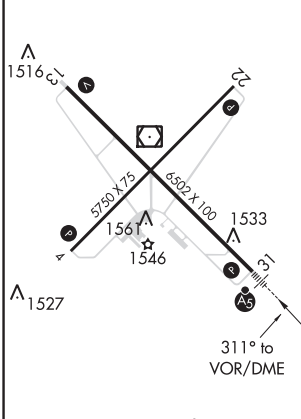


**MISSED APPROACH:**  
Climb to 3100 then right turn direct JMS VOR/DME and hold.

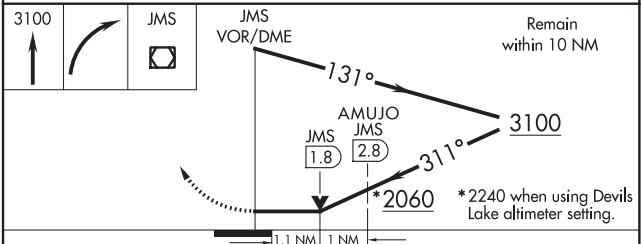
ASOS <b>118.425</b>	MINNEAPOLIS CENTER <b>124.2 270.3</b>	UNICOM <b>123.0 (CTAF) 0</b>
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ELEV 1500	<b>D</b>	TDZE 1498
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- REIL Rws 4, 13, and 22
- MIRL Rwy 4-22
- HIRL Rwy 13-31



CATEGORY	A	B	C	D
S-31	2060-½	562 (600-½)	2060-1 562 (600-1)	2060-1¼ 562 (600-1¼)
CIRCLING	2060-1	560 (600-1)	2060-1½ 560 (600-1½)	2060-2 560 (600-2)
AMUJO FIX MINIMUMS				
S-31	1900-½	402 (400-½)	1900-¾ 402 (400-¾)	1900-1 402 (400-1)
CIRCLING	1960-1	460 (500-1)	1960-1½ 460 (500-1½)	2060-2 560 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

AL-685 (FAA)

JAMESTOWN RGNL (JMS)  
JAMESTOWN, NORTH DAKOTA

ASOS  
118.425  
CTAF/UNICOM  
123.0

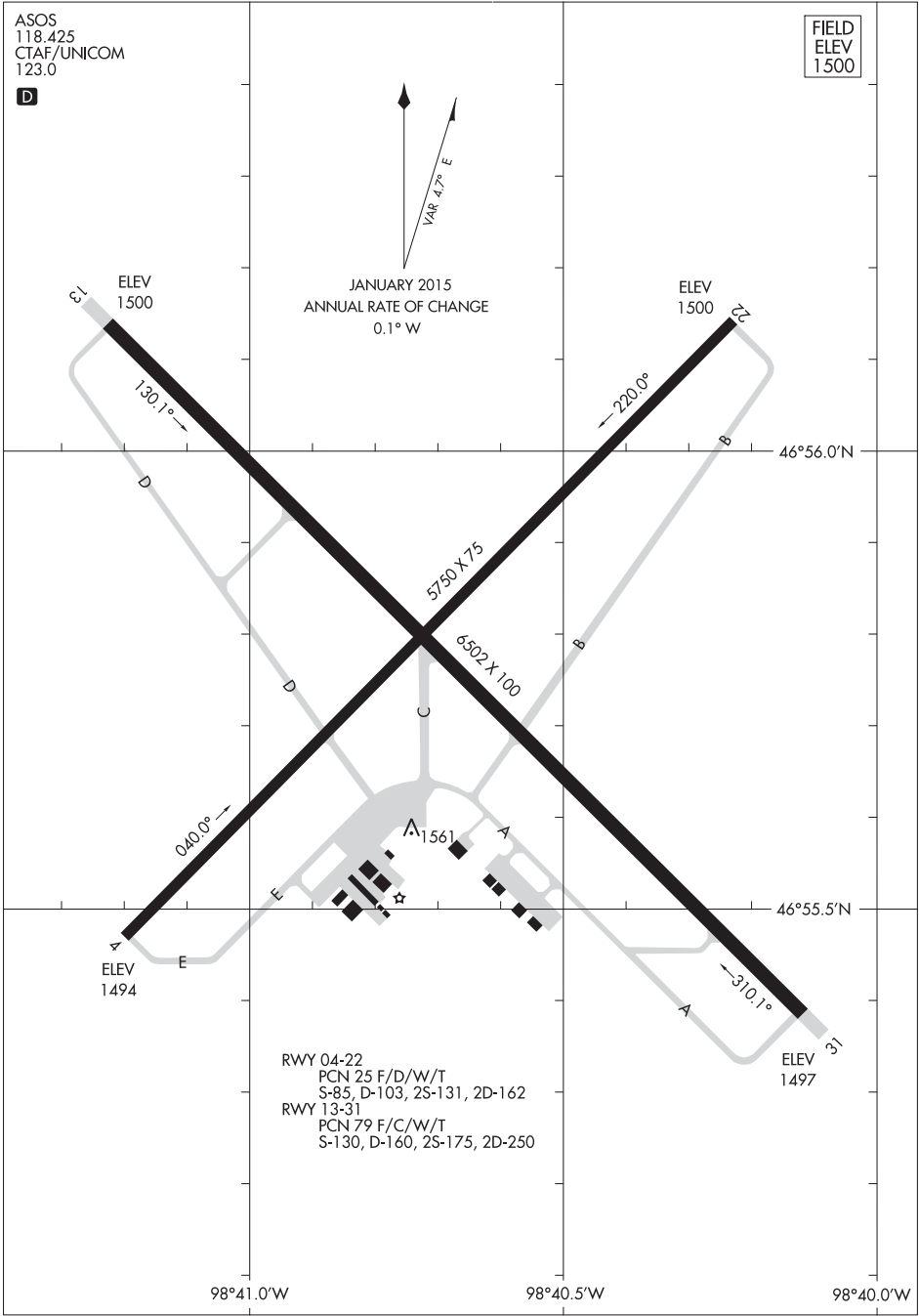
FIELD  
ELEV  
1500



JANUARY 2015  
ANNUAL RATE OF CHANGE  
0.1° W

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



RWY 04-22  
PCN 25 F/D/W/T  
S-85, D-103, 2S-131, 2D-162  
RWY 13-31  
PCN 79 F/C/W/T  
S-130, D-160, 2S-175, 2D-250

# AIRPORT DIAGRAM

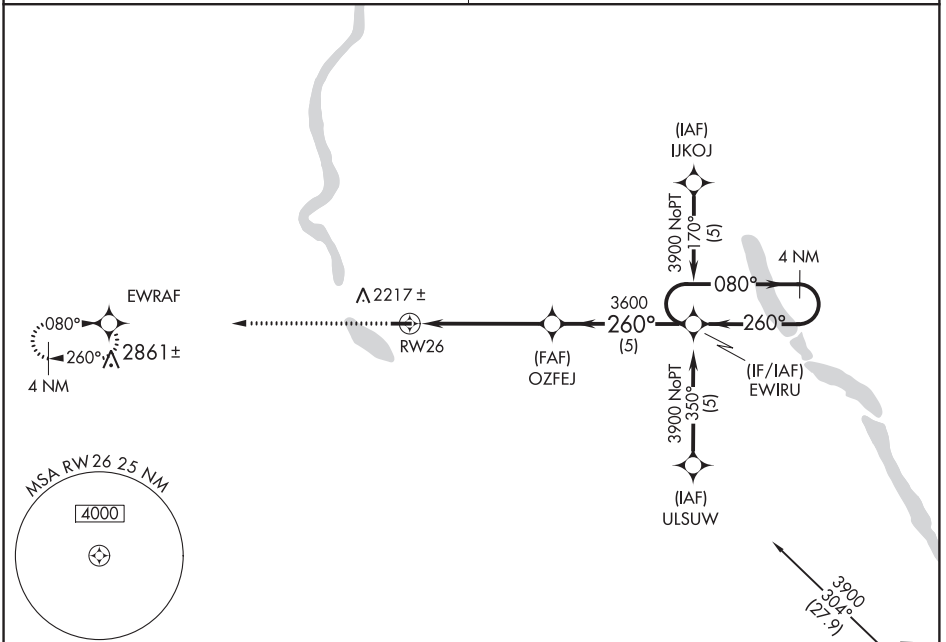
APP CRS <b>260°</b>	Rwy Idg <b>3700</b>
	TDZE <b>1960</b>
	Apt Elev <b>1962</b>

# RNAV (GPS) RWY 26

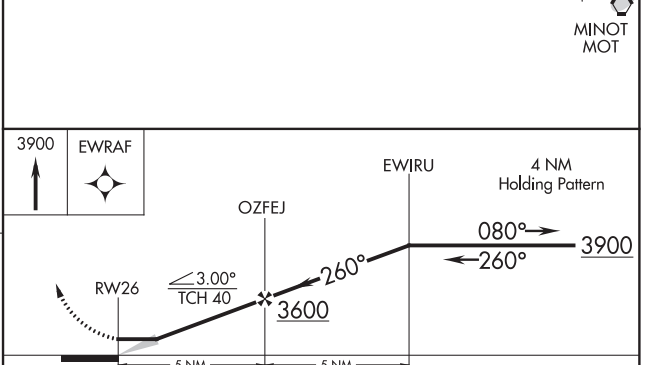
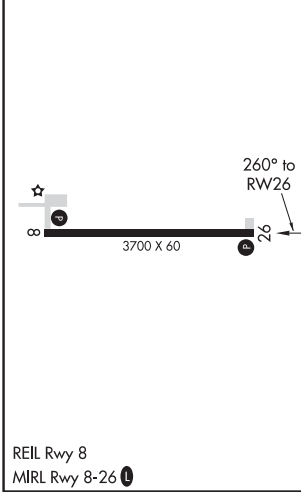
KENMARE MUNI (7K5)

<p>Use Minot Infil altimeter setting. GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.</p>	<p>MISSED APPROACH: Climb to 3900 direct EWRAF WP and hold.</p>
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<p>MINOT APP CON ★</p> <p><b>119.6 363.8</b></p>	<p>CTAF</p> <p><b>122.8</b> </p>
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ELEV 1962	TDZE 1960
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CATEGORY	A	B	C	D
LNAV MDA	2420-1	460 (500-1)	NA	
CIRCLING	2580-1 618 (700-1)	2640-1 678 (700-1)	NA	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

KINDRED, NORTH DAKOTA

AL-10406 (FAA)

16315

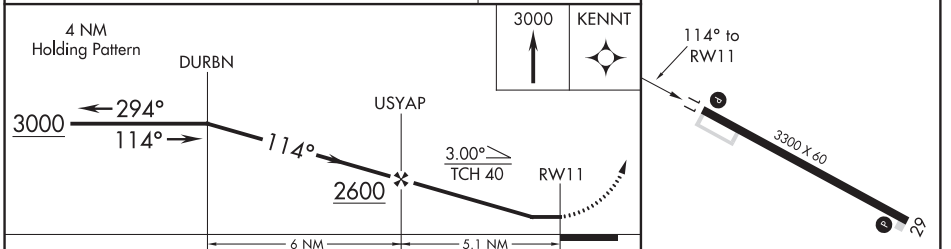
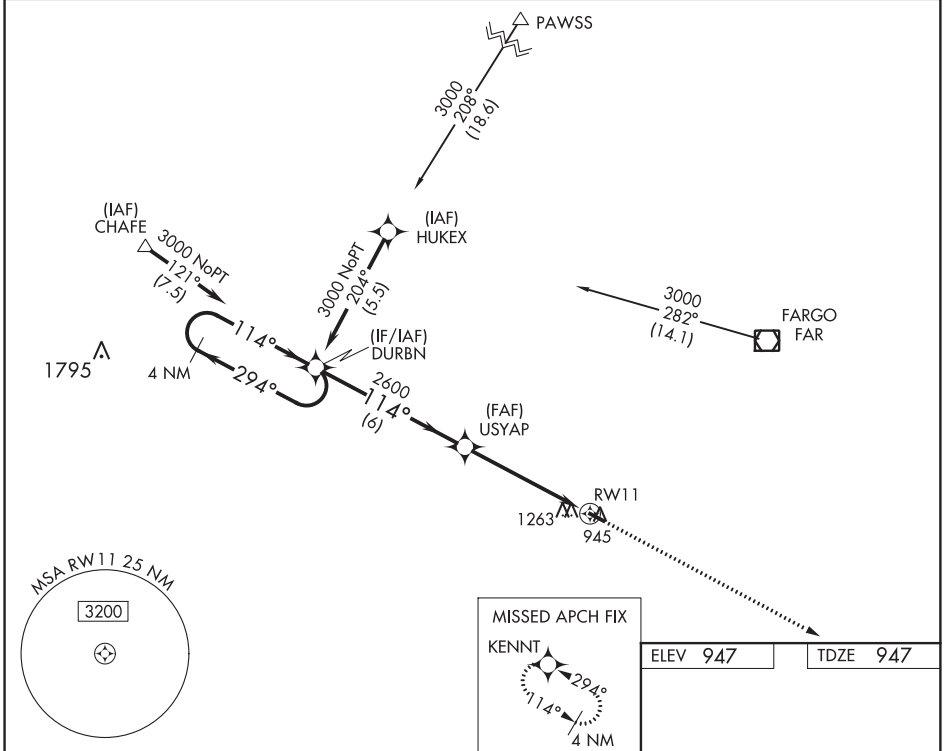
WAAS CH <b>97733</b> <b>W11A</b>	APP CRS <b>114°</b>	Rwy Idg <b>3300</b> TDZE <b>947</b> Apt Elev <b>947</b>
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# RNAV (GPS) RWY 11

ROBERT ODEGAARD FIELD (K74)

<p><b>▽</b> DME/DME RNP-0.3 NA. <b>▲</b> NA Helicopter visibility reduction below ¾ SM NA. Use Hector Intl altimeter setting.</p>	<p>MISSED APPROACH: Climb to 3000 direct KENNT and hold.</p>
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<p>FARGO APP CON <b>120.4 377.15</b></p>	<p>CTAF <b>122.9</b></p>
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CATEGORY	A	B	C	D
LP MDA	1440-1	493 (500-1)		NA
LNAV MDA	1620-1	673 (700-1)		NA
<b>C</b> CIRCLING	1680-1	733 (800-1)		NA

ELEV 947	TDZE 947
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MIRL Rwy 11-29

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

KINDRED, NORTH DAKOTA  
Amdt 1D 10NOV16

46°39'N-97°00'W

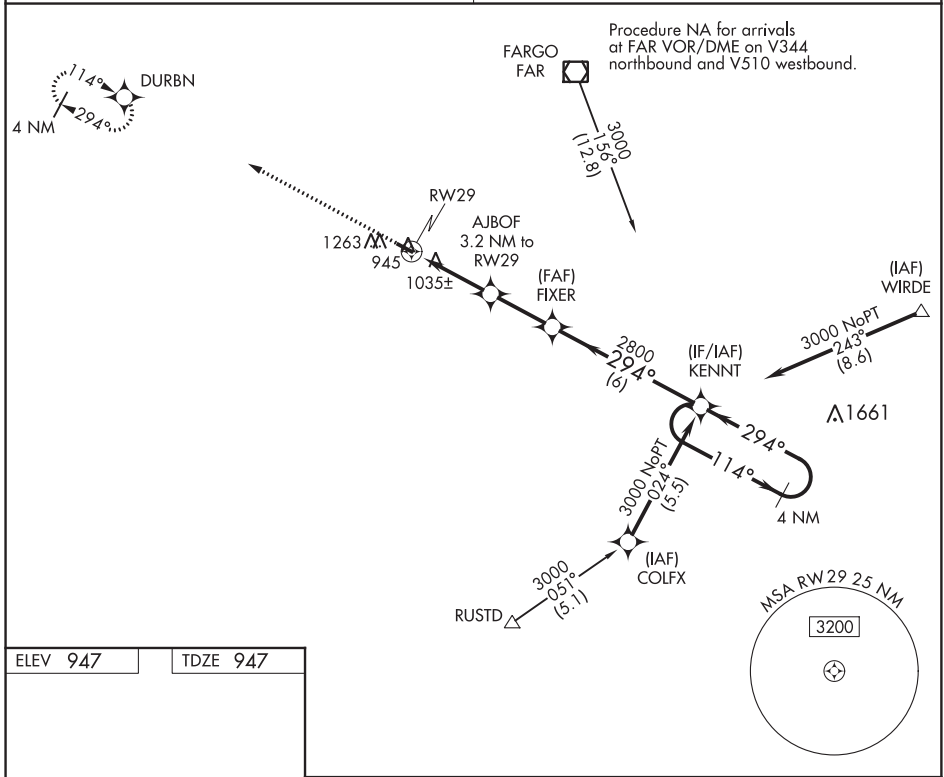
ROBERT ODEGAARD FIELD (K74)  
**RNAV (GPS) RWY 11**

APP CRS <b>294°</b>	Rwy Idg <b>3300</b>
	TDZE <b>947</b>
	Apt Elev <b>947</b>

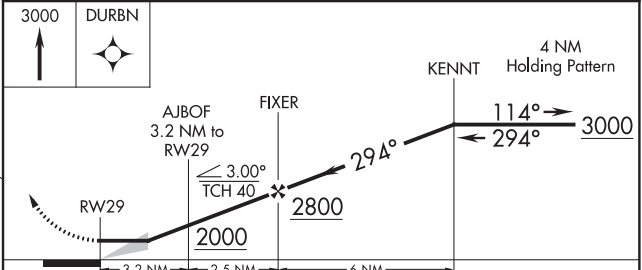
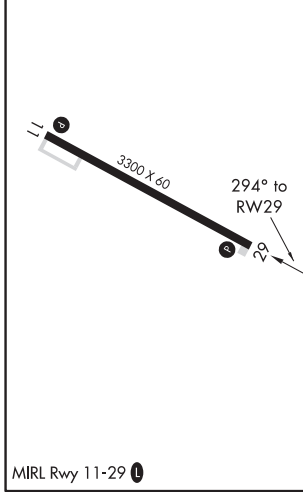
# RNAV (GPS) RWY 29

ROBERT ODEGAARD FIELD (K74)

NA	DME/DME RNP-0.3 NA. Use Hector Intl altimeter setting.	MISSED APPROACH: Climb to 3000 direct DURBN and hold.
FARGO APP CON <b>120.4 377.15</b>		CTAF <b>122.9</b>



ELEV 947	TDZE 947
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CATEGORY	A	B	C	D
LNAV MDA	1400-1	453 (500-1)	NA	
CIRCLING	1680-1	733 (800-1)	NA	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LANGDON, NORTH DAKOTA

AL-9432 (FAA)

15008

APP CRS	Rwy Idg	<b>3600</b>
<b>133°</b>	TDZE	<b>1606</b>
	Apt Elev	<b>1608</b>

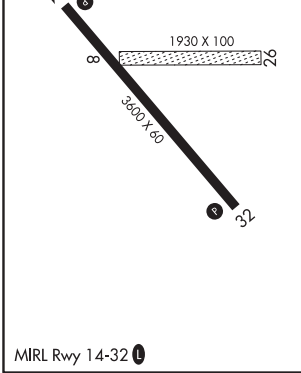
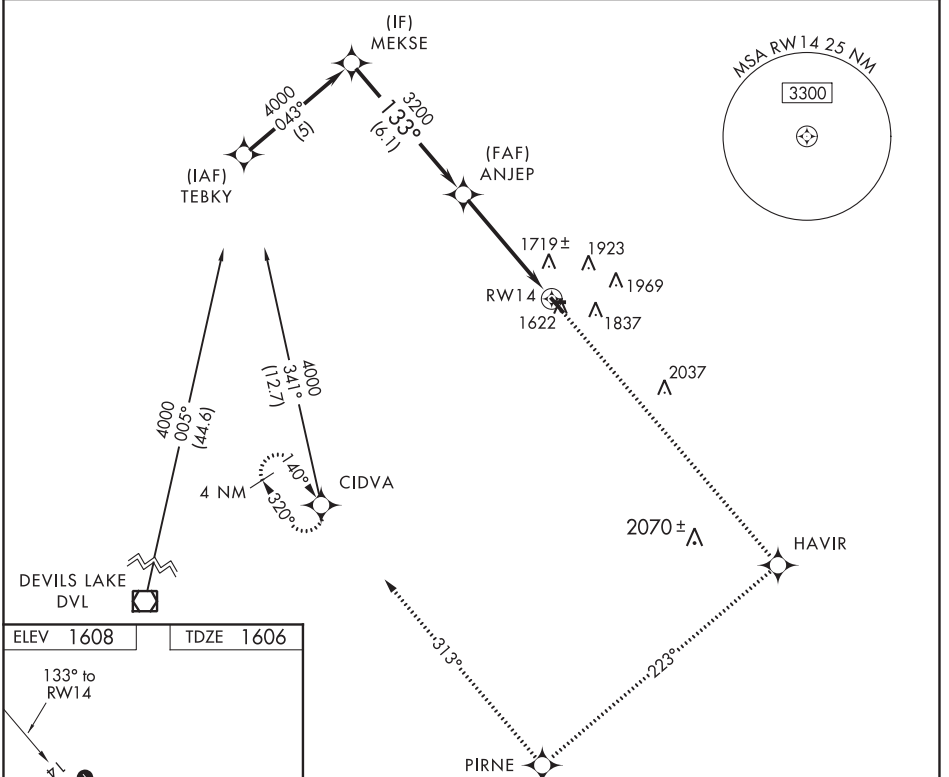
# RNAV (GPS) RWY 14

ROBERTSON FIELD (D55)

**⚠** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.  
**⚠** When local altimeter setting not received use Devils Lake altimeter setting and increase all MDA 140 feet, increase LNAV and Circling Cat C visibility ½ mile, and Circling Cat B visibility ¼ mile.

MISSED APPROACH: Climb to 4000 direct HAVIR and via track 223° to PIRNE and via track 313° to CIDVA and hold.

AWOS-3 <b>118.225</b>	MINNEAPOLIS CENTER <b>132.15 269.6</b>	UNICOM <b>122.8 (CTAF)</b> <b>📻</b>
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Procedure Turn NA	MEKSE	4000	HAVIR	PIRNE	CIDVA
		↑	✧	223° tr ✧	313° tr ✧
	4000	133°	ANJEP	3200	RWY 14
VGSI and descent angles not coincident (VGSI Angle 3.00/TCH 25).					
		6.1 NM	4.8 NM		
CATEGORY	A	B	C	D	
LNAV MDA	2100-1	494 (500-1)	2100-1¼ 494 (500-1¼)	NA	
CIRCLING	2240-1	632 (700-1)	2240-1¾ 632 (700-1¾)	NA	

LANGDON, NORTH DAKOTA  
 Orig 03JUN10

48°45'N - 98°24'W

# ROBERTSON FIELD (D55)

## RNAV (GPS) RWY 14

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>50515</b> <b>W32A</b>	APP CRS <b>313°</b>	Rwy Ldg <b>3600</b> TDZE <b>1608</b> Apt Elev <b>1608</b>
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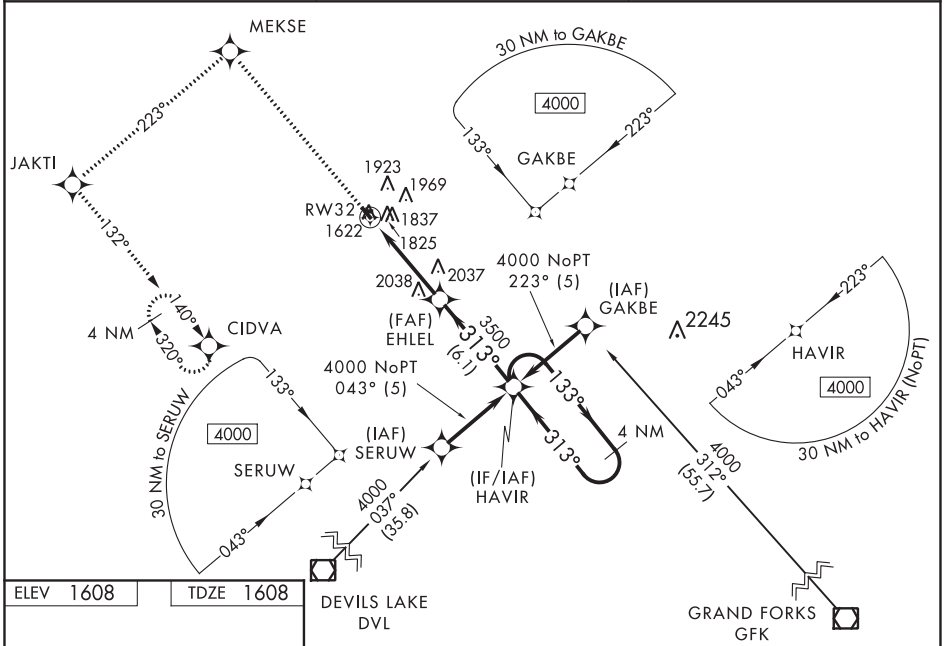
# RNAV (GPS) RWY 32

ROBERTSON FIELD (D55)

Baro-VNAV NA when using Devils Lake altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F).  
 ▲ DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received use Devils Lake altimeter setting and increase all DA 122 feet and all MDA 140 feet, increase LPV all Cats, LNAV and Circling Cat B visibility ¼ mile and LNAV/VNAV all Cats, LNAV and Circling Cat C visibility ½ mile.

MISSED APPROACH: Climb to 4000 direct MEKSE and via track 223° to JAKTI and via track 132° to CIDVA and hold.

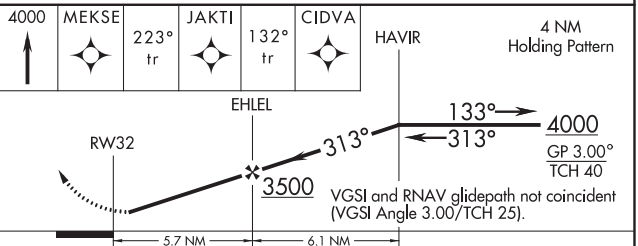
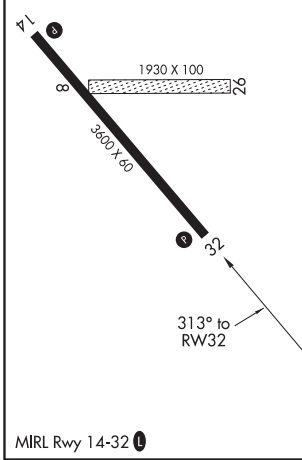
AWOS-3 <b>118.225</b>	MINNEAPOLIS CENTER <b>132.15 269.6</b>	UNICOM <b>122.8</b> (CTAF) <b>📻</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1608	TDZE 1608
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CATEGORY	A	B	C	D
LPV DA	1858-1	250 (300-1)		NA
LNAV/ VNAV DA	2159-2	551 (600-2)		NA
LNAV MDA	2340-1	732 (800-1)	2340-2 732 (800-2)	NA
CIRCLING	2340-1	732 (800-1)	2340-2 732 (800-2)	NA

LEMMON, SOUTH DAKOTA

AL-9028 (FAA)

16091

WAAS CH <b>78431</b> W29A	APP CRS <b>299°</b>	Rwy Idg TDZE Apt Elev	<b>4499</b> <b>2573</b> <b>2573</b>
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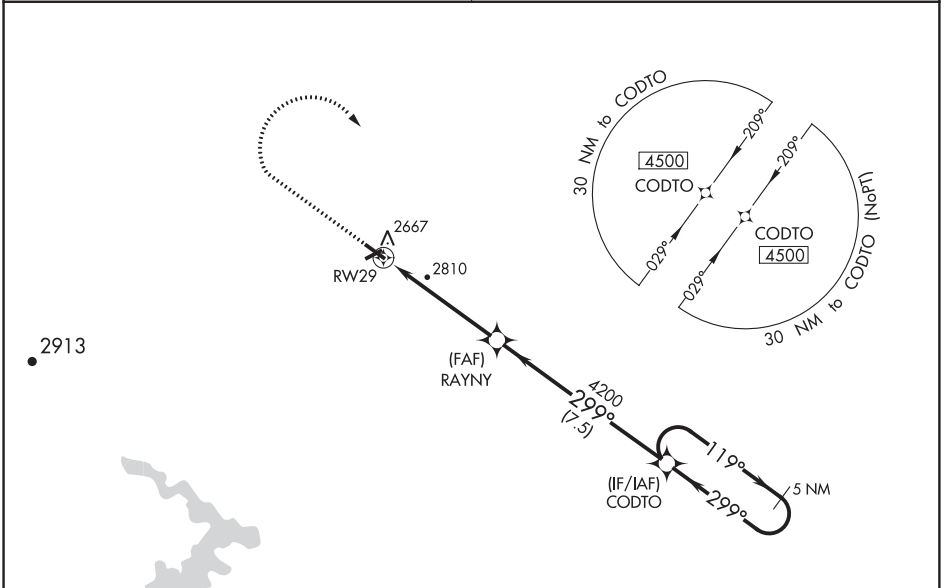
# RNAV (GPS) RWY 29

LEMMON MUNI (LEM)

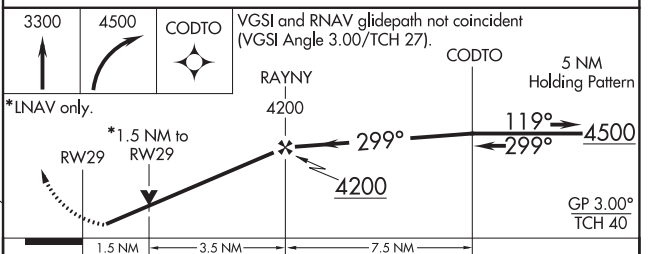
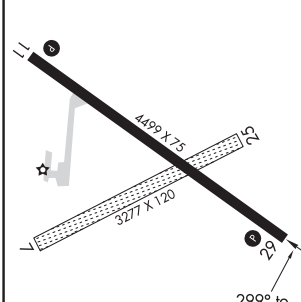
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C (-4°F) or above 54°C (130°F). DME/DME-0.3 NA. Baro-VNAV and VDP NA when using Hettinger altimeter setting. Helicopter visibility reduction below 3/4 SM NA. When local altimeter setting not received, use Hettinger altimeter setting and increase all DA 74 feet and all MDA 80 feet and increase LPV and LNAV/VNAV all Cats visibility 1/8 mile and LNAV Cats C/D and Circling Cats C/D visibility 1/4 mile.

**⚠ NA** MISSED APPROACH: Climb to 3300 then climbing right turn to 4500 direct CODTO and hold.

MINNEAPOLIS CENTER <b>124.25 380.3</b>	AUNICOM <b>122.8 (CTAF)</b> <b>📻</b>
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ELEV 2573	TDZE 2573
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CATEGORY	A	B	C	D
LPV DA	2823-1 250 (300-1)			
LNAV/VNAV DA	2831-1 258 (300-1)			
LNAV MDA	3060-1 487 (500-1)		3060-1 3/8 487 (500-1 3/8)	
<b>C</b> CIRCLING	3220-1 647 (700-1)		3280-2 707 (800-2) 3280-2 1/4 707 (800-2 1/4)	

LEMMON, SOUTH DAKOTA  
Orig-A 05FEB15

45°55'N-102°06'W

# LEMMON MUNI (LEM) RNAV (GPS) RWY 29

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>99630</b> <b>W09A</b>	APP CRS <b>100°</b>	Rwy Idg TDZE Apt Elev	<b>3700</b> <b>1777</b> <b>1779</b>
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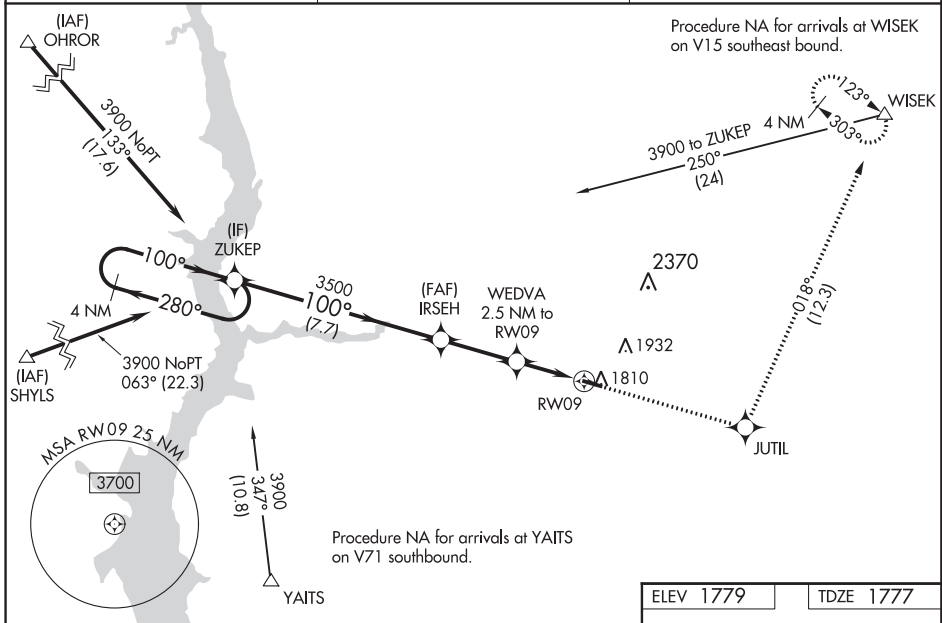
# RNAV (GPS) RWY 9

LINTON MUNI (7L2)

▼ Baro-VNAV NA when using Bismarck Muni altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). When VGSI inop, Straight-In/Circling Rwy 9 procedure NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Bismarck Muni altimeter setting and increase all DA 107 feet and LPV visibility ¼ mile all Cats, LNAV/VNAV ½ mile all Cats; increase all MDA 120 feet and LNAV Cat C and Circling Cat C visibility ¼ mile.

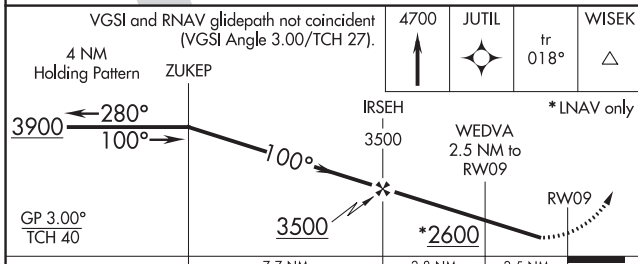
MISSED APPROACH: Climb to 4700 direct JUTIL and on track 018° to WISEK and hold.

ASOS-3 <b>118.175</b>	MINNEAPOLIS CENTER <b>135.25 256.7</b>	CTAF <b>122.9</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 1779	TDZE 1777
MIRL Rwy 9-27	

CATEGORY	A	B	C	D
LPV DA		2027-1 250 (300-1)		NA
LNAV/VNAV DA		2091-1 314 (400-1)		NA
LNAV MDA	2160-1	383 (400-1)	2160-1 383 (400-1 1/8)	NA
CIRCLING	2220-1 441 (500-1)	2360-1 581 (600-1)	2380-1 601 (700-1 3/4)	NA

LINTON, NORTH DAKOTA

AL-9454 (FAA)

15232

WAAS CH <b>86630</b> <b>W27A</b>	APP CRS <b>280°</b>	Rwy Idg TDZE <b>1779</b> Apt Elev <b>1779</b>	<b>3700</b>
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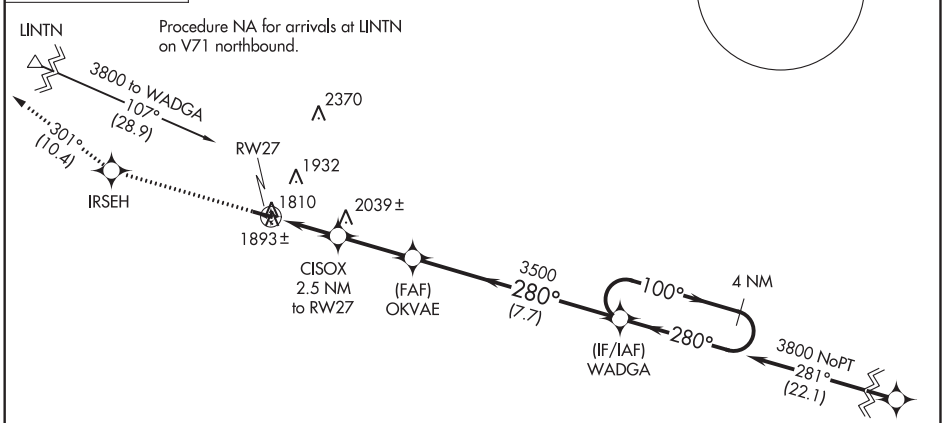
# RNAV (GPS) RWY 27

LINTON MUNI (7L2)

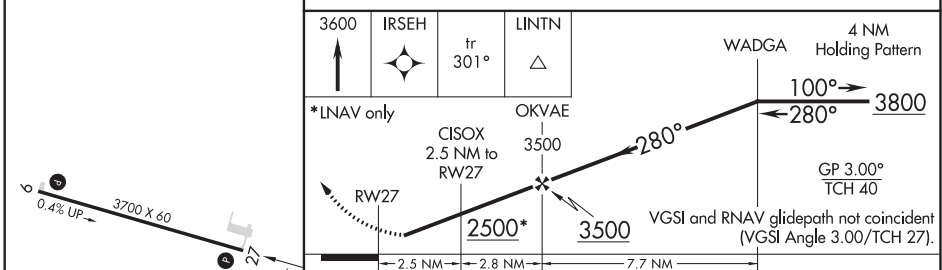
**⚠** When VGSI inop, Circling Rwy 9 NA at night. Baro-VNAV NA when using Bismarck Muni altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). When VGSI inop, Straight-in/Circling Rwy 27 procedure NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter not received, use Bismarck Muni altimeter setting and increase all DA 107 feet and visibility LPV and LNAV/VNAV ¼ mile all Cats; increase all MDA 120 feet and visibility LNAV Cat C and Circling Cat C ¼ mile.

**⚠** MISSED APPROACH: Climb to 3600 direct IRSEH and on track 301° to LINTN and hold.

ASOS-3 <b>118.175</b>	MINNEAPOLIS CENTER <b>135.25 256.7</b>	CTAF <b>122.9</b> <b>⓪</b>
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ELEV <b>1779</b>	TDZE <b>1779</b>
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CATEGORY	A	B	C	D
LPV DA	2029-1 250 (300-1)			NA
LNAV/VNAV DA	2043-1 264 (300-1)			NA
LNAV MDA	2160-1	381 (400-1)	2160-1 <sup>1</sup> / <sub>8</sub> 381 (400-1 <sup>1</sup> / <sub>8</sub> )	NA
CIRCLING	2220-1 441 (500-1)	2360-1 581 (600-1)	2380-1 <sup>3</sup> / <sub>4</sub> 601 (700-1 <sup>3</sup> / <sub>4</sub> )	NA

MIRL Rwy 9-27 **⓪**  
LINTON, NORTH DAKOTA  
Orig-A 05FEB15

46°13'N-100°15'W

# RNAV (GPS) RWY 27

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>69419</b> <b>W13A</b>	APP CRS <b>136°</b>	Rwy Idg TDZE Apt Elev	<b>4002</b> <b>1140</b> <b>1140</b>
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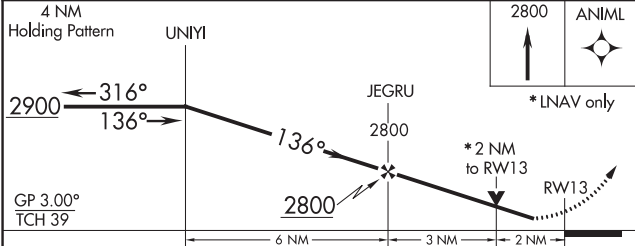
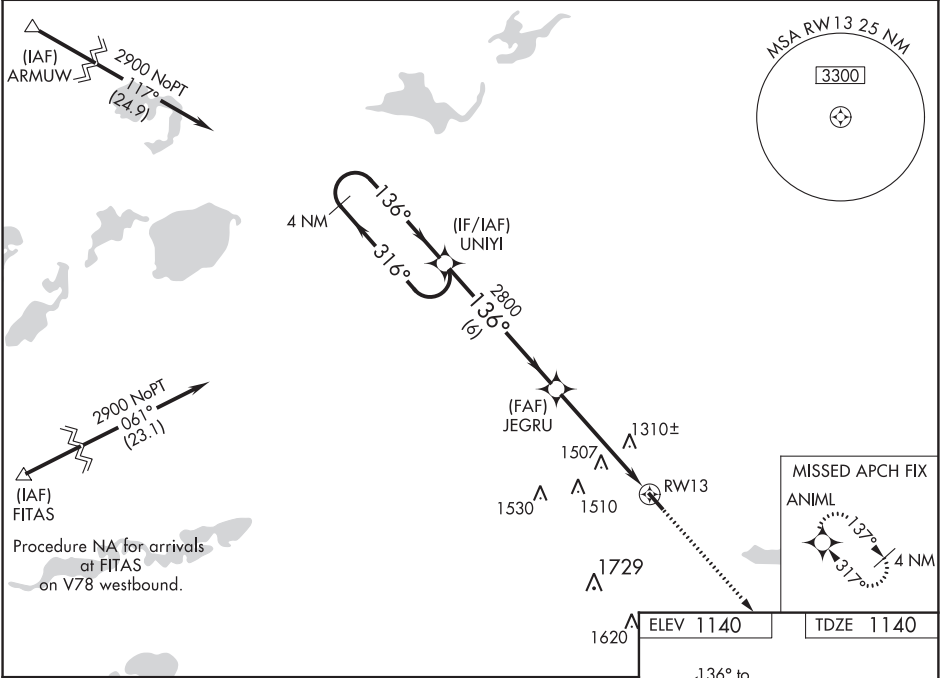
# RNAV (GPS) RWY 13

LITCHFIELD MUNI (LJF)

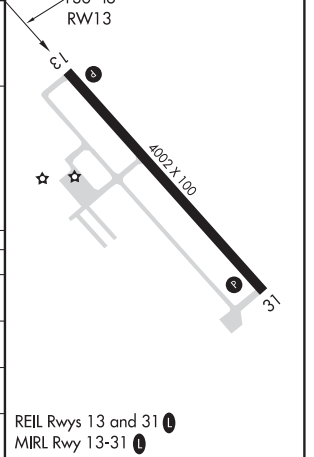
**⚠** Baro-VNAV NA when using Hutchinson altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Hutchinson altimeter setting and increase all DA 46 feet and all MDA 60 feet, and increase LNAV/VNAV all Cats and Circling visibility Cat D ¼ mile. VDP NA with Hutchinson altimeter setting.

**MISSED APPROACH:** Climb to 2800 direct ANIML and hold.

AWOS-3 <b>109.0</b>	MINNEAPOLIS CENTER <b>125.5 323.1</b>	CTAF <b>122.9</b>
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CATEGORY	A	B	C	D
LPV DA	1390-1		250 (300-1)	
LNAV/VNAV DA	1934-2¾		794 (800-2¾)	
LNAV MDA	1820-1	680 (700-1)	1820-2 680 (700-2)	1820-2¼ 680 (700-2¼)
CIRCLING	1820-1	680 (700-1)	1820-2 680 (700-2)	1860-2¼ 720 (800-2¼)



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LITCHFIELD, MINNESOTA

AL-6940 (FAA)

16035

WAAS CH <b>40319</b> <b>W31A</b>	APP CRS <b>317°</b>	Rwy Idg TDZE Apt Elev	<b>4002</b> <b>1140</b> <b>1140</b>
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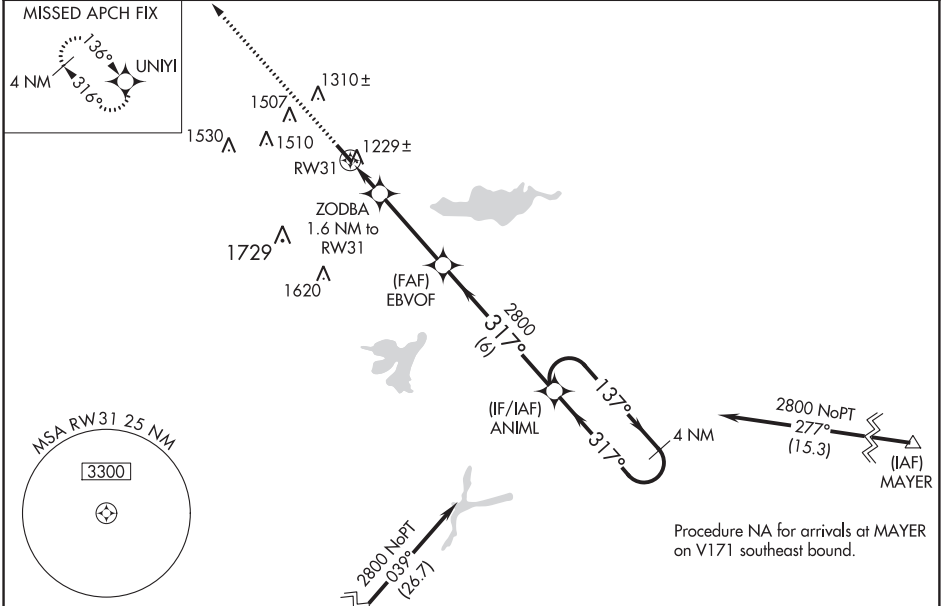
# RNAV (GPS) RWY 31

LITCHFIELD MUNI (LJF)

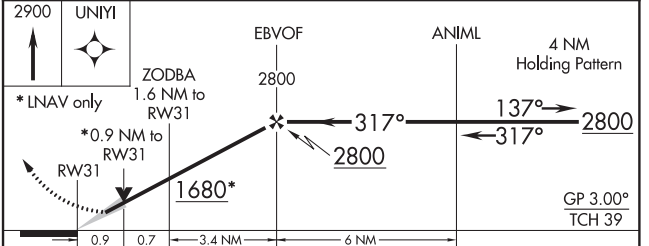
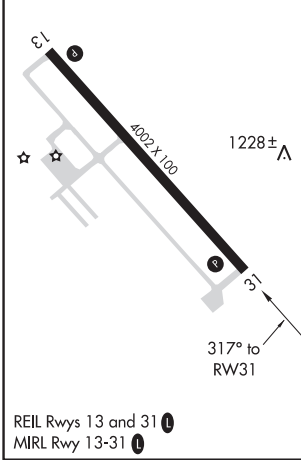
**⚠** Baro-VNAV NA when using Hutchinson altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Hutchinson altimeter setting and increase all DA 46 feet and all MDA 60 feet, and increase LNAV and Circling visibility Cat D ¼ mile. VDP NA when using Hutchinson altimeter setting.

**MISSED APPROACH:**  
Climb to 2900 direct UNYI and hold.

AWOS-3 <b>109.0</b>	MINNEAPOLIS CENTER <b>125.5 323.1</b>	CTAF <b>122.9</b>
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ELEV 1140	TDZE 1140
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CATEGORY	A	B	C	D
LPV DA		1389-1	249 (300-1)	
LNAV/VNAV DA		1548-1½	408 (500-1½)	
LNAV MDA		1480-1	340 (400-1)	
CIRCLING	1600-1	460 (500-1)	1600-1½ 460 (500-1½)	1860-2¼ 720 (800-2¼)

LITCHFIELD, MINNESOTA  
Orig 23SEP10

45°06'N-94°30'W

# RNAV (GPS) RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

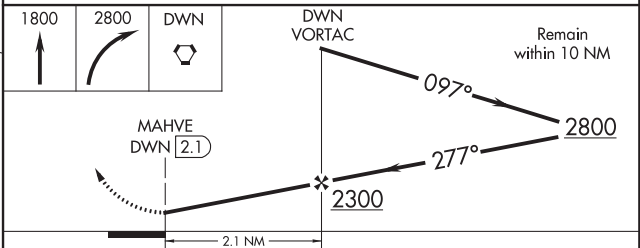
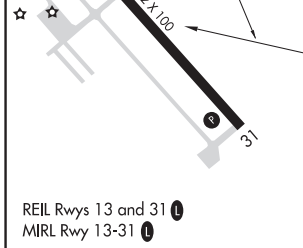
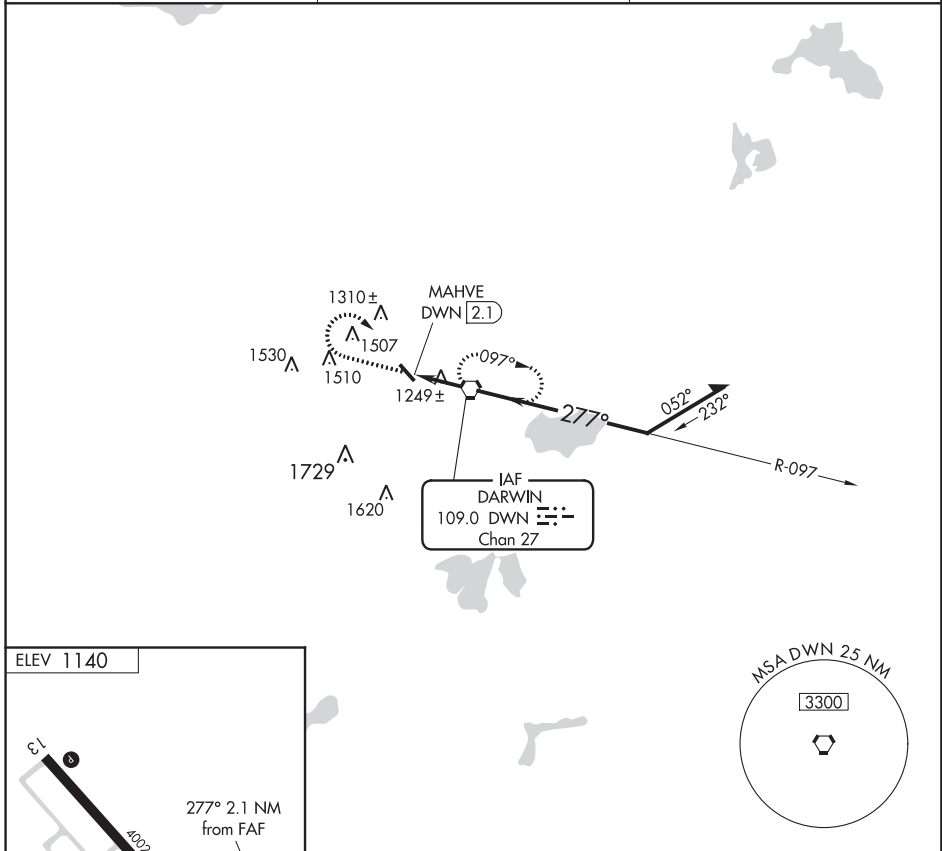
NC-1, 10 NOV 2016 to 05 JAN 2017

VORTAC DWN <b>109.0</b> Chan 27	APP CRS <b>277°</b>	Rwy Idg TDZE Apt Elev	<b>N/A</b> <b>N/A</b> <b>1140</b>
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**VOR-A**  
LITCHFIELD MUNI (LJF)

<p><b>⚠</b> When local altimeter setting not received, use Hutchinson altimeter setting and increase all MDA 60 feet, and increase visibility Circling Cat D ¼ mile.</p>	<p><b>MISSED APPROACH:</b> Climb to 1800 then climbing right turn to 2800 direct DWN VORTAC and hold.</p>
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AWOS-3 <b>109.0</b>	MINNEAPOLIS CENTER <b>125.5 323.1</b>	CTAF <b>122.9</b>
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FAF to MAP 2.1 NM					
Knots	60	90	120	150	180
Min:Sec	2:06	1:24	1:03	0:50	0:42
CATEGORY	A		B		C
CIRCLING	1600-1		460 (500-1)		1600-1½ 460 (500-1½)
					1860-2¼ 720 (800-2¼)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>93920</b> <b>W31A</b>	APP CRS <b>308°</b>	Rwy Idg TDZE Apt Elev	<b>4010</b> <b>1123</b> <b>1123</b>
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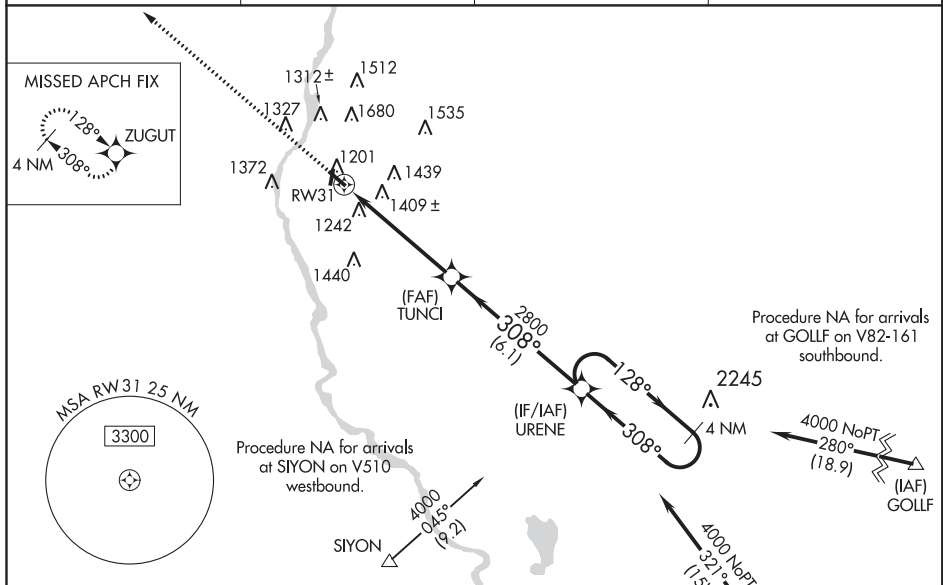
# RNAV (GPS) RWY 31

LITTLE FALLS/MORRISON COUNTY-LINDBERGH FIELD (LXL)

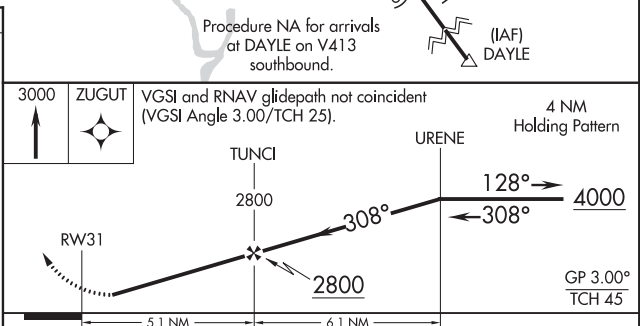
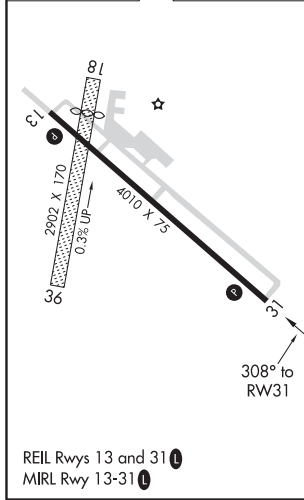
**⚠** Baro-VNAV NA when using St Cloud altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 32°C (89°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA. When local altimeter setting not received use St Cloud altimeter setting and increase all DA 76 feet and all MDA 80 feet, increase LPV all Cats and Circling Cat C visibility 1/2 mile and LNAV/VNAV all Cats, LNAV Cats C/D, and Circling Cat D 1/4 mile.

MISSED APPROACH: Climb to 3000 direct ZUGUT and hold.

AWOS-3 <b>119.45</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1123	TDZE 1123
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CATEGORY	A	B	C	D
LPV DA		1517-1 3/8	394 (400-1 3/8)	
LNAV/VNAV DA		1749-2 1/4	626 (700-2 1/4)	
LNAV MDA	1660-1	537 (600-1)	1660-1 1/2	537 (600-1 1/2)
CIRCLING	1700-1 577 (600-1)	1720-1 597 (600-1)	1720-1 1/2 597 (600-1 1/2)	2000-2 3/4 877 (900-2 3/4)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

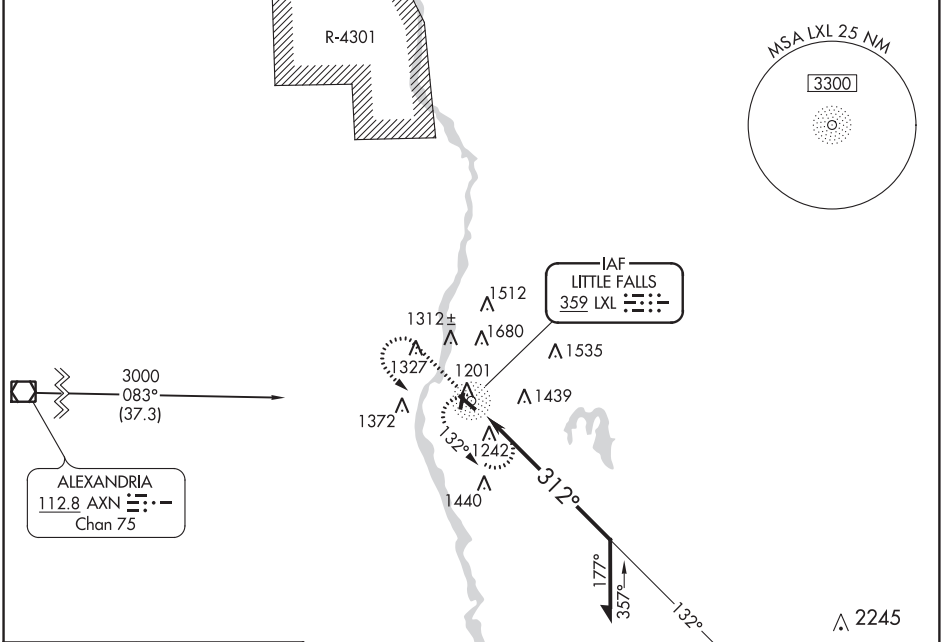
NDB LXL <b>359</b>	APP CRS <b>312°</b>	Rwy Idg TDZE Apt Elev	<b>4010</b> <b>1123</b> <b>1122</b>
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# NDB RWY 31

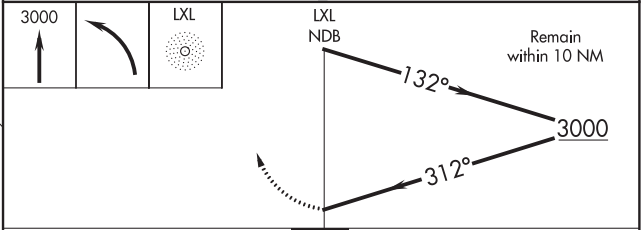
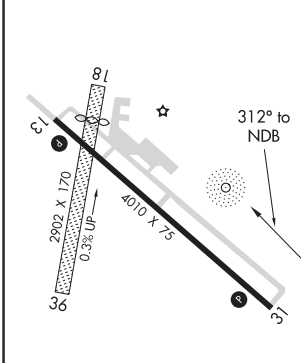
LITTLE FALLS/MORRISON COUNTY-LINDBERGH FIELD (LXL)

<b>NA</b>	Rwy 31 Straight-in and Circling minimums NA at night. Helicopter visibility reduction below 1 SM NA.	MISSED APPROACH: Climb to 3000 then left turn direct LXL NDB and hold.
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AWOS-3 <b>119.45</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1122	TDZE 1123
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CATEGORY	A	B	C	D
S-31	1840-1	717 (800-1)	1840-2 717 (800-2)	1840-2½ 717 (800-2¼)
CIRCLING	1840-1	718 (800-1)	1840-2 718 (800-2)	1980-2¾ 858 (900-2¾)

# NDB RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

APP CRS <b>344°</b>	Rwy Idg <b>3001</b>
	TDZE <b>1332</b>
	Apt Elev <b>1333</b>

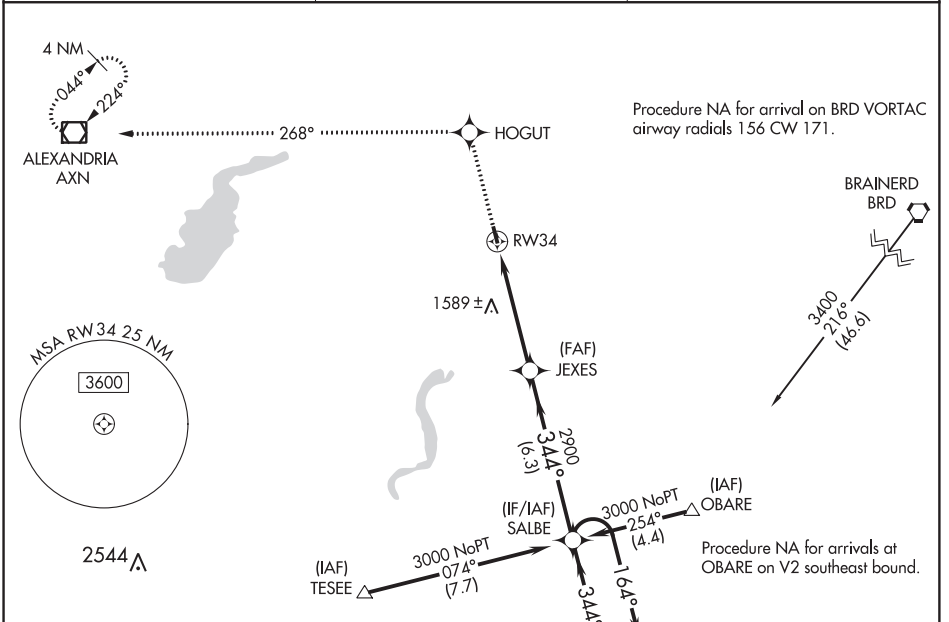
# RNAV (GPS) RWY 34

TODD FIELD (14Y)

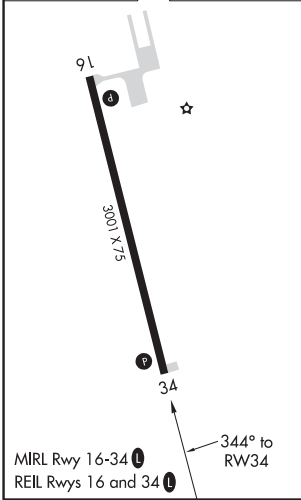
**NA** DME/DME RNP-0.3 NA. When local altimeter setting not received, use Alexandria altimeter setting and increase all MDA 80 feet and Circling Cat C visibility ¼ mile. VDP NA when using Alexandria altimeter setting.

MISSED APPROACH: Climb to 3000 direct HOGUT and via track 268° to AXN VOR/DME and hold.

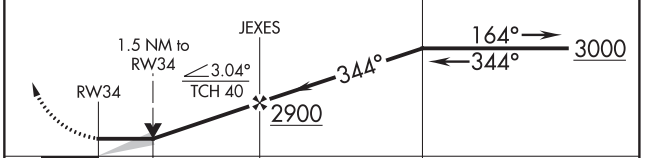
AWOS-3 <b>118.65</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	CTAF <b>122.9</b>
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ELEV 1333	TDZE 1332
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3000	HOGUT	tr 268°	AXN	VGSI and descent angles not coincident. (VGSI Angle 3.00/TCH 23).
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CATEGORY	A	B	C	D
LNAV MDA	1840-1	508 (600-1)	1840-1½ 508 (600-1½)	NA
CIRCLING	1840-1	507 (600-1)	1920-1½ 587 (600-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



# RNAV (GPS) RWY 31

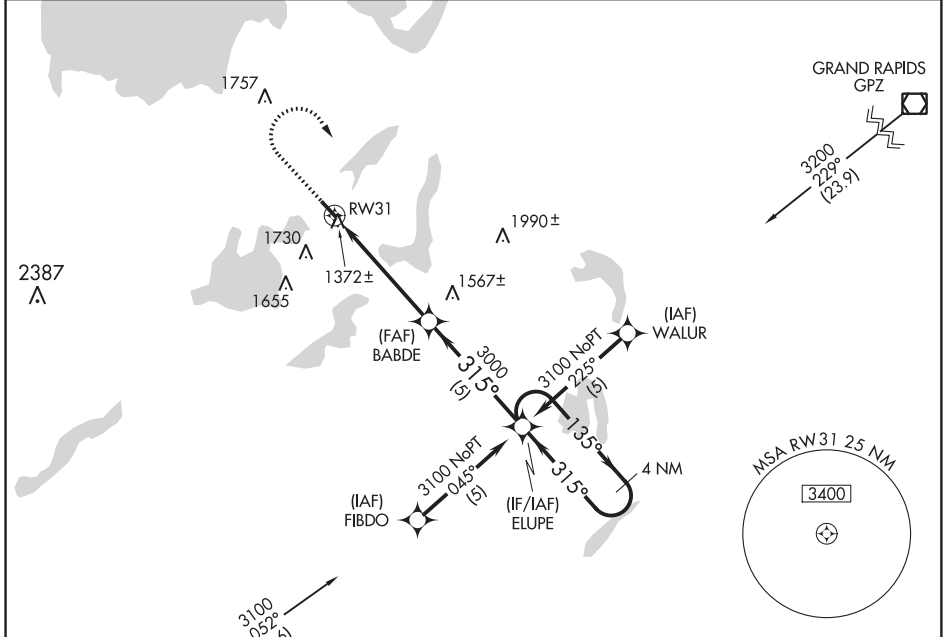
LONGVILLE MUNI (XVG)

APP CRS <b>315°</b>	Rwy Idg <b>3549</b>
	TDZE <b>1332</b>
	Apt Elev <b>1334</b>

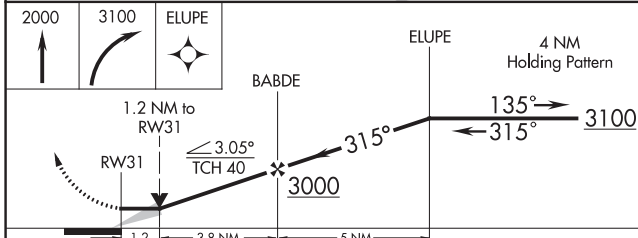
▲ NA GPS or RNP-0.3 required. DME/DME RNP-0.3 NA

MISSED APPROACH: Climb to 2000 then climbing right turn to 3100 direct ELUPE WP and hold.

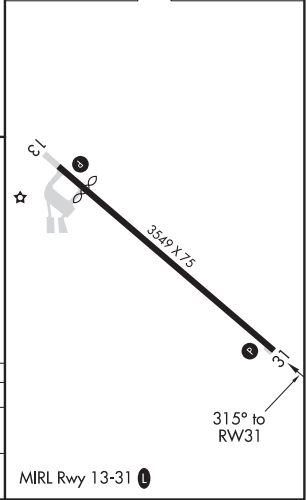
AWOS-3 <b>118.275</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	GCO <b>121.725</b>	CTAF <b>122.9</b>
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ELEV 1334	TDZE 1332
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CATEGORY	A	B	C	D
LNAV MDA	1760-1	428 (500-1)		NA
CIRCLING	1860-1	526 (600-1)		NA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LONGVILLE, MINNESOTA

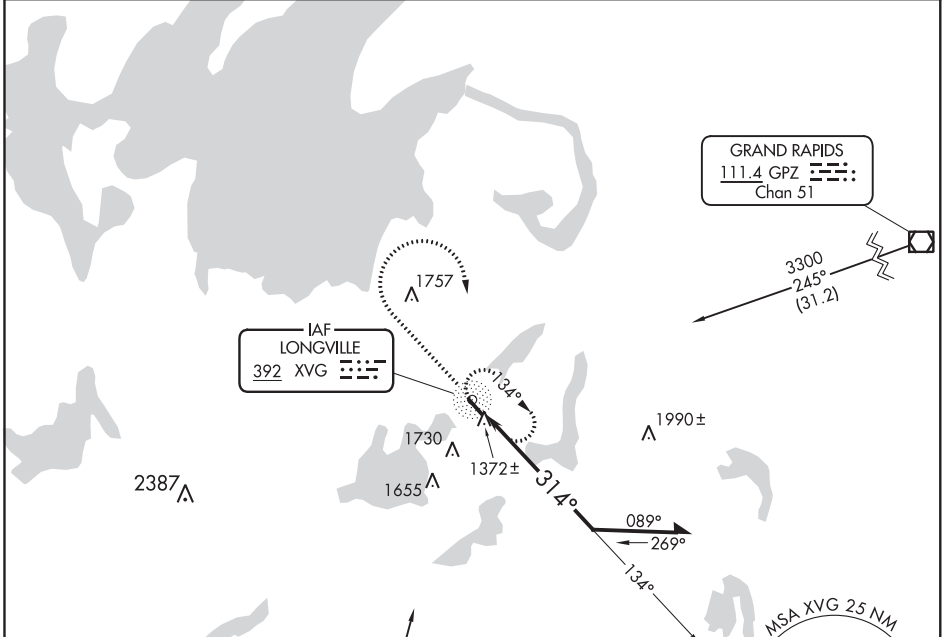
AL-9381 (FAA)

14261

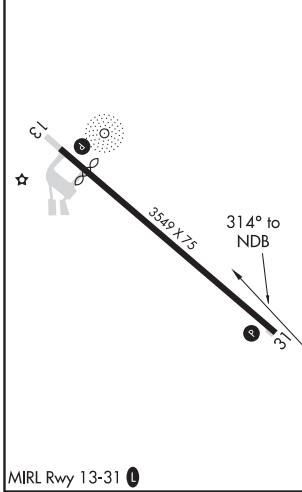
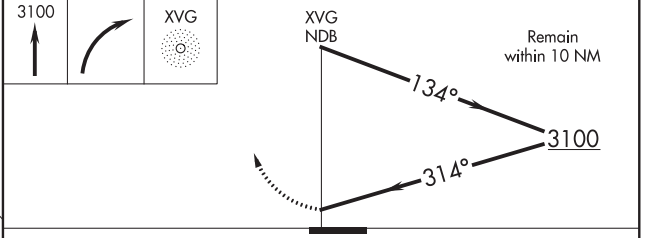
NDB XVG <b>392</b>	APP CRS <b>314°</b>	Rwy Idg TDZE Apt Elev	<b>3549</b> <b>1332</b> <b>1334</b>
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**NDB RWY 31**  
LONGVILLE MUNI (XVG)

		MISSED APPROACH: Climb to 3100 then right turn direct XVG NDB and hold.	
AWOS-3 <b>118.275</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	GCO <b>121.725</b>	CTAF <b>122.90</b>



ELEV 1334	TDZE 1332
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CATEGORY	A	B	C	D
S-31	1920-1	588 (600-1)	NA	
CIRCLING	1920-1	586 (600-1)	NA	

LONGVILLE, MINNESOTA  
Orig 28JAN99

46°59'N-94°12'W

LONGVILLE MUNI (XVG)  
**NDB RWY 31**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>86317</b> <b>W18A</b>	APP CRS <b>175°</b>	Rwy Idg TDZE <b>1434</b> Apt Elev <b>1434</b>
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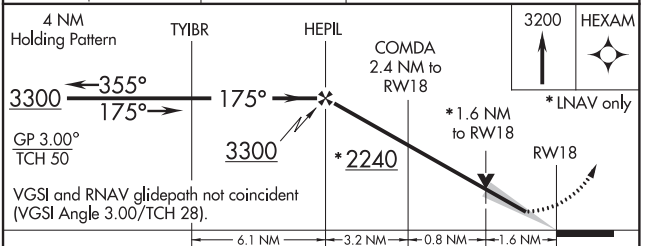
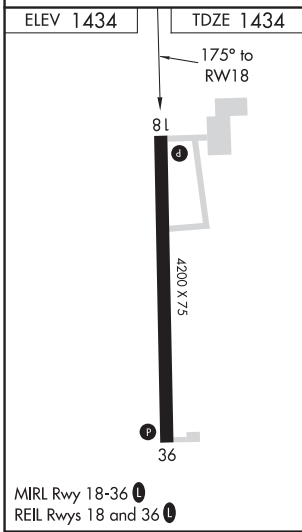
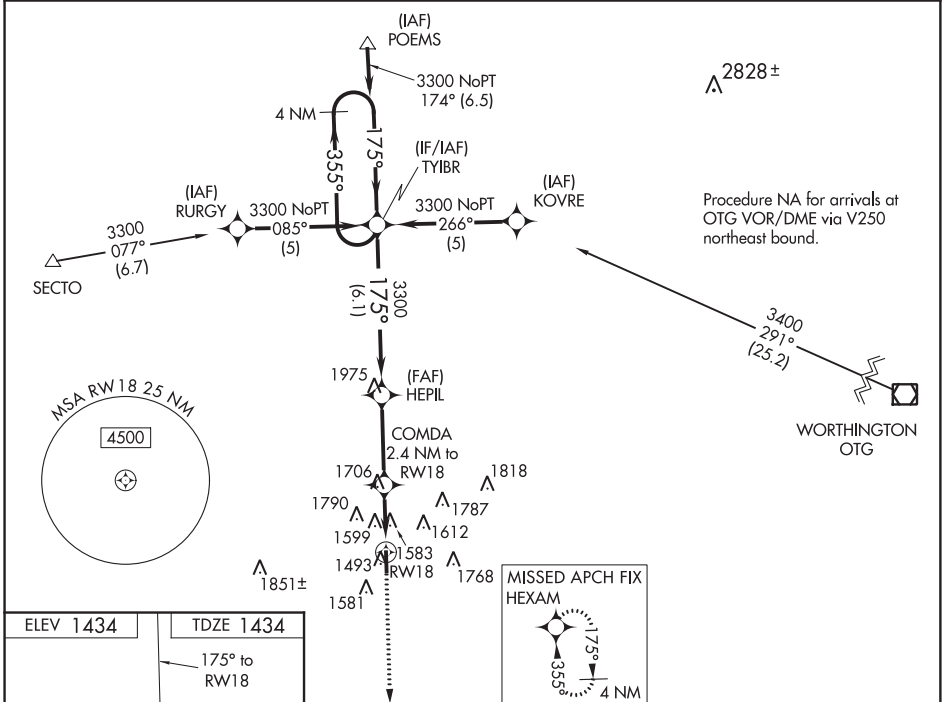
# RNAV (GPS) RWY 18

QUENTIN AANENSON FIELD (LYV)

▼ **NA** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Pipestone altimeter setting and increase all DA 94 feet and all MDA 100 feet. Increase LNAV/VNAV all Cats, LNAV and Circling Cat C/D visibility ¼ mile. Baro-VNAV and VDP NA when using Pipestone altimeter setting.

MISSED APPROACH: Climb to 3200 direct HEXAM and hold.

AWOS-3 <b>119.825</b>	MINNEAPOLIS CENTER <b>132.05 317.4</b>	UNICOM <b>122.7 (CTAF)</b>
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CATEGORY	A	B	C	D
LPV DA	1634-1 200 (200-1)			
LNAV/VNAV DA	2131-2½ 697 (700-2½)			
LNAV MDA	1960-1	526 (600-1)	1960-1½ 526 (600-1½)	1960-1¾ 526 (600-1¾)
CIRCLING	1960-1	526 (600-1)	2140-2 706 (800-2)	2140-2½ 706 (800-2½)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LIVERNE, MINNESOTA

AL-9419 (FAA)

15232

WAAS CH <b>40117</b> W36A	APP CRS <b>355°</b>	Rwy Idg TDZE <b>1432</b> Apt Elev <b>1434</b>	<b>4200</b>
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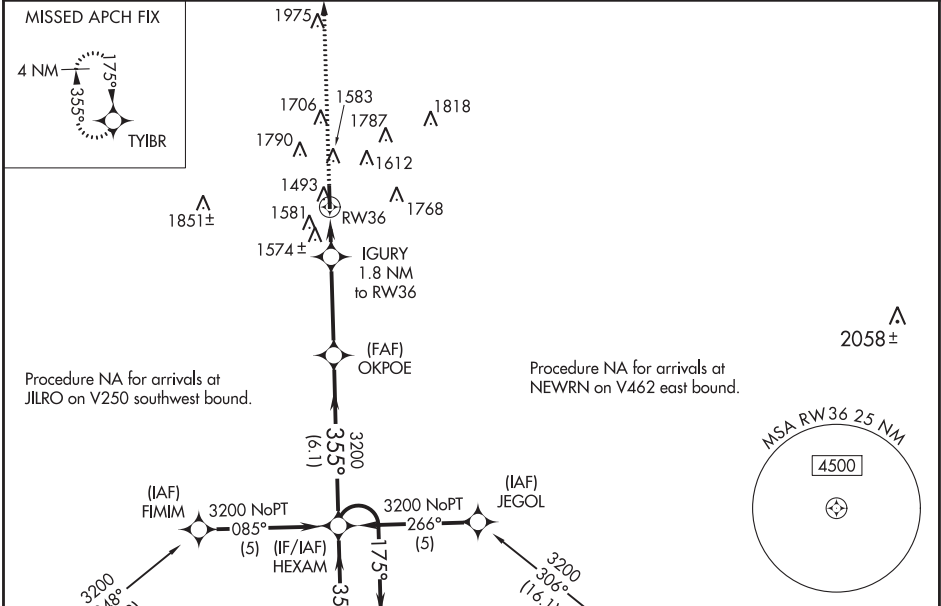
# RNAV (GPS) RWY 36

QUENTIN AANENSON FIELD (LYV)

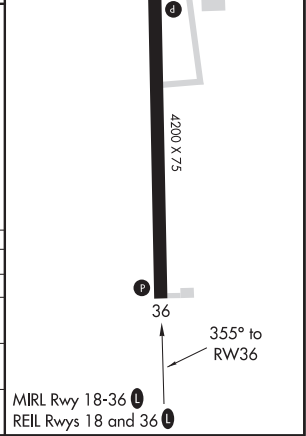
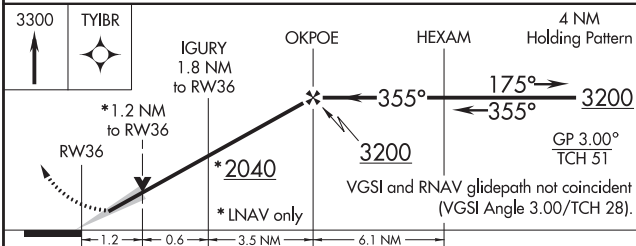
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Pistone altimeter setting and increase all DA 94 feet and all MDA 100 feet, increase LNAV/VNAV all Cats LNAV visibility ½ mile and LNAV and Circling Cats C/D visibility ¼ mile. Baro-VNAV and VDP NA when using Pistone altimeter setting.

**MISSED APPROACH:**  
Climb to 3300 direct TYBR and hold.

AWOS-3 <b>119.825</b>	MINNEAPOLIS CENTER <b>132.05 317.4</b>	UNICOM <b>122.7 (CTAF)</b>
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ELEV 1434	TDZE 1432
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CATEGORY	A	B	C	D
LPV DA	1632-1		200 (200-1)	
LNAV/VNAV DA	1882-1½		450 (500-1½)	
LNAV MDA	1840-1	408 (500-1)	1840-1¼	408 (500-1¼)
CIRCLING	1940-1	506 (600-1)	2140-2	2140-2¼
			706 (800-2)	706 (800-2¼)

LIVERNE, MINNESOTA  
Orig-A 23AUG12

43°37'N-96°13'W

# QUENTIN AANENSON FIELD (LYV) RNAV (GPS) RWY 36

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>63030</b> <b>W14A</b>	APP CRS <b>137°</b>	Rwy Idg <b>3300</b> TDZE <b>1083</b> Apt Elev <b>1083</b>
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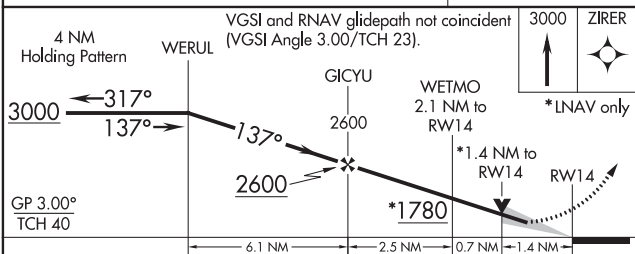
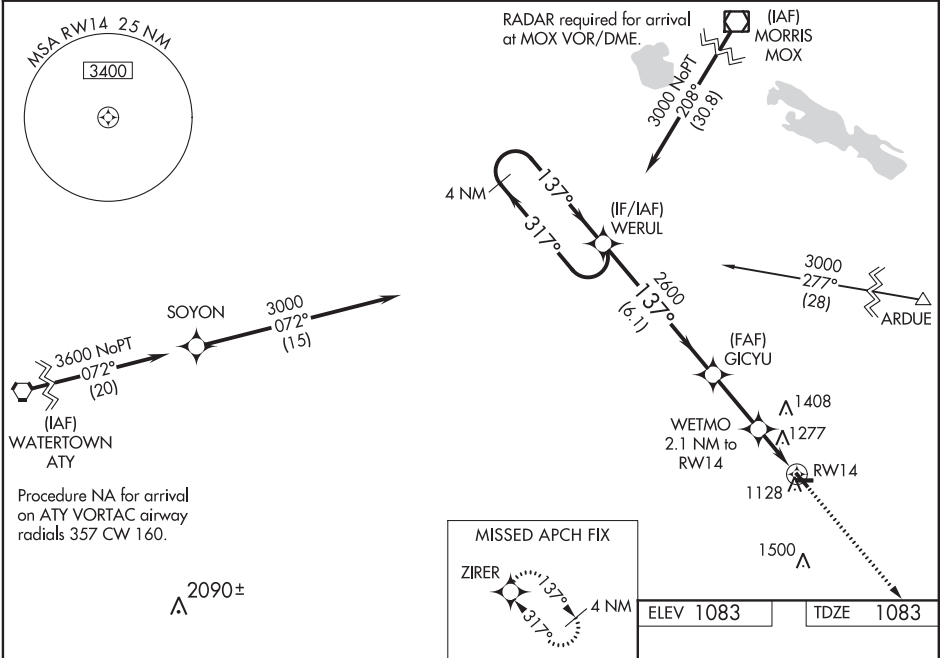
# RNAV (GPS) RWY 14

LAC QUI PARLE COUNTY (D.XX)

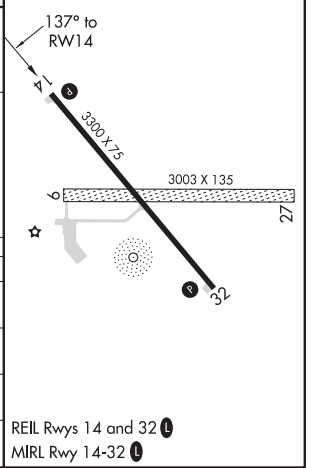
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). When local altimeter setting not received, use Appleton Muni altimeter setting and increase all DA 46 feet, increase all MDA 60 feet, and visibility LNAV/VNAV all Cats to 1 1/8 mile, Circling Cat C to 1 3/4 mile. DME/DME RNP-0.3 NA. Baro-VNAV and VDP NA when using Appleton Muni altimeter setting. Circling NA to Rwy 9 and 27.

MISSED APPROACH: Climb to 3000 direct ZIRER and hold.

AWOS-3 <b>118.975</b>	MINNEAPOLIS CENTER <b>128.5 306.2</b>	UNICOM <b>122.8 (CTAF) ①</b>
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CATEGORY	A	B	C	D
LPV DA	1283-1 200 (200-1)			NA
LNAV/VNAV DA	1572-1 5/8 489 (500-1%)			NA
LNAV MDA	1540-1	457 (500-1)	1540-1 3/8 457 (500-1%)	NA
CIRCLING	1640-1	557 (600-1)	1640-1 1/2 557 (600-1 1/2)	NA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>53530</b> <b>W32A</b>	APP CRS <b>317°</b>	Rwy Idg TDZE <b>1082</b> Apt Elev <b>1083</b>	<b>3300</b>
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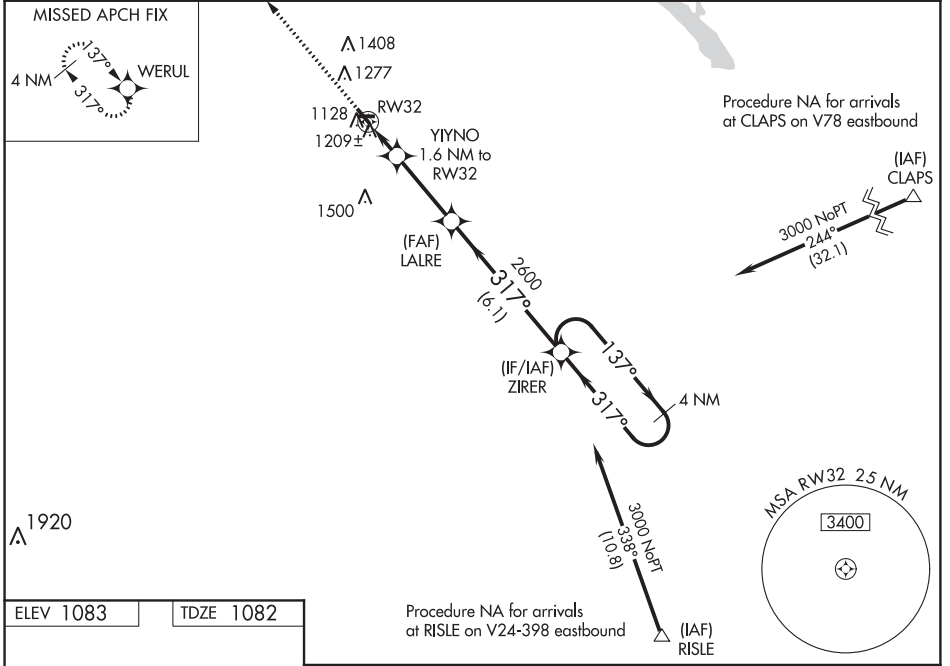
# RNAV (GPS) RWY 32

LAC QUI PARLE COUNTY (D.XX)

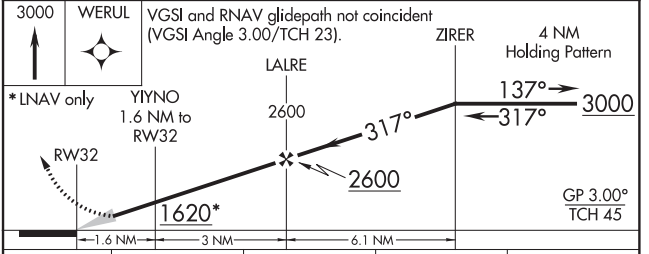
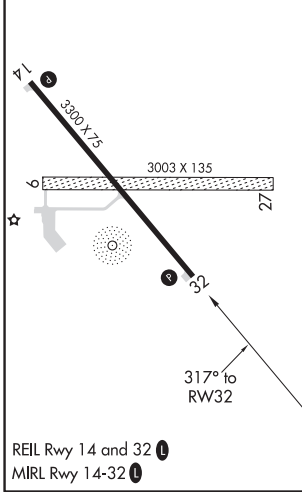
**⚠** Baro-VNAV NA when using Appleton Muni altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F).  
**⚠** When local altimeter setting not received, use Appleton Muni altimeter setting and increase all DA 46 feet, increase all MDA 60 feet, and visibility LNAV/VNAV all Cats to 1½ mile, LNAV Cat C to 1¾ mile, Circling Cat C to 1¾ mile. DME/DME RNP-0.3 NA. Circling NA to Rwy 9 and 27.

MISSED APPROACH: Climb to 3000 direct WERUL and hold.

AWOS-3 <b>118.975</b>	MINNEAPOLIS CENTER <b>128.5 306.2</b>	UNICOM <b>122.8 (CTAF) ①</b>
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ELEV 1083	TDZE 1082
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CATEGORY	A	B	C	D
LPV DA	1282-1	200 (200-1)		NA
LNAV/VNAV DA	1363-1	281 (300-1)		NA
LNAV MDA	1460-1	378 (400-1)	1460-1½ 378 (400-1½)	NA
CIRCLING	1640-1	557 (600-1)	1640-1½ 557 (600-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

NDB DXX <b>341</b>	APP CRS <b>309°</b>	Rwy Idg <b>3300</b>
		TDZE <b>1082</b>
		Apt Elev <b>1083</b>

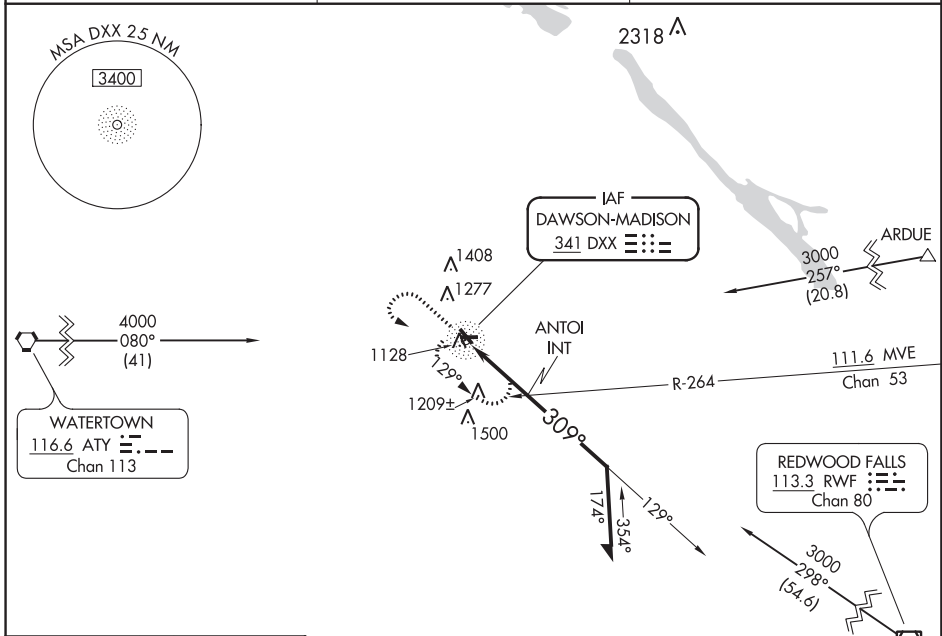
# NDB RWY 32

LAC QUI PARLE COUNTY (DXX)

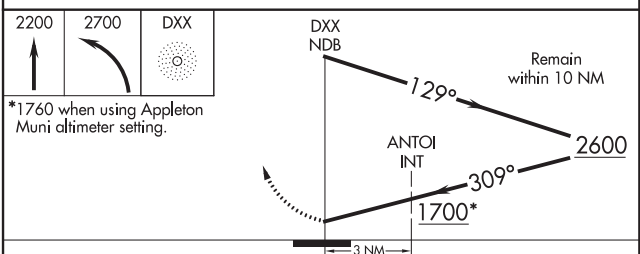
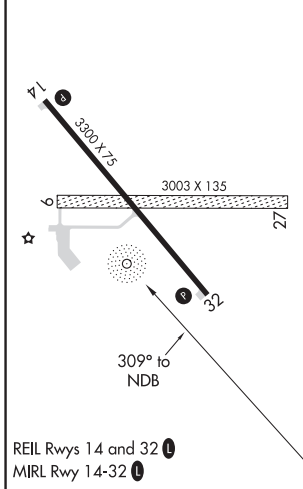
**⚠** When local altimeter setting not received, use Appleton Muni altimeter setting and increase all MDA 60 feet and visibility Cat C to 2 miles, ANTOI fix minimums increase Circling Cat C visibility to 1 3/4 mile. Circling NA to Rwys 9 and 27.

**⚠** MISSED APPROACH: Climb to 2200 then climbing left turn to 2700 direct DXX NDB and hold.

AWOS-3 <b>118.975</b>	MINNEAPOLIS CENTER <b>128.5 306.2</b>	UNICOM <b>122.8 (CTAF) ①</b>
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ELEV 1083	TDZE 1082
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CATEGORY	A	B	C	D
S-32	1700-1	618 (700-1)	1700-1 3/4 618 (700-1 3/4)	NA
CIRCLING	1700-1	617 (700-1)	1700-1 3/4 617 (700-1 3/4)	NA
ANTOI FIX MINIMUMS				
S-32	1520-1	438 (500-1)	1520-1 3/8 438 (500-1 3/8)	NA
CIRCLING	1640-1	557 (600-1)	1640-1 1/2 557 (600-1 1/2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

APP CRS	Rwy Idg	<b>5000</b>
<b>150°</b>	TDZE	<b>1718</b>
	Apt Elev	<b>1718</b>

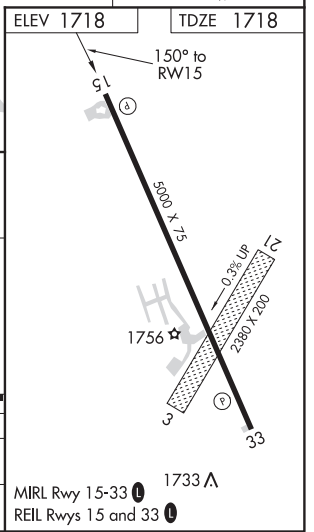
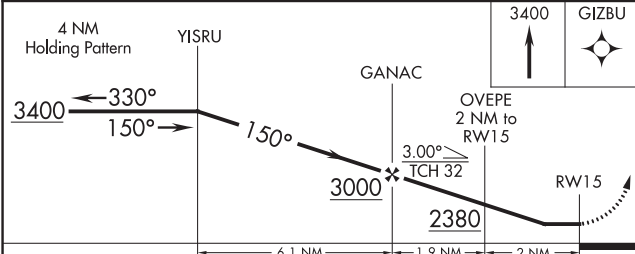
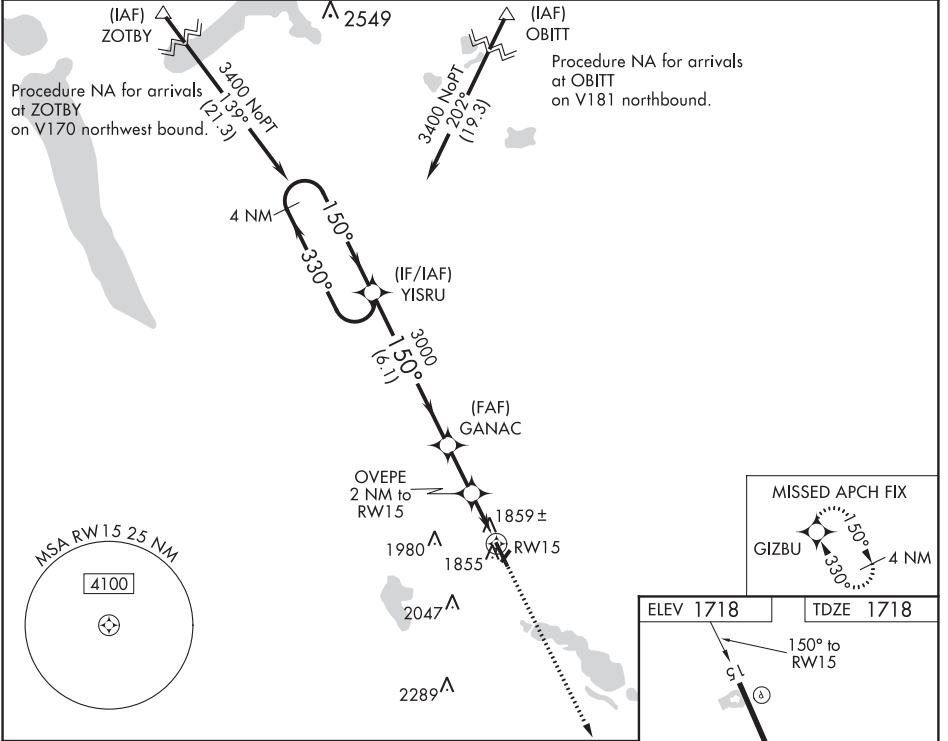
# RNAV (GPS) RWY 15

MADISON MUNI (MDS)

**⚠** When VGSI inoperative, Straight-in/Circling Rwy 15 procedure NA at night.  
**⚠** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Brookings altimeter setting and increase all MDA 60 feet and increase LNAV Cat C/D visibility to 1½ mile. Circling NA to Rwys 3 and 21. When Rwy 33 VGSI inoperative, circling to Rwy 33 NA at night.

**MISSED APPROACH:**  
 Climb to 3400 direct GIZBU and hold.

<b>AWOS-3</b> <b>118.35</b>	<b>MINNEAPOLIS CENTER</b> <b>132.05 317.4</b>	<b>GCO</b> <b>121.725</b>	<b>UNICOM</b> <b>122.8 (CTAF) ①</b>
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CATEGORY	A	B	C	D
LNAV MDA	2120-1	402 (500-1)	2120-1½	402 (500-1½)
CIRCLING	2180-1	462 (500-1)	2180-1½	2280-2 562 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>58321</b> <b>W33A</b>	APP CRS <b>330°</b>	Rwy ldg TDZE <b>1713</b> Apt Elev <b>1718</b>
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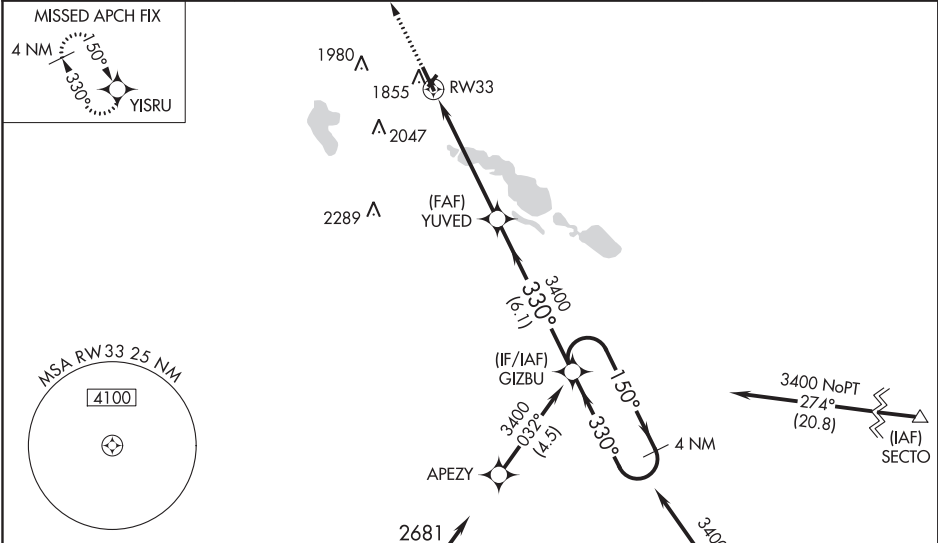
# RNAV (GPS) RWY 33

MADISON MUNI (MDS)

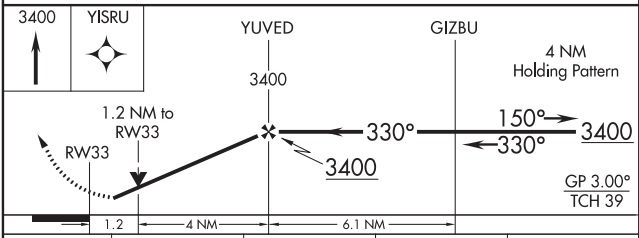
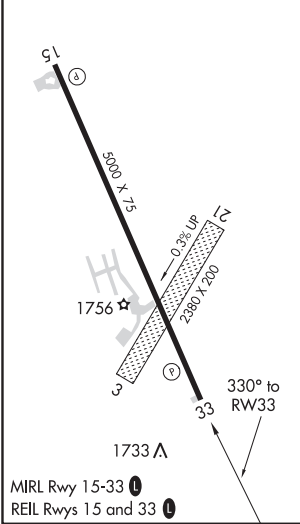
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 33°C (91°F). DME/DME RNP-0.3 NA. Rwy 33 helicopter visibility reduction below 3/4 SM NA. When local altimeter setting not received, use Brookings altimeter setting and increase all DA 58 feet and all MDA 60 feet. Increase LNAV/VNAV all Cats visibilities to 1 1/4 and LNAV Cat C/D visibilities to 1 1/2 mile. Circling NA to Rwys 3 and 21. Baro-VNAV NA when using Brookings altimeter setting.

MISSED APPROACH: Climb to 3400 direct YISRU and hold.

AWOS-3 <b>118.35</b>	MINNEAPOLIS CENTER <b>132.05 317.4</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b> <b>📻</b>
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ELEV 1718	TDZE 1713
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CATEGORY	A	B	C	D
LPV DA		1963-1	250 (300-1)	
LNAV/VNAV DA		2013-1	300 (300-1)	
LNAV MDA	2120-1	407 (500-1)	2120-1 1/8	407 (500-1 1/8)
CIRCLING	2180-1	462 (500-1)	2180-1 1/2 462 (500-1 1/2)	2280-2 562 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>45832</b> <b>W17A</b>	APP CRS <b>166°</b>	Rwy Idg <b>3400</b> TDZE <b>1246</b> Apt Elev <b>1246</b>
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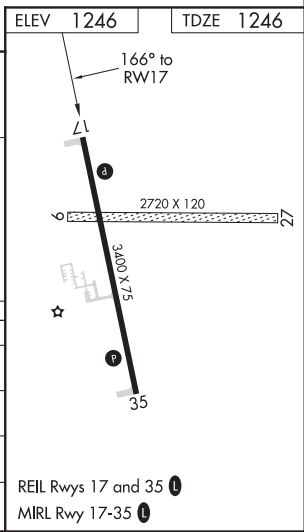
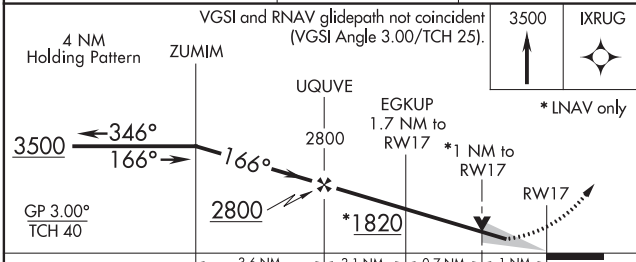
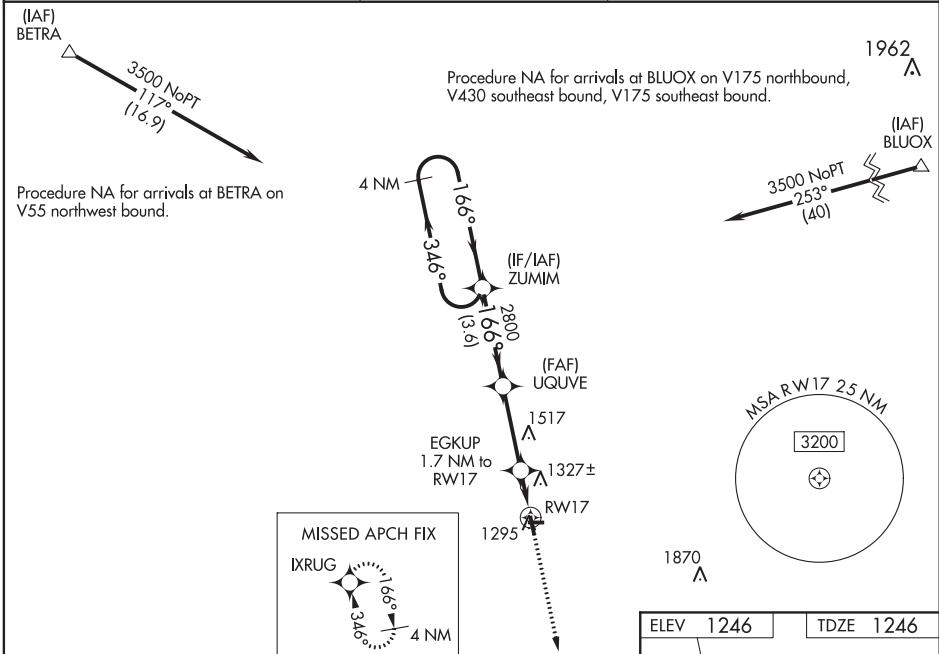
# RNAV (GPS) RWY 17

MAHNOMEN COUNTY (3N8)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Fosston altimeter setting and increase all DA 53 feet and all MDA 60 feet, and increase LNAV Cat C/D visibility 1/8 mile. Baro-VNAV and VDP NA when using Fosston altimeter setting. Night landing: Rwy 9, 27 NA.

**MISSED APPROACH:**  
Climb to 3500 direct IXRUG and hold.

AWOS-3PT <b>121.125</b>	MINNEAPOLIS CENTER <b>127.35 278.3</b>	CTAF <b>122.9</b>
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CATEGORY	A	B	C	D
LPV DA	1496-1	250 (300-1)		NA
LNAV/VNAV DA	1496-1	250 (300-1)		NA
LNAV MDA	1580-1	334 (400-1)		NA
<b>C</b> CIRCLING	1640-1 394 (400-1)	1700-1 454 (500-1)		NA

REIL Rwy 17 and 35 **Ⓛ**  
MIRL Rwy 17-35 **Ⓛ**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>56532</b> <b>W35A</b>	APP CRS <b>346°</b>	Rwy Idg <b>3400</b> TDZE <b>1246</b> Apt Elev <b>1246</b>
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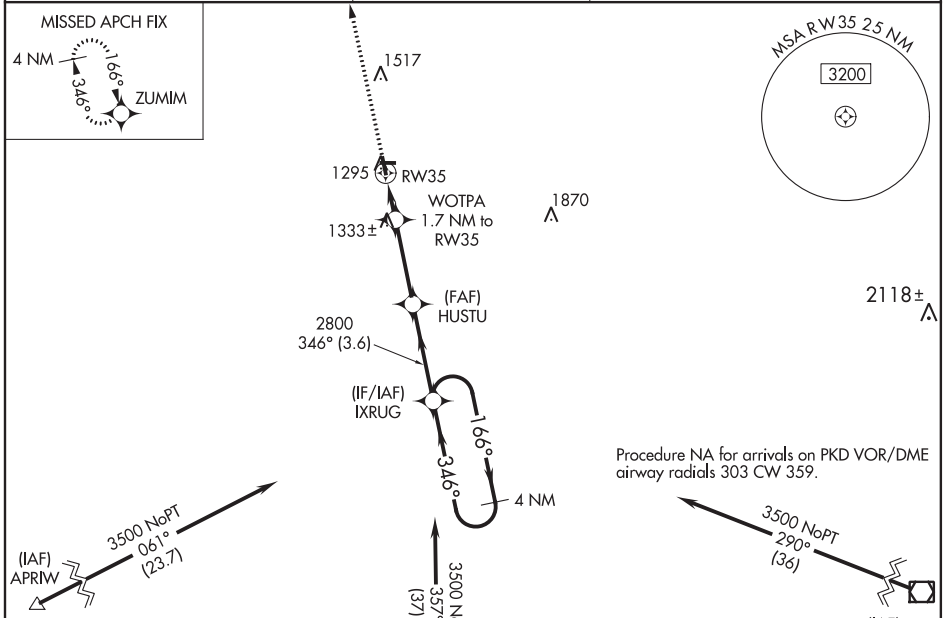
# RNAV (GPS) RWY 35

MAHNOMEN COUNTY (3N8)

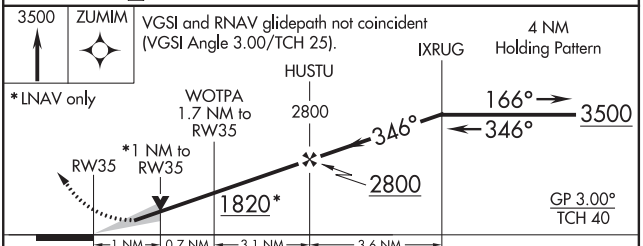
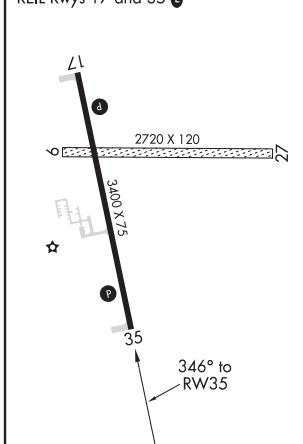
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Fosston altimeter setting and increase all DA 53 feet and all MDA 60 feet, and increase LNAV Cat C/D visibility 1/8 mile. Baro-VNAV and VDP NA when using Fosston altimeter setting. Night landing: Rwy 9,27 NA.

**MISSED APPROACH:** Climb to 3500 direct ZUMIM and hold.

AWOS-3PT <b>121.125</b>	MINNEAPOLIS CENTER <b>127.35 278.3</b>	CTAF <b>122.9</b>
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ELEV 1246	TDZE 1246
MIRL Rwy 17-35	REIL Rwy 17 and 35



CATEGORY	A	B	C	D
LPV DA	1496-1	250 (300-1)		NA
LNAV/VNAV DA	1496-1	250 (300-1)		NA
LNAV MDA	1600-1	354 (400-1)		NA
<b>C</b> CIRCLING	1640-1 394 (400-1)	1700-1 454 (500-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>49031</b> <b>W13A</b>	APP CRS <b>139°</b>	Rwy Idg <b>4399</b> TDZE <b>1942</b> Apt Elev <b>1944</b>
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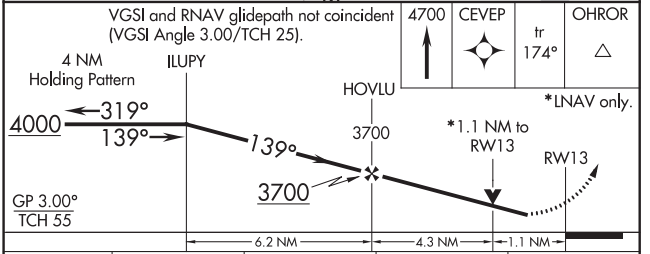
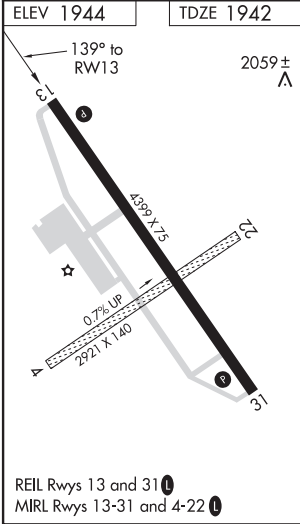
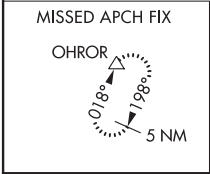
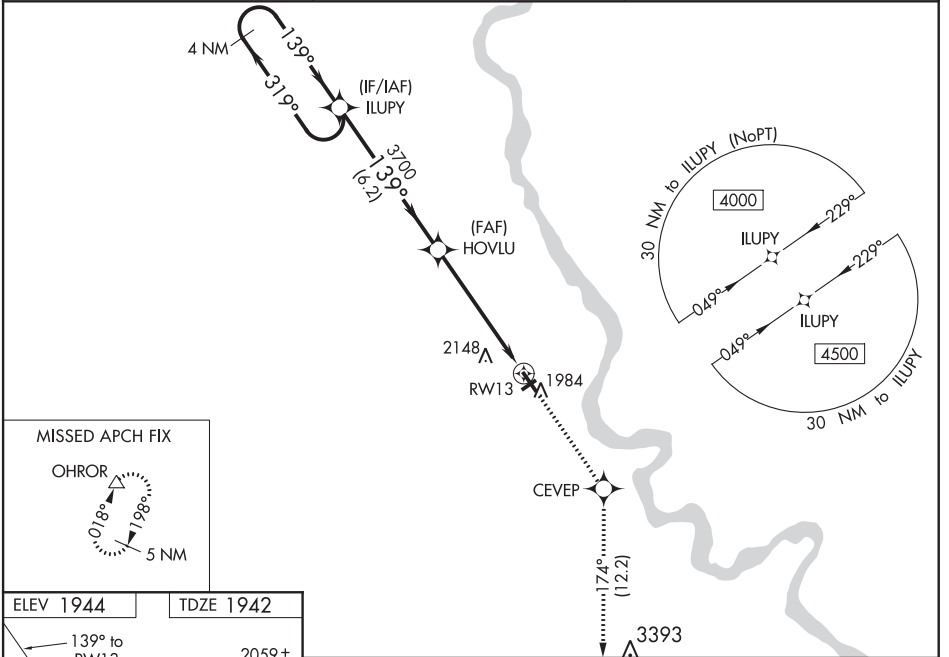
# RNAV (GPS) RWY 13

MANDAN MUNI (Y19)

**ASR** Baro-VNAV NA when using Bismarck altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM not authorized. VDP NA when using Bismarck altimeter setting. When local altimeter setting not received, use Bismarck altimeter setting and increase all DA 54 feet and LPV all Cats visibility 1/4 mile, LNAV/VNAV all Cats visibility 1/2 mile, increase all MDA 60 feet and LNAV Cat C/D and Circling Cat D visibility 1/4 mile. Circling to Rwy 4 and 22 NA.

**MISSED APPROACH:** Climb to 4700 direct CEVPE and on track 174° to OHROR and hold.

AWOS-3 <b>118.225</b>	BISMARCK APP CON ★ <b>126.3 298.9</b>	UNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LPV DA		2192-3/4	250 (300-3/4)	
LNAV/VNAV DA		2244-1	302 (300-1)	
LNAV MDA		2320-1	378 (400-1)	
<b>CIRCLING</b>	2360-1 416 (500-1)	2460-1 516 (600-1)	2460-1½ 516 (600-1½)	2560-2 616 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>93731</b> <b>W31A</b>	APP CRS <b>319°</b>	Rwy Idg <b>4399</b> TDZE <b>1943</b> Apt Elev <b>1944</b>
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# RNAV (GPS) RWY 31

MANDAN MUNI (Y19)

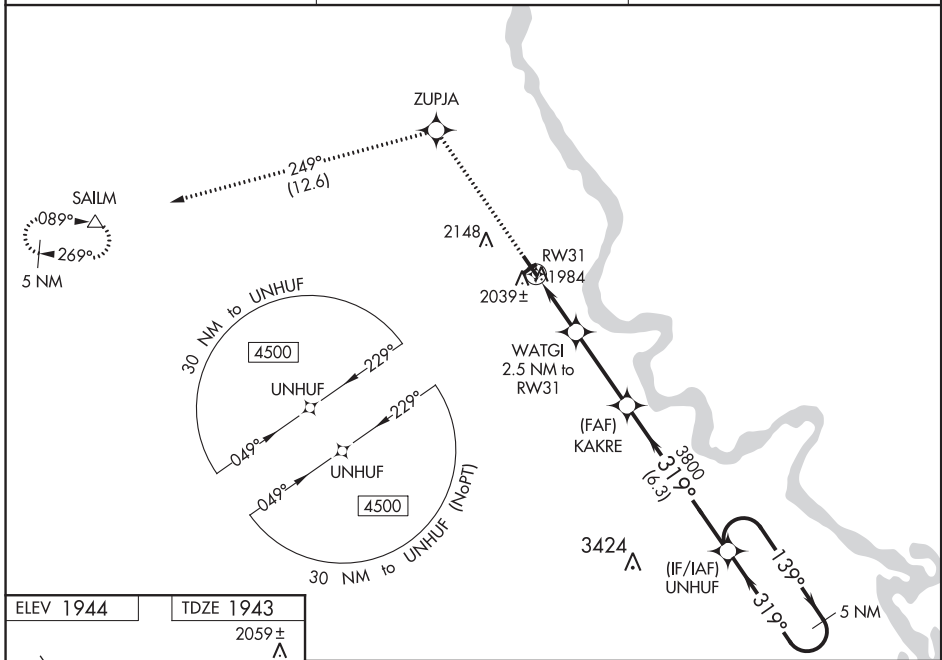
**⚠** Baro-VNAV NA when using Bismarck altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Bismarck altimeter setting and increase all DA 54 feet and LNAV/VNAV all Cats visibility ½ mile, increase all MDA 60 feet and LNAV Cat C/D visibility ½ mile and Circling Cat D ¼ mile. Helicopter visibility reduction below ¾ SM NA. Circling to Rwys 4 and 22 NA.

**MISSED APPROACH:** Climb to 4600 direct ZUPJA and on track 249° to SAILM and hold.

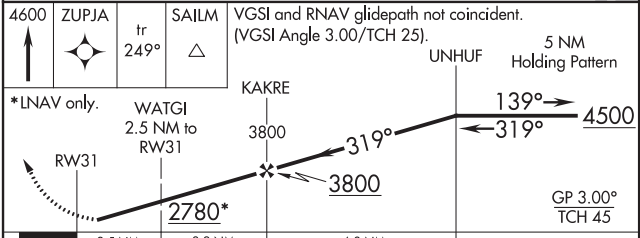
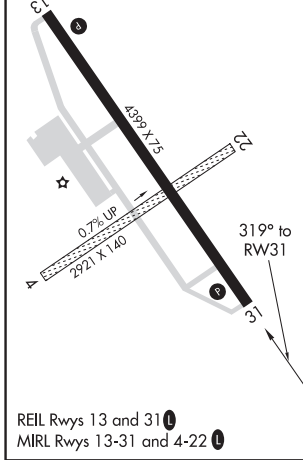
AWOS-3  
**118.225**

BISMARCK APP CON \*  
**126.3 298.9**

UNICOM  
**122.8 (CTAF) 0**



ELEV 1944	TDZE 1943
	2059± A



CATEGORY	A	B	C	D
LPV DA		2193-1	250 (300-1)	
LNAV/VNAV DA		2220-1	277 (300-1)	
LNAV MDA		2300-1	357 (400-1)	
<b>C</b> CIRCLING	2360-1 416 (500-1)	2460-1 516 (600-1)	2460-1½ 516 (600-1½)	2560-2 616 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MANDAN, NORTH DAKOTA

AL-6759 (FAA)

16231

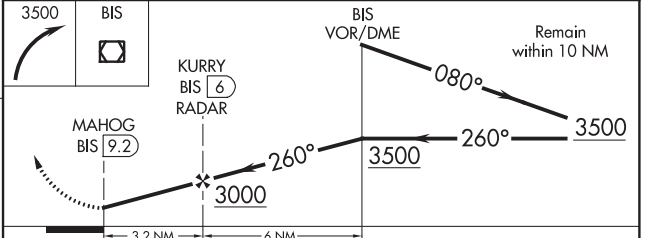
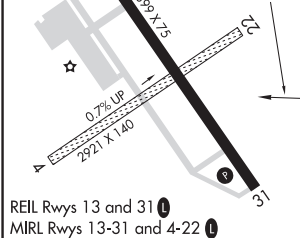
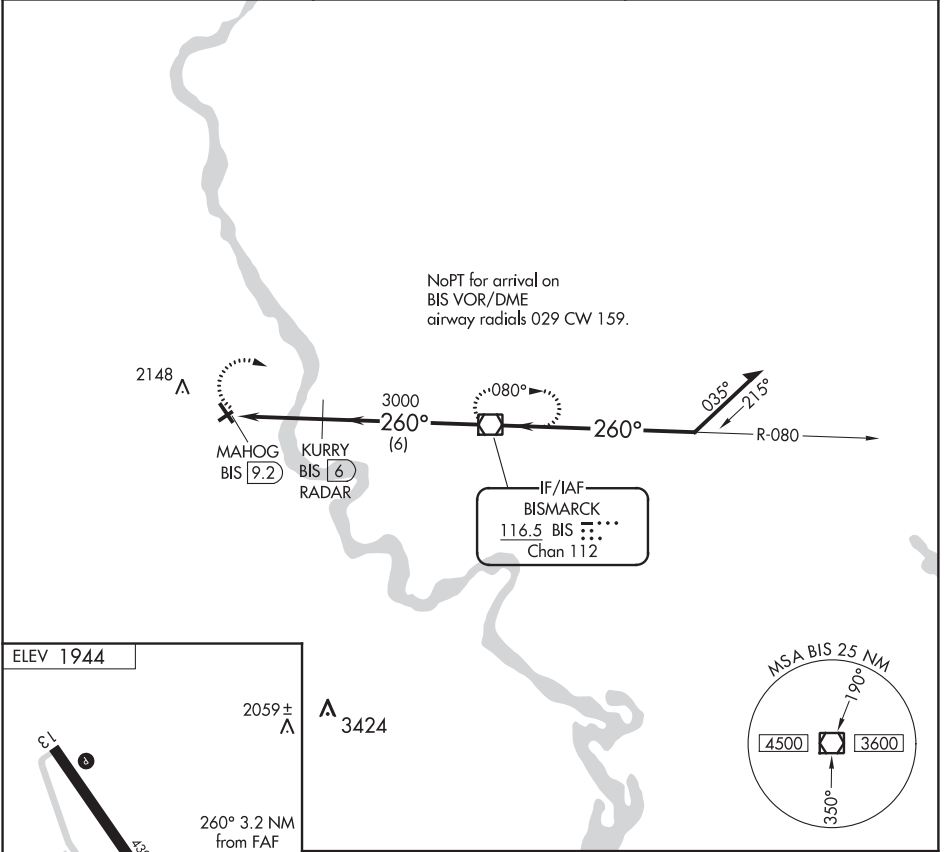
VOR/DME BIS <b>116.5</b> Chan <b>112</b>	APP CRS <b>260°</b>	Rwy Idg TDZE Apt Elev	<b>N/A</b> <b>N/A</b> <b>1944</b>
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# VOR-A

MANDAN MUNI (Y19)

**⚠** DME or RADAR required. When local altimeter setting not received, use Bismarck altimeter setting and increase all MDA 60 feet, and Cat D visibility ¼ mile. Circling to Rws 4 and 22 NA.  
**ASR** MISSED APPROACH: Climbing right turn to 3500 direct BIS VOR/DME and hold.

AWOS-3 <b>118,225</b>	BISMARCK APP CON★ <b>126.3 298.9</b>	UNICOM <b>122.8</b> (CTAF) <b>⓪</b>
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FAF to MAP 3.2 NM					
Knots	60	90	120	150	180
Min:Sec	3:12	2:08	1:36	1:17	1:04

CATEGORY	A	B	C	D
<b>⓪</b> CIRCLING	2360-1 416 (500-1)	2460-1 516 (600-1)	2460-1½ 516 (600-1½)	2560-2 616 (700-2)

MANDAN, NORTH DAKOTA  
Amdt 2A 18AUG16

46°46'N-100°54'W

MANDAN MUNI (Y19)  
**VOR-A**

NC-1, 10 NOV 2016 to 05 JAN 2017


NC-1, 10 NOV 2016 to 05 JAN 2017

LOC I-MKT <b>108.7</b>	APP CRS <b>331°</b>	Rwy Idg TDZE Apt Elev	<b>6600</b> <b>1021</b> <b>1021</b>
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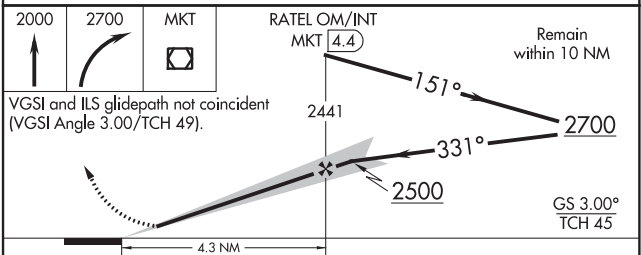
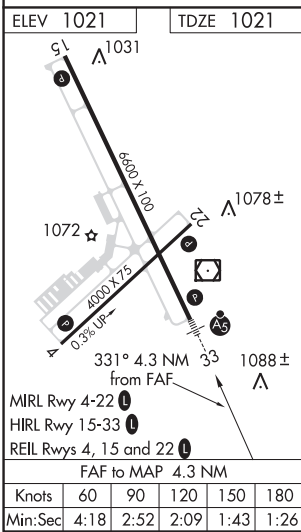
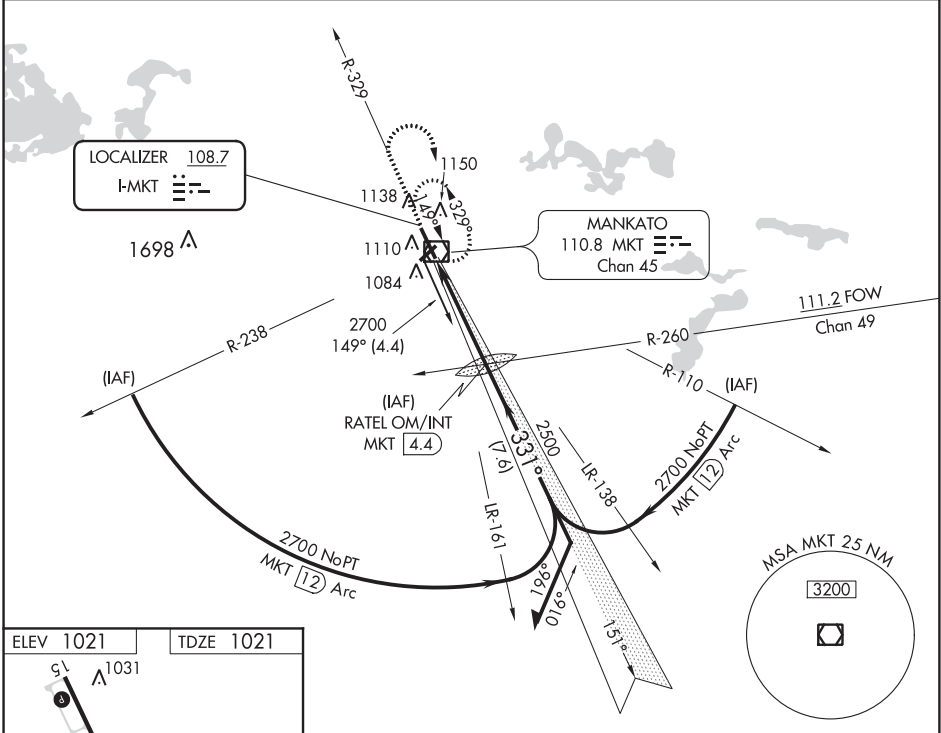
# ILS or LOC RWY 33

MANKATO RGNL (MKT)

**⚠** For inop MALSR when using Waseca altimeter setting, increase S-ILS 33 all Cats visibility to ½ mile. When local altimeter setting not received, use Waseca altimeter setting: increase DA to 1278 feet; increase all MDA 60 feet and visibility Cats C and D ¼ mile.

**MALSR**  
  
**MISSED APPROACH:** Climb to 2000 then climbing right turn to 2700 direct MKT VOR/DME and hold.

AWOS-3PT <b>118.175</b>	MINNEAPOLIS CENTER <b>135.0 306.9</b>	UNICOM <b>122.725</b> (CTAF) <b>Ⓛ</b>
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CATEGORY	A	B	C	D
S-ILS 33	1221-½ 200 (200-½)			
S-LOC 33	1420-½	399 (400-½)	1420-5/8	399 (400-5/8)
CIRCLING	1460-1 439 (500-1)	1480-1 459 (500-1)	1480-1½ 459 (500-1½)	1580-2 559 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MANKATO, MINNESOTA

AL-5755 (FAA)

16315

APP CRS	Rwy Idg	<b>4000</b>
<b>043°</b>	TDZE	<b>1018</b>
	Apt Elev	<b>1021</b>

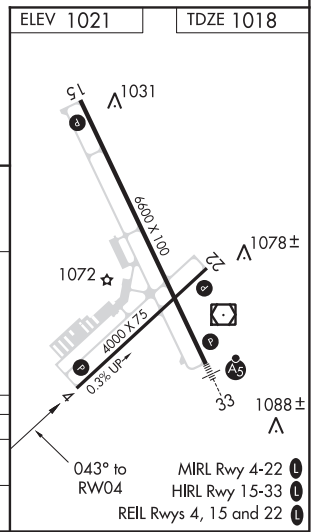
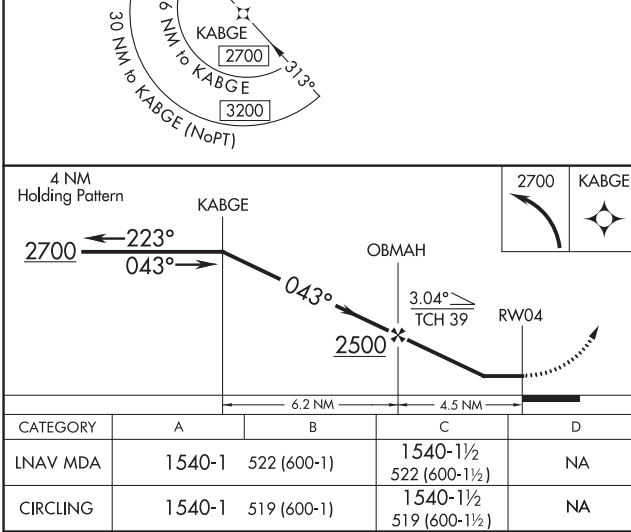
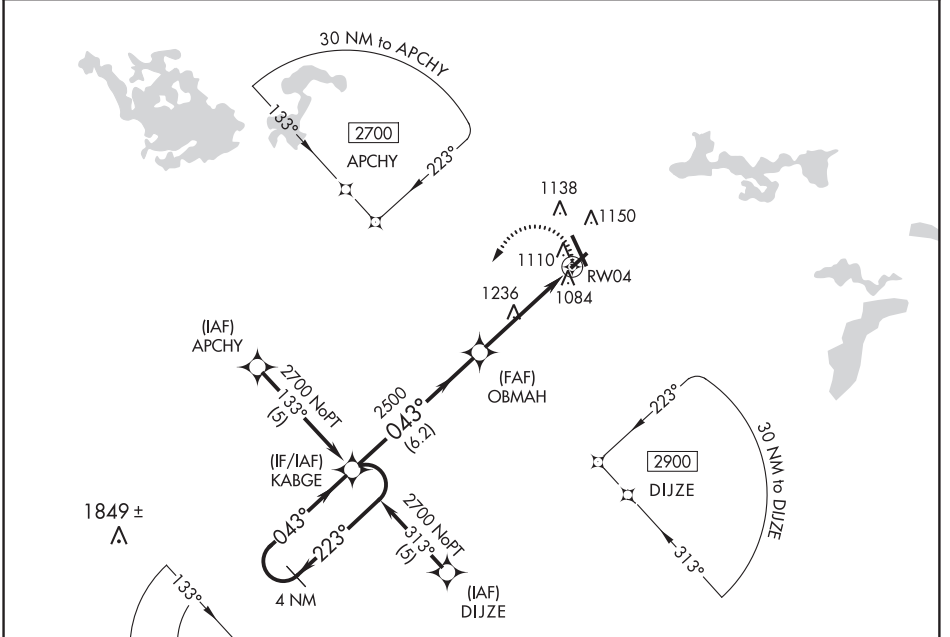
# RNAV (GPS) RWY 4

MANKATO RGNL (MKT)

**⚠** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.  
**⚠** When local altimeter setting not received use Waseca altimeter setting and increase all MDA 60 feet.

MISSED APPROACH: Climbing left turn to 2700 direct KABGE and hold.

AWOS-3PT <b>118.175</b>	MINNEAPOLIS CENTER <b>135.0 306.9</b>	UNICOM <b>122.725 (CTAF)</b> <b>1</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MANKATO, MINNESOTA  
 Orig 17DEC09

44°13'N-93°55'W

# MANKATO RGNL (MKT)

## RNAV (GPS) RWY 4



WAAS CH <b>45615</b> <b>W15A</b>	APP CRS <b>151°</b>	Rwy ldg <b>6600</b> TDZE <b>1020</b> Apt Elev <b>1021</b>
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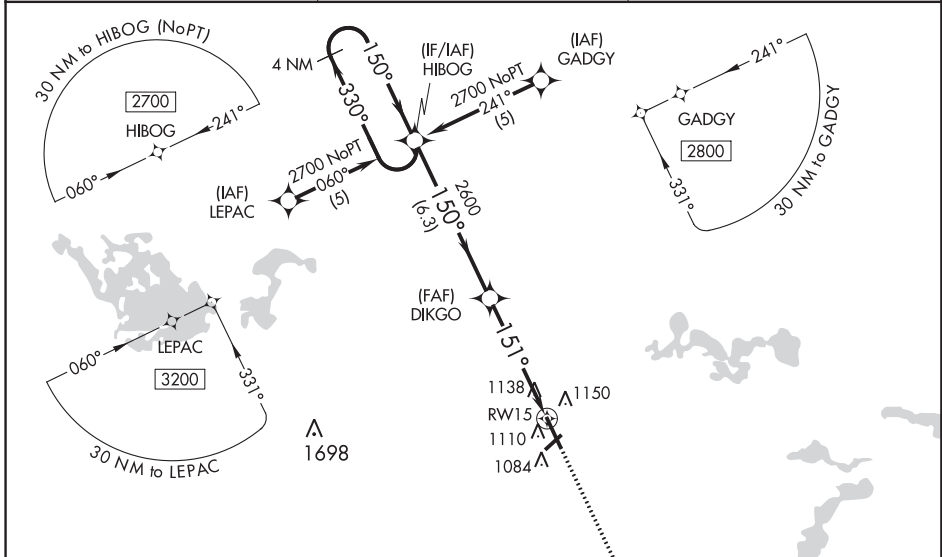
# RNAV (GPS) RWY 15

MANKATO RGNL (MKT)

Baro-VNAV NA when using Waseca altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA.  
 When local altimeter setting not received, use Waseca altimeter setting; increase LPV DA to 1430 feet, LNAV/VNAV DA to 1473 feet and visibility LPV ¼ mile and LNAV/VNAV ½ mile all Cats; increase all MDA 60 feet and visibility LNAV Cat C and D ¼ mile.

**MISSED APPROACH:**  
Climb to 2900 direct ANIMY and hold.

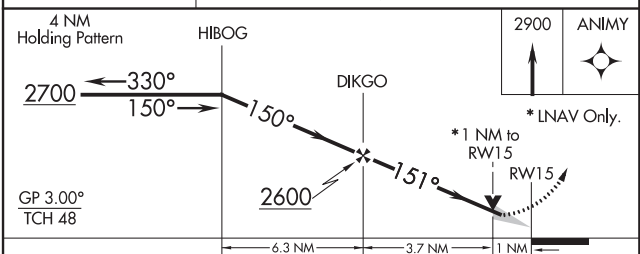
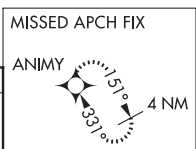
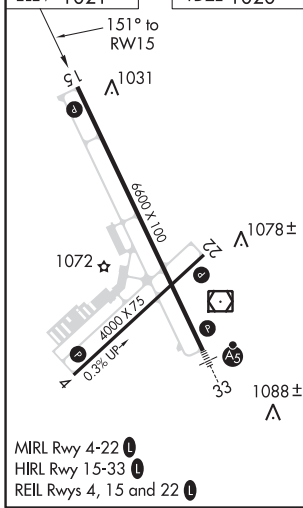
AWOS-3PT <b>118.175</b>	MINNEAPOLIS CENTER <b>135.0 306.9</b>	UNICOM <b>122.725 (CTAF)</b> <b>1</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV <b>1021</b>	TDZE <b>1020</b>
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CATEGORY	A	B	C	D
LPV DA		1373-1½	353 (400-1½)	
LNAV/VNAV DA		1416-1¾	396 (400-1¾)	
LNAV MDA		1400-1	380 (400-1)	
CIRCLING	1460-1	1480-1	1480-1½	1580-2
	439 (500-1)	459 (500-1)	459 (500-1½)	559 (600-2)

MANKATO, MINNESOTA

AL-5755 (FAA)

16315

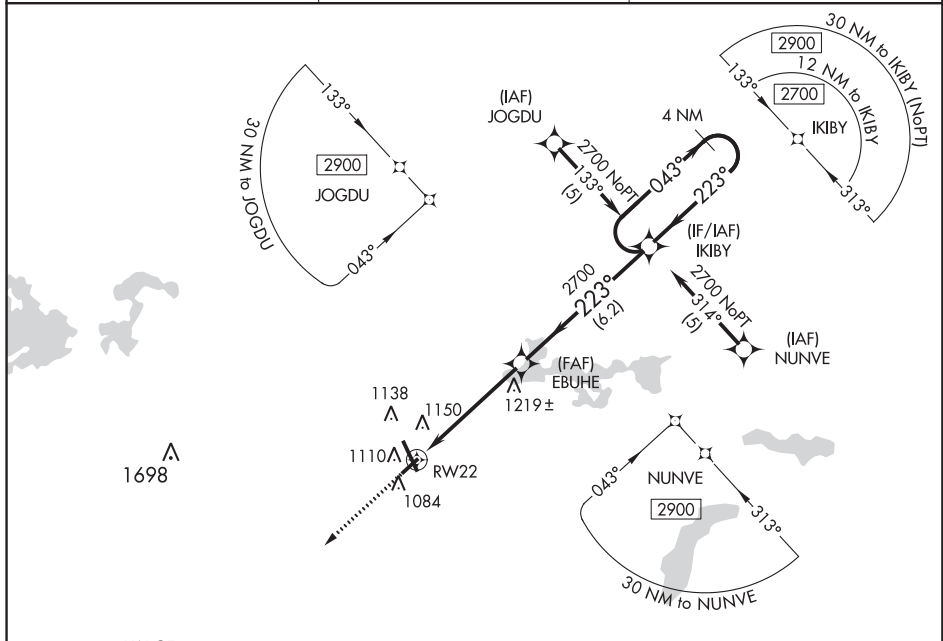
APP CRS	Rwy Idg	<b>4000</b>
<b>223°</b>	TDZE	<b>1021</b>
	Apt Elev	<b>1021</b>

# RNAV (GPS) RWY 22

MANKATO RGNL (MKT)

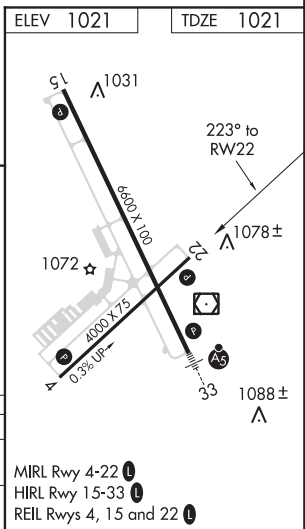
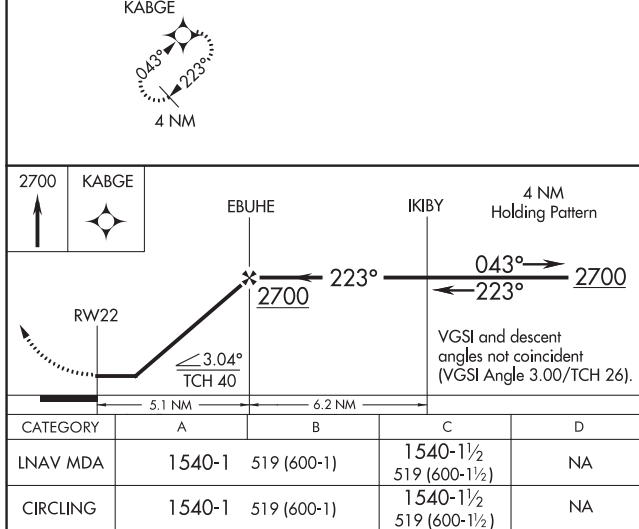
<p><b>⚠</b> DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.  <b>⚠</b> When local altimeter setting not received, use Waseca altimeter setting and increase all MDA 60 feet.</p>	<p>MISSED APPROACH: Climb to 2700 direct KABGE and hold.</p>
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AWOS-3PT <b>118.175</b>	MINNEAPOLIS CENTER <b>135.0 306.9</b>	UNICOM <b>122.725 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



MANKATO, MINNESOTA  
 Orig-A 31MAY12

44°13'N-93°55'W

# MANKATO RGNL (MKT) RNAV (GPS) RWY 22


- MIRL Rwy 4-22 **Ⓛ**
- HIRL Rwy 15-33 **Ⓛ**
- REIL Rws 4, 15 and 22 **Ⓛ**

WAAS CH <b>86315</b> <b>W33A</b>	APP CRS <b>331°</b>	Rwy Idg <b>6600</b> TDZE <b>1021</b> Apt Elev <b>1021</b>
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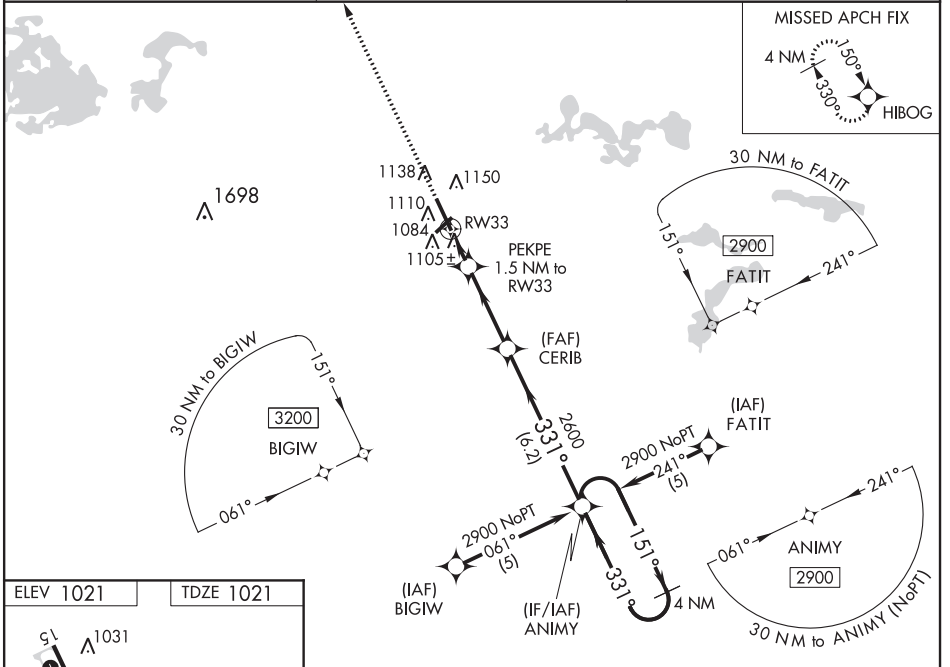
# RNAV (GPS) RWY 33

MANKATO RGNL (MKT)

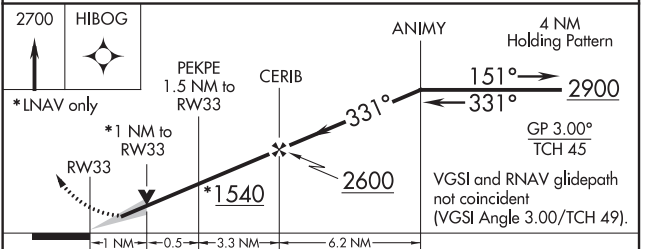
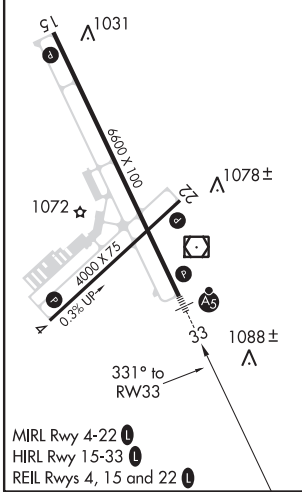
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Waseca altimeter setting: increase LPV DA to 1278 feet, LNAV/VNAV DA to 1432 feet and LNAV/VNAV visibility ½ mile all Cats; increase all MDA 60 feet and LNAV Cats C and D visibility ½ mile.  
 ▲ For inoperative MALSRL when using Waseca altimeter setting, increase LPV all Cats visibility to ¾ mile and LNAV Cat C and D visibility to 1 ½ mile. Baro-VNAV and VDP NA when using Waseca altimeter setting. For inoperative MALSRL, increase LNAV/VNAV all Cats visibility to 1 ½ mile and LNAV Cats C and D visibility to 1 mile.

**MALSRL**  
  
**MISSED APPROACH:**  
 Climb to 2700 direct HIBOG and hold.

AWOS-3PT <b>118.175</b>	MINNEAPOLIS CENTER <b>135.0 306.9</b>	UNICOM <b>122.725 (CTAF)</b> 
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ELEV 1021	TDZE 1021
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CATEGORY	A	B	C	D
LPV DA		1221-½	200 (200-½)	
LNAV/VNAV DA		1375-¾	354 (400-¾)	
LNAV MDA	1380-½	359 (400-½)	1380-⅝	359 (400-⅝)
CIRCLING	1460-1 439 (500-1)	1480-1 459 (500-1)	1480-1½ 459 (500-1½)	1580-2 559 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MANKATO, MINNESOTA

AL-5755 (FAA)

16315

VOR/DME MKT <b>110.8</b> Chan <b>45</b>	APP CRS <b>139°</b>	Rwy Idg TDZE Apt Elev	<b>6600</b> <b>1020</b> <b>1021</b>
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# VOR RWY 15

MANKATO RGNL (MKT)

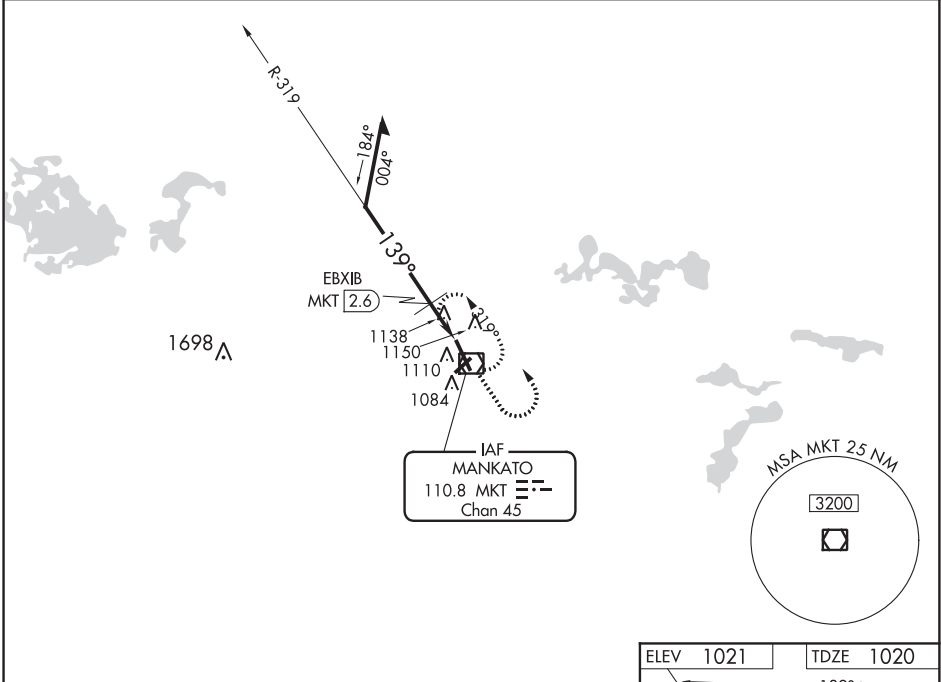
**⚠** When local altimeter setting not received use Waseca altimeter setting and increase EBXIB FIX MINIMUMS all MDA 60 feet, increase Circling Cats C and D visibility ¼ mile, and increase EBXIB FIX MINIMUMS S-15 Cats C and D visibility ¼ mile.

**MISSED APPROACH:** Climb to 2000 then climbing left turn to 2700 direct MKT VOR/DME and hold.

AWOS-3PT  
**118.175**

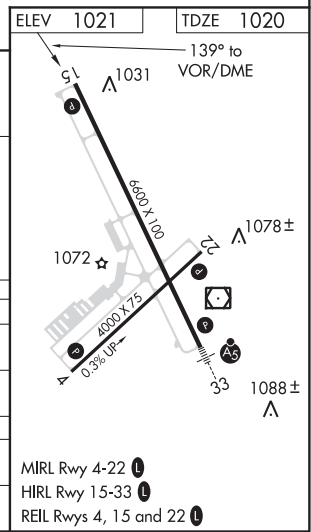
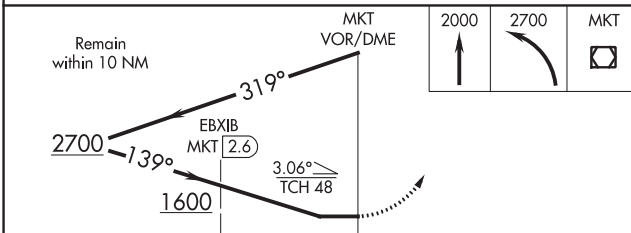
MINNEAPOLIS CENTER  
**135.0 306.9**

UNICOM  
**122.725 (CTAF)**



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D
S-15	1600-1	580 (600-1)	1600-1½ 580 (600-1½)	1600-1¾ 580 (600-1¾)
CIRCLING	1600-1	579 (600-1)	1600-1½ 579 (600-1½)	1600-2 579 (600-2)
<b>EBXIB FIX MINIMUMS</b>				
S-15	1400-1 380 (400-1)		1400-1¼ 380 (400-1¼)	
CIRCLING	1460-1 439 (500-1)	1480-1 459 (500-1)	1480-1½ 459 (500-1½)	1580-2 559 (600-2)

MANKATO, MINNESOTA  
Amdt 7A 10DEC15

44°13'N-93°55'W


# MANKATO RGNL (MKT) VOR RWY 15

LOC I-MKT <b>108.7</b>	APP CRS <b>331°</b>	Rwy Idg <b>6600</b> TDZE <b>1021</b> Apt Elev <b>1021</b>
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# COPTER ILS or LOC RWY 33

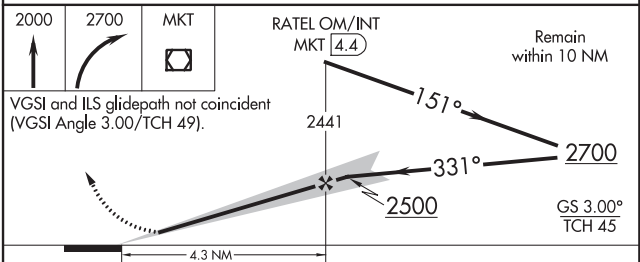
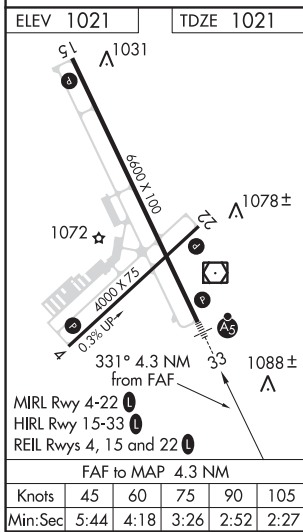
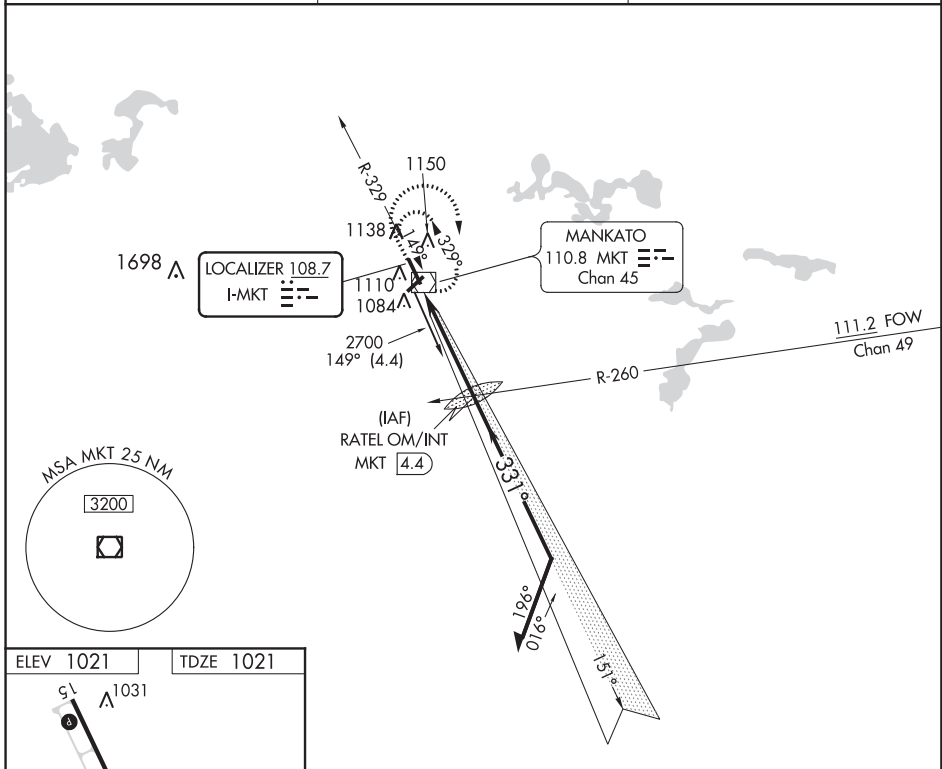
MANKATO RGNL (MKT)

**⚠** For inoperative MALSRL increase visibility to ½ mile. When local altimeter setting not received, use Waseca altimeter setting: increase DA to 1278 feet; increase MDA 60 feet.

**MALSRL** 

**MISSED APPROACH:** Climb to 2000 then climbing right turn to 2700 direct MKT VOR/DME and hold.

AWOS-3PT <b>118.175</b>	MINNEAPOLIS CENTER <b>135.0 306.9</b>	UNICOM <b>122.725 (CTAF)</b> 
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CATEGORY	COPTER	B	C	D
S-ILS 33	1221-¼ 200 (200-¼)		NA	
S-LOC 33	1420-¼ 399 (400-¼)		NA	
CIRCLING		NA		

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

AL-5755 (FAA)

MANKATO RGNL (MKT)  
MANKATO, MINNESOTA

AWOS-3PT  
118.175  
CTAF/UNICOM  
122.725

FIELD  
ELEV  
1021

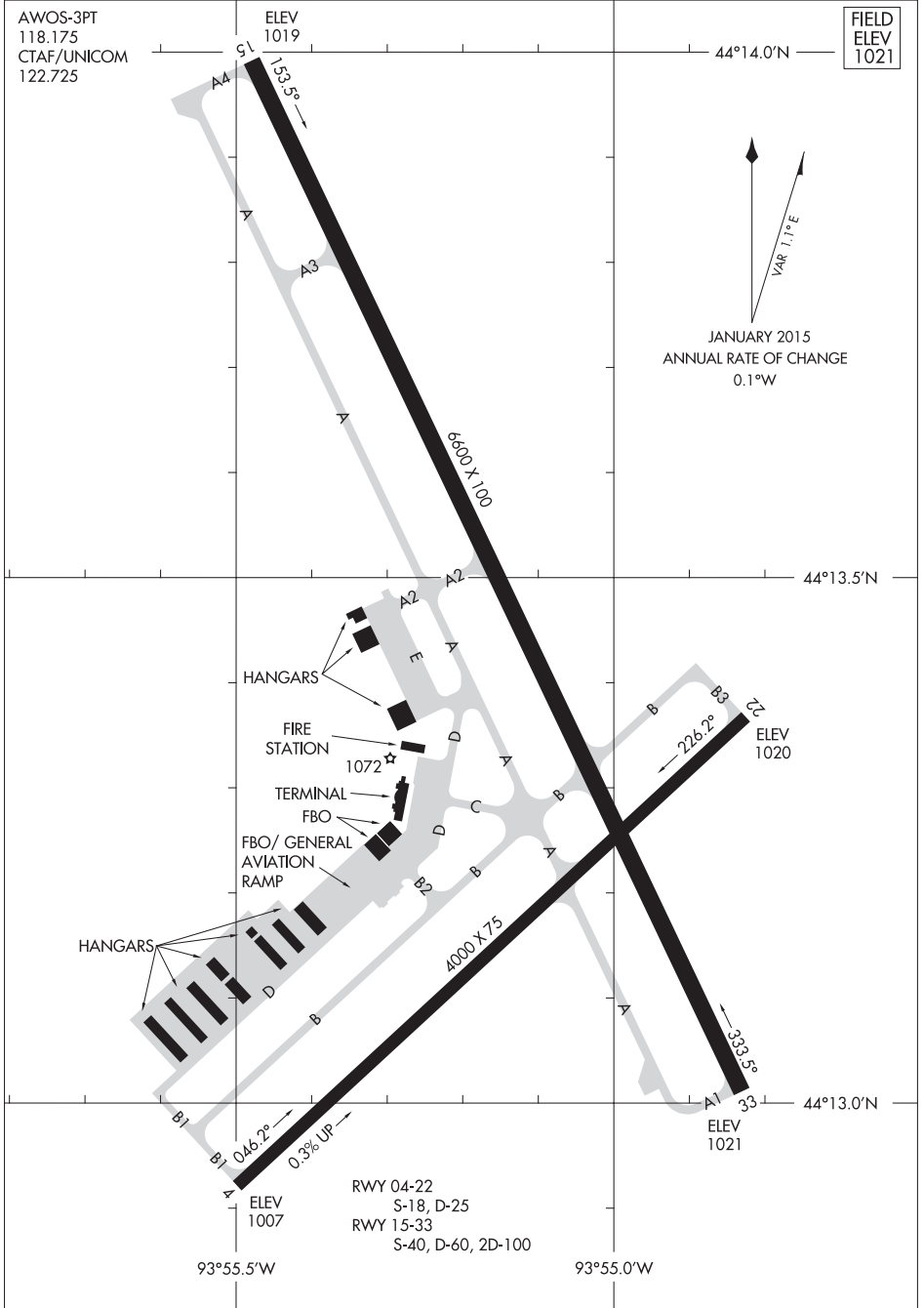
44°14.0'N



JANUARY 2015  
ANNUAL RATE OF CHANGE  
0.1°W

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



44°13.5'N

44°13.0'N

93°55.5'W

93°55.0'W

RWY 04-22  
S-18, D-25  
RWY 15-33  
S-40, D-60, 2D-100

# AIRPORT DIAGRAM

16315

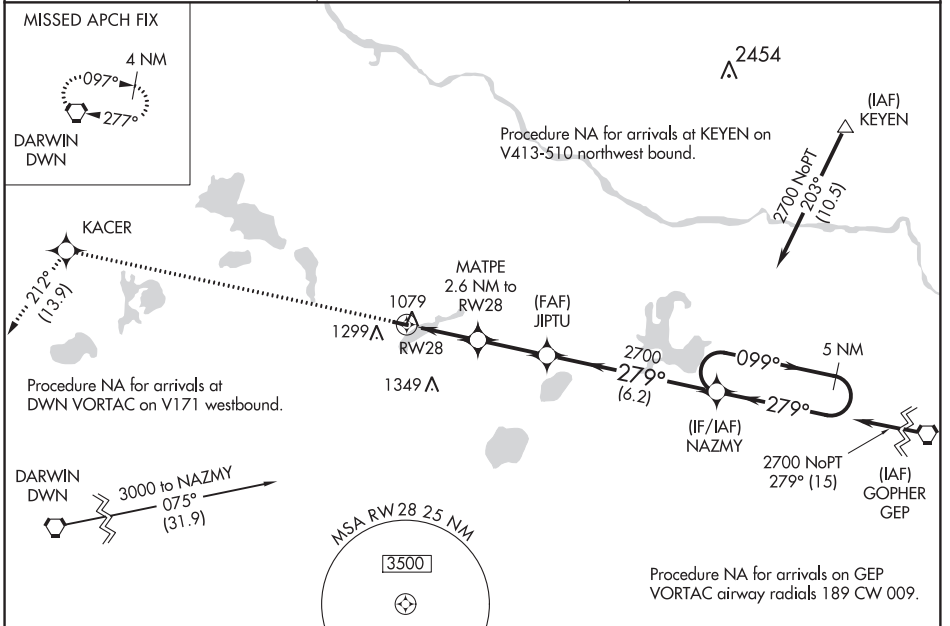
MANKATO, MINNESOTA  
MANKATO RGNL (MKT)

WAAS CH <b>50422</b> <b>W28A</b>	APP CRS <b>279°</b>	Rwy Idg TDZE Apt Elev	<b>2796</b> <b>1028</b> <b>1028</b>
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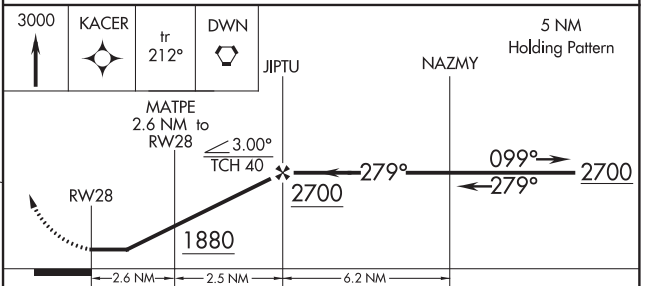
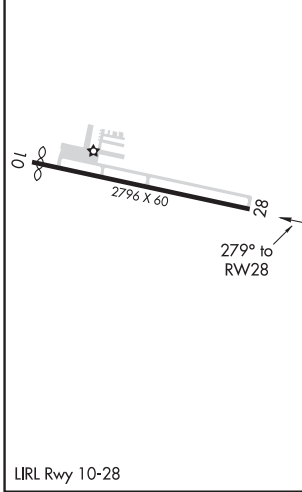
# RNAV (GPS) RWY 28

MAPLE LAKE MUNI-BILL MAVENCAMP SR FIELD (MGG)

<p><b>⚠</b> DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Buffalo altimeter setting and increase all MDA 40 feet, increase Circling Cat C visibility ¼ mile. Night Landing: Rwy 28 NA.</p>	<p>MISSED APPROACH: Climb to 3000 direct KACER and on track 212° to DWN VORTAC and hold.</p>	
<p>AWOS-3 <b>128.325</b></p>	<p>MINNEAPOLIS APP CON <b>126.5 284.7</b></p>	<p>UNICOM <b>122.8</b> (CTAF)</p>



ELEV 1028	TDZE 1028
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CATEGORY	A	B	C	D
LP MDA	1340-1 312 (400-1)			NA
LNAV MDA	1500-1	472 (500-1)	1500-1 <sup>3</sup> / <sub>8</sub> 472 (500-1 <sup>3</sup> / <sub>8</sub> )	NA
CIRCLING	1660-1	632 (700-1)	1660-1 <sup>3</sup> / <sub>4</sub> 632 (700-1 <sup>3</sup> / <sub>4</sub> )	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MAPLE LAKE, MINNESOTA

AL-6585 (FAA)

16147

VORTAC DWN <b>109.0</b> Chan 27	APP CRS <b>239°</b>	Rwy Idg TDZE Apt Elev	<b>N/A</b> <b>N/A</b> <b>1028</b>
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**VOR-A**  
MAPLE LAKE MUNI-BILL MAVENCAMP SR FIELD (MGG)

MAPLE LAKE MUNI-BILL MAVENCAMP SR FIELD (MGG)

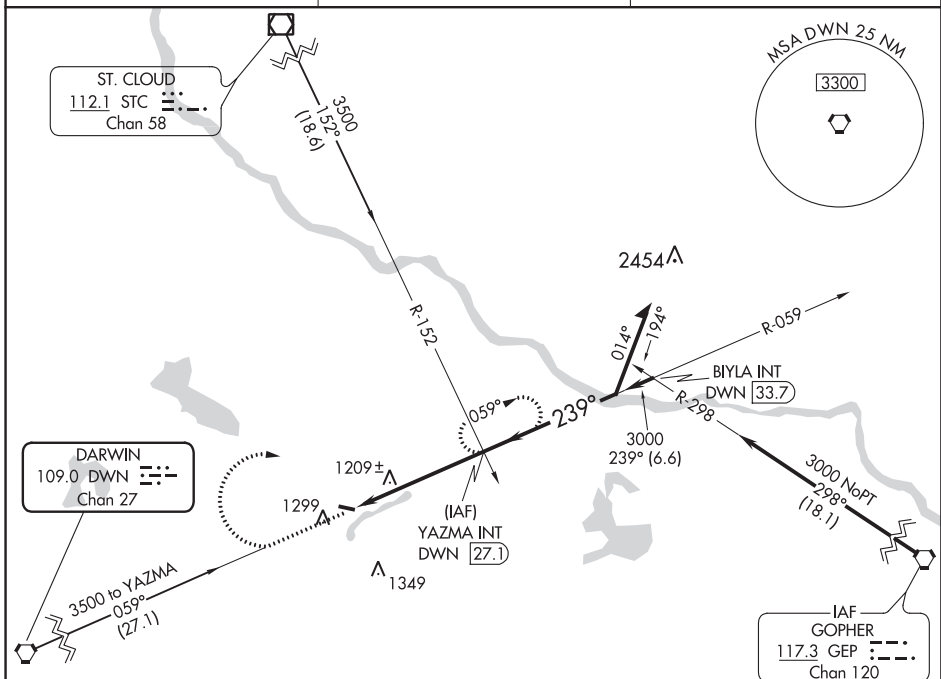
**⚠** When local altimeter setting not received, use Buffalo altimeter setting and increase all MDA 40 feet and increase Circling Cat C visibility ¼ mile.  
Night Landing: Rwy 28 NA. Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH: Climb to 2000 then climbing right turn to 3500 via DWN R-059 to YAZMA INT/27.1 DME and hold.

AWOS-3  
**128.325**

MINNEAPOLIS APP CON  
**126.5 284.7**

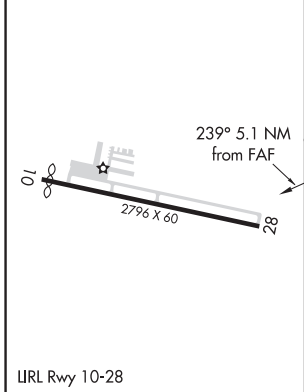
UNICOM  
**122.8 (CTAF)**



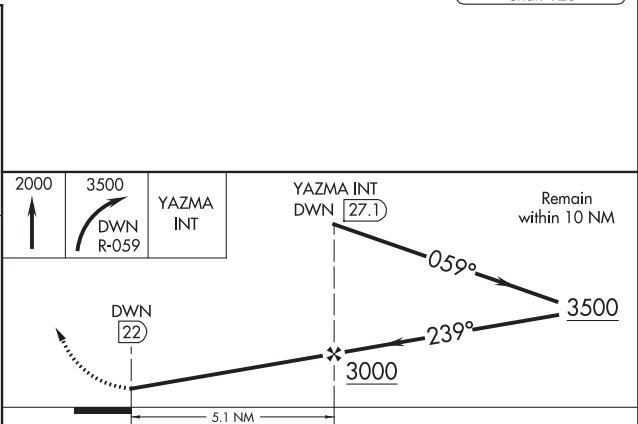
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1028



FAF to MAP 5.1 NM					
Knots	60	90	120	150	180
Min:Sec	5:06	3:24	2:33	2:02	1:42



CATEGORY	A	B	C	D
CIRCLING	1660-1 632 (700-1)	1660-1¼ 632 (700-1¼)	1660-1¾ 632 (700-1¾)	NA

MAPLE LAKE, MINNESOTA  
Amdt 4B 28APR16

MAPLE LAKE MUNI-BILL MAVENCAMP SR FIELD (MGG)  
45°14'N-93°59'W

**VOR-A**



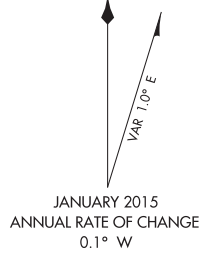
16147

# AIRPORT DIAGRAM

MAPLE LAKE MUNI-BILL MAVENCAMP SR FIELD (MGG)  
AL-6585 (FAA)  
MAPLE LAKE, MINNESOTA

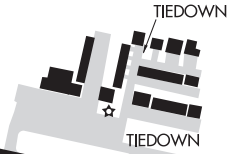
AWOS-3  
128.325  
CTAF/UNICOM  
122.8

45°14.5'N



1063 ±  
△

ELEV  
1024



2796 X 60

281.2°

FIELD  
ELEV  
1028

45°14.0'N

093°59.5'W

093°59.0'W

# AIRPORT DIAGRAM

16147

MAPLE LAKE, MINNESOTA  
MAPLE LAKE MUNI-BILL MAVENCAMP SR FIELD (MGG)

MAPLE LAKE, MINNESOTA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MARSHALL, MINNESOTA


AL-5640 (FAA)

16203

LOC I-GBY <b>109.7</b>	APP CRS <b>125°</b>	Rwy Idg <b>7221</b> TDZE <b>1182</b> Apt Elev <b>1182</b>
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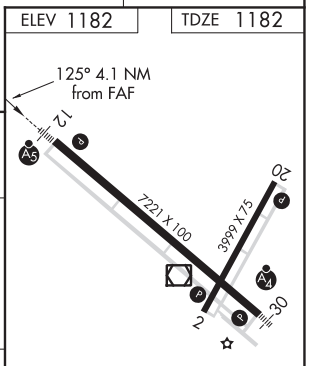
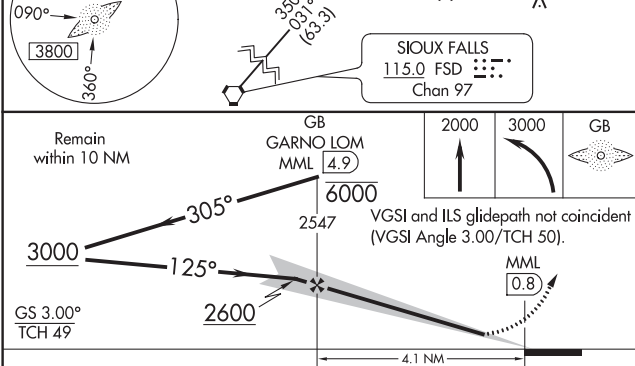
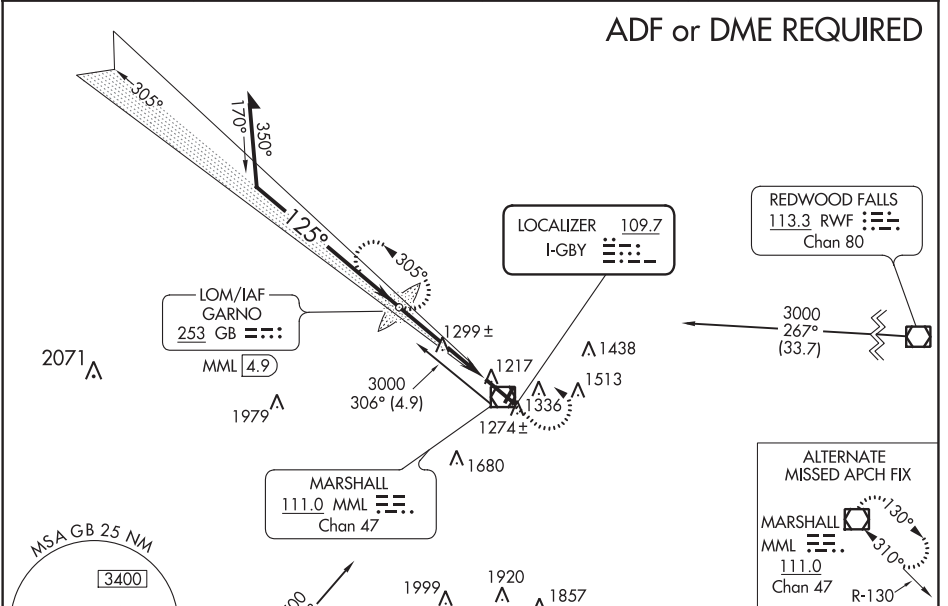
**ILS or LOC RWY 12**  
SOUTHWEST MINNESOTA RGNL MARSHALL/RYAN FIELD (MML)

**ADF required.**  
When local altimeter setting not received, use Tracy Muni altimeter setting and increase all DAs/MDAs 60 feet and S-LOC 12 Cats C/D visibility 1/2 mile. For inoperative MALSR when using Tracy Muni altimeter setting, increase S-ILS 12 visibility to 1 mile all Cats.




**MALSR**  MISSED APPROACH: Climb to 2000 then climbing left turn to 3000 direct GARNO LOM/MML 4.9 DME and hold.

AWOS-3PT <b>111.0</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b>
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**ADF or DME REQUIRED**



CATEGORY	A	B	C	D
S-ILS 12	1382-1/2 200 (200-1/2)			
S-LOC 12	1560-1/2 378 (400-1/2)		1560-3/4 378 (400-3/4)	
CIRCLING	1640-1 458 (500-1)		1640-1 1/2 458 (500-1 1/2) 1740-2 558 (600-2)	

HIRL Rwy 12-30   
REIL Rwys 2 and 20   
MIRL Rwy 2-20 

FAF to MAP 4.1 NM

Knots	60	90	120	150	180
Min:Sec	4:06	2:44	2:03	1:38	1:22

MARSHALL, MINNESOTA  
Amdt 2A 03JUN10

SOUTHWEST MINNESOTA RGNL MARSHALL/RYAN FIELD (MML)  
44°27'N-95°49'W

**ILS or LOC RWY 12**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

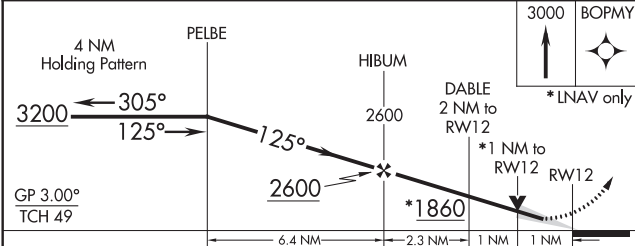
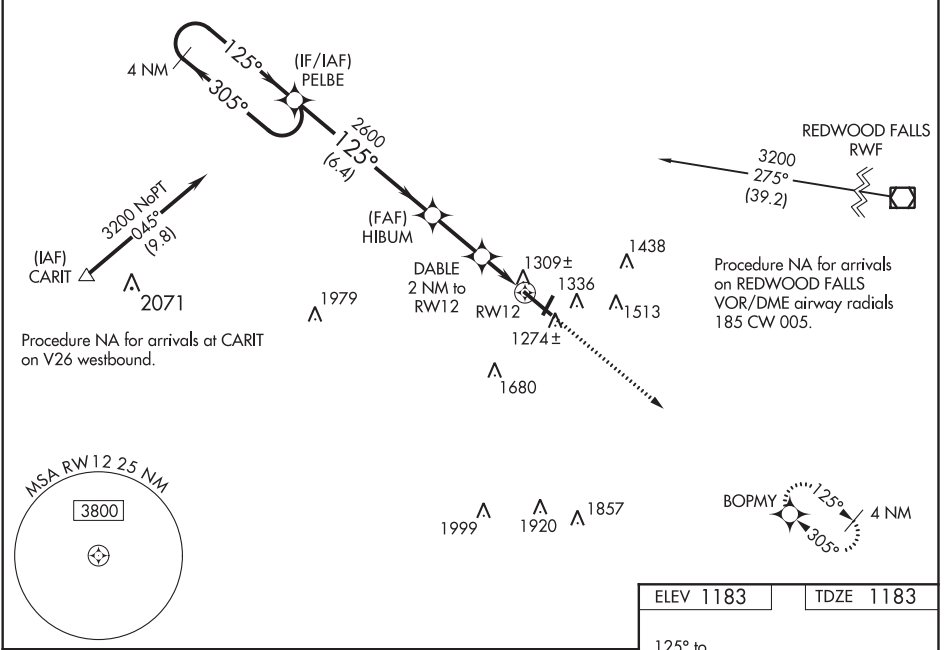
WAAS CH <b>82106</b> <b>W12A</b>	APP CRS <b>125°</b>	Rwy Idg <b>7221</b> TDZE <b>1183</b> Apt Elev <b>1183</b>
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# RNAV (GPS) RWY 12

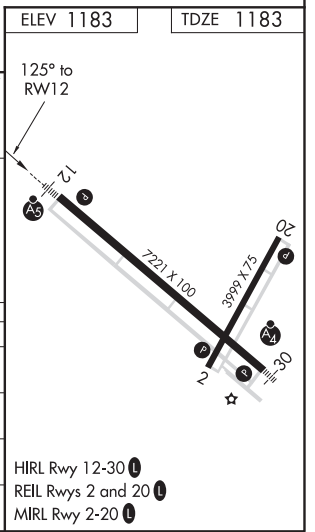
SOUTHWEST MINNESOTA RGNL MARSHALL/RYAN FIELD (MML)

<p><b>⚠</b> Baro-VNAV and VDP NA when using Tracy Muni altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 36°C (96°F). When local altimeter setting not received, use Tracy Muni altimeter setting and increase all DA 58 feet and all MDA 60 feet. Increase LNAV/VNAV and LNAV Cats C/D visibility to ¾ mile. DME/DME RNP-0.3 NA. For inoperative MALSR, increase LNAV Cats C/D visibility to 1 mile. For inoperative MALSR when using Tracy Muni altimeter setting, increase LPV all Cats to ¾ mile.</p>	<p>MALSR</p> <p>MISSED APPROACH: Climb to 3000 direct BOPMY and hold.</p>
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AWOS-3PT <b>111.0</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
LPV DA		1383-½	200 (200-½)	
LNAV/VNAV DA		1490-½	307 (400-½)	
LNAV MDA	1560-½	377 (400-½)	1560-5/8	377 (400-5/8)
CIRCLING	1640-1	457 (500-1)	1640-1½	1740-2
			457 (500-1½)	557 (600-2)



NC-1, 10 NOV 2016 to 05 JAN 2017

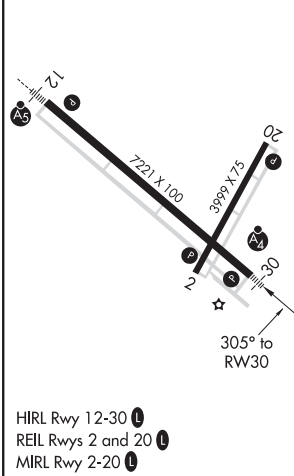
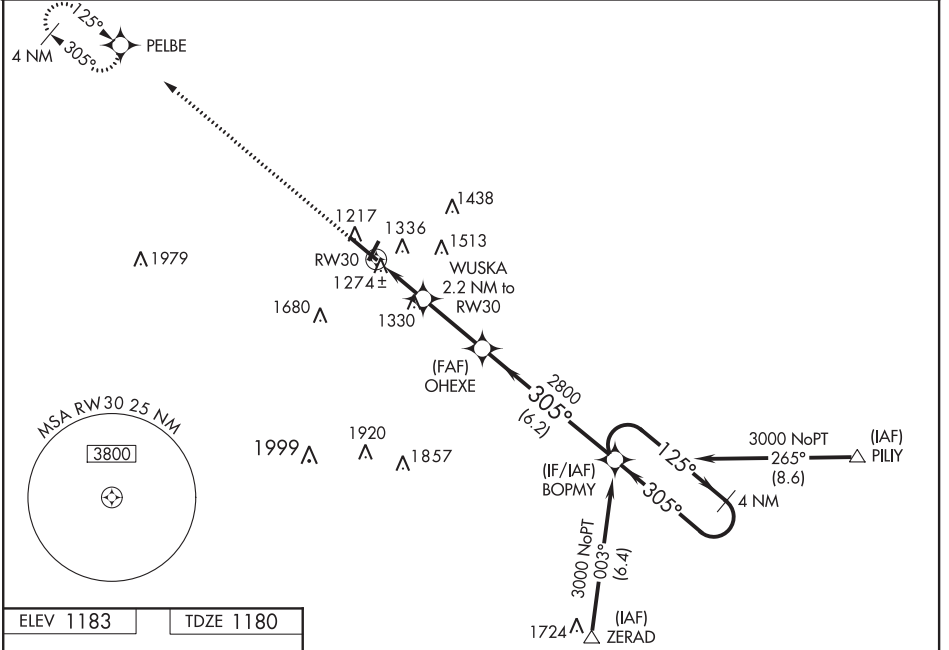
NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>86321</b> <b>W30A</b>	APP CRS <b>305°</b>	Rwy Idg TDZE Apt Elev	<b>7221</b> <b>1180</b> <b>1183</b>
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# RNAV (GPS) RWY 30

SOUTHWEST MINNESOTA RGNL MARSHALL/RYAN FIELD (MIML)

<p><b>⚠</b> For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 36°C (96°F). DME/DME RNP-0.3 NA. VDP NA with Tracy altimeter setting. When local altimeter setting not received, use Tracy altimeter setting and increase all DA 58 feet and all MDA 60 feet, and LPV visibility all Cats 1/4 mile, LNAV/VNAV visibility all Cats 1/4 mile, and LNAV Cat C and D visibility 1/4 mile. Visibility reduction by helicopters NA. Baro-VNAV NA when using Tracy altimeter setting.</p>		<p>MALSF</p>	<p>MISSED APPROACH: Climb to 3200 direct PELBE and hold.</p>
AWOS-3PT <b>111.0</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b>



ELEV 1183	TDZE 1180	<p>3200 PELBE VGSi and RNAV glidepath not coincident. (VGSi angle 3.00/TCH 32)</p>			
<p>*LNAV only</p>		<p>WUSKA 2.2 NM to RW30</p>	<p>OHEXE 2800</p>	<p>BOPMY 2800</p>	<p>4 NM Holding Pattern</p>
<p>RW30 1900*</p>		<p>*1.2 NM to RW30</p>	<p>1900*</p>	<p>3000</p>	<p>GP 3.00° TCH 40</p>
<p>1.2 NM 1 NM 2.8 NM 6.2 NM</p>					
CATEGORY	A	B	C	D	
LPV DA	1430-7/8		250 (300-7/8)		
LNAV/VNAV DA	1464-1		284 (300-1)		
LNAV MDA	1580-1	400 (400-1)	1580-1 1/8	400 (400-1 1/8)	
CIRCLING	1640-1	457 (500-1)	1640-1 1/2	1740-2	557 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME MML <b>111.0</b> Chan 47	APP CRS <b>130°</b>	Rwy Idg TDZE Apt Elev	<b>7221</b> <b>1182</b> <b>1182</b>
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# VOR RWY 12

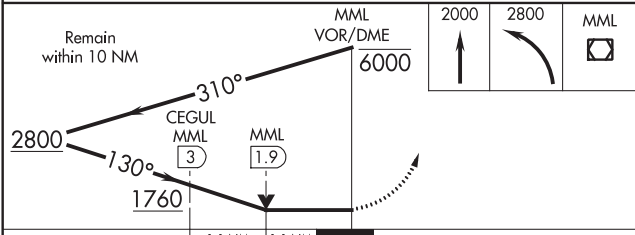
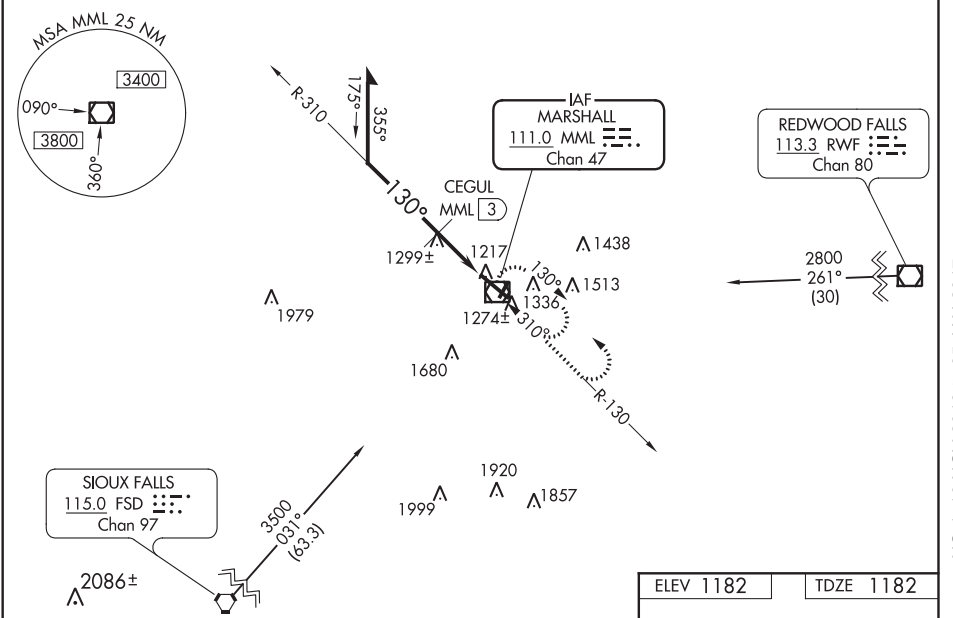
SOUTHWEST MINNESOTA RGNL MARSHALL/RYAN FIELD (MML)

**⚠** For inoperative MALSRS, increase CEGUL FIX MINIMUMS S-12 Cat D visibility to 1 1/4 mile.  
**⚠** When local altimeter setting not received, use Tracy Muni altimeter setting and increase all MDAs 60 feet and S-12 Cat C/D visibility 1/4 mile; increase Circling Cat C visibility 1/4 mile. Increase CEGUL FIX MINIMUMS S-12 Cat C visibility to 3/4 mile. VDP NA when using Tracy Muni altimeter setting.

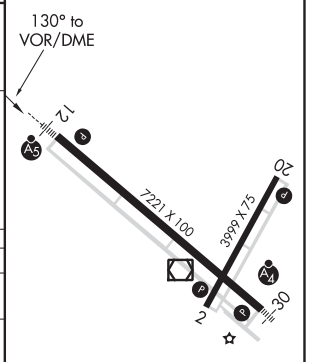
**MALSRS**

**MISSED APPROACH:** Climb to 2000, then climbing left turn to 2800 direct MML VOR/DME and hold.

AWOS-3PT <b>111.0</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	GCO <b>121.725</b>	UNICOM <b>122.8</b> (CTAF) <b>📻</b>
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ELEV 1182	TDZE 1182
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CATEGORY	A	B	C	D
S-12	1760-1/2	578 (600-1/2)	1760-1 578 (600-1)	1760-1 1/4 578 (600-1 1/4)
CIRCLING	1760-1	578 (600-1)	1760-1 1/2 578 (600-1 1/2)	1760-2 578 (600-2)
CEGUL FIX MINIMUMS				
S-12	1560-1/2 378 (400-1/2)		1560-1 378 (400-1)	
CIRCLING	1640-1	458 (500-1)	1640-1 1/2 458 (500-1 1/2)	1740-2 558 (600-2)

HIRL Rwy 12-30 **📴**  
 REIL Rws 2 and 20 **📴**  
 MIRL Rwy 2-20 **📴**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

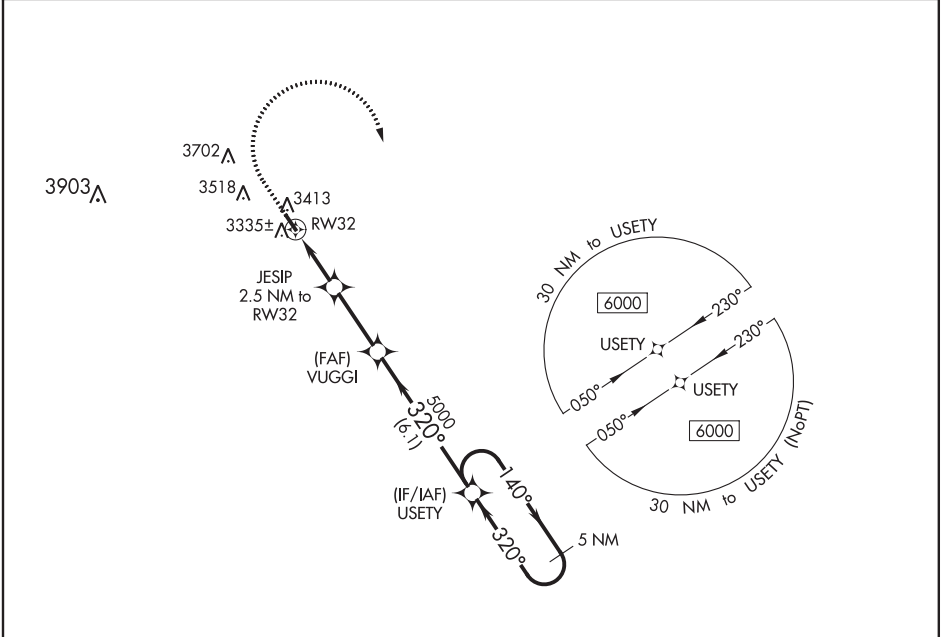
WAAS CH <b>77540</b> <b>W32A</b>	APP CRS <b>320°</b>	Rwy Idg <b>3699</b> TDZE <b>3294</b> Apt Elev <b>3295</b>
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# RNAV (GPS) RWY 32

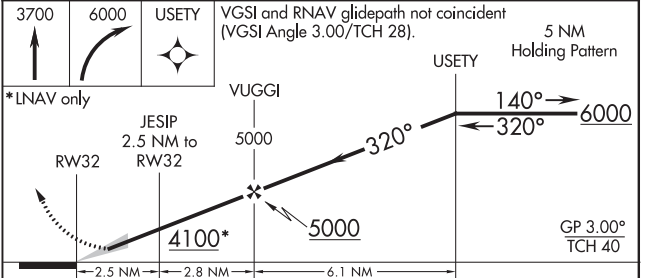
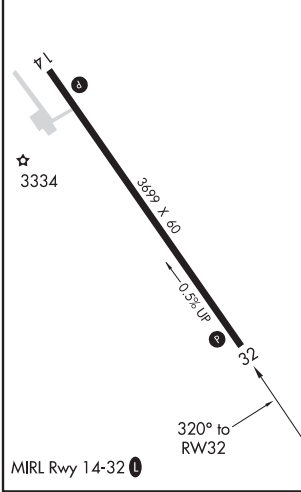
MARTIN MUNI (9V6)

<b>▽</b> Baro-VNAV NA. DME/DME RNP-0.3 NA. <b>▲</b> NA Use Pine Ridge altimeter setting.	MISSED APPROACH: Climb to 3700 then climbing right turn to 6000 direct USETY and hold.
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AWOS-3 <b>123.0</b>	PINE RIDGE ASOS <b>126.775</b>	DENVER CENTER <b>127.95 338.2</b>	CTAF <b>122.9</b>
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ELEV 3295	TDZE 3294
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CATEGORY	A	B	C	D
LPV DA	3633-1¼	339 (400-1¼)		NA
RNAV/VNAV DA	3633-1¼	339 (400-1¼)		NA
RNAV MDA	3680-1	386 (400-1)	3680-1½ 386 (400-1½)	NA
<b>C</b> CIRCLING	3860-1 565 (600-1)	3920-1 625 (700-1)	4100-2¼ 805 (900-2¼)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

APP CRS <b>139°</b>	Rwy Idg <b>3400</b>
	TDZE <b>1228</b>
	Apt Elev <b>1228</b>

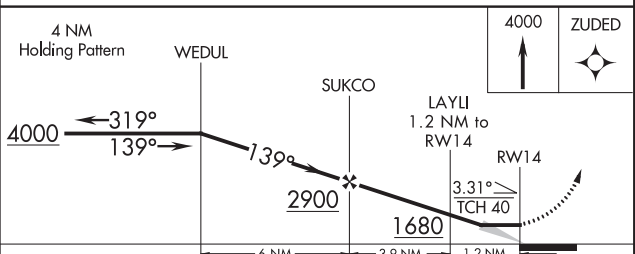
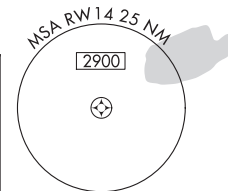
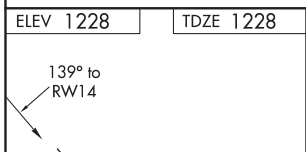
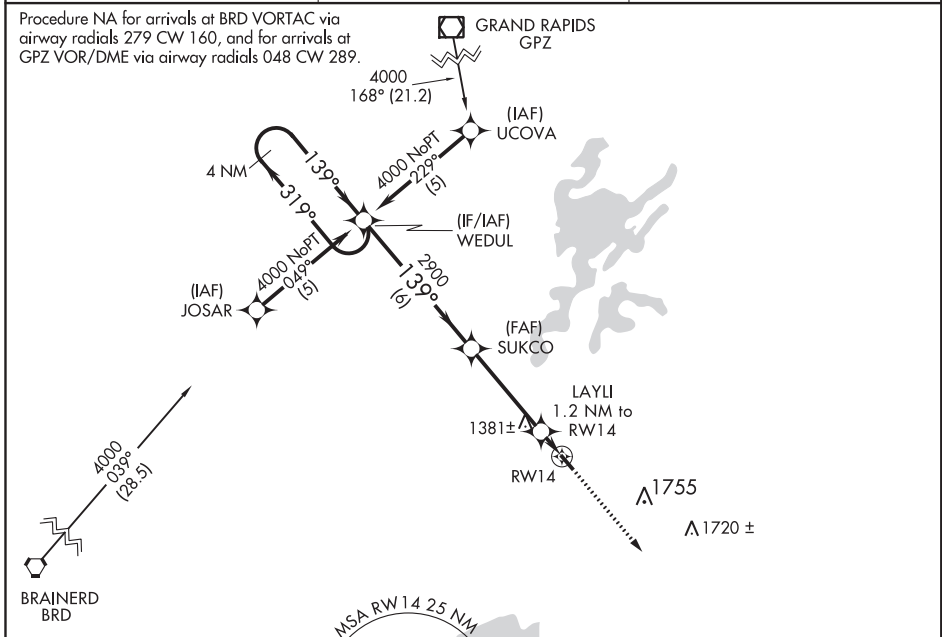
# RNAV (GPS) RWY 14

ISEDOR IVERSON (H.Z.X)

**NA** DME/DME RNP-0.3 NA.  
If local altimeter setting not received, use Aitkin altimeter setting and increase all MDAs 40 feet.  
Procedure NA at night.

MISSED APPROACH: Climb to 4000 direct ZUDED and hold.

ASOS-3 <b>119.575</b>	MINNEAPOLIS CENTER <b>127.9 281.45</b>	CTAF <b>122.9 0</b>
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CATEGORY	A	B	C	D
LNAV MDA	1580-1	352 (400-1)		NA
CIRCLING	1660-1 432 (500-1)	1680-1 452 (500-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MC GREGOR, MINNESOTA

AL-9495 (FAA)

14317

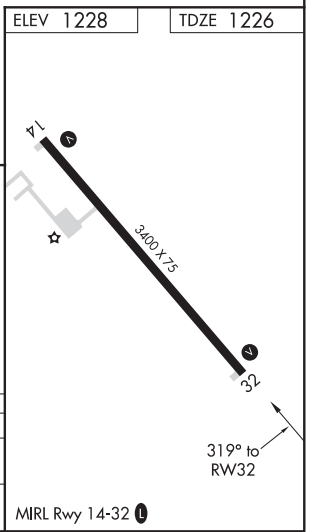
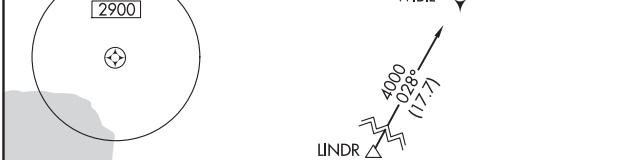
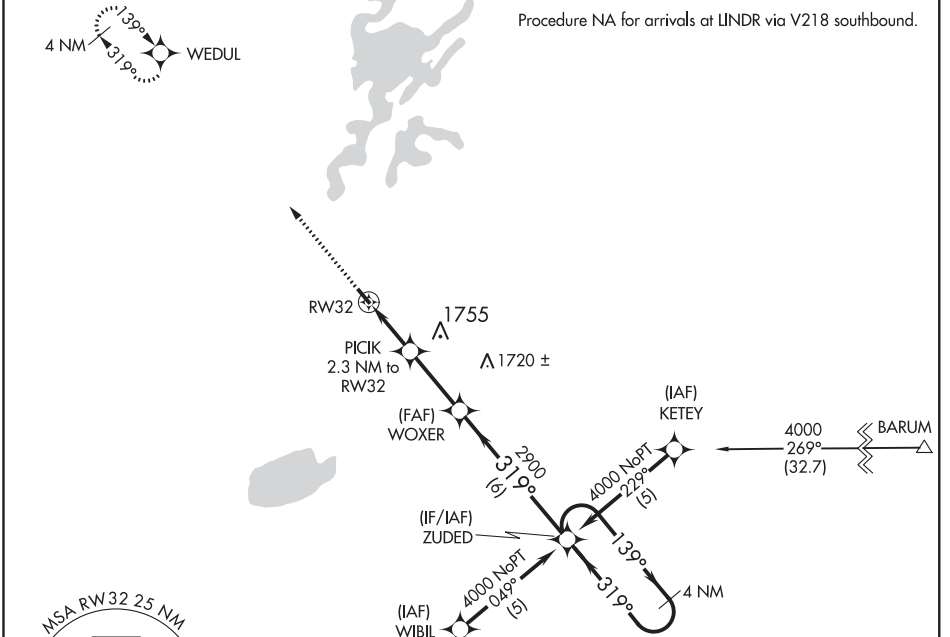
APP CRS <b>319°</b>	Rwy Idg <b>3400</b>
	TDZE <b>1226</b>
	Apt Elev <b>1228</b>

# RNAV (GPS) RWY 32

ISEDOR IVERSON (H.Z.X)

<p><b>▽</b> DME/DME RNP- 0.3 NA.  <b>△</b> NA If local altimeter setting not received, use Aitkin altimeter setting and increase all MDAs 40 feet.                  Procedure NA at night.</p>	<p>MISSED APPROACH: Climb to 4000 direct WEDUL and hold.</p>
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<p>ASOS-3 <b>119.575</b></p>	<p>MINNEAPOLIS CENTER <b>127.9 281.45</b></p>	<p>CTAF <b>122.9 0</b></p>
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CATEGORY	A	B	C	D
LNVA MDA	1600-1	374 (400-1)		NA
CIRCLING	1660-1 432 (500-1)	1680-1 452 (500-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



APP CRS	Rwy Idg	<b>4000</b>
<b>312°</b>	TDZE	<b>1114</b>
	Apt Elev	<b>1116</b>

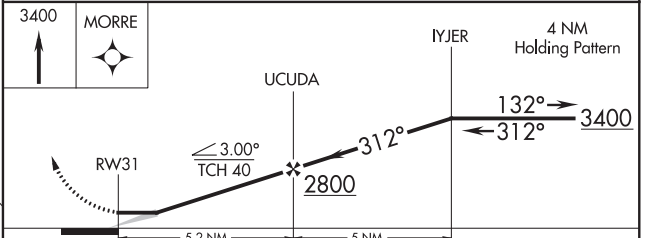
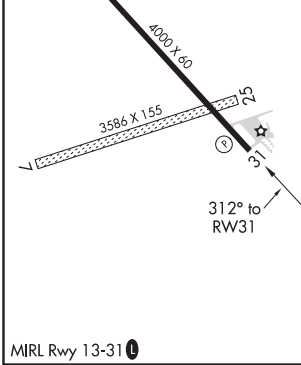
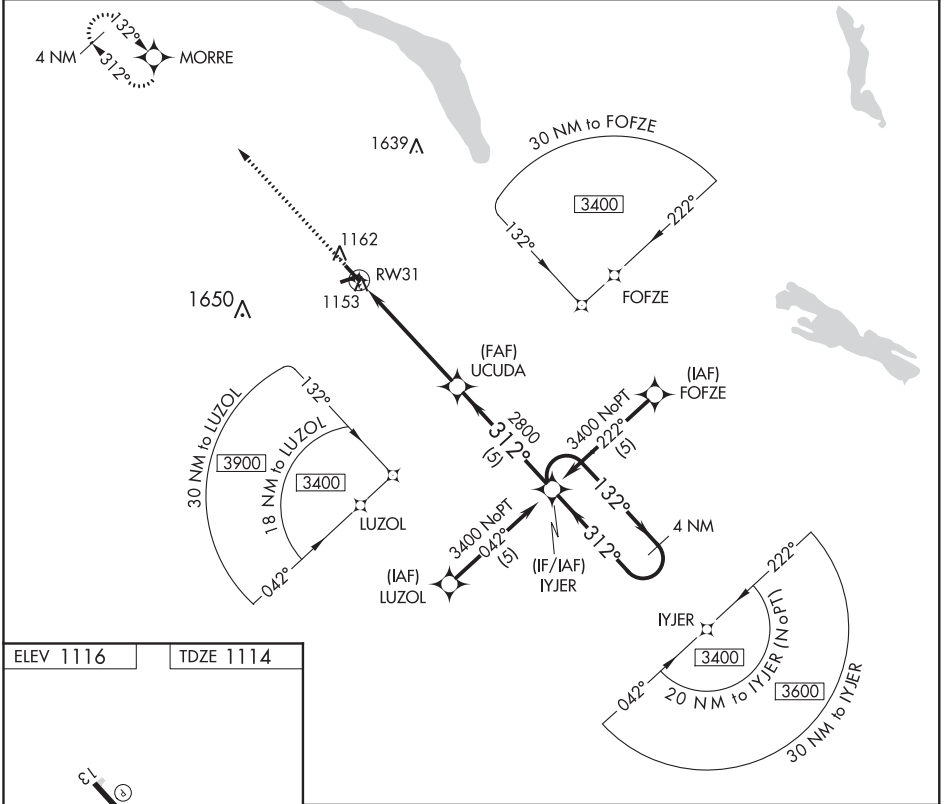
# RNAV (GPS) RWY 31

MILBANK MUNI (1D1)

**NA** Use Watertown Muni, SD altimeter setting.  
 GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3400 direct MORRE WP and hold.

MINNEAPOLIS CENTER <b>128.5 306.2</b>	UNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LNAV MDA	1720-1	606 (700-1)	NA	
CIRCLING	1720-1	604 (700-1)	NA	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>50322</b> <b>W15A</b>	APP CRS <b>151°</b>	Rwy Idg TDZE Apt Elev	<b>3600</b> <b>1569</b> <b>1570</b>
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# RNAV (GPS) RWY 15

MILLER MUNI (MKA)

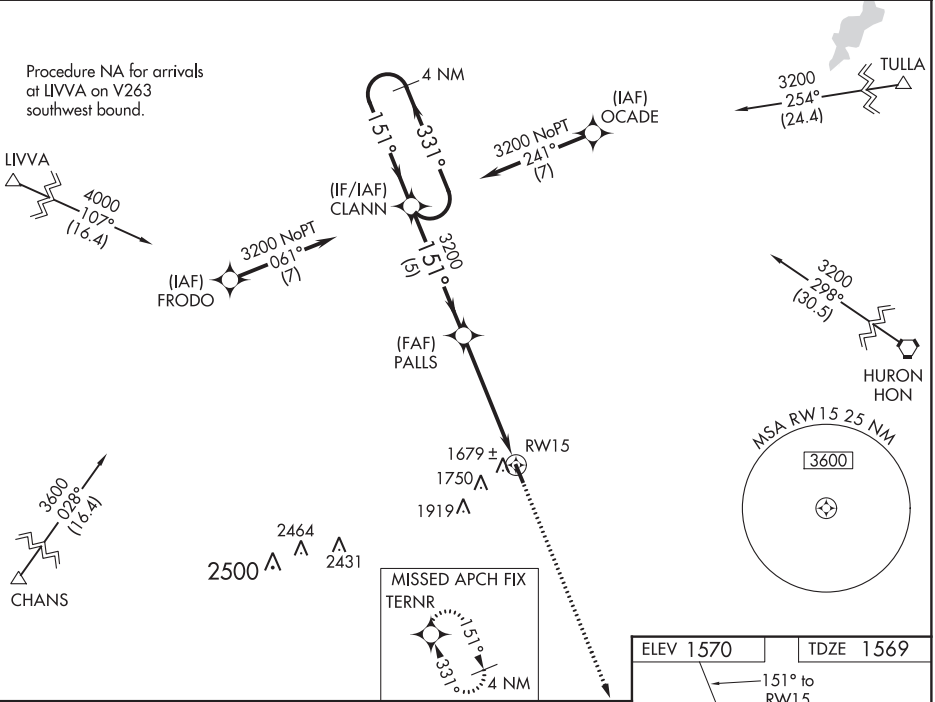
**▼** Baro-VNAV NA. Use Huron altimeter setting; when not received, use Mitchell altimeter setting and increase all DA 62 feet and all MDA 80 feet; increase LPV and LNAV/VNAV all Cats visibility ¼ mile. DME/DME RNP-0.3 NA.

**▲** NA

MISSED APPROACH: Climb to 3700 direct TERNR and hold.

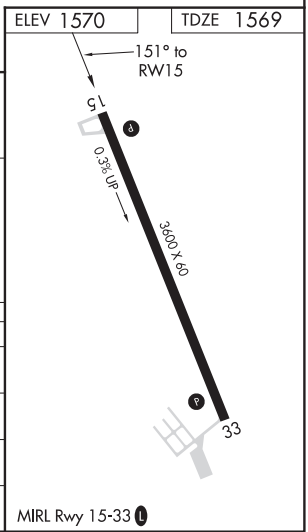
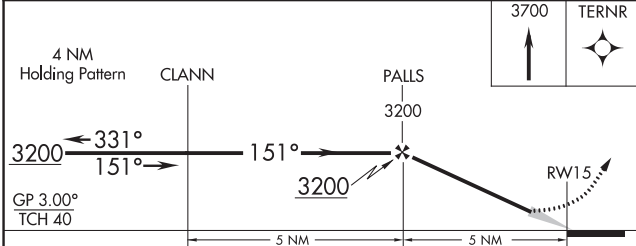
MINNEAPOLIS CENTER <b>125.1 269.1</b>	CTAF <b>122.9</b>	GCO <b>121.725</b>	<b>122.8</b>
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Procedure NA for arrivals at LIVVA on V263 southwest bound.



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D
LPV DA	1883-1	314 (400-1)		NA
LNAV/VNAV DA	1964-1 3/8	395 (400-1 3/8)		NA
LNAV MDA	2100-1	531 (600-1)		NA
CIRCLING	2180-1 610 (700-1)	2220-1 650 (700-1)		NA

WAAS CH <b>97522</b> <b>W33A</b>	APP CRS <b>331°</b>	Rwy Idg TDZE Apt Elev	<b>3600</b> <b>1570</b> <b>1570</b>
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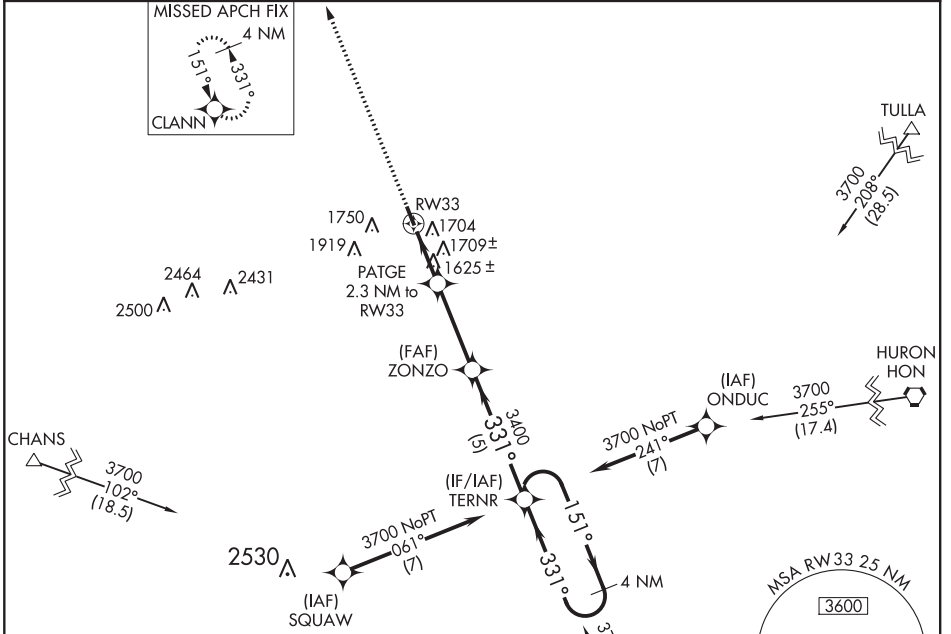
# RNAV (GPS) RWY 33

MILLER MUNI (MKA)

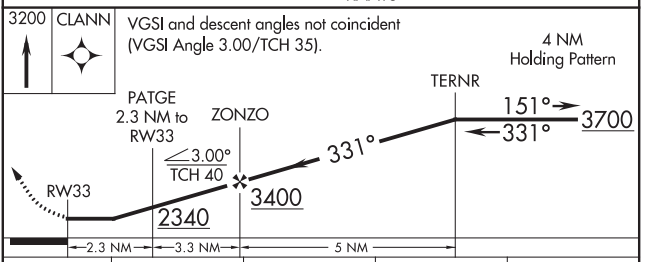
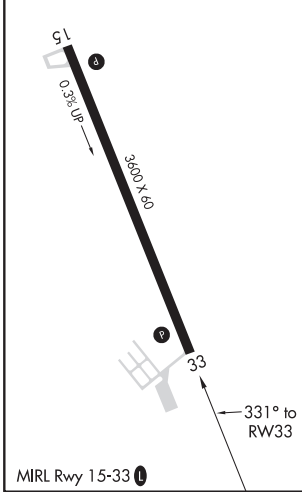
**⚠** Use Huron altimeter setting; when not received, use Mitchell altimeter setting and increase all MDA 80 feet. DME/DME RNP-0.3 NA. Helicopter visibility reduction below  $\frac{3}{4}$  SM NA.

**⚠** NA MISSED APPROACH: Climb to 3200 direct CLANN and hold.

MINNEAPOLIS CENTER <b>125.1 269.1</b>	CTAF <b>122.9</b>	GCO <b>121.725</b>	<b>122.8</b>
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ELEV 1570	TDZE 1570
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CATEGORY	A	B	C	D
LP MDA	2000-1	430 (500-1)	NA	
LNAV MDA	2080-1	510 (600-1)	NA	
CIRCLING	2180-1 610 (700-1)	2220-1 650 (700-1)	NA	

NC-1, 10 NOV 2016 to 05 JAN 2017

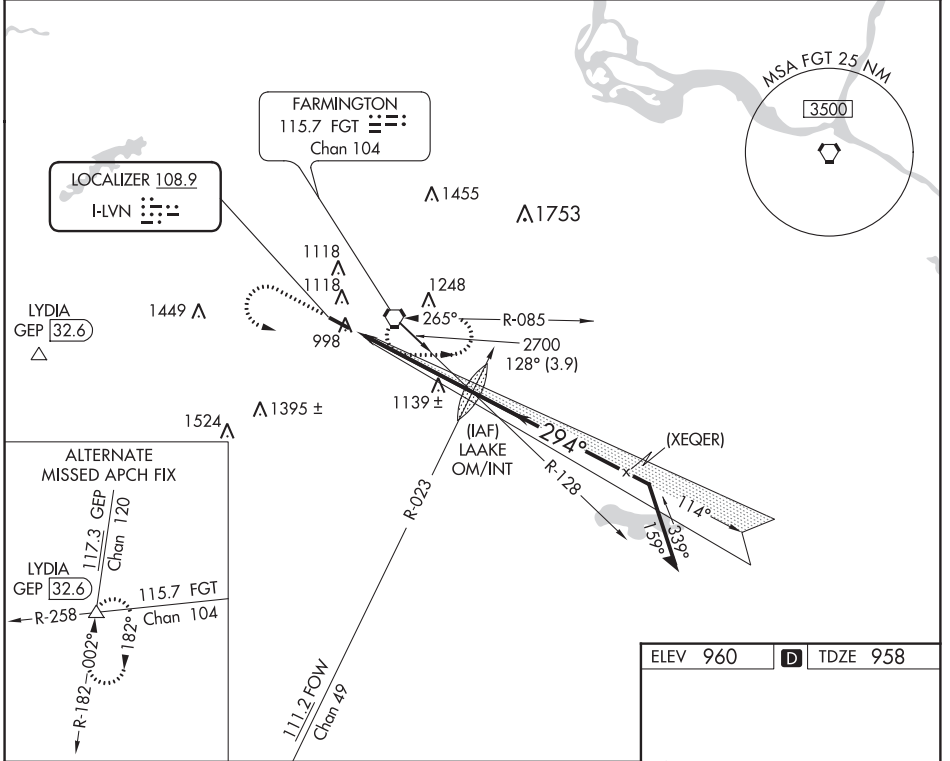
NC-1, 10 NOV 2016 to 05 JAN 2017

LOC I-LVN <b>108.9</b>	APP CRS <b>294°</b>	Rwy Idg <b>3707</b>
		TDZE <b>958</b>
		Apt Elev <b>960</b>

# ILS or LOC RWY 30

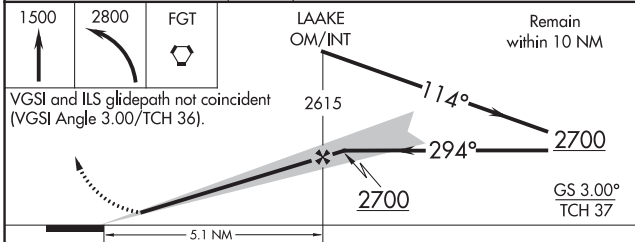
AIRLAKE (LVN)

Visibility reduction by helicopters NA. For inoperative MALSRR, increase S-LOC Cats A and B visibility to 1 mile.	MALSRR	MISSED APPROACH: Climb to 1500 then climbing left turn to 2800 direct FGT VORTAC and hold.	
AWOS-3 <b>118.0</b>	MINNEAPOLIS APP CON <b>134.7 284.7</b>	CLNC DEL <b>118.95</b>	UNICOM <b>123.0 (CTAF)</b>



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 960		TDZE 958
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REIL Rwy 12   
 HIRL Rwy 12-30   
 FAF to MAP 5.1 NM

Knots	60	90	120	150	180
Min:Sec	5:06	3:24	2:33	2:02	1:42

CATEGORY	A	B	C	D
S-ILS 30		1208- <sup>3</sup> / <sub>4</sub>	250 (300- <sup>3</sup> / <sub>4</sub> )	
S-LOC 30		1400- <sup>3</sup> / <sub>4</sub>	442 (500- <sup>3</sup> / <sub>4</sub> )	
CIRCLING	1500-1	540 (600-1)	1500-1 <sup>1</sup> / <sub>2</sub> 540 (600-1 <sup>1</sup> / <sub>2</sub> )	1520-2 560 (600-2)

WAAS CH <b>57920</b> <b>W12A</b>	APP CRS <b>114°</b>	Rwy Idg <b>4099</b> TDZE <b>960</b> Apt Elev <b>960</b>
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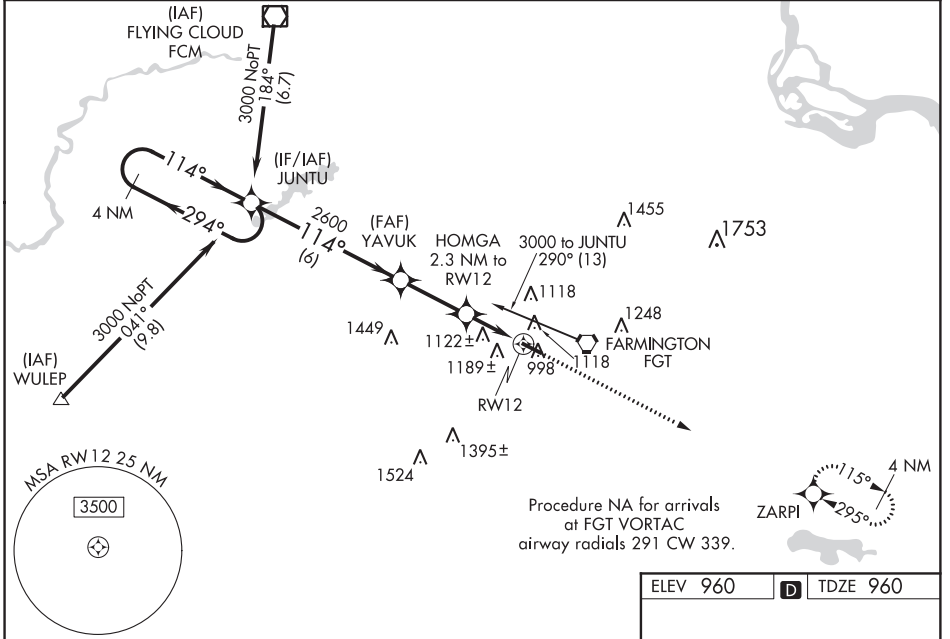
# RNAV (GPS) RWY 12

AIRLAKE (LVN)

▼ When VGSI inoperative, procedure NA at night. Baro-VNAV NA when using Minneapolis-St Paul Intl/Wold-Chamberlain altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Minneapolis-St Paul Intl/Wold-Chamberlain altimeter setting and increase all DA 52 feet and all MDA 60 feet. Increase LNAV/VNAV all Cats and LNAV Cat D visibility 1/4 mile. VDP NA with Minneapolis-St Paul Intl/Wold-Chamberlain altimeter setting.

**MISSED APPROACH:**  
Climb to 3600 direct ZARPI and hold.

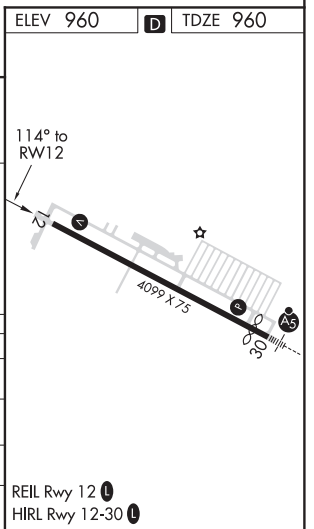
AWOS-3 <b>118.0</b>	MINNEAPOLIS APP CON <b>134.7 284.7</b>	CLNC DEL <b>118.95</b>	UNICOM <b>123.0 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

4 NM Holding Pattern		VGSIs and RNAV glidepath not coincident (VGSIs Angle 3.25/TCH 37).		3600	ZARPI
				*LNAV only	
CATEGORY	A	B	C	D	
LPV DA		1210-1	250 (300-1)		
LNAV/VNAV DA		1457-1¾	497 (500-1¾)		
LNAV MDA	1380-1	420 (500-1)	1380-1¼	420 (500-1¼)	
CIRCLING	1500-1	540 (600-1)	1500-1½	1520-2	560 (600-2)



MINNEAPOLIS, MINNESOTA

AL-6652 (FAA)

16091

WAAS CH <b>99328</b> <b>W30A</b>	APP CRS <b>295°</b>	Rwy Idg TDZE <b>958</b> Apt Elev <b>960</b>	<b>3707</b> <b>958</b> <b>960</b>
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# RNAV (GPS) RWY 30

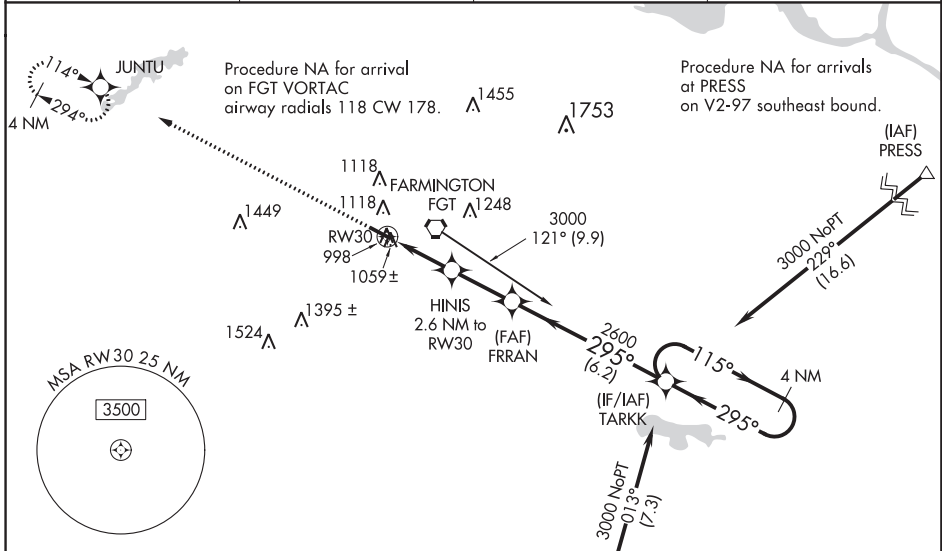
AIRLAKE (LVN)

**⚠** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Baro-VNAV NA when using Minneapolis-St Paul Intl/Wold-Chamberlain altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 37°C (98°F). When local altimeter setting not received, use Minneapolis-St Paul Intl/Wold-Chamberlain altimeter setting and increase all DA 52 feet and all MDA 60 feet. For inoperative MALSR, increase LNAV/VNAV and LNAV visibility to 1 all Cats. For inoperative MALSR when using Minneapolis-St Paul Intl/Wold-Chamberlain altimeter setting, increase LNAV/VNAV visibility to 1½, and LNAV Cat A/B to 1. Inoperative table does not apply to LPV. VDP NA with Minneapolis-St Paul Intl/Wold-Chamberlain altimeter setting.

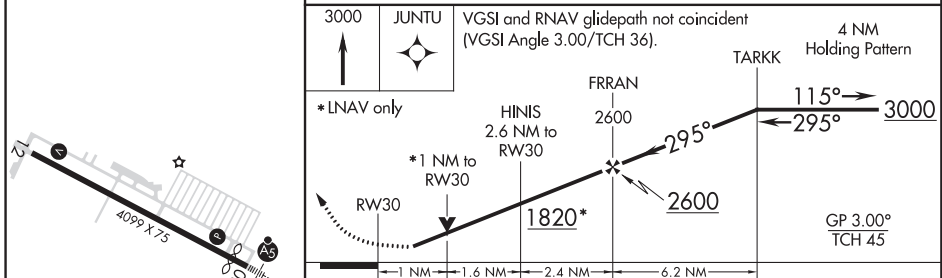


MISSED APPROACH:  
Climb to 3000 direct  
JUNTU and hold.

AWOS-3 <b>118.0</b>	MINNEAPOLIS APP CON <b>134.7 284.7</b>	CLNC DEL <b>118.95</b>	UNICOM <b>123.0 (CTAF)</b>
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ELEV 960	<b>D</b>	TDZE 958
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CATEGORY	A	B	C	D
LPV DA		1158-¾	200 (200-¾)	
LNAV/VNAV DA		1246-¾	288 (300-¾)	
LNAV MDA		1320-¾	362 (400-¾)	
CIRCLING	1500-1	540 (600-1)	1500-1½ 540 (600-1½)	1520-2 560 (600-2)

MINNEAPOLIS, MINNESOTA  
Orig-A 28MAY15

44°38'N-93°14'W

# RNAV (GPS) RWY 30

AIRLAKE (LVN)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VORTAC FGT <b>115.7</b> Chan <b>104</b>	APP CRS <b>085°</b>	Rwy Idg <b>4099</b> TDZE <b>960</b> Apt Elev <b>960</b>
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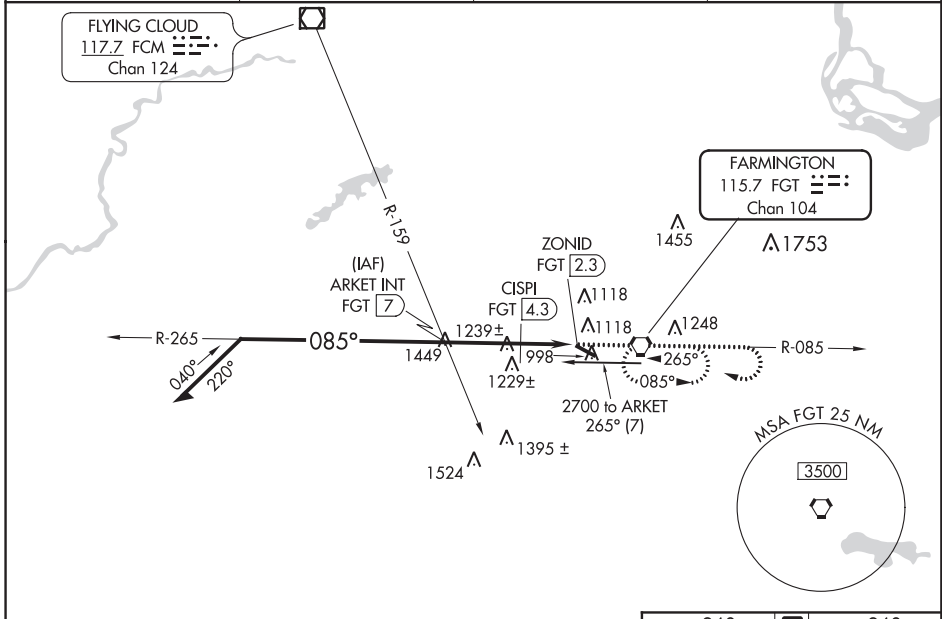
# VOR RWY 12

AIRLAKE (LVN)

**⚠** When VGSI inoperative, straight-in/Circling Rwy 12 procedure NA at night. Visibility reduction by helicopters NA. When local altimeter setting not received, use Minneapolis-St Paul Intl/ Wold-Chamberlain altimeter setting and increase all MDA 60 feet, increase S-12 and Circling Cat B, C, and D visibility ¼ mile.

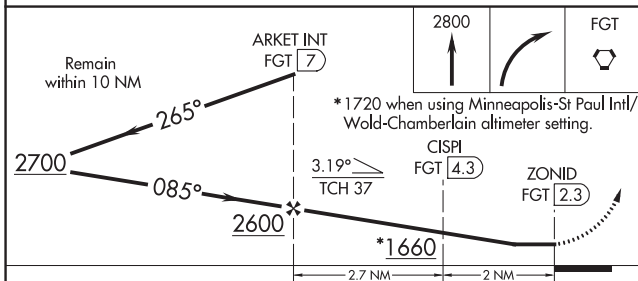
MISSED APPROACH: Climb to 2800 then right turn direct FGT VORTAC and hold.

AWOS-3 <b>118.0</b>	MINNEAPOLIS APP CON <b>134.7 284.7</b>	CLNC DEL <b>118.95</b>	UNICOM <b>123.0 (CTAF)</b> <b>⓪</b>
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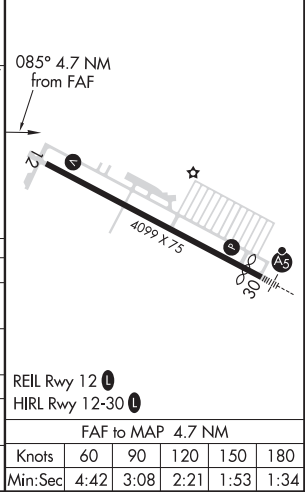
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 960	<b>D</b> TDZE 960
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CATEGORY	A	B	C	D
S-12	1660-1	700 (700-1)	1660-2 700 (700-2)	1660-2¼ 700 (700-2¼)
CIRCLING	1660-1	700 (700-1)	1660-2 700 (700-2)	1660-2¼ 700 (700-2¼)
CISPI FIX MINIMUMS				
S-12	1480-1	520 (600-1)	1480-1½ 520 (600-1½)	1480-1¾ 520 (600-1¾)
CIRCLING	1500-1	540 (600-1)	1500-1½ 540 (600-1½)	1520-2 560 (600-2)



REIL Rwy 12 <b>⓪</b>				
HIRL Rwy 12-30 <b>⓪</b>				
FAF to MAP 4.7 NM				
Knots	60	90	120	150
Min:Sec	4:42	3:08	2:21	1:53
			1:34	

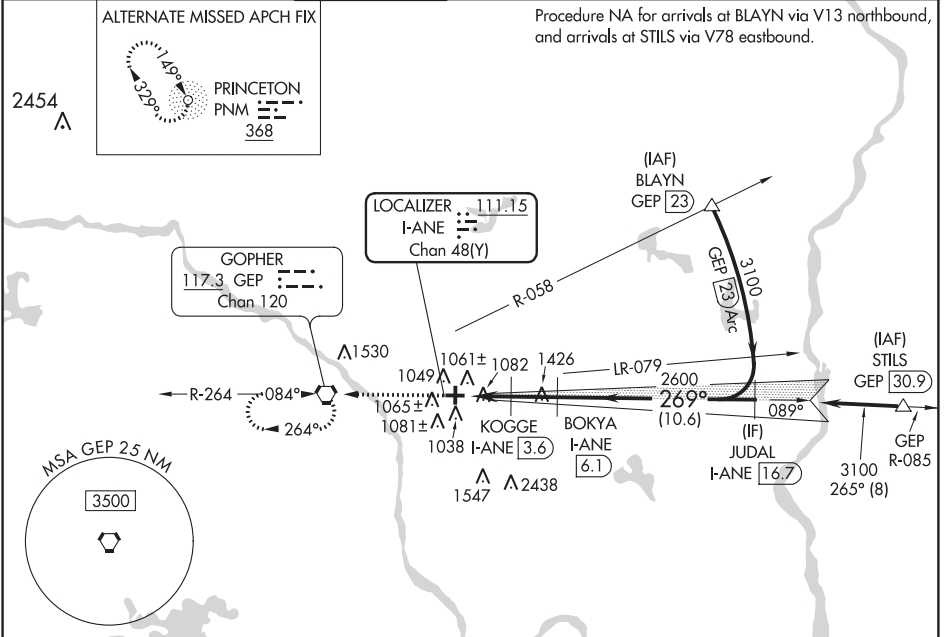
LOC/DME I-ANE <b>111.15</b> Chan 48 (Y)	APP CRS <b>269°</b>	Rwy Idg 5000	TDZE 910	Apt Elev 912
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# ILS or LOC/DME RWY 27

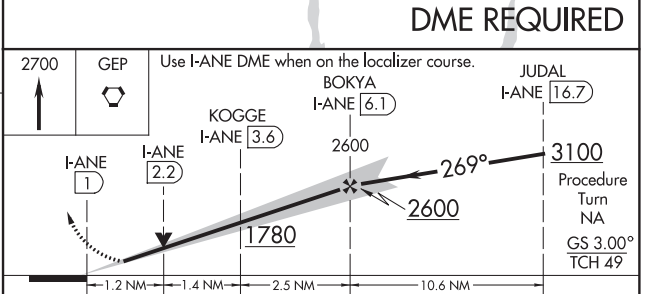
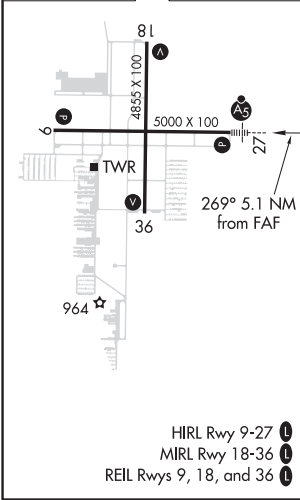
ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (A.N.E.)

<p><b>⚠</b> If local altimeter setting not received, use Crystal altimeter setting and increase all DAs/MDAs 40 feet. VDP NA when using Crystal altimeter setting.</p>	<p>MALSR </p>	<p>MISSED APPROACH: Climb to 2700 direct GEP VORTAC and hold.</p>
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ATIS <b>120.625</b>	MINNEAPOLIS APP CON <b>126.5</b>	ANOKA TOWER* <b>132.4</b> (CTAF) <b>0</b>	GND CON <b>121.85</b>	CLNC DEL <b>121.3</b>	MINNEAPOLIS CLNC DEL <b>121.85</b> (When tower closed)	UNICOM <b>122.95</b>
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ELEV 912	TDZE 910
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CATEGORY	A	B	C	D
S-ILS 27	1110-1/2 200 (200-1/2)			
S-LOC 27	1340-1/2 430 (500-1/2)	1340-3/4 430 (500-3/4)	1400-1 430 (500-1)	1480-2 568 (600-2)
CIRCLING	1400-1 488 (500-1)	1400-1 488 (500-1)	1480-2 568 (600-2)	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>82312</b> <b>W09A</b>	APP CRS <b>089°</b>	Rwy Idg TDZE Apt Elev	<b>5000</b> <b>910</b> <b>912</b>
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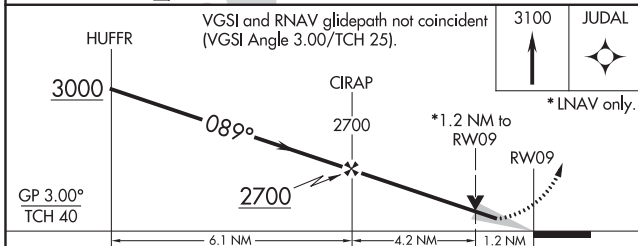
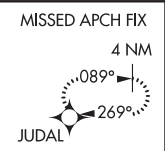
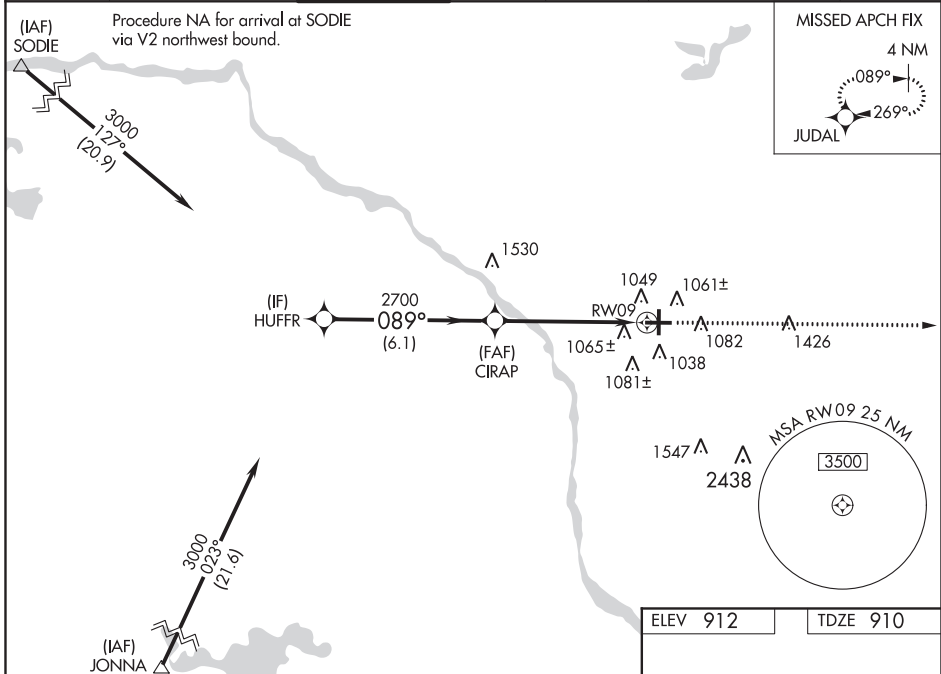
# RNAV (GPS) RWY 9

ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (A.N.E.)

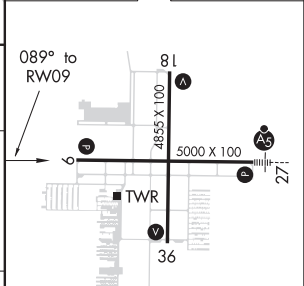
**▼** Baro-VNAV NA when using Crystal altimeter setting. For uncompensated Baro-VNAV systems,  
**▲** LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Crystal altimeter setting and increase all DA 25 feet, all MDA 40 feet, increase LNAV/VNAV all Cats visibility ¼ mile, LNAV Cat D ¼ mile.

MISSED APPROACH: Climb to 3100 direct JUDAL and hold.

ATIS <b>120.625</b>	MINNEAPOLIS APP CON <b>126.5</b>	ANOKA TOWER* <b>132.4</b> (CTAF) <b>0</b>	GND CON <b>121.85</b>	CLNC DEL <b>121.3</b>	MINNEAPOLIS CLNC DEL <b>121.85</b> (When tower closed)	UNICOM <b>122.95</b>
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ELEV 912	TDZE 910
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CATEGORY	A	B	C	D
LPV DA		1225-1¼	315 (400-1¼)	
LNAV/VNAV DA		1352-1½	442 (500-1½)	
LNAV MDA	1320-1	410 (500-1)	1320-1¼	410 (500-1¼)
CIRCLING	1400-1	488 (500-1)	1400-1½	1480-2
			488 (500-1½)	568 (600-2)

HIRL Rwy 9-27 **1**

MIRL Rwy 18-36 **1**

REIL Rwy 9, 18 and 36 **1**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

APP CRS	Rwy Idg	<b>4855</b>
<b>179°</b>	TDZE	<b>912</b>
	Apt Elev	<b>912</b>

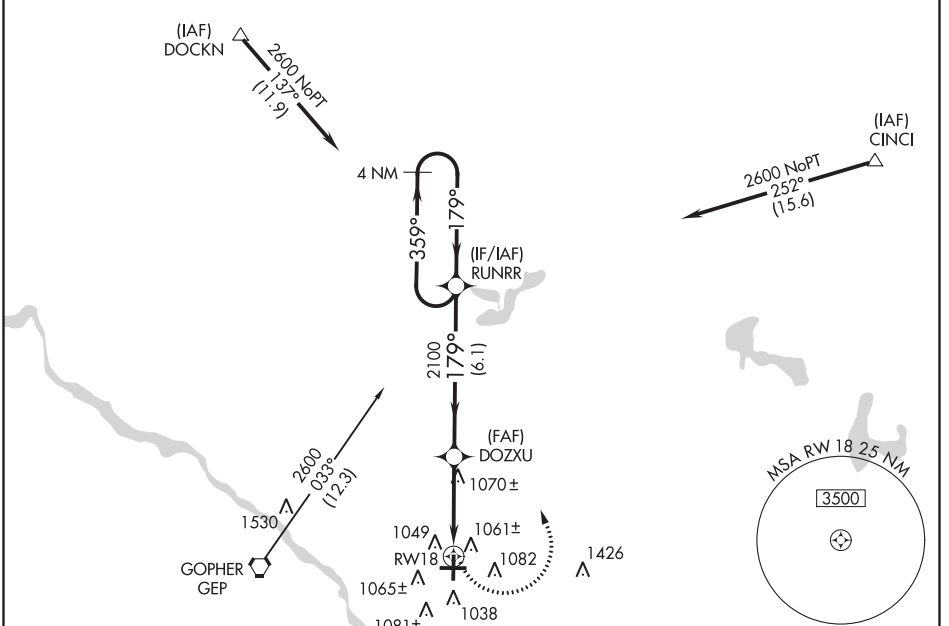
# RNAV (GPS) RWY 18

ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (A.NE)

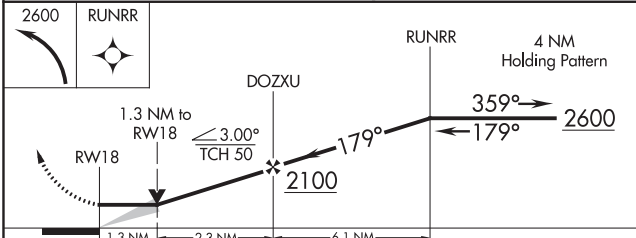
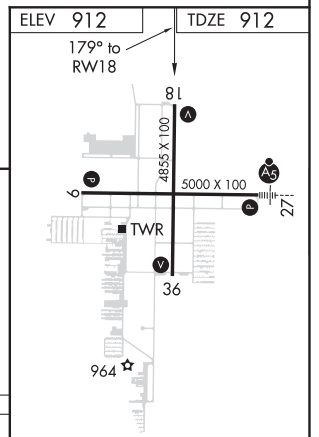
**⚠** DME/DME RNP-0.3 NA. When local altimeter setting not received, use Crystal altimeter setting and increase all MDA 40 feet, increase LNAV Cat C visibility ¼ mile.

**⚠** MISSED APPROACH: Climbing left turn to 2600 direct RUNRR and hold.

ATIS <b>120.625</b>	MINNEAPOLIS APP CON <b>126.5</b>	ANOKA TOWER* <b>132.4</b> (CTAF) <b>0</b>	GND CON <b>121.85</b>	CLNC DEL <b>121.3</b>	MINNEAPOLIS CLNC DEL <b>121.85</b> (When tower closed)	UNICOM <b>122.95</b>
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Procedure NA for arrivals at GEP VORTAC via airway radials 333 CW 085.



CATEGORY	A	B	C	D
LNAV MDA	1380-1	468 (500-1)	1380-1½ 468 (500-1¼)	1380-1½ 468 (500-1½)
CIRCLING	1400-1	488 (500-1)	1400-1½ 488 (500-1½)	1480-2 568 (600-2)

HIRL Rwy 9-27 **0**  
MIRL Rwy 18-36 **0**  
REIL Rws 9, 18 and 36 **0**

NC-1, 10 NOV 2016 to 05 JAN 2017


NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>78300</b>	APP CRS <b>269°</b>	Rwy Idg TDZE <b>910</b>	<b>5000</b>
<b>W27A</b>		Apt Elev <b>912</b>	

# RNAV (GPS) RWY 27

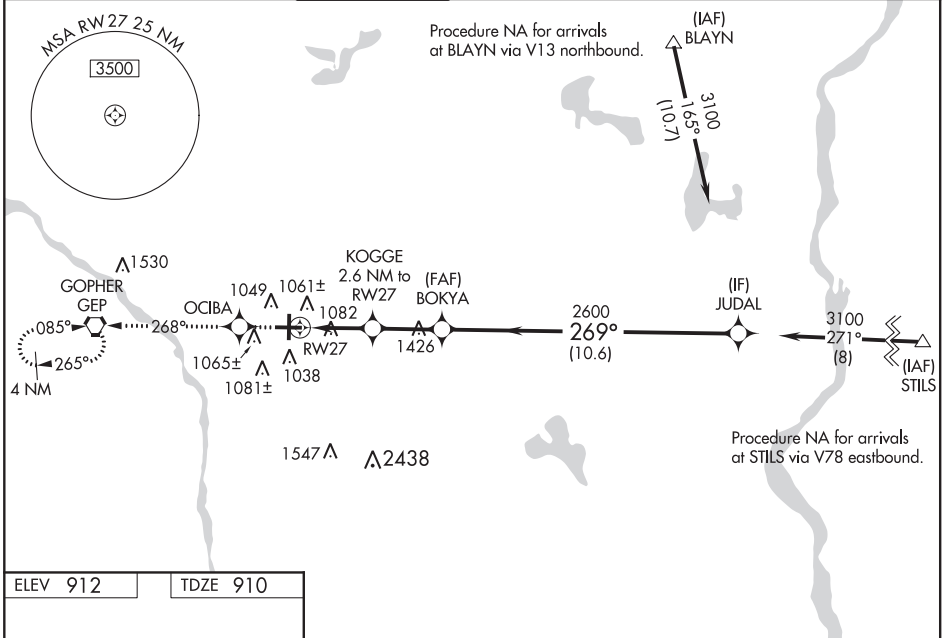
ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (A.N.E)

**▼** Baro-VNAV and VDP NA when using Crystal altimeter setting.  
**▲** When local altimeter setting not received, use Crystal altimeter setting and increase all DA/MDA 40 feet, increase LPV and LNAV/VNAV all visibilities 1/4 SM. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA.

MALSR  


MISSED APPROACH: Climb to 2700 direct OCIBA and via 268° track to GEP VORTAC and hold.

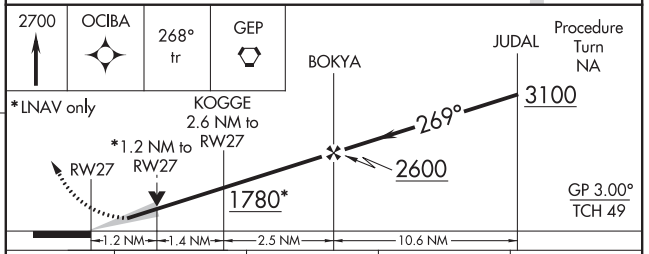
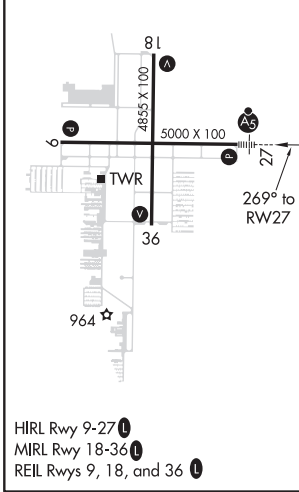
ATIS <b>120.625</b>	MINNEAPOLIS APP CON <b>126.5</b>	ANOKA TOWER* <b>132.4</b> (CTAF) 	GND CON <b>121.85</b>	CLNC DEL <b>121.3</b>	MINNEAPOLIS CLNC DEL <b>121.85</b> (When tower closed)	UNICOM <b>122.95</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 912	TDZE 910
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	A	B	C	D
LPV DA	1160-1/2 250 (300-1/2)			
LNAV/VNAV DA	1371-1 461 (500-1)			
LNAV MDA	1340-1/2 430 (500-1/2)	1340-3/4 430 (500-3/4)	1340-1 430 (500-1)	
CIRCLING	1400-1 488 (500-1)	1400-1 1/2 488 (500-1 1/2)	1480-2 568 (600-2)	

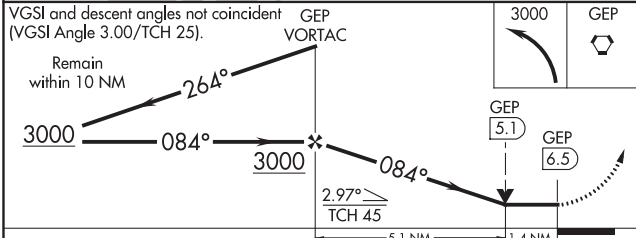
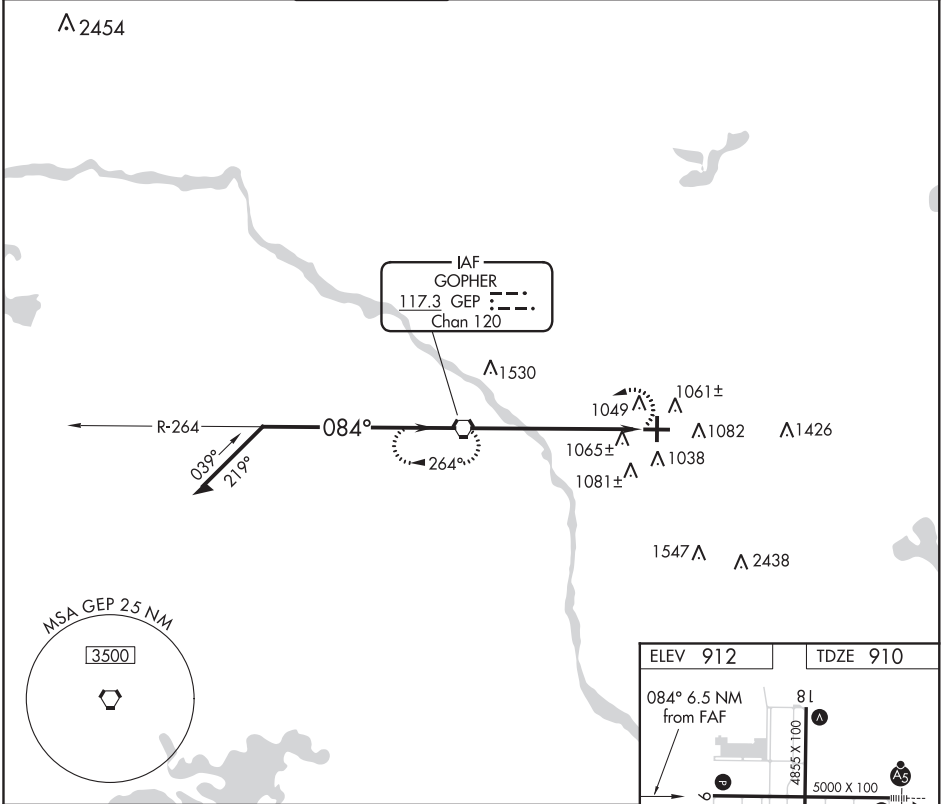
VORTAC GEP <b>117.3</b> Chan <b>120</b>	APP CRS <b>084°</b>	Rwy Idg TDZE Apt Elev	<b>5000</b> <b>910</b> <b>912</b>
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**VOR RWY 9**  
ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (A.N.E)

**⚠** When local altimeter setting not received, use Crystal altimeter setting and increase all MDA 40 feet and S-9 Cat C visibility ¼ mile.

MISSED APPROACH: Climbing left turn to 3000 direct GEP VORTAC and hold.

ATIS <b>120.625</b>	MINNEAPOLIS APP CON <b>126.5</b>	ANOKA TOWER* <b>132.4</b> (CTAF) <b>0</b>	GND CON <b>121.85</b>	CLNC DEL <b>121.3</b>	MINNEAPOLIS CLNC DEL <b>121.85</b> (When tower closed)	UNICOM <b>122.95</b>
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ELEV 912	TDZE 910
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HIRL Rwy 9-27 **0**  
MIRL Rwy 18-36 **1**  
REIL Rws 9, 18 and 36 **0**

FAF to MAP 6.5 NM

Knots	60	90	120	150	180
Min:Sec	6:30	4:20	3:15	2:36	2:10

CATEGORY	A	B	C	D
S-9	1380-1 470 (500-1)		1380-1½ 470 (500-1½)	1380-1½ 470 (500-1½)
CIRCLING	1400-1 488 (500-1)		1400-1½ 488 (500-1½)	1480-2 568 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

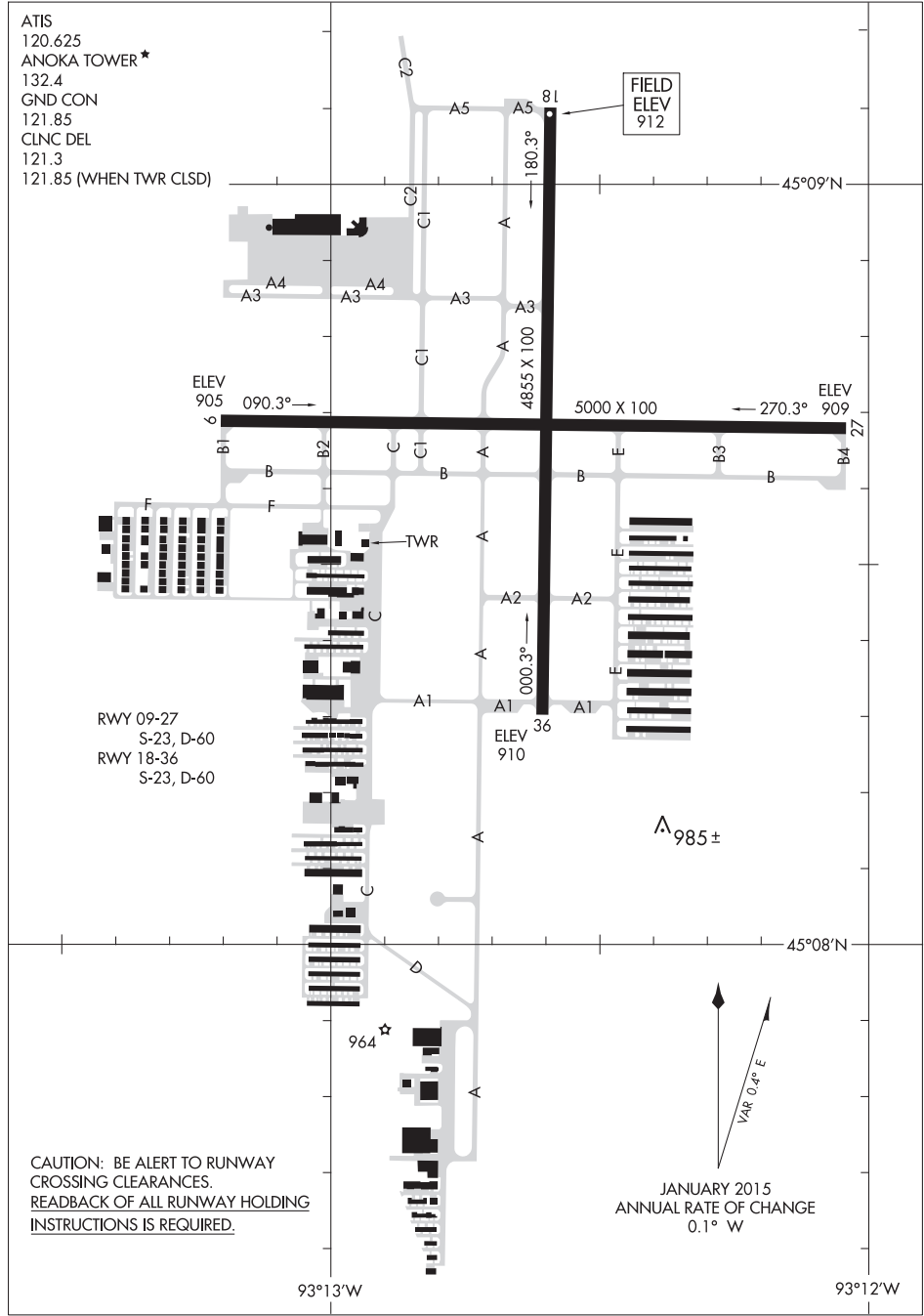
NC-1, 10 NOV 2016 to 05 JAN 2017

16203

# AIRPORT DIAGRAM

ANOKA COUNTY- BLAINE AIRPORT (JANES FIELD) (ANE)  
AL-5202 (FAA) MINNEAPOLIS, MINNESOTA

ATIS  
 120.625  
 ANOKA TOWER \*  
 132.4  
 GND CON  
 121.85  
 CLNC DEL  
 121.3  
 121.85 (WHEN TWR CLSD)



RWY 09-27  
 S-23, D-60  
 RWY 18-36  
 S-23, D-60

CAUTION: BE ALERT TO RUNWAY  
 CROSSING CLEARANCES.  
 READBACK OF ALL RUNWAY HOLDING  
 INSTRUCTIONS IS REQUIRED.

JANUARY 2015  
 ANNUAL RATE OF CHANGE  
 0.1° W

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

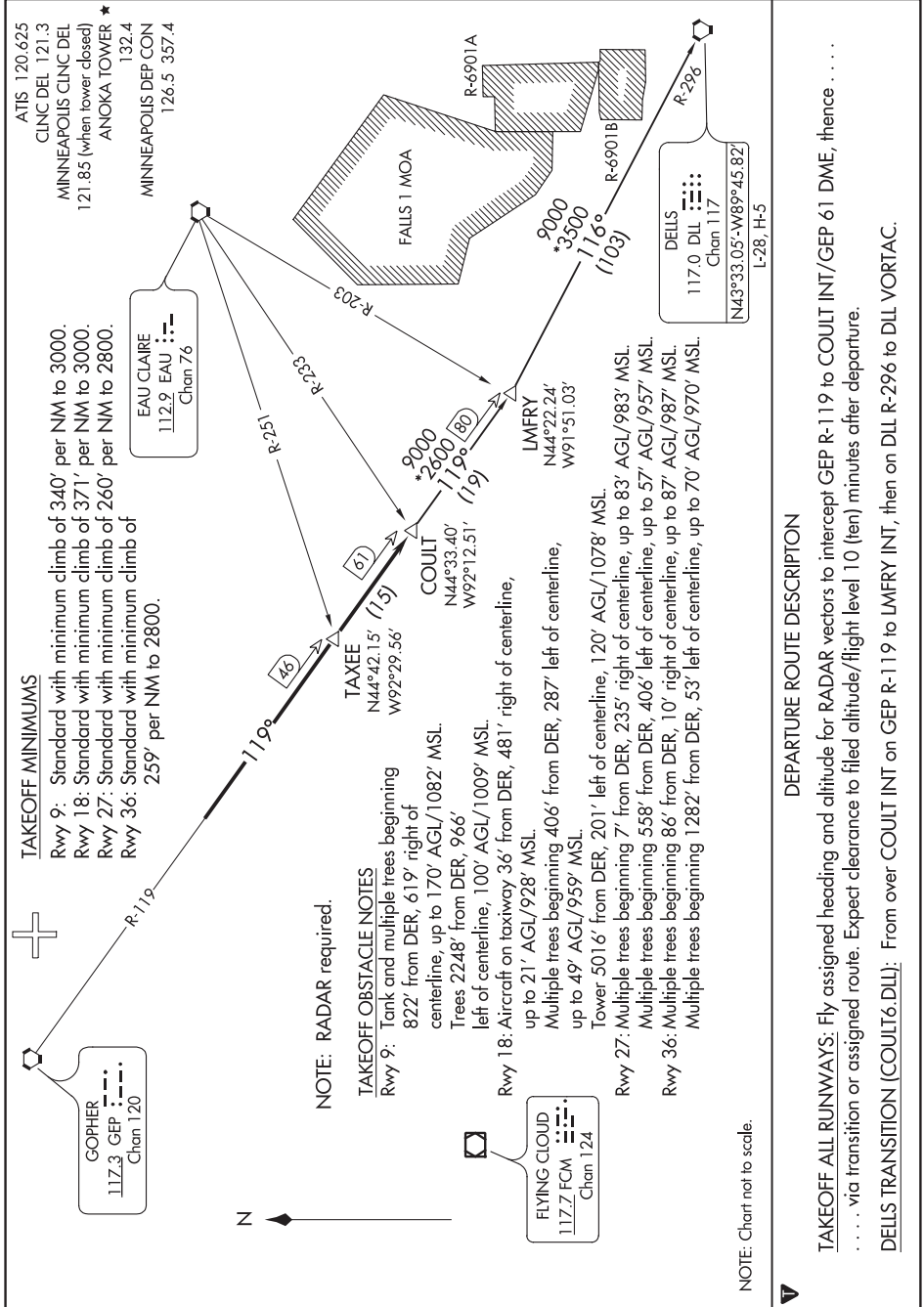
ANOKA COUNTY- BLAINE AIRPORT (JANES FIELD) (ANE)  
MINNEAPOLIS, MINNESOTA

16203

(COULT6.COULT) 16259  
**COULT SIX DEPARTURE**

ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (ANE)  
 SL-5202 (FAA) MINNEAPOLIS, MINNESOTA

21.01.2018 10:05:10



(COULT6.COULT) 06FEB14  
**COULT SIX DEPARTURE**

ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (ANE)  
 MINNEAPOLIS, MINNESOTA

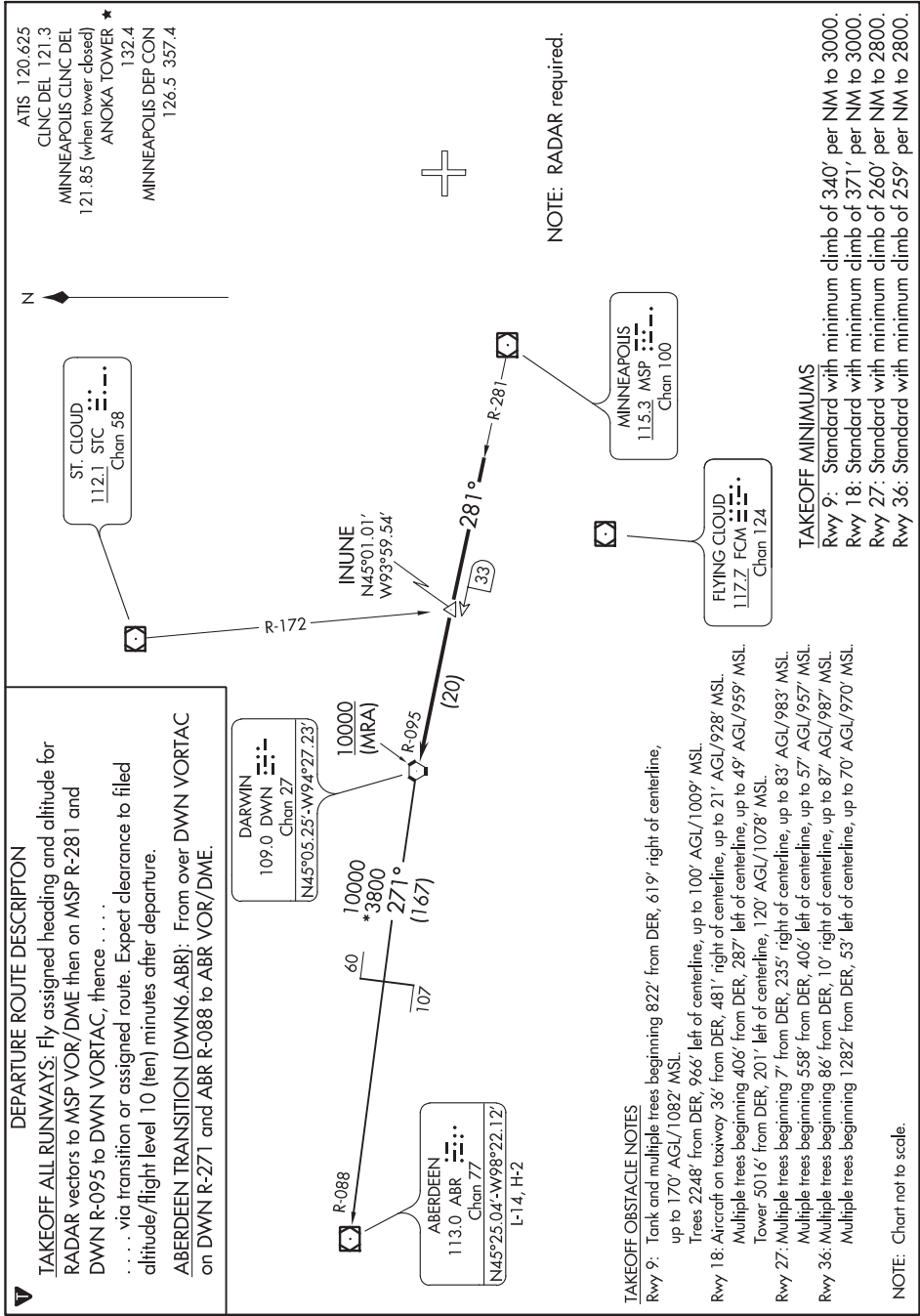
NC-1, 10 NOV 2016 to 05 JAN 2017

# DARWIN SIX DEPARTURE

SL-5202 (FAA)

MINNEAPOLIS, MINNESOTA

NC-1, 10 NOV 2016 to 05 JAN 2017



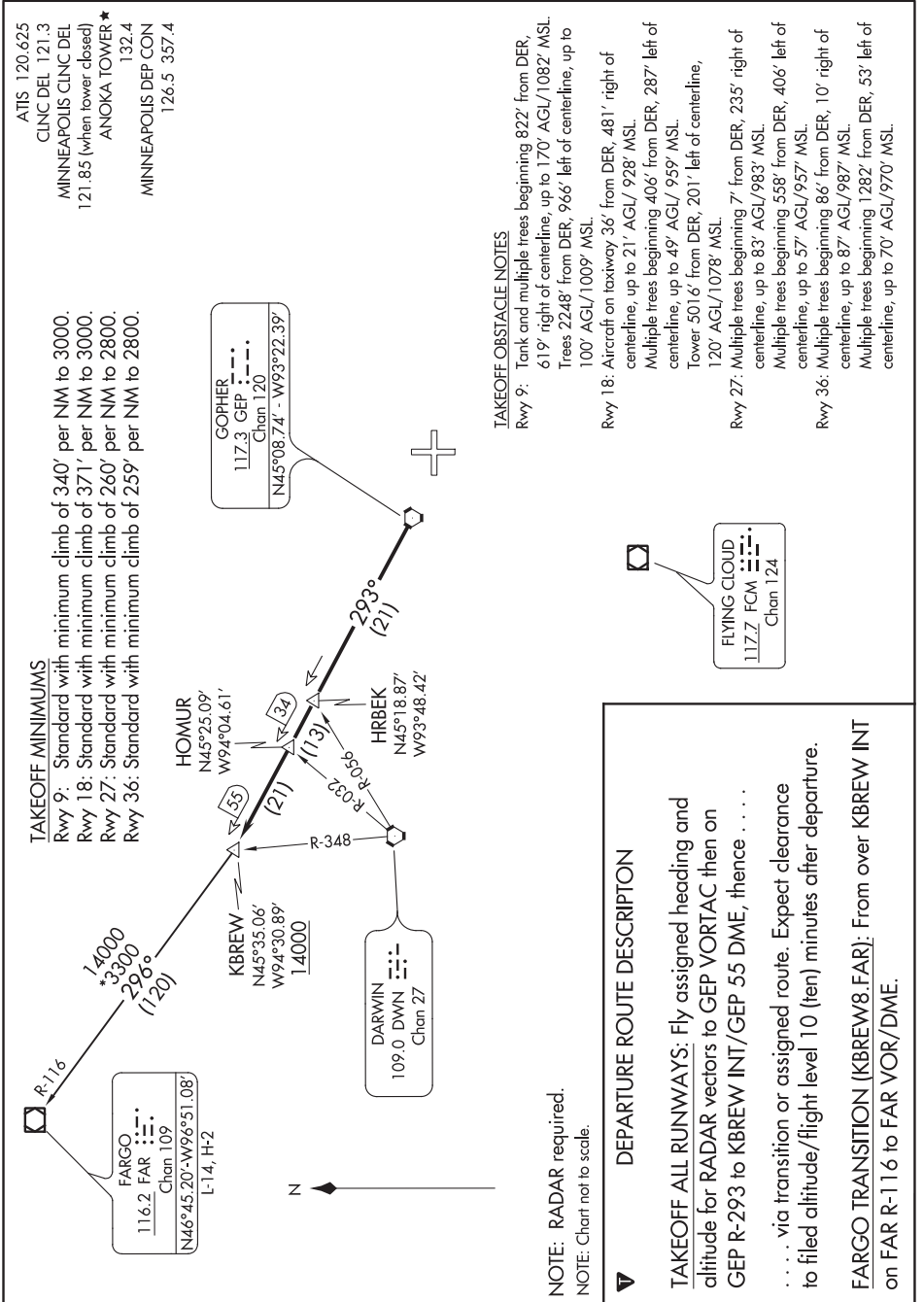
# DARWIN SIX DEPARTURE

NC-1, 10 NOV 2016 to 05 JAN 2017

# KBREW EIGHT DEPARTURE

ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (ANE)  
SI-5202 (FAA) MINNEAPOLIS, MINNESOTA

NC-1, 10 NOV 2016 to 05 JAN 2017



# KBREW EIGHT DEPARTURE

ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (ANE)  
MINNEAPOLIS, MINNESOTA

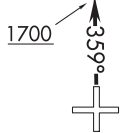
NC-1, 10 NOV 2016 to 05 JAN 2017



(ORSKY9.ORSKY) 16315  
**ORSKY NINE DEPARTURE**

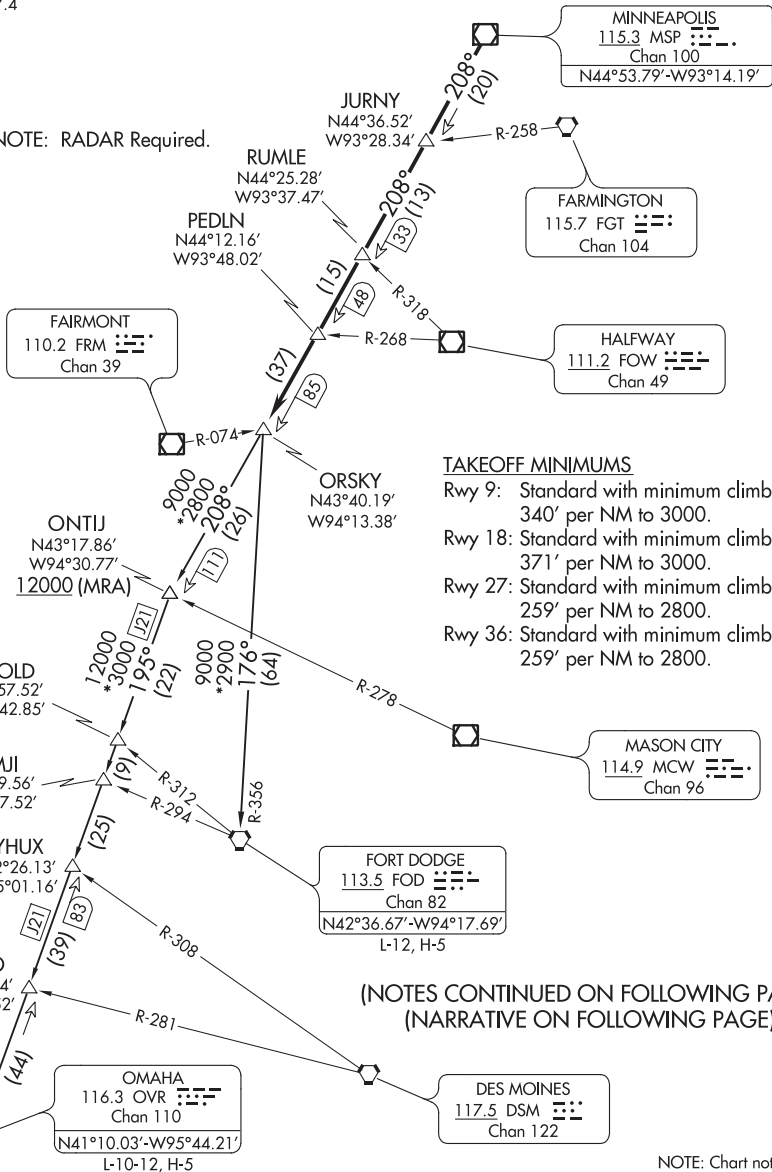
ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (ANE)  
 SL-5202 (FAA) MINNEAPOLIS, MINNESOTA

ATIS 120.625  
 CLNC DEL 121.3  
 MINNEAPOLIS CLNC DEL  
 121.85 (when tower closed)  
 ANOKA TOWER ★  
 132.4  
 MINNEAPOLIS DEP CON  
 126.5 357.4



**TOP ALTITUDE:  
 (JETS) 7000/(PROPS) 5000**

NOTE: RADAR Required.



(NOTES CONTINUED ON FOLLOWING PAGE)  
 (NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

(ORSKY9.ORSKY) 15SEP16  
**ORSKY NINE DEPARTURE**

ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (ANE)  
 MINNEAPOLIS, MINNESOTA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAYS 9, 18, 27: Fly assigned heading and altitude for RADAR vectors to MSP VOR/DME then on MSP R-208 to ORSKY INT/MSP 85 DME. Thence . . . .

TAKEOFF RUNWAY 36: Climb heading 359° to 1700 before proceeding southeast bound for RADAR vectors to MSP VOR/DME then on MSP R-208 to ORSKY INT/MSP 85 DME, thence. . . .

. . . .via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

FORT DODGE TRANSITION (ORSKY9.FOD): From over ORSKY INT on FOD R-356 to FOD VORTAC.

OMAHA TRANSITION (ORSKY9.OVR): From over ORSKY INT on MSP R-208 to ONTIJ INT, then on OVR R-015 to OVR VORTAC.

TAKEOFF OBSTACLE NOTES

Rwy 9: Tank and multiple trees beginning 822' from DER, 619' right of centerline, up to 170' AGL/1082' MSL.

Trees 2248' from DER, 966' left of centerline, up to 100' AGL/1009' MSL.

Rwy 18: Aircraft on taxiway 36' from DER, 481' right of centerline, up to 21' AGL/928' MSL.

Multiple trees beginning 406' from DER, 287' left of centerline, up to 49' AGL/959' MSL.

Tower 5016' from DER, 201' left of centerline, 120' AGL/1078' MSL.

Rwy 27: Multiple trees 7' from DER, 232' right of centerline, up to 83' AGL/983' MSL.

Multiple trees beginning 558' from DER, 406' left of centerline, up to 57' AGL/957' MSL.

Rwy 36: Multiple trees beginning 86' from DER, 10' right of centerline, up to 87' AGL/987' MSL.

Multiple trees beginning 1282' from DER, 53' left of centerline, up to 70' AGL/970' MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# ROCHESTER EIGHT DEPARTURE

SL-5202 (FAA)

MINNEAPOLIS, MINNESOTA

ATIS 120.625  
 CLNC DEL 121.3  
 MINNEAPOLIS CLNC DEL  
 121.85 (when tower closed)  
 ANOKA TOWER ★  
 132.4  
 MINNEAPOLIS DEP CON  
 126.5 357.4



### TAKEOFF OBSTACLE NOTES

- Rwy 9: Tank and multiple trees beginning 822' from DER, 619' right of centerline, up to 170' AGL/1082' MSL. Trees beginning 2248' from DER, 966' left of centerline, up to 100' AGL/1009' MSL.
- Rwy 18: Aircraft on taxiway 36' from DER, 481' right of centerline, up to 21' AGL/928' MSL. Multiple trees beginning 406' from DER, 287' left of centerline, up to 49' AGL/959' MSL. Tower 5016' from DER, 201' left of centerline, 120' AGL/1078' MSL.
- Rwy 27: Multiple trees beginning 7' from DER, 235' right of centerline, up to 83' AGL/983' MSL. Multiple trees beginning 558' from DER, 406' left of centerline, up to 57' AGL/957' MSL.
- Rwy 36: Multiple trees beginning 86' from DER, 10' right of centerline, up to 87' AGL/987' MSL. Multiple trees beginning 1282' from DER, 53' left of centerline, up to 70' AGL/970' MSL.

FLYING CLOUD  
 117.7 FCM  
 Chan 124

FARMINGTON  
 115.7 FGT  
 Chan 104  
 N44°37.86'-W93°10.92'

NOTE: RADAR required.

HALFWAY  
 111.2 FOW  
 Chan 49

### TAKEOFF MINIMUMS

- Rwy 9: Standard with minimum climb of 340' per NM to 3000.
- Rwy 18: Standard with minimum climb of 371' per NM to 3000.
- Rwy 27: Standard with minimum climb of 260' per NM to 2800.
- Rwy 36: Standard with minimum climb of 259' per NM to 2800.

### DEPARTURE ROUTE DESCRIPTION

**TAKEOFF ALL RUNWAYS:** Fly assigned heading and altitude for RADAR vectors to FGT VORTAC then via FGT R-147 and RST R-329 to RST VOR/DME. Cross FOBUG INT/FGT 14 DME at or above 4000, thence . . . .

. . . . via assigned transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

**WATERLOO TRANSITION (RST8.ALO):** From over RST VOR/DME on RST R-168 and ALO R-347 to ALO VOR/DME.

ROCHESTER  
 112.0 RST  
 Chan 57  
 N43°46.97'-W92°35.82'

WATERLOO  
 112.2 ALO  
 Chan 59  
 N42°33.39'-W92°23.94'  
 L-28, H-5

NOTE: Chart not to scale.

# ROCHESTER EIGHT DEPARTURE

MINNEAPOLIS, MINNESOTA

NC-1, 10 NOV 2016 to 05 JAN 2017

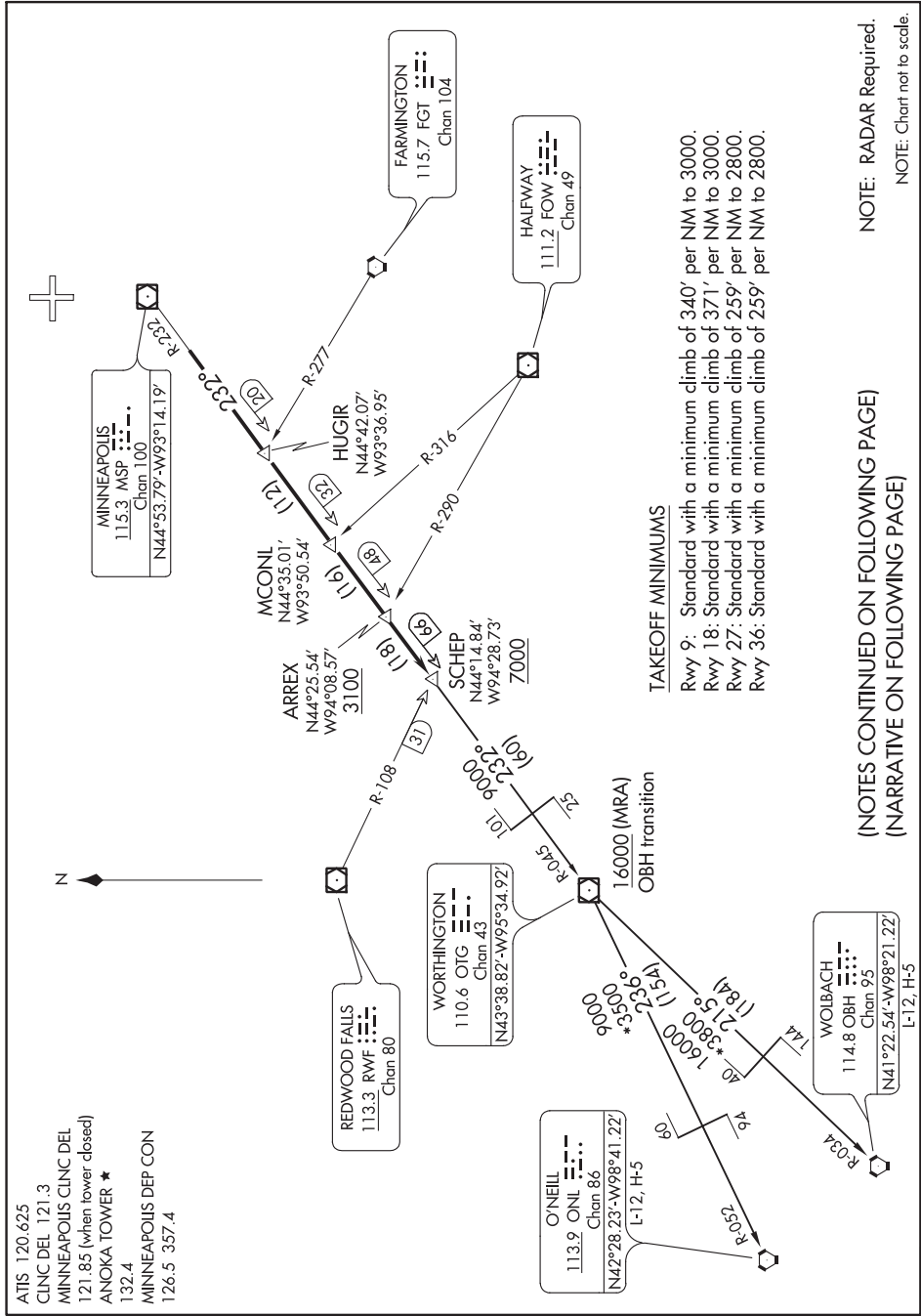
NC-1, 10 NOV 2016 to 05 JAN 2017

# SCHEP EIGHT DEPARTURE

SL-5202 (FAA)

MINNEAPOLIS, MINNESOTA

NC-1, 10 NOV 2016 to 05 JAN 2017



(NOTES CONTINUED ON FOLLOWING PAGE)  
(NARRATIVE ON FOLLOWING PAGE)

NC-1, 10 NOV 2016 to 05 JAN 2017

# SCHEP EIGHT DEPARTURE

(SCHEP8.SCHEP) 06FEB14

MINNEAPOLIS, MINNESOTA

ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (ANE)

# SCHEP EIGHT DEPARTURE



## DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Fly assigned heading and altitude for RADAR vectors to MSP VOR/DME then via MSP R-232 to SCHEP INT/MSP 66 DME, thence . . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

O'NEILL TRANSITION SCHEP8.ONL): From over SCHEP INT on MSP R-232 and OTG R-045 to OTG VOR/DME, then on OTG R-236 and ONL R-052 to ONL VORTAC.

WOLBACH TRANSITION SCHEP8.OBH): From over SCHEP INT on MSP R-232 and OTG R-045 to OTG VOR/DME, then on OTG R-215 and OBH R-034 to OBH VORTAC.

### TAKEOFF OBSTACLE NOTES

- Rwy 9: Tank and multiple trees beginning 822' from DER, 619' right of centerline, up to 170' AGL/1082' MSL.  
Trees 2248' from DER, 966' left of centerline, 100' AGL/1009' MSL.
- Rwy 18: Aircraft on taxiway 36' from DER, 481' right of centerline, up to 21' AGL/928' MSL.  
Multiple trees beginning 406' from DER, 287' left of centerline, up to 49' AGL/959' MSL.  
Tower 5016' from DER, 201' left of centerline, 120' AGL/1078' MSL.
- Rwy 27: Multiple trees beginning 7' from DER, 235' right of centerline, up to 83' AGL/983' MSL.  
Multiple trees beginning 558' from DER, 406' left of centerline, up to 57' AGL/957' MSL.
- Rwy 36: Multiple trees beginning 86' from DER, 10' right of centerline, up to 87' AGL/987' MSL.  
Multiple trees beginning 1282' from DER, 53' left of centerline, up to 70' AGL/970' MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# SCHEP EIGHT DEPARTURE

# WLSTN SIX DEPARTURE

ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (ANE)

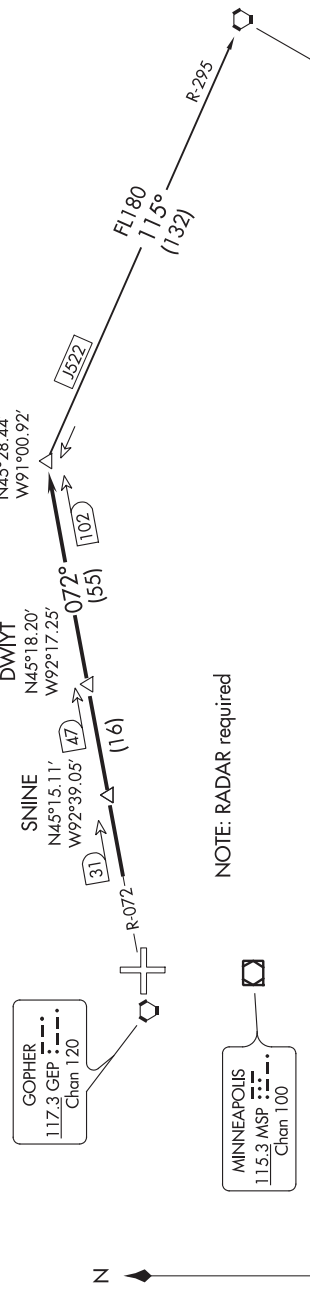
SL-5202 (FAA)

MINNEAPOLIS, MINNESOTA

NC-1, 10 NOV 2016 to 05 JAN 2017

ATIS 120.625  
 CLNC DEL 121.3  
 MINNEAPOLIS CLNC DEL  
 121.85 (when tower closed)  
 ANOKA TOWER  
 132.4  
 MINNEAPOLIS DEP CON  
 126.5 357.4

**TAKEOFF MINIMUMS**  
 Rwy 9: Standard with minimum climb of 340' per NM to 3000.  
 Rwy 18: Standard with minimum climb of 371' per NM to 3000.  
 Rwy 27: Standard with minimum climb of 259' per NM to 2800.  
 Rwy 36: Standard with minimum climb of 259' per NM to 2800.



NOTE: RADAR required

### TAKEOFF OBSTACLE NOTES

- Rwy 9: Tank and multiple trees beginning 822' from DER, 619' right of centerline, up to 170' AGL/1082' MSL. Trees 2248' from DER, 966' left of centerline, 100' AGL/1009' MSL.
- Rwy 18: Aircraft on taxiway 36' from DER, 481' right of centerline, up to 21' AGL/928' MSL. Multiple trees beginning 406' from DER, 287' left of centerline, up to 49' AGL/959' MSL. Tower 5016' from DER, 201' left of centerline, 120' AGL/1078' MSL.
- Rwy 27: Multiple trees beginning 7' from DER, 235' right of centerline, up to 83' AGL/983' MSL. Multiple trees beginning 558' from DER, 406' left of centerline, up to 57' AGL/957' MSL.
- Rwy 36: Multiple trees beginning 86' from DER, 10' right of centerline, up to 87' AGL/987' MSL. Multiple trees beginning 1282' from DER, 53' left of centerline, up to 70' AGL/970' MSL.

GOPHER  
 117.3 GEP  
 Chan 120

MINNEAPOLIS  
 115.3 MSP  
 Chan 100

GREEN BAY  
 115.5 GRB  
 Chan 102  
 N44°33.31'-W88°11.69'  
 L-31, H-2

### DEPARTURE ROUTE DESCRIPTION

**TAKEOFF ALL RUNWAYS:** Fly assigned heading and altitude for RADAR vectors to GEP R-072 to WLSTN/GEP 102 DME. Thence . . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

**GREEN BAY TRANSITION (WLSTN6.GRB):** From over WLSTN INT on GRB R-295 to GRB VORTAC.

# WLSTN SIX DEPARTURE

MINNEAPOLIS, MINNESOTA

ANOKA COUNTY-BLAINE AIRPORT (JANES FIELD) (ANE)

06FEB14

NC-1, 10 NOV 2016 to 05 JAN 2017

# ZMBRO SIX DEPARTURE

NC-1, 10 NOV 2016 to 05 JAN 2017

### TAKEOFF OBSTACLE NOTES

- Rwy 9: Tank and multiple trees beginning 822' from DER, 619' right of centerline, up to 170' AGL/1082' MSL. Trees 2248' from DER, 966' left of centerline, 100' AGL/1009' MSL.
- Rwy 18: Aircraft on taxiway 36' from DER, 481' right of centerline, up to 21' AGL/928' MSL. Multiple trees beginning 406' from DER, 287' left of centerline, up to 49' AGL/959' MSL. Tower 5016' from DER, 201' left of centerline, 120' AGL/1078' MSL.
- Rwy 27: Multiple trees beginning 7' from DER, 235' right of centerline, up to 83' AGL/983' MSL. Multiple trees beginning 558' from DER, 406' left of centerline, up to 57' AGL/957' MSL.
- Rwy 36: Multiple trees beginning 86' from DER, 10' right of centerline, up to 87' AGL/987' MSL. Multiple trees beginning 1282' from DER, 53' left of centerline, up to 70' AGL/970' MSL.

### TAKEOFF MINIMUMS

- Rwy 9: Standard with a minimum climb of 340' per NM to 3000.
- Rwy 18: Standard with a minimum climb of 371' per NM to 3000.
- Rwy 27: Standard with a minimum climb of 259' per NM to 2800.
- Rwy 36: Standard with a minimum climb of 259' per NM to 2800.

### DEPARTURE ROUTE DESCRIPTION

**TAKEOFF ALL RUNWAYS:** Fly assigned heading and altitude for RADAR vectors to MSP VOR/DME then on MSP R-138 to JEDET INT/MSP 34 DME, at or above 4000; then on ODI R-301 to ZMBRO INT/ODI 50 DME, thence . . . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

**NODINE TRANSITION (ZMBRO.ODI):** From over ZMBRO INT on ODI R-301 to ODI VORTAC.

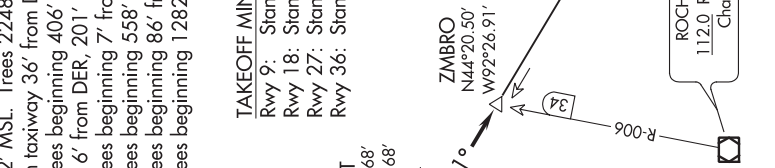


MINNEAPOLIS  
115.3 MSP  
Chan 100

HALFWAY  
111.2 FOW  
Chan 49

NODINE  
117.9 ODI  
Chan 126  
N43°54.74'-W91°28.05'  
L-28, H-2

ROCHESTER  
112.0 RST  
Chan 57



NOTE: RADAR required  
NOTE: Chart not to scale.

# ZMBRO SIX DEPARTURE

NC-1, 10 NOV 2016 to 05 JAN 2017

# RNAV (GPS) RWY 14L

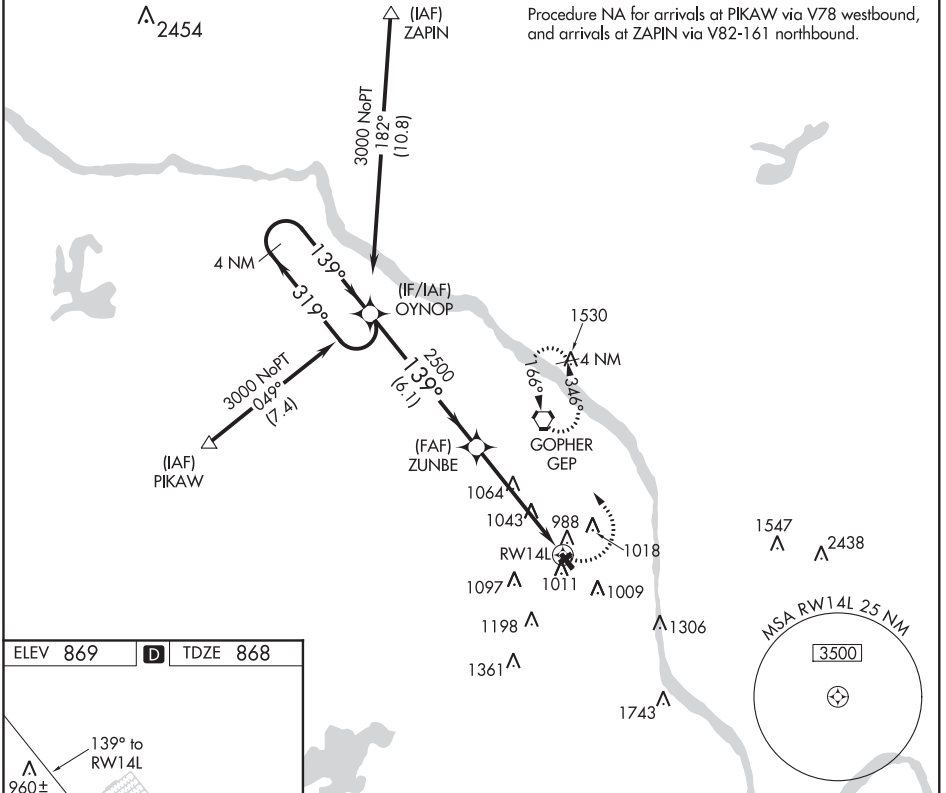
CRYSTAL (MIC)

APP CRS <b>139°</b>	Rwy Idg <b>3268</b>
	TDZE <b>868</b>
	Apt Elev <b>869</b>

**⚠** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.  
**⚠** When local altimeter setting not received, use Anoka County-Blaine Airport (Janes Field) altimeter setting and increase all MDA 80 feet, increase Circling Cat D visibility ¼ mile.

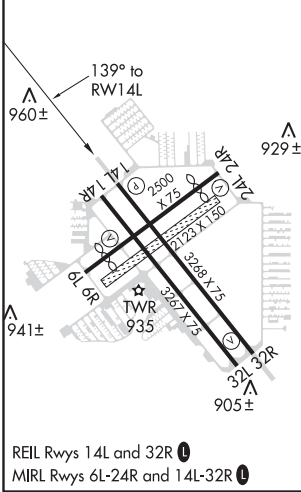
**MISSED APPROACH:** Climbing left turn to 2700 direct GEP VORTAC and hold.

ATIS <b>124.475</b>	MINNEAPOLIS APP CON <b>126.5</b>	CRYSTAL TOWER * <b>120.7 (CTAF) 0</b>	GND CON <b>121.6</b>	CLNC DEL <b>121.6</b>	MINNEAPOLIS CLNC DEL <b>121.6</b> (When tower closed)	UNICOM <b>122.95</b>
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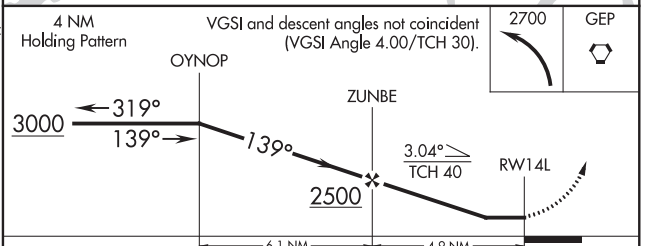


Procedure NA for arrivals at PIKAW via V78 westbound, and arrivals at ZAPIN via V82-161 northbound.

ELEV 869	<b>D</b>	TDZE 868
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REIL Rwy 14L and 32R  
 MIRL Rwy 6L-24R and 14L-32R



CATEGORY	A	B	C	D
LNAV MDA	1380-1	512 (600-1)	1380-1½ 512 (600-1½)	1380-1¾ 512 (600-1¾)
CIRCLING	1380-1	511 (600-1)	1380-1½ 511 (600-1½)	1460-2 591 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

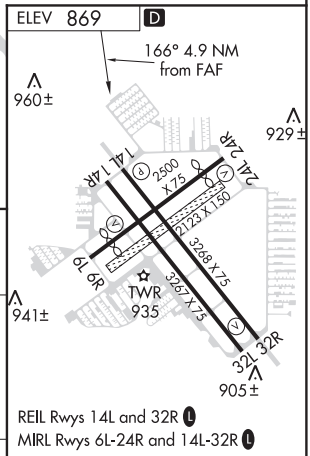
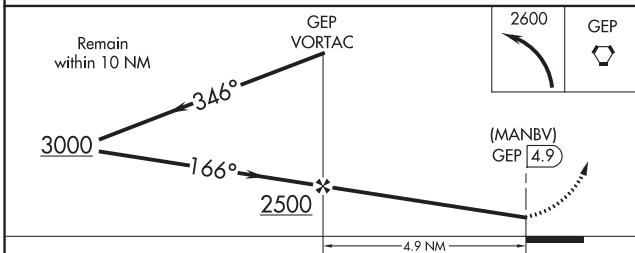
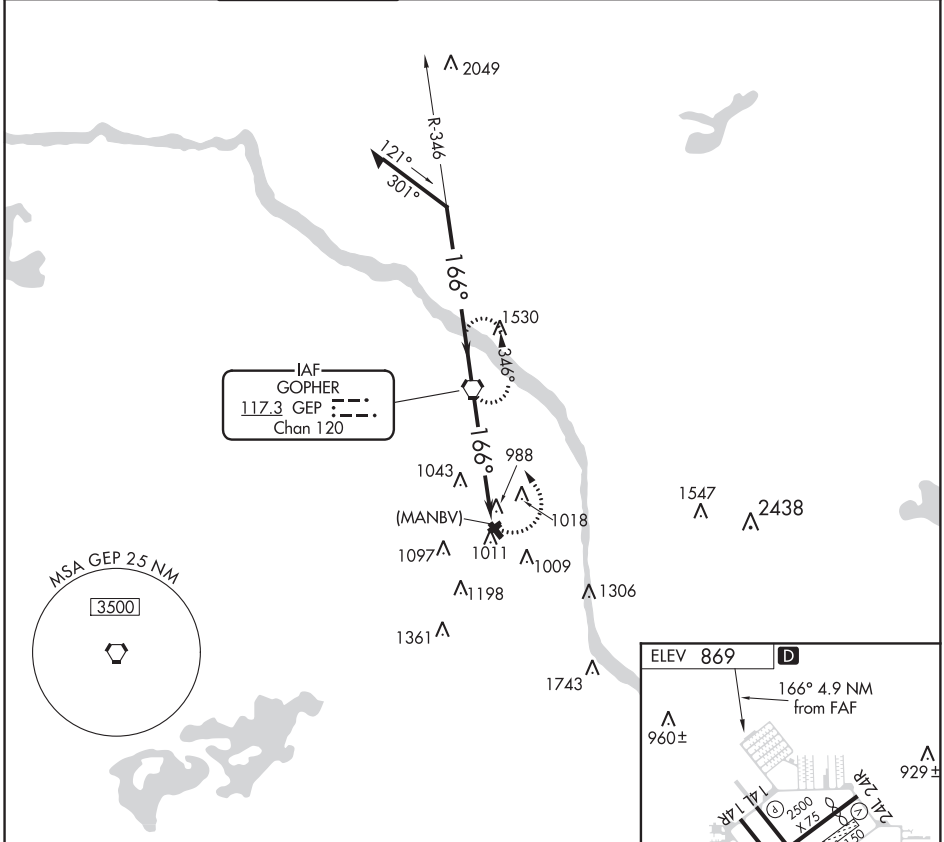


VORTAC GEP <b>117.3</b> Chan <b>120</b>	APP CRS <b>166°</b>	Rwy Idg TDZE Apt Elev	<b>N/A</b> <b>N/A</b> <b>869</b>
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# VOR or GPS-A CRYSTAL (MIC)

MISSED APPROACH: Climbing left turn to 2600 direct GEP VORTAC and hold.

ATIS <b>124.475</b>	MINNEAPOLIS APP CON <b>126.5</b>	CRYSTAL TOWER * <b>120.7 (CTAF)</b>	GND CON <b>121.6</b>	CLNC DEL <b>121.6</b>	MINNEAPOLIS CLNC DEL <b>121.6</b> (When tower closed)	UNICOM <b>122.95</b>
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CATEGORY	A	B	C	D	FAF to MAP 4.9 NM						
CIRCLING	1360-1 491 (500-1)			1460-2 591 (600-2)		Knots	60	90	120	150	180
						Min:Sec	4:54	3:16	2:27	1:58	1:38

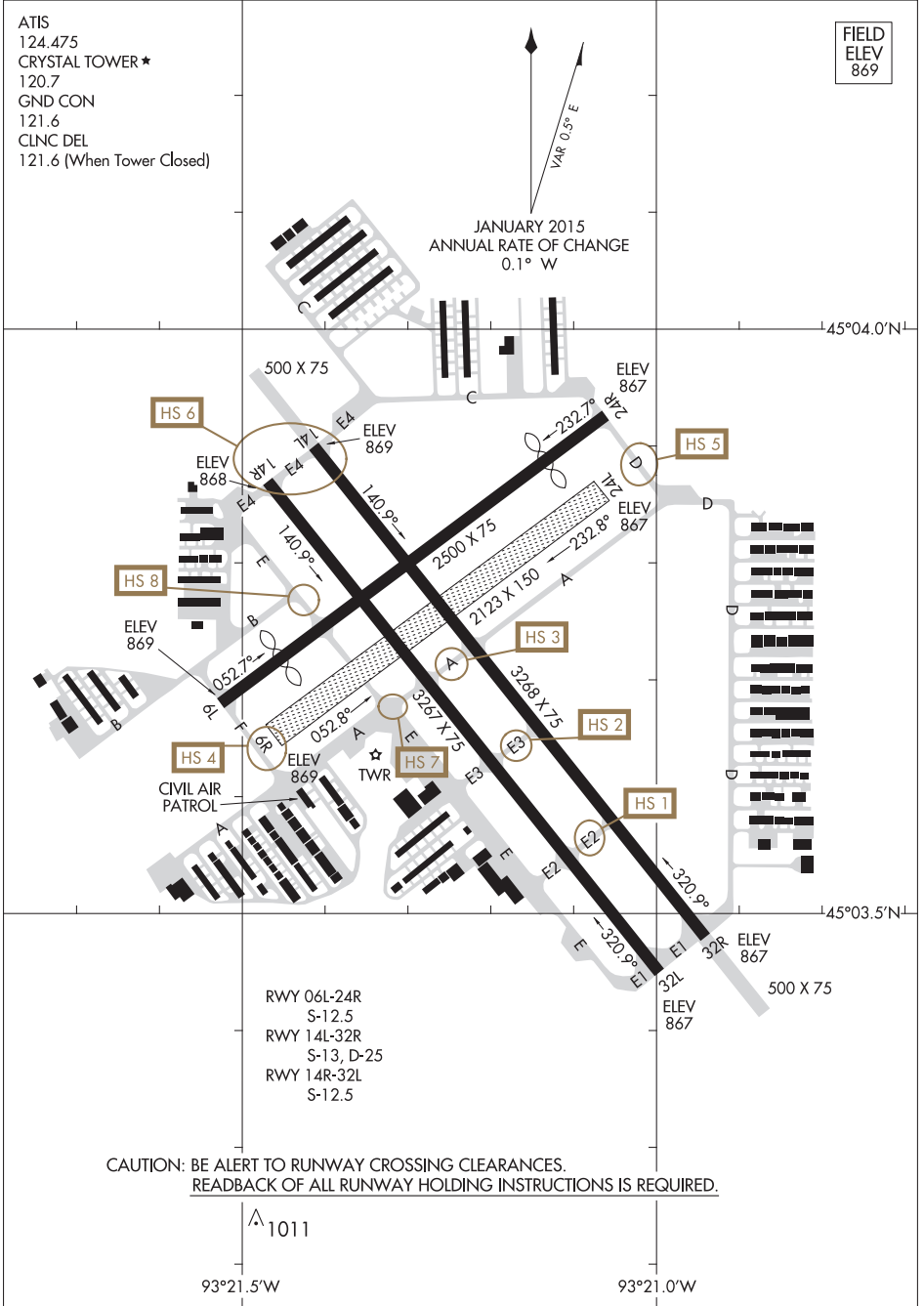
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

AL-5158 (FAA)

CRYSTAL (MIC)  
MINNEAPOLIS, MINNESOTA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

MINNEAPOLIS, MINNESOTA  
CRYSTAL (MIC)

LOC I-FCM <b>109.7</b>	APP CRS <b>098°</b>	Rwy Idg TDZE Apt Elev	<b>5000</b> <b>905</b> <b>906</b>
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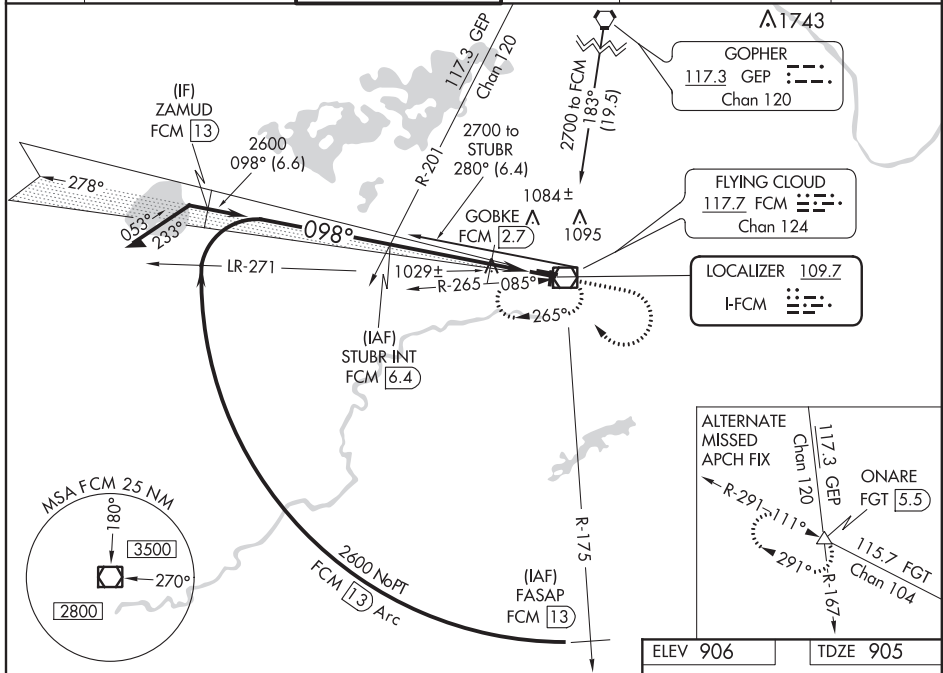
# ILS or LOC RWY 10R

## FLYING CLOUD (FCM)

When local altimeter setting not received, use Minneapolis-St Paul Intl/Wold Chamberlain altimeter setting and increase all DA 34 feet and all MDA 40 feet, increase S-LOC Cat C and D visibility ¼ mile, GOBKE fix minimums: Increase S-LOC Cat C visibility ¼ mile. Night Landing: Rwy 18/36 NA.

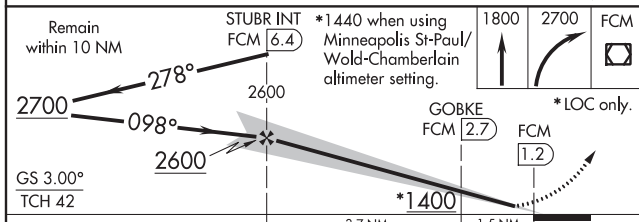
MALSR  
A5  
MISSED APPROACH: Climb to 1800 then climbing right turn to 2700 direct FCM VOR/DME and hold, continue climb-in-hold to 2700.

ATIS <b>124.9</b>	MINNEAPOLIS APP CON <b>134.7 357.4</b>	FLYING CLOUD TOWER * <b>119.15 (CTAF)</b>	GND CON <b>121.7</b>	MINNEAPOLIS CLNC DEL <b>121.7</b> (When tower closed)	UNICOM <b>122.95</b>
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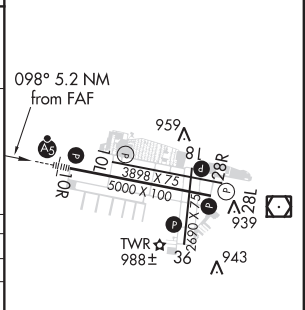
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 906	TDZE 905
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CATEGORY	A	B	C	D
S-ILS 10R	1105-½		200 (200-½)	
S-LOC 10R	1400-½	495 (500-½)	1400-¾ 495 (500-¾)	1400-1 495 (500-1)
<b>C</b> CIRCLING	1400-1 494 (500-1)	1440-1 534 (600-1)	1440-1½ 534 (600-1½)	1540-2 634 (700-2)
GOBKE FIX MINIMUMS				
S-LOC 10R	1280-½		375 (400-½)	
<b>C</b> CIRCLING	1320-1 414 (500-1)	1440-1 534 (600-1)	1440-1½ 534 (600-1½)	1540-2 634 (700-2)



MIRL Rwy 10L-28R	HIRL Rwy 10R-28L	MIRL Rwy 18-36	REIL Rws 18, 28L, and 36		
FAF to MAP 5.2 NM					
Knots	60	90	120	150	180
Min:Sec	5:12	3:28	2:36	2:05	1:44

WAAS CH <b>42510</b> <b>W10A</b>	APP CRS <b>098°</b>	Rwy Idg TDZE Apt Elev	<b>3898</b> <b>906</b> <b>906</b>
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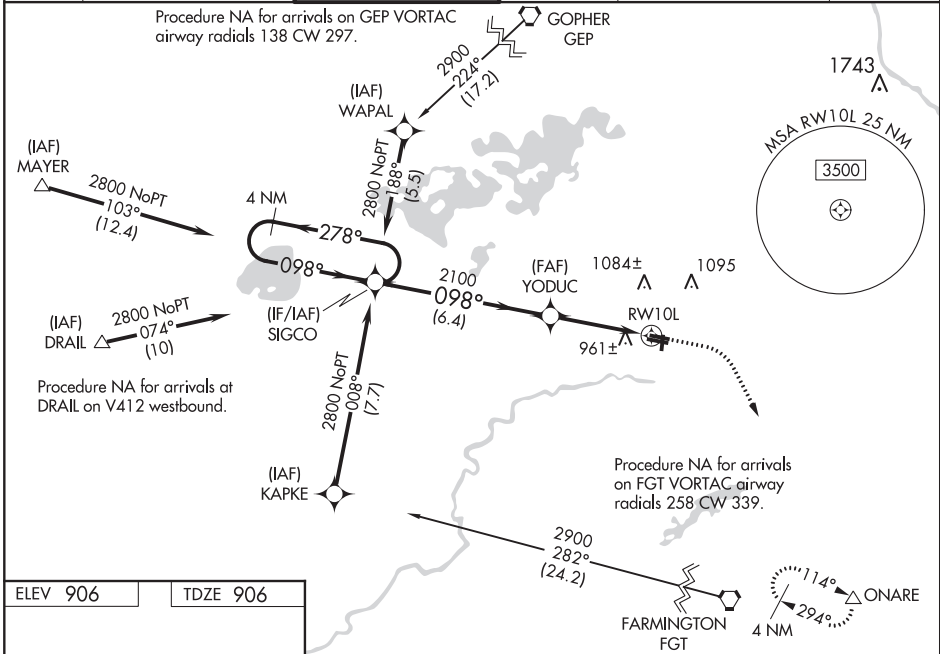
# RNAV (GPS) RWY 10L

FLYING CLOUD (FCM)

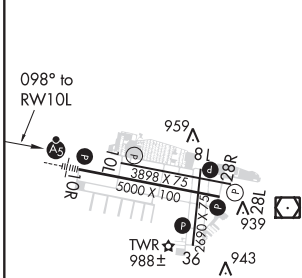
**⚠** Baro-VNAV NA when using Minneapolis-St Paul Intl/Wold Chamberlain altimeter setting. For uncompensated Baro-VNAV systems, LNAV-VNAV NA below -22°C (-7°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Night Landing: Rwy 18/36 NA. When local altimeter setting not received, use Minneapolis-St Paul Intl/Wold Chamberlain altimeter setting and increase all DA 34 feet and all MDA 40 feet; increase LNAV/VNAV visibility 1/8 mile all Cats, and Circling Cat D 1/4 mile.

**MISSED APPROACH:** Climb to 1400 then climbing right turn to 2900 direct ONARE and hold.

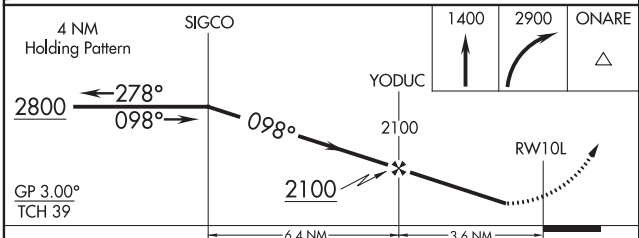
ATIS <b>124.9</b>	MINNEAPOLIS APP CON <b>134.7 357.4</b>	FLYING CLOUD TOWER ★ <b>119.15 (CTAF) 0</b>	GND CON <b>121.7</b>	MINNEAPOLIS CLNC DEL <b>121.7</b> (When tower closed)	UNICOM <b>122.95</b>
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ELEV 906	TDZE 906
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- MIRL Rwy 10L-28R
- HIRL Rwy 10R-28L
- MIRL Rwy 18-36
- REIL Rws 18, 28L, and 36



CATEGORY	A	B	C	D
LPV DA		1187-1	281 (300-1)	
LNAV/VNAV DA		1230-1 1/8	324 (400-1 1/8)	
LNAV MDA		1240-1	334 (400-1)	
<b>C</b> CIRCLING	1320-1 414 (500-1)	1440-1 534 (600-1)	1440-1 1/2 534 (600-1 1/2)	1540-2 634 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017


NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>42519</b> <b>W10B</b>	APP CRS <b>098°</b>	Rwy Idg TDZE Apt Elev	<b>5000</b> <b>905</b> <b>906</b>
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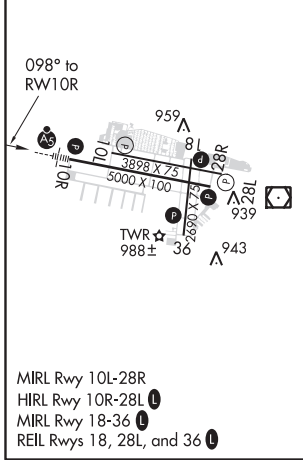
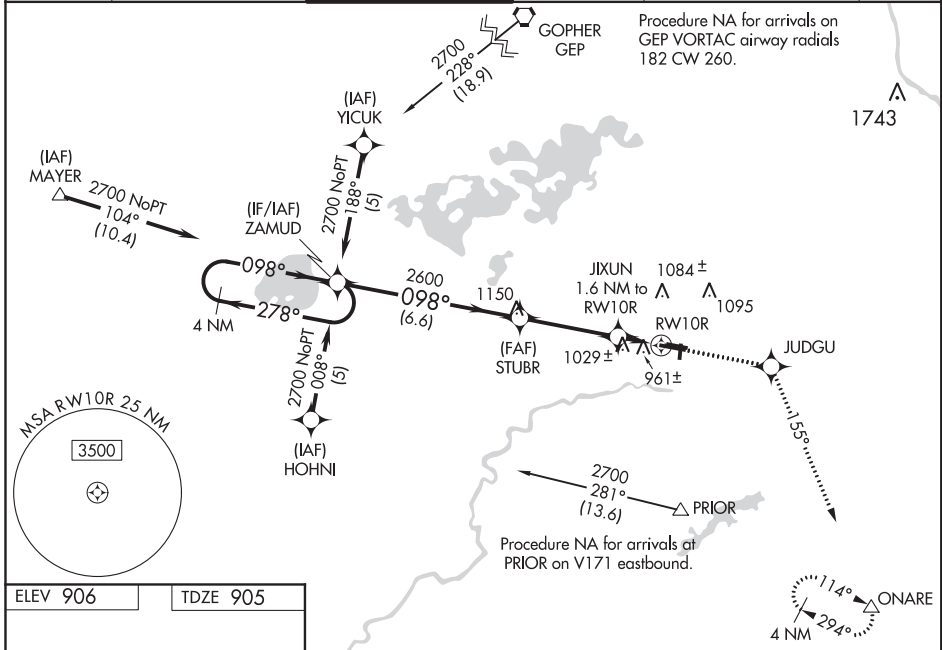
# RNAV (GPS) RWY 10R

FLYING CLOUD (FCM)

**⚠** Baro-VNAV NA when using Minneapolis-St Paul Intl/Wold Chamberlain altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.6°C (4°F) or above 47°C (116°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Minneapolis-St Paul Intl/Wold Chamberlain altimeter setting and increase all DA 34 feet and all MDA 40 feet and increase LNAV Cat C visibility ¼ mile. For inoperative MALSR increase LNAV Cat D visibility to 1¼. Night Landing: Rwy 18/36 NA.

**MALSR**  
  
**MISSED APPROACH:**  
 Climb to 3000 direct JUDGU and on track 155° to ONARE and hold.

ATIS <b>124.9</b>	MINNEAPOLIS APP CON <b>134.7 357.4</b>	FLYING CLOUD TOWER* <b>119.15 (CTAF)</b> 	GND CON <b>121.7</b>	MINNEAPOLIS CLNC DEL <b>121.7</b> (When tower closed)	UNICOM <b>122.95</b>
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4 NM Holding Pattern	ZAMUD	3000	JUDGU	ONARE
2700	← 278°	→ 098°	↑	tr 155°
GP 3.00° TCH 42	2700	098°	2600	JIXUN 1.6 NM to RWY 10R
			*1440	RWY 10R
				*LNAV only.
		6.6 NM	3.6 NM	1.6
CATEGORY	A	B	C	D
LPV DA		1105-½	200 (200-½)	
LNAV/VNAV DA		1237-¾	332 (400-¾)	
LNAV MDA		1280-½	375 (400-½)	1280-1 375 (400-1)
<b>C</b> CIRCLING	1320-1 414 (500-1)	1440-1 534 (600-1)	1440-1½ 534 (600-1½)	1540-2 634 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>90218</b> <b>W28B</b>	APP CRS <b>278°</b>	Rwy Idg TDZE Apt Elev	<b>5000</b> <b>906</b> <b>906</b>
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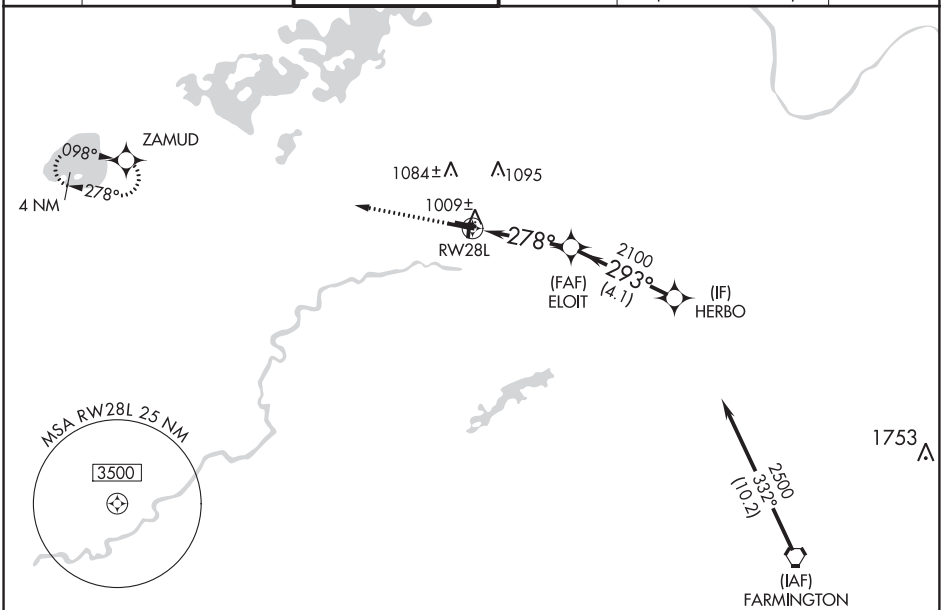
# RNAV (GPS) RWY 28L

FLYING CLOUD (FCM)

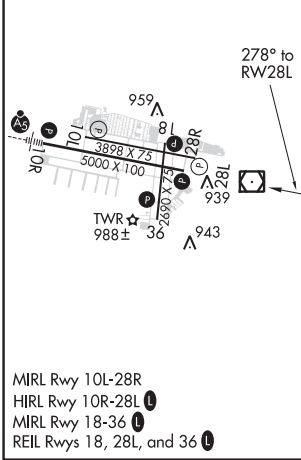
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (2°F) or above 54°C (130°F).  
**⚠** When local altimeter setting not received, use Minneapolis-St Paul Intl/Wold-Chamberlain altimeter setting and increase all DA 34 feet and all MDA 40 feet, increase LNAV Cats C and D visibility 1/8 mile. DME/DME RNP-0.3 NA. Night Landing: Rwy 18/36 NA. Helicopters visibility reduction below 3/4 SM NA.

MISSED APPROACH: Climb to 2700 direct ZAMUD and hold.

ATIS <b>124.9</b>	MINNEAPOLIS APP CON <b>134.7 357.4</b>	FLYING CLOUD TOWER ★ <b>119.15 (CTAF)</b> <b>Ⓛ</b>	GND CON <b>121.7</b>	MINNEAPOLIS CLNC DEL <b>121.7</b> (When tower closed)	UNICOM <b>122.95</b>
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ELEV 906	TDZE 906
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Procedure NA for arrivals on FGT VORTAC airway radials 258 CW 011.

2700	ZAMUD	VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 44).		HERBO
		ELOIT		2500
		RW28L		
		2100		
		278°	293°	
		3.6 NM	4.1 NM	
				GP 3.00° TCH 55
CATEGORY	A	B	C	D
LPV DA		1156-1	250 (300-1)	
LNAV/VNAV DA		1198-1	292 (300-1)	
LNAV MDA	1280-1	374 (400-1)	1280-1 1/8	374 (400-1 1/8)
<b>C</b> CIRCLING	1320-1 414 (500-1)	1440-1 534 (600-1)	1440-1 1/2 534 (600-1 1/2)	1540-2 634 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>99709</b> <b>W28A</b>	APP CRS <b>278°</b>	Rwy Idg TDZE Apt Elev	<b>3898</b> <b>900</b> <b>906</b>
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# RNAV (GPS) RWY 28R

FLYING CLOUD (FCM)

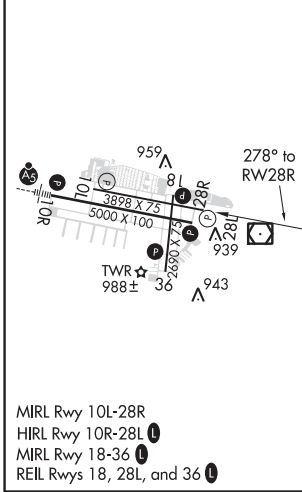
**⚠** Baro-VNAV NA when using Minneapolis-St Paul Intl/Wold Chamberlain altimeter setting.  
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -21°C (-5°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA. Night Landing: Rwy 18/36 NA. When local altimeter setting not received, use Minneapolis-St Paul Intl/Wold Chamberlain altimeter setting and increase all DA 34 feet and all MDA 40 feet; increase Circling Cat D visibility 1/4 mile.

MISSED APPROACH: Climb to 2800 direct SIGCO and hold.

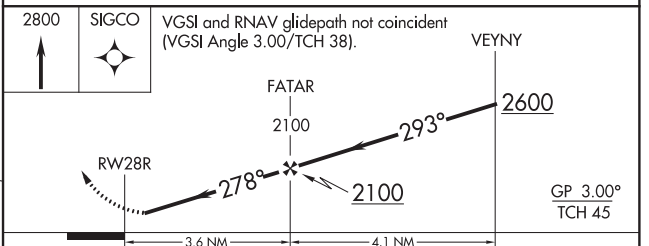
ATIS <b>124.9</b>	MINNEAPOLIS APP CON <b>134.7 357.4</b>	FLYING CLOUD TOWER ★ <b>119.15 (CTAF) 0</b>	GND CON <b>121.7</b>	MINNEAPOLIS CLNC DEL <b>121.7</b> (When tower closed)	UNICOM <b>122.95</b>
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ELEV	906	TDZE	900
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MIRL Rwy 10L-28R  
 HIRL Rwy 10R-28L  
 MIRL Rwy 18-36  
 REIL Rwy 18, 28L, and 36



CATEGORY	A	B	C	D
LPV DA		1150-1	250 (300-1)	
LNAV/VNAV DA		1150-1	250 (300-1)	
LNAV MDA		1240-1	340 (400-1)	
<b>C</b> CIRCLING	1320-1 414 (500-1)	1440-1 534 (600-1)	1440-1½ 534 (600-1½)	1540-2 634 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>82635</b> <b>W36A</b>	APP CRS <b>003°</b>	Rwy Idg <b>2690</b> TDZE <b>905</b> Apt Elev <b>906</b>
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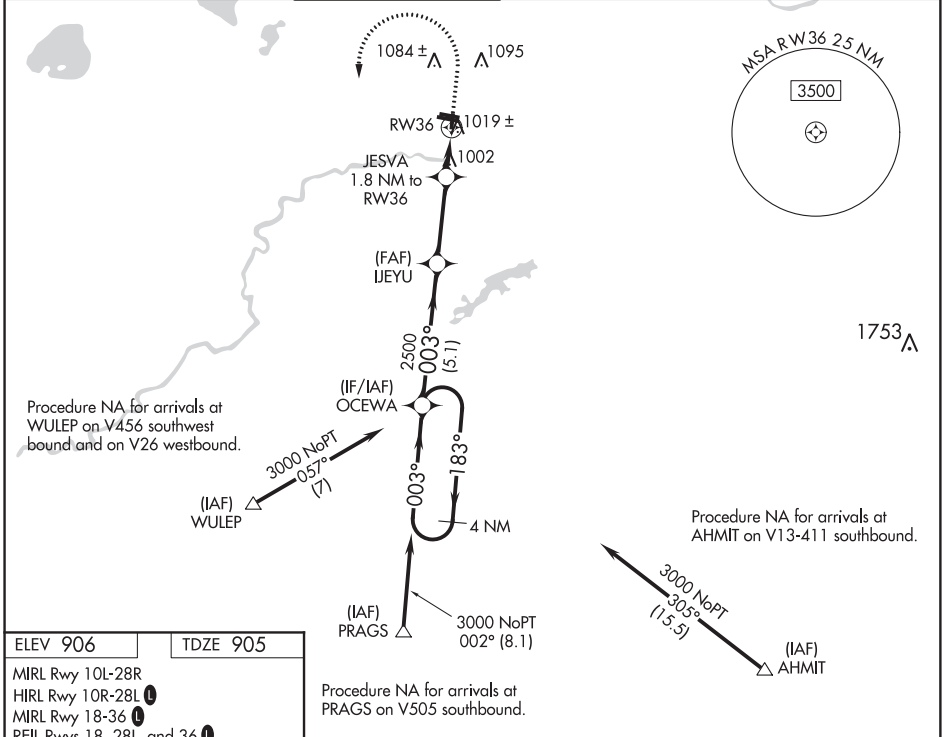
# RNAV (GPS) RWY 36

FLYING CLOUD (FCM)

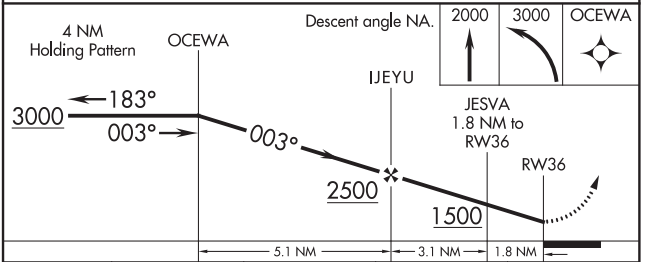
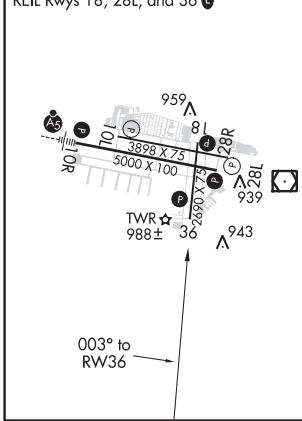
**⚠** DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA.  
**⚠** Night Landing: Rwy 18/36 NA. When local altimeter setting not received, use Minneapolis St Paul Intl/Wold-Chamberlain altimeter setting and increase all MDA 40 feet and increase LP and LNAV Cat C visibility 1/8 mile.

**MISSED APPROACH:** Climb to 2000 then climbing left turn to 3000 direct OCEWA and hold.

ATIS <b>124.9</b>	MINNEAPOLIS APP CON <b>134.7 357.4</b>	FLYING CLOUD TOWER ★ <b>119.15 (CTAF) 0</b>	GND CON <b>121.7</b>	MINNEAPOLIS CLNC DEL <b>121.7</b> (When tower closed)	UNICOM <b>122.95</b>
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ELEV 906	TDZE 905
MIRL Rwy 10L-28R	HIRL Rwy 10R-28L
MIRL Rwy 18-36	REIL Rwys 18, 28L, and 36



CATEGORY	A	B	C	D
LP MDA	1260-1	355 (400-1)		NA
LNAV MDA	1280-1	375 (400-1)		NA
<b>C</b> CIRCLING	1320-1 414 (500-1)	1440-1 534 (600-1)	1440-1½ 534 (600-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



VOR/DME FCM	APP CRS	Rwy Idg	<b>2690</b>
<b>117.7</b>		TDZE	<b>905</b>
Chan <b>124</b>	<b>035°</b>	Apt Elev	<b>906</b>

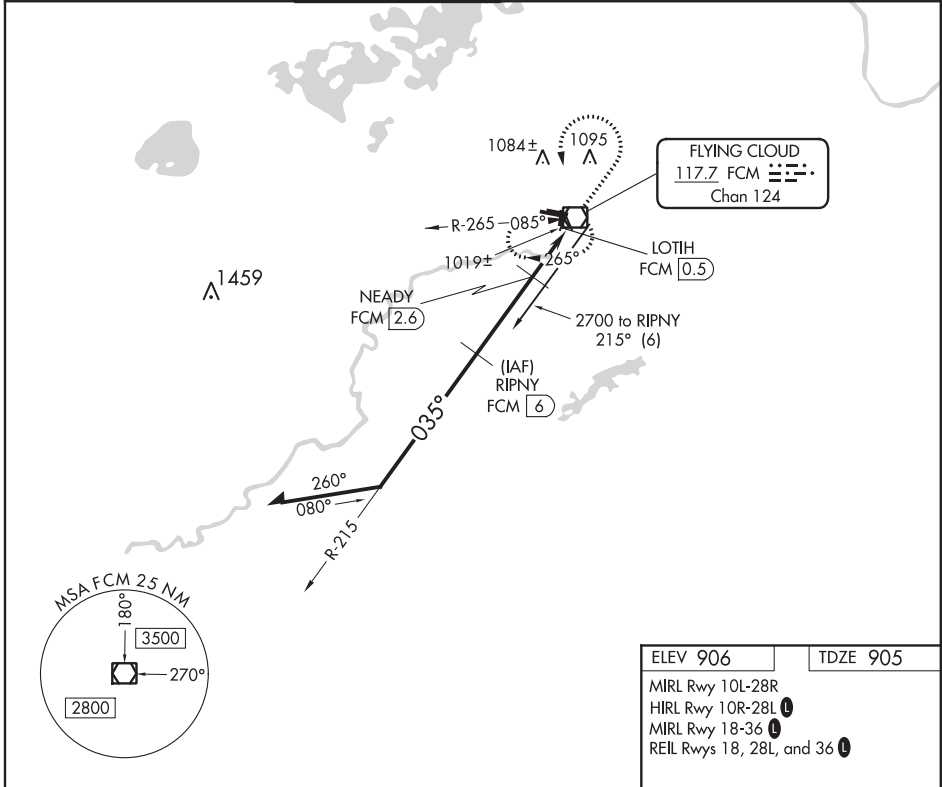
# VOR/DME RWY 36

FLYING CLOUD (FCM)

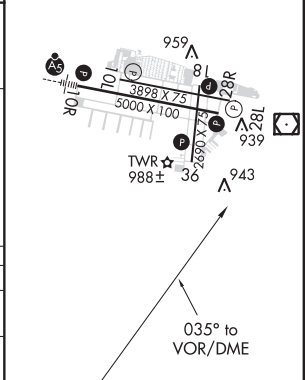
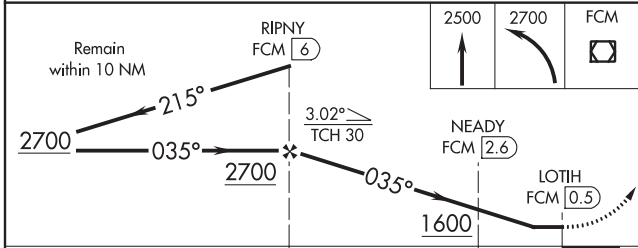
**⚠** When local altimeter setting not received, use Minneapolis St Paul Intl/Wold Chamberlain altimeter setting and increase all MDA 40 feet and S-36 Cat C visibility 1/8 mile. Helicopter visibility reduction below 1 SM NA. Night Landing: Rwy 18/36 NA.

**MISSED APPROACH:** Climb to 2500 then climbing left turn to 2700 direct FCM VOR/DME and hold.

ATIS <b>124.9</b>	MINNEAPOLIS APP CON <b>134.7 357.4</b>	FLYING CLOUD TOWER ★ <b>119.15 (CTAF) 0</b>	GND CON <b>121.7</b>	MINNEAPOLIS CLNC DEL <b>121.7</b> (When tower closed)	UNICOM <b>122.95</b>
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ELEV 906	TDZE 905
MIRL Rwy 10L-28R	
HIRL Rwy 10R-28L	
MIRL Rwy 18-36	
REIL Rwy 18, 28L, and 36	



CATEGORY	A	B	C	D
S-36	1280-1	375 (400-1)		NA
<b>C</b> CIRCLING	1320-1 414 (500-1)	1440-1 534 (600-1)	1440-1½ 534 (600-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME FCM <b>117.7</b> Chan <b>124</b>	APP CRS <b>100°</b>	Rwy Idg TDZE Apt Elev <b>5000</b> <b>905</b> <b>906</b>
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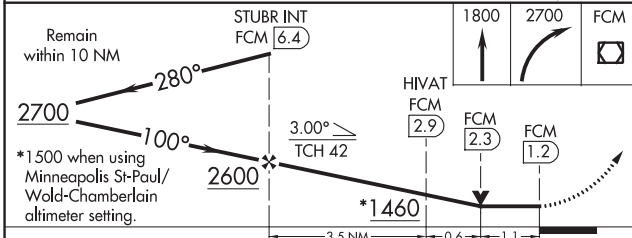
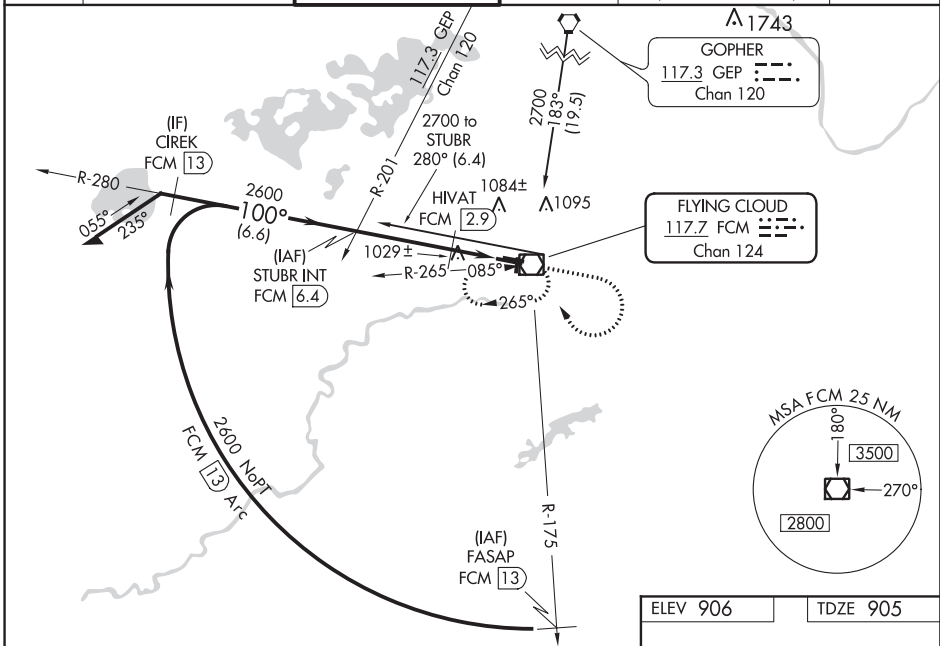
# VOR RWY 10R

FLYING CLOUD (FCM)

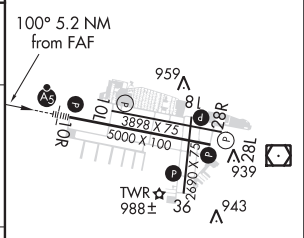
⚠ When local altimeter setting not received, use Minneapolis St-Paul/Wald-Chamberlain altimeter setting and increase all MDA 40 feet, HVIAT fix minimums: Increase S-10R Cat C visibility ¼ mile. For inoperative MALS/R, HVIAT fix minimums: Increase S-10R Cat D visibility to 1 ¼ mile. VDP NA when using Minneapolis St-Paul/Wald-Chamberlain altimeter setting. Night Landing: Rwy 18/36 NA.

MALS/R  
MISSED APPROACH: Climb to 1800 then climbing right turn to 2700 direct FCM VOR/DME and hold, continue climb-in-hold to 2700.

ATIS <b>124.9</b>	MINNEAPOLIS APP CON <b>134.7 357.4</b>	FLYING CLOUD TOWER ★ <b>119.15 (CTAF)</b>	GND CON <b>121.7</b>	MINNEAPOLIS CLNC DEL <b>121.7</b> (When tower closed)	UNICOM <b>122.95</b>
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ELEV 906	TDZE 905
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CATEGORY	A	B	C	D
S-10R	1460-½	555 (600-½)	1460-1 555 (600-1)	1460-1¼ 555 (600-1¼)
☑ CIRCLING	1460-1	554 (600-1)	1460-1½ 554 (600-1½)	1540-2 634 (700-2)
HVIAT FIX MINIMUMS				
S-10R	1280-½ 375 (400-½)		1280-1 375 (400-1)	
☑ CIRCLING	1320-1 414 (500-1)	1440-1 534 (600-1)	1440-1½ 534 (600-1½)	1540-2 634 (700-2)

MIRL Rwy 10L-28R	HIRL Rwy 10R-28L	MIRL Rwy 18-36	REIL Rwys 18, 28L, and 36		
FAF to MAP 5.2 NM					
Knots	60	90	120	150	180
Min:Sec	5:12	3:28	2:36	2:05	1:44

NC-1, 10 NOV 2016 to 05 JAN 2017


NC-1, 10 NOV 2016 to 05 JAN 2017

# COPTER ILS or LOC RWY 10R

FLYING CLOUD (FCM)

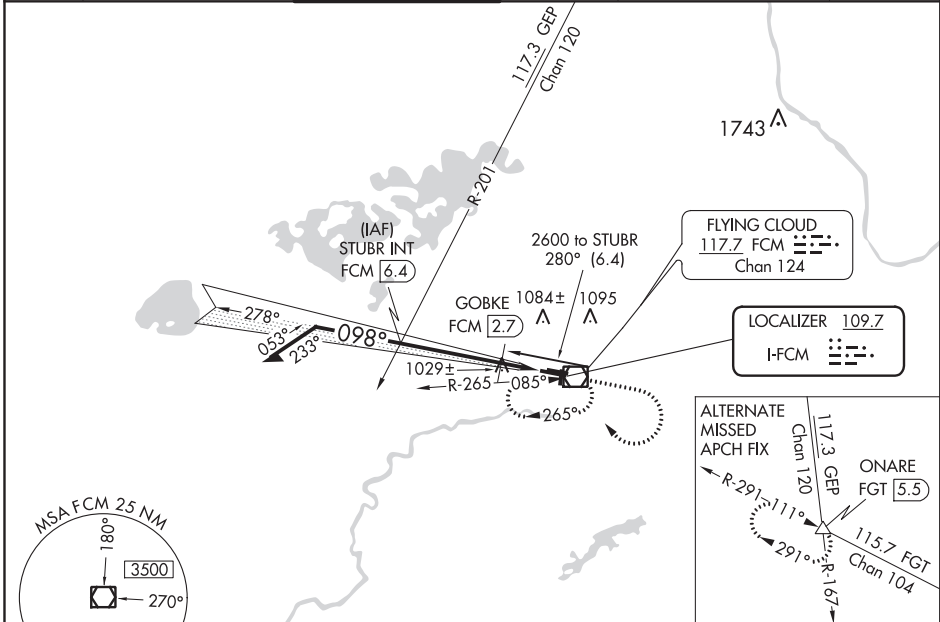
LOC I-FCM <b>109.7</b>	APP CRS <b>098°</b>	Rwy Idg TDZE Apt Elev <b>5000</b> <b>905</b> <b>906</b>
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**⚠** For inoperative MALSR, increase visibility to 1/2 mile. When local altimeter setting not received, use Minneapolis-St Paul Intl-Wold Chamberlain altimeter setting and increase DA 34 feet and all MDA 40 feet. Night Landing: Rwy 18/36 NA.

**MALSR**  


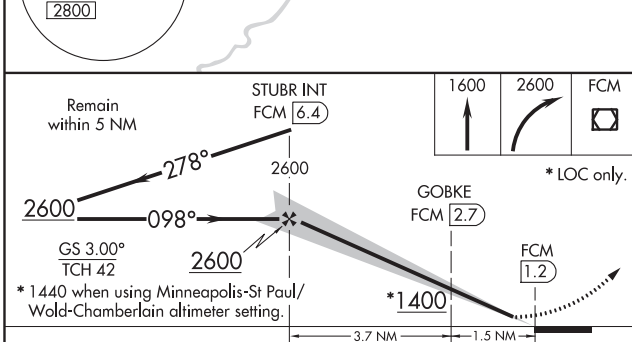
**MISSED APPROACH:** Climb to 1600 then climbing right turn to 2600 direct FCM VOR/DME and hold, continue climb-in-hold to 2600.

ATIS <b>124.9</b>	MINNEAPOLIS APP CON <b>134.7 357.4</b>	FLYING CLOUD TOWER * <b>119.15 (CTAF)</b>	GND CON <b>121.7</b>	MINNEAPOLIS CLNC DEL <b>121.7</b> (When tower closed)	UNICOM <b>122.95</b>
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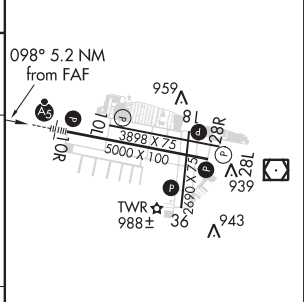


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 906	TDZE 905
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CATEGORY	COPTER	B	C	D
H-ILS 10R	1105-¼ 200 (200-¼)		NA	
H-LOC 10R	1400-¼ 495 (500-¼)		NA	
GOBKE FIX MINIMUMS				
H-LOC 10R	1280-¼ 375 (400-¼)		NA	

FAF to MAP 5.2 NM					
Knots	45	60	75	90	105
Min:Sec	6:56	5:12	4:10	3:28	2:58

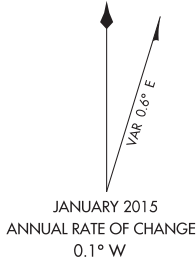
# COPTER ILS or LOC RWY 10R

# AIRPORT DIAGRAM

AL-5094 (FAA)

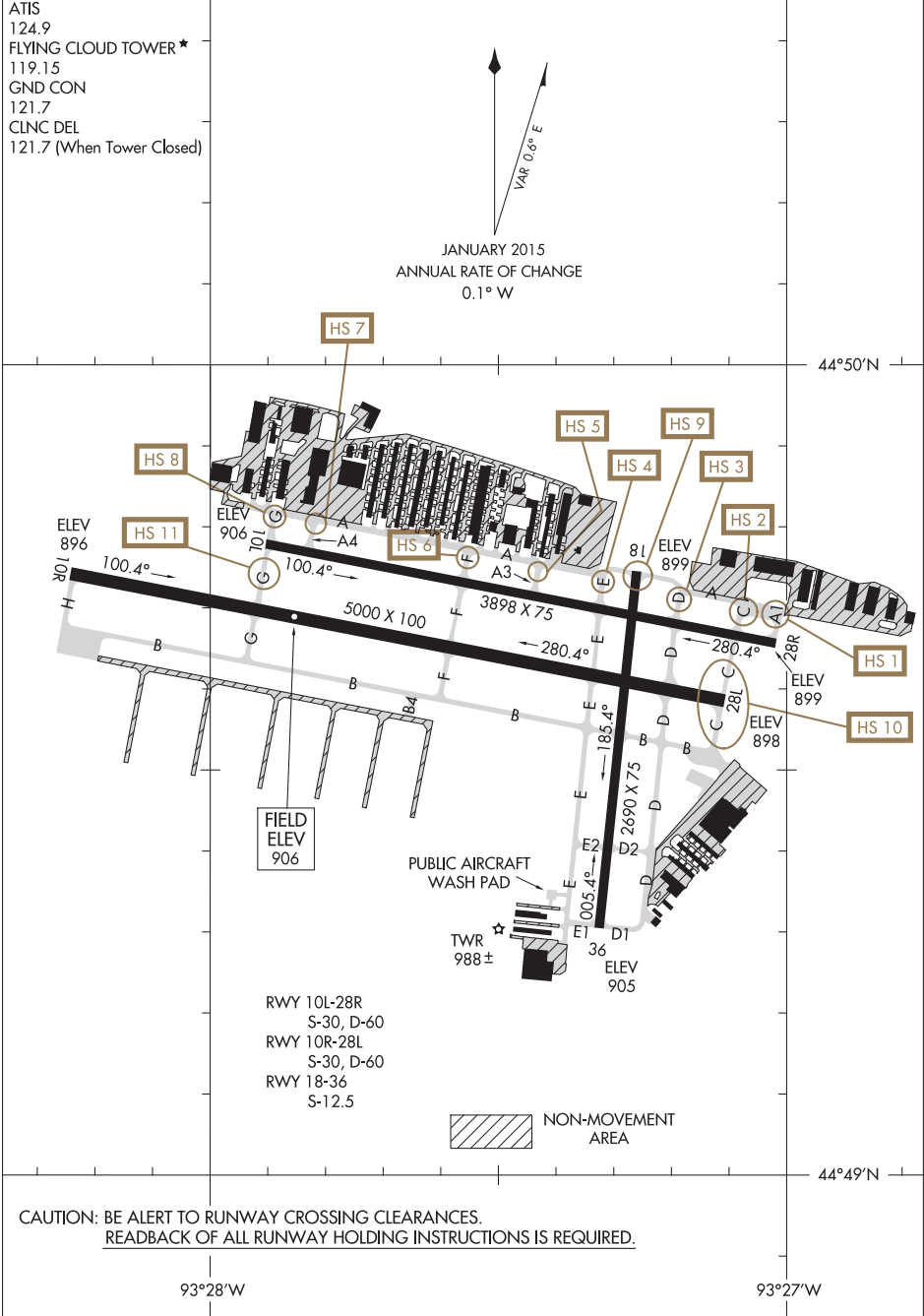
FLYING CLOUD (F'CM)  
MINNEAPOLIS, MINNESOTA

ATIS  
124.9  
FLYING CLOUD TOWER ★  
119.15  
GND CON  
121.7  
CLNC DEL  
121.7 (When Tower Closed)



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.  
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

# AIRPORT DIAGRAM

MINNEAPOLIS, MINNESOTA  
FLYING CLOUD (F'CM)

# COULT SIX DEPARTURE

SL-5094 (FAA)

FLYING CLOUD (FCM)  
MINNEAPOLIS, MINNESOTA

21.02.2016 10:05 AM '1-ON

NOTE: RADAR required.

TAKEOFF MINIMUMS

Rwys 10L, 10R, 18, 28L, 28R, 36: Standard.

ATIS 124.9  
MINNEAPOLIS CLINC DEL  
121.7 (when tower closed)  
FLYING CLOUD TOWER ★  
119.15  
MINNEAPOLIS DEP CON  
134.7 357.4

EAU CLAIRE  
112.9 EAU  
Chan 76

GOPHER  
117.3 GEP  
Chan 120

FLYING CLOUD  
117.7 FCM  
Chan 124



### TAKEOFF OBSTACLE NOTES

Rwy 10L: Tree, buildings and poles beginning 78' from DER, 346' left of centerline, up to 45' AGL/945' MSL. Vehicle on road, sign and trees beginning 645' from DER, 442' right of centerline, up to 37' AGL/937' MSL.

Rwy 10R: Buildings beginning 260' from DER, 321' right of centerline, up to 40' AGL/943' MSL. Trees, poles and general utility beginning 331' from DER, 106' right of centerline, up to 38' AGL/939' MSL.

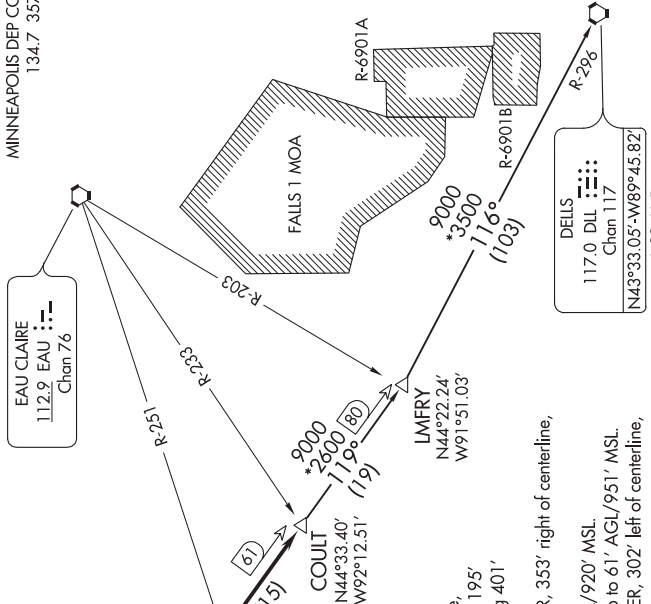
Rwy 18: Buildings beginning 212' from DER, 318' right of centerline, up to 34' AGL/938' MSL. Vehicle on road 262' from DER, 195' left of centerline, up to 15' AGL/918' MSL. Trees beginning 401' from DER, 165' left of centerline, up to 51' AGL/961' MSL.

Rwy 28R: Tree, buildings and general utility beginning 105' from DER, 353' right of centerline, up to 38' AGL/938' MSL.

Rwy 36: Building 3' from DER, 478' left of centerline, up to 18' AGL/920' MSL.

Trees beginning 426' from DER, 323' right of centerline, up to 61' AGL/951' MSL.  
Tree, buildings, poles and windmill beginning 541' from DER, 302' left of centerline, up to 59' AGL/960' MSL.

NOTE: Chart not to scale.



### DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Fly assigned heading and altitude for RADAR vectors to intercept GEP R-119 to COULT INT/GEP 61 DME, thence . . . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.  
DELLS TRANSITION (COULT6.DLL): From over COULT INT on GEP R-119 to LMFRY INT, then on DLL R-296 to DLL VORTAC.

# COULT SIX DEPARTURE

# DARWIN SIX DEPARTURE

SL-5094 (FAA)

FLYING CLOUD (FCM)  
MINNEAPOLIS, MINNESOTA

21.0Z NAF 50 01 91.0Z AON 01 '1-ON

### DEPARTURE ROUTE DESCRIPTION

**TAKEOFF ALL RUNWAYS:** Fly assigned heading and altitude for RADAR vectors to MSP VOR/DME then on MSP R-281 and DWN R-095 to DWN VORTAC, thence . . . . .  
 . . . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

**ABERDEEN TRANSITION (DWN6.ABR):** From over DWN VORTAC on DWN R-271 and ABR R-088 to ABR VOR/DME.

**DARWIN**  
 109.0 DWN  
 Chan 27  
 N45°05.25'-W94°27.23'

10000  
 \*3800  
 271°  
 (167)

10000  
 (MRA)  
 R-095  
 (20)

**ABERDEEN**  
 113.0 ABR  
 Chan 77  
 N45°25.04'-W98°22.12'  
 L-14, H-2

ATIS 124.9  
 MINNEAPOLIS CLNC DEL  
 121.7 (when lower closed)  
 FLYING CLOUD TOWER \*  
 119.15  
 MINNEAPOLIS DEP CON  
 134.7 357.4

**ST. CLOUD**  
 112.1 STC  
 Chan 38

**INUNE**  
 N45°01.01'  
 W93°59.54'

R-172

R-281

33

**MINNEAPOLIS**  
 115.3 MSP  
 Chan 100

**FLYING CLOUD**  
 117.7 FCM  
 Chan 124

**TAKEOFF MINIMUMS**  
 Rwy 10L, 10R, 18, 28L, 28R, 36: Standard.

NOTE: RADAR required.



# DARWIN SIX DEPARTURE

(DWN6.DWN) 06FEB14

MINNEAPOLIS, MINNESOTA  
FLYING CLOUD (FCM)

### TAKEOFF OBSTACLE NOTES

- Rwy 10L: Tree, buildings, and poles beginning 78' from DER, 346' left of centerline, up to 45' AGL/945' MSL.  
Vehicle on road, sign, and trees beginning 645' from DER, 442' right of centerline, up to 37' AGL/937' MSL.
- Rwy 10R: Buildings beginning 260' from DER, 321' right of centerline, up to 40' AGL/943' MSL.  
Trees, poles, and general utility beginning 331' from DER, 106' right of centerline, up to 38' AGL/939' MSL.
- Rwy 18: Buildings beginning 212' from DER, 318' right of centerline, up to 34' AGL/938' MSL.  
Vehicle on road 262' from DER, 195' left of centerline, 15' AGL/918' MSL.  
Trees beginning 401' from DER, 165' left of centerline, up to 51' AGL/961' MSL.
- Rwy 28R: Tree, buildings, and general utility beginning 105' from DER, 353' right of centerline, up to 38' AGL/938' MSL.
- Rwy 36: Buildings 3' from DER, 478' left of centerline, 18' AGL/920' MSL.  
Trees beginning 426' from DER, 323' right of centerline, up to 61' AGL/951' MSL.  
Trees, buildings, poles, and windmill beginning 541' from DER, 302' left of centerline, up to 59' AGL/960' MSL.

NOTE: Chart not to scale.

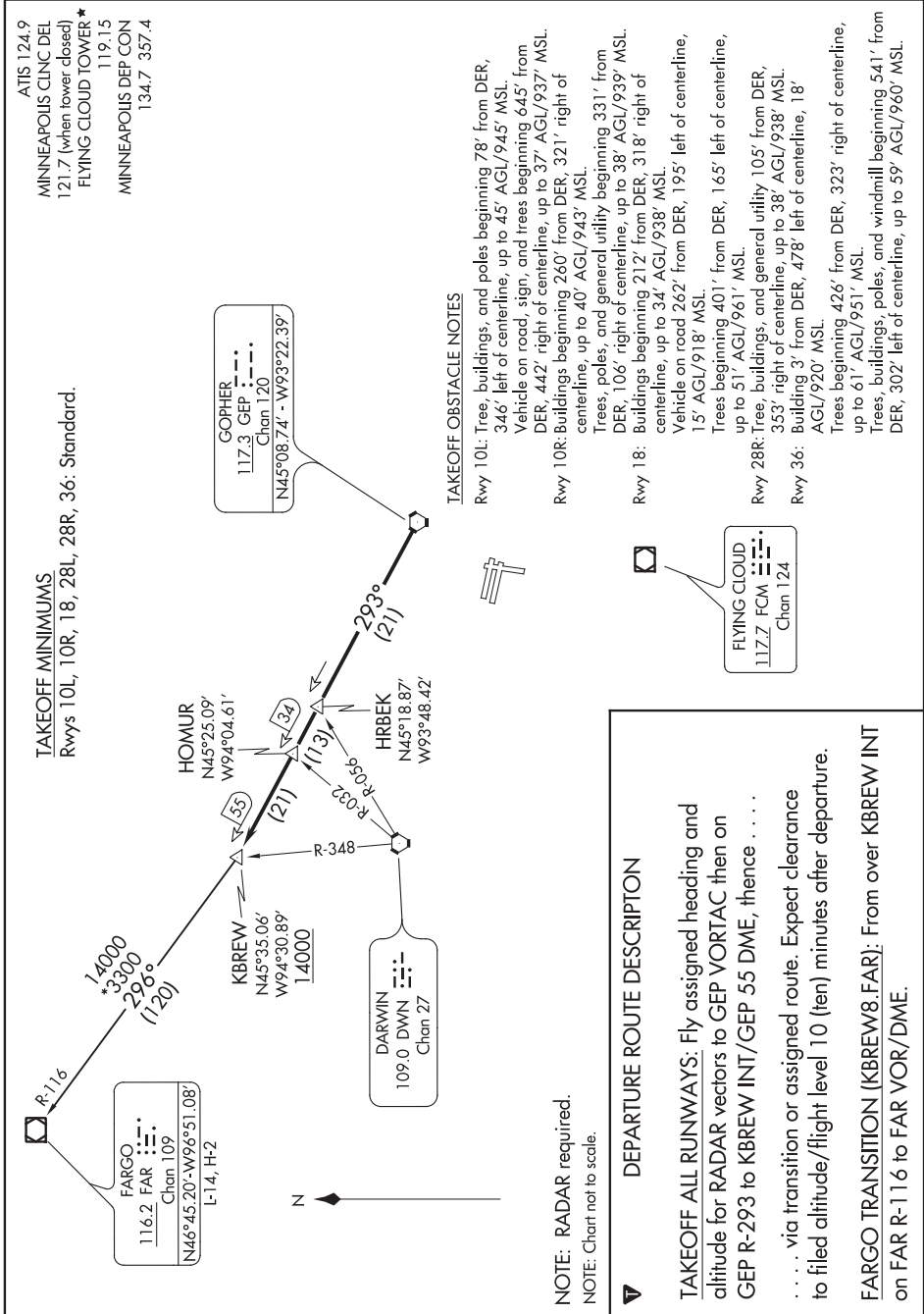
NC-1, 10 NOV 2016 to 05 JAN 2017

(KBREW8.KBREW) 16315  
**KBREW EIGHT DEPARTURE**

SL-5094 (FAA)

FLYING CLOUD (FCM)  
 MINNEAPOLIS, MINNESOTA

ZL10JAN 20 01 05 JAN 20 01 '1-C-N



(KBREW8.KBREW) 10NOV16  
**KBREW EIGHT DEPARTURE**

MINNEAPOLIS, MINNESOTA  
 FLYING CLOUD (FCM)

NC-1, 10 NOV 2016 to 05 JAN 2017

# (ORSKY9.ORSKY) 16315 ORSKY NINE DEPARTURE

SL-5094 (FAA)

FLYING CLOUD (FCM)  
MINNEAPOLIS, MINNESOTA

ATIS 124.9  
MINNEAPOLIS CLNC DEL  
121.7 (when tower closed)  
FLYING CLOUD TOWER \*  
119.15  
MINNEAPOLIS DEP CON  
134.7 357.4

**TOP ALTITUDE:  
(JETS) 7000/(PROPS) 5000**

MINNEAPOLIS  
115.3 MSP  
Chan 100  
N44°53.79'-W93°14.19'

NOTE: RADAR required.

FARMINGTON  
115.7 FGT  
Chan 104

HALFWAY  
111.2 FOW  
Chan 49

FAIRMONT  
110.2 FRM  
Chan 39

ORSKY  
N43°40.19'  
W94°13.38'

TAKEOFF MINIMUMS  
Rwys 10L, 10R, 18, 28L, 28R, 36: Standard.

ONTIJ  
N43°17.86'  
W94°30.77'  
12000 (MRA)

GOOLD  
N42°57.52'  
W94°42.85'

SIMJI  
N42°49.56'  
W94°47.52'

EYHUX  
N42°26.13'  
W95°01.16'

TODDO  
N41°50.54'  
W95°21.52'

OMAHA  
116.3 OVR  
Chan 110  
N41°10.03'-W95°44.21'  
L-10-12, H-5

MASON CITY  
114.9 MCW  
Chan 96

FORT DODGE  
113.5 FOD  
Chan 82  
N42°36.67'-W94°17.69'  
L-12, H-5

DES MOINES  
117.5 DSM  
Chan 122

(NOTES CONTINUED ON FOLLOWING PAGE)  
(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

# ORSKY NINE DEPARTURE (ORSKY9.ORSKY) 15SEP16

MINNEAPOLIS, MINNESOTA  
FLYING CLOUD (FCM)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017





DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Fly assigned heading and altitude for RADAR vectors to MSP VOR/DME then on MSP R-208 to ORSKY INT/MSP 85 DME. Thence . . . .

. . . .via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

FORT DODGE TRANSITION (ORSKY9.FOD): From over ORSKY INT on FOD R-356 to FOD VORTAC.

OMAHA TRANSITION (ORSKY9.OVR): From over ORSKY INT on MSP R-208 to ONTIJ INT, then on OVR R-015 to OVR VORTAC.

TAKEOFF OBSTACLE NOTES

Rwy 10L: Tree, buildings, and poles beginning 78' from DER, 346' left of centerline, up to 45' AGL/945' MSL.

Vehicle on road, sign, and trees beginning 645' from DER, 442' right of centerline, up to 37' AGL/937' MSL.

Rwy 10R: Buildings beginning 260' from DER, 321' right of centerline, up to 40' AGL/943' MSL. Trees, poles, and general utility beginning 331' from DER, 106' right of centerline, up to 38' AGL/939' MSL.

Rwy 18: Buildings beginning 212' from DER, 318' right of centerline, up to 34' AGL/938' MSL. Vehicle on road 262' from DER, 195' left of centerline, 15' AGL/918' MSL. Trees beginning 401' from DER, 165' left of centerline, up to 51' AGL/961' MSL.

Rwy 28R: Tree, buildings, and general utility beginning 105' from DER, 353' right of centerline, up to 38' AGL/938' MSL.

Rwy 36: Building 3' from DER, 478' left of centerline, 18' AGL/920' MSL. Trees beginning 426' from DER, 323' right of centerline, up to 61' AGL/951' MSL. Trees, buildings, poles and windmill beginning 541' from DER, 302' left of centerline, up to 59' AGL/960' MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

(RST8.RST) 16203

# ROCHESTER EIGHT DEPARTURE

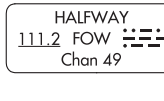
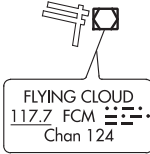
SL-5094 (FAA)

FLYING CLOUD (FCM)  
MINNEAPOLIS, MINNESOTA

ATIS  
124.9  
MINNEAPOLIS CLNC DEL  
121.7 (when tower closed)  
FLYING CLOUD TOWER ★  
119.15  
MINNEAPOLIS DEP CON  
134.7 357.4

### TAKEOFF OBSTACLE NOTES

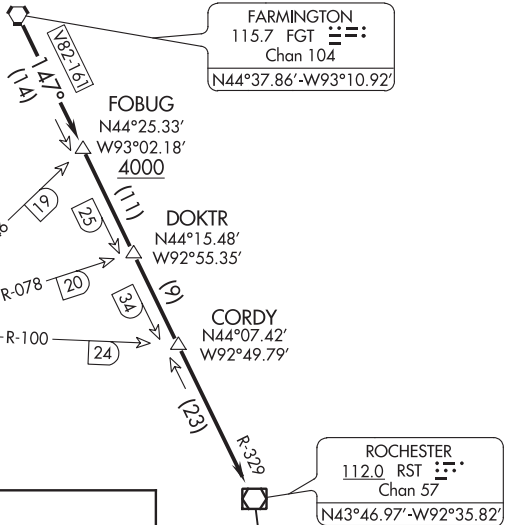
- Rwy 10L: Tree, buildings, and poles beginning 78' from DER, 346' left of centerline, up to 45' AGL/945' MSL. Vehicle on road, sign and trees beginning 645' from DER, 442' right of centerline, up to 37' AGL/937' MSL.
- Rwy 10R: Buildings beginning 260' from DER, 321' right of centerline, up to 40' AGL/943' MSL. Trees, poles, and general utility beginning 331' from DER, 106' right of centerline, up to 38' AGL/939' MSL.
- Rwy 18: Buildings beginning 212' from DER, 318' right of centerline, up to 34' AGL/938' MSL. Vehicle on road 262' from DER, 195' left of centerline, 15' AGL/918' MSL. Trees beginning 401' from DER, 165' left of centerline, up to 51' AGL/961' MSL.
- Rwy 28R: Tree, buildings, and general utility beginning 105' from DER, 353' right of centerline, up to 38' AGL/938' MSL.
- Rwy 36: Building 3' from DER, 478' left of centerline, 18' AGL/920' MSL. Trees beginning 426' from DER, 323' right of centerline, up to 61' AGL/951' MSL. Trees, buildings, poles and windmill beginning 541' from DER, 302' left of centerline, up to 59' AGL/960' MSL.



NOTE: RADAR required.

### TAKEOFF MINIMUMS

Rwys 10L/R, 18, 28L/R, 36: Standard.



### DEPARTURE ROUTE DESCRIPTION

**TAKEOFF ALL RUNWAYS:** Fly assigned heading and altitude for RADAR vectors to FGT VORTAC then via FGT R-147 and RST R-329 to RST VOR/DME. Cross FOBUG INT/FGT 14 DME at or above 4000, thence . . . .

. . . . via assigned transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

**WATERLOO TRANSITION (RST8.ALO):** From over RST VOR/DME on RST R-168 and ALO R-347 to ALO VOR/DME.

NOTE: Chart not to scale.

# ROCHESTER EIGHT DEPARTURE

(RST8.RST) 21JUL16

MINNEAPOLIS, MINNESOTA  
FLYING CLOUD (FCM)

NC-1, 10 NOV 2016 to 05 JAN 2017

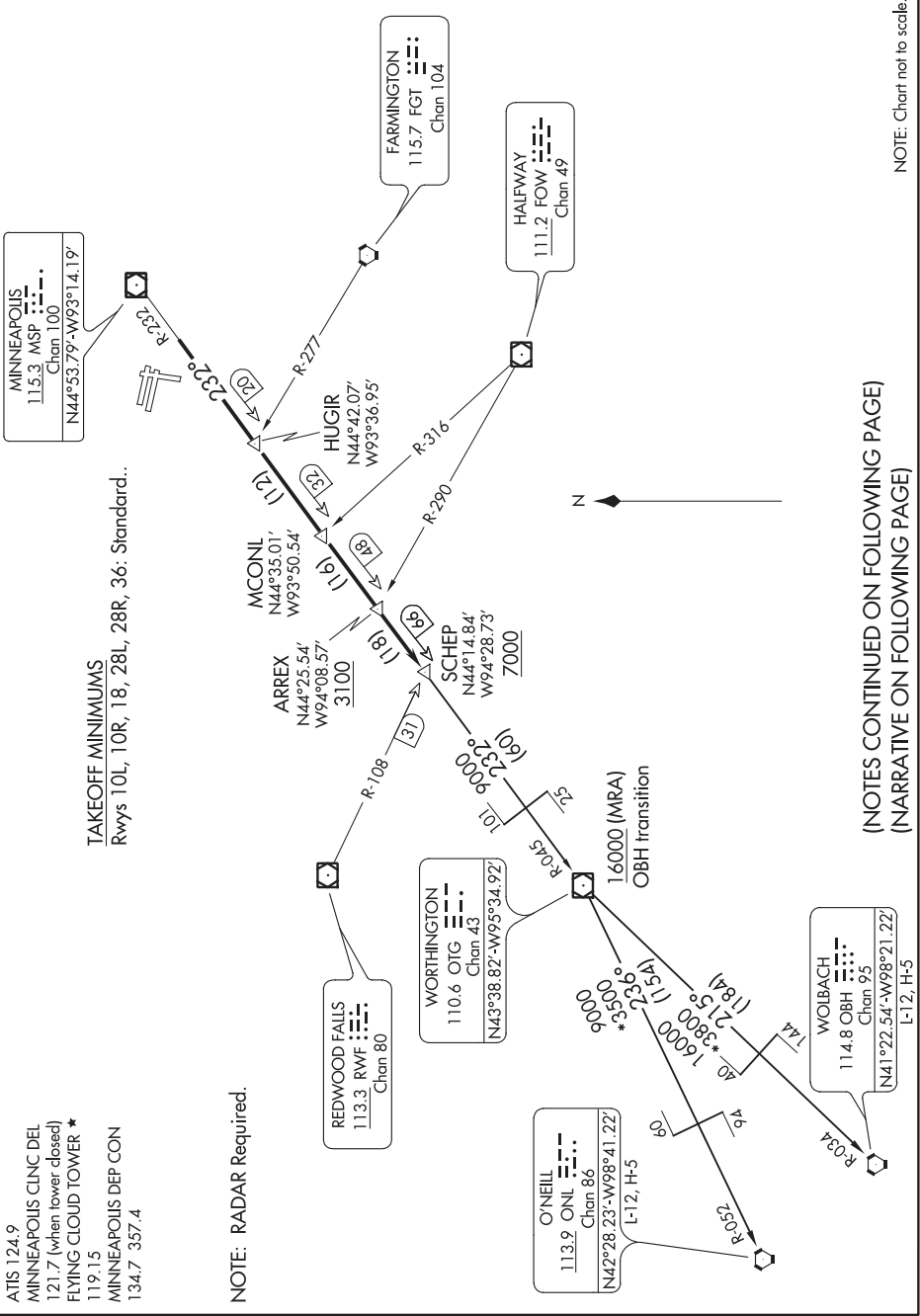
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ATIS 124.9  
MINNEAPOLIS CLNC DEL  
121.7 (when tower closed)  
FLYING CLOUD TOWER \*  
119.15  
MINNEAPOLIS DEP CON  
134.7 357.4

TAKEOFF MINIMUMS  
Rwys 10L, 10R, 18, 28L, 28R, 36: Standard..

NOTE: RADAR Required.



NOTE: Chart not to scale.

(NOTES CONTINUED ON FOLLOWING PAGE)  
(NARRATIVE ON FOLLOWING PAGE)

NC-1, 10 NOV 2016 to 05 JAN 2017



## DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Fly assigned heading and altitude for RADAR vectors to MSP VOR/DME then via MSP R-232 to SCHEP INT/MSP 66 DME, Thence . . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

O'NEILL TRANSITION (SCHEP8.ONL): From over SCHEP INT on MSP R-232 and OTG R-045 to OTG VOR/DME, then on OTG R-236 and ONL R-052 to ONL VORTAC.

WOLBACH TRANSITION (SCHEP8.OBH): From over SCHEP INT on MSP R-232 and OTG R-045 to OTG VOR/DME, then on OTG R-215 and OBH R-034 to OBH VORTAC.

TAKEOFF OBSTACLE NOTES

- Rwy 10L: Tree, buildings, and poles beginning 78' from DER, 346' left of centerline, up to 45' AGL/945' MSL. Vehicle on road, sign and trees beginning 645' from DER, 442' right of centerline, up to 37' AGL/937' MSL.
- Rwy 10R: Buildings beginning 260' from DER, 321' right of centerline, up to 40' AGL/943' MSL. Trees, poles, and general utility beginning 331' from DER, 106' right of centerline, up to 38' AGL/939' MSL.
- Rwy 18: Buildings beginning 212' from DER, 318' right of centerline, up to 34' AGL/938' MSL. Vehicle on road 262' from DER, 195' left of centerline, 15' AGL/918' MSL. Trees beginning 401' from DER, 165' left of centerline, up to 51' AGL/961' MSL.
- Rwy 28R: Tree, buildings, and general utility beginning 105' from DER, 353' right of centerline, up to 38' AGL/938' MSL.
- Rwy 36: Building 3' from DER, 478' left of centerline, 18' AGL/920' MSL. Trees beginning 426' from DER, 323' right of centerline, up to 61' AGL/951' MSL. Trees, buildings, poles and windmill beginning 541' from DER, 302' left of centerline, up to 59' AGL/960' MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

(WLSTN6.WLSTN) 16259  
**WLSTN SIX DEPARTURE**

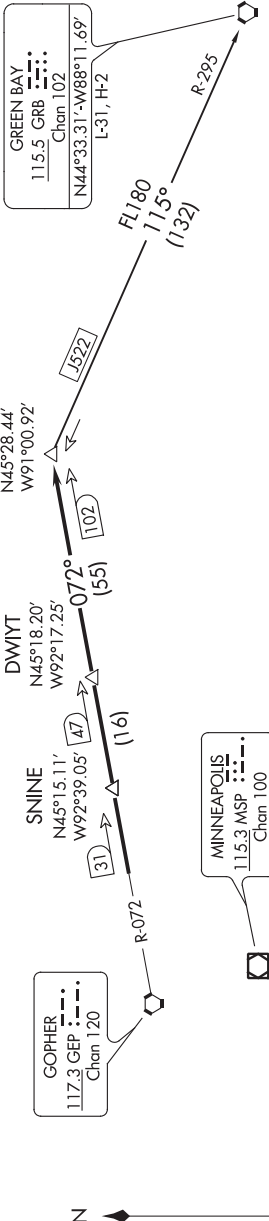
SL-5094 (FAA)

FLYING CLOUD (FCM)  
 MINNEAPOLIS, MINNESOTA

Z1.0Z NAV 05 01 91.0Z AON 01 '1-ON

ATIS 124.9  
 MINNEAPOLIS CLINC DEL  
 121.7 (when tower closed)  
 FLYING CLOUD TOWER ★  
 119.15  
 MINNEAPOLIS DEP CON  
 134.7 357.4

**TAKEOFF MINIMUMS:**  
 Rwy 10L, 10R, 18, 28L, 28R, 36: Standard..



**TAKEOFF OBSTACLE NOTES**

- Rwy 10L: Tree, buildings, and poles beginning 78' from DER, 346' left of centerline, up to 45' AGL/945' MSL. Vehicle on road, sign and trees beginning 645' from DER, 442' right of centerline, up to 37' AGL/937' MSL.
- Rwy 10R: Buildings beginning 260' from DER, 321' right of centerline, up to 40' AGL/943' MSL. Trees, poles, and general utility beginning 331' from DER, 106' right of centerline, up to 38' AGL/939' MSL.
- Rwy 18: Buildings beginning 212' from DER, 318' right of centerline, up to 34' AGL/938' MSL. Vehicle on road 262' from DER, 195' left of centerline, 15' AGL/918' MSL. Trees beginning 401' from DER, 165' left of centerline, up to 51' AGL/961' MSL.
- Rwy 28R: Tree, buildings, and general utility beginning 105' from DER, 353' right of centerline, up to 38' AGL/938' MSL.
- Rwy 36: Building 3' from DER, 478' left of centerline, 18' AGL/920' MSL. Trees beginning 426' from DER, 323' right of centerline, up to 61' AGL/951' MSL. Trees, buildings, poles and windmill beginning 541' from DER, 302' left of centerline, up to 59' AGL/960' MSL.

**DEPARTURE ROUTE DESCRIPTION**

**TAKEOFF ALL RUNWAYS:** Fly assigned heading and altitude for RADAR vectors to GEP R-072 to WLSTN/GEP 102 DME. Thence . . . . .

. . . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

**GREEN BAY TRANSITION (WLSTN6.GRB):** From over WLSTN INT on GRB R-295 to GRB VORTAC.

NOTE: RADAR required  
 NOTE: Chart not to scale.

(WLSTN6.WLSTN) 06FEB14  
**WLSTN SIX DEPARTURE**

MINNEAPOLIS, MINNESOTA  
 FLYING CLOUD (FCM)

NC-1, 10 NOV 2016 to 05 JAN 2017

# ZMBRO SIX DEPARTURE

4L-5094 (FAA)

FLYING CLOUD (FCM)  
MINNEAPOLIS, MINNESOTA

### TAKEOFF OBSTACLE NOTES

Rwy 10L: Tree, buildings, and poles beginning 78' from DER, 346' left of centerline, up to 45' AGL/945' MSL. Vehicle on road, sign and trees beginning 645' from DER, 442' right of centerline, up to 37' AGL/937' MSL.

Rwy 10R: Buildings beginning 260' from DER, 321' right of centerline, up to 40' AGL/943' MSL. Trees, poles, and general utility beginning 331' from DER, 106' right of centerline, up to 38' AGL/939' MSL.

Rwy 18: Buildings beginning 212' from DER, 318' right of centerline, up to 34' AGL/938' MSL. Vehicle on road 262' from DER, 195' left of centerline, 15' AGL/918' MSL. Trees beginning 401' from DER, 165' left of centerline, up to 51' AGL/961' MSL.

Rwy 28R: Tree, buildings, and general utility beginning 105' from DER, 353' right of centerline, up to 38' AGL/938' MSL.

Rwy 36: Building 3' from DER, 478' left of centerline, 18' AGL/920' MSL. Trees beginning 426' from DER, 323' right of centerline, up to 61' AGL/951' MSL.

Trees, buildings, poles and windmill beginning 541' from DER, 302' left of centerline, up to 59' AGL/960' MSL.

ATIS 124.9  
MINNEAPOLIS CLNC DEL  
121.7 (when tower closed)  
FLYING CLOUD TOWER \*  
119.15  
MINNEAPOLIS DEP CON  
134.7 357.4

### TAKEOFF MINIMUMS:

Rwys 10L, 10R, 18, 28L, 28R, 36: Standard.

MINNEAPOLIS  
115.3 MSP  
Chan 100

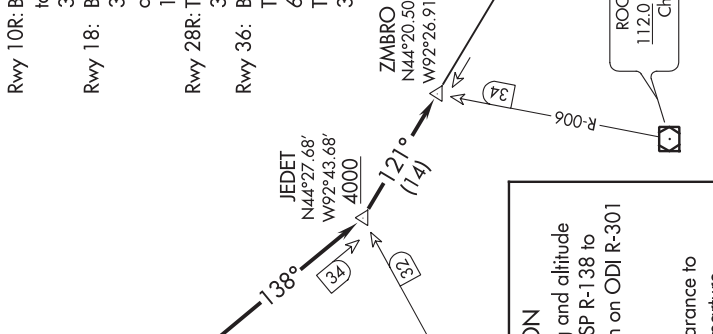
HALFWAY  
111.2 FOW  
Chan 49

### DEPARTURE ROUTE DESCRIPTION

**TAKEOFF ALL RUNWAYS:** Fly assigned heading and altitude for RADAR vectors to MSP VOR/DME then on MSP R-138 to JEDET INT/MSP 34 DME, at or above 4000; then on ODI R-301 to ZMBRO INT/ODI 50 DME, thence . . . . .

. . . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

**NODINE TRANSITION (ZMBRO6.ODI):** From over ZMBRO INT on ODI R-301 to ODI VORTAC.



NOTE: RADAR required  
NOTE: Chart not to scale.

# ZMBRO SIX DEPARTURE

(ZMBRO6.ZMBRO) 06FEB14

MINNEAPOLIS, MINNESOTA  
FLYING CLOUD (FCM)

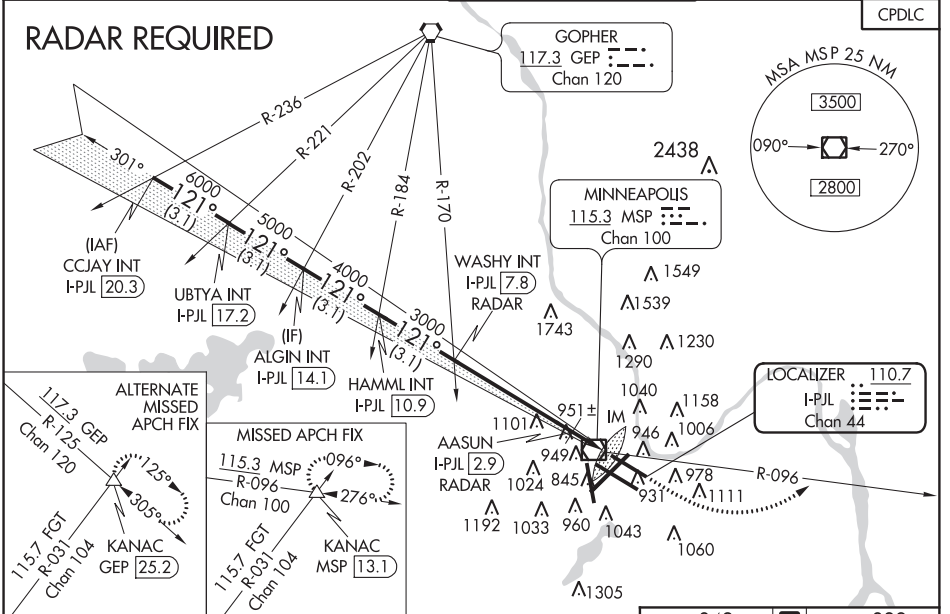
LOC/DME I-PJL <b>110.7</b> Chan <b>44</b>	APP CRS <b>121°</b>	Rwy Idg TDZE <b>7620</b> <b>839</b>	Apt Elev <b>842</b>
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# ILS or LOC RWY 12L

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<p><b>⚠</b> Simultaneous approach authorized with Rwy 12R. For inop ALSF, increase S-ILS 12L Cat E visibility to RVR 4000, S-LOC 12L Cat E visibility to 1½ mile. AASUN fix minimums: increase S-LOC 12L Cat C/D/E visibility to 1½ mile.</p>	ALSF-2 	MISSED APPROACH: Climb to 1300, then climbing left turn to 3000 on MSP VOR/DME R-096 to KANAC INT/MSP 13.1 DME and hold.
	<p>CLNC DEL <b>133.2</b></p>	

ATIS ARR <b>135.35</b> <b>239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VGSi and ILS glidepath not coincident (VGSi Angle 3.00/TCH 79).					ELEV 842	TDZE 839
CCJAY INT I-PJL 20.3 UBTYA INT I-PJL 17.2 ALGIN INT I-PJL 14.1 HAMML INT I-PJL 10.9 WASHY INT I-PJL 7.8 AASUN I-PJL 2.9 KANAC MSP 13.1	*LOC only R-096		121° 6.6 NM from FAF		HIRL all Rwys REIL Rwy 17 TDZ/CL Rwys 12L, 12R, 30L, and 35	
GS 3.00° TCH 52 7000 6000 5000 4000 3000 1420	121°		10000 X 200 0.5% 8200 X 150 0.5% 859± 865± 106		FAF to MAP 6.6 NM	
CATEGORY S-ILS 12L	A	B	C	D	E	
S-LOC 12L	1420/24	581 (600-½)	1420-1¼	581 (600-1¼)		
CIRCLING	1420-1	578 (600-1)	1460-1¾ 618 (700-1¾)	1660-2¾ 818 (900-2¾)	1800-3 958 (1000-3)	
AASUN FIX MINIMUMS						
S-LOC 12L	1240/24	401 (400-½)	1240/40	401 (400-¾)		
CIRCLING	1360-1	518 (600-1)	1460-1¾ 618 (700-1¾)	1660-2¾ 818 (900-2¾)	1800-3 958 (1000-3)	
Knots: 60 90 120 150 180 Min:Sec: 6:36 4:24 3:18 2:38 2:12						

# ILS or LOC RWY 12L

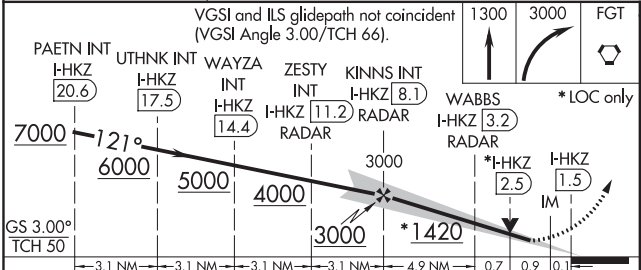
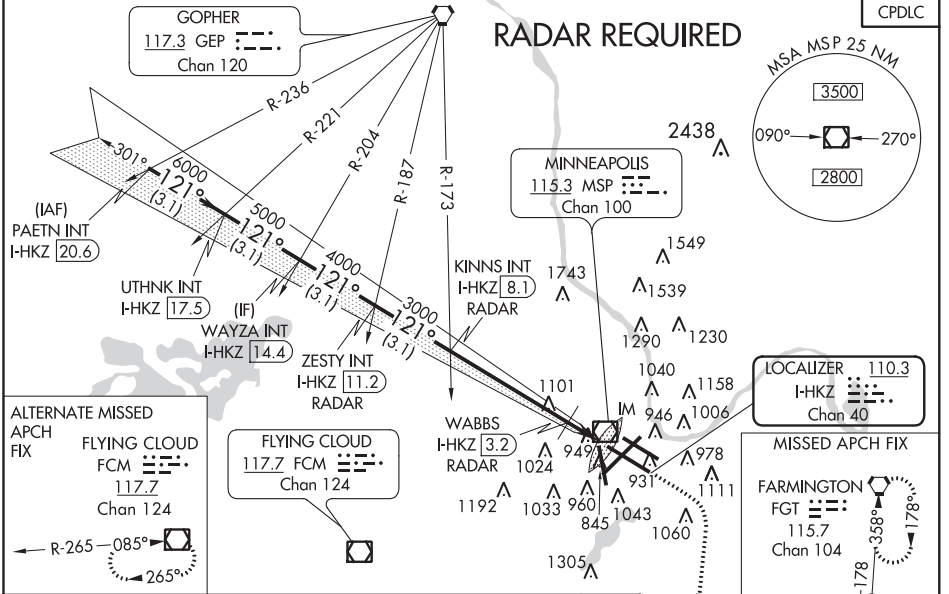
LOC/DME I-HKZ <b>110.3</b> Chan 40	APP CRS <b>121°</b>	Rwy Idg 10000	TDZE 842	Apt Elev 842
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**ILS or LOC RWY 12R**  
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

**⚠** For inop ALSF-2, increase S-ILS 12R Cat E visibility to RVR 4000, and S-LOC 12R Cat E visibility to 1½. WABBS FIX minimums: For inop ALSF-2, increase S-LOC 12R Cat E visibility to RVR 6000. Simultaneous approach authorized with Rwy 12L.

**ALSF-2** **A**  
MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct FGT VORTAC and hold.

ATIS ARR <b>135.35 239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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ELEV 842	TDZE 842
121° 6.6 NM from FAF	
<p>Diagram showing approach path and altitudes: 950±, 906±, 859±, 865±, 1000 X 200, 1108±, 996±, 800 X 150.</p>	
35 HIRL all Rwys REIL Rwy 17 TDZ/CL Rwys 12L, 12R, 30L, and 35 FAF to MAP 6.6 NM	
Knots	60 90 120 150 180
Min:Sec	6:36 4:24 3:18 2:38 2:12

CATEGORY	A	B	C	D	E
S-ILS 12R	1042/18 200 (200-½)				
S-LOC 12R	1420/24	578 (600-½)	1420-1¼		578 (600-1¼)
<b>C</b> CIRCLING	1420-1	578 (600-1)	1460-1¾ 618 (700-1¾)	1660-2¾ 818 (900-2¾)	1800-3 958 (1000-3)
WABBS FIX MINIMUMS					
S-LOC 12R	1240/24	398 (400-½)	1240/35		398 (400-¾)
<b>C</b> CIRCLING	1360-1	518 (600-1)	1460-1¾ 618 (700-1¾)	1660-2¾ 818 (900-2¾)	1800-3 958 (1000-3)

**ILS or LOC RWY 12R**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



LOC/DME I-MSP <b>110.3</b> Chan 40	APP CRS <b>301°</b>	Rwy Idg TDZE Apt Elev	<b>10000</b> <b>823</b> <b>842</b>
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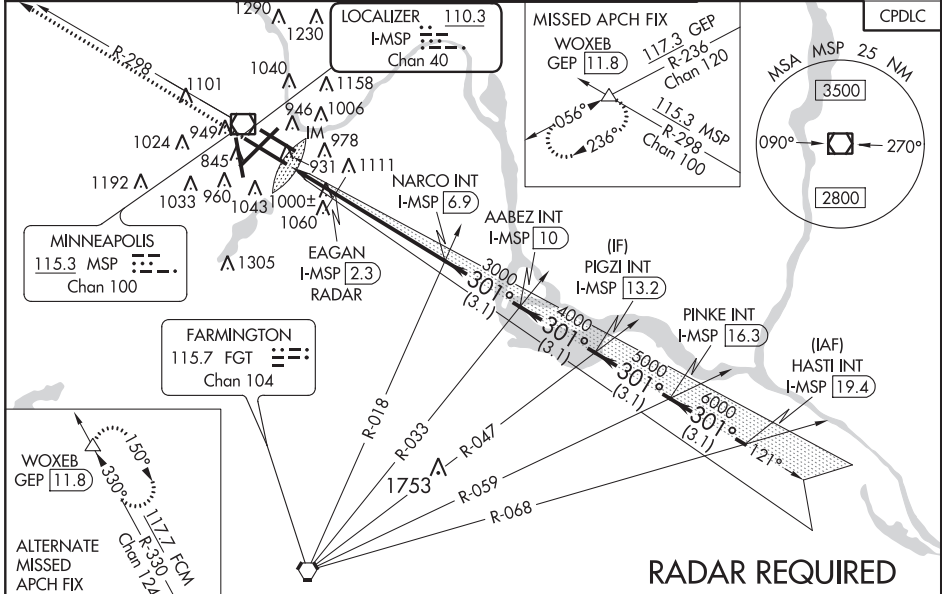
# ILS Z or LOC RWY 30L

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

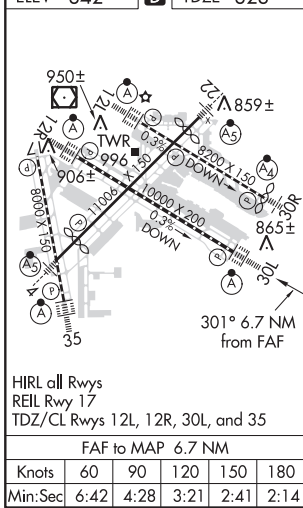
**⚠** Simultaneous approaches authorized with Rwy 30R and ILS V RWY 35 (CONVERGING). For inop ALSF-2, increase S-ILS 30L Cat E visibility to RVR 4000, and increase S-LOC 30L Cat E visibility to 2 miles. EAGAN fix minimums: For inop ALSF-2, increase S-LOC 30L Cat E visibility to 1 3/8 mile.

**ALSF-2**  
**MISSED APPROACH:** Climb to 1300 then climb to 3000 on heading 301° and MSP VOR/DME R-298 to WOXEB INT/ GEP VORTAC 11.8 DME and hold.

ATIS ARR <b>135.35 239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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ELEV 842 **D** TDZE 823



1300	3000	MSP R-298	WOXEB	VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 78).	
hdg 301°					
* LOC only.	EAGAN I-MSP 2.3 RADAR	NARCO INT I-MSP 6.9	AABEZ INT I-MSP 10	PIGZI INT I-MSP 13.2	
	* I-MSP 1.4			PINKE INT I-MSP 16.3	
	I-MSP 0.2			HASTI INT I-MSP 19.4	
		3000	4000	5000	
		1520*	3000	7000	
		0.2	1 NM	0.9	
			4.6 NM	3.1 NM	
			3.1 NM	3.1 NM	
			3.1 NM	3.1 NM	
CATEGORY	A	B	C	D	E
S-ILS 30L	1023/18 200 (200-1/2)				
S-LOC 30L	1520/24	697 (700-1/2)	1520-1 1/2	697 (700-1/2)	
<b>C</b> CIRCLING	1520-1	678 (700-1)	1520-2	1660-2 3/4	1800-3
			678 (700-2)	818 (900-2 3/4)	958 (1000-3)
EAGAN FIX MINIMUMS (DME OR RADAR REQUIRED)					
S-LOC 30L	1280/24	457 (500-1/2)	1280/45	457 (500-7/8)	
<b>C</b> CIRCLING	1360-1	518 (600-1)	1460-1 3/4	1660-2 3/4	1800-3
			618 (700-1 3/4)	818 (900-2 3/4)	958 (1000-3)

HIRL all Rwys  
REIL Rwy 17  
TDZ/CL Rwys 12L, 12R, 30L, and 35  
FAF to MAP 6.7 NM

Knots	60	90	120	150	180
Min:Sec	6:42	4:28	3:21	2:41	2:14

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)  
44°53'N-93°13'W  
**ILS Z or LOC RWY 30L**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-HINN <b>110.7</b> Chan 44	APP CRS <b>301°</b>	Rwy Idg TDZE Apt Elev	<b>8000</b> <b>822</b> <b>842</b>
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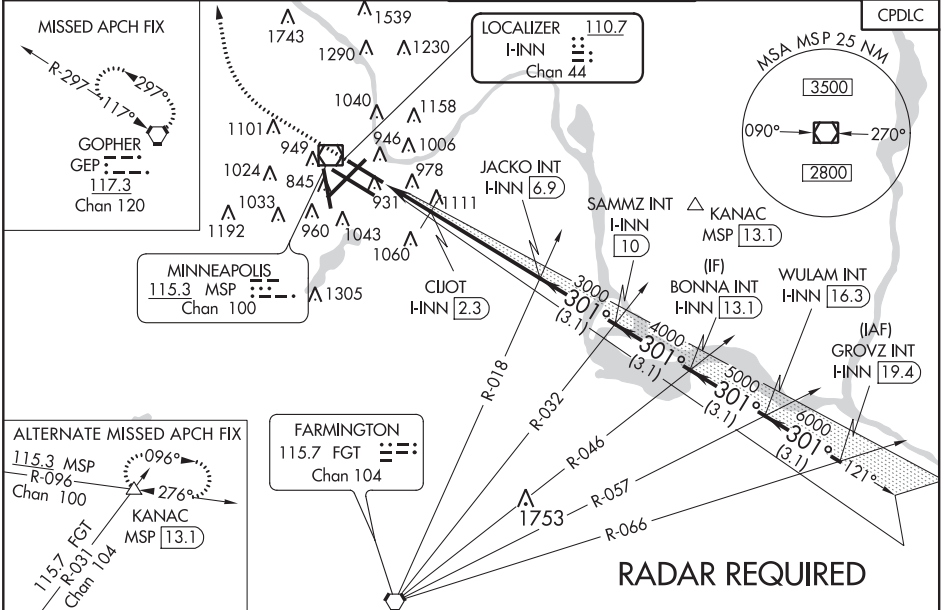
# ILS Z or LOC RWY 30R

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

**⚠** Simultaneous approaches authorized with Rwy 30L and ILS V RWY 35 (CONVERGING). For inop MALSf, increase S-LOC 30R Cat D and E visibility to 2 miles. CIJOT fix minimums: increase S-LOC 30R Cat C/D/E visibility to 1½ mile. Inop table does not apply to S-ILS 30R all Cats.

**MALSf** MISSED APPROACH: Climb to 1300, then climbing right turn to 3000 direct GEP VORTAC and hold.

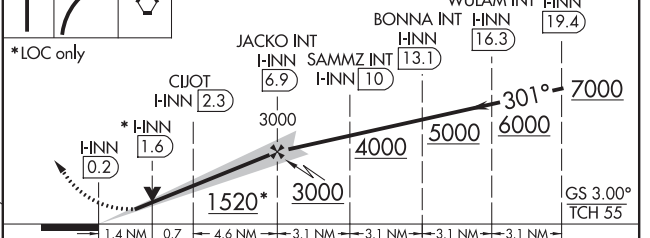
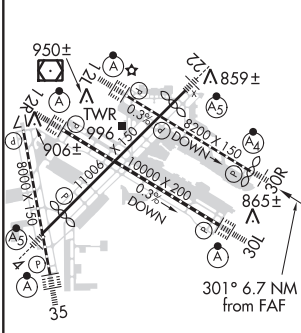
ATIS ARR <b>135.35 239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

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ELEV 842	<b>D</b> TDZE 822	1300	3000	GEP	VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 71).
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HIRL all Rwys	REIL Rwy 17	TDZ/CL Rwys 12L, 12R, 30L, and 35	FAF to MAP 6.7 NM		
Knots	60	90	120	150	180
Min:Sec	6:42	4:28	3:21	2:41	2:14

CATEGORY	A	B	C	D	E
S-ILS 30R	1072/40 250 (300-¾)				
S-LOC 30R	1520/40	698 (700-¾)	1520-1¼	698 (700-1¼)	
<b>C</b> CIRCLING	1520-1	678 (700-1)	1520-2	1660-2¾	1800-3
CIJOT FIX MINIMUMS					
S-LOC 30R	1340/40	518 (500-¾)	1340-1¼	518 (500-1¼)	
<b>C</b> CIRCLING	1360-1	518 (600-1)	1460-1¼	1660-2¾	1800-3
			618 (700-1¼)	818 (900-2¾)	958 (1000-3)

LOC/DME I-BMA <b>110.95</b> Chan 46(Y)	APP CRS <b>350°</b>	Rwy Idg TDZE Apt Elev	<b>8000</b> <b>834</b> <b>842</b>
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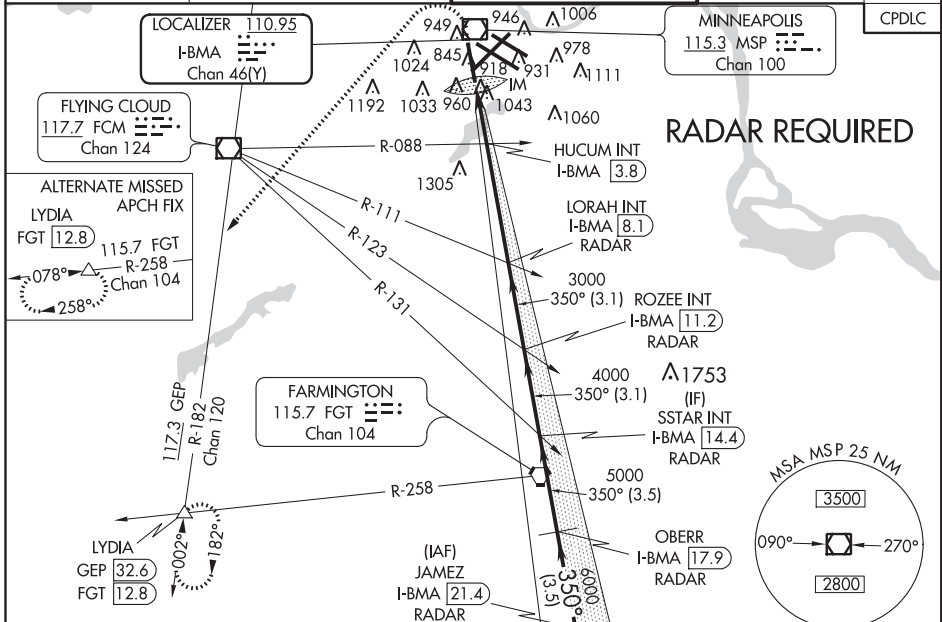
# ILS Z or LOC RWY 35

## MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

**▲** For inop ALSF, increase S-ILS 35 Cat E visibility to RVR 4000, S-LOC 35 Cats C/D/E visibility to 2½ miles, and HUCUM fix minimums S-LOC 35 Cats C/D/E visibility to RVR 5500.

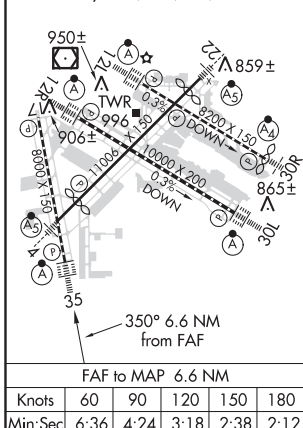
**ALSF-2** MISSED APPROACH: Climb to 1600 then climbing left turn to 3000 on heading 240° and on GEP VORTAC R-182 to LYDIA INT/GEF 32.6 DME and hold.

ATIS ARR <b>135.35</b> <b>239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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ELEV 842	<b>D</b>	TDZE 834
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HIRL all Rwys  
REIL Rwy 17  
TDZ/CL Rwys 12L, 12R, 30L, and 35



1600	3000	GEF R-182	LYDIA	VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 71).	JAMEZ I-BMA 21.4 RADAR
hdg 240°				SSTAR INT I-BMA 17.9 RADAR	OBERR I-BMA 17.9 RADAR
*LOC only					
HUCUM INT I-BMA 3.8	LORAH INT I-BMA 8.1	ROZEE INT I-BMA 11.2	JAMEZ I-BMA 21.4	OBERR I-BMA 17.9	JAMEZ I-BMA 21.4
I-BMA 1.5	I-BMA 2.3	I-BMA 14.4	I-BMA 17.9	I-BMA 17.9	I-BMA 21.4
3000	3000	4000	5000	6000	7000
0.1	0.8	1.4	4.3 NM	3.1 NM	3.5 NM
GS 3.00° TCH 55					

CATEGORY	A	B	C	D	E
S-ILS 35	1034/18 200 (200-½)				
S-LOC 35	1600/24 766 (800-½)	1600/40 766 (800-¾)	1600-1¾ 766 (800-1¾)		
<b>C</b> CIRCLING	1600-1 758 (800-1)	1600-1¼ 758 (800-1¼)	1600-2½ 758 (800-2½)	1660-2¾ 818 (900-2¾)	1800-3 958 (1000-3)
HUCUM FIX MINIMUMS (DUAL VOR RECEIVERS OR DME REQUIRED)					
S-LOC 35	1180/24	346 (400-½)	1180/30 346 (400-¾)		
<b>C</b> CIRCLING	1360-1	518 (600-1)	1460-1¾ 618 (700-1¾)	1660-2¾ 818 (900-2¾)	1800-3 958 (1000-3)

NC-1, 10 NOV 2016 to 05 JAN 2017

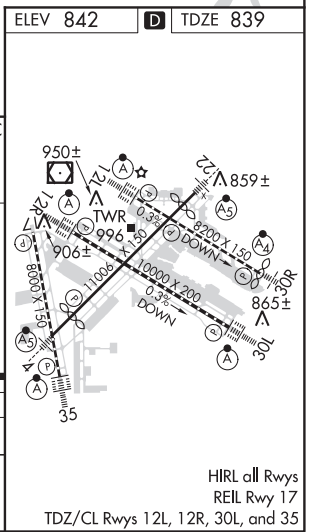
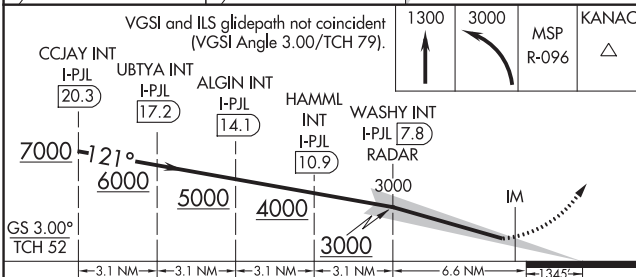
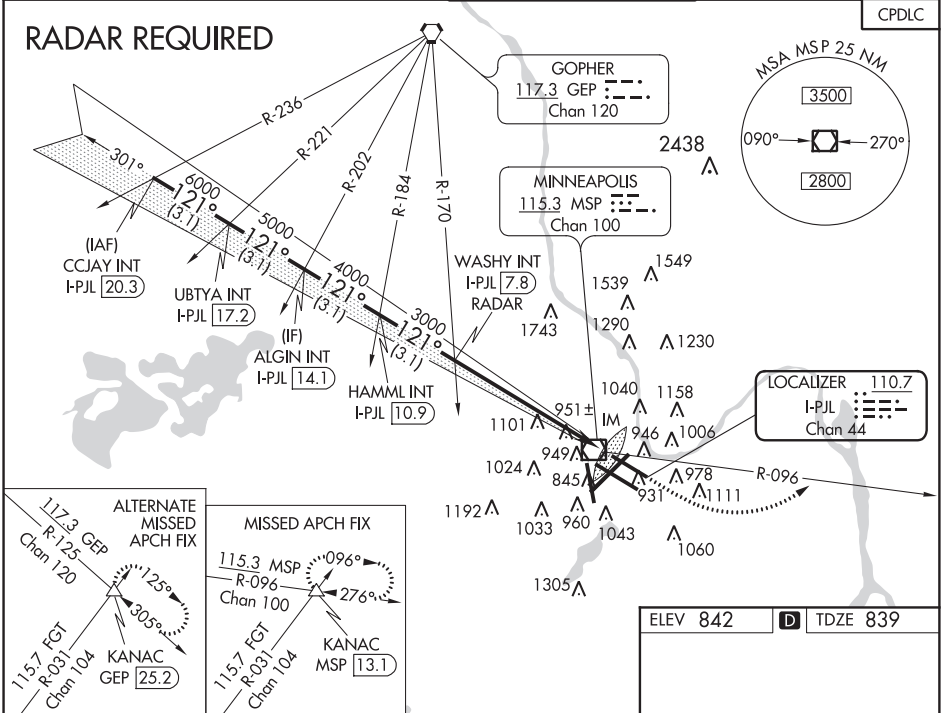
NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-PJL <b>110.7</b> Chan <b>44</b>	APP CRS <b>121°</b>	Rwy Idg TDZE <b>7620</b> <b>839</b>	Apt Elev <b>842</b>
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# ILS RWY 12L (SA CAT I)

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<b>⚠</b> Simultaneous approach authorized with Rwy 12R. <b>⚠</b> Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.	ALS-F-2 	MISSED APPROACH: Climb to 1300, then climbing left turn to 3000 on MSP VOR/DME R-096 to KANAC INT/MSP 13.1 DME and hold.
	ATIS ARR <b>135.35</b> <b>239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)
	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>



CCJAY INT I-PJL 20.3	UBTYA INT I-PJL 17.2	ALGIN INT I-PJL 14.1	HAMML INT I-PJL 10.9	WASHY INT I-PJL 7.8 RADAR	MSP R-096	KANAC
SA CATEGORY I ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED						
HIRL all Rwys REIL Rwy 17 TDZ/CL Rwys 12L, 12R, 30L, and 35						

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

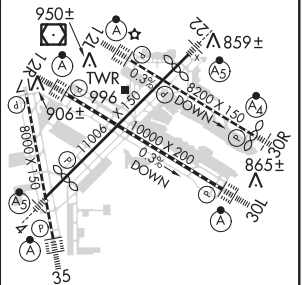
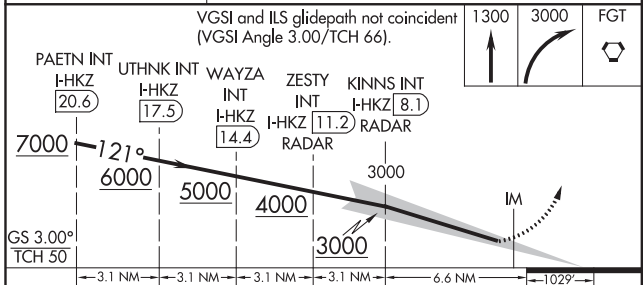
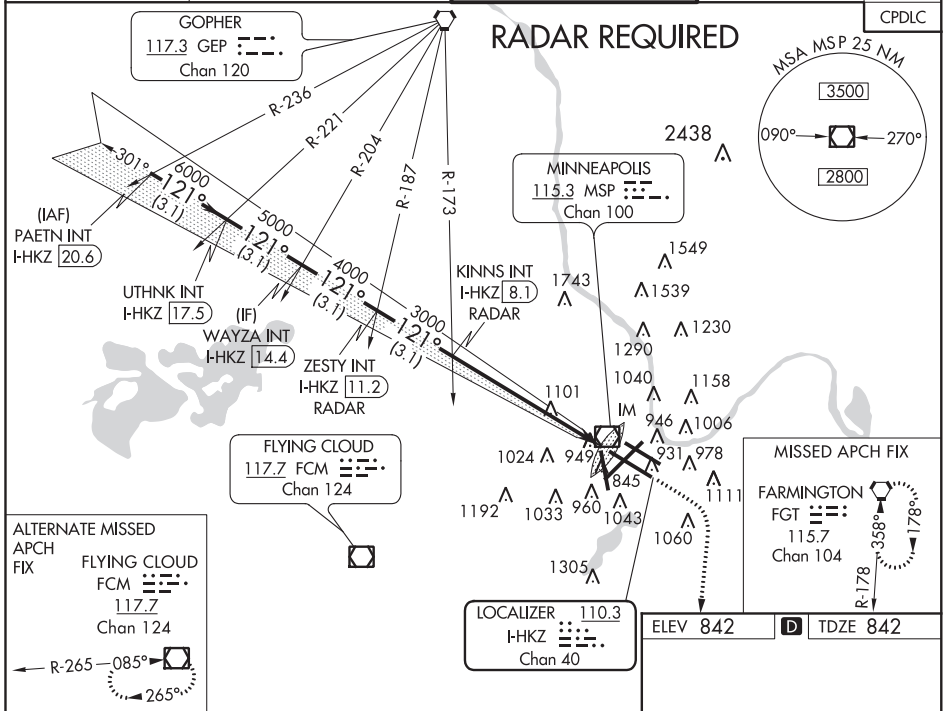
LOC/DME I-HKZ <b>110.3</b> Chan <b>40</b>	APP CRS <b>121°</b>	Rwy Idg <b>10000</b> TDZE <b>842</b> Apt Elev <b>842</b>
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# ILS RWY 12R (SA CAT I)

## MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

	ALSIF-2 	MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct FGT VORTAC and hold.

ATIS ARR <b>135.35</b> <b>239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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CATEGORY	A	B	C	D
S-ILS 12R	RA 168/14 150 DA 992			

### SA CATEGORY I ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

HIRL all Rwys  
REIL Rwy 17  
TDZ/CL Rwys 12L, 12R, 30L, and 35

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

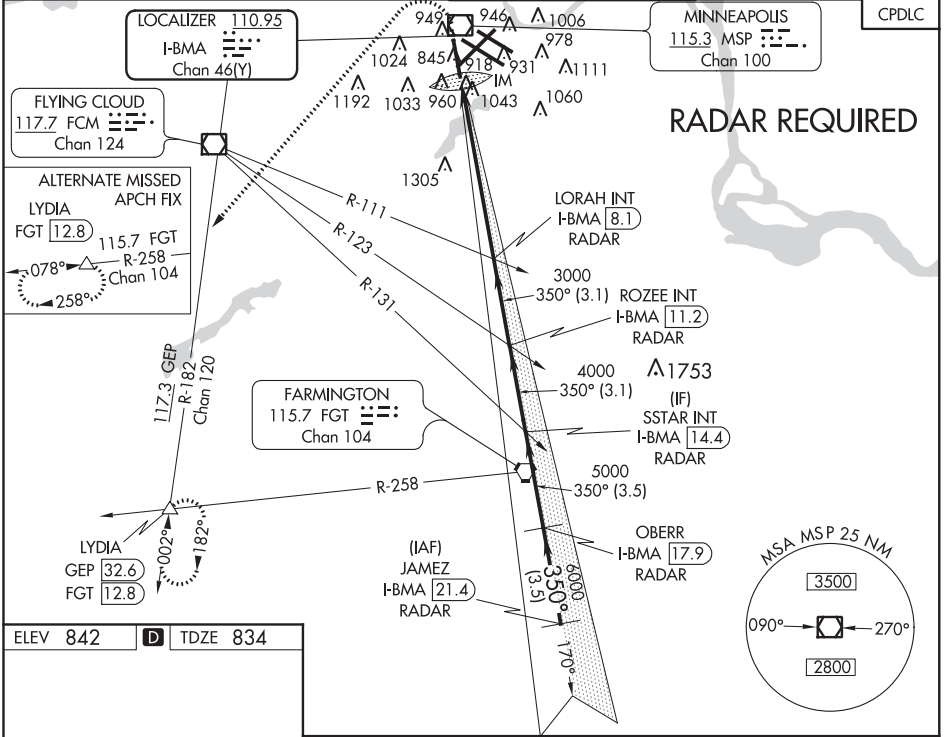
LOC/DME I-BMA <b>110.95</b> Chan <b>46 (Y)</b>	APP CRS <b>350°</b>	Rwy Idg TDZE Apt Elev	<b>8000</b> <b>834</b> <b>842</b>
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# ILS Z RWY 35 (SA CAT I)

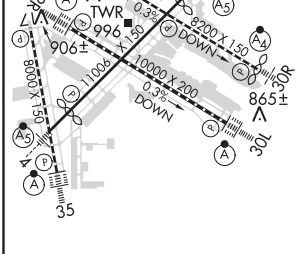
## MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<p>Requires specific OPSEC, MSPEC, or LOA approval and use of HUD to DH.</p>	<p>ALSIF-2</p>	<p>MISSED APPROACH: Climb to 1600 then climbing left turn to 3000 on heading 240° and on GEP VORTAC R-182 to LYDIA INT/GEP 32.6 DME and hold.</p>
	<p>CPDLC</p>	

ATIS ARR <b>135.35 239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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ELEV 842	<b>D</b>	TDZE 834
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1600 3000 hdg 240°

GEP R-182 LYDIA

VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 71).

SSTAR INT I-BMA 14.4 RADAR  
OBERR I-BMA 17.9 RADAR  
JAMEZ I-BMA 21.4 RADAR

LORAH INT I-BMA 8.1 RADAR  
ROZEE INT I-BMA 11.2 RADAR  
I-BMA 14.4 RADAR

350° 7000  
3000 4000 5000 6000  
GS 3.00° TCH 55

CATEGORY	A	B	C	D
S-ILS 35	RA 157/14 150 DA 984			

**SA CATEGORY I ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-MSP <b>110.3</b> Chan 40	APP CRS <b>301°</b>	Rwy Idg TDZE Apt Elev	<b>10000</b> <b>823</b> <b>842</b>
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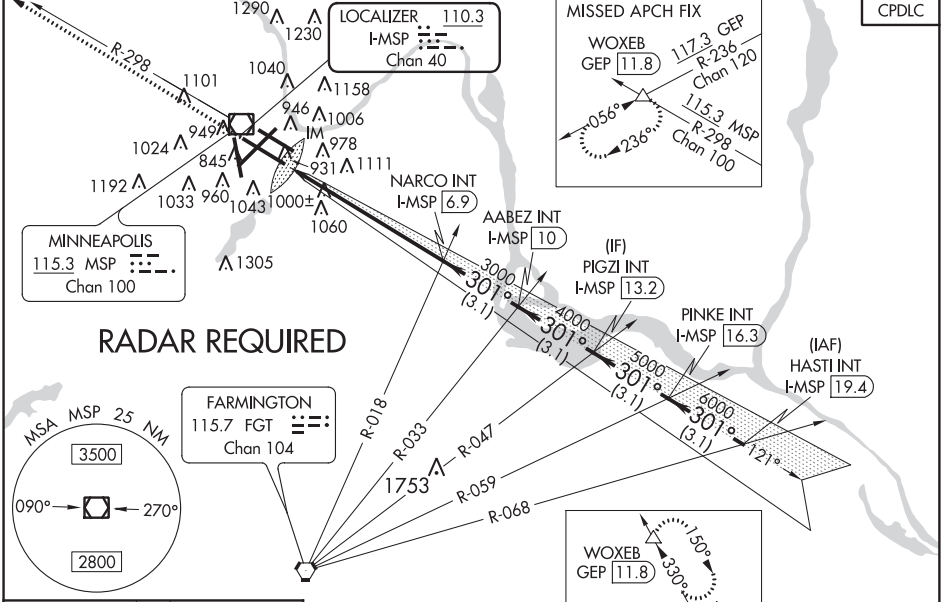
# ILS Z RWY 30L (CAT II)

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

**Simultaneous approaches authorized with Rwy 30R and ILS V RWY 35 (CONVERGING). RVR 1000 authorized with specific OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to touchdown.**

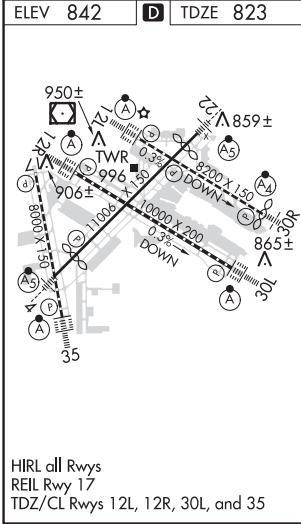
**MISSED APPROACH:** Climb to 1300 then climb to 3000 on heading 301° and MSP VOR/DME R-298 to WOXEB INT/ GEP VORTAC 11.8 DME and hold.

ATIS ARR <b>135.35 239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 842	D	TDZE 823			
1300	3000	MSP R-298	WOXEB	VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 78).	HASTI INT I-MSP 19.4
hdg 301°					
IM	3000	4000	5000	6000	7000
	6.7 NM	3.1 NM	3.1 NM	3.1 NM	3.1 NM
CATEGORY	A	B	C	D	
S-ILS 30L	RA NA/12 100 DA 923				
<b>CATEGORY II ILS - SPECIAL AIRCREW &amp; AIRCRAFT CERTIFICATION REQUIRED</b>					

LOC/DME I-PJL <b>110.7</b> Chan <b>44</b>	APP CRS <b>121°</b>	Rwy Idg TDZE <b>7620</b> <b>839</b>	Apt Elev <b>842</b>
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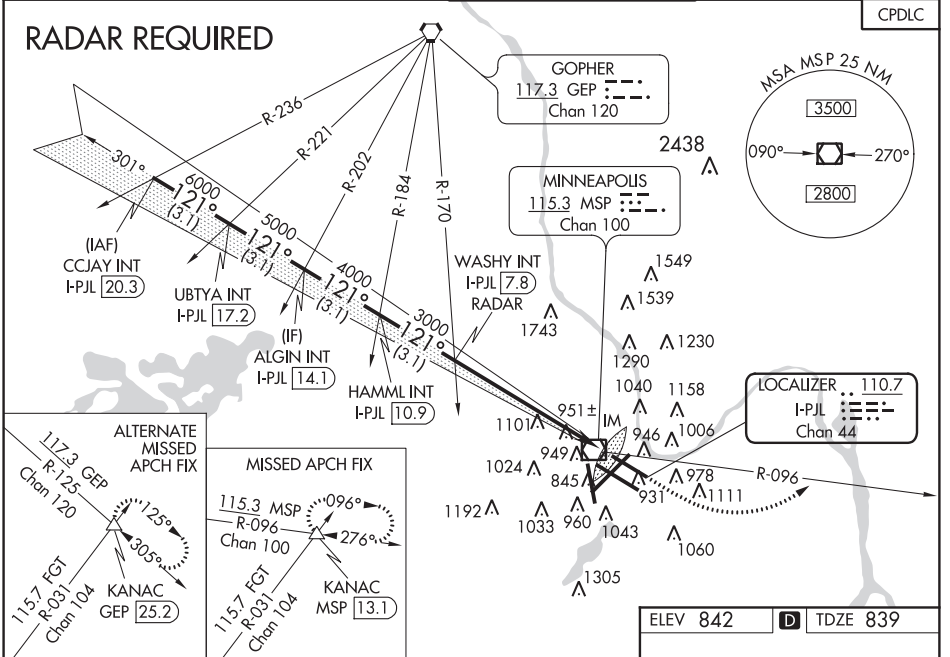
# ILS RWY 12L (CAT II & III)

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

**⚠** Simultaneous approach authorized with Rwy 12R.  
**⚠** CAT II: RVR 1000 authorized with specific OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to touchdown.

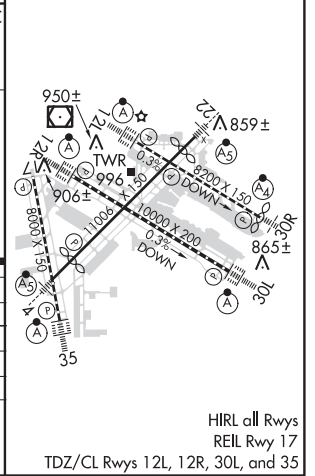
ALS-2  
 MISSED APPROACH: Climb to 1300, then climbing left turn to 3000 on MSP VOR/DME R-096 to KANAC INT/MSP 13.1 DME and hold.

ATIS ARR <b>135.35 239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 79).

CCJAY INT I-PJL <b>20.3</b>	UBTYA INT I-PJL <b>17.2</b>	ALGIN INT I-PJL <b>14.1</b>	HAMMIL INT I-PJL <b>10.9</b>	WASHY INT I-PJL <b>7.8</b> RADAR	IM 938
7000	6000	5000	4000	3000	
GS 3.00° TCH 52					
-3.1 NM		-3.1 NM		-3.1 NM	
-3.1 NM		-3.1 NM		-6.6 NM	
-3.1 NM		-3.1 NM		-1345'	
CATEGORY	A	B	C	D	
S-ILS 12L	CAT II RA 91/12 100 DA 939				
S-ILS 12L	CAT IIIa RVR 07				
S-ILS 12L	CAT IIIb RVR 06				
S-ILS 12L	CAT IIIc NA				



## CATEGORY II & III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



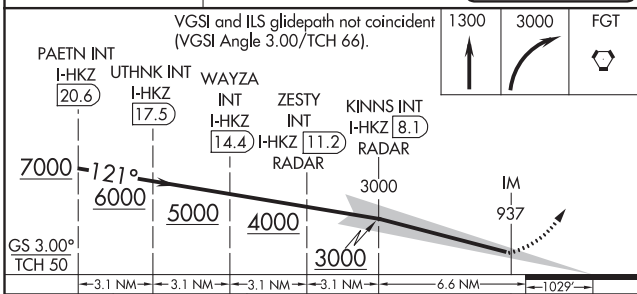
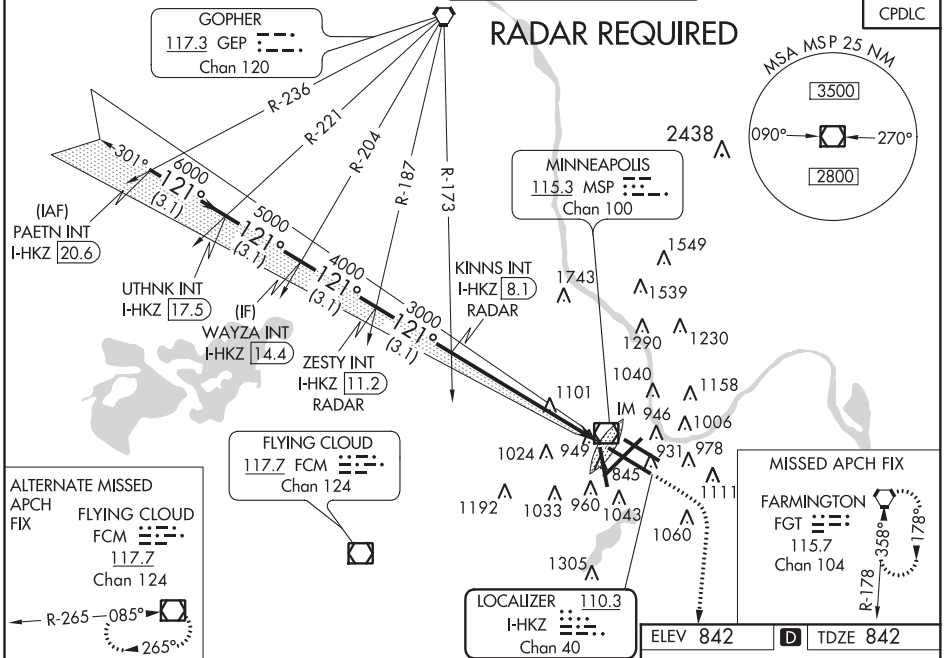
LOC/DME I-HKZ <b>110.3</b> Chan 40	APP CRS <b>121°</b>	Rwy Idg <b>10000</b> TDZE <b>842</b> Apt Elev <b>842</b>
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**ILS RWY 12R (CAT II & III)**  
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

**Simultaneous approach authorized with Rwy 12L.**  
**CAT II: RVR 1000 authorized with specific OPSPEC, MSPEC, or LOA approval and use of autoland or HUD to touchdown.**

ALSF-2 MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct FGT VORTAC and hold.

ATIS ARR <b>135.35</b> 239.275 DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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CATEGORY	A	B	C	D
S-ILS 12R		CAT II RA 102/12 100 DA 942		
S-ILS 12R		CAT IIIa RVR 06		
S-ILS 12R		CAT IIIb NA		
S-ILS 12R		CAT IIIc NA		

**CATEGORY II & III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED**

HIRL all Rwys  
REIL Rwy 17  
TDZ/CL Rwys 12L, 12R, 30L, and 35

NC-1, 10 NOV 2016 to 05 JAN 2017

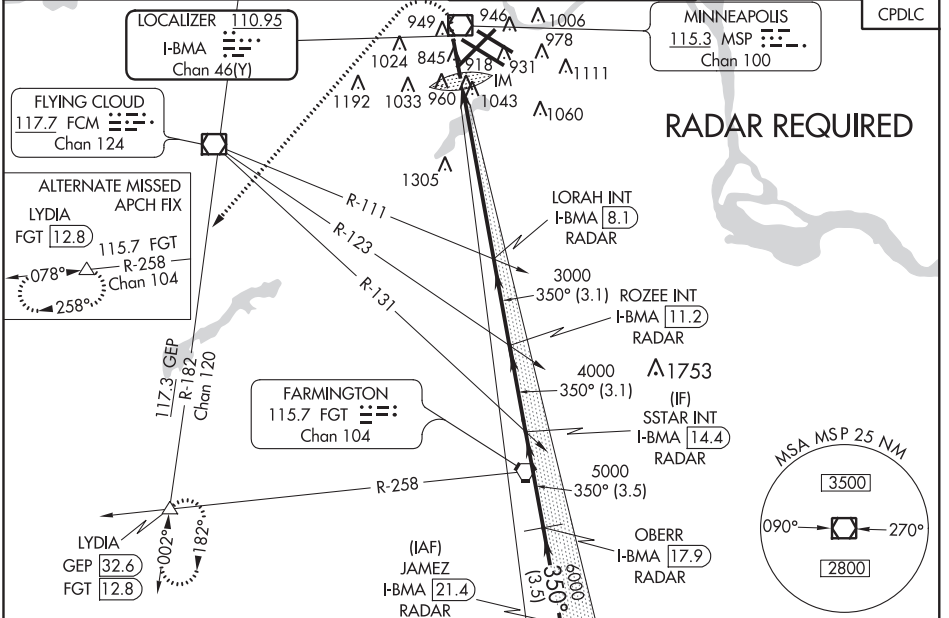
NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-BMA <b>110.95</b> Chan 46 (Y)	APP CRS <b>350°</b>	Rwy Idg TDZE Apt Elev	<b>8000</b> <b>834</b> <b>842</b>
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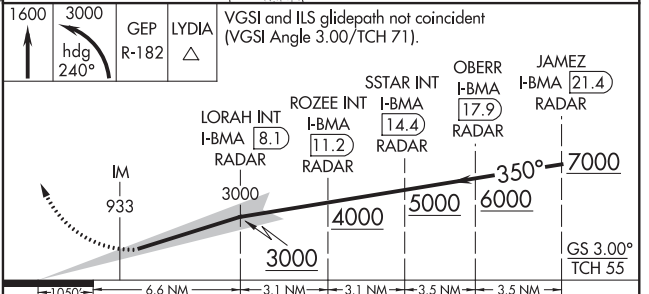
# ILS Z RWY 35 (CAT II & III)

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<b>ATIS</b> ARR <b>135.35</b> <b>239.275</b> DEP <b>120.8</b>	<b>MINNEAPOLIS APP CON</b> <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	<b>MINNEAPOLIS TOWER</b> <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	<b>GND CON</b> <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	<b>CLNC DEL</b> <b>133.2</b>

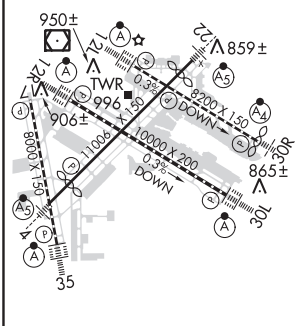


ELEV 842	<b>D</b>	TDZE 834
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CATEGORY	A	B	C	D
S-ILS 35	CAT II RA 106/12 110 DA 944			
S-ILS 35	CAT IIIa RVR 07			
S-ILS 35	CAT IIIb RVR 06			
S-ILS 35	CAT IIIc NA			

**CATEGORY II & III ILS - SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED**



HIRL all Rwys  
REIL Rwy 17  
TDZ/CL Rwys 12L, 12R, 30L, and 35

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

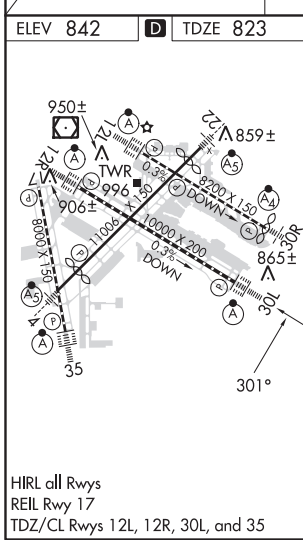
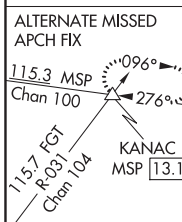
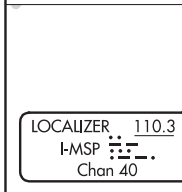
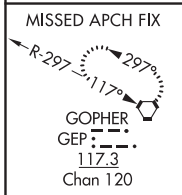
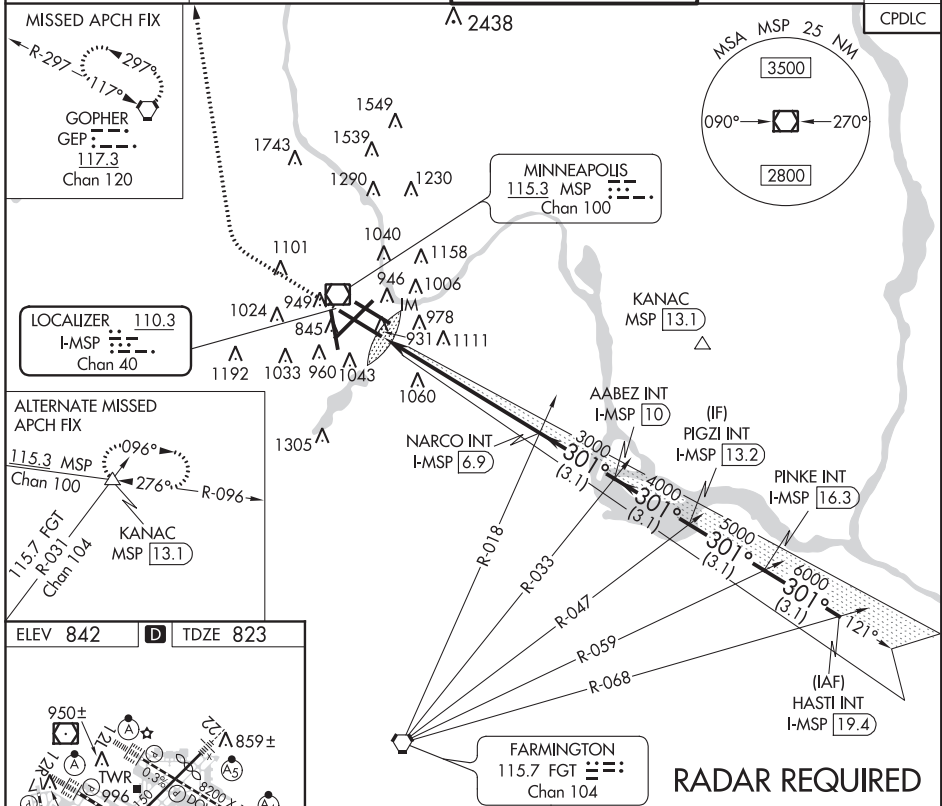
LOC/DME I-MSP <b>110.3</b> Chan <b>40</b>	APP CRS <b>301°</b>	Rwy Idg <b>10000</b> TDZE <b>823</b> Apt Elev <b>842</b>
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# ILS V RWY 30L (CONVERGING)

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

	For inop ALSF-2, increase visibility all Cats to 1 1/2 mile. Simultaneous approaches authorized with Rwy 30R and ILS V RWY 35 (CONVERGING).		MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct GEP VORTAC and hold.

ATIS ARR <b>135.35</b> <b>239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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1300 3000 GEP	VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 78).				
	NARCO INT I-MSP [6.9]	AABEZ INT I-MSP [10]	PIGZI INT I-MSP [13.2]	PINKE INT I-MSP [16.3]	HASTI INT I-MSP [19.4]
Use I-MSP DME when on the localizer course.	3000	4000	5000	6000	7000
IM	3000	4000	5000	6000	7000
GS 3.00° TCH 55	0.2	6.5 NM	3.1 NM	3.1 NM	3.1 NM
CATEGORY	A	B	C	D	E
S-ILS 30L	1173/40 350 (400-3/4)				

NC-1, 10 NOV 2016 to 05 JAN 2017

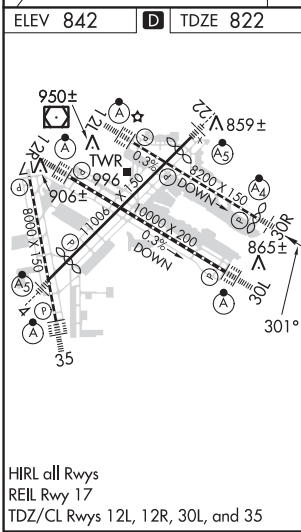
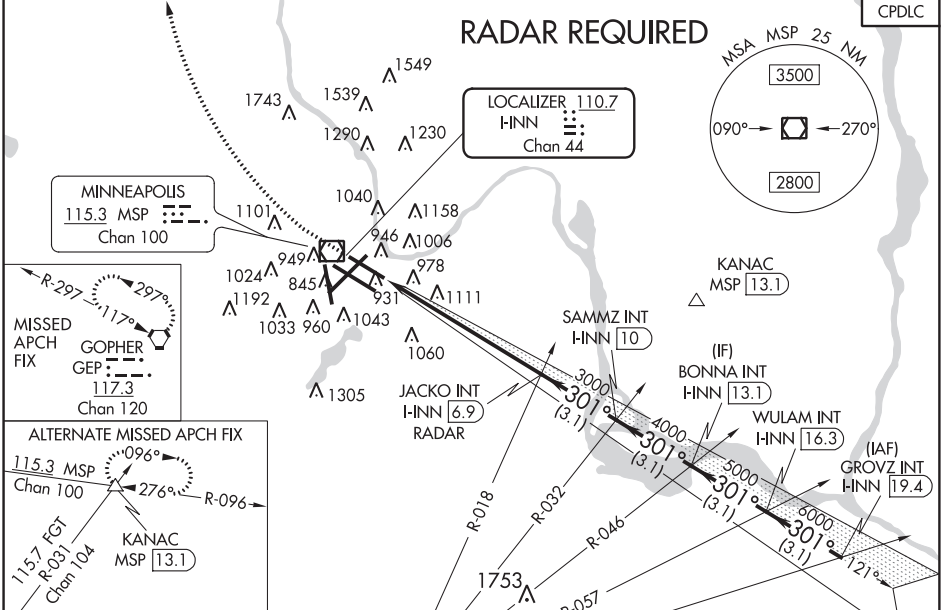
NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-INN <b>110.7</b> Chan <b>44</b>	APP CRS <b>301°</b>	Rwy Idg <b>8000</b>	<b>822</b>
		TDZE <b>822</b>	
		Apt Elev <b>842</b>	

# ILS V RWY 30R (CONVERGING)

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<b>▲</b> Simultaneous approaches authorized with Rwy 30L and ILS V RWY 35 (CONVERGING). For inop MALSF, increase S-ILS 30R all Cats visibility to 1½ mile.	ATIS ARR <b>135.35</b> <b>239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
	MALSF 	MISSED APPROACH: Climb to 1500, then climbing right turn to 3000 direct GEP VORTAC and hold.			



1500	3000	GEP	VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 71).	GROVZ INT H-INN 19.4	
				WULAM INT H-INN 16.3	
				BONNA INT H-INN 13.1	
				JACKO INT H-INN 6.9	
				SAMMZ INT H-INN 10	
				301° 7000	
				GS 3.00° TCH 55	
				Distances: 6.7 NM, 3.1 NM, 3.1 NM, 3.1 NM, 3.1 NM	
CATEGORY	A	B	C	D	E
S-ILS 30R	1272 - 1¼ 450 (500-1¼)				

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

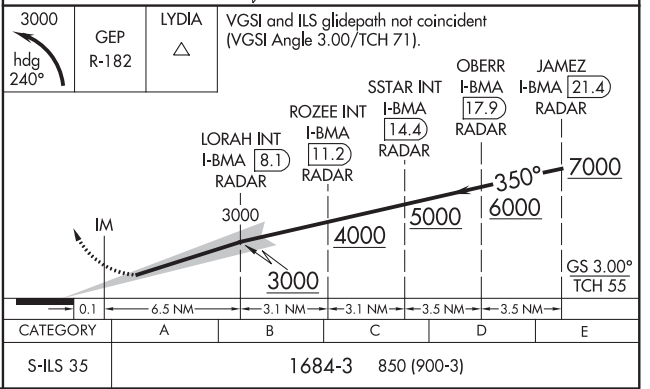
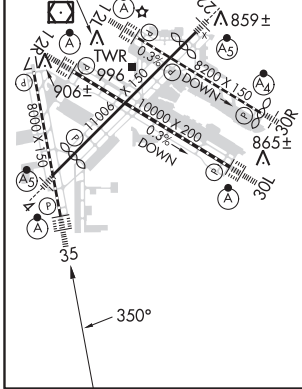
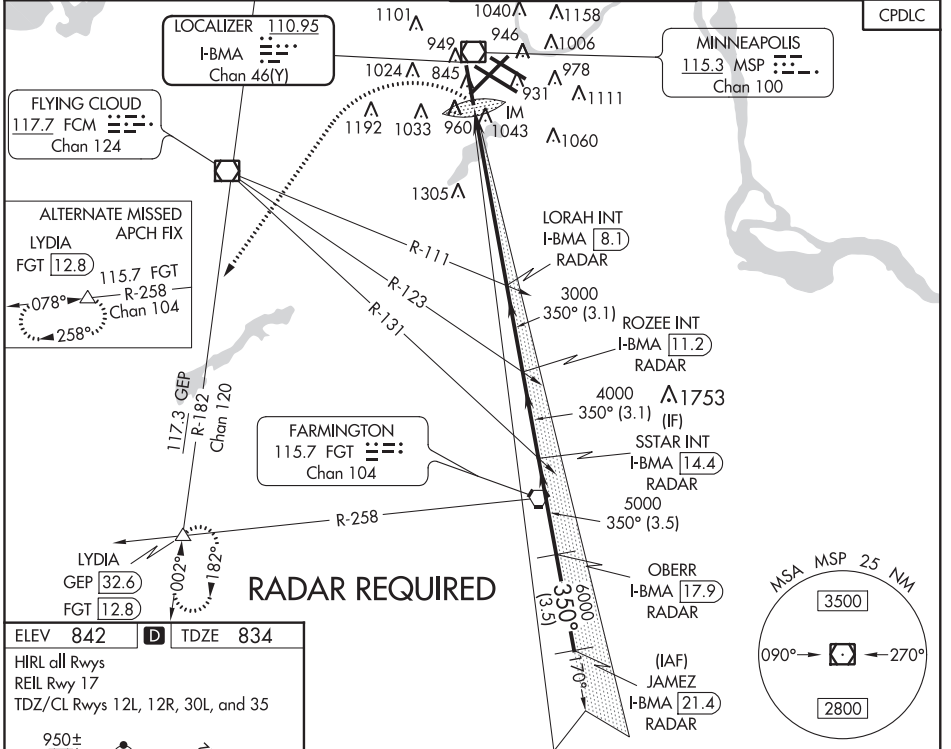
LOC/DME I-BMA <b>110.95</b> Chan <b>46 (Y)</b>	APP CRS <b>350°</b>	Rwy Idg TDZE Apt Elev	<b>8000</b> <b>834</b> <b>842</b>
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# ILS V RWY 35 (CONVERGING)

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<b>NA</b> Inop table does not apply. No autoland on ILS V RWY 35 (CONVERGING). Simultaneous approach authorized.	ALSF-2 	MISSED APPROACH: Climbing left turn to 3000 on heading 240° and on GEP VORTAC R-182 to LYDIA INT/GEP 32.6 DME and hold.
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ATIS ARR <b>135.35 239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MINNEAPOLIS, MINNESOTA

AL-264 (FAA)

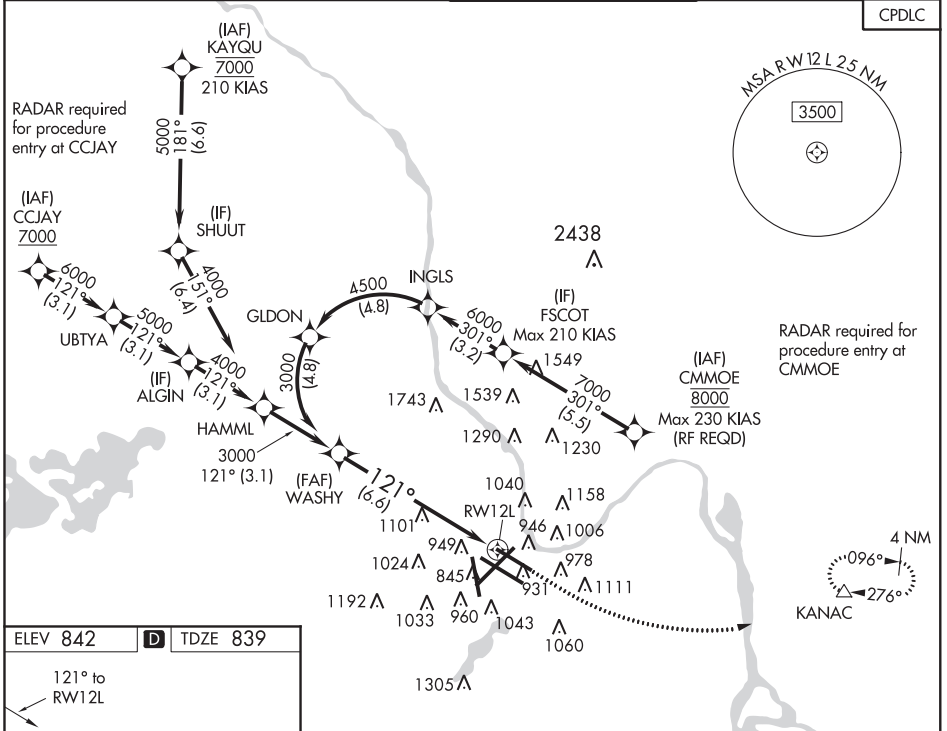
16315

APP CRS	Rwy Idg	<b>7620</b>
<b>121°</b>	TDZE	<b>839</b>
	Apt Elev	<b>842</b>

# RNAV (RNP) Y RWY 12L

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

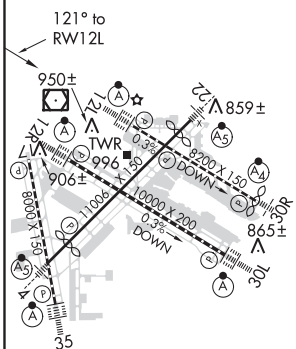
<b>▽</b> For uncompensated Baro-VNAV systems, procedure NA below -20°C (-4°F) or above 54°C (130°F). GPS required.	ATIS	MINNEAPOLIS APP CON	MINNEAPOLIS TOWER	GND CON	CLNC DEL
	ARR <b>135.35</b> <b>239.275</b>	<b>118.725 335.5</b> (Rwy 35)	<b>123.675 273.55</b> (17-35)	<b>N 121.8 348.6</b>	<b>133.2</b>
	DEP <b>120.8</b>	<b>119.3 335.5</b> (12L-30R, 4-22, 17)	<b>123.95 273.55</b> (12L-30R)	<b>S 121.9 348.6</b>	
		<b>126.95 335.5</b> (12R-30L)	<b>126.7 273.55</b> (12R-30L, 4-22)	<b>W 127.925 348.6</b>	



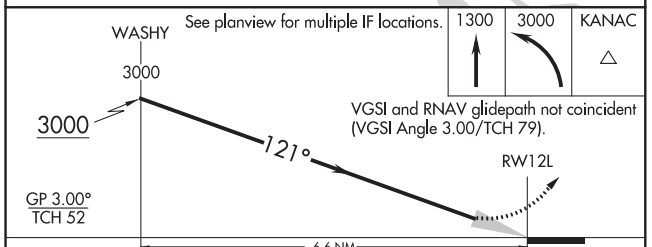
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 842	<b>D</b>	TDZE 839
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HIRL all Rwys  
REIL Rwy 17  
TDZ/CL Rwys 12L, 12R, 30L, and 35



CATEGORY	A	B	C	D
RNP 0.15 DA		1150/24	311 (400-½)	
RNP 0.30 DA		1241/45	402 (400-¾)	

## AUTHORIZATION REQUIRED

MINNEAPOLIS, MINNESOTA  
Orig 30APR15

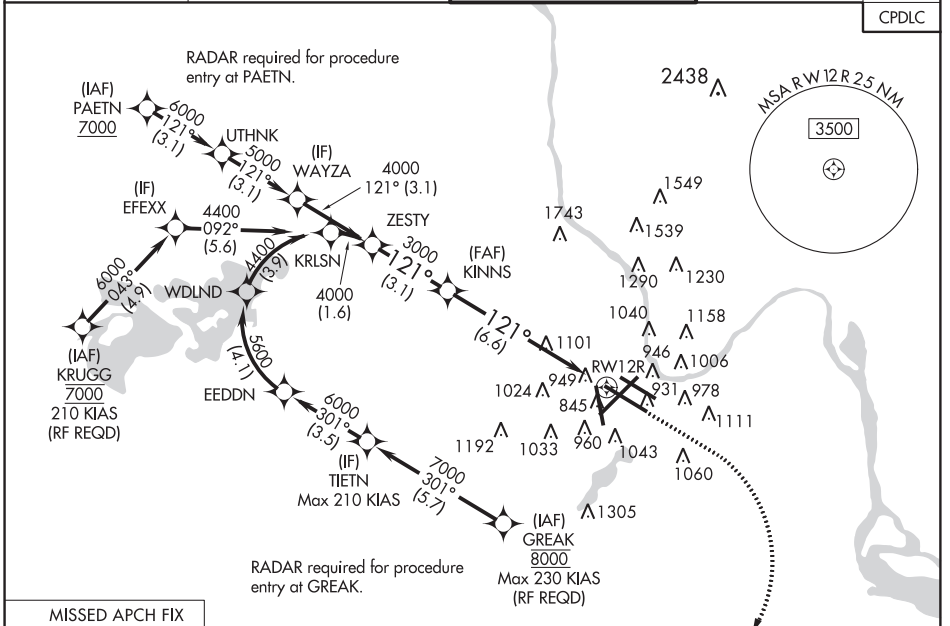
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)  
44°53'N-93°13'W  
**RNAV (RNP) Y RWY 12L**

APP CRS	Rwy Idg	<b>10000</b>
<b>121°</b>	TDZE	<b>842</b>
	Apt Elev	<b>842</b>

# RNAV (RNP) Y RWY 12R

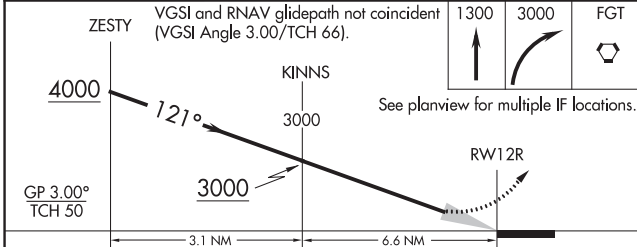
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<p><b>▼</b> For uncompensated Baro-VNAV systems, procedure NA below -20°C (-4°F) or above 54°C (130°F). For inop ALSF, increase RNP 0.15 all Cats visibility to RVR 6000. GPS required.</p>	ATIS	MINNEAPOLIS APP CON	MINNEAPOLIS TOWER	GND CON	CLNC DEL
	ARR <b>135.35</b> DEP <b>120.8</b>	<b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	<b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	<b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	<b>133.2</b>



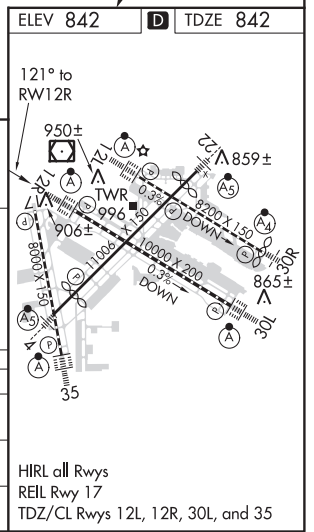
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D
RNP 0.15 DA		1191/40	349 (400-¾)	
RNP 0.30 DA		1251/45	409 (500-¾)	

## AUTHORIZATION REQUIRED




# RNAV (RNP) Y RWY 30L

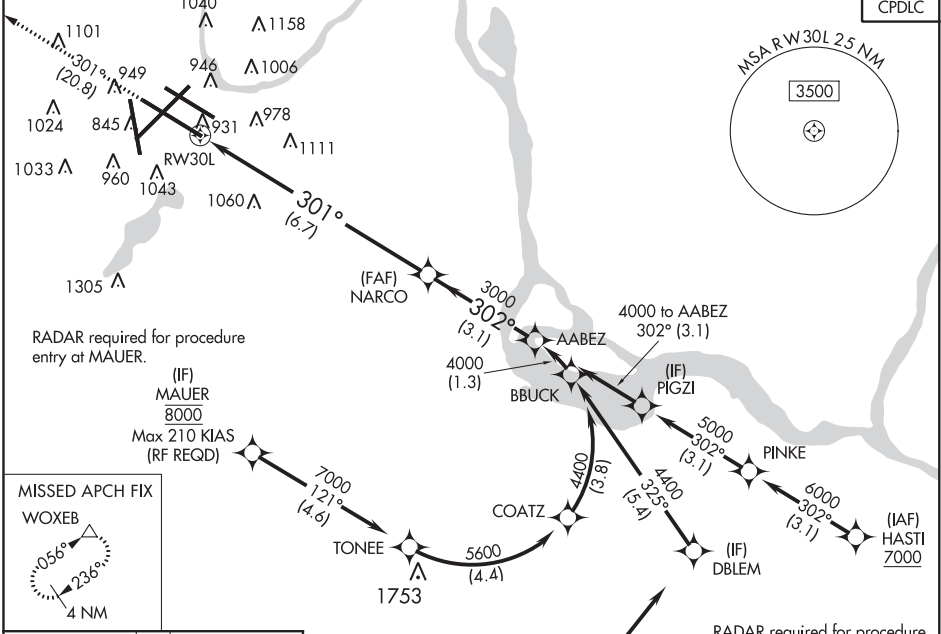
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

APP CRS <b>301°</b>	Rwy Idg <b>10000</b>
	TDZE <b>823</b>
	Apt Elev <b>842</b>

**▼** For uncompensated Baro-VNAV systems, procedure NA below -19°C (-2°F) or above 54°C (130°F). For inop ALSF, increase RNP 0.30 all Cats visibility to RVR 5000. GPS required.

ALSF-2   
 MISSED APPROACH: Climb to 3000 on track 301° to WOXB and hold.

ATIS ARR <b>135.35</b> 239.275 DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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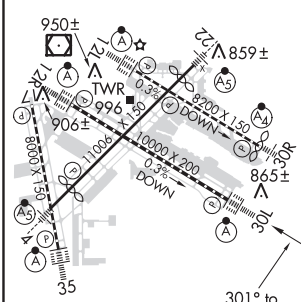


NC-1, 10 NOV 2016 to 05 JAN 2017

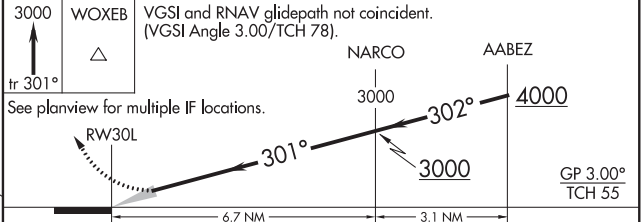
NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV <b>842</b>	<b>D</b>	TDZE <b>823</b>
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HIRL all Rwys  
 REIL Rwy 17  
 TDZ/CL Rwys 12L, 12R, 30L, and 35



RADAR required for procedure entry at HASTI.



CATEGORY	A	B	C	D
RNP 0.30 DA	1 150/30 327 (400-%)			

## AUTHORIZATION REQUIRED



APP CRS	Rwy Idg	<b>8000</b>
<b>301°</b>	TDZE	<b>822</b>
	Apt Elev	<b>842</b>

# RNAV (RNP) Y RWY 30R

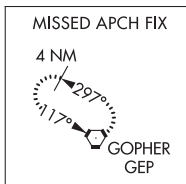
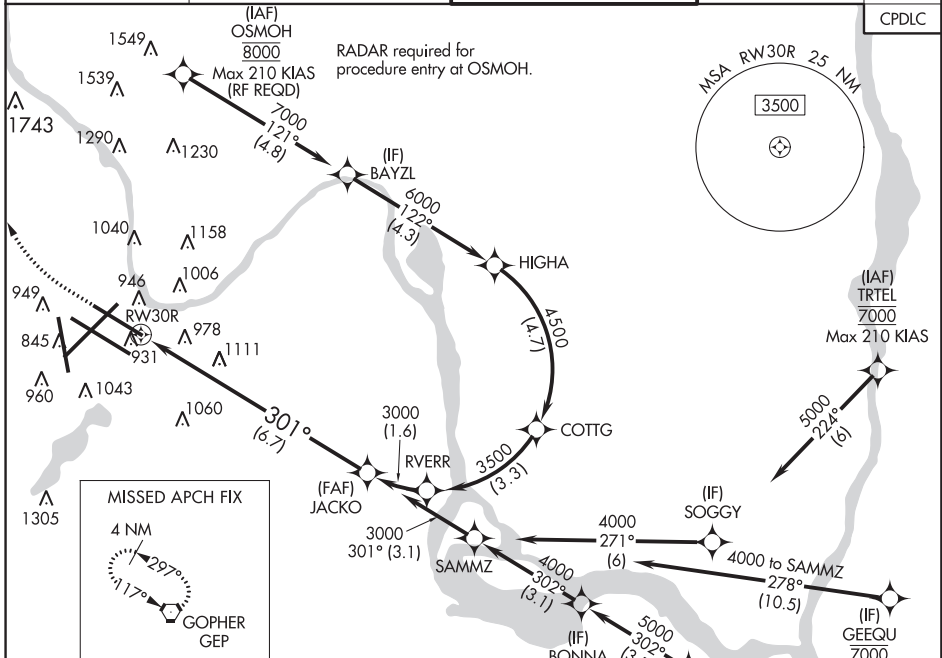
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

▼ For uncompensated Baro-VNAV systems, procedure NA below -19°C (-2°F) or above 54°C (130°F). For inop MALSF, increase RNP 0.15 all Cats visibility to RVR 4500 and RNP 0.30 Cat D visibility to 1 1/8 mile. GPS required.

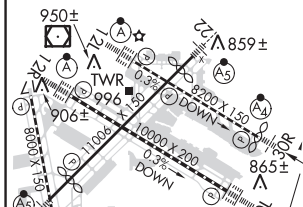
MALSF

MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct GEP VORTAC and hold.

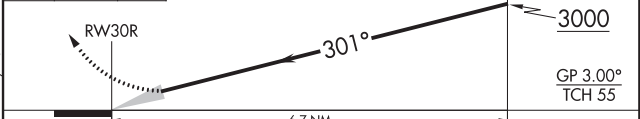
ATIS	MINNEAPOLIS APP CON	MINNEAPOLIS TOWER	GND CON	CLNC DEL
ARR <b>135.35 239.275</b>	<b>118.725 335.5</b> (Rwy 35)	<b>123.675 273.55</b> (17-35)	<b>N 121.8 348.6</b>	<b>133.2</b>
DEP <b>120.8</b>	<b>119.3 335.5</b> (12L-30R, 4-22, 17)	<b>123.95 273.55</b> (12L-30R)	<b>S 121.9 348.6</b>	
	<b>126.95 335.5</b> (12R-30L)	<b>126.7 273.55</b> (12R-30L, 4-22)	<b>W 127.925 348.6</b>	



ELEV <b>842</b>	<b>D</b>	TDZE <b>822</b>
HIRL all Rwys		
REIL Rwy 17		
TDZ/CL Rwys 12L, 12R, 30L, and 35		



1300 3000 GEP VGS1 and RNAV glidepath not coincident (VGS1 Angle 3.00/TCH 71). See planview for multiple IF locations.



CATEGORY	A	B	C	D
RNP 0.15 DA		1097/40	275 (300-3/4)	
RNP 0.30 DA		1305-1 3/8	483 (500-1%)	

## AUTHORIZATION REQUIRED

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

APP CRS	Rwy Idg	<b>8000</b>
<b>350°</b>	TDZE	<b>834</b>
	Apt Elev	<b>842</b>

# RNAV (RNP) Y RWY 35

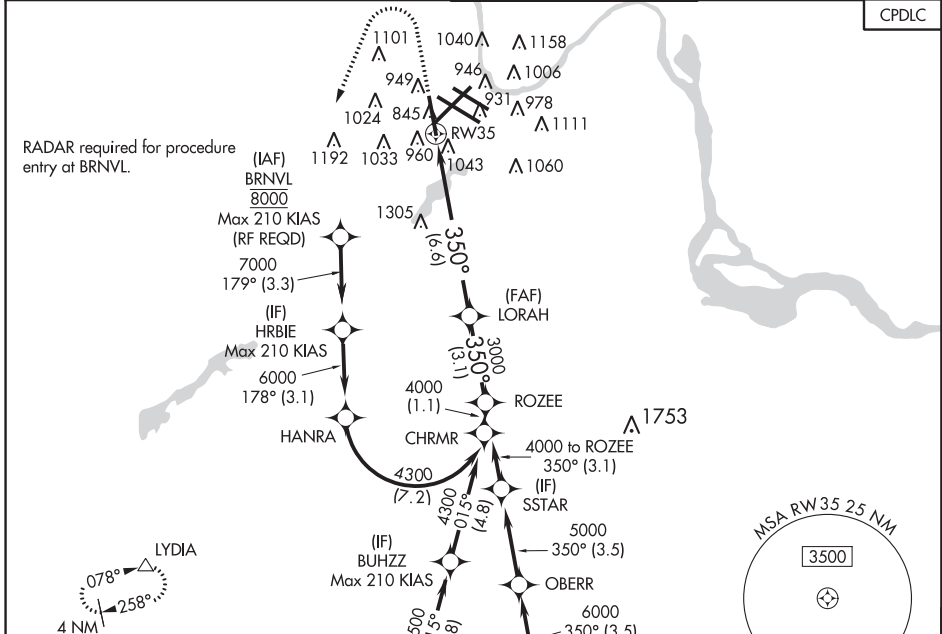
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

**▼** For uncompensated Baro-VNAV systems, procedure NA below -19°C (-2°F) or above 54°C (130°F). For inop ALSF, increase RNP 0.30 all Cats visibility to 1½ miles. GPS required.

**ALSF-2**

**MISSED APPROACH:** Climb to 1300 then climbing left turn to 3000 direct LYDIA and hold.

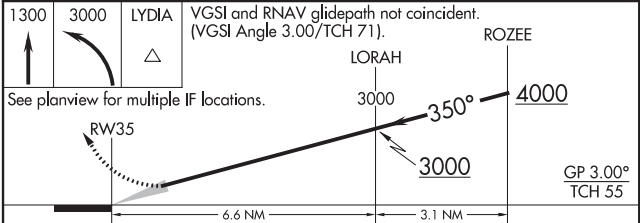
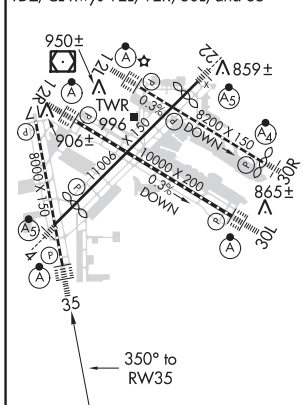
ATIS	MINNEAPOLIS APP CON	MINNEAPOLIS TOWER	GND CON	CLNC DEL
ARR <b>135.35 239.275</b>	<b>118.725 335.5</b> (Rwy 35)	<b>123.675 273.55</b> (17-35)	<b>N 121.8 348.6</b>	<b>133.2</b>
DEP <b>120.8</b>	<b>119.3 335.5</b> (12L-30R, 4-22, 17)	<b>123.95 273.55</b> (12L-30R)	<b>S 121.9 348.6</b>	
	<b>126.95 335.5</b> (12R-30L)	<b>126.7 273.55</b> (12R-30L, 4-22)	<b>W 127.925 348.6</b>	



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV <b>842</b>	<b>D</b>	TDZE <b>834</b>
HIRL all Rwys		
REIL Rwy 17		
TDZ/CL Rwys 12L, 12R, 30L, and 35		



CATEGORY	A	B	C	D
RNP 0.11 DA		1213/40	379 (400-¾)	
RNP 0.16 DA		1291/60	457 (500-1¼)	
RNP 0.30 DA		1345-1¼	511 (600-1¼)	

## AUTHORIZATION REQUIRED

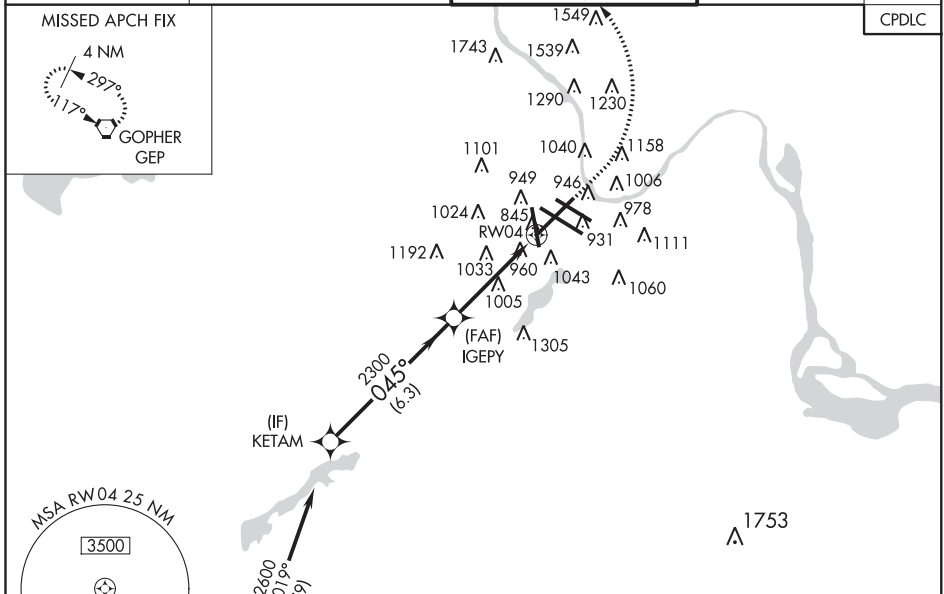
WAAS CH <b>72931</b> <b>W04A</b>	APP CRS <b>045°</b>	Rwy Idg <b>9456</b> TDZE <b>832</b> Apt Elev <b>842</b>
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# RNAV (GPS) RWY 4

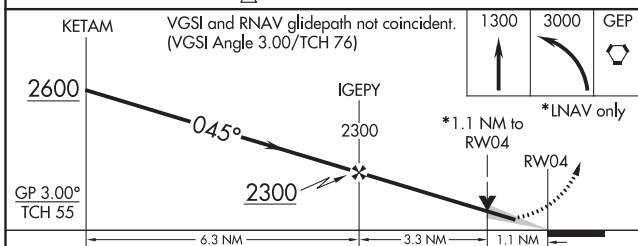
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<p>DME/DME RNP-0.3 NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). For inoperative MALSR, increase LPV Cat E visibility to RVR 4000, LNAV/VNAV Cat E visibility to RVR 5000 and LNAV Cat E visibility to 1¼ mile.</p>	<p>MALSR</p>	<p>MISSED APPROACH: Climb to 1300 then climbing left turn to 3000 direct GEP VORTAC and hold.</p>

<p>ATIS ARR <b>135.35</b> <b>239.275</b> DEP <b>120.8</b></p>	<p>MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)</p>	<p>MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)</p>	<p>GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b></p>	<p>CLNC DEL <b>133.2</b></p>
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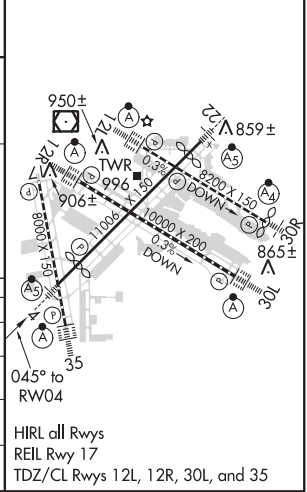


Procedure NA for arrivals at LYDIA on V505 southbound and on V26 westbound.



ELEV 842	<b>D</b> TDZE 832
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CATEGORY	A	B	C	D	E
LPV DA	1032/24		200 (200-½)		
LNAV/VNAV DA	1146/24		314 (400-½)		
LNAV MDA	1260/24 428 (500-½)		1260/40 428 (500-¾)		
<b>C</b> CIRCLING	1360-1 518 (600-1)	1460-1¾ 618 (700-1¾)	1660-2¾ 818 (900-2¾)	1800-3 958 (1000-3)	



# RNAV (GPS) RWY 4

NC-1, 10 NOV 2016 to 05 JAN 2017

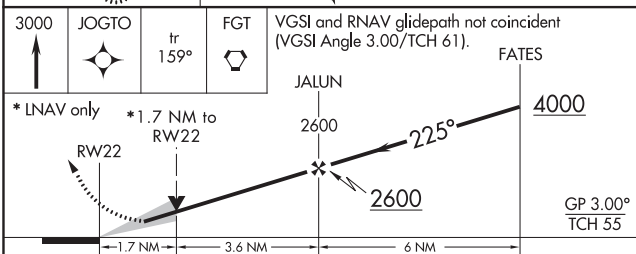
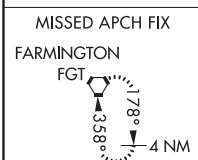
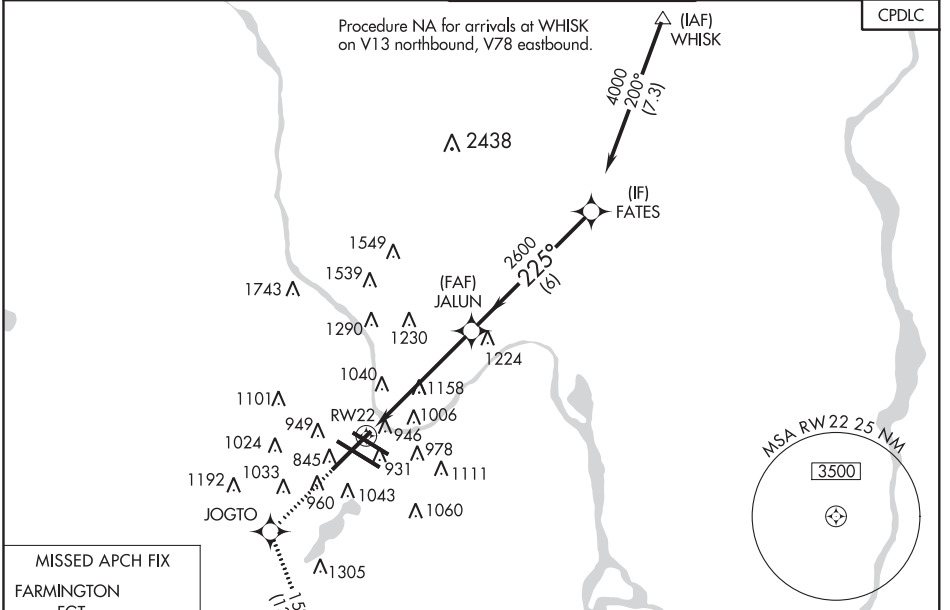
NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>60927</b> <b>W22A</b>	APP CRS <b>225°</b>	Rwy Idg <b>10006</b> TDZE <b>828</b> Apt Elev <b>842</b>
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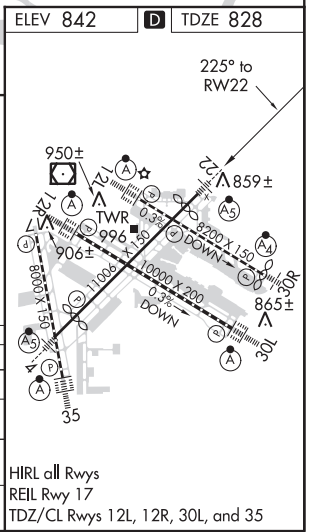
# RNAV (GPS) RWY 22

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<b>⚠</b> DME/DME RNP-0.3 NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -27°C (-1.6°F) or above 54°C (130°F). For inop MALSR, increase LPV all Cats visibility to 1½ mile, LNAV/VNAV all Cats visibility to 1¼ mile and LNAV Cat E visibility to 1¼ mile.	<b>MALSR</b> 	<b>MISSED APPROACH:</b> Climb to 3000 direct JOGTO and on track 159° to FGT VORTAC and hold.	
		ATIS ARR <b>135.35 239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.275 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)
CLNC DEL <b>133.2</b>			



CATEGORY	A	B	C	D	E
LPV DA	1190/40 362 (400-¾)				
LNAV/VNAV DA	1227/45 399 (400-⅔)				
LNAV MDA	1420/40 592 (600-¾)	1420-1¼ 592 (600-1¼)			
CIRCLING	1420-1 578 (600-1)	1460-1¾ 618 (700-1¾)	1660-2¾ 818 (900-2¾)	1800-3 958 (1000-3)	



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>45525</b> <b>W12B</b>	APP CRS <b>121°</b>	Rwy ldg TDZE Apt Elev	<b>7620</b> <b>839</b> <b>842</b>
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# RNAV (GPS) Z RWY 12L

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

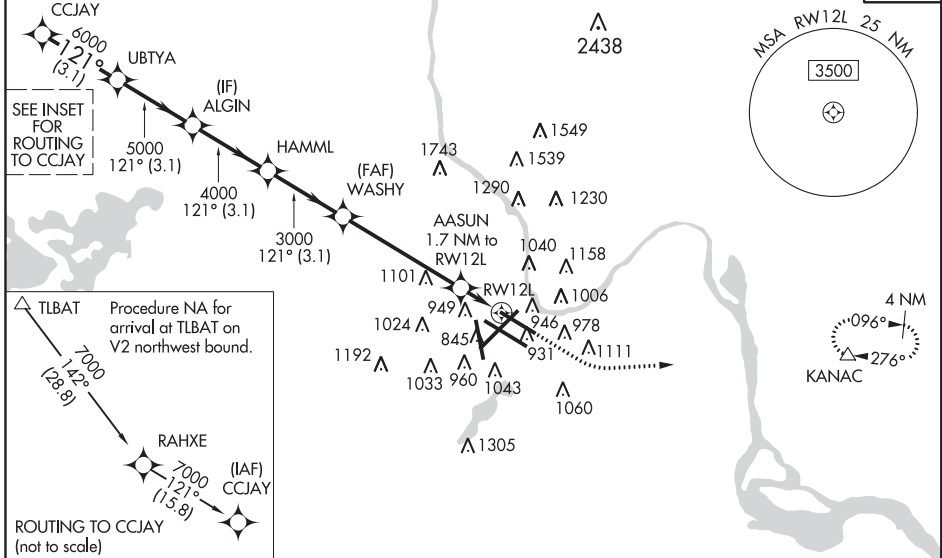
**⚠** DME/DME RNP-0.3 NA. Simultaneous approach authorized with Rwy 12R. LNAV procedure NA during simultaneous operations. Use of FD or AP providing RNAV track guidance required during simultaneous operations. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C (-4°F) or above 54°C (130°F). For inop ALSF-2, increase LPV Cat E visibility to RVR 4000, LNAV/VNAV all Cats visibility to RVR 5000 and LNAV Cat E visibility to 1 ¼ mile.

**ALSF-2**

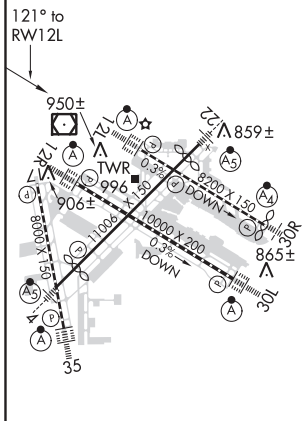
**MISSED APPROACH:**  
Climb to 1300, then climbing left turn to 3000 direct KANAC and hold.

ATIS ARR <b>135.35 239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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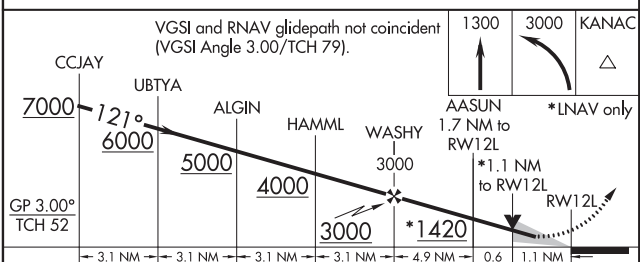
CPDLC
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ELEV 842	<b>D</b>	TDZE 839
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HIRL all Rwys  
REIL Rwy 17  
TDZ/CL Rwys 12L, 12R, 30L, and 35



CATEGORY	A	B	C	D	E
LPV DA		1039/24	200 (200-½)		
LNAV/VNAV DA		1157/30	318 (400-⅝)		
LNAV MDA	1260/24	421 (500-½)	1260/40	421 (500-¾)	
<b>C</b> CIRCLING	1360-1	518 (600-1)	1460-1¾ 618 (700-1¾)	1660-2¾ 818 (900-2¾)	1800-3 958 (1000-3)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>50125</b> <b>W12A</b>	APP CRS <b>121°</b>	Rwy Idg <b>10000</b> TDZE <b>842</b> Apt Elev <b>842</b>
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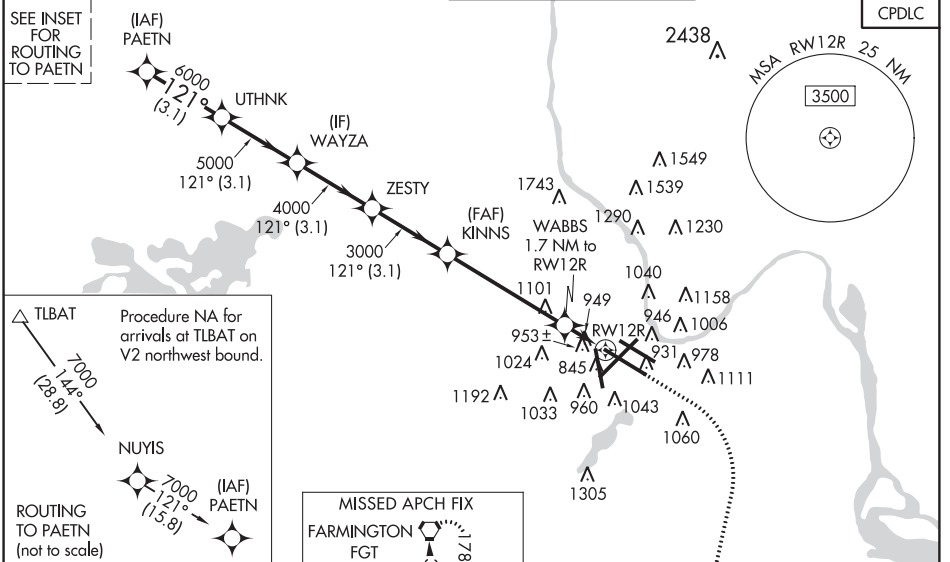
# RNAV (GPS) Z RWY 12R

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

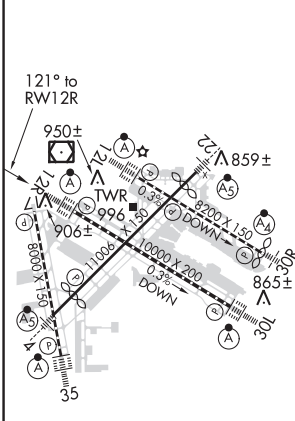
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C (-4°F) or above 54°C (130°F). Simultaneous approach authorized with Rwy 12L. DME/DME RNP-0.3 NA. Use of FD or AP providing RNAV track guidance required during simultaneous operations. For inop ALSF-2, increase LPV Cat E visibility to RVR 4000, increase LNAV/VNAV Cat E visibility to 1½ mile, and increase LNAV Cat C/D/E visibility to RVR 5500. LNAV procedure NA during simultaneous operations.

**ALSF-2**  
**MISSED APPROACH:** Climb to 1300 then climbing right turn to 3000 direct FGT VORTAC and hold.

ATIS ARR <b>135.35</b> <b>239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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ELEV <b>842</b>	<b>D</b> TDZE <b>842</b>
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HIRL all Rwys  
REIL Rwy 17  
TDZ/CL Rwys 12L, 12R, 30L, and 35

VGSi and RNAV glidepath not coincident (VGSi Angle 3.00°/TCH 66).				
PAETN	UTHNK	WAYZA	ZESTY	KINNS
7000	6000	5000	4000	3000
GP 3.00° TCH 50				3000
				*1420
				1300
				3000
				FGT
				WABBS 1.7 NM to RWY 12R
				*1 NM to RWY 12R
				*RNAV only
				0.7 1 NM

CATEGORY	A	B	C	D	E
LPV DA		1042/24	200 (200-½)		
LNAV/VNAV DA		1211/40	369 (400-¾)		
LNAV MDA	1220/24	378 (400-½)	1220/35	378 (400-¾)	
<b>C</b> CIRCLING	1360-1	518 (600-1)	1460-1¾ 618 (700-1¼)	1660-2¾ 818 (900-2¾)	1800-3 958 (1000-3)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>56225</b> <b>W30A</b>	APP CRS <b>301°</b>	Rwy Idg <b>10000</b> TDZE <b>823</b> Apt Elev <b>842</b>
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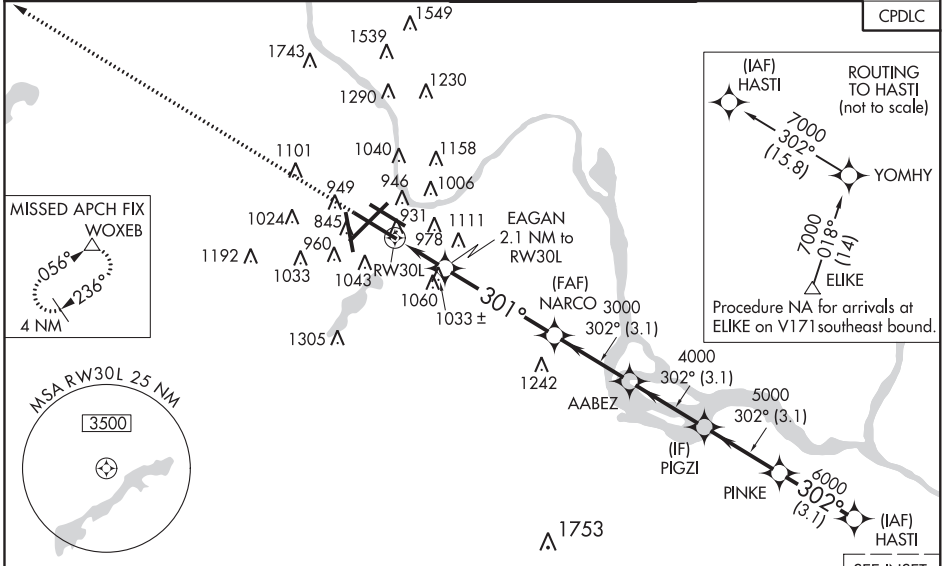
# RNAV (GPS) Z RWY 30L

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

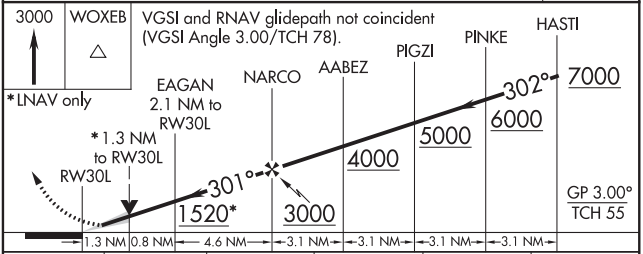
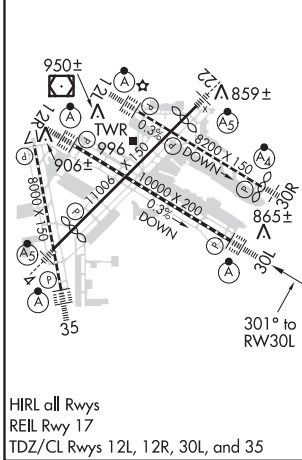
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (-2°F) or above 54°C (130°F). Simultaneous approaches authorized with Rwy 30R and ILS V RWY 35 (CONVERGING). DME/DME RNP-0.3 NA. Use of FD or AP providing RNAV track guidance required during simultaneous operations. LNAV NA during simultaneous operations. For inop ALSF-2, increase LPV Cat E visibility to RVR 4000, increase LNAV/VNAV Cat E visibility to RVR 6000, and LNAV Cats C/D/E visibility to 1 1/2 mile.

ALSF-2  
**MISSED APPROACH:**  
Climb to 3000 direct WOXEB and hold.

ATIS ARR <b>135.35 239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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ELEV <b>842</b>	<b>D</b>	TDZE <b>823</b>
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CATEGORY	A	B	C	D	E
LPV DA		1023/24	200 (200-1/2)		
LNAV/VNAV DA		1147/30	324 (400-3/4)		
LNAV MDA	1300/24	477 (500-1/2)	1300/50	477 (500-1)	
<b>C</b> CIRCLING	1360-1	518 (600-1)	1460-1 3/4 618 (700-1 3/4)	1660-2 3/4 818 (900-2 3/4)	1800-3 958 (1000-3)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>60925</b> <b>W30B</b>	APP CRS <b>301°</b>	Rwy Idg TDZE Apt Elev	<b>8000</b> <b>822</b> <b>842</b>
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# RNAV (GPS) Z RWY 30R

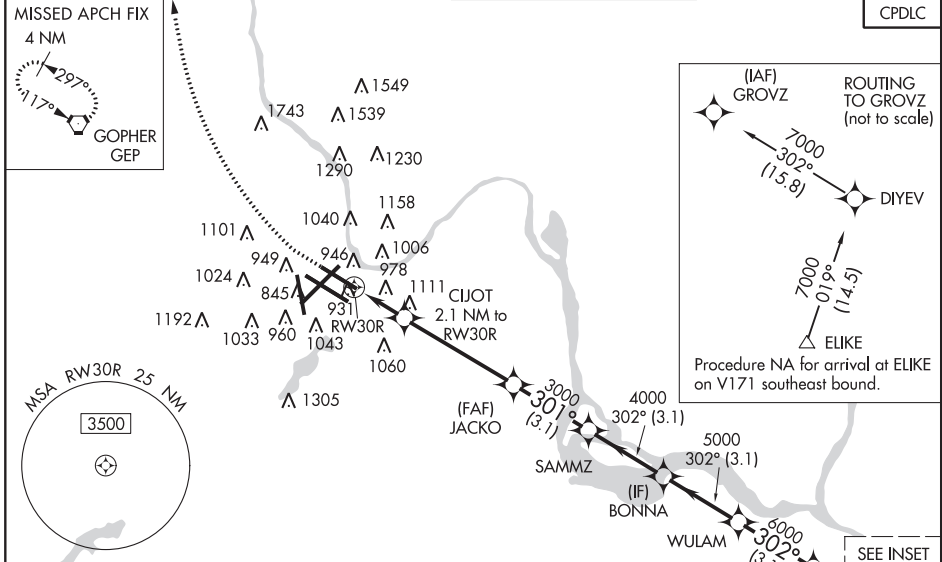
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

**⚠** DME/DME RNP-0.3 NA. Simultaneous approaches authorized with Rwy 30L and ILS V RWY 35 (CONVERGING). LNAV procedure NA during simultaneous operations.  
**⚠** Use of FD or AP providing RNAV track guidance required during simultaneous operations.  
 For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (-2°F) or above 54°C (130°F). For inop MALSF, increase LNAV/VNAV and LNAV Cats D/E visibility to 1½ mile. Inop table does not apply to LPV all Cats.

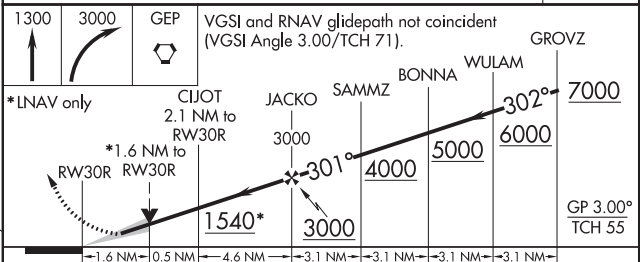
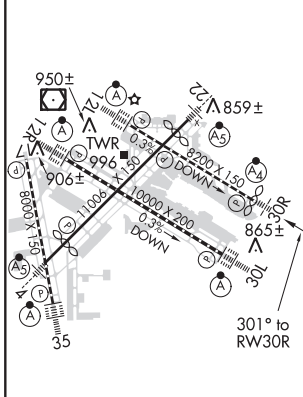


**MISSED APPROACH:**  
Climb to 1300, then climbing right turn to 3000 direct GEP VORTAC and hold.

ATIS ARR <b>135.35 239.275</b> DEP <b>120.8</b>	MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)	MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>
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ELEV 842	<b>D</b>	TDZE 822
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CATEGORY	A	B	C	D	E
LPV DA		1072/40	250 (300-¾)		
LNAV/VNAV DA		1316-1⅓	494 (500-1⅓)		
LNAV MDA	1400/40	578 (600-¾)	1400-1⅓	578 (600-1⅓)	
<b>C</b> CIRCLING	1400-1	558 (600-1)	1460-1¾ 618 (700-1¾)	1660-2¾ 818 (900-2¾)	1800-3 958 (1000-3)

HIRL all Rwys  
REIL Rwy 17  
TDZ/CL Rwys 12L, 12R, 30L, and 35

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

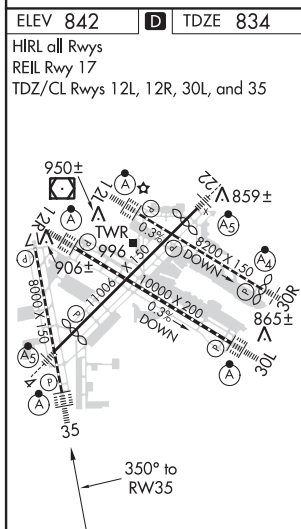
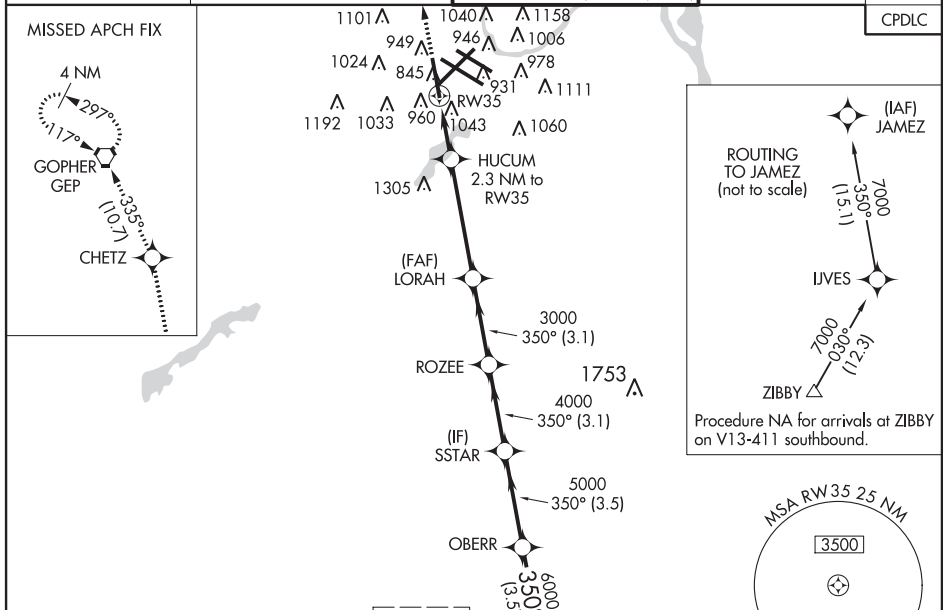


WAAS CH <b>90128</b> <b>W35A</b>	APP CRS <b>350°</b>	Rwy Idg TDZE <b>834</b> Apt Elev <b>842</b>
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# RNAV (GPS) Z RWY 35

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<p><b>⚠</b> For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (-2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. For inop ALSF-2, increase LPV Cat E visibility to RVR 4000, LNAV/VNAV Cat E visibility to 1¼ mile, and LNAV Cats C/D/E visibility to 1½ mile.</p>	ALSF-2	MISSED APPROACH: Climb to 3000 direct CHETZ and on track 335° to GEP VORTAC and hold.
	<p>ATIS ARR <b>135.35 239.275</b> DEP <b>120.8</b></p>	<p>MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)</p>
	GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b>	CLNC DEL <b>133.2</b>



SEE INSET FOR ROUTING TO JAMEZ

3000	CHETZ	tr 335°	GEP	VGSi and RNAV glidepath not coincident (VGSi Angle 3.00/TCH 71).					
				HUCUM 2.3 NM to RW35	LORAH 3000	ROZEE 4000	SSTAR 5000	OBERR 6000	JAMEZ 7000
				*1.2 NM to RW35	1620*	3000			GP 3.00° TCH 55
				1.2 NM	1.1 NM	4.3 NM	3.1 NM	3.1 NM	3.5 NM
CATEGORY	A	B	C	D	E				
LPV DA	1034/24		200 (200-½)						
LNAV/VNAV DA	1204/40		370 (400-¾)						
LNAV MDA	1300/24	466 (500-½)	1300/50		466 (500-1)				
<b>C</b> CIRCLING	1360-1	518 (600-1)	1460-1¾	1660-2¾	1800-3	618 (700-1¾)	818 (900-2¾)	958 (1000-3)	

NC-1, 10 NOV 2016 to 05 JAN 2017

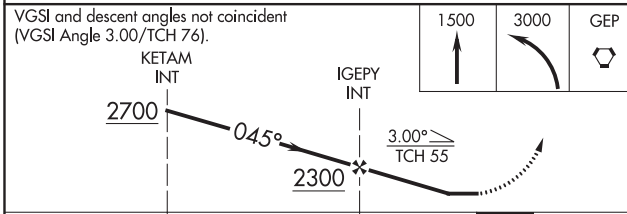
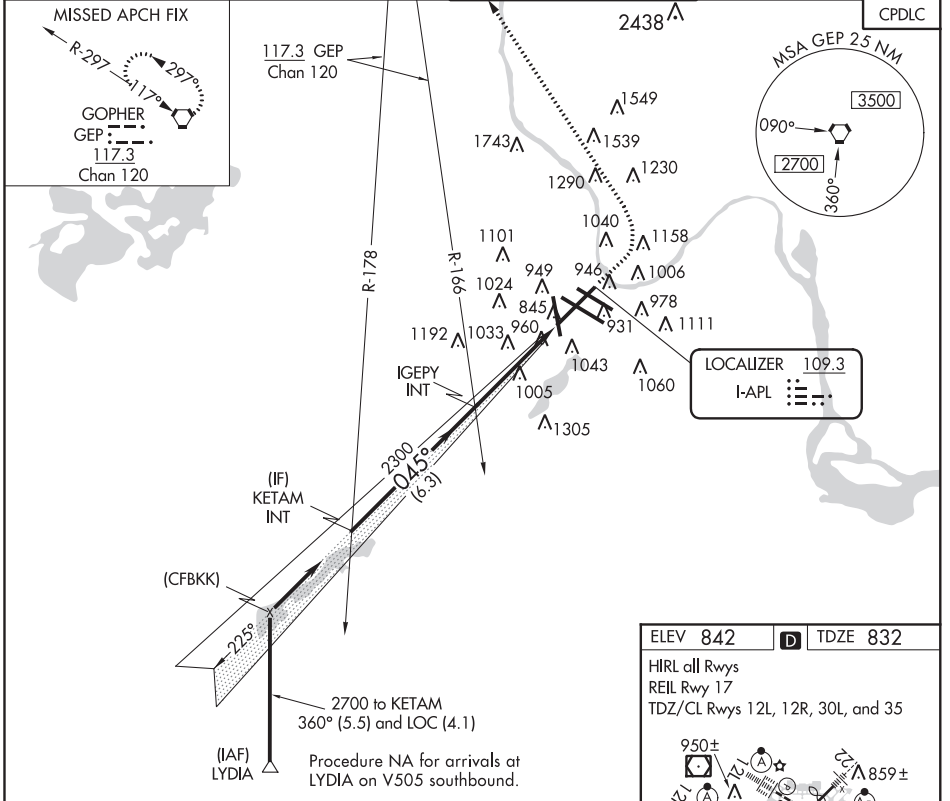
NC-1, 10 NOV 2016 to 05 JAN 2017

LOC I-APL <b>109.3</b>	APP CRS <b>045°</b>	Rwy Idg TDZE Apt Elev	<b>9456</b> <b>832</b> <b>842</b>
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# LOC RWY 4

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<p>For inoperative MALS/R, increase S-4 Cat E visibility to 1 1/2 mile.</p>	<p>MALS/R</p>	<p>MISSED APPROACH: Climb to 1500 then climbing left turn to 3000 direct GEP VORTAC and hold.</p>	
		<p>ATIS</p> <p>ARR <b>135.35</b> 239.275</p> <p>DEP <b>120.8</b></p>	<p>MINNEAPOLIS APP CON</p> <p><b>118.725 335.5</b> (Rwy 35)</p> <p><b>119.3 335.5</b> (12L-30R, 4-22, 17)</p> <p><b>126.95 335.5</b> (12R-30L)</p>
			<p>CLNC DEL</p> <p><b>133.2</b></p>



ELEV 842	<b>D</b>	TDZE 832			
<p>HIRL all Rwys</p> <p>REIL Rwy 17</p> <p>TDZ/CL Rwys 12L, 12R, 30L, and 35</p>					
<p>045° 4.4 NM from FAF</p> <p>FAF to MAP 4.4 NM</p>					
Knots	60	90	120	150	180
Min:Sec	4:24	2:56	2:12	1:46	1:28

CATEGORY	A	B	C	D	E
S-4	1340/24	508 (500-1/2)	1340/55	508 (500-1/4)	
<b>C</b> CIRCLING	1360-1	518 (600-1)	1460-1 3/4	1660-2 3/4	1800-3
			618 (700-13/4)	818 (900-23/4)	958 (1000-3)

NC-1, 10 NOV 2016 to 05 JAN 2017

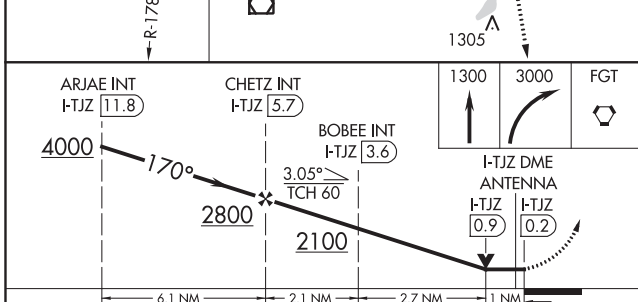
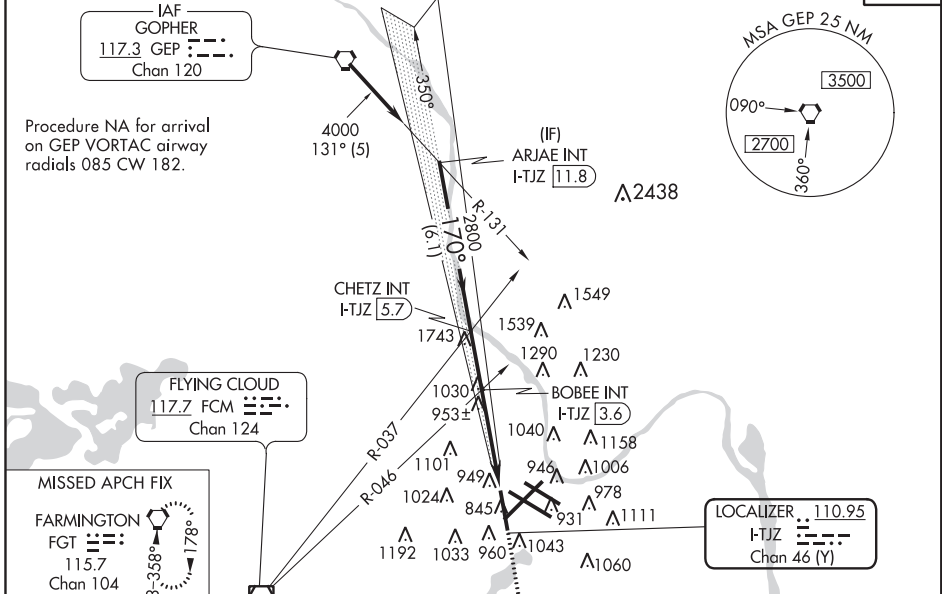
NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-TJZ <b>110.95</b> Chan 46 (Y)	APP CRS <b>170°</b>	Rwy Idg 8000 TDZE 840 Apt Elev 842
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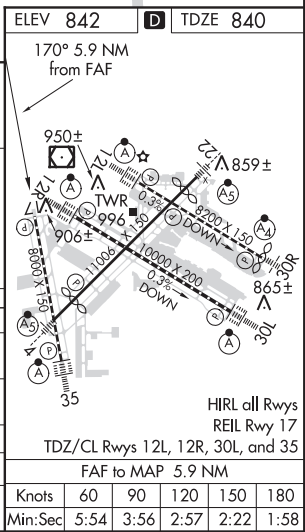
# LOC RWY 17

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<p><b>▼</b> Helicopter visibility reduction below RVR 4000 NA.</p> <p><b>▲</b> MISSED APPROACH: Climb to 1300 then climbing right turn to 3000 direct FGT VORTAC and hold.</p>				
<p>ATIS ARR <b>135.35 239.275</b> DEP <b>120.8</b></p>	<p>MINNEAPOLIS APP CON <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)</p>	<p>MINNEAPOLIS TOWER <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)</p>	<p>GND CON <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b></p>	<p>CLNC DEL <b>133.2</b></p>
<p>CPDLC</p>				



CATEGORY	A	B	C	D
S-17	2100/60 1260 (1300-1¼)	2100-1½ 1260 (1300-1½)	2100-3	1260 (1300-3)
<b>C</b> CIRCLING	2100-1¼ 1258 (1300-1¼)	2100-1½ 1258 (1300-1½)	2100-3	1258 (1300-3)
BOBEE FIX MINIMUMS (DUAL VOR RECEIVERS OR DME REQUIRED)				
S-17	1220/55		380 (400-1¼)	
<b>C</b> CIRCLING	1360-1 518 (600-1)		1460-1¾ 618 (700-1¾)	1660-2¾ 818 (900-2¾)



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

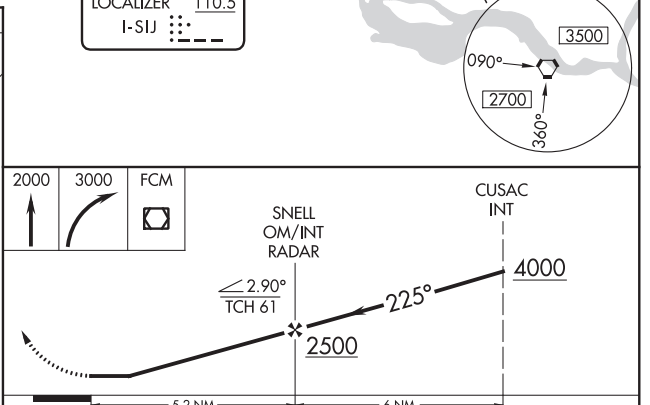
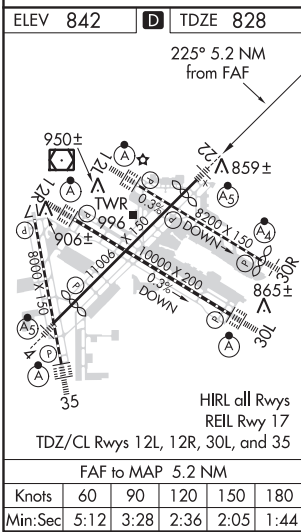
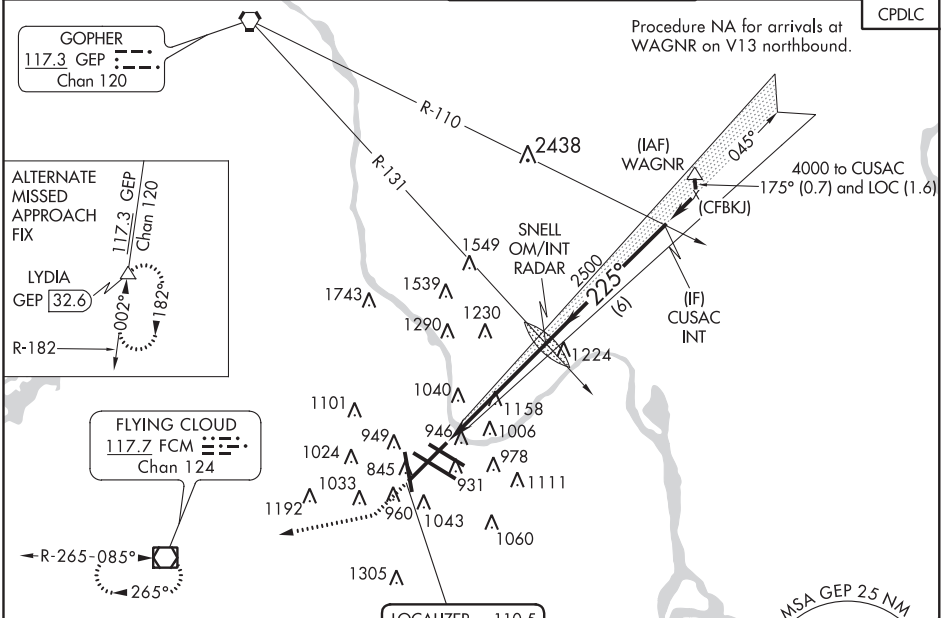
# LOC RWY 17

LOC I-SIJ <b>110.5</b>	APP CRS <b>225°</b>	Rwy Idg <b>10006</b>
		TDZE <b>828</b>
		Apt Elev <b>842</b>

# LOC RWY 22

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

<p><b>ATIS</b> ARR <b>135.35 239.275</b> DEP <b>120.8</b></p>	<p><b>MINNEAPOLIS APP CON</b> <b>118.725 335.5</b> (Rwy 35) <b>119.3 335.5</b> (12L-30R, 4-22, 17) <b>126.95 335.5</b> (12R-30L)</p>	<p><b>MINNEAPOLIS TOWER</b> <b>123.675 273.55</b> (17-35) <b>123.95 273.55</b> (12L-30R) <b>126.7 273.55</b> (12R-30L, 4-22)</p>	<p><b>GND CON</b> <b>N 121.8 348.6</b> <b>S 121.9 348.6</b> <b>W 127.925 348.6</b></p>	<p><b>CLNC DEL</b> <b>133.2</b></p>



CATEGORY	A	B	C	D	E
S-22	1420/40	592 (600-¾)	1420-1¼	592 (600-1¼)	
<b>C</b> CIRCLING	1420-1	578 (600-1)	1460-1¾	1660-2¾	1800-3
			618 (700-1¾)	818 (900-2¾)	958 (1000-3)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

## MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

AL-264 (FAA)

MINNEAPOLIS, MINNESOTA

ATIS ARR 135.35 239.275

DEP 120.8

MINNEAPOLIS TOWER

123.95 273.55 (Rwy 12L-30R)

126.7 273.55 (Rwys 12R-30L, 04-22)

123.675 273.55 (Rwy 17-35)

GND CON

N 121.8 348.6

S 121.9 348.6

W 127.925 348.6

CLNC DEL

133.2

GND METERING

133.57

CPDLC

**D**

RWYS 04-22, 12L-30R, 12R-30L, 17-35

PCN 80 R/B/W/T

S-100, D-200, 2S-175, 2D-400, 2D/2D2-850

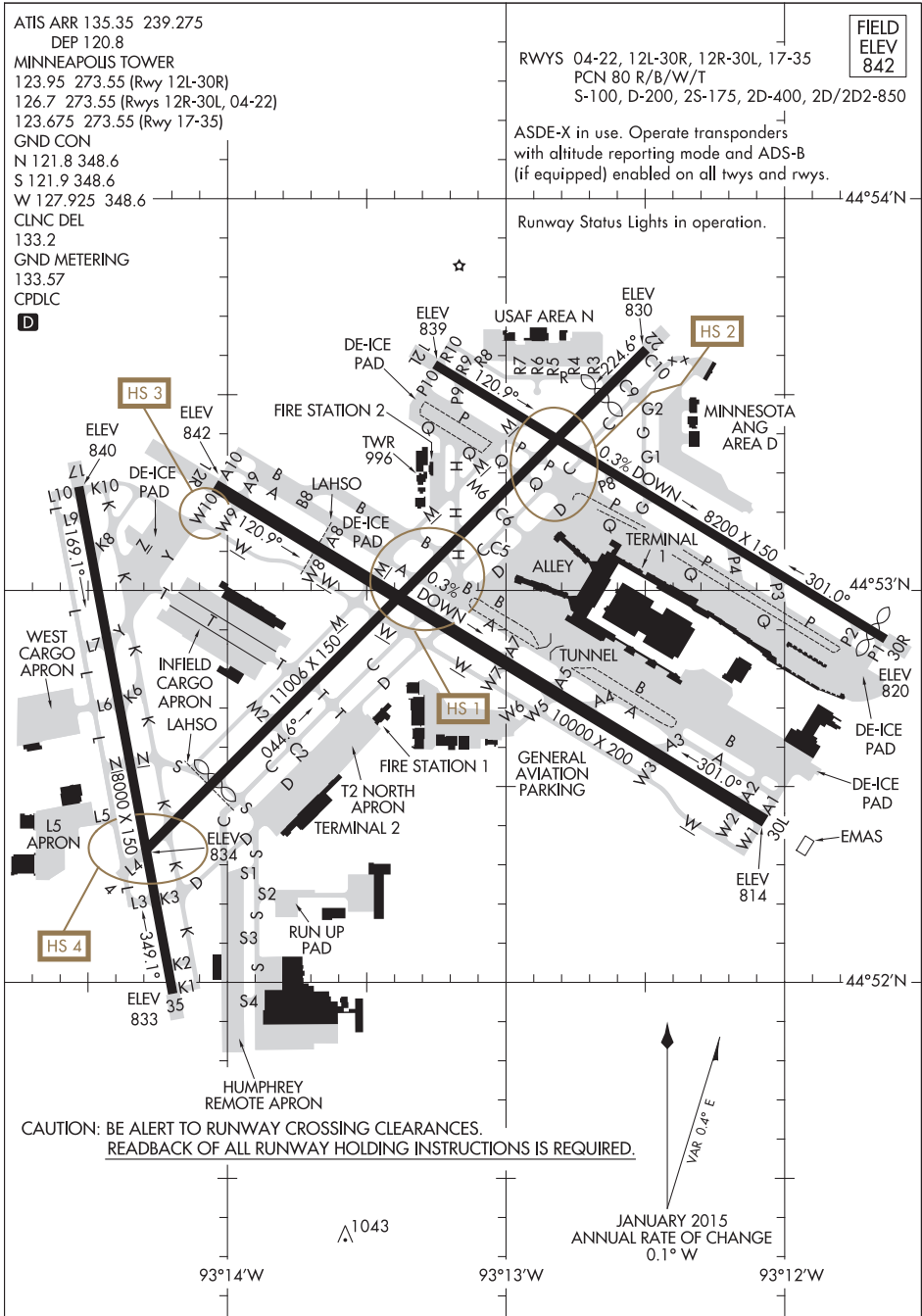
ASDE-X in use. Operate transponders with altitude reporting mode and ADS-B (if equipped) enabled on all twys and rwys.

Runway Status Lights in operation.

FIELD ELEV 842

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



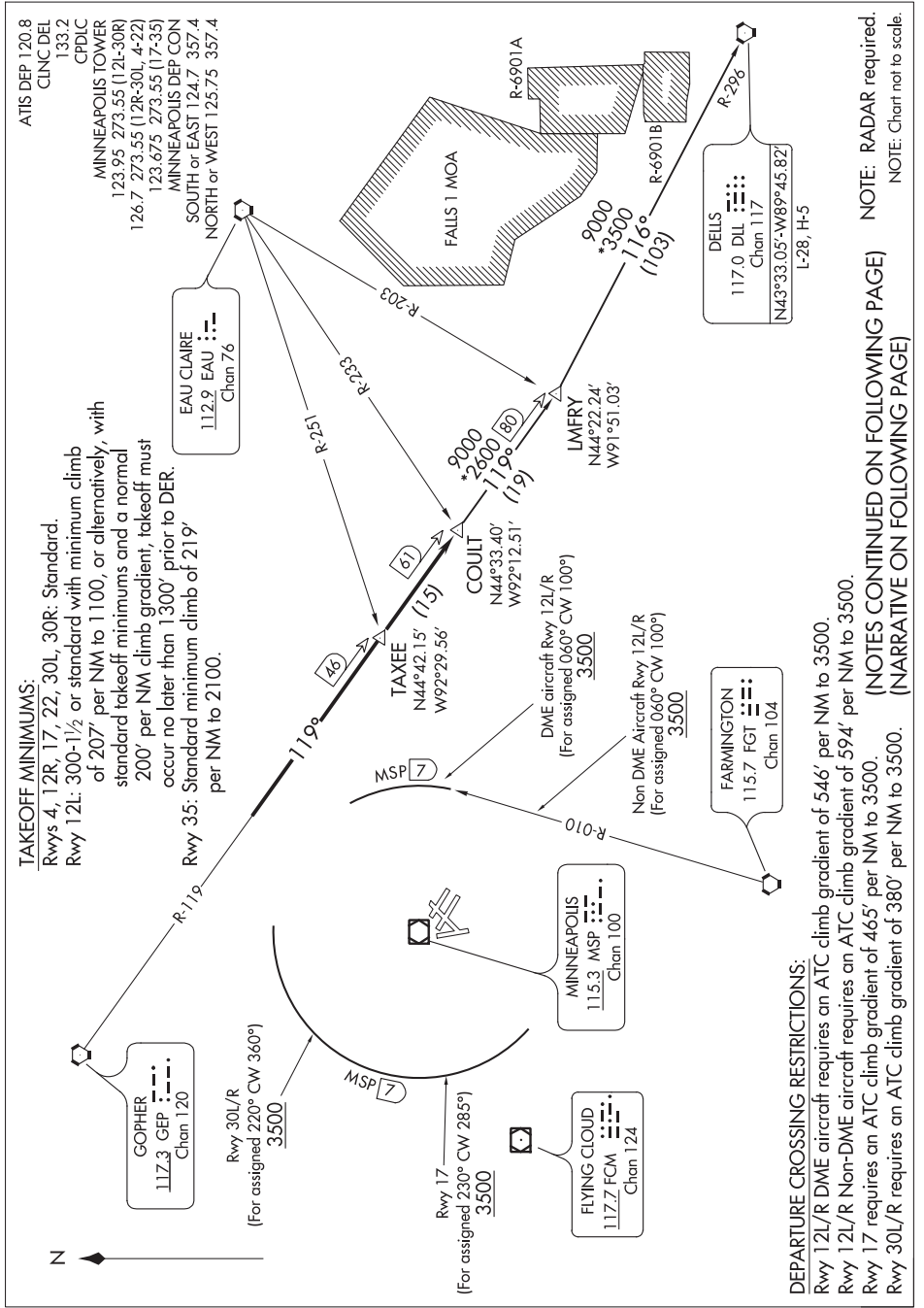
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.  
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

# AIRPORT DIAGRAM

MINNEAPOLIS, MINNESOTA  
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

(COULT6.COULT) 16315  
**COULT SIX DEPARTURE**

21.02.2016 10:10:10



NOTE: RADAR required.  
 NOTE: Chart not to scale.

(NOTES CONTINUED ON FOLLOWING PAGE)  
 (NARRATIVE ON FOLLOWING PAGE)

NC-1, 10 NOV 2016 to 05 JAN 2017

COULT SIX DEPARTURE



DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Fly assigned heading for RADAR vectors to intercept GEP R-119 to COULT INT/GEP 61 DME. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude.

DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned headings from 060° clockwise to 100°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

NON-DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned headings from 060° clockwise to 100°, cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAY 17: For assigned headings from 230° clockwise to 285°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAYS 30L/R: For assigned headings from 220° clockwise to 360°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAYS 4, 22, 35: Initially assigned heading, thence . . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

DELLS TRANSITION (COULT6.DLL): From over COULT INT on GEP R-119 to LMFYR INT then on DLL R-296 to DLL VORTAC.

TAKEOFF OBSTACLE NOTES

- Rwy 4: Trees beginning 800' from DER, 301' left of centerline, up to 75' AGL/925' MSL. Rod on building 2528' from DER, 1174' left of centerline, 78' AGL/922' MSL. Fence beginning 13' from DER, 486' left of centerline, up to 6' AGL/860' MSL. Stack 4535' from DER, 480' left of centerline, 139' AGL/949' MSL.
- Rwy 12L: Tree 1.1 NM from DER, 1691' left of centerline, 92' AGL/991' MSL. Light pole and camera on wall beginning 398' from DER, 561' right of centerline, up to 23' AGL/832' MSL.
- Rwy 12R: Tree 1479' from DER, 561' left of centerline, up to 86' AGL/855' MSL. Obstruction light on pole 1002' from DER, 753' left of centerline, 53' AGL/852' MSL.
- Rwy 17: Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL. Building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL. Building 1956' from DER, 904' left of centerline, 61' AGL/866' MSL. Tree 2619' from DER, on centerline, 79' AGL/900' MSL.
- Rwy 22: Trees beginning 2659' from DER, 867' right of centerline, up to 94' AGL/934' MSL.
- Rwy 30L: Antenna on tower 3555' from DER, 1334' left of centerline, 116' AGL/935' MSL.
- Rwy 30R: Billboard sign 1463' from DER, 848' right of centerline, 31' AGL/880' MSL.
- Rwy 35: Trees beginning 2553' from DER, 770' right of centerline, up to 100' AGL/919' MSL. Trees beginning 1989' from DER, 194' left of centerline, up to 87' AGL/906' MSL. Buildings beginning 5.4 NM from DER, 1781' left of centerline, up to 889' AGL/1743' MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

COULT SIX DEPARTURE

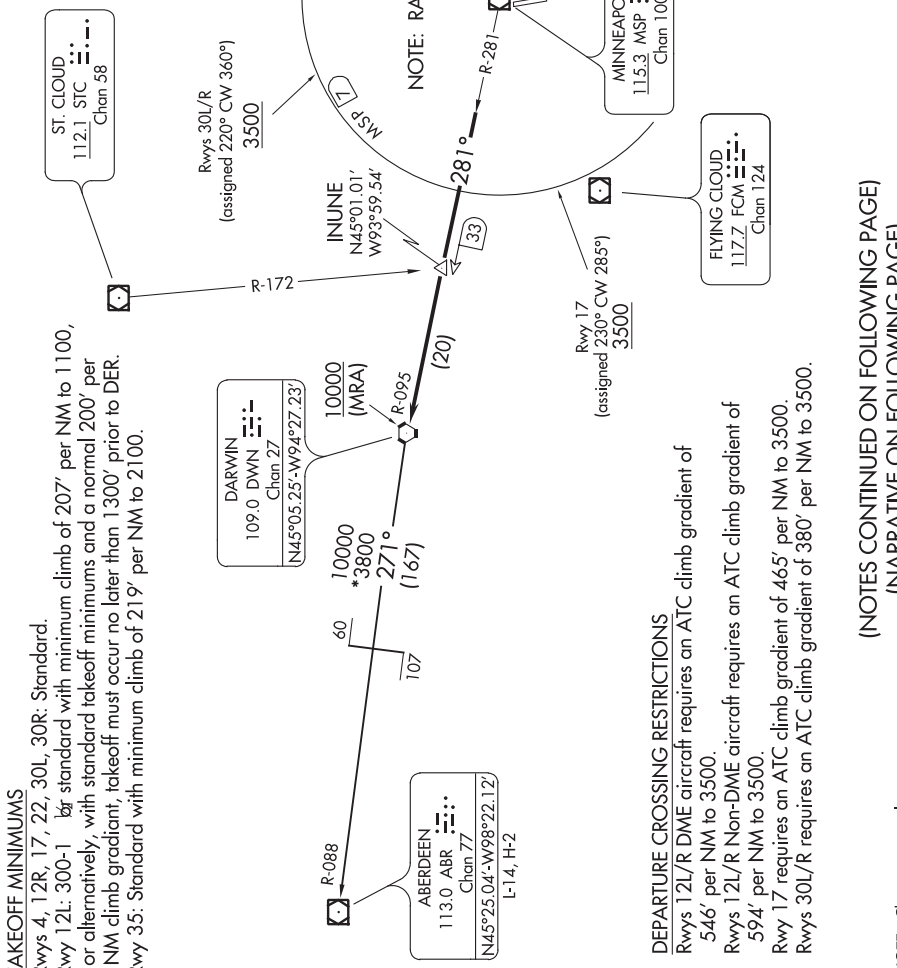
# DARWIN SIX DEPARTURE

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA

NC-1, 10 NOV 2016 to 05 JAN 2017

ATIS DEP 120.8  
CLINC DEL 133.2  
CPDLC  
MINNEAPOLIS TOWER  
123.95 273.55 (12L-30R)  
126.7 273.55 (12R-30L, 4-22)  
123.675 273.55 (17-35)  
MINNEAPOLIS DEP CON  
SOUTH or EAST 124.7 357.4  
NORTH or WEST 125.75 357.4



### TAKEOFF MINIMUMS

Rwys 4, 12R, 17, 22, 30L, 30R: Standard.  
Rwy 12L: 300-1 for standard with minimum climb of 207' per NM to 1100, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1300' prior to DER.  
Rwy 35: Standard with minimum climb of 219' per NM to 2100.

### DEPARTURE CROSSING RESTRICTIONS

Rwys 12L/R DME aircraft requires an ATC climb gradient of 546' per NM to 3500.  
Rwys 12L/R Non-DME aircraft requires an ATC climb gradient of 594' per NM to 3500.  
Rwy 17 requires an ATC climb gradient of 465' per NM to 3500.  
Rwys 30L/R requires an ATC climb gradient of 380' per NM to 3500.

(NOTES CONTINUED ON FOLLOWING PAGE)  
(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

NC-1, 10 NOV 2016 to 05 JAN 2017

# DARWIN SIX DEPARTURE



# DARWIN SIX DEPARTURE

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA



## DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Fly assigned heading for RADAR vectors to intercept MSP R-281 and DWN R-095 to DWN VORTAC. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude.

DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned headings from 060° clockwise to 100°, cross MSP 7 DME at or above 3500, maintain assigned altitude.

If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

NON-DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned headings from 060° clockwise to 100°, cross FGT R-010 at or above 3500, maintain assigned altitude.

If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAY 17: For assigned headings from 230° clockwise to 285°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAYS 30L/R: For assigned headings from 220° clockwise to 360°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAYS 4, 22, 35: Initially assigned heading, thence...

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

ABERDEEN TRANSITION (DWN6.ABR): From over DWN VORTAC on DWN R-271 and ABR R-088 to ABR VOR/DME.

### TAKEOFF OBSTACLE NOTES:

- Rwy 4: Trees beginning 800' from DER, 301' left of centerline, up to 75' AGL/925' MSL.  
Rod on building 2528' from DER, 1174' left of centerline, 78' AGL/922' MSL.  
Fence beginning 13' from DER, 486' left of centerline, up to 6' AGL/860' MSL.  
Stack 4535' from DER, 480' left of centerline, 139' AGL/949' MSL.
- Rwy 12L: Tree 1.1 NM from DER, 1691' left of centerline, 92' AGL/991' MSL.  
Light pole and camera on wall beginning 398' from DER, 561' right of centerline, up to 23' AGL/832' MSL.
- Rwy 12R: Tree 1479' from DER, 561' left of centerline, 86' AGL/855' MSL.  
Obstruction light on pole 1002' from DER, 753' left of centerline, 53' AGL/852' MSL.
- Rwy 17: Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.  
Building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.  
Building 1956' from DER, 904' left of centerline, 61' AGL/866' MSL.  
Tree 2619' from DER, on centerline, 79' AGL/900' MSL.
- Rwy 22: Trees beginning 2659' from DER, 867' right of centerline, up to 94' AGL/934' MSL.
- Rwy 30L: Antenna on tower 3555' from DER, 1334' left of centerline, 116' AGL/935' MSL.
- Rwy 30R: Billboard sign 1463' from DER, 848' right of centerline, 31' AGL/880' MSL.
- Rwy 35: Trees beginning 2553' from DER, 770' right of centerline, up to 100' AGL/919' MSL.  
Trees beginning 1989' from DER, 194' left of centerline, up to 87' AGL/906' MSL.  
Buildings beginning 5.4 NM from DER, 1781' left of centerline, up to 889' AGL/1743' MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# DARWIN SIX DEPARTURE

(DWN6.DWN) 06FEB14

MINNEAPOLIS, MINNESOTA

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

(HSTIN3.HSTIN) 16315

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

# HESTIN THREE DEPARTURE (RNAV)

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA

ATIS DEP 120.8  
 CLNC DEL  
 133.2  
 CPDLC  
 MINNEAPOLIS TOWER  
 123.95 273.55 (12L-30R)  
 126.7 273.55 (12R-30L, 4-22)  
 123.675 273.55 (17-35)  
 MINNEAPOLIS DEP CON  
 SOUTH or EAST 124.7 357.4  
 NORTH or WEST 125.75 357.4

### TAKEOFF OBSTACLE NOTES

Rwy 17: Pole 409' from DER, 530' right of centerline,  
 29' AGL/866' MSL.  
 Building 2619' from DER, 881' left of centerline,  
 97' AGL/918' MSL.  
 Building 1956' from DER, 904' left of centerline,  
 61' AGL/866' MSL.  
 Tree 2619' from DER, on centerline,  
 79' AGL/900' MSL.

NOTE: For use by Turbojet aircraft only.

NOTE: RADAR required.

NOTE: DME/DME/IRU or GPS required.

NOTE: RNAV 1.

NANCZ  
 17000  
 11000

### TAKEOFF MINIMUMS

Rwys 4, 12L/R, 22, 30L/R, 35: NA-Air Traffic.  
 Rwy 17: Standard with minimum  
 climb of 370' per NM to 11000.

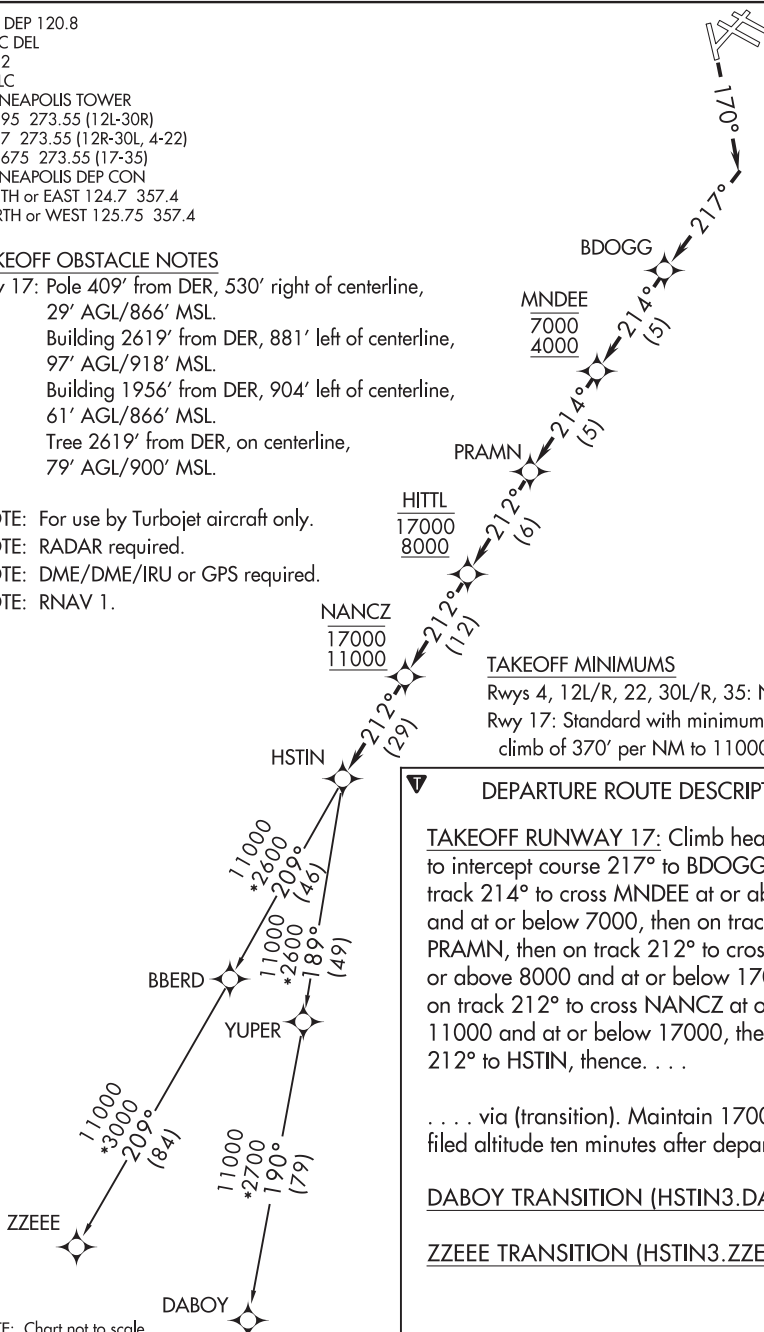
### DEPARTURE ROUTE DESCRIPTION

**TAKEOFF RUNWAY 17:** Climb heading 170° to intercept course 217° to BDOGG, then on track 214° to cross MNDEE at or above 4000 and at or below 7000, then on track 214° to PRAMN, then on track 212° to cross HITTL at or above 8000 and at or below 17000, then on track 212° to cross NANCZ at or above 11000 and at or below 17000, then on track 212° to HSTIN, thence. . . .

. . . . via (transition). Maintain 17000. Expect filed altitude ten minutes after departure.

DABOY TRANSITION (HSTIN3.DABOY)

ZZEEE TRANSITION (HSTIN3.ZZEEE)



NOTE: Chart not to scale.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

## HESTIN THREE DEPARTURE (RNAV)

MINNEAPOLIS, MINNESOTA

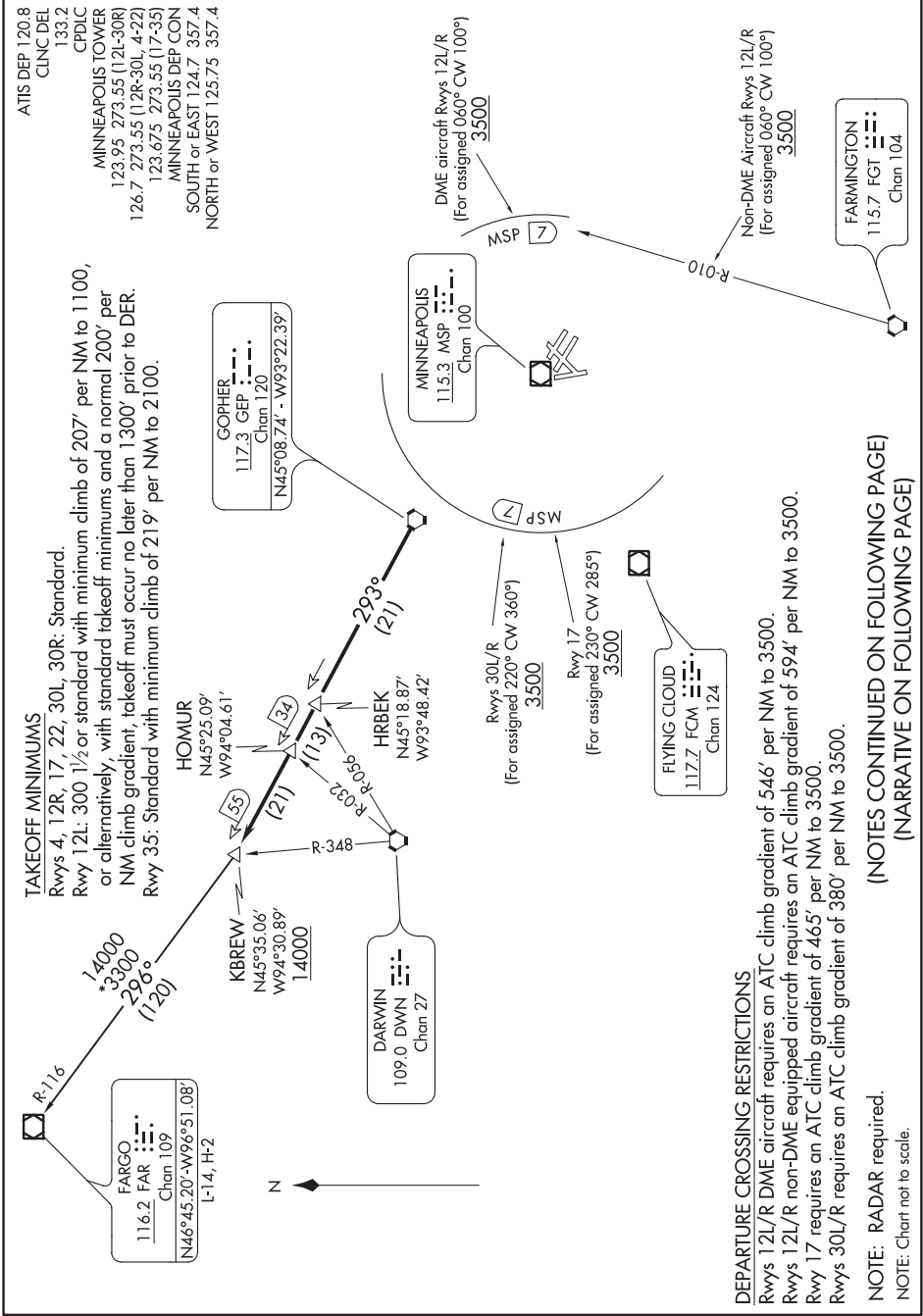
(HSTIN3.HSTIN) 02MAY13

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

**(KBREW8.KBREW) 16315**  
**KBREW EIGHT DEPARTURE**

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)  
 SL-264 (FAA) MINNEAPOLIS, MINNESOTA

21.02 NOV 2016 10:11:01 '1-CN



**(KBREW8.KBREW) 10NOV16**  
**KBREW EIGHT DEPARTURE**

MINNEAPOLIS, MINNESOTA  
 MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

NC-1, 10 NOV 2016 to 05 JAN 2017

(KBREW8.KBREW) 16315

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

## KBREW EIGHT DEPARTURE

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA



## DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Fly assigned heading for RADAR vectors to GEP VORTAC then on GEP R-293 to KBREW INT/GEP 55 DME. Turbojet aircraft maintain 7000 or lower assigned altitude. All other aircraft maintain 5000 or lower assigned altitude.

DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned headings from 060° clockwise to 100°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

NON-DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned headings from 060° clockwise to 100°, cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAY 17: For assigned headings from 230° clockwise to 285°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAYS 30L/R: For assigned headings from 220° clockwise to 360°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAYS 4, 22, 35: Initially assigned heading, thence . . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

FARGO TRANSITION (KBREW8.FAR): From over KBREW INT on FAR R-116 to FAR VOR/DME.

## TAKEOFF OBSTACLE NOTES

- Rwy 4: Trees beginning 800' from DER, 301' left of centerline, up to 75' AGL/925' MSL.  
Rod on building 2528' from DER, 1174' left of centerline, 78' AGL/922' MSL.  
Fence beginning 13' from DER, 486' left of centerline, up to 6' AGL/860' MSL.  
Stack 4535' from DER, 480' left of centerline, 139' AGL/949' MSL.
- Rwy 12L: Tree 1.1 NM from DER, 1691' left of centerline, 92' AGL/991' MSL.  
Light pole and camera on wall beginning 398' from DER, 561' right of centerline, up to 23' AGL/832' MSL.
- Rwy 12R: Tree 1479' from DER, 561' left of centerline, 86' AGL/855' MSL.  
Obstruction light on pole 1002' from DER, 753' left of centerline, 53' AGL/852' MSL.
- Rwy 17: Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.  
Building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.  
Building 1956' from DER, 904' left of centerline, 61' AGL/866' MSL.  
Tree 2619' from DER, on centerline, 79' AGL/900' MSL.
- Rwy 22: Trees beginning 2659' from DER, 867' right of centerline, up to 94' AGL/934' MSL.
- Rwy 30L: Antenna on tower 3555' from DER, 1334' left of centerline, 116' AGL/935' MSL.
- Rwy 30R: Billboard sign 1463' from DER, 848' right of centerline, 31' AGL/880' MSL.
- Rwy 35: Trees beginning 2553' from DER, 770' right of centerline, up to 100' AGL/919' MSL.  
Trees beginning 1989' from DER, 194' left of centerline, up to 87' AGL/906' MSL.  
Buildings beginning 5.4 NM from DER, 1781' left of centerline, up to 889' AGL/1743' MSL.

KBREW EIGHT DEPARTURE

(KBREW8.KBREW) 10NOV16

MINNEAPOLIS, MINNESOTA

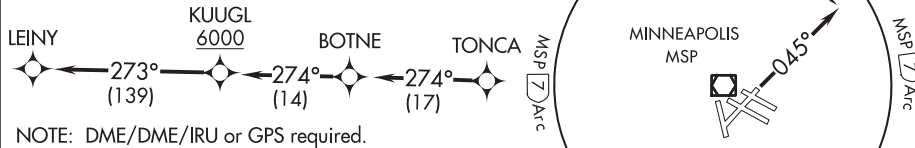
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

ATIS DEP 120.8  
CLNC DEL  
133.2  
CPDLC  
MINNEAPOLIS TOWER  
123.95 273.55 (12L-30R)  
126.7 273.55 (12R-30L, 4-22)  
123.675 273.55 (17-35)  
MINNEAPOLIS DEP CON  
SOUTH or EAST 124.7 357.4  
NORTH or WEST 125.75 357.4

(NOTES CONTINUED ON FOLLOWING PAGE)

Rwy 17 (For assigned 230° CW 285°) 3500  
Rwy 30L/R (For assigned 220° CW 360°) 3500

Rwy 12L/R  
(For assigned 060° CW 100°)  
3500



- NOTE: DME/DME/IRU or GPS required.
- NOTE: RNAV 1.
- NOTE: RADAR required for non-GPS equipped aircraft.
- NOTE: For non-GPS equipped aircraft, GEP, RWF, FSD, ATY, and HON must be operational.

**TAKEOFF MINIMUMS**

Rwys 4, 12R, 17, 22, 30L/R: Standard.  
 Rwy 12L: 300-1½ or standard with minimum climb of 207' per NM to 1100, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1300' prior to DER.  
 Rwy 35: Standard with minimum climb of 219' per NM to 2100.

**DEPARTURE CROSSING RESTRICTIONS**

Runway 12L/R aircraft requires an ATC climb gradient of 546' per NM to 3500.  
 Runway 17 requires an ATC climb gradient of 465' per NM to 3500.  
 Runway 30L/R requires an ATC climb gradient of 380' per NM to 3500.

NOTE: Chart not to scale.

**DEPARTURE ROUTE DESCRIPTION**

TAKEOFF RWY 4: Climb heading 045° to 2100. Thence . . .

TAKEOFF RWYS 12L/R: For assigned headings from 060° clockwise to 100°, cross MSP VOR/DME 7 DME Arc at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . .

TAKEOFF RWY 17: For assigned headings from 230° clockwise to 285°, cross MSP VOR/DME 7 DME Arc at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . .

TAKEOFF RWYS 22, 35: Climb on assigned heading for Radar vectors. Thence . . .

TAKEOFF RWYS 30L/R: For assigned headings from 220° clockwise to 360°, cross MSP VOR/DME 7 DME Arc at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . .

. . . expect Radar vectors to TONCA, then on track 274° to BOTNE, then on track 274° to cross KUUGL at or above 6000, then on track 273° to LEINY. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude until BOTNE. Expect filed altitude/flight level 10 minutes after departure.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

TAKEOFF OBSTACLE NOTES:

- Rwy 04: Trees beginning 800' from DER, 301' left of centerline, up to 75' AGL/925' MSL.  
Rod on building 2528' from DER, 1174' left of centerline, 78' AGL/922' MSL.  
Fence beginning 13' from DER, 486' left of centerline, up to 6' AGL/860' MSL.  
Stack 4535' from DER, 480' left of centerline, 139' AGL/949' MSL.
- Rwy 12L: Tree 1.1 NM from DER, 1691' left of centerline, 92' AGL/991' MSL.  
LT pole and camera on wall beginning 398' from DER, 561' right of centerline,  
up to 23' AGL/832' MSL.
- Rwy 12R: Tree 1479' from DER, 561' left of centerline, 86' AGL/855' MSL.  
OL on pole 1002' from DER, 753' left of centerline, 53' AGL/852' MSL.
- Rwy 17: Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.  
Building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.  
Building 1956' from DER, 904' left of centerline, 61' AGL/866' MSL.  
Tree 2619' from DER, on centerline, 79' AGL/900' MSL.
- Rwy 22: Trees beginning 2659' from DER, 867' right of centerline, 94' AGL/934' MSL.
- Rwy 30L: Antenna on tower 3555' from DER, 1334' left of centerline, 116' AGL/935 MSL.
- Rwy 30R: Billboard sign 1463' from DER, 848' right of centerline, 31' AGL/880' MSL.
- Rwy 35: Trees beginning 2553' from DER, 770' right of centerline, 100' AGL/919' MSL.  
Trees beginning 1989' from DER, 194' left of centerline, up to 87' AGL/906' MSL.  
Buildings beginnings 5.4 NM from DER, 1781' left of centerline,  
up to 889' AGL/1743 MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# MEADOW LAKE THREE DEPARTURE

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA

## TAKEOFF MINIMUMS

Rwy 17: Standard with minimum ATC climb of 240' per NM to 5000.

All other runways: NA - ATC request.

ATIS DEP 120.8  
 CLNC DEL 133.2  
 CPDLC  
 MINNEAPOLIS TOWER  
 123.95 273.55 (12L-30R)  
 126.7 273.55 (12R-30L, 4-22)  
 123.675 273.55 (17-35)  
 MINNEAPOLIS DEP CON  
 SOUTH or EAST 124.7 357.4  
 NORTH or WEST 125.75 357.4

**FARGO**  
 116.2 FAR  
 Chan 109  
 N46°45.20'-W96°51.08'  
 L-14, H-2

**BRAINERD**  
 116.9 BRD  
 Chan 116  
 N46°20.90'-W94°01.56'  
 L-14, H-2

**DULUTH**  
 112.6 DLH  
 Chan 73  
 N46°48.13'-W92°12.17'  
 L-14, H-2

**GREEN BAY**  
 115.5 GRB  
 Chan 102  
 N44°33.31'-W88°11.69'  
 L-31, H-2

**ABERDEEN**  
 113.0 ABR  
 Chan 77  
 N45°25.04'-W98°22.12'  
 L-14, H-2

**MINNEAPOLIS**  
 115.3 MSP  
 Chan 100  
 N44°53.79'-W93°14.19'  
 L-12-14, H-2

**FARMINGTON**  
 115.7 FGT  
 Chan 104  
 N44°37.86'-W93°10.92'  
 L-12-14, H-2

**RAPID CITY**  
 112.3 RAP  
 Chan 70  
 N43°58.56'-W103°00.74'  
 L-12, H-2

**FLYING CLOUD**  
 117.7 FCM  
 Chan 124  
 N44°49.52'-W93°26.56'  
 L-12-14, H-2

**NODINE**  
 117.9 ODI  
 Chan 126  
 N43°54.74'-W91°28.05'  
 L-28, H-2

**SIOUX FALLS**  
 115.0 FSD  
 Chan 97  
 N43°38.97'-W96°46.87'  
 L-12, H-5

**FORT DODGE**  
 113.5 FOD  
 Chan 82  
 N42°36.67'-W94°17.69'  
 L-12, H-5

**ROCHESTER**  
 112.0 RST  
 Chan 57  
 N43°46.97'-W92°35.82'  
 L-12-28, H-2

**DELLS**  
 117.0 DLL  
 Chan 117  
 N43°33.05'-W89°45.82'  
 L-28, H-5

**O'NEILL**  
 113.9 ONL  
 Chan 86  
 N42°28.23'-W98°41.22'  
 L-12, H-5

**OMAHA**  
 116.3 OVR  
 Chan 110  
 N41°10.03'-W95°44.21'  
 L-10-12, H-5

**DES MOINES**  
 117.5 DSM  
 Chan 122  
 N41°26.26'-W93°38.91'  
 L-12-27, H-5

**ST JOSEPH**  
 115.5 STJ  
 Chan 102  
 N39°57.63'-W94°55.51'  
 L-10, H-5

**KANSAS CITY**  
 113.25 MCI  
 Chan 79 (Y)  
 N39°17.12'-W94°44.22'  
 L-10, H-5

NOTE: RADAR and DME required.

## TAKEOFF OBSTACLE NOTES

Rwy 17: Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.  
 Building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.  
 Building 1956' from DER, 904' left of centerline, 61' AGL/866' MSL.  
 Tree 2619' from DER, on centerline, 79' AGL/900' MSL.

NOTE: Chart not to scale.

## DEPARTURE ROUTE DESCRIPTION

**TAKEOFF RUNWAY 17:** Climb via heading 170° to HUSHH/MSP VOR/DME 3.5 DME then right turn heading 245° and continue climb (turbojet aircraft maintain 7000 or lower as assigned, all other aircraft maintain 5000 or lower as assigned). Then via vectors to assigned route/fix. Expect clearance to assigned altitude/flight level 10 minutes after departure.

# MEADOW LAKE THREE DEPARTURE

MINNEAPOLIS, MINNESOTA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MINNEAPOLIS SEVEN DEPARTURE

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA

ATIS DEP 120.8  
 CLNC DEL  
 133.2  
 CPDLC  
 MINNEAPOLIS TOWER  
 123.95 273.55 (12R-30L)  
 126.7 273.55 (12R-30L, 4-22)  
 123.675 273.55 (17-35)  
 MINNEAPOLIS DEP CON  
 SOUTH or EAST 124.7 357.4  
 NORTH or WEST 125.75 357.4

FARGO  
 116.2 FAR  
 Chan 109  
 N46°45.20'-W96°51.08'  
 L-14, H-2

DULUTH  
 112.6 DLH  
 Chan 73  
 N46°48.13'-W92°12.17'  
 L-14, H-2

BRAINERD  
 116.9 BRD  
 Chan 116  
 N46°20.90'-W94°01.56'  
 L-14, H-2

GREEN BAY  
 115.5 GRB  
 Chan 102  
 N44°33.31'-W88°11.69'  
 L-31, H-2

FLYING CLOUD  
 117.7 FCM  
 Chan 124

MINNEAPOLIS  
 115.3 MSP  
 Chan 100

ABERDEEN  
 113.0 ABR  
 Chan 77  
 N45°25.04'-W98°22.12'  
 L-14, H-2

Rwys 30L/R  
 (For assigned 220° CW 360°)  
 3500

NODINE  
 117.9 ODI  
 Chan 126  
 N43°54.74'-W91°28.05'  
 L-28, H-2

RAPID CITY  
 112.3 RAP  
 Chan 70  
 N43°58.56'-W103°00.74'  
 L-12, H-2

FARMINGTON  
 115.7 FGT  
 Chan 104

Non DME Aircraft  
 Rwys 12L/R  
 (For assigned 060° CW 100°)  
 3500

SIoux FALLS  
 115.0 FSD  
 Chan 97  
 N43°38.97'-W96°46.87'  
 L-12, H-5

FORT DODGE  
 113.5 FOD  
 Chan 82  
 N42°36.67'-W94°17.69'  
 L-12, H-5

ROCHESTER  
 112.0 RST  
 Chan 57  
 N43°46.97'-W92°35.82'  
 L-12-28, H-2

DELLS  
 117.0 DLL  
 Chan 117  
 N43°33.05'-W89°45.82'  
 L-28, H-5

O'NEILL  
 113.9 ONL  
 Chan 86  
 N42°28.23'-W98°41.22'  
 L-12, H-5

OMAHA  
 116.3 OVR  
 Chan 110  
 N41°10.03'-W95°44.21'  
 L-10-12, H-5

DES MOINES  
 117.5 DSM  
 Chan 122  
 N41°26.26'-W93°38.91'  
 L-12-27, H-5

ST JOSEPH  
 115.5 STJ  
 Chan 102  
 N39°57.63'-W94°55.51'  
 L-10, H-5

KANSAS CITY  
 113.25 MCI  
 Chan 79 (Y)  
 N39°17.12'-W94°44.22'  
 L-10, H-5

NOTE: RADAR required.  
 NOTE: DME required for Rwys 17,  
 30L/R departures.

TAKEOFF MINIMUMS

Rwys 4, 12R, 17, 22, 30L/R: Standard.  
 Rwy 12L: 300-1½ or standard with minimum climb of 207' per NM to 1100,  
 or alternatively, with standard takeoff minimums and a normal 200' per NM  
 climb gradient, takeoff must occur no later than 1300' prior to DER.  
 Rwy 35: Standard with minimum climb of 219' per NM to 2100.

DEPARTURE CROSSING RESTRICTIONS

Runways 12L/R DME aircraft requires an ATC climb gradient of 546' per NM to 3500. Runways 12L/R  
 non-DME aircraft requires an ATC climb gradient of 594' per NM to 3500.  
 Runway 17 requires an ATC climb gradient of 465' per NM to 3500.  
 Runways 30L/R requires an ATC climb gradient of 380' per NM to 3500.

NOTE: Chart not to scale.

(NOTES CONTINUED ON FOLLOWING PAGE) (NARRATIVE ON FOLLOWING PAGE)

MINNEAPOLIS SEVEN DEPARTURE

MINNEAPOLIS, MINNESOTA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017





DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Fly assigned heading for RADAR vectors to join filed/assigned route. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude. Expect clearance to assigned altitude/flight level 10 (ten) minutes after departure.

DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned heading from 060° clockwise to 100°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply advise ATC as soon as possible prior to departure.

NON-DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned headings from 060° clockwise to 100°, cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure.

TAKEOFF RUNWAY 17 DEPARTURES: For assigned headings from 230° clockwise to 285° cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure.

TAKEOFF RUNWAYS 30L/R DEPARTURES: For assigned headings from 220° clockwise to 360° cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure.

TAKEOFF OBSTACLE NOTES

Rwy 4: Trees beginning 800' from DER, 301' left of centerline, up to 75' AGL/925' MSL.  
Rod on building 2528' from DER, 1174' left of centerline, 78' AGL/922' MSL.  
Fence beginning 13' from DER, 486' left of centerline, up to 6' AGL/860' MSL.  
Stack 4535' from DER, 480' left of centerline, 139' AGL/949' MSL.

Rwy 12L: Tree 1.1 NM from DER, 1691' left of centerline, 92' AGL/991' MSL.  
Light pole and camera on wall beginning 398' from DER, 561' right of centerline, up to 23' AGL/832' MSL.

Rwy 12R: Tree 1479' from DER, 561' left of centerline, 86' AGL/855' MSL.  
OL on pole 1002' from DER, 753' left of centerline, 53' AGL/852' MSL.

Rwy 17: Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.  
Building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.  
Building 1956' from DER, 904' left of centerline, 61' AGL/866' MSL.  
Tree 2619' from DER, on centerline, 79' AGL/900' MSL.

Rwy 22: Trees beginning 2659' from DER, 867' right of centerline, 94' AGL/934' MSL.

Rwy 30L: Antenna on tower 3555' from DER, 1334' left of centerline, 116' AGL/935 MSL.

Rwy 30R: Billboard sign 1463' from DER, 848' right of centerline, 31' AGL/880' MSL.

Rwy 35: Trees beginning 2553' from DER, 770' right of centerline, up to 100' AGL/919' MSL.  
Trees beginning 1989' from DER, 194' left of centerline, up to 87' AGL/906' MSL.  
Buildings beginning 5.4 NM from DER, 1781' left of centerline, up to 889' AGL/1743 MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

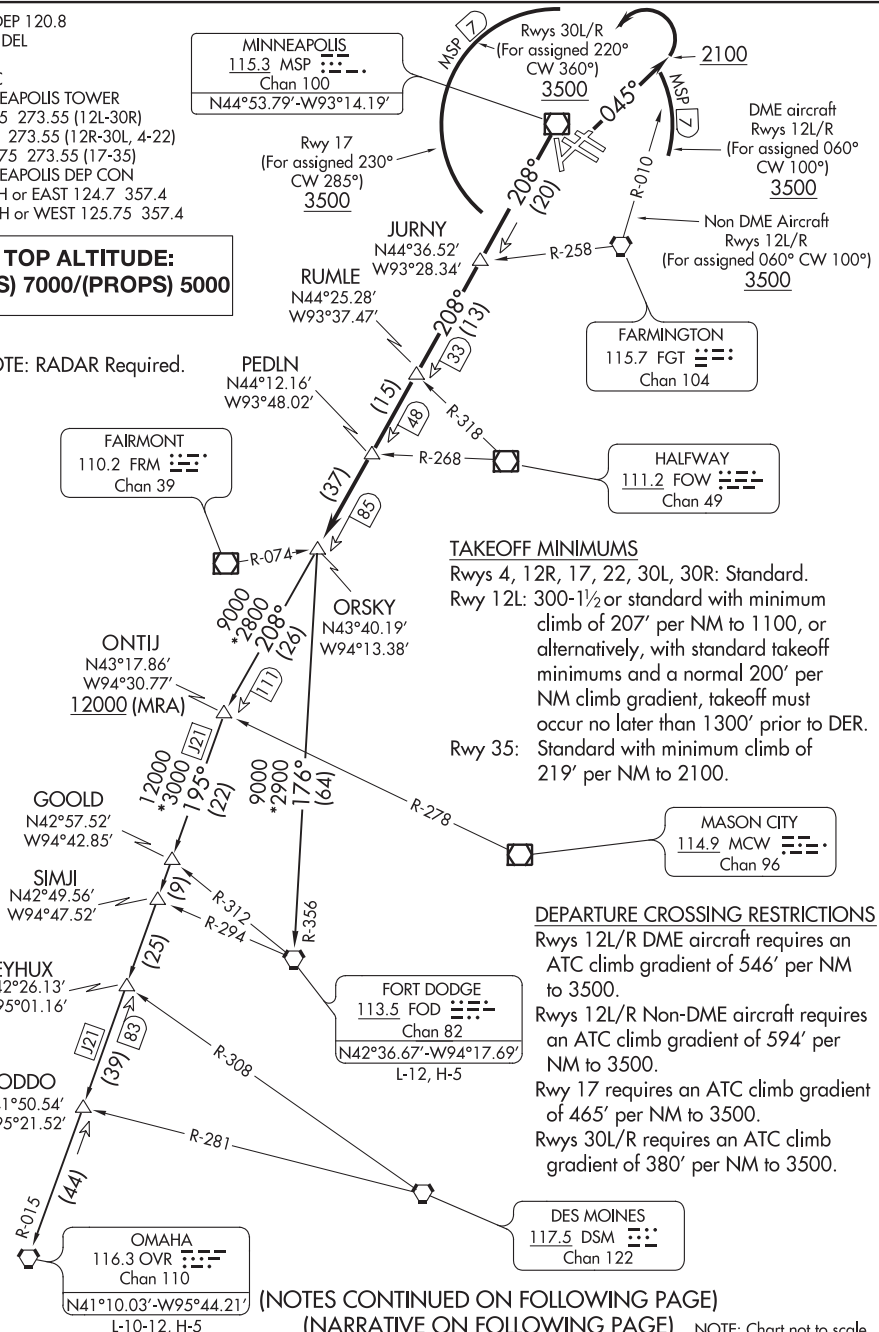
# (ORSKY9.ORSKY) 16315 ORSKY NINE DEPARTURE

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)  
SL-264 (FAA) MINNEAPOLIS, MINNESOTA

ATIS DEP 120.8  
 CLNC DEL  
 133.2  
 CPDLC  
 MINNEAPOLIS TOWER  
 123.95 273.55 (12L-30R)  
 126.7 273.55 (12R-30L, 4-22)  
 123.675 273.55 (17-35)  
 MINNEAPOLIS DEP CON  
 SOUTH or EAST 124.7 357.4  
 NORTH or WEST 125.75 357.4

**TOP ALTITUDE:  
 (JETS) 7000/(PROPS) 5000**

NOTE: RADAR Required.



### TAKEOFF MINIMUMS

Rwys 4, 12R, 17, 22, 30L, 30R: Standard.  
 Rwy 12L: 300-1½ or standard with minimum climb of 207' per NM to 1100, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later than 1300' prior to DER.  
 Rwy 35: Standard with minimum climb of 219' per NM to 2100.

### DEPARTURE CROSSING RESTRICTIONS

Rwys 12L/R DME aircraft requires an ATC climb gradient of 546' per NM to 3500.  
 Rwys 12L/R Non-DME aircraft requires an ATC climb gradient of 594' per NM to 3500.  
 Rwy 17 requires an ATC climb gradient of 465' per NM to 3500.  
 Rwys 30L/R requires an ATC climb gradient of 380' per NM to 3500.

(NOTES CONTINUED ON FOLLOWING PAGE)  
 (NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# ORSKY NINE DEPARTURE (ORSKY9.ORSKY) 15SEP16

MINNEAPOLIS, MINNESOTA  
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)



DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Fly assigned heading for RADAR vectors to MSP R-208 to ORSKY INT/MSP 85 DME. Turbojet aircraft maintain 7000 or lower assigned altitude. All other aircraft maintain 5000 or lower assigned altitude.

TAKEOFF RUNWAY 4: Climb heading 045° to 2100 before turning left.

DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned headings from 060° clockwise to 100°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

NON-DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned headings from 060° clockwise to 100°, cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAY 17: For assigned headings from 230° clockwise to 285°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAYS 22, 35: Initially assigned heading. Thence . . . .

TAKEOFF RUNWAYS 30L/R: Fly assigned headings from 220° clockwise to 360°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

. . . .via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

FORT DODGE TRANSITION (ORSKY9.FOD): From over ORSKY INT on FOD R-356 to FOD VORTAC.

OMAHA TRANSITION (ORSKY9.OVR): From over ORSKY INT on MSP R-208 to ONTIJ INT, then on OVR R-015 to OVR VORTAC.

TAKEOFF OBSTACLE NOTES

- Rwy 4: Trees beginning 800' from DER, 301' left of centerline, up to 75' AGL/925' MSL. Rod on building 2528' from DER, 1174' left of centerline, 78' AGL/922' MSL. Fence beginning 13' from DER, 486' left of centerline, up to 6' AGL/860' MSL. Stack 4535' from DER, 480' left of centerline, 139' AGL/949' MSL.
- Rwy 12L: Tree 1.1 NM from DER, 1691' left of centerline, 92' AGL/991' MSL. Light pole and camera on wall beginning 398' from DER, 561' right of centerline, up to 23' AGL/832' MSL.
- Rwy 12R: Tree 1479' from DER, 561' left of centerline, 86' AGL/855' MSL. Obstruction light on pole 1002' from DER, 753' left of centerline, 53' AGL/852' MSL.
- Rwy 17: Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL. Building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL. Building 1956' from DER, 904' left of centerline, 61' AGL/866' MSL. Tree 2619' from DER, on centerline, 79' AGL/900' MSL.
- Rwy 22: Trees beginning 2659' from DER, 867' right of centerline, up to 94' AGL/934' MSL.
- Rwy 30L: Antenna on tower 3555' from DER, 1334' left of centerline, 116' AGL/935' MSL.
- Rwy 30R: Billboard sign 1463' from DER, 848' right of centerline, 31' AGL/880' MSL.
- Rwy 35: Trees beginning 2553' from DER, 770' right of centerline, up to 100' AGL/919' MSL. Trees beginning 1989' from DER, 194' left of centerline, up to 87' AGL/906' MSL. Buildings beginning 5.4 NM from DER, 1781' left of centerline, up to 889' AGL/1743' MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

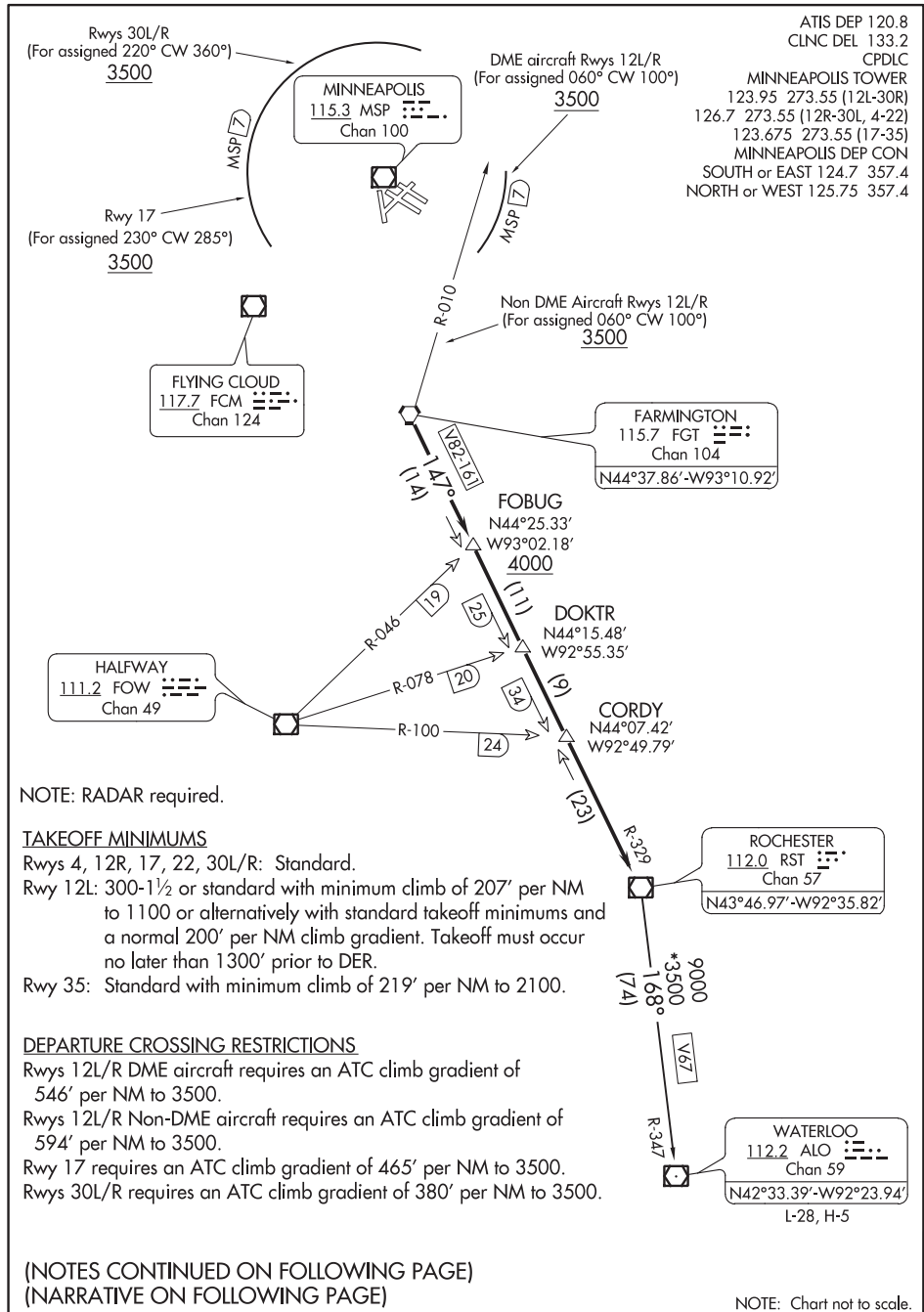
(RST8.RST) 16315

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

# ROCHESTER EIGHT DEPARTURE

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA



ATIS DEP 120.8  
 CLNC DEL 133.2  
 CPDLC  
 MINNEAPOLIS TOWER  
 123.95 273.55 (12L-30R)  
 126.7 273.55 (12R-30L, 4-22)  
 123.675 273.55 (17-35)  
 MINNEAPOLIS DEP CON  
 SOUTH or EAST 124.7 357.4  
 NORTH or WEST 125.75 357.4

Rwys 30L/R  
 (For assigned 220° CW 360°)  
**3500**  
 MSP 7  
 Rwy 17  
 (For assigned 230° CW 285°)  
**3500**

DME aircraft Rwys 12L/R  
 (For assigned 060° CW 100°)  
**3500**  
 MSP 7

Non DME Aircraft Rwys 12L/R  
 (For assigned 060° CW 100°)  
**3500**

FLYING CLOUD  
 117.7 FCM  
 Chan 124

FARMINGTON  
 115.7 FGT  
 Chan 104  
 N44°37.86'-W93°10.92'

FOBUG  
 N44°25.33'  
 W93°02.18'  
**4000**

DOKTR  
 N44°15.48'  
 W92°55.35'

CORDY  
 N44°07.42'  
 W92°49.79'

HALFWAY  
 111.2 FOW  
 Chan 49

ROCHESTER  
 112.0 RST  
 Chan 57  
 N43°46.97'-W92°35.82'

WATERLOO  
 112.2 ALO  
 Chan 59  
 N42°33.39'-W92°23.94'  
 L-28, H-5

NOTE: RADAR required.

### TAKEOFF MINIMUMS

- Rwys 4, 12R, 17, 22, 30L/R: Standard.
- Rwy 12L: 300-1½ or standard with minimum climb of 207' per NM to 1100 or alternatively with standard takeoff minimums and a normal 200' per NM climb gradient. Takeoff must occur no later than 1300' prior to DER.
- Rwy 35: Standard with minimum climb of 219' per NM to 2100.

### DEPARTURE CROSSING RESTRICTIONS

- Rwys 12L/R DME aircraft requires an ATC climb gradient of 546' per NM to 3500.
- Rwys 12L/R Non-DME aircraft requires an ATC climb gradient of 594' per NM to 3500.
- Rwy 17 requires an ATC climb gradient of 465' per NM to 3500.
- Rwys 30L/R requires an ATC climb gradient of 380' per NM to 3500.

(NOTES CONTINUED ON FOLLOWING PAGE)  
 (NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

# ROCHESTER EIGHT DEPARTURE

MINNEAPOLIS, MINNESOTA

(RST8.RST) 21JUL16

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Fly assigned heading for RADAR vectors to FGT VORTAC, then via FGT R-147 and RST R-329 to RST VOR/DME. Cross FOBUG INT/FGT 14 DME at or above 4000. Turbojet aircraft maintain 7000 or lower assigned altitude. All other aircraft maintain 5000 or lower assigned altitude.

DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned headings from 060° clockwise to 100°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure, thence . . . .

NON-DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned headings from 060° clockwise to 100°, cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure, thence. . . .

TAKEOFF RUNWAYS 4, 22, 35: Initially assigned heading, thence . . . .

TAKEOFF RUNWAY 17: For assigned headings from 230° clockwise to 285° cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure, thence . . . .

TAKEOFF RUNWAYS 30L/R: For assigned headings from 220° clockwise to 360° cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure, thence . . . .

. . . . via assigned transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

WATERLOO TRANSITION (RST8.ALO): From over RST VOR/DME on RST R-168 and ALO R-347 to ALO VOR/DME.

TAKEOFF OBSTACLE NOTES

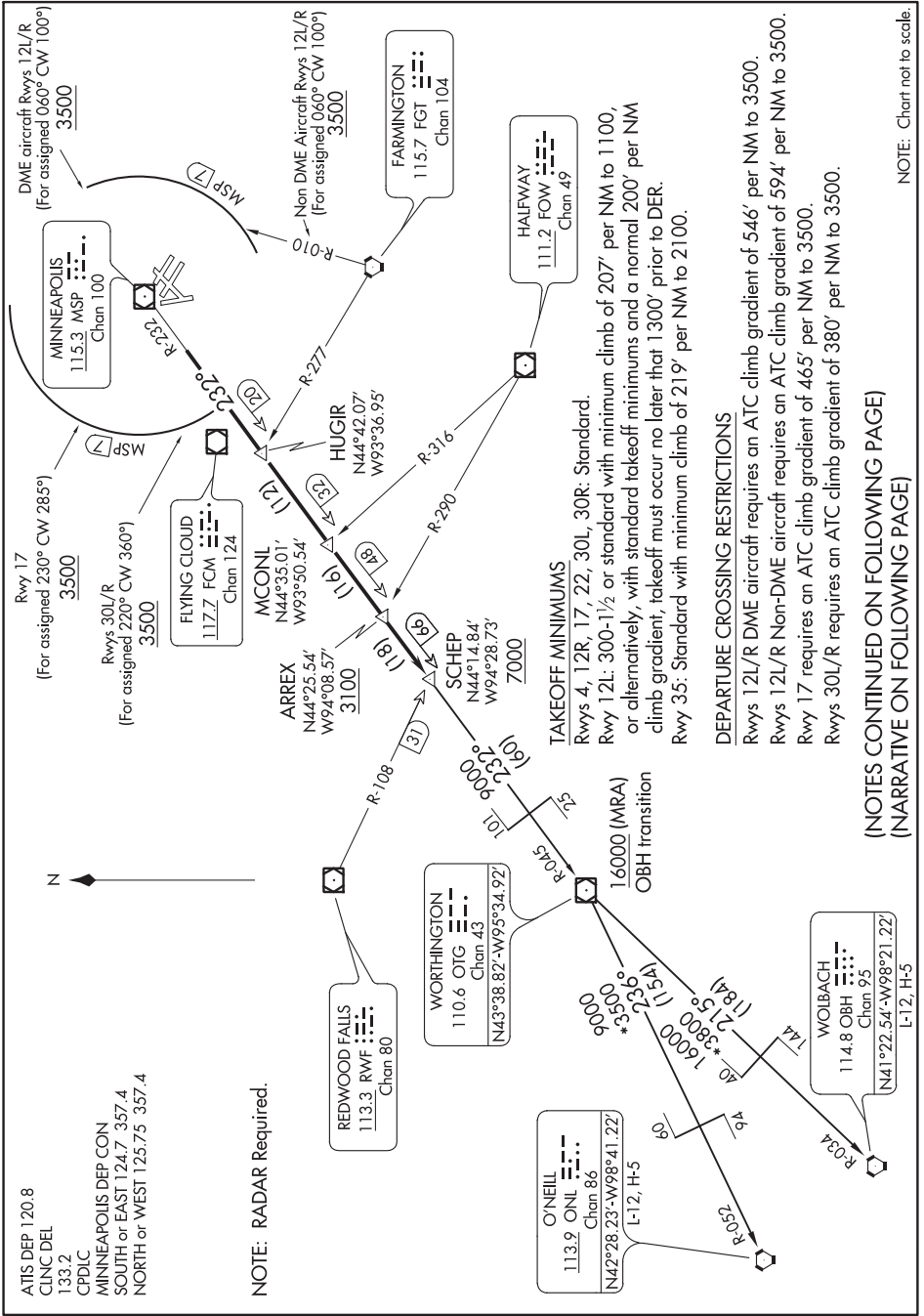
- Rwy 4: Trees beginning 800' from DER, 301' left of centerline, up to 75' AGL/925' MSL. Rod on building 2528' from DER, 1174' left of centerline, 78' AGL/922' MSL. Fence beginning 13' from DER, 486' left of centerline, up to 6' AGL/860' MSL. Stack 4535' from DER, 480' left of centerline, 139' AGL/949' MSL.
- Rwy 12L: Tree 1.1 NM from DER, 1691' left of centerline, 92' AGL/991' MSL. Light pole and camera on wall beginning 389' from DER, 561' right of centerline, up to 23' AGL/832' MSL.
- Rwy 12R: Tree 1479' from DER, 561' left of centerline, 86' AGL/855' MSL. Obstruction light on pole 1002' from DER, 753' left of centerline, 53' AGL/852' MSL.
- Rwy 17: Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL. Building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL. Building 1956' from DER, 904' left of centerline, 61' AGL/866' MSL. Tree 2619' from DER, on centerline, 79' AGL/900' MSL.
- Rwy 22: Trees beginning 2659' from DER, 867' right of centerline, up to 94' AGL/934' MSL.
- Rwy 30L: Antenna on tower 3555' from DER, 1334' left of centerline, 116' AGL/935' MSL.
- Rwy 30R: Billboard sign 1463' from DER, 848' right of centerline, 31' AGL/880' MSL.
- Rwy 35: Trees beginning 2553' from DER, 770' right of centerline, up to 100' AGL/919' MSL. Trees beginning 1989' from DER, 194' left of centerline, up to 87' AGL/906' MSL. Buildings beginning 5.4 NM from DER, 1781' left of centerline, up to 889' AGL/1743' MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# SCHEP EIGHT DEPARTURE

21.0Z JAN 20 2016 10:10.1'-ON



ATIS DEP 120.8  
 CLNC DEL  
 133.2  
 CPDLC  
 MINNEAPOLIS DEP CON  
 SOUTH or EAST 124.7 357.4  
 NORTH or WEST 125.75 357.4

NOTE: RADAR Required.

**TAKEOFF MINIMUMS**  
 Rwy 4, 12R, 17, 22, 30L, 30R: Standard.  
 Rwy 12L: 300-1/2 or standard with minimum climb of 207' per NM to 1100, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient. takeoff must occur no later than 1300' prior to DER.  
 Rwy 35: Standard with minimum climb of 219' per NM to 2100.

**DEPARTURE CROSSING RESTRICTIONS**  
 Rwy 12L/R DME aircraft requires an ATC climb gradient of 546' per NM to 3500.  
 Rwy 12L/R Non-DME aircraft requires an ATC climb gradient of 594' per NM to 3500.  
 Rwy 17 requires an ATC climb gradient of 465' per NM to 3500.  
 Rwy 30L/R requires an ATC climb gradient of 380' per NM to 3500.

(NOTES CONTINUED ON FOLLOWING PAGE)  
 (NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

NC-1, 10 NOV 2016 to 05 JAN 2017

# SCHEP EIGHT DEPARTURE

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA



## DEPARTURE ROUTE DESCRIPTION

**TAKEOFF ALL RUNWAYS:** Fly assigned heading for RADAR vectors to MSP R-232 to SCHEP INT/MSP 66 DME. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude.

**DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES:** For assigned headings from 060° clockwise to 100°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply advise ATC as soon as possible prior to departure, thence . . . .

**NON-DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES:** For assigned headings from 060° clockwise to 100°, cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure, thence . . . .

**TAKEOFF RUNWAY 17 DEPARTURES:** For assigned headings from 230° clockwise to 285° cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure, thence . . . .

**TAKEOFF RUNWAYS 30L/R DEPARTURES:** For assigned headings from 220° clockwise to 360° cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure, thence . . . .

**TAKEOFF RUNWAYS 4, 22, 35:** Initially assigned heading, thence . . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

**O'NEILL TRANSITION (SCHEP8.ONL):** From over SCHEP INT on MSP R-232 and OTG R-045 to OTG VOR/DME, then on OTG R-236 and ONL R-052 to ONL VORTAC.

**WOLBACH TRANSITION (SCHEP8.OBH):** From over SCHEP INT on MSP R-232 and OTG R-045 to OTG VOR/DME, then on OTG R-215 and OBH R-034 to OBH VORTAC.

### TAKEOFF OBSTACLE NOTES

- Rwy 04: Trees beginning 800' from DER, 301' left of centerline, up to 75' AGL/925' MSL.  
Rod on building 2528' from DER, 1174' left of centerline, 78' AGL/922' MSL.  
Fence beginning 13' from DER, 486' left of centerline, up to 6' AGL/860' MSL.  
Stack 4535' from DER, 480' left of centerline, 139' AGL/949' MSL.
- Rwy 12L: Tree 1.1 NM from DER, 1691' left of centerline, 92' AGL/991' MSL.  
Light pole and camera on wall beginning 398' from DER, 561' right of centerline, up to 23' AGL/832' MSL.
- Rwy 12R: Tree 1479' from DER, 561' left of centerline, 86' AGL/855' MSL.  
Obstruction light on pole 1002' from DER, 753' left of centerline, 53' AGL/852' MSL.
- Rwy 17: Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.  
Building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.  
Building 1956' from DER, 904' left of centerline, 61' AGL/866' MSL.  
Tree 2619' from DER, on centerline, 79' AGL/900' MSL.
- Rwy 22: Trees beginning 2659' from DER, 867' right of centerline, 94' AGL/934' MSL.
- Rwy 30L: Antenna on tower 3555' from DER, 1334' left of centerline, 116' AGL/935 MSL.
- Rwy 30R: Billboard sign 1463' from DER, 848' right of centerline, 31' AGL/880' MSL.
- Rwy 35: Trees beginning 2553' from DER, 770' right of centerline, 100' AGL/919' MSL.  
Trees beginning 1989' from DER, 194' left of centerline, up to 87' AGL/906' MSL.  
Buildings beginnings 5.4 NM from DER, 1781' left of centerline, up to 889' AGL/1743 MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# SCHEP EIGHT DEPARTURE

(SCHEP8.SCHEP) 06FEB14

MINNEAPOLIS, MINNESOTA  
MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

NC-1, 10 NOV 2016 to 05 JAN 2017

ATIS DEP 120.8  
 CLNC DEL  
 133.2  
 CPDIC  
 MINNEAPOLIS TOWER  
 123.95 273.55 (12L-30R)  
 126.7 273.55 (12R-30L, 4-22)  
 123.675 273.55 (17-35)  
 MINNEAPOLIS DEP CON  
 SOUTH or EAST 124.7 357.4  
 NORTH or WEST 125.75 357.4

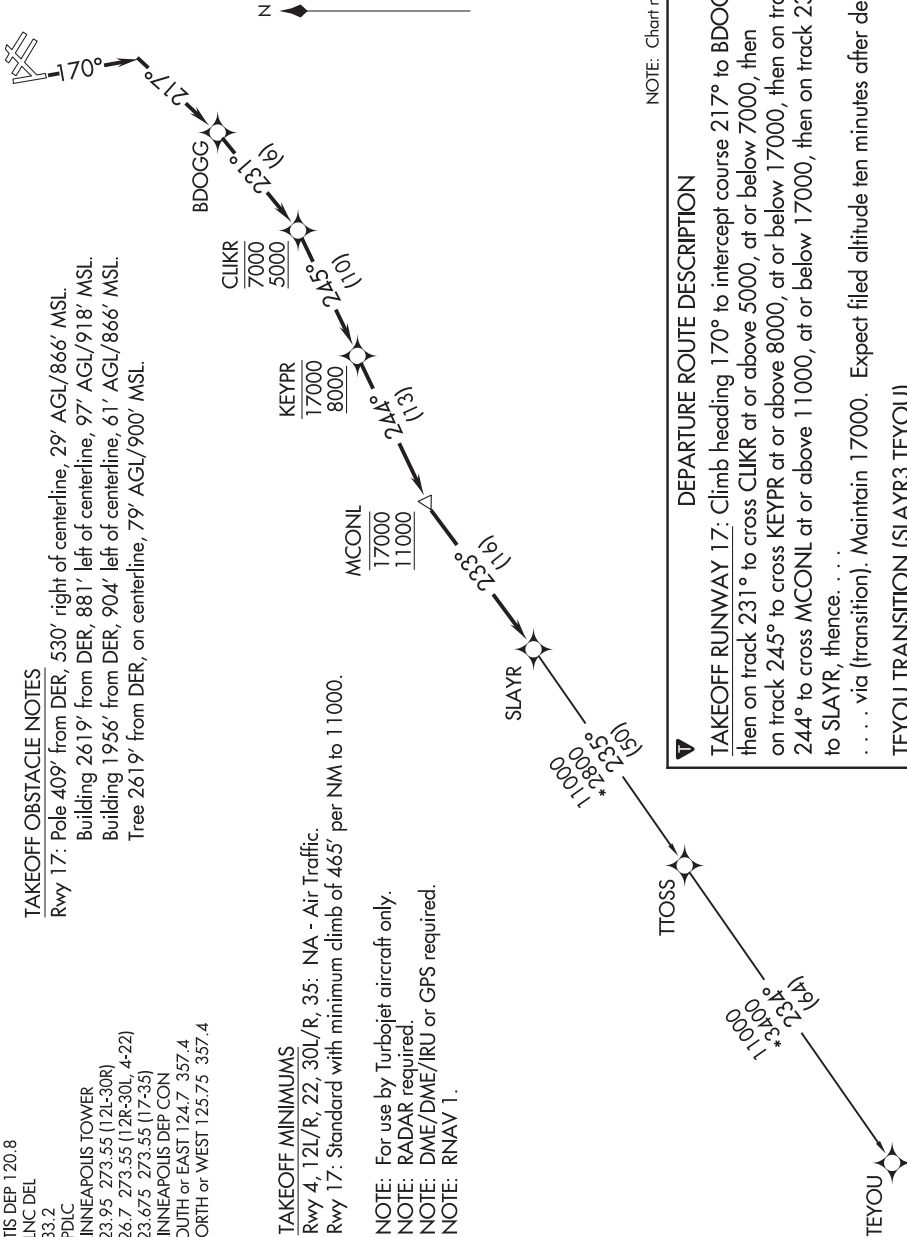
TAKEOFF OBSTACLE NOTES

Rwy 17: Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.  
 Building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.  
 Building 1956' from DER, 904' left of centerline, 61' AGL/866' MSL.  
 Trees 2619' from DER, on centerline, 79' AGL/900' MSL.

TAKEOFF MINIMUMS

Rwy 4, 12L/R, 22, 30L/R, 35: NA - Air Traffic.  
 Rwy 17: Standard with minimum climb of 465' per NM to 11000.

NOTE: For use by Turbojet aircraft only.  
 NOTE: RADAR required.  
 NOTE: DME/DME/IRU or GPS required.  
 NOTE: RNAV 1.



NOTE: Chart not to scale.

DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 17: Climb heading 170° to intercept course 217° to BDOGG, then on track 231° to cross CLIKR at or above 5000, at or below 7000, then on track 245° to cross KEYPR at or above 8000, at or below 17000, then on track 244° to cross MCONL at or above 11000, at or below 17000, then on track 233° to SLAYR, thence. . . . via (transition). Maintain 17000. Expect filed altitude ten minutes after departure.

TEYOU TRANSITION (SLAYR3.TEYOU)



# SMERF SIX DEPARTURE (RNAV)

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA

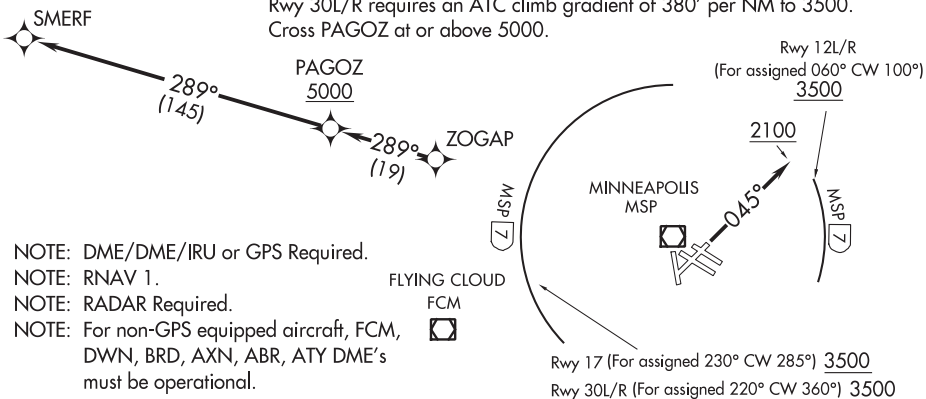
ATIS DEP 120.8  
 CLNC DEL  
 133.2  
 CPDLC  
 MINNEAPOLIS TOWER  
 123.95 273.55 (12L-30R)  
 126.7 273.55 (12R-30L, 4-22)  
 123.675 273.55 (17-35)  
 MINNEAPOLIS DEP CON  
 SOUTH or EAST 124.7 357.4  
 NORTH or WEST 125.75 357.4

### TAKEOFF MINIMUMS

Rwys 4, 12R, 17, 22, 30L/R: Standard.  
 Rwy 12L: 300-1½ or standard with minimum climb of 207' per NM to 1100, or alternatively, with standard takeoff minimums and a normal 200' per NM climb gradient, takeoff must occur no later that 1300' prior to DER.  
 Rwy 35: Standard with minimum climb of 219' per NM to 2100.

### DEPARTURE CROSSING RESTRICTIONS

Rwy 12L/R requires an ATC climb gradient of 546' per NM to 3500.  
 Rwy 17 requires an ATC climb gradient of 465' per NM to 3500.  
 Rwy 30L/R requires an ATC climb gradient of 380' per NM to 3500.  
 Cross PAGOZ at or above 5000.



- NOTE: DME/DME/IRU or GPS Required.
- NOTE: RNAV 1.
- NOTE: RADAR Required.
- NOTE: For non-GPS equipped aircraft, FCM, DWN, BRD, AXN, ABR, ATY DME's must be operational.

NOTE: Chart not to scale.

(NOTES CONTINUED ON FOLLOWING PAGE)

## DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 4: Climb heading 045° to 2100. Thence . . . .

TAKEOFF RWYS 12L/R: For assigned headings from 060° clockwise to 100°, cross MSP VOR/DME 7 DME Arc at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RWY 17: For assigned headings from 230° clockwise to 285°, cross MSP VOR/DME 7 DME Arc at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RWYS 22, 35: Climb on assigned heading for radar vectors. Thence . . . .

TAKEOFF RWYS 30L/R: For assigned headings from 220° clockwise to 360°, cross MSP VOR/DME 7 DME Arc at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

. . . . expect radar vectors to ZOGAP, then on track 289° to PAGOZ and on track 289° to SMERF. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude. Expect filed altitude/flight level 10 minutes after departure.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

TAKEOFF OBSTACLE NOTES:

- Rwy 04: Trees beginning 800' from DER, 301' left of centerline, up to 75' AGL/925' MSL.  
Rod on building 2528' from DER, 1174' left of centerline, 78' AGL/922' MSL.  
Fence beginning 13' from DER, 486' left of centerline, up to 6' AGL/860' MSL.  
Stack 4535' from DER, 480' left of centerline, 139' AGL/949' MSL.
- Rwy 12L: Tree 1.1 NM from DER, 1691' left of centerline, 92' AGL/991' MSL.  
LT pole and camera on wall beginning 398' from DER, 561' right of centerline,  
up to 23' AGL/832' MSL.
- Rwy 12R: Tree 1479' from DER, 561' left of centerline, 86' AGL/855' MSL.  
OL on pole 1002' from DER, 753' left of centerline, 53' AGL/852' MSL.
- Rwy 17: Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL.  
Building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL.  
Building 1956' from DER, 904' left of centerline, 61' AGL/866' MSL.  
Tree 2619' from DER, on centerline, 79' AGL/900' MSL.
- Rwy 22: Trees beginning 2659' from DER, 867' right of centerline, 94' AGL/934' MSL.
- Rwy 30L: Antenna on tower 3555' from DER, 1334' left of centerline, 116' AGL/935' MSL.
- Rwy 30R: Billboard sign 1463' from DER, 848' right of centerline, 31' AGL/880' MSL.
- Rwy 35: Trees beginning 2553' from DER, 770' right of centerline, 100' AGL/919' MSL.  
Trees beginning 1989' from DER, 194' left of centerline, up to 87' AGL/906' MSL.  
Buildings beginnings 5.4 NM from DER, 1781' left of centerline,  
up to 889' AGL/1743' MSL.

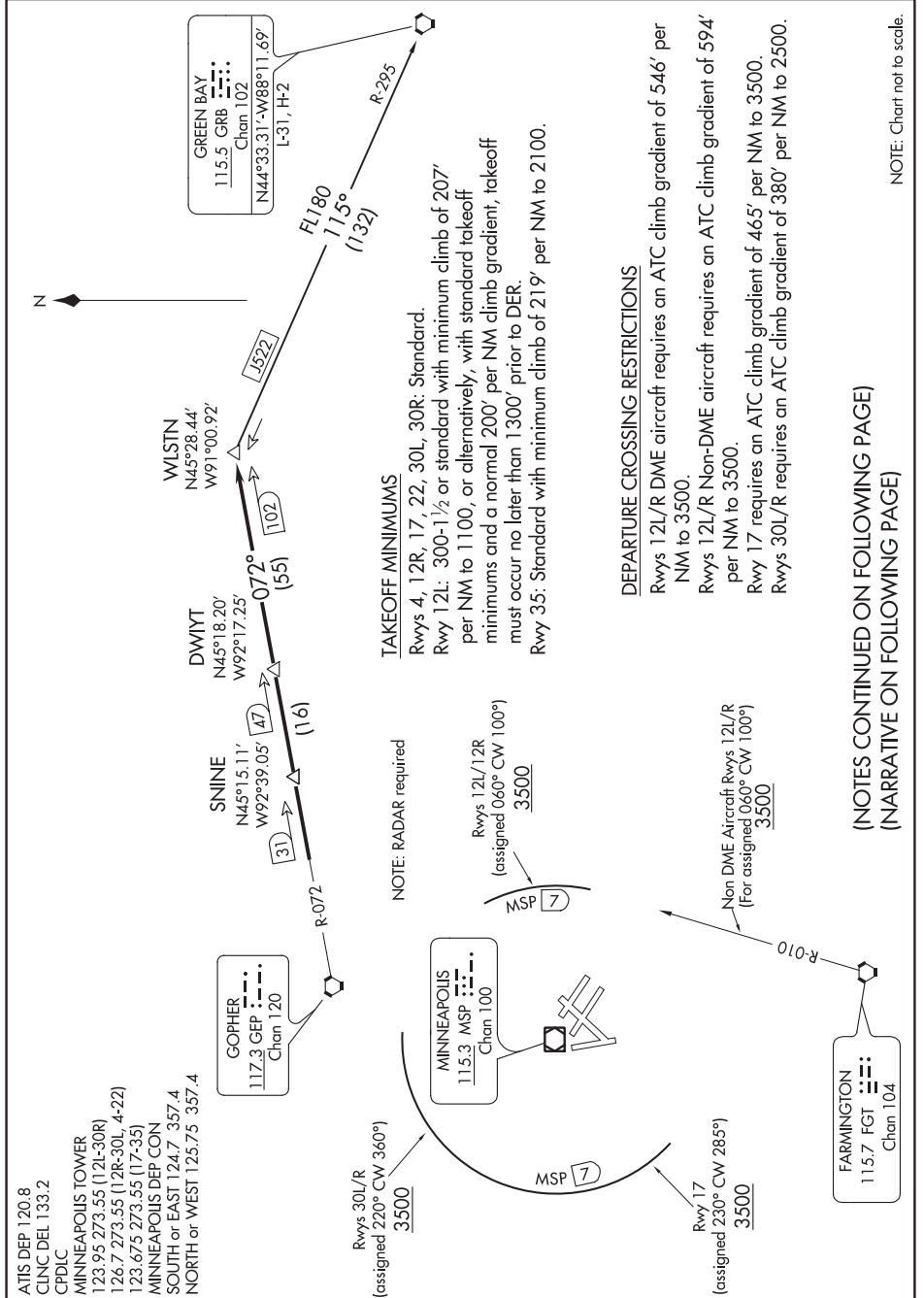
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

(WLSTN6. WLSTN) 16315  
**WLSTN SIX DEPARTURE**

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)  
 SL-264 (FAA) MINNEAPOLIS, MINNESOTA

NC-1, 10 NOV 2016 to 05 JAN 2017



(WLSTN6. WLSTN) 06FEB14  
**WLSTN SIX DEPARTURE**

MINNEAPOLIS, MINNESOTA  
 MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

NC-1, 10 NOV 2016 to 05 JAN 2017

(WLSTN6.WLSTN) 16259

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

## WLSTN SIX DEPARTURE

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA



## DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Fly assigned heading for RADAR vectors to GEP R-072 to WLSTN/GEP 102 DME. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude. Thence . . . .

DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned headings from 060° clockwise to 100°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

NON-DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned headings from 060° clockwise to 100°, cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAY 17: For assigned headings from 230° clockwise to 285° cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAYS 30L/R: For assigned headings from 220° clockwise to 360° cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAYS 4, 22, 35: Initially assigned heading, thence . . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

GREEN BAY TRANSITION (WLSTN6.GRB): From over WLSTN INT on GRB R-295 to GRB VORTAC.

TAKEOFF OBSTACLE NOTES

- Rwy 4: Trees beginning 800' from DER, 301' left of centerline, up to 75' AGL/925' MSL. Rod on building 2528' from DER, 1174' left of centerline, 78' AGL/922' MSL. Fence beginning 13' from DER, 486' left of centerline, up to 6' AGL/860' MSL. Stack 4535' from DER, 480' left of centerline, 139' AGL/949' MSL.
- Rwy 12L: Tree 1.1 NM from DER, 1691' left of centerline, 92' AGL/991' MSL. Light pole and camera on wall beginning 398' from DER, 561' right of centerline, up to 23' AGL/832' MSL.
- Rwy 12R: Tree 1479' from DER, 561' left of centerline, 86' AGL/855' MSL. Obstruction light on pole 1002' from DER, 753' left of centerline, 53' AGL/852' MSL.
- Rwy 17: Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL. Building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL. Building 1956' from DER, 904' left of centerline, 61' AGL/866' MSL. Tree 2619' from DER, on centerline, 79' AGL/900' MSL.
- Rwy 22: Trees beginning 2659' from DER, 867' right of centerline, 94' AGL/934' MSL.
- Rwy 30L: Antenna on tower 3555' from DER, 1334' left of centerline, 116' AGL/935' MSL.
- Rwy 30R: Billboard sign 1463' from DER, 848' right of centerline, 31' AGL/880' MSL.
- Rwy 35: Trees beginning 2553' from DER, 770' right of centerline, up to 100' AGL/919' MSL. Trees beginning 1989' from DER, 194' left of centerline, up to 87' AGL/906' MSL. Buildings beginning 5.4 NM from DER, 1781' left of centerline, up to 889' AGL/1743' MSL.

WLSTN SIX DEPARTURE

MINNEAPOLIS, MINNESOTA

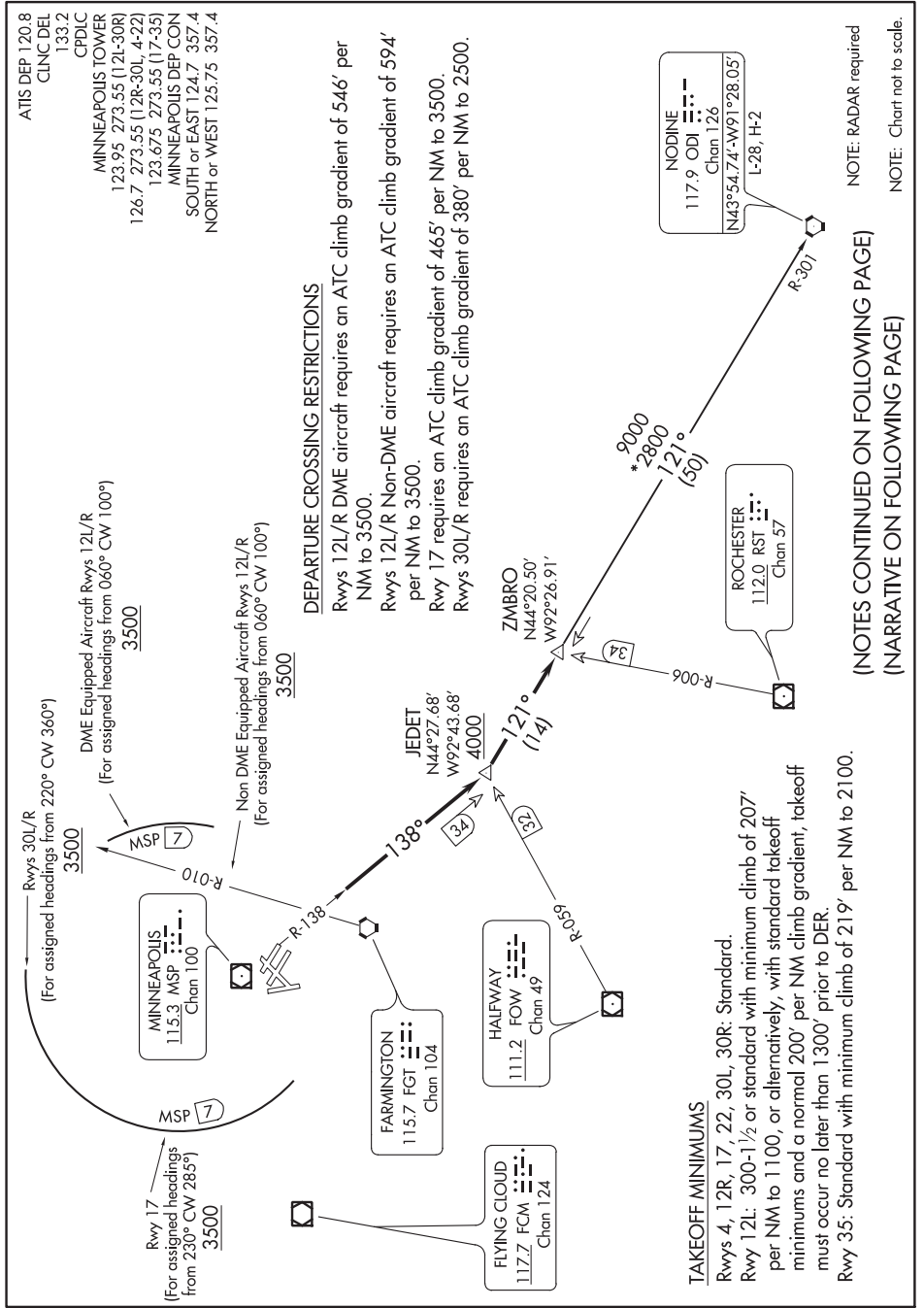
(WLSTN6.WLSTN) 06FEB14

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

**ZMBRO SIX DEPARTURE**  
 (ZMBRO6.ZMBRO) 16315

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)  
 SL-264 (FAA) MINNEAPOLIS, MINNESOTA

ZL10Z JAN 20 2017 01:10:01 '1-ON



**ZMBRO SIX DEPARTURE**  
 (ZMBRO6.ZMBRO) 06FEB14

MINNEAPOLIS, MINNESOTA  
 MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

NOTE: RADAR required  
 NOTE: Chart not to scale.

(NOTES CONTINUED ON FOLLOWING PAGE)  
 (NARRATIVE ON FOLLOWING PAGE)

NC-1, 10 NOV 2016 to 05 JAN 2017

(ZMBRO6.ZMBRO) 16259

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)

## ZMBRO SIX DEPARTURE

SL-264 (FAA)

MINNEAPOLIS, MINNESOTA



## DEPARTURE ROUTE DESCRIPTION

TAKEOFF ALL RUNWAYS: Fly assigned heading for RADAR vectors to MSP R-138 to JEDET INT/MSP 34 DME, at or above 4000; then on ODI R-301 to ZMBRO INT/ODI 50 DME. Turbojet aircraft maintain 7000 or lower assigned altitude, all other aircraft maintain 5000 or lower assigned altitude, thence . . . .

DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned headings from 060° clockwise to 100°, cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply advise ATC as soon as possible prior to departure. Thence . . . .

NON-DME EQUIPPED AIRCRAFT RUNWAYS 12L/R DEPARTURES: For assigned headings from 060° clockwise to 100°, cross FGT R-010 at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAY 17: For assigned headings from 230° clockwise to 285° cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAYS 30L/R: For assigned headings from 220° clockwise to 360° cross MSP 7 DME at or above 3500, maintain assigned altitude. If unable to comply, advise ATC as soon as possible prior to departure. Thence . . . .

TAKEOFF RUNWAYS 4, 22, 35: Initially assigned heading. Thence . . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

NODINE TRANSITION (ZMBRO6.ODI): From over ZMBRO INT on ODI R-301 to ODI VORTAC.

TAKEOFF OBSTACLE NOTES

- Rwy 4: Trees beginning 800' from DER, 301' left of centerline, up to 75' AGL/925' MSL. Rod on building 2528' from DER, 1174' left of centerline, 78' AGL/922' MSL. Fence beginning 13' from DER, 486' left of centerline, up to 6' AGL/860' MSL. Stack 4535' from DER, 480' left of centerline, 139' AGL/949' MSL.
- Rwy 12L: Tree 1.1 NM from DER, 1691' left of centerline, 92' AGL/991' MSL. Light pole and camera on wall beginning 398' from DER, 561' right of centerline, up to 23' AGL/832' MSL.
- Rwy 12R: Tree 1479' from DER, 561' left of centerline, 86' AGL/855' MSL. Obstruction light on pole 1002' from DER, 753' left of centerline, 53' AGL/852' MSL.
- Rwy 17: Pole 409' from DER, 530' right of centerline, 29' AGL/866' MSL. Building 2619' from DER, 881' left of centerline, 97' AGL/918' MSL. Building 1956' from DER, 904' left of centerline, 61' AGL/866' MSL. Tree 2619' from DER, on centerline, 79' AGL/900' MSL.
- Rwy 22: Trees beginning 2659' from DER, 867' right of centerline, 94' AGL/934' MSL.
- Rwy 30L: Antenna on tower 3555' from DER, 1334' left of centerline, 116' AGL/935' MSL.
- Rwy 30R: Billboard sign 1463' from DER, 848' right of centerline, 31' AGL/880' MSL.
- Rwy 35: Trees beginning 2553' from DER, 770' right of centerline, 100' AGL/919' MSL. Trees beginning 1989' from DER, 194' left of centerline, up to 87' AGL/906' MSL. Buildings beginning 5.4 NM from DER, 1781' left of centerline, up to 889' AGL/1743' MSL.

## ZMBRO SIX DEPARTURE

MINNEAPOLIS, MINNESOTA

(ZMBRO6.ZMBRO) 06FEB14

MINNEAPOLIS-ST PAUL INTL/WOLD-CHAMBERLAIN (MSP)



MINOT, NORTH DAKOTA

AL-635 (FAA)

16147

WAAS CH <b>97616</b> <b>W08A</b>	APP CRS <b>080°</b>	Rwy Idg TDZE Apt Elev	<b>5957</b> <b>1712</b> <b>1716</b>
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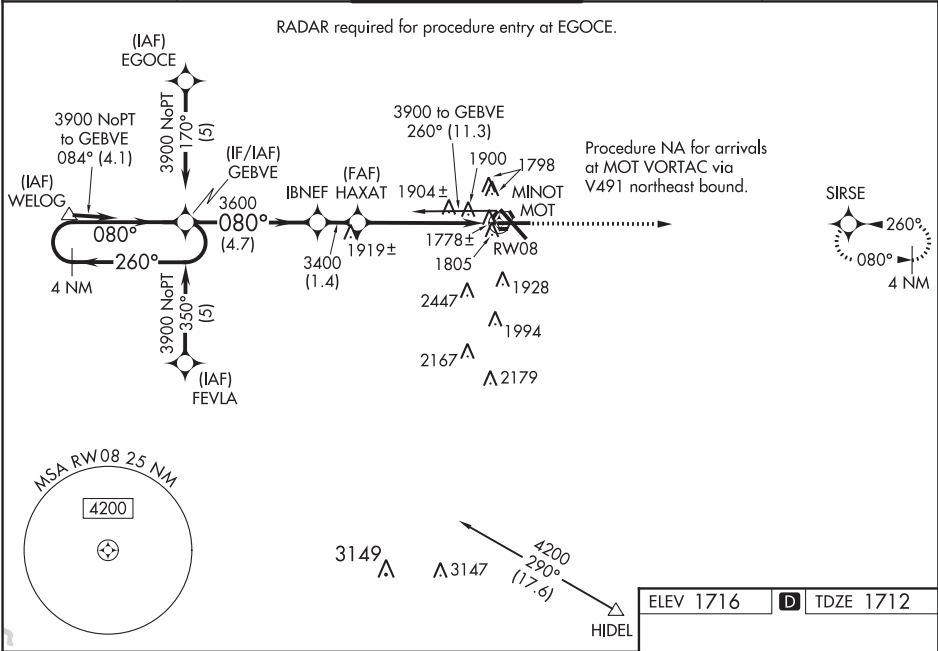
# RNAV (GPS) RWY 8

MINOT INTL (MOT)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below ¾ SM NA. Baro-VNAV NA when using Minot AFB altimeter setting. VDP NA with Minot AFB altimeter setting. When local altimeter setting not received, use Minot AFB altimeter setting and increase all DA 30 feet and all MDA 40 feet; increase LNAV/VNAV all Cats visibility ¼ mile and Circling Cat C visibility ¼ mile.

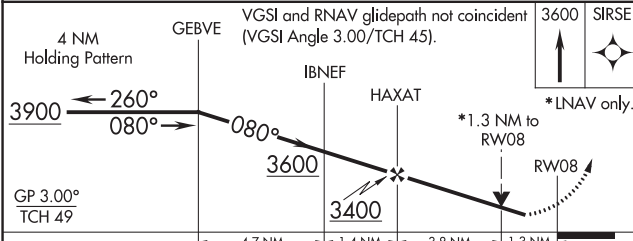
**MISSED APPROACH:**  
Climb to 3600 direct SIRSE and hold.

ASOS <b>118.725</b>	MINOT APP CON * <b>119.6 363.8</b>	MAGIC CITY TOWER * <b>118.2 (CTAF) 0 251.125</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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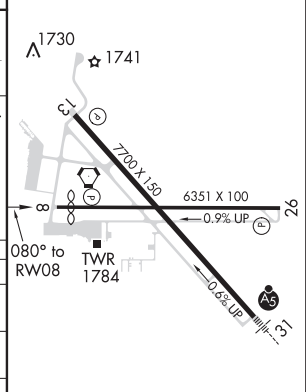


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 1716	<b>D</b>	TDZE 1712
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CATEGORY	A	B	C	D
LPV DA	1991-1 279 (300-1)			
LNAV/VNAV DA	2218-1¾ 506 (600-1¾)			
LNAV MDA	2160-1 448 (500-1)	2160-1¼ 448 (500-1¼)	2160-1½ 448 (500-1½)	2160-1¾ 448 (500-1¾)
CIRCLING	2200-1 484 (500-1)	2280-1½ 564 (600-1½)	2280-2 564 (600-2)	

REIL Rwy 13  
REIL Rwy 8 and 26 **⓪**  
HIRL Rwy 8-26 and 13-31 **⓪**

MINOT, NORTH DAKOTA  
Orig-A 15OCT15

48°15'N-101°17'W

# RNAV (GPS) RWY 8

MINOT INTL (MOT)



WAAS CH <b>70399</b> <b>W13A</b>	APP CRS <b>128°</b>	Rwy Idg TDZE Apt Elev	<b>7700</b> <b>1702</b> <b>1716</b>
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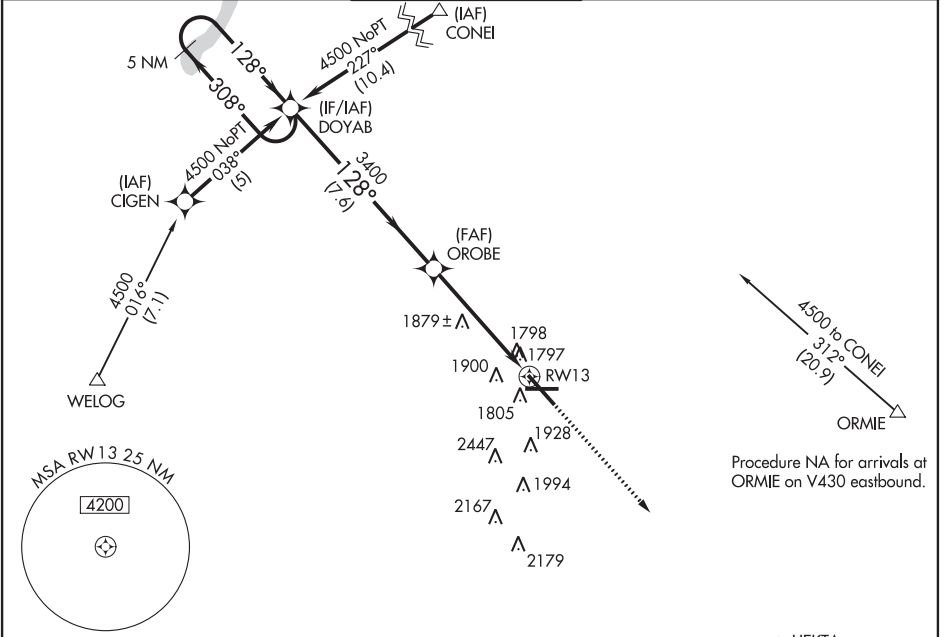
# RNAV (GPS) RWY 13

MINOT INTL (MOT)

**⚠** If local altimeter not received, use Minot AFB altimeter setting and increase all DAs/MDAs 40 feet. Baro-VNAV NA below -18°C (0°F). VDP and Baro-VNAV NA when using Minot AFB altimeter setting. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 4000 direct HEKTA and hold.

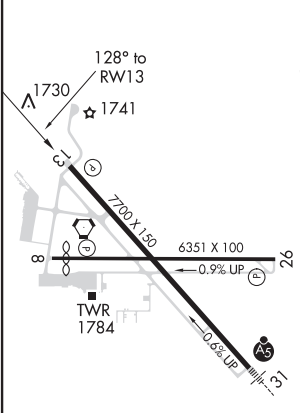
ASOS <b>118.725</b>	MINOT APP CON * <b>119.6 363.8</b>	MAGIC CITY TOWER * <b>118.2 (CTAF) 251.125</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1716	<b>D</b>	TDZE 1702
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REL Rwy 13  
REL Rwys 8 and 26  
HIRL Rwys 8-26 and 13-31

3149		3147		HEKTA	
5 NM Holding Pattern		DOYAB		4000 HEKTA	
4500 ← 308°		→ 128°		* 1.2 NM to RW13	
GP 3.00°		OROBE		* LNAV only.	
TCH 49		3400		RW13	
		7.6 NM		3.9 NM	
		A		B	
CATEGORY	A		C		D
LPV DA	2021-1		319 (400-1)		
LNAV/VNAV DA	2181-1¾		479 (500-1¾)		
LNAV MDA	2140-1	438 (500-1)	2140-1½	438 (500-1½)	
CIRCLING	2200-1	484 (500-1)	2280-1½	2280-2	564 (600-2)

MINOT, NORTH DAKOTA

AL-635 (FAA)

16147

WAAS CH <b>56516</b> <b>W26A</b>	APP CRS <b>260°</b>	Rwy Idg TDZE Apt Elev	<b>6350</b> <b>1682</b> <b>1716</b>
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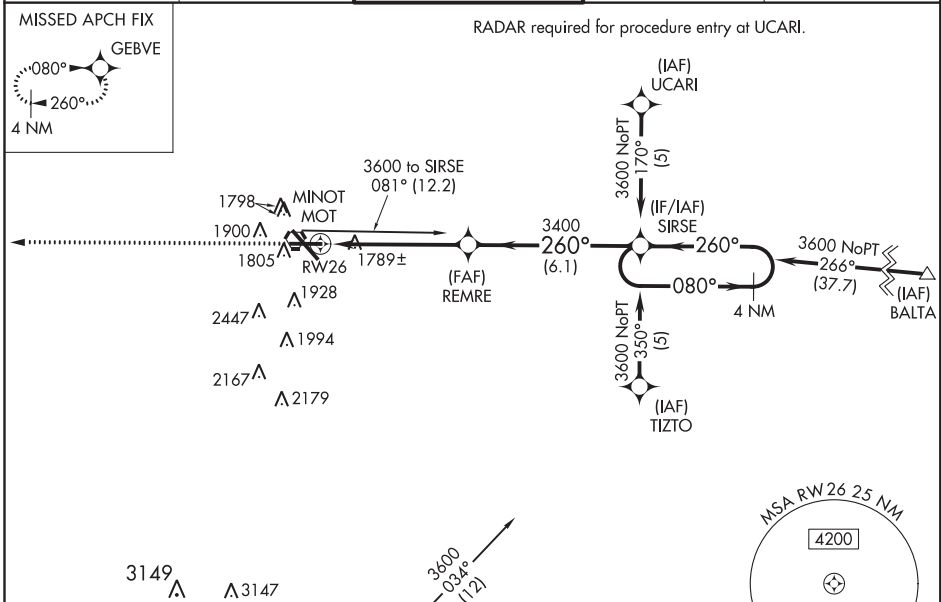
# RNAV (GPS) RWY 26

MINOT INTL (MOT)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). DME/DME RNP-0.3 NA. Baro-VNAV NA when using Minot AFB altimeter setting. VDP NA with Minot AFB altimeter setting. When local altimeter setting not received, use Minot AFB altimeter setting and increase all DA 30 feet and all MDA 40 feet; increase Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 3900 direct GEBVE and hold.

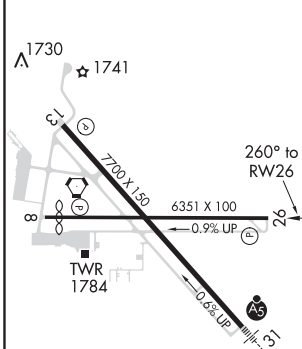
ASOS <b>118.725</b>	MINOT APP CON * <b>119.6 363.8</b>	MAGIC CITY TOWER * <b>118.2 (CTAF) 0 251.125</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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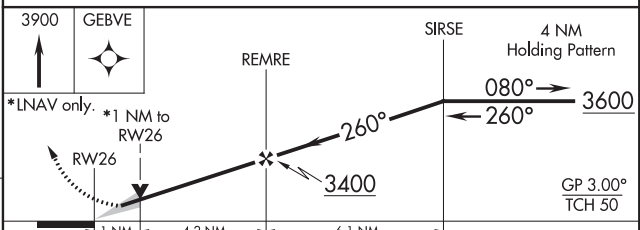
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1716	<b>D</b>	TDZE 1682
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REIL Rwy 13  
REIL Rwy 8 and 26  
HIRL Rwy 8-26 and 13-31



CATEGORY	A	B	C	D
LPV DA	1932-1 250 (300-1)			
LNAV/VNAV DA	1932-1 250 (300-1)			
LNAV MDA	2040-1 358 (400-1)			2040-1½ 358 (400-1½)
CIRCLING	2200-1 484 (500-1)		2280-1½ 564 (600-1½)	2280-2 564 (600-2)

MINOT, NORTH DAKOTA  
Orig 11FEB10

48°15'N-101°17'W

# MINOT INTL (MOT)

## RNAV (GPS) RWY 26

WAAS CH <b>66099</b> <b>W31A</b>	APP CRS <b>308°</b>	Rwy Idg TDZE Apt Elev	<b>7700</b> <b>1679</b> <b>1716</b>
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# RNAV (GPS) RWY 31

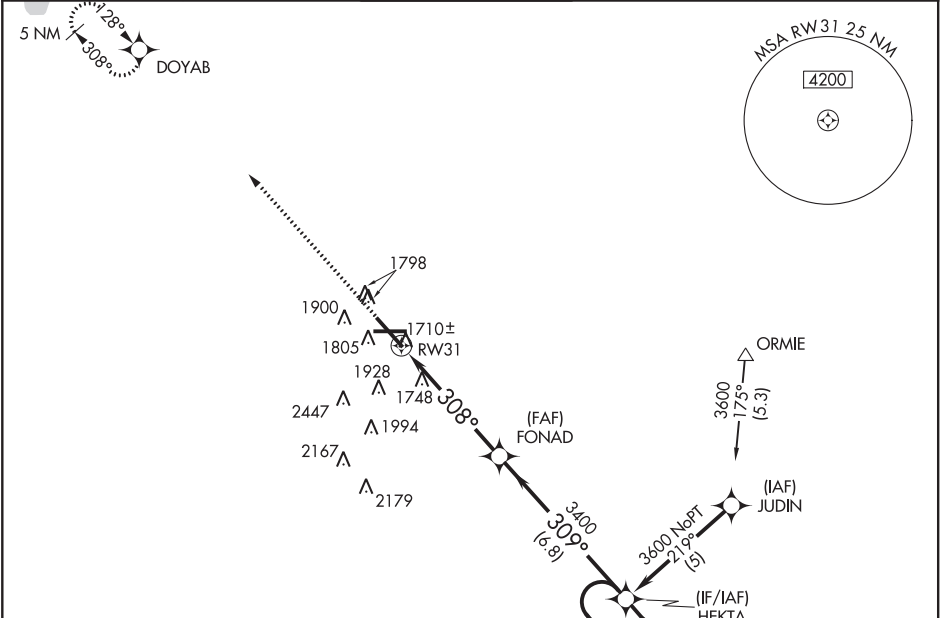
MINOT INTL (MOT)

**⚠** If local altimeter setting not received use Minot AFB altimeter setting and increase all DAs/MDAs 40 feet. Baro-VNAV NA below -18°C (0°F). VDP and Baro-VNAV NA when using Minot AFB altimeter setting. For inoperative MALS increase LPV visibility to RVR 5000 all Cats, LNAV/VNAV Cat D visibility to RVR 5000. Inoperative table does not apply to LNAV Cat D. DME/DME RNP-0.3 NA.

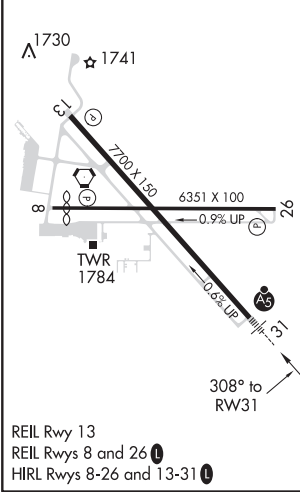


**MISSED APPROACH:**  
Climb to 4500 direct DOYAB and hold.

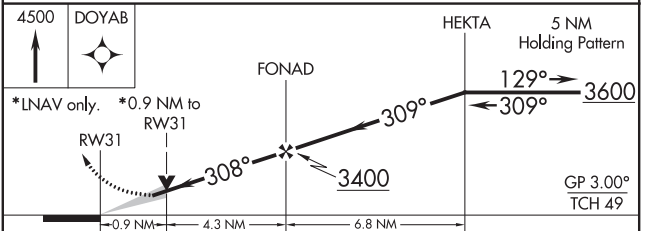
ASOS <b>118.725</b>	MINOT APP CON * <b>119.6 363.8</b>	MAGIC CITY TOWER * <b>118.2 (CTAF) 0 251.125</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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ELEV 1716	<b>D</b>	TDZE 1679
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REIL Rwy 13  
REIL Rws 8 and 26  
HIRL Rws 8-26 and 13-31



CATEGORY	A	B	C	D
LPV DA	1929/24 250 (300-1/2)			
LNAV/VNAV DA	1960/24 287 (300-1/2)		1960/40 287 (300-3/4)	
LNAV MDA	2000/24 321 (300-1/2)		2000/50 321 (300-1)	
CIRCLING	2200-1 484 (500-1)		2280-1 1/2 564 (600-1 1/2)	2280-2 564 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MINOT, NORTH DAKOTA

AL-635 (FAA)

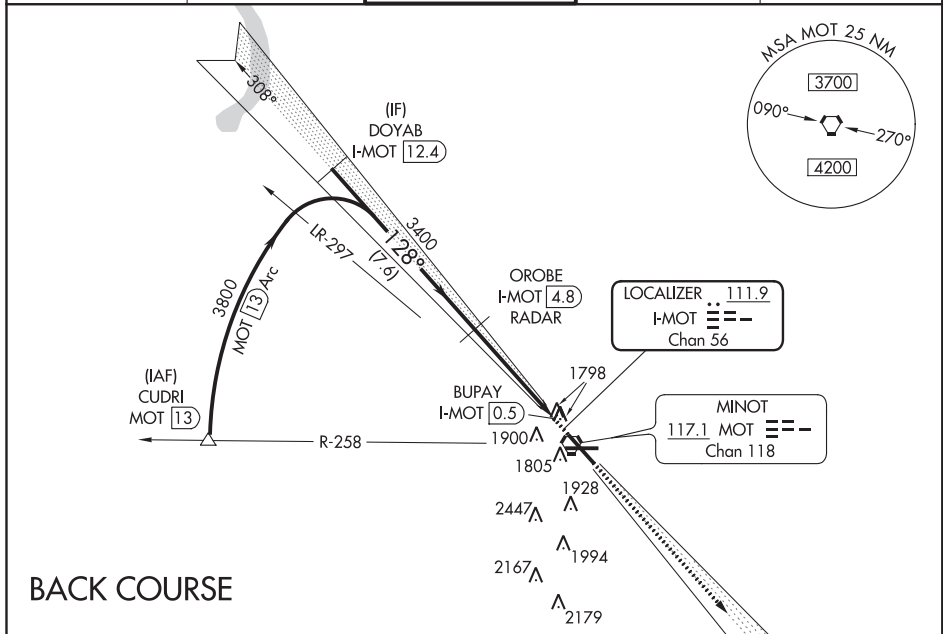
16147

LOC/DME I-MOT <b>111.9</b> Chan <b>56</b>	APP CRS <b>128°</b>	Rwy Idg <b>7700</b> TDZE <b>1702</b> Apt Elev <b>1716</b>
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# LOC/DME BC RWY 13

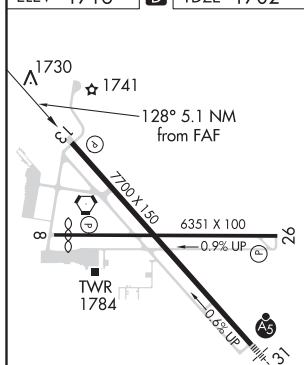
MINOT INTL (MOT)

<p><b>⚠</b> When local altimeter not received, use Minot AFB altimeter setting and increase all MDA 40 feet and S-13 Cat C/D visibility to 1 1/8.</p>		<p>MISSED APPROACH: Climb to 3700 on I-MOT LOC SE course to HEKTA/I-MOT 13.6 DME/RADAR and hold.</p>		
ASOS <b>118.725</b>	MINOT APP CON ★ <b>119.6 363.8</b>	MAGIC CITY TOWER ★ <b>118.2</b> (CTAF) <b>0 251.125</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>

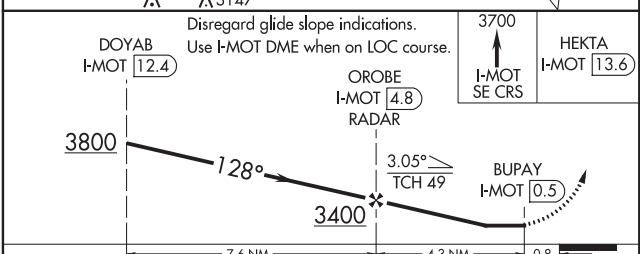


## BACK COURSE

ELEV 1716	<b>D</b>	TDZE 1702
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REIL Rwy 13  
REIL Rwys 8 and 26  
HIRL Rwys 8-26 and 13-31



CATEGORY	A	B	C	D
S-13	2060-1 358 (400-1)			
CIRCLING	2200-1	484 (500-1)	2280-1 1/2 564 (600-1 1/2)	2320-2 604 (700-2)

MINOT, NORTH DAKOTA  
Amdt 8A 26MAY16

48°15'N-101°17'W

# LOC/DME BC RWY 13

MINOT INTL (MOT)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VORTAC MOT <b>117.1</b> Chan <b>118</b>	APP CRS <b>067°</b>	Rwy Idg <b>5957</b> TDZE <b>1712</b> Apt Elev <b>1716</b>
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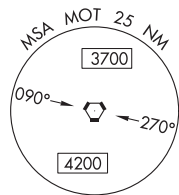
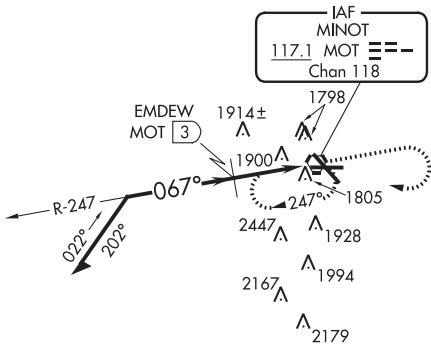
# VOR RWY 8

MINOT INTL (MOT)

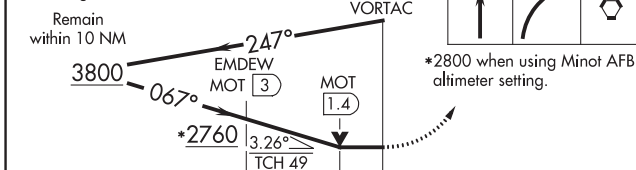
**⚠** VDP NA with Minot AFB altimeter setting. When local altimeter setting not received, use Minot AFB altimeter setting and increase all MDA 40 feet; EMDEW FIX minimums increase S-8 and Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 3800 then right turn direct MOT VORTAC and hold.

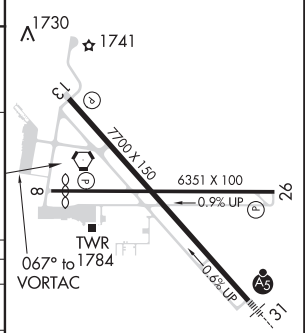
ASOS <b>118.725</b>	MINOT APP CON * <b>119.6 363.8</b>	MAGIC CITY TOWER * <b>118.2 (CTAF) 251.125</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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VGSI and descent angles not coincident (VGSI Angle 3.00/TCH 45).  
Remain within 10 NM



ELEV 1716	<b>D</b>	TDZE 1712
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CATEGORY	A	B	C	D
S-8	2760-1¼ 1048 (1100-1¼)	2760-1½ 1048 (1100-1½)	2760-3	1048 (1100-3)
CIRCLING	2760-1¼ 1044 (1100-1¼)	2760-1½ 1044 (1100-1½)	2760-3	1044 (1100-3)
EMDEW FIX MINIMUMS				
S-8	2180-1	468 (500-1)	2180-1¼ 468 (500-1¼)	2180-1½ 468 (500-1½)
CIRCLING	2200-1	484 (500-1)	2280-1½ 564 (600-1½)	2280-2 564 (600-2)

REIL Rwy 13  
REIL Rwys 8 and 26  
HIRL Rwys 8-26 and 13-31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MINOT, NORTH DAKOTA

AL-635 (FAA)

16147

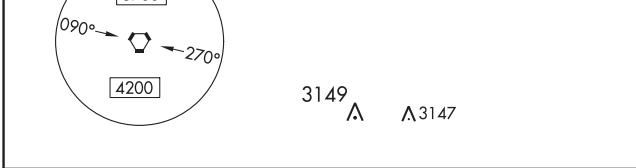
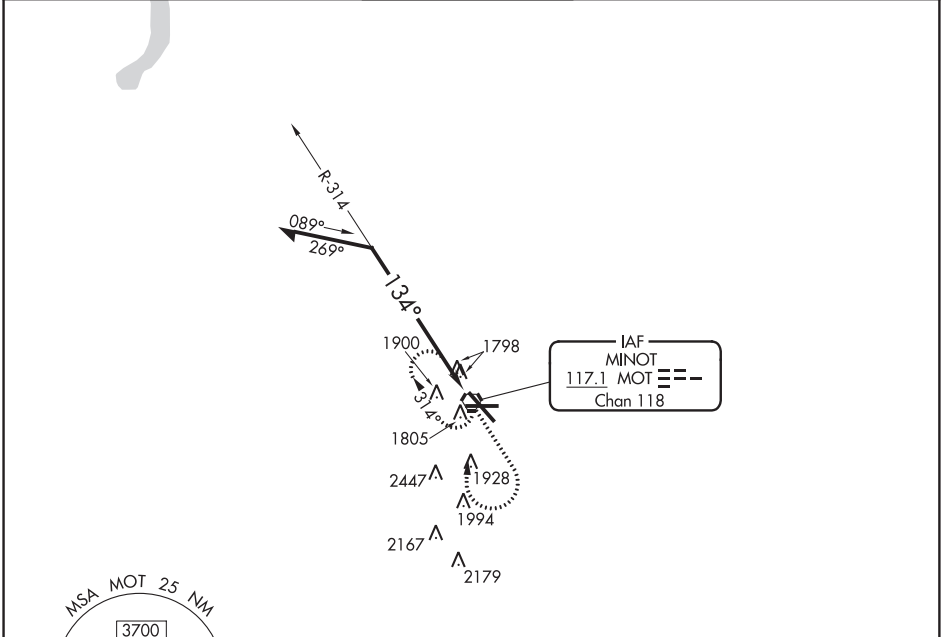
VORTAC MOT <b>117.1</b> Chan <b>118</b>	APP CRS <b>134°</b>	Rwy Idg <b>7700</b> TDZE <b>1702</b> Apt Elev <b>1716</b>
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# VOR RWY 13

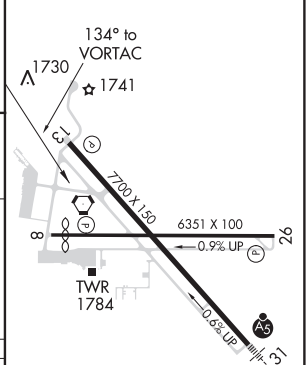
MINOT INTL (MOT)

**▽** MISSED APPROACH: Climb to 3500 then right turn direct MOT VORTAC and hold.

ASOS <b>118.725</b>	MINOT APP CON * <b>119.6 363.8</b>	MAGIC CITY TOWER * <b>118.2 (CTAF) 251.125</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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ELEV 1716	<b>D</b> TDZE 1702
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Remain within 10 NM	MOT VORTAC	3500	MOT
3500	MOT 1.7	1.4 NM	

CATEGORY	A	B	C	D
S-13	2200-1 498 (500-1)		2200-1½ 498 (500-1¼)	2200-1½ 498 (500-1½)
CIRCLING	2200-1 484 (500-1)		2280-1½ 564 (600-1½)	2280-2 564 (600-2)

REIL Rwy 13  
REIL Rwys 8 and 26 **D**  
HIRL Rwys 8-26 and 13-31 **D**

MINOT, NORTH DAKOTA  
Amdt 11 15APR04

48°15'N-101°17'W

# MINOT INTL (MOT) VOR RWY 13

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VORTAC MOT <b>117.1</b> Chan <b>118</b>	APP CRS <b>264°</b>	Rwy Idg <b>6350</b> TDZE <b>1682</b> Apt Elev <b>1716</b>
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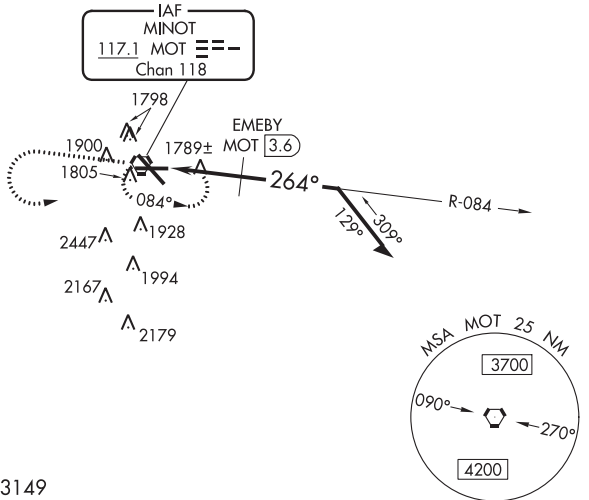
# VOR RWY 26

MINOT INTL (MOT)

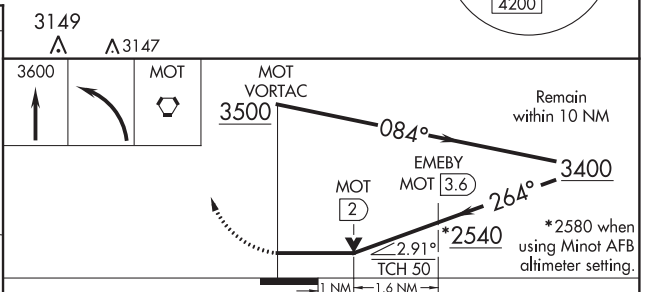
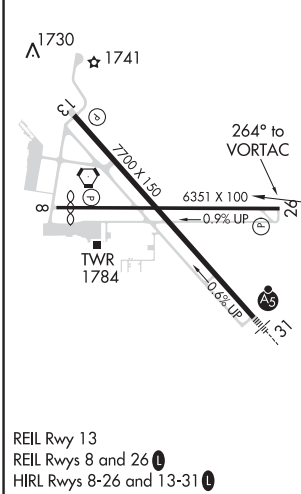
**⚠** VDP NA with Minot AFB altimeter setting. When local altimeter setting not received, use Minot AFB altimeter setting and increase all MDA 40 feet; increase S-26 and Circling Cats A/C/D visibility ¼ mile, and EMEBY FIX minimums Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 3600 then left turn direct MOT VORTAC and hold.

ASOS <b>118.725</b>	MINOT APP CON * <b>119.6 363.8</b>	MAGIC CITY TOWER * <b>118.2 (CTAF) 251.125</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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ELEV 1716	<b>D</b>	TDZE 1682
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CATEGORY	A	B	C	D
S-26	2540-1 858 (900-1)	2540-1¼ 858 (900-1¼)	2540-2½ 858 (900-1½)	2540-2¾ 858 (900-2¾)
CIRCLING	2540-1 824 (900-1)	2540-1¼ 824 (900-1¼)	2540-2½ 824 (900-1½)	2540-2¾ 824 (900-2¾)
EMEBY FIX MINIMUMS				
S-26	2040-1 358 (400-1)			2040-1¼ 358 (400-1¼)
CIRCLING	2200-1 484 (500-1)		2280-1½ 564 (600-1½)	2280-2 564 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MINOT, NORTH DAKOTA

AL-635 (FAA)

16147

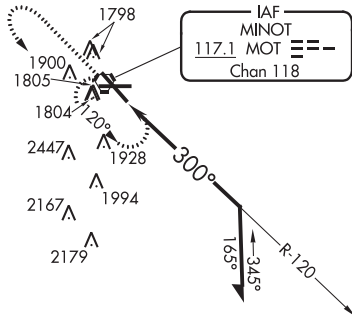
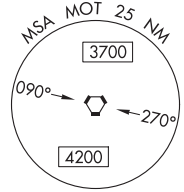
VORTAC MOT <b>117.1</b> Chan <b>118</b>	APP CRS <b>300°</b>	Rwy Idg <b>7700</b> TDZE <b>1673</b> Apt Elev <b>1716</b>
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# VOR RWY 31

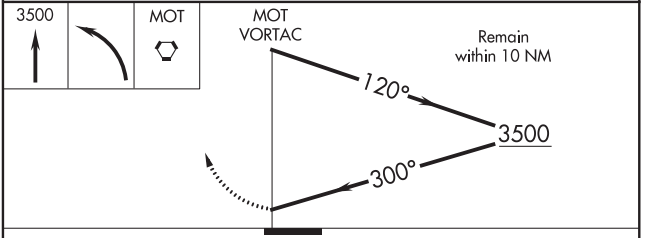
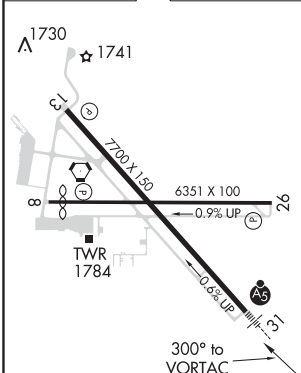
MINOT INTL (MOT)

MALS R MISSED APPROACH: Climb to 3500 then left turn direct MOT VORTAC and hold.	
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ASOS <b>118.725</b>	MINOT APP CON * <b>119.6 363.8</b>	MAGIC CITY TOWER * <b>118.2 (CTAF) 251.125</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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ELEV 1716	<b>D</b>	TDZE 1673
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CATEGORY	A	B	C	D
S-31	2200/24	527 (500-½)	2200/50 527 (500-1)	2200/60 527 (500-1¼)
CIRCLING	2200-1	484 (500-1)	2280-1½ 564 (600-1½)	2280-2 564 (600-2)

MINOT, NORTH DAKOTA  
Amdt 11 15APR04

48°15'N-101°17'W

# VOR RWY 31

MINOT INTL (MOT)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



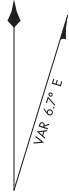
# AIRPORT DIAGRAM

AL-635 (FAA)

MINOT INTL (MOT)  
MINOT, NORTH DAKOTA

ASOS  
118.725  
MAGIC CITY TOWER ★  
118.2 251.125  
GND CON  
121.9

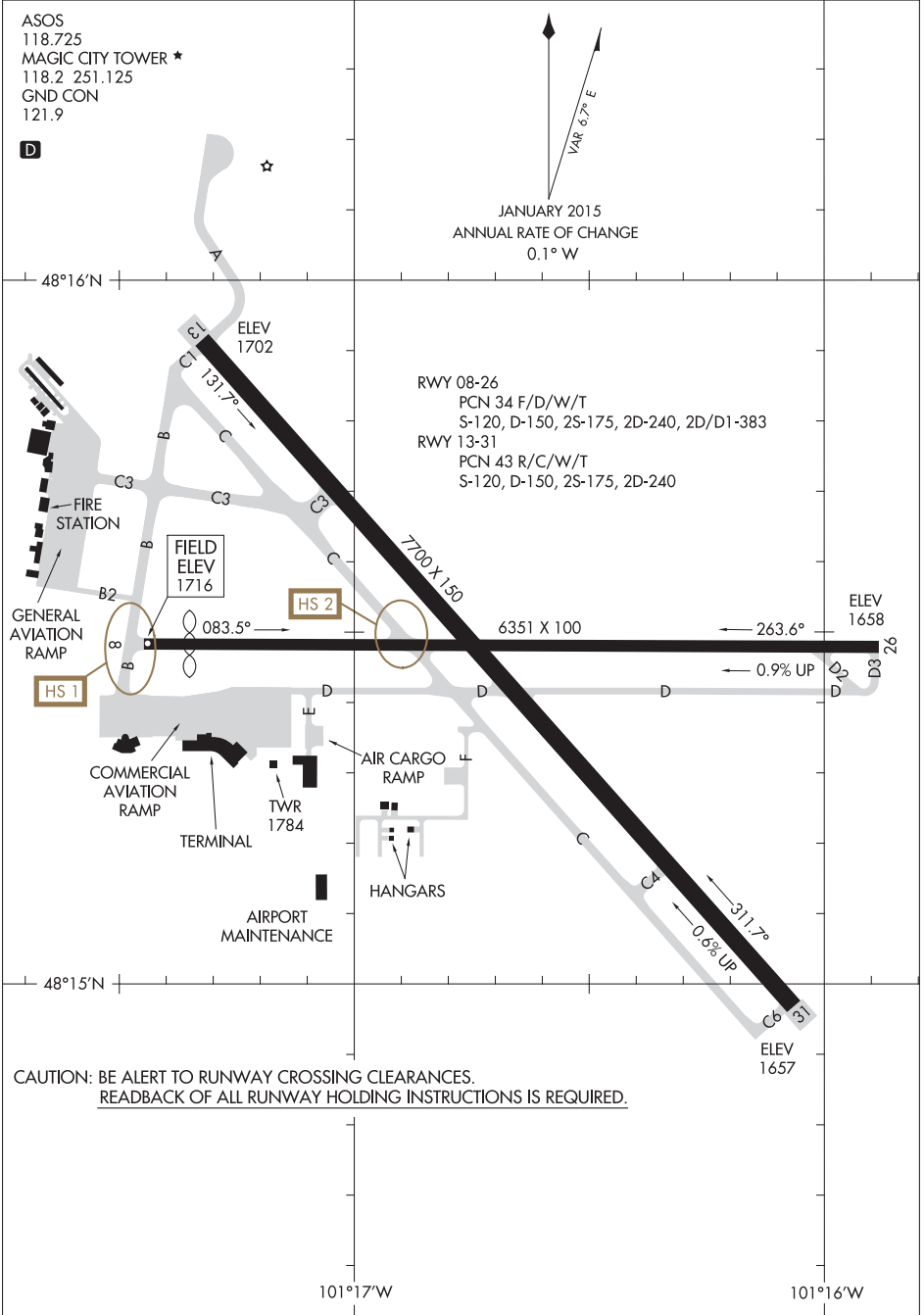
D



JANUARY 2015  
ANNUAL RATE OF CHANGE  
0.1° W

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.  
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

# AIRPORT DIAGRAM

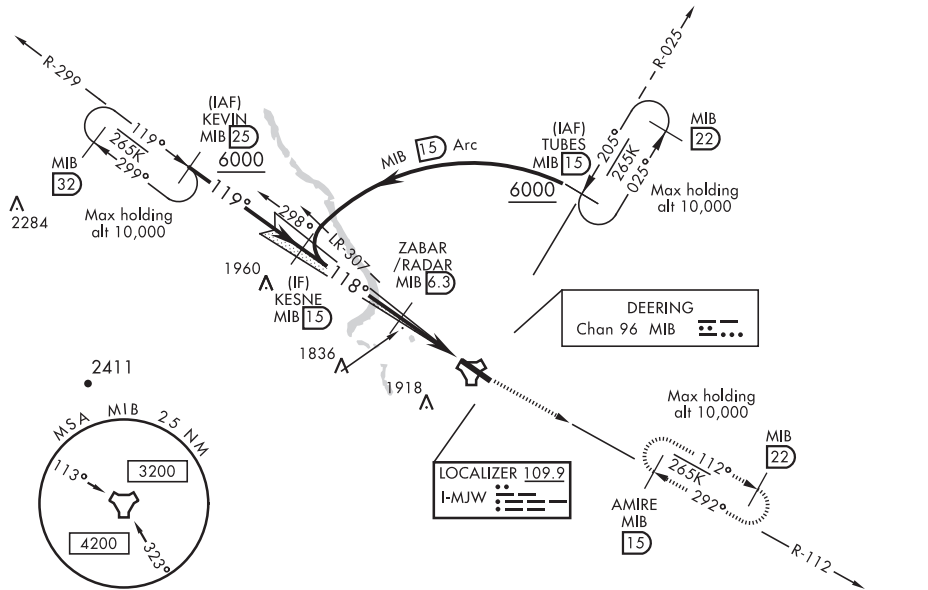
MINOT, NORTH DAKOTA  
MINOT INTL (MOT)

MINOT, NORTH DAKOTA

# ILS or LOC Y RWY 12

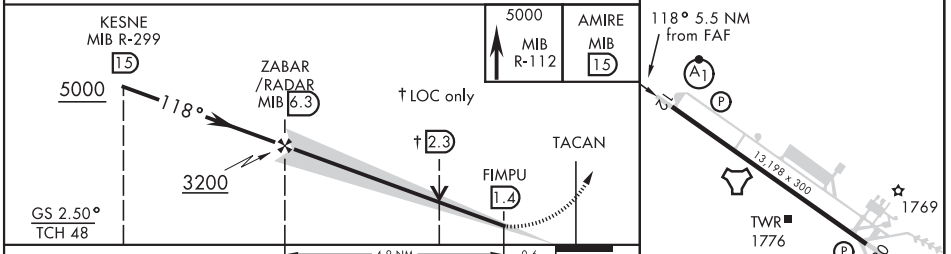
LOC I-MJW <b>109.9</b>	APCH CRS <b>118°</b>	Rwy Idg <b>13,198</b> TDZE <b>1666</b> Arprt Elev <b>1666</b>	AL-5013 [USAF]	MINOT AFB (KMIB)
* When ALS inop, increase RVR to 40 and vis to ¾ mile. ** When ALS inop, increase CAT AB RVR to 55 and vis to 1 mile, CAT CDE vis to 1¼ miles.			ALSF-1 	MISSED APPROACH: Climb to 5000 via MIB TACAN R-112 direct AMIRE and hold.
ATIS ★ <b>278.8</b>	MINOT APP CON <b>119.6 363.8</b>	MINOT TOWER ★ <b>120.65 253.5</b>	GND CON <b>134.0 275.8</b>	CLNC DEL <b>326.2</b>

\*\*\* Circling not authorized N of Rwy 12-30.



## RADAR or DME REQUIRED

EMERG SAFE ALT 100 NM 4700



CATEGORY	A	B	C	D	E
S-ILS 12*	1866/24		200	(200-½)	
S-LOC 12**	2100/24	434 (500-½)	2100/40	434	(500-¾)
CIRCLING ***	2120-1 454 (500-1)	2140-1 474 (500-1)	2180-1½ 514 (600-1½)	2220-2	554 (600-2)

HIRL Rwy 12-30					
FAF to MAP 4.9 NM					
Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

MINOT, NORTH DAKOTA

48°25'N-101°21'W

MINOT AFB (KMIB)

Orig 21JUL16

# ILS or LOC Y RWY 12

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MINOT, NORTH DAKOTA

# ILS or LOC Y RWY 30

LOC I-MIB <b>109.9</b>	APCH CRS <b>298 °</b>	Rwy Idg TDZE <b>13,198</b> Arpt Elev <b>1646</b>
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AL-5013 [USAF]

MINOT AFB (KMIB)

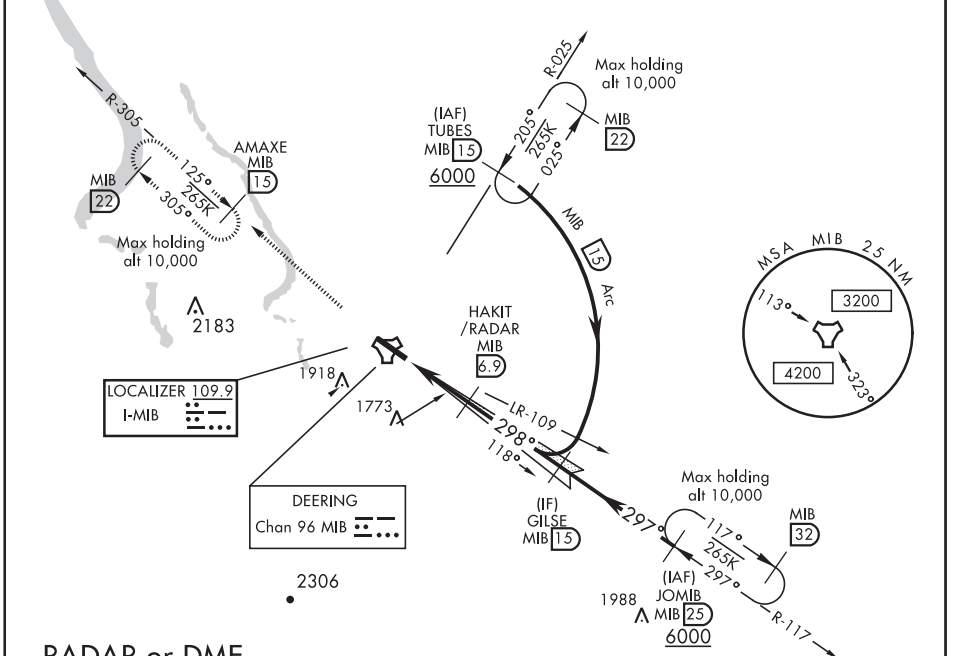
\* When ALS inop, increase CAT ABCDE RVR to 40 and vis to 3/4 mile.  
 \*\* When ALS inop, increase CAT AB RVR to 55 and vis to 1 mile, CAT CDE RVR to 60 and vis to 1 1/8 miles.



MISSED APPROACH: Climb to 5000 via MIB TACAN R-305 direct AMAXE and hold.

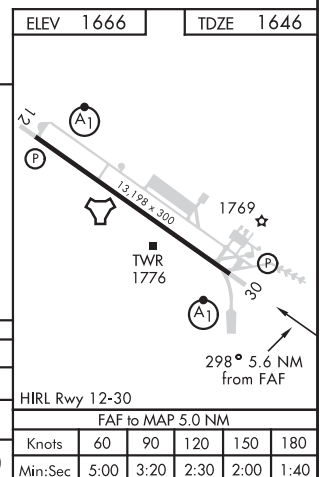
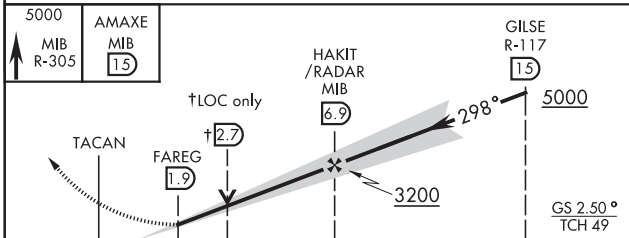
ATIS ★ <b>278.8</b>	MINOT APP CON <b>119.6 363.8</b>	MINOT TOWER ★ <b>120.65 253.5</b>	GND CON <b>134.0 275.8</b>	CLNC DEL <b>326.2</b>
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\*\*\* Circling not authorized N of Rwy 12-30.



## RADAR or DME REQUIRED

EMERG SAFE ALT 100 NM 4700



CATEGORY	A	B	C	D	E
S-ILS 30 *	1846/24		200	(200-1/2)	
S-LOC 30 **	2040/24	394 (400-1/2)	2040/35	394	(400-3/8)
CIRCLING ***	2120-1 454 (500-1)	2140-1 474 (500-1)	2180-1 1/2 514 (600-1 1/2)	2220-2	554 (600-2)

HIRL Rwy 12-30					
FAF to MAP 5.0 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40

MINOT, NORTH DAKOTA  
Orig 21JUL16

48° 25' N - 101° 21' W

MINOT AFB (KMIB)

# ILS or LOC Y RWY 30

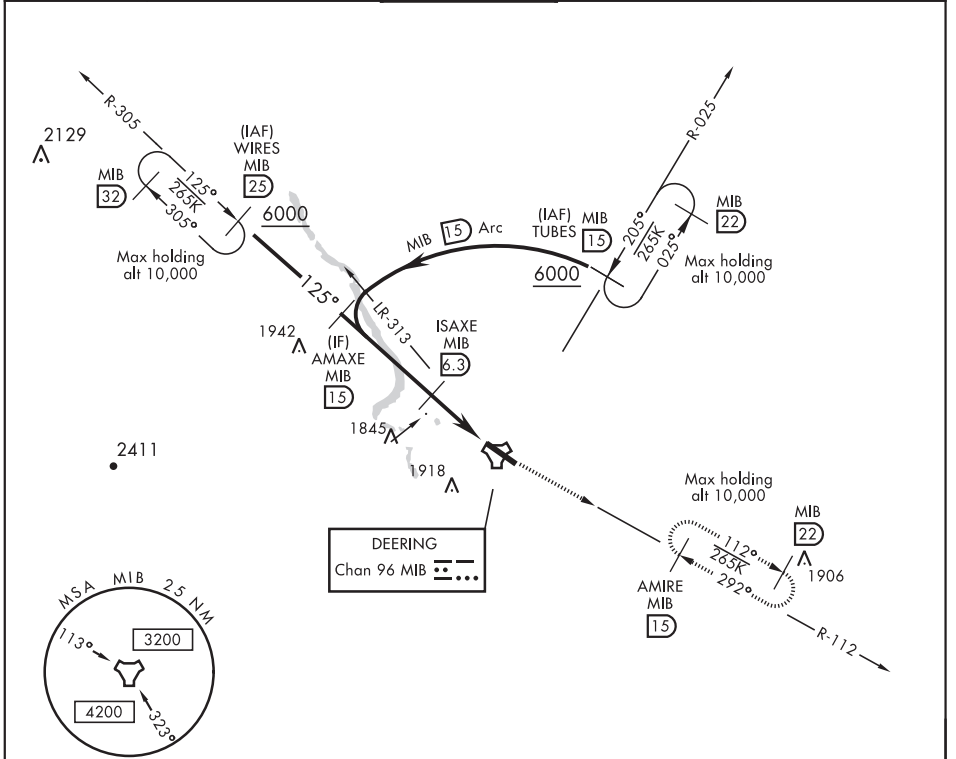
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MINOT, NORTH DAKOTA

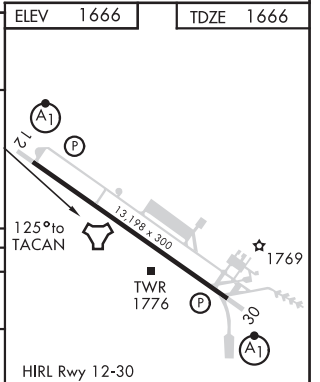
# TACAN Y RWY 12

TACAN MIB Chan <b>96</b>	APCH CRS <b>125°</b>	Rwy Idg <b>13,198</b> TDZE <b>1666</b> Arprt Elev <b>1666</b>	AL-5013 [USAF]	MINOT AFB (KMIB)
* When ALS inop, increase CAT AB RVR to 55 vis to 1 mile, CAT CDE vis to 1¼ miles.			ALSF-1	MISSED APPROACH: Climb to 5000 via MIB TACAN R-112 direct AMIRE and hold.
** Circling not authorized N of Rwy 12-30.				
ATIS ★ <b>278.8</b>	MINOT APP CON <b>119.6 363.8</b>	MINOT TOWER ★ <b>120.65 253.5</b>	GND CON <b>134.0 275.8</b>	CLNC DEL <b>326.2</b>



EMERG SAFE ALT 100 NM 4700

AMAXE MIB R-305	ISAXE	5000	AMIRE	ELEV 1666	TDZE 1666
5000	ISAXE	3200	MIB R-112		
2.57° TCH 47			MIB 15		
		4.8 NM			
CATEGORY	A	B	C	D	E
S-12*	2100/24	434 (500-½)	2100/40	434 (500-¾)	
CIRCLING**	2120-1 454 (500-1)	2140-1 474 (500-1)	2180-1½ 514 (600-1½)	2220-2 554 (600-2)	



MINOT, NORTH DAKOTA  
Orig 21JUL16

48°25'N-101°21'W

MINOT AFB (KMIB)

# TACAN Y RWY 12

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# TACAN Y RWY 30

TACAN MIB Chan <b>96</b>	APCH CRS <b>292°</b>	Rwy Idg <b>13,198</b> TDZE <b>1646</b> Arprt Elev <b>1666</b>
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AL-5013 [USAF]

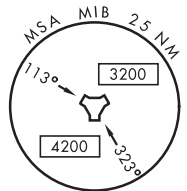
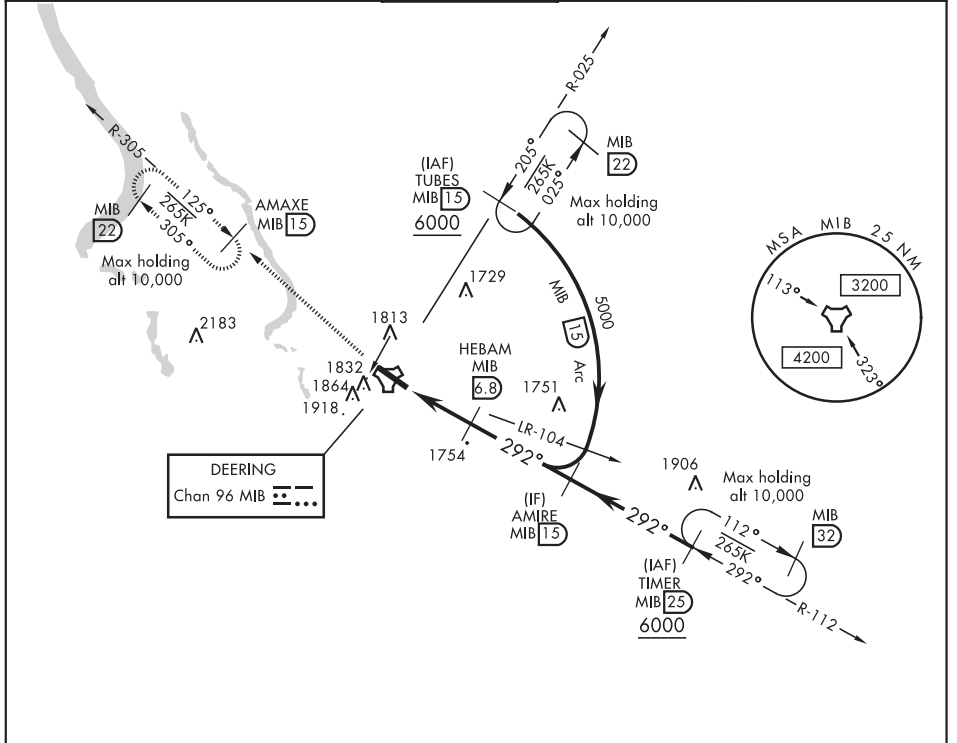
MINOT AFB (KMIB)

\* When ALS inop, increase CAT AB RVR to 55 and vis to 1 mile, CAT CDE vis to 1 3/8 miles.  
 \*\* Circling not authorized N of Rwy 12-30



MISSED APPROACH: Climb to 5000 via MIB TACAN R-305 direct AMAXE and hold.

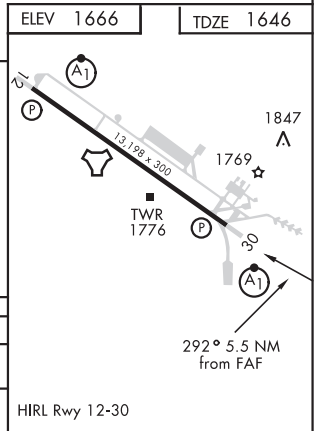
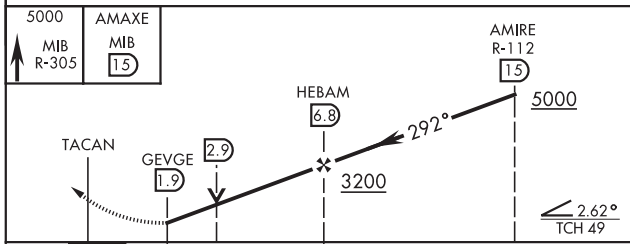
ATIS ★ <b>278.8</b>	MINOT APP CON <b>119.6 363.8</b>	MINOT TOWER ★ <b>120.65 253.5</b>	GND CON <b>134.0 275.8</b>	CLNC DEL <b>326.2</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

EMERG SAFE ALT 100 NM 4700



CATEGORY	A	B	C	D	E
S-30 *	2100/24 454 (500-1/2)		2100/45 454 (500-3/4)		
CIRCLING **	2120-1 454 (500-1)	2140-1 474 (500-1)	2180-1 514 (600-1 1/2)	2220-2 554 (600-2)	

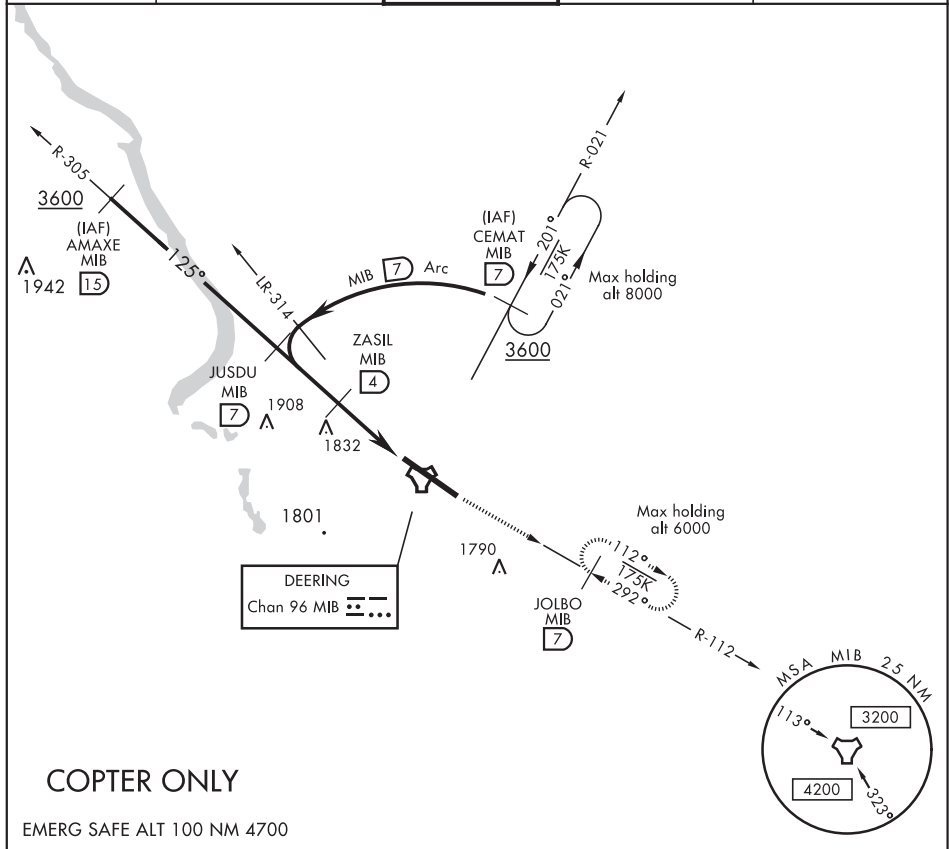
HIRL Rwy 12-30

# TACAN Y RWY 30

MINOT, NORTH DAKOTA

# COPTER TACAN 125°

TACAN MIB Chan <b>96</b>	APCH CRS <b>125°</b>	Rwy ldg <b>13,198</b> TDZE <b>1666</b> Arpt Elev <b>1666</b>	AL-5013 [USAF]	MINOT AFB (KMIB)
* When ALS inop, increase RVR to 28 and vis to ½ mile.			ALSF-1 	MISSED APPROACH: Climb to 3600 via MIB TACAN R-112 direct JOLBO and hold.
ATIS ★ <b>278.8</b>	MINOT APP CON <b>119.6 363.8</b>	MINOT TOWER ★ <b>120.65 253.5</b>	GND CON <b>134.0 275.8</b>	CLNC DEL <b>326.2</b>



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

JUSDU R-305 MIB (7)	ZASIL MIB (4)	TACAN	ELEV 1666	TDZE 1666
3000	2600	ZELOL (1.1)	JOLBO MIB (7)	
2.65° TCH 47	2.9 NM	.2		
CATEGORY	COPTER			
H-125°*	2100/12	434	(500-¼)	HIRL Rwy 12-30

MINOT, NORTH DAKOTA 48° 25'N-101° 21'W MINOT AFB (KMIB)

Orig 21JUL16

# COPTER TACAN 125°

MINOT, NORTH DAKOTA

# COPTER TACAN 292°

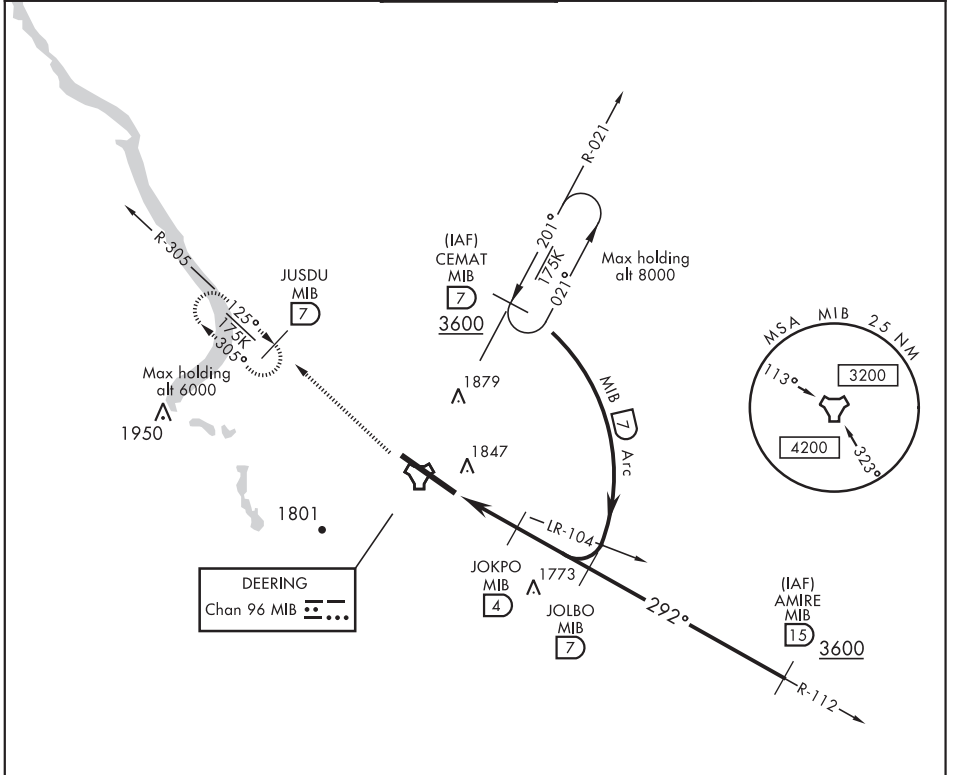
TACAN MIB Chan <b>96</b>	APCH CRS <b>292°</b>	Rwy Idg <b>13,198</b> TDZE <b>1646</b> Arprt Elev <b>1666</b>
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AL-5013 [USAF]

MINOT AFB (KMIB)

* When ALS inop, increase RVR to 28 and vis to 1/2 mile.	ALSF-1 	MISSED APPROACH: Climb to 3600 via MIB TACAN R-305 direct JUSDU and hold.
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ATIS ★ <b>278.8</b>	MINOT APP CON <b>119.6 363.8</b>	MINOT TOWER ★ <b>120.65 253.5</b>	GND CON <b>134.0 275.8</b>	CLNC DEL <b>326.2</b>
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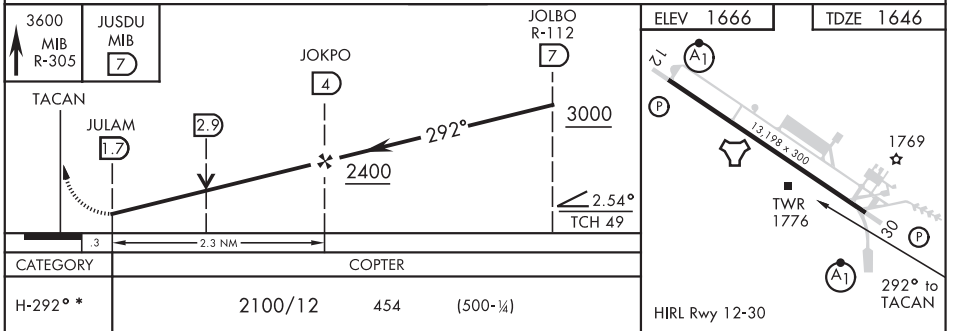


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

## COPTER ONLY

EMERG SAFE ALT 100 NM 4700



MINOT, NORTH DAKOTA

48° 25' N - 101° 21' W

MINOT AFB (KMIB)

Orig 21JUL16

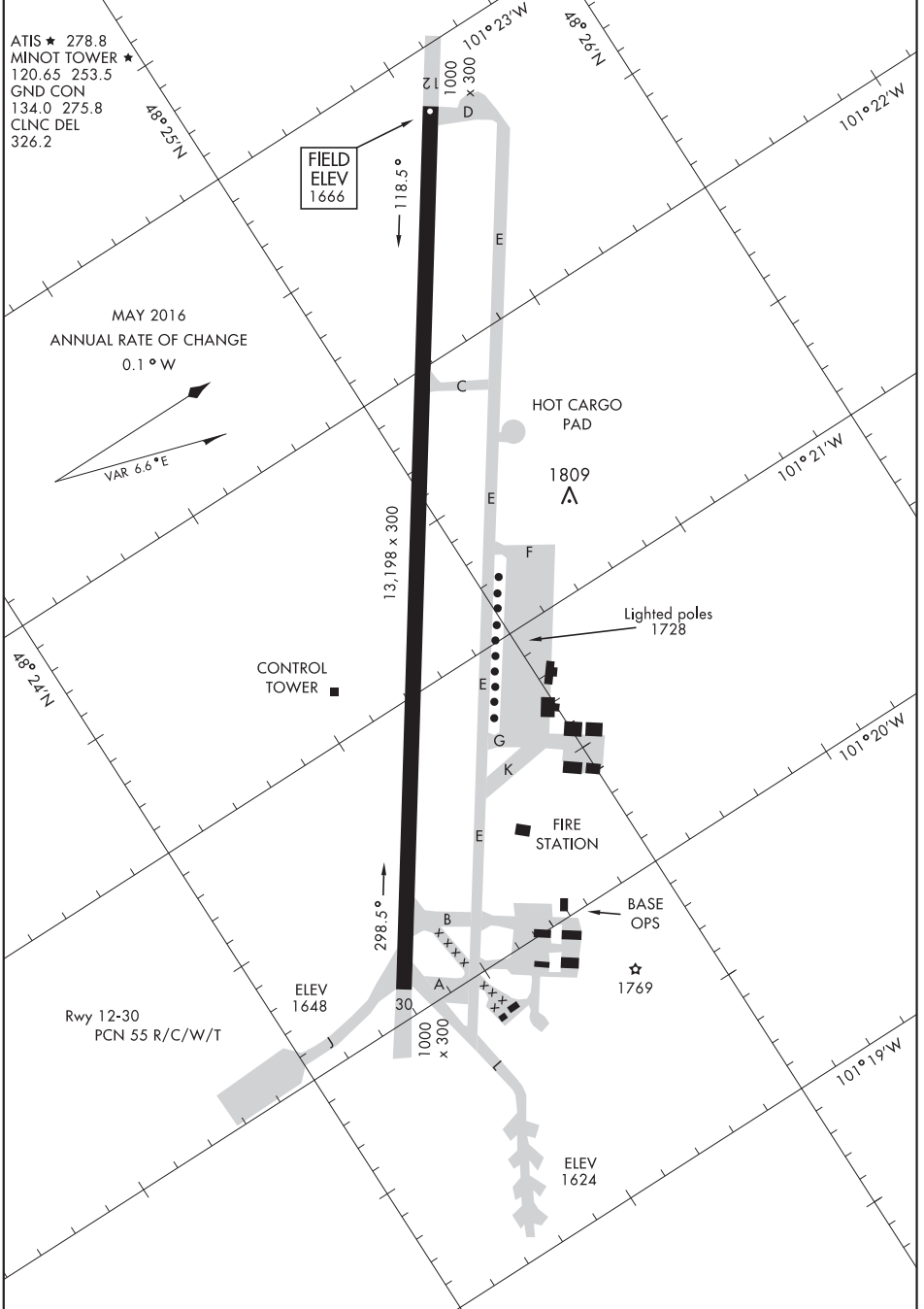
# COPTER TACAN 292°

# AIRPORT DIAGRAM

AFD-5013 [USAF]

MINOT AFB (KMIB)

MINOT, NORTH DAKOTA



# AIRPORT DIAGRAM

MINOT, NORTH DAKOTA

MINOT AFB (KMIB)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



LOC I-LPA <b>109.7</b>	APP CRS <b>310°</b>	Rwy Idg TDZE Apt Elev	<b>6700</b> <b>1304</b> <b>1304</b>
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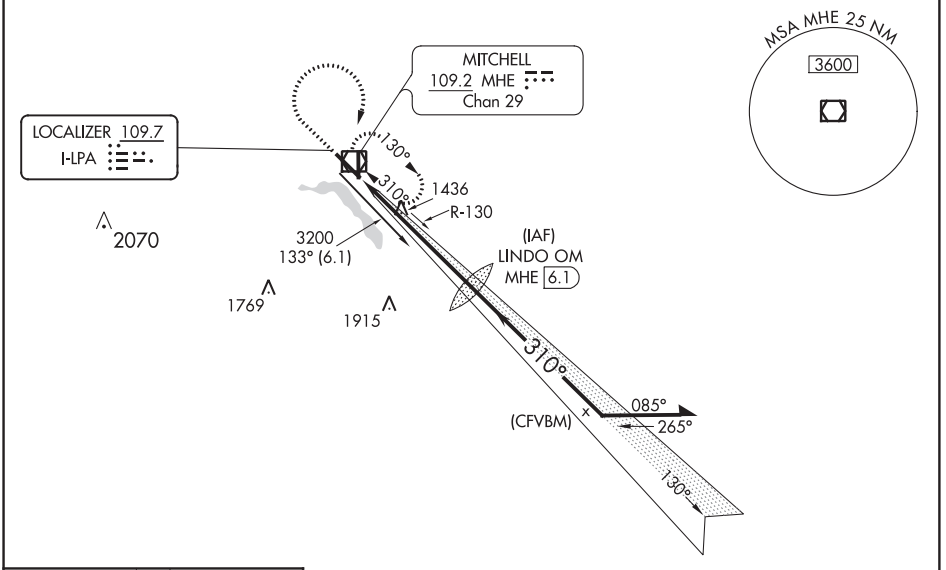
# ILS or LOC RWY 31

MITCHELL MUNI (MHE)

**NA** Autopilot coupled approach NA below 2174 MSL. VDP NA with Huron Rgnl altimeter setting. When local altimeter setting not received, use Huron Rgnl altimeter setting and increase DA 89 feet and all MDA 100 feet. Increase S-ILS 31 all Cats visibility to ½ mile, S-LOC 31 Cats C/D to 1 mile and Circling Cat C to 1¾ mile. For inop MALSRS, increase S-LOC 31 Cats C/D visibility to 1½ mile. For inop MALSRS when using Huron Rgnl altimeter setting, increase S-ILS 31 all Cats visibility to 1½ mile and S-LOC 31 Cats C/D to 1½ mile.

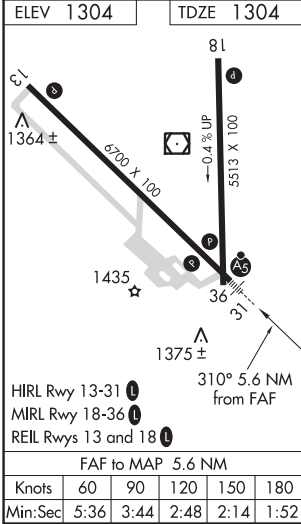
**MALSRS** MISSED APPROACH: Climb to 3200 then right turn direct MHE VOR/DME and hold.

ASOS <b>124.175</b>	HURON RADIO <b>122.3</b>	UNICOM <b>122.8 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



## DME REQUIRED

3200	MHE	LINDO OM MHE 6.1	Remain within 10 NM	
*LOC only.	*MHE 1.6	3183	3200	3200
VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 61)				
GS 3.00° TCH 57				
CATEGORY	A	B	C	D
S-ILS 31	1554-½		250 (300-½)	
S-LOC 31	1700-½	396 (400-½)	1700-¾	396 (400-¾)
CIRCLING	1740-1 436 (500-1)	1760-1 456 (500-1)	1820-1½ 516 (600-1½)	1860-2 556 (600-2)

MITCHELL, SOUTH DAKOTA

AL-5234 (FAA)

15344

WAAS CH <b>77900</b> <b>W13A</b>	APP CRS <b>130°</b>	Rwy Idg <b>6700</b> TDZE <b>1301</b> Apt Elev <b>1304</b>
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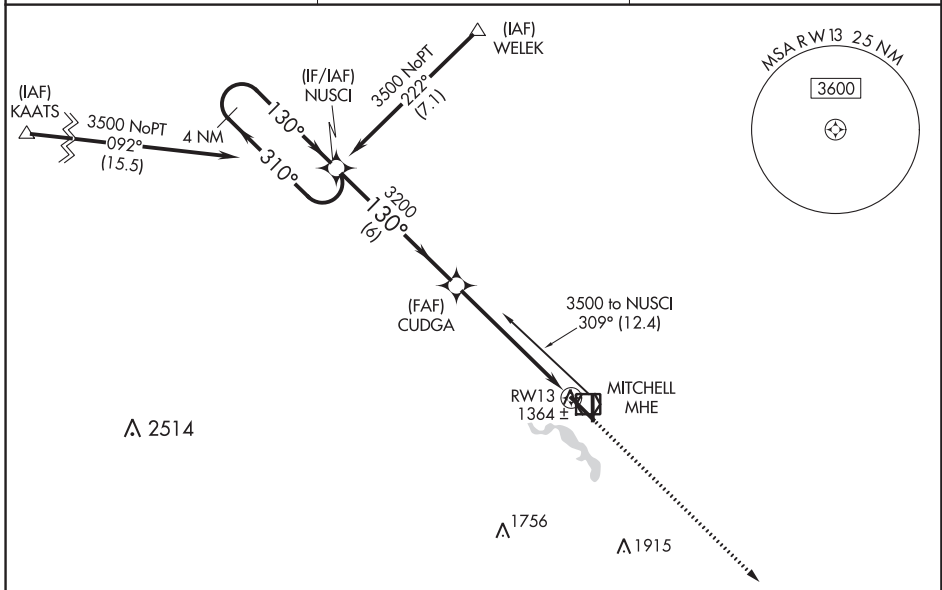
# RNAV (GPS) RWY 13

MITCHELL MUNI (MHE)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). Baro-VNAV and VDP NA with Huron Rgnl altimeter setting.  
**⚠** DME/DME RNP-0.3 NA. When local altimeter setting not received, use Huron Rgnl altimeter setting and increase all DA 89 feet and all MDA 100 feet. Increase LPV all Cats visibility ¼ mile, LNAV/VNAV all Cats and LNAV Cats C/D visibility ⅓ mile and Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 3200 direct JUTUB and hold.

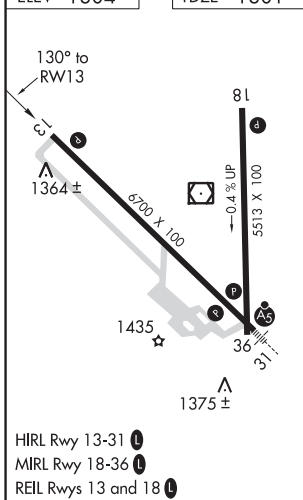
ASOS <b>124.175</b>	HURON RADIO <b>122.3</b>	UNICOM <b>122.8 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1304	TDZE 1301
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- HIRL Rwy 13-31
- MIRL Rwy 18-36
- REIL Rwy 13 and 18

4 NM Holding Pattern NUSCI 3500 ← 310° 130° → GP 3.00° TCH 46	CUDGA 3200 *0.9 NM to RWY 13 RWY 13 *LNAV only	3200 JUTUB		
		6 NM 4.8 NM 0.9		
CATEGORY LPV DA LNAV/VNAV DA LNAV MDA CIRCLING	A 1575-1 1627-1¼ 1620-1 1740-1¼ 436 (500-1¼)	B 274 (300-1) 326 (400-1¼) 319 (400-1) 1760-1¼ 456 (500-1¼)	C 1820-1½ 516 (600-1½)	D 1860-2 556 (600-2)

MITCHELL, SOUTH DAKOTA  
 Orig-A 10DEC15

43°46'N-98°02'W

# RNAV (GPS) RWY 13

MITCHELL MUNI (MHE)

WAAS CH <b>86938</b> <b>W18A</b>	APP CRS <b>176°</b>	Rwy Idg <b>5513</b> TDZE <b>1298</b> Apt Elev <b>1304</b>
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# RNAV (GPS) RWY 18

MITCHELL MUNI (MHE)

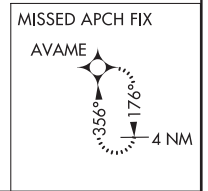
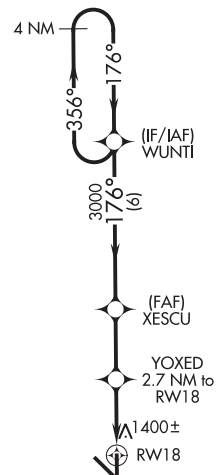
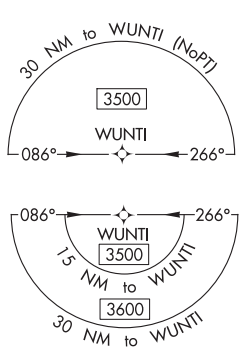
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C (-4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received use Huron Rgnl altimeter setting and increase LPV DA to 1637, LNAV/VNAV DA to 1685 and increase all MDA 100 feet. Increase LPV visibility all Cats to 1½ mile, LNAV/VNAV visibility all Cats to 1¾ mile and LNAV Cats C/D to 1¾ mile. Increase Circling Cat C visibility to 1¾ mile. Baro VNAV and VDP NA when using Huron Rgnl altimeter setting.

**MISSED APPROACH:** Climb to 3500 direct AVAME and hold.

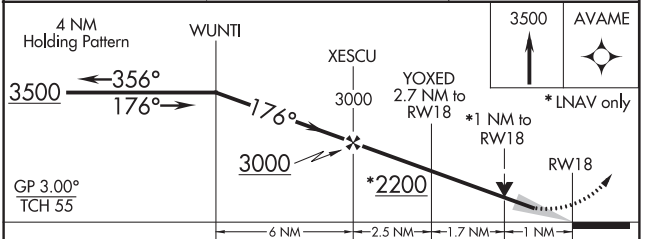
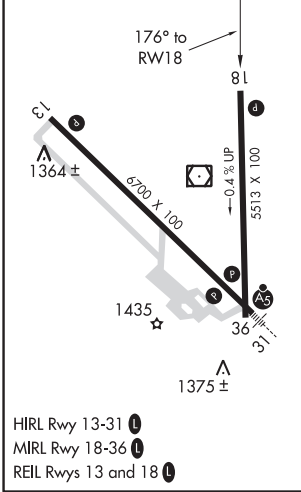
**ASOS**  
**124.175**

**HURON RADIO**  
**122.3**

**UNICOM**  
**122.8 (CTAF) 0**



ELEV 1304 TDZE 1298



CATEGORY	A	B	C	D
LPV DA		1548-1	250 (300-1)	
LNAV/VNAV DA		1596-1	298 (300-1)	
LNAV MDA		1660-1	362 (400-1)	
CIRCLING	1740-1	1760-1	1820-1½	1860-2
	436 (500-1)	456 (500-1)	516 (600-1½)	556 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MITCHELL, SOUTH DAKOTA

AL-5234 (FAA)

15344

WAAS CH <b>70700</b> <b>W31A</b>	APP CRS <b>310°</b>	Rwy Idg <b>6700</b> TDZE <b>1304</b> Apt Elev <b>1304</b>
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# RNAV (GPS) RWY 31

MITCHELL MUNI (MHE)

**▼** For uncompensated Baro-VNAV systems, LNAV-VNAV NA below -16°C (4°F) or above 54°C (130°F). Baro-VNAV and VDP NA when using Huron Rgnl altimeter setting.  
**▲** DME/DME RNP-0.3 NA. When local altimeter setting not received, use Huron Rgnl altimeter setting and increase all DA 89 feet and all MDA 100 feet. Increase LPV all Cats visibility 1/8 mile. Increase LNAV/VNAV all Cats, LNAV Cats C/D and Circling Cat C visibility 1/4 mile. For inop MALSR, increase LNAV/VNAV all Cats visibility to 1 mile and LNAV Cats C/D to 1 1/8 mile. For inop MALSR when using Huron Rgnl altimeter setting, increase LPV all Cats visibility to 1 1/8 mile.



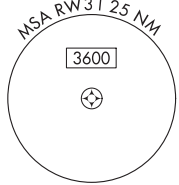
MISSED APPROACH:  
Climb to 3500 direct NUSCI and hold.

ASOS  
**124.175**

HURON RADIO  
**122.3**

UNICOM  
**122.8 (CTAF)**

MISSED APCH FIX



▲ 2070

1769 ▲

1722 ▲

1915 ▲

1655

3200

3200

3200

3200

3200

3200

3200

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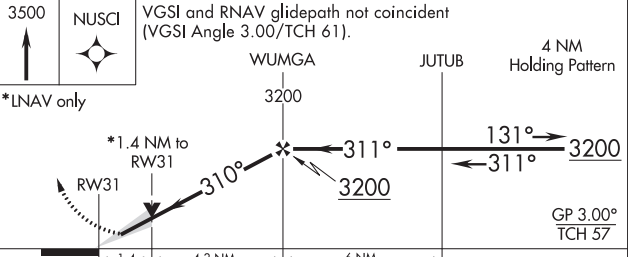
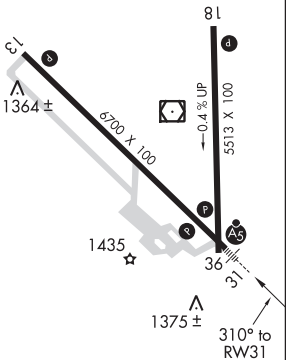
3200

3200

3200

3200

ELEV 1304 TDZE 1304



CATEGORY	A	B	C	D
LPV DA	1554-1/2		250 (300-1/2)	
LNAV/VNAV DA	1625-5/8		321 (400-5/8)	
LNAV MDA	1800-1/2	496 (500-1/2)	1800-1	496 (500-1)
<b>C</b> CIRCLING	1800-1	496 (500-1)	1820-1 1/2 516 (600-1 1/2)	1860-2 556 (600-2)

HIRL Rwy 13-31  
MIRL Rwy 18-36  
REIL Rwy 13 and 18

MITCHELL, SOUTH DAKOTA  
Orig-A 10DEC15

43°46'N-98°02'W

# MITCHELL MUNI (MHE) RNAV (GPS) RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>63038</b> <b>W36A</b>	APP CRS <b>356°</b>	Rwy Idg TDZE Apt Elev	<b>5513</b> <b>1304</b> <b>1304</b>
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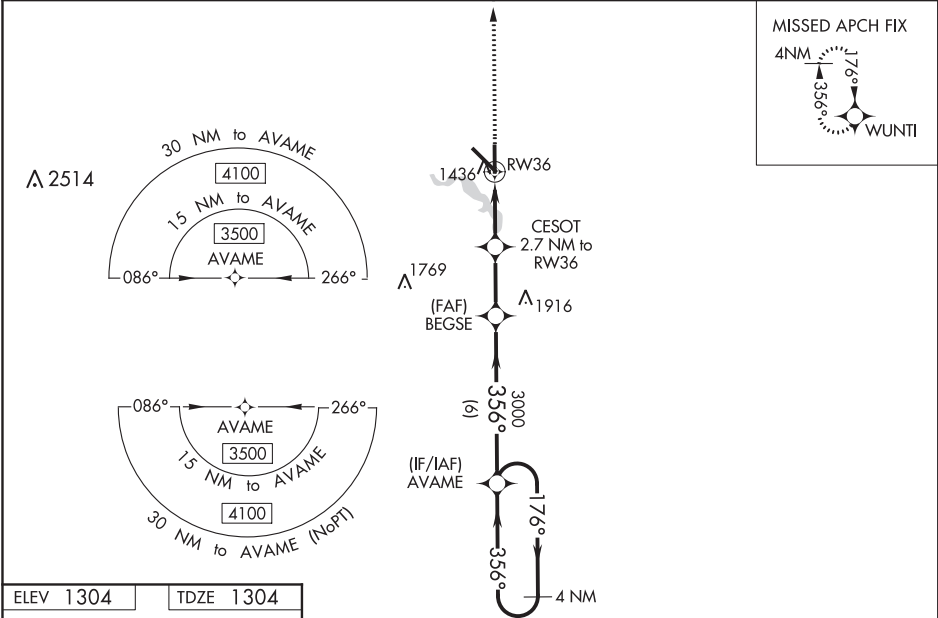
# RNAV (GPS) RWY 36

MITCHELL MUNI (MHE)

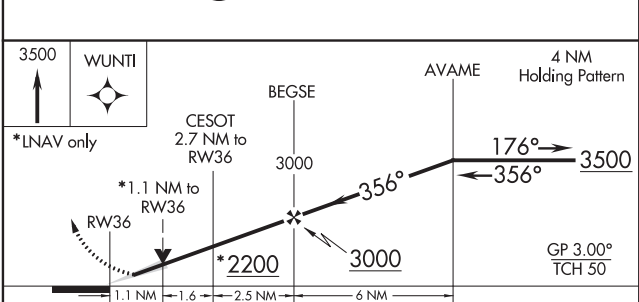
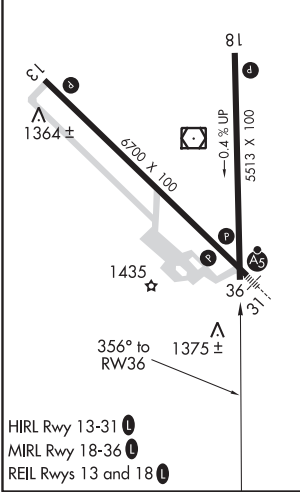
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -21°C (-5°F) or above 54°C (130°F). DME/DME RNP-0,3 NA. When local altimeter setting not received, use Huron Rgnl altimeter setting and increase LPV DA to 1643, and LNAV/VNAV DA to 1697. Increase all MDA 100 feet. Increase LPV visibility, all Cats, to 1½ mile, LNAV/VNAV visibility, all Cats, and LNAV visibility Cats C/D to 1¾ mile and increase Circling Cat C visibility to 1¾ mile. Baro-VNAV and VDP NA when using Huron Rgnl altimeter setting.

**MISSED APPROACH:**  
Climb to 3500 direct WUNTI and hold.

ASOS <b>124.175</b>	HURON RADIO <b>122.3</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1304	TDZE 1304
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CATEGORY	A	B	C	D
LPV DA		1554-1	250 (300-1)	
LNAV/VNAV DA		1608-1	304 (400-1)	
LNAV MDA	1700-1	396 (400-1)	1700-1½	396 (400-1½)
<b>C</b> CIRCLING	1740-1 436 (500-1)	1760-1 456 (500-1)	1820-1½ 516 (600-1½)	1860-2 556 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MITCHELL, SOUTH DAKOTA

AL-5234 (FAA)

15344

VOR/DME MHE <b>109.2</b> Chan <b>29</b>	APP CRS <b>117°</b>	Rwy Idg TDZE Apt Elev	<b>6700</b> <b>1301</b> <b>1304</b>
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# VOR RWY 13

MITCHELL MUNI (MHE)

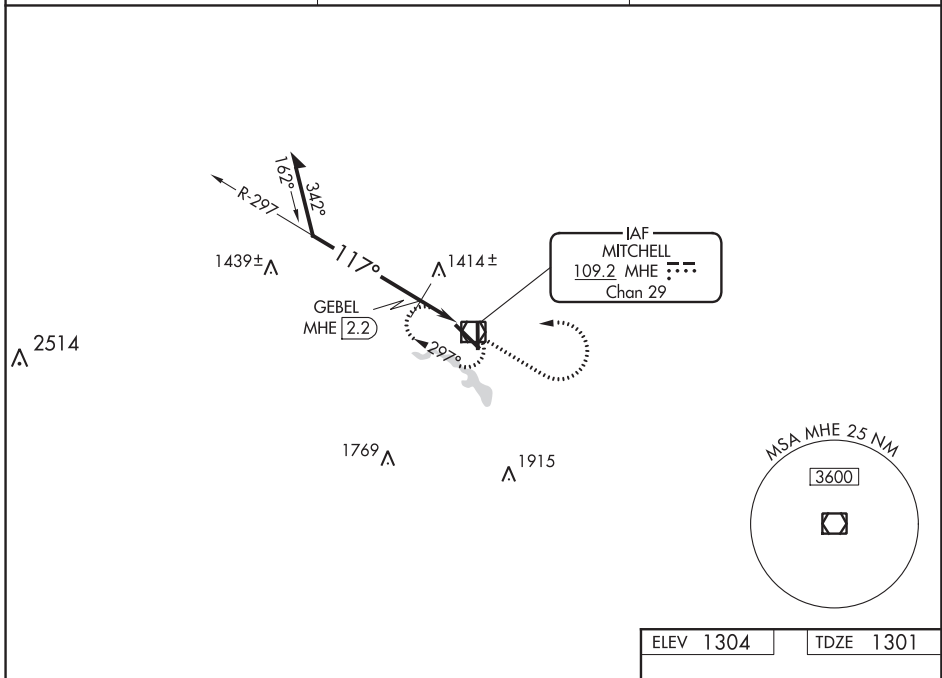
**▽** VDP NA with Huron Rgnl altimeter setting. If local altimeter setting not received, use Huron Regional altimeter setting and increase all MDA's 100 feet. Increase S-13 and Circling Cat C visibility ¼ mile, increase GEBEL fix minimums S-13 Cat C visibility ⅓ mile and Cat D ½ mile.

**MISSED APPROACH:** Climb to 2900 then climbing left turn to 3000 direct MHE VOR/DME and hold.

ASOS  
**124.175**

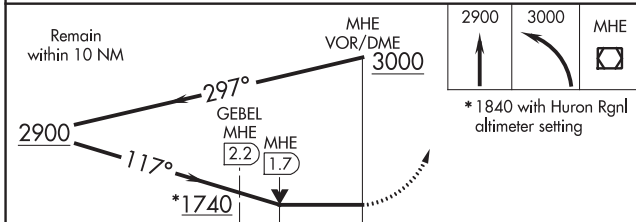
HURON RADIO  
**122.3**

UNICOM  
**122.8 (CTAF)** **Ⓛ**

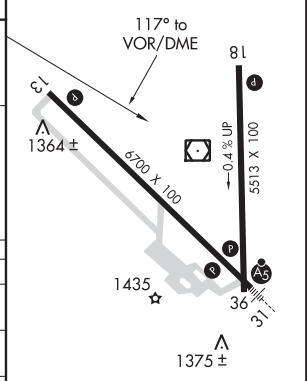


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 1304	TDZE 1301
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CATEGORY	A	B	C	D
S-13	1740-1 439 (500-1)		1740-1¼ 439 (500-1¼)	1740-1½ 439 (500-1½)
<b>C</b> CIRCLING	1740-1 436 (500-1)	1760-1 456 (500-1)	1820-1½ 516 (600-1½)	1860-2 556 (600-2)
GEBEL FIX MINIMUMS				
S-13	1680-1 379 (400-1)		1680-1¼ 379 (400-1¼)	
<b>C</b> CIRCLING	1740-1 436 (500-1)	1760-1 456 (500-1)	1820-1½ 516 (600-1½)	1860-2 556 (600-2)

HIRL Rwy 13-31 **Ⓛ**  
MRL Rwy 18-36 **Ⓛ**  
REIL Rws 13 and 18 **Ⓛ**

MITCHELL, SOUTH DAKOTA  
Amdt 11A 10DEC15

43°46'N-98°02'W

# MITCHELL MUNI (MHE)

## VOR RWY 13

APP CRS <b>118°</b>	Rwy Idg <b>4410</b>
	TDZE <b>1703</b>
	Apt Elev <b>1715</b>

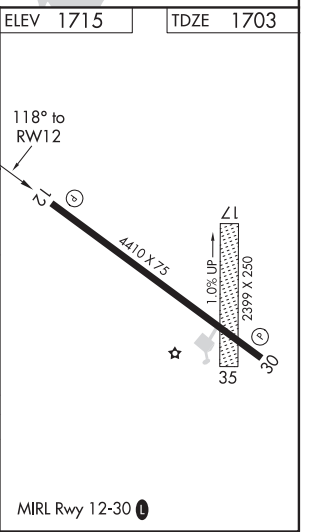
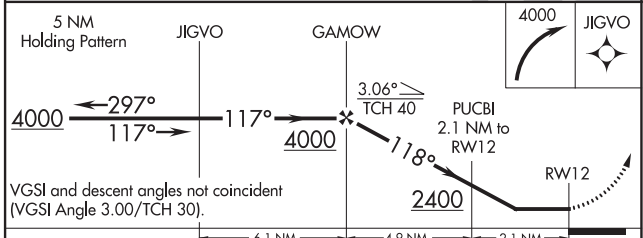
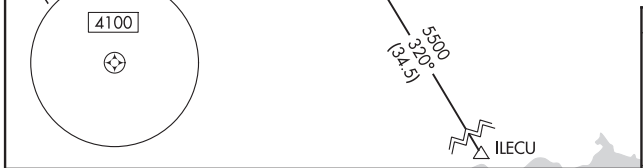
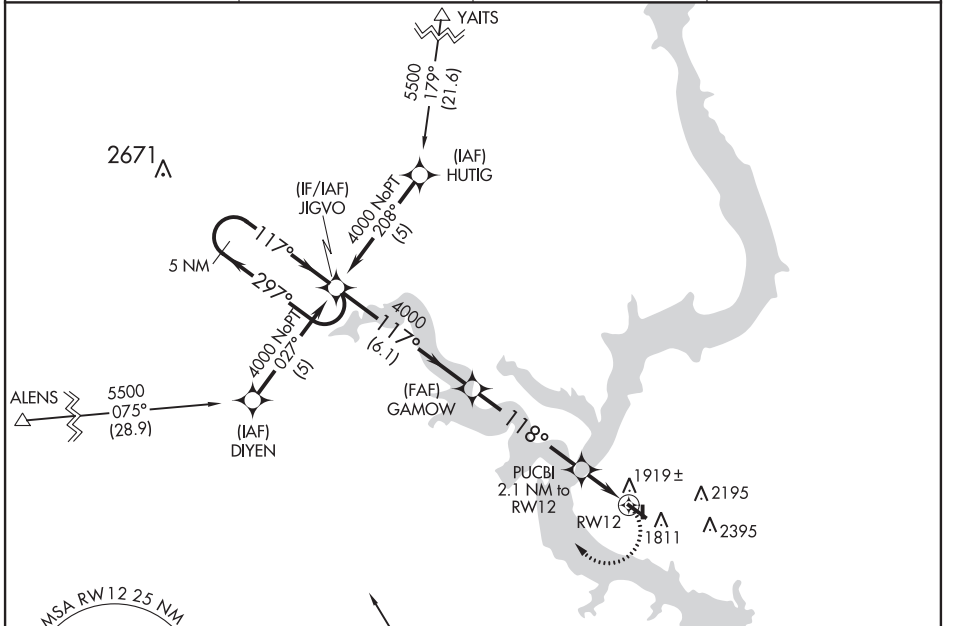
# RNAV (GPS) RWY 12

MOBRIDGE MUNI (MBG)

**⚠** DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM not authorized. If local altimeter setting not received, use Pierre Rgnl altimeter setting and increase all MDAs 180 feet.

**MISSED APPROACH:** Climbing right turn to 4000 direct JIGVO and hold.

ASOS <b>121.425</b>	HURON RADIO <b>122.35</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
LNAV MDA	2260-1	557 (600-1)	2260-1½ 557 (600-1½)	2260-1¾ 557 (600-1¾)
CIRCLING	2360-1	645 (700-1)	2360-1¾ 645 (700-1¾)	2560-2¾ 845 (900-2¾)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>72622</b> <b>W30A</b>	APP CRS <b>298°</b>	Rwy Idg <b>4410</b> TDZE <b>1701</b> Apt Elev <b>1716</b>
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# RNAV (GPS) RWY 30

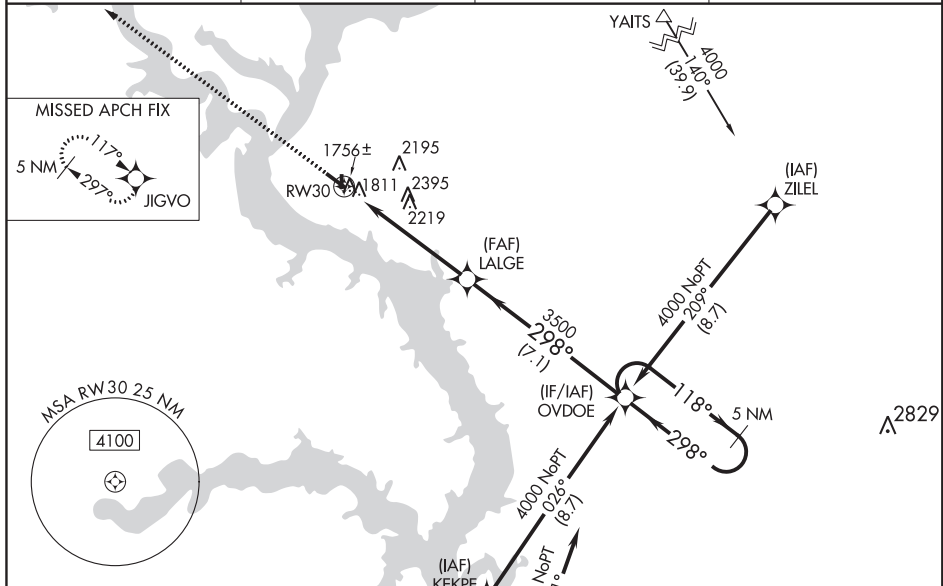
MOBRIDGE MUNI (MBG)

**⚠** Baro-VNAV NA when using Pierre Rgnl altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 33°C (91°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. VDP NA with Pierre Rgnl altimeter setting. When local altimeter setting not received, use Pierre Rgnl altimeter setting and increase all DA 165 feet and all MDA 180 feet, increase LPV and LNAV/VNAV all Cats visibility 5/8 mile, LNAV Cat B visibility 1/4 mile, Cat C/D 1/2 mile, Circling Cat A/B/D 1/4 mile, Cat C 1/2 mile.

**❄** -30°C/-22°F

**MISSED APPROACH:**  
Climb to 4000 direct JIGVO and hold.

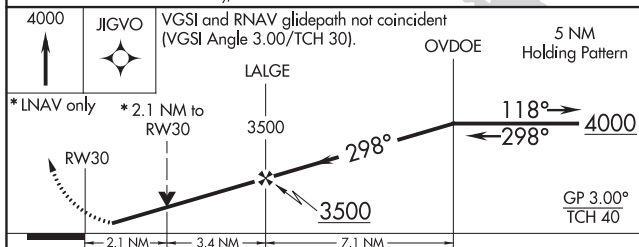
ASOS <b>121.425</b>	HURON RADIO <b>122.35</b>	GCO <b>121.725</b>	UNICOM <b>122.8</b> (CTAF) <b>📻</b>
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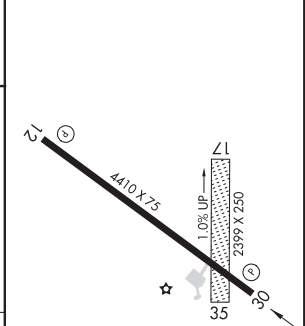
Procedure NA for arrival at CALOG via V344 westbound.

4000 063° (23.5)

CALOG



ELEV 1716	TDZE 1701
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CATEGORY	A	B	C	D
LPV DA		2050-1 1/8	349 (400-1 1/8)	
LNAV/VNAV DA		1993-1	292 (300-1)	
LNAV MDA	2400-1	699 (700-1)	2400-2	699 (700-2)
CIRCLING	2400-1	684 (700-1)	2400-2	2560-2 3/4 844 (900-2 3/4)

MIRL Rwy 12-30 **📻**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



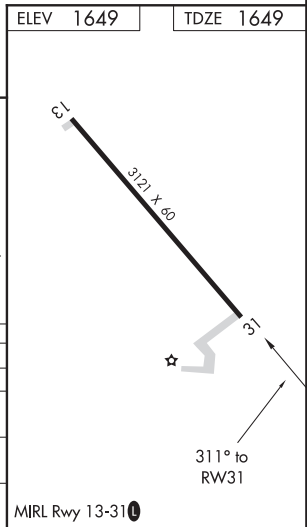
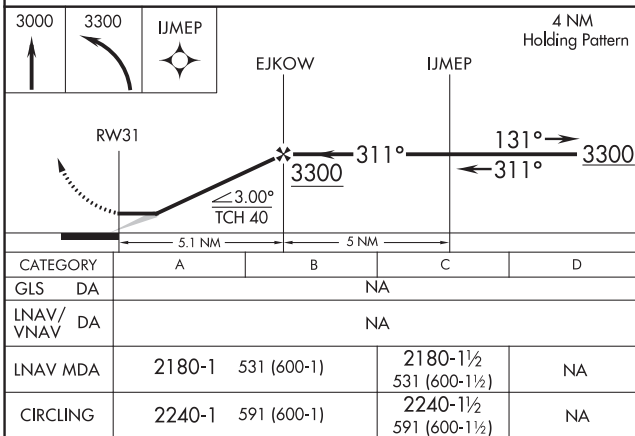
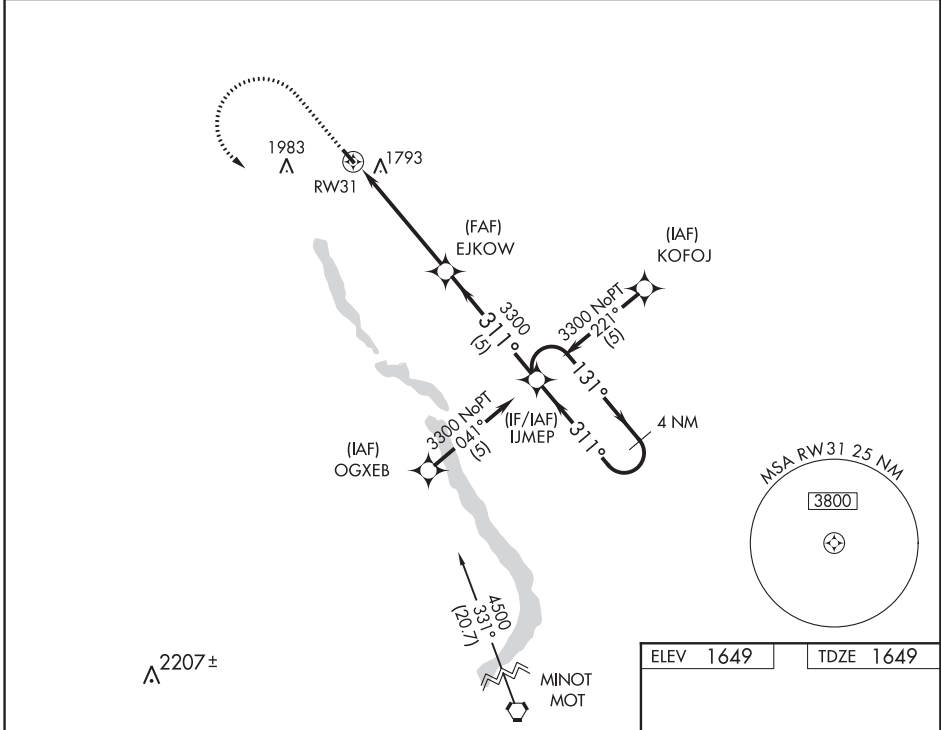
APP CRS <b>311°</b>	Rwy ldg TDZE Apt Elev	<b>3121</b> <b>1649</b> <b>1649</b>
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# RNAV (GPS) RWY 31

MOHALL MUNI (HBC)

<p><b>NA</b> Use Minot Intl altimeter setting. GPS or RNP-0.3 required. DME/DME RNP-0.3 NA.</p>	<p>MISSED APPROACH: Climb to 3000 then climbing left turn to 3300 direct IJMEP WP and hold.</p>
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<p>MINOT APP CON ★ <b>119.6 363.8</b></p>	<p>UNICOM <b>122.8</b> (CTAF) <b>0</b></p>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MOHALL, NORTH DAKOTA

AL-6052 (FAA)

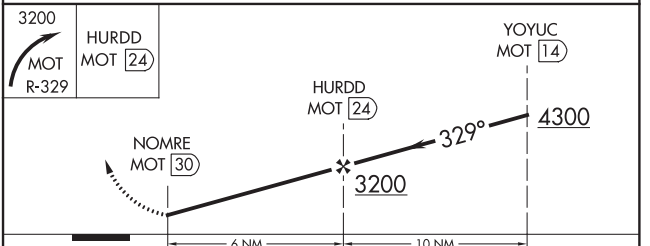
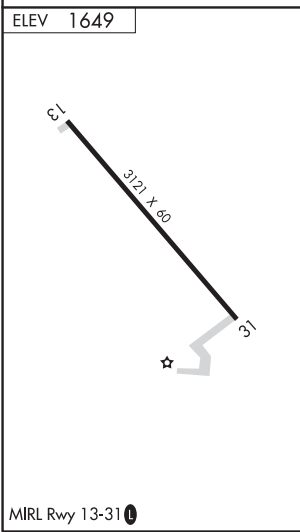
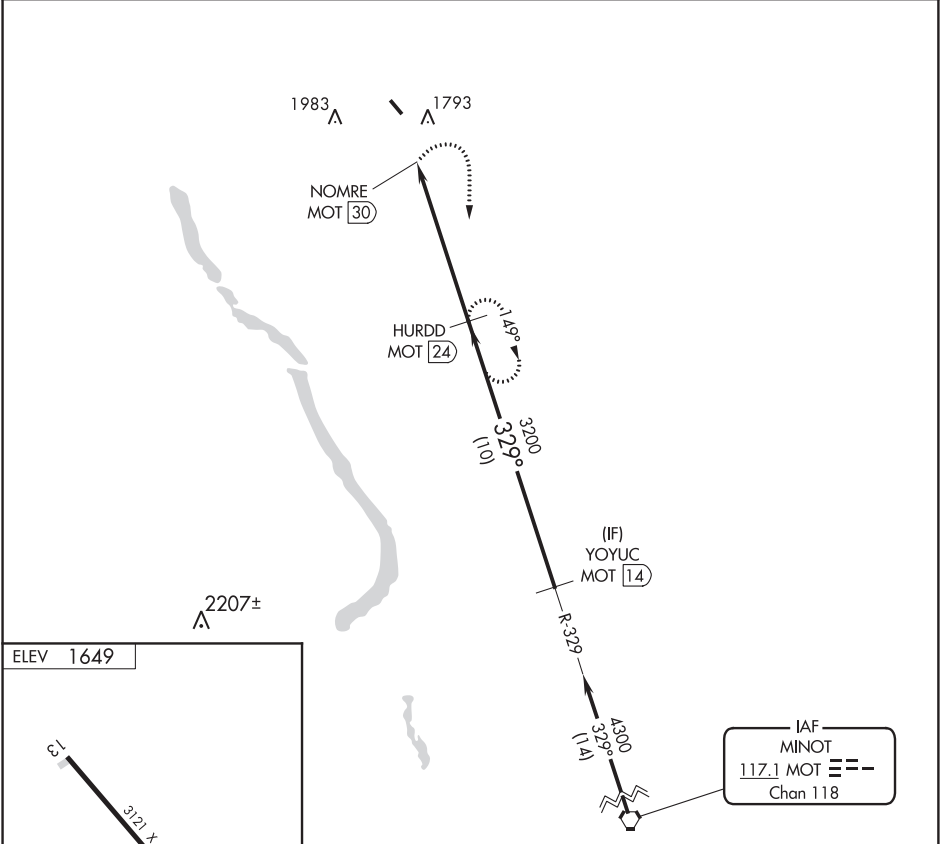
15288

VORTAC MOT <b>117.1</b> Chan <b>118</b>	APP CRS <b>329°</b>	Rwy Idg TDZE Apt Elev	<b>N/A</b> <b>N/A</b> <b>1649</b>
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**VOR/DME-A**  
MOHALL MUNI (HBC)

<p><b>NA</b> Use Minot Intl altimeter setting; when not received, use Minot AFB altimeter setting; when neither received, procedure NA. Procedure NA at night.</p>	<p><b>MISSED APPROACH:</b> Climbing right turn to 3200 on MOT VORTAC R-329 to HURDD/MOT 24 DME and hold.</p>
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<p>MINOT APP CON <b>*</b> <b>119.6 363.8</b></p>	<p>UNICOM <b>122.8 (CTAF) 0</b></p>
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CATEGORY	A	B	C	D
CIRCLING	2800-2¼	1151 (1200-2¼)	2800-3 1151 (1200-3)	NA

MOHALL, NORTH DAKOTA  
Orig 09FEB12

48°46'N-101°32'W

MOHALL MUNI (HBC)  
**VOR/DME-A**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>58030</b> <b>W14A</b>	APP CRS <b>141°</b>	Rwy Idg TDZE <b>1034</b> Apt Elev <b>1035</b>	<b>3999</b>
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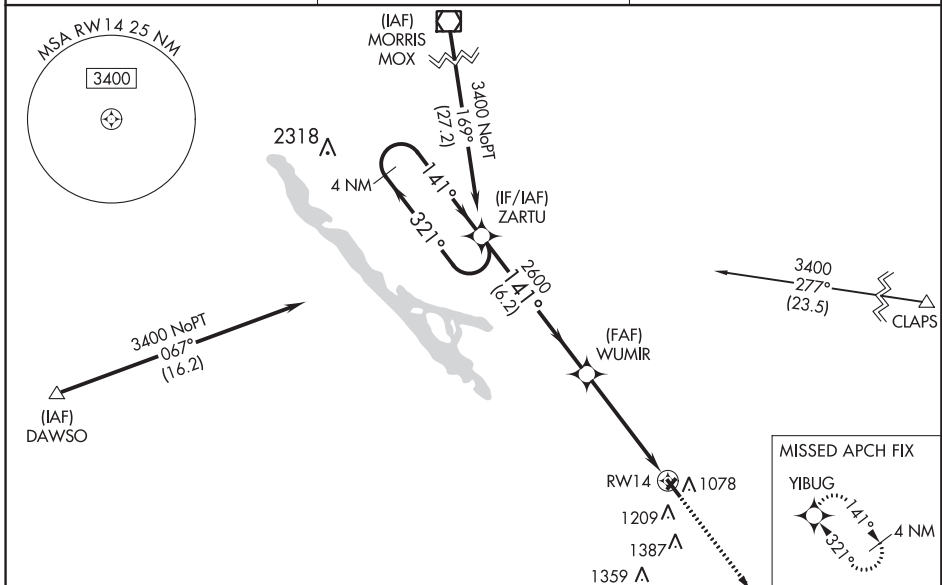
# RNAV (GPS) RWY 14

MONTEVIDEO-CHIPPEWA COUNTY (MVE)

**⚠** Baro-VNAV NA when using Granite Falls altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -30°C (-22°F) or above 54°C (130°F). When local altimeter setting not received, use Granite Falls altimeter setting and increase all DA 36 feet and MDA 40 feet, increase LNAV Cats C and D visibility 1/8 mile and Circling Cat D visibility 1/4 mile. DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. When VGSI inop, Straight-in and Circling Rwy 14 procedures NA at night. Circling to Rwy 3-21 NA.

**MISSED APPROACH:**  
Climb to 3300 direct YIBUG and hold.

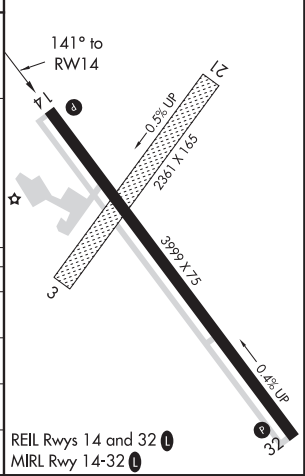
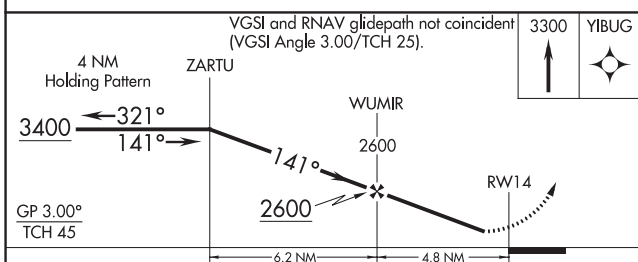
AWOS-3 <b>111.6</b>	MINNEAPOLIS CENTER <b>125.5 323.1</b>	UNICOM <b>122.8 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1035	TDZE 1034
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CATEGORY	A	B	C	D
LPV DA		1284-1	250 (300-1)	
LNAV/VNAV DA		1284-1	250 (300-1)	
LNAV MDA	1520-1 486 (500-1)		1520-1 3/8 486 (500-1 3/8)	
CIRCLING	1560-1 525 (600-1)		1560-1 1/2 525 (600-1 1/2)	1700-2 665 (700-2)

REIL Rwys 14 and 32 **0**  
MRL Rwy 14-32 **0**

WAAS CH <b>86430</b>	APP CRS <b>321°</b>	Rwy Idg <b>3999</b>
<b>W32A</b>		TDZE <b>1028</b>
		Apt Elev <b>1035</b>

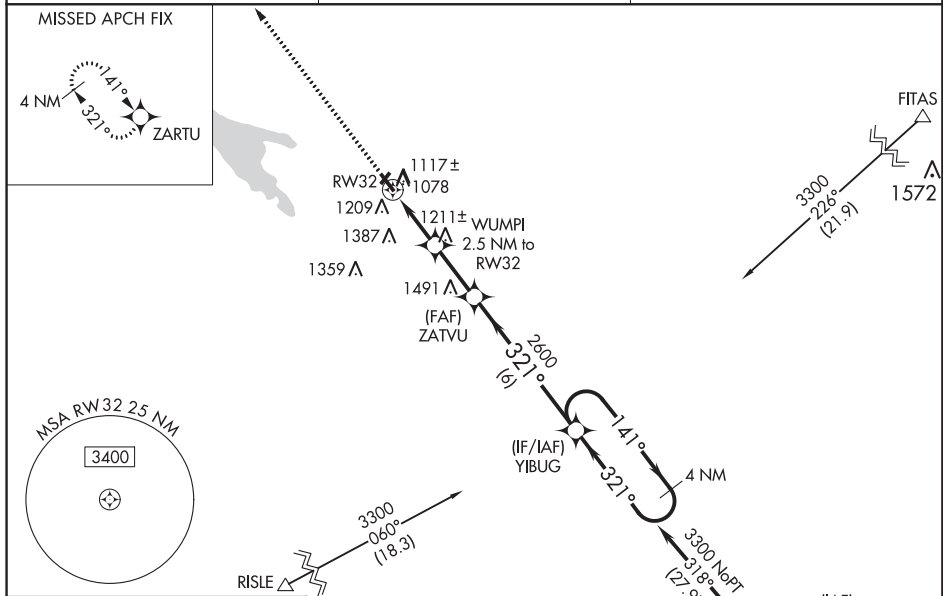
# RNAV (GPS) RWY 32

MONTEVIDEO-CHIPPEWA COUNTY (MVE)

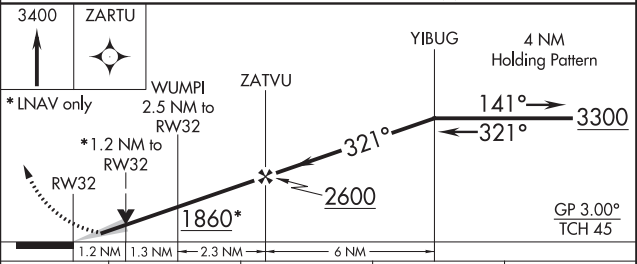
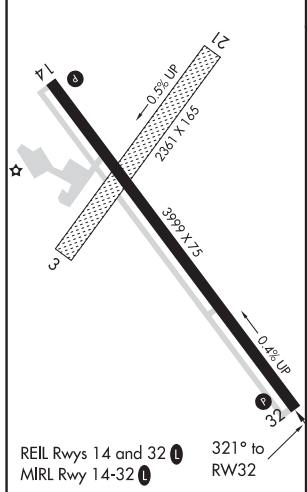
**⚠** Circling to Rwy 14 NA at night. Baro-VNAV NA when using Granite Falls altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -30°C (-22°F) or above 54°C (130°F). When local altimeter setting not received, use Granite Falls altimeter setting and increase all DA 36 feet and MDA 40 feet and increase LNAV/VNAV visibility all Cats 1/8 mile, increase LNAV visibility Cats C and D 1/8 mile, and increase Circling visibility Cat D 1/4 mile. DME/DME RNP -0.3 NA. Circling to Rwy 3-21 NA. Helicopter visibility reduction below 1 SM NA.

**MISSED APPROACH:**  
Climb to 3400 direct ZARTU and hold.

AWOS-3 <b>111.6</b>	MINNEAPOLIS CENTER <b>125.5 323.1</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1035	TDZE 1028
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CATEGORY	A	B	C	D
LPV DA	1234-1 206 (200-1)			
LNAV/VNAV DA	1428-1 3/8 400 (400-1 3/8)			
LNAV MDA	1420-1	392 (400-1)	1420-1 1/8	392 (400-1 1/8)
CIRCLING	1560-1	525 (600-1)	1560-1 1/2	1700-2 665 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

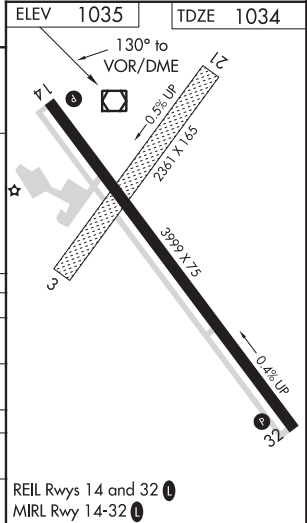
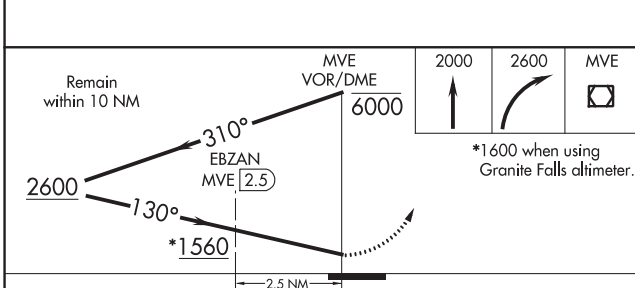
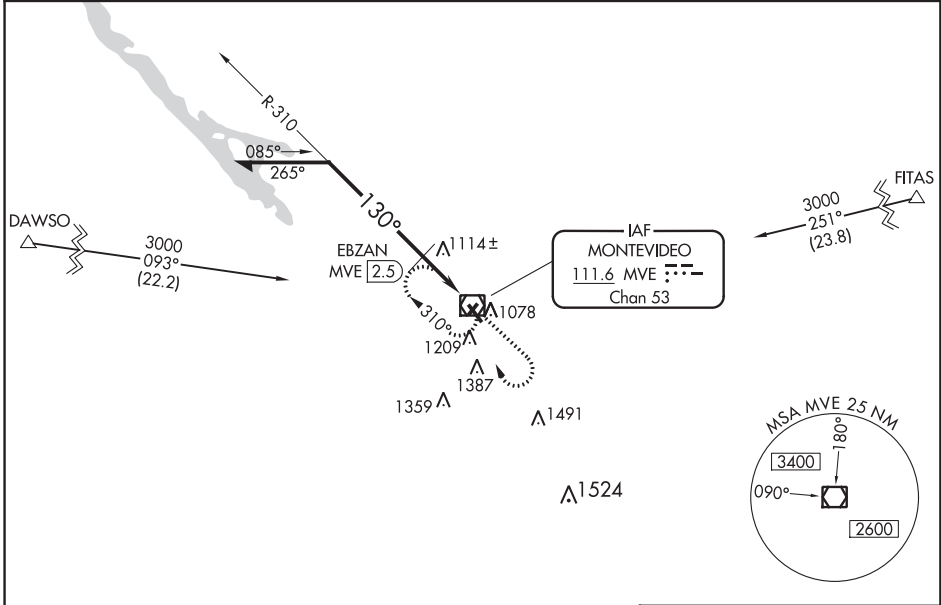
VOR/DME MVE <b>111.6</b> Chan <b>53</b>	APP CRS <b>130°</b>	Rwy Idg TDZE Apt Elev	<b>3999</b> <b>1034</b> <b>1035</b>
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**VOR RWY 14**  
MONTEVIDEO-CHIPPEWA COUNTY (MVE)

When local altimeter setting not received, use Granite Falls altimeter setting and increase all MDA 40 feet, increase S-14 Cats C and D visibility 1/8 mile, Circling Cat C visibility 1/8 mile and Cat D visibility 1/4 mile. Increase EBZAN fix Minimums S-14 Cats C and D visibility 1/8 mile and Circling Cat D visibility 1/4 mile. When VGSJ inop, Straight-In/Circling Rwy 14 Procedure NA at night. Helicopter visibility reduction below 1 SM NA. Circling to Rwy 3-21 NA.

MISSED APPROACH: Climb to 2000 then climbing right turn to 2600 direct MVE VOR/DME and hold.

AWOS-3 <b>111.6</b>	MINNEAPOLIS CENTER <b>125.5 323.1</b>	UNICOM <b>122.8 (CTAF) 1</b>
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CATEGORY	A	B	C	D
S-14	1560-1	526 (600-1)	1560-1½	526 (600-1½)
CIRCLING	1560-1	525 (600-1)	1560-1½ 525 (600-1½)	1700-2 665 (700-2)
EBZAN FIX MINIMUMS				
S-14	1380-1		346 (400-1)	
CIRCLING	1560-1	525 (600-1)	1560-1½ 525 (600-1½)	1700-2 665 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>70630</b> <b>W30A</b>	APP CRS <b>293°</b>	Rwy Idg TDZE Apt Elev	<b>4300</b> <b>918</b> <b>918</b>
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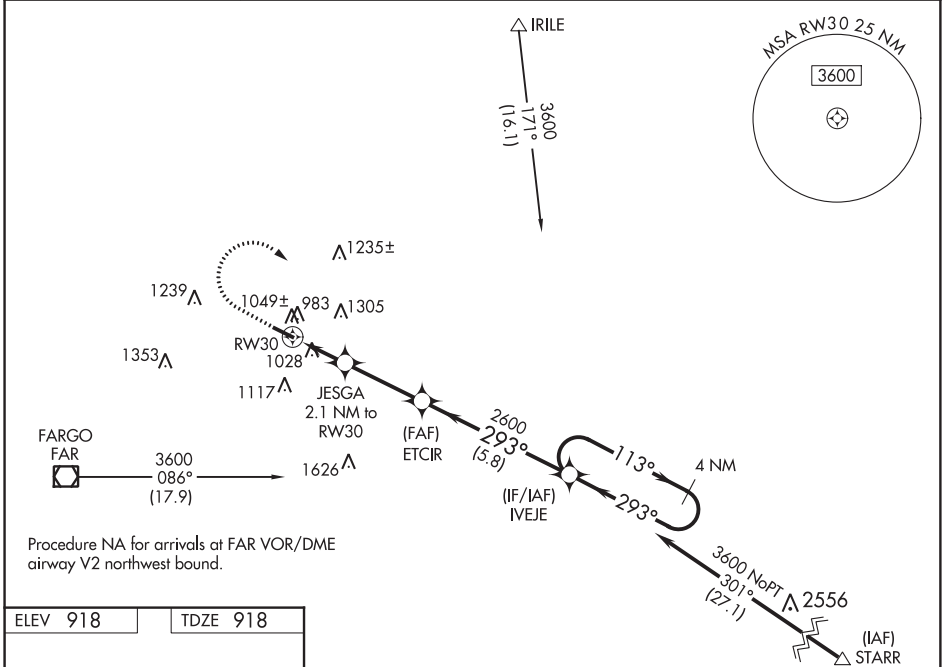
# RNAV (GPS) RWY 30

MOORHEAD MUNI (JKJ)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Hector Intl altimeter setting and increase all DA 21 feet, increase all MDA 40 feet.

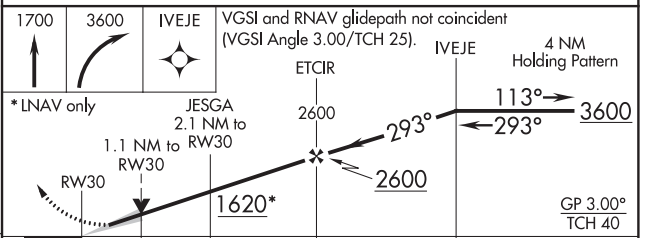
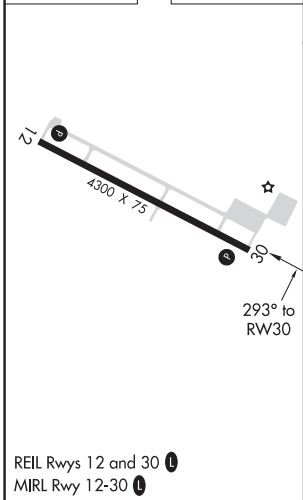
**MISSED APPROACH:** Climb to 1700 then climbing right turn to 3600 direct IVEJE and hold.

AWOS-3 <b>120.0</b>	FARGO APP CON <b>120.4 377.15</b>	GCO <b>121.725</b>	UNICOM <b>123.0</b> (CTAF) <b>📻</b>
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Procedure NA for arrivals at FAR VOR/DME airway V2 northwest bound.

ELEV 918	TDZE 918
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		A		B		C		D	
CATEGORY									
LPV DA		1168-7/8		250 (300-7/8)				NA	
LNAV/VNAV DA		1211-1		293 (300-1)				NA	
LNAV MDA		1300-1		382 (400-1)				NA	
CIRCLING		1360-1 442 (500-1)		1380-1 462 (500-1)				NA	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

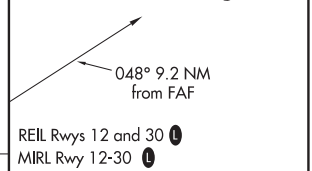
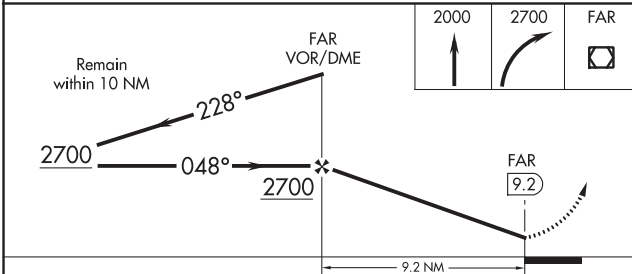
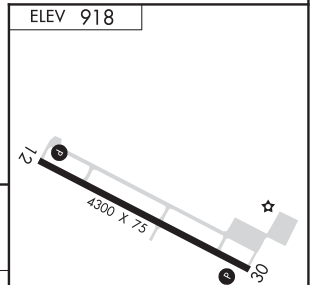
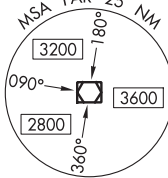
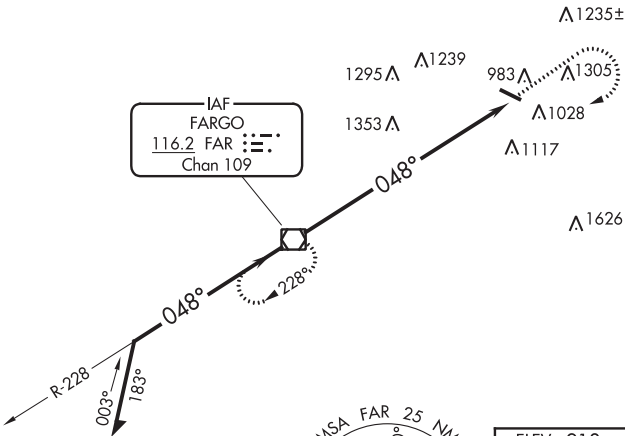
VOR/DME FAR <b>116.2</b> Chan <b>109</b>	APP CRS <b>048°</b>	Rwy Idg TDZE Apt Elev	<b>N/A</b> <b>N/A</b> <b>918</b>
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**VOR-A**  
MOORHEAD MUNI (JKJ)

		MISSED APPROACH: Climb to 2000 then climbing right turn to 2700 direct FAR VOR/DME and hold.	
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AWOS-3 <b>120.0</b>	FARGO APP CON <b>120.4 377-15</b>	GCO <b>121.725</b>	UNICOM <b>123.0</b> (CTAF)
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△ 2152



CATEGORY	A	B	C	D	FAR to MAP 9.2 NM					
CIRCLING	1740-1¼	822 (900-1¼)		NA	Knots	60	90	120	150	180
					Min:Sec	9:12	6:08	4:36	3:41	3:04

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>82730</b> <b>W04A</b>	APP CRS <b>038°</b>	Rwy Idg TDZE Apt Elev	<b>3200</b> <b>1076</b> <b>1076</b>
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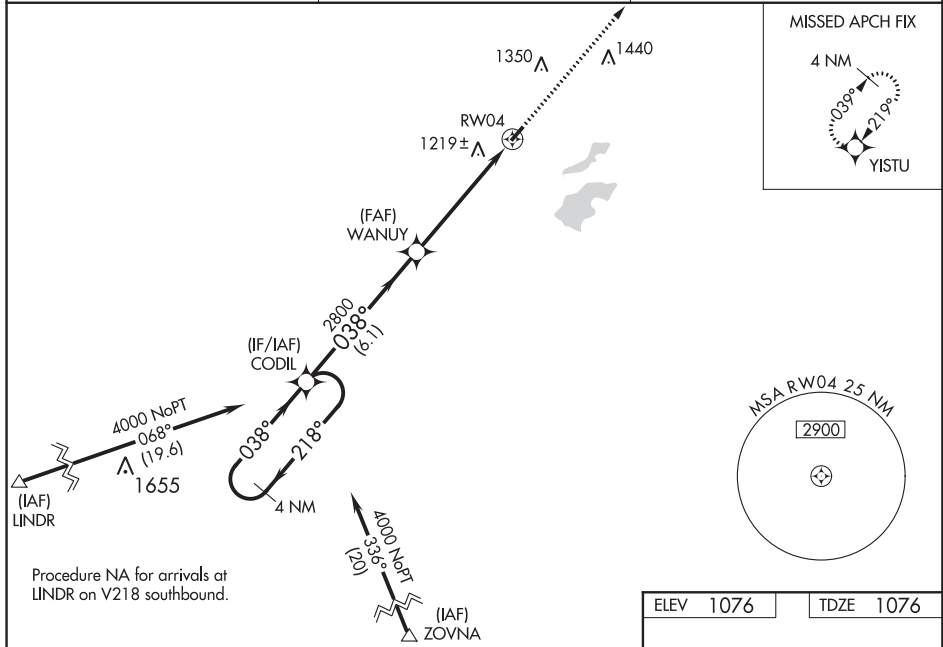
# RNAV (GPS) RWY 4

MOOSE LAKE CARLTON COUNTY (MZH)

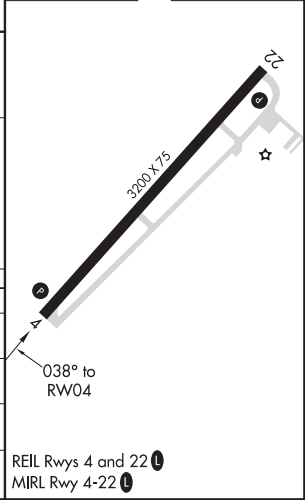
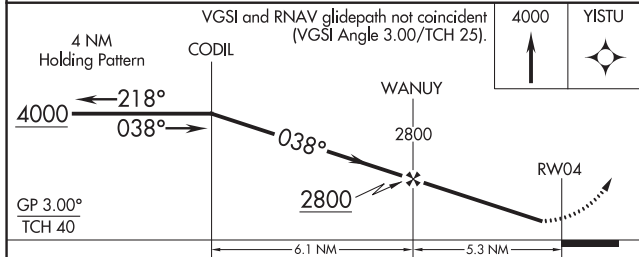
**▽** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). Straight-in minimums NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Baro-VNAV NA when using Cloquet altimeter setting. When local altimeter setting not received, use Cloquet altimeter setting and increase all DA 77 feet and all MDA 80 feet; increase LPV all Cats visibility 1/8 mile and LNAV/VNAV all Cats visibility 3/8 mile.

MISSED APPROACH: Climb to 4000 direct YISTU and hold.

AWOS-3 <b>119.125</b>	DULUTH APP CON <b>125.45 233.7</b>	CTAF <b>122.9 0</b>
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ELEV 1076	TDZE 1076
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CATEGORY	A	B	C	D
LPV DA	1326-1	250 (300-1)		NA
LNAV/VNAV DA	1529-1½	453 (500-1½)		NA
LNAV MDA	1560-1	484 (500-1)		NA
CIRCLING	1660-1	584 (600-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



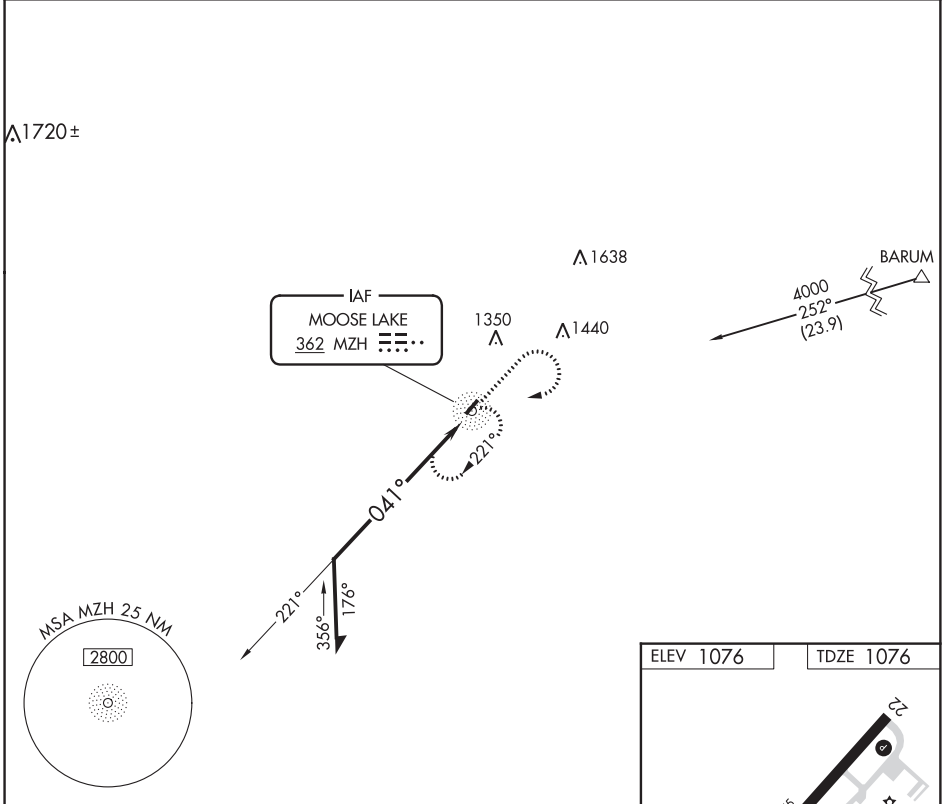
NDB MZH	APP CRS	Rwy Idg	<b>3200</b>
<b>362</b>	<b>041°</b>	TDZE	<b>1076</b>
		Apt Elev	<b>1076</b>

# NDB RWY 4

MOOSE LAKE CARLTON COUNTY (MZH)

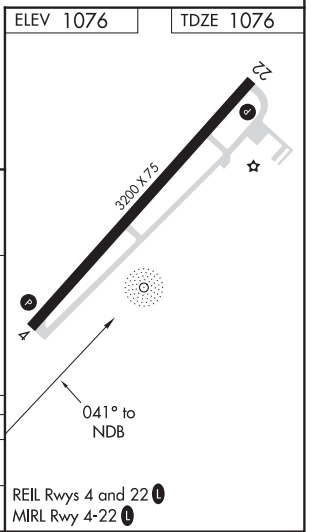
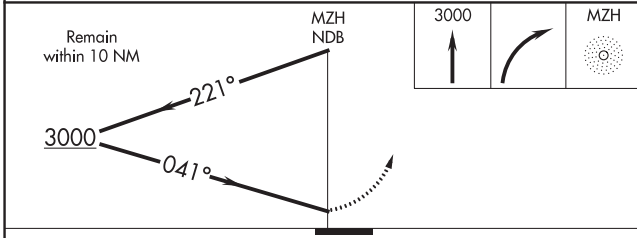
	<p>MISSED APPROACH: Climb to 3000, then right turn direct MZH NDB and hold.</p>
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<p>AWOS-3 <b>119.125</b></p>	<p>DULUTH APP CON <b>125.45 233.7</b></p>	<p>CTAF <b>122.9 0</b></p>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D
S-4	1800-1	724 (800-1)		NA
CIRCLING	1800-1	724 (800-1)		NA

REIL Rwys 4 and 22 0  
MIRL Rwy 4-22 0

MORA, MINNESOTA

AL-6885 (FAA)

15288

WAAS CH <b>90139</b> <b>W35A</b>	APP CRS <b>352°</b>	Rwy Idg TDZE Apt Elev	<b>4794</b> <b>1010</b> <b>1010</b>
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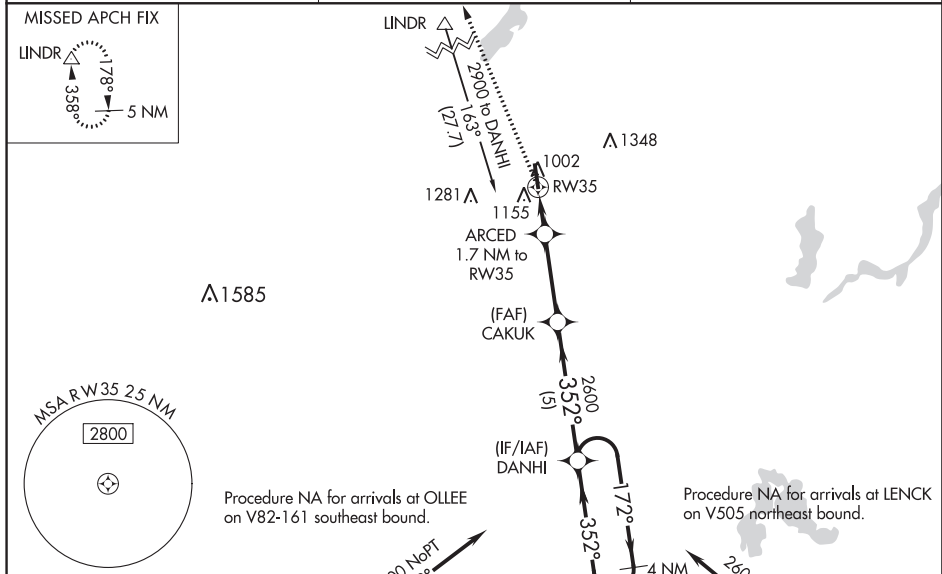
# RNAV (GPS) RWY 35

MORA MUNI (JMR)

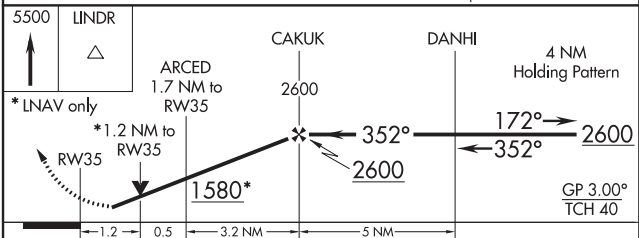
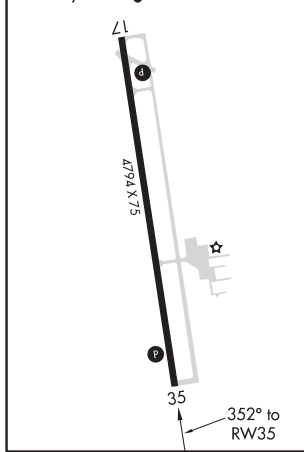
**⚠** DME/DME RNP-0.3 NA. Baro-VNAV and VDP NA when using Hinckley altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). When local altimeter setting not received, use Hinckley altimeter setting and increase all DA 43 feet and all MDA 60 feet and increase LNAV/VNAV all Cats visibility 1/8 mile and LNAV and Circling Cat C and D visibility 1/4 mile. Helicopter visibility reduction below 3/4 SM NA. Night landing: Rwy 17 NA.

MISSED APPROACH: Climb to 5500 direct LINDR and hold, continue climb-in-hold to 5500.

AWOS-3 <b>123.925</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1010	TDZE 1010
REIL Rwy 17 and 35	
MIRL Rwy 17-35	



CATEGORY	A	B	C	D
LPV DA		1267-1	257 (300-1)	
LNAV/VNAV DA		1316-1	306 (400-1)	
LNAV MDA	1420-1	410 (500-1)	1420-1 1/8	410 (500-1 1/8)
<b>C</b> CIRCLING	1480-1 470 (500-1)	1500-1 490 (500-1)	1700-2 690 (700-2)	1700-2 1/4 690 (700-2 1/4)

MORA, MINNESOTA  
Orig 15OCT15

45°53'N-93°16'W

# RNAV (GPS) RWY 35

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>49032</b> <b>W14A</b>	APP CRS <b>142°</b>	Rwy Idg <b>4007</b> TDZE <b>1132</b> Apt Elev <b>1136</b>
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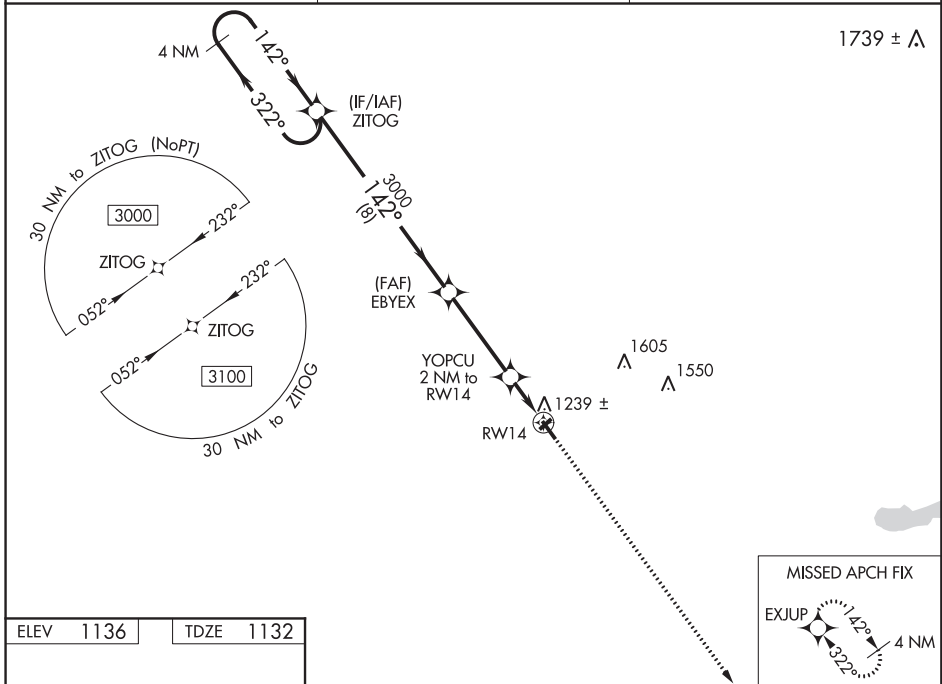
# RNAV (GPS) RWY 14

MORRIS MUNI-CHARLIE SCHMIDT FIELD (MOX)

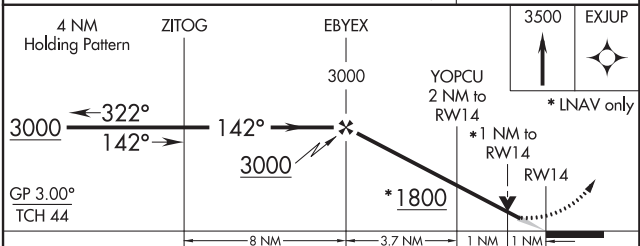
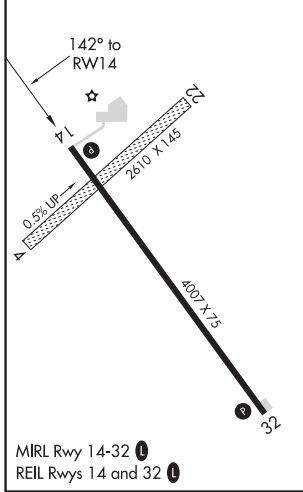
**⚠** Circling to Rwy 04, 22 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (1°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Benson altimeter setting and increase all DA 59 feet and all MDA 60 feet, increase LNAV/VNAV all Cats visibility and LNAV and Circling Cat C visibility ¼ mile. Baro VNAV and VDP NA when using Benson altimeter setting.

**MISSED APPROACH:** Climb to 3500 direct EXJUP and hold.

AWOS-3 <b>109.6</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1136	TDZE 1132
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CATEGORY	A	B	C	D
LPV DA	1382-1	250 (300-1)		NA
LNAV/VNAV DA	1544-1 $\frac{3}{8}$	412 (500-1 $\frac{3}{8}$ )		NA
LNAV MDA	1500-1	368 (400-1)		NA
<b>C</b> CIRCLING	1560-1 424 (500-1)	1600-1 464 (500-1)	1860-2 724 (800-2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>93732</b> <b>W32A</b>	APP CRS <b>322°</b>	Rwy Idg TDZE <b>1131</b> Apt Elev <b>1136</b>	<b>4007</b>
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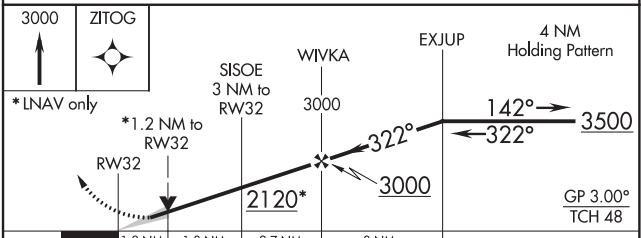
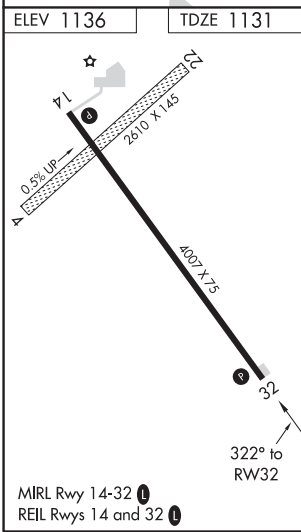
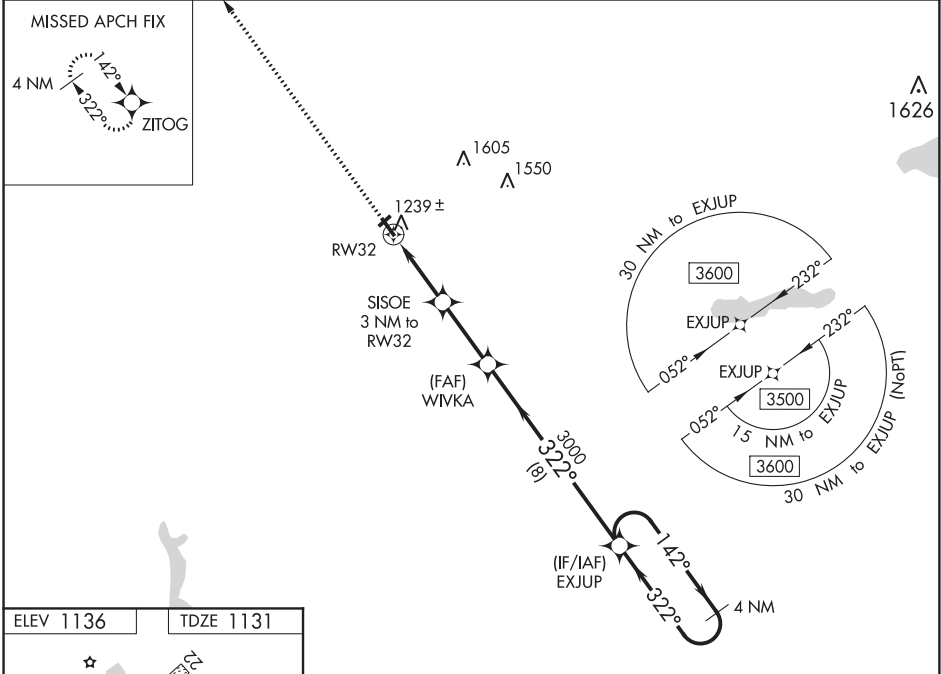
# RNAV (GPS) RWY 32

MORRIS MUNI-CHARLIE SCHMIDT FIELD (MOX)

**⚠** Circling to Rwy 4, 22 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (1°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Baro VNAV and VDP NA when using Benson altimeter setting. When local altimeter setting not received, use Benson altimeter setting and increase all DA 59 feet and all MDA 60 feet and increase LNAV/VNAV all Cats visibility 1/4 mile, LNAV Cat C visibility 1/8 mile and Circling Cat C visibility 1/4 mile.

**MISSED APPROACH:**  
Climb to 3000 direct ZITOG and hold.

AWOS-3 <b>109.6</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	UNICOM <b>122.8 (CTAF) ①</b>
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CATEGORY	A	B	C	D
LPV DA	1381-1 250 (300-1)			NA
LNAV/VNAV DA	1535-1 3/8 404 (400-1 3/8)			NA
LNAV MDA	1540-1	409 (500-1)	1540-1 1/8 409 (500-1 1/8)	NA
<b>C</b> CIRCLING	1560-1 424 (500-1)	1600-1 464 (500-1)	1860-2 724 (800-2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME MOX <b>109.6</b> Chan 33	APP CRS <b>144°</b>	Rwy Idg TDZE <b>1132</b> Apt Elev <b>1136</b>	<b>4007</b>
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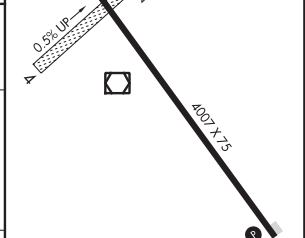
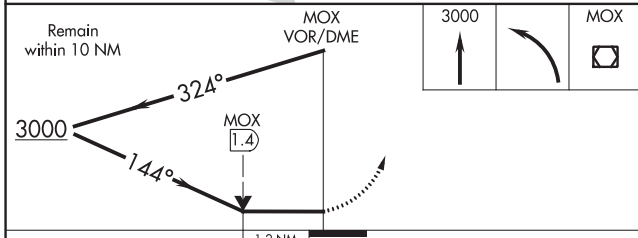
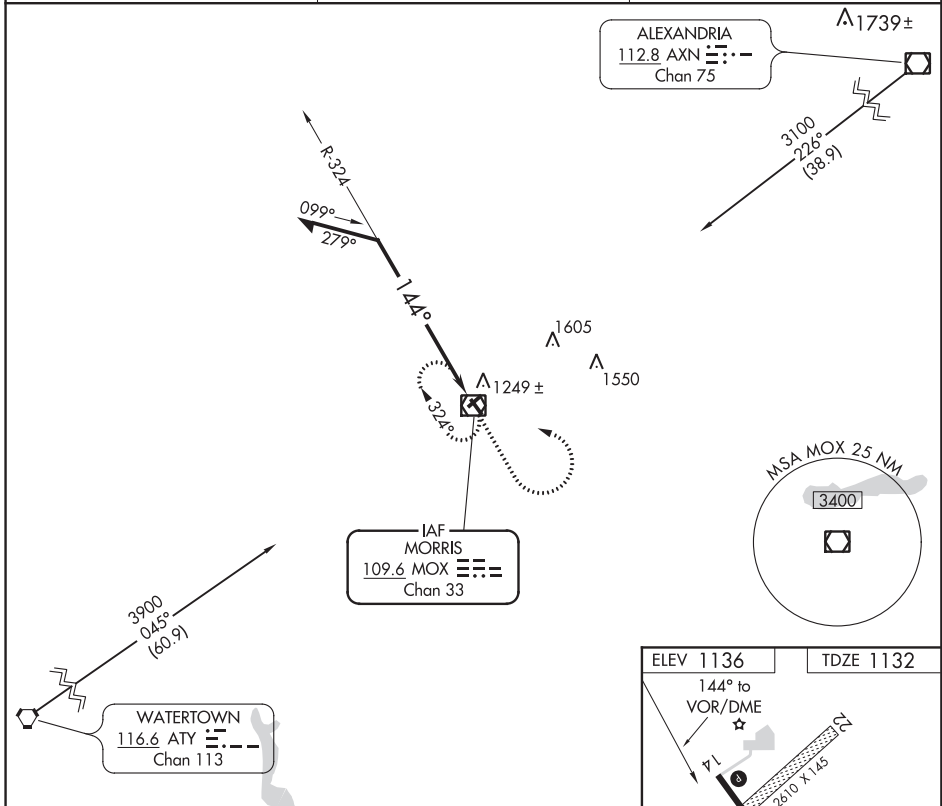
# VOR RWY 14

MORRIS MUNI-CHARLIE SCHMIDT FIELD (MOX)

**NA** When local altimeter setting not received, use Benson altimeter setting and increase all MDA 60 feet; increase S-14 Cat C visibility 1/8 mile and Circling Cat C visibility 1/4 mile. VDP NA when using Benson altimeter setting. Circling to Rwy 4/22 NA at night.

MISSED APPROACH: Climb to 3000 then left turn direct MOX VOR/DME and hold.

AWOS-3 <b>109.6</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	UNICOM <b>122.8</b> (CTAF) <b>Q</b>
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CATEGORY	A	B	C	D
S-14	1560-1	428 (500-1)	1560-1 1/4 428 (500-1 1/4)	NA
<b>C</b> CIRCLING	1560-1 424 (500-1)	1600-1 464 (500-1)	1860-2 724 (800-2)	NA

MIRL Rwy 14-32 **Q**  
REIL Rwy 14 and 32 **Q**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MORRIS, MINNESOTA

AL-5621 (FAA)

15148

VOR/DME MOX <b>109.6</b> Chan 33	APP CRS <b>315°</b>	Rwy Idg TDZE Apt Elev	<b>4007</b> <b>1131</b> <b>1136</b>
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# VOR RWY 32

MORRIS MUNI-CHARLIE SCHMIDT FIELD (MOX)

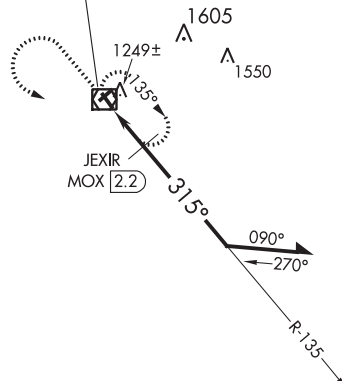
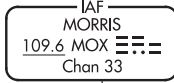
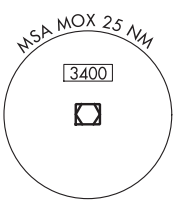
**NA** VDP NA when using Benson altimeter setting.  
When local altimeter setting not received, use Benson altimeter setting and increase all MDAs 60 feet, and Cat C visibility 1/4 mile, JEXIR Fix minimums S-32 Cat C visibility 1/4 mile. Circling to Rwy 4/22 NA at night.

MISSED APPROACH: Climb to 3000 then left turn direct MOX VOR/DME and hold.

AWOS-3  
**109.6**

MINNEAPOLIS CENTER  
**126.1 269.2**

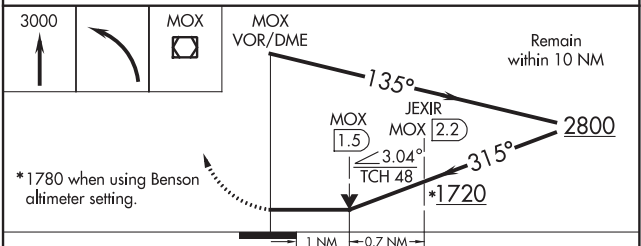
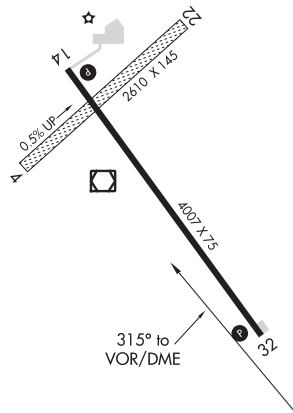
UNICOM  
**122.8** (CTAF) **0**



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1136 TDZE 1131



CATEGORY	A	B	C	D
S-32	1720-1	589 (600-1)	1720-1 <sup>3</sup> / <sub>4</sub> 589 (600-1 <sup>3</sup> / <sub>4</sub> )	NA
<b>C</b> CIRCLING	1720-1	584 (600-1)	1860-2 724 (800-2)	NA
JEXIR FIX MINIMUMS				
S-32	1500-1 369 (400-1)			NA
<b>C</b> CIRCLING	1560-1 424 (500-1)	1600-1 464 (500-1)	1860-2 724 (800-2)	NA

MORRIS, MINNESOTA  
Amdt 5B 28MAY15

MORRIS MUNI-CHARLIE SCHMIDT FIELD (MOX)  
45°34'N-95°58'W  
**VOR RWY 32**

WAAS CH <b>87131</b> <b>W15A</b>	APP CRS <b>150°</b>	Rwy Idg <b>5401</b> TDZE <b>1011</b> Apt Elev <b>1011</b>
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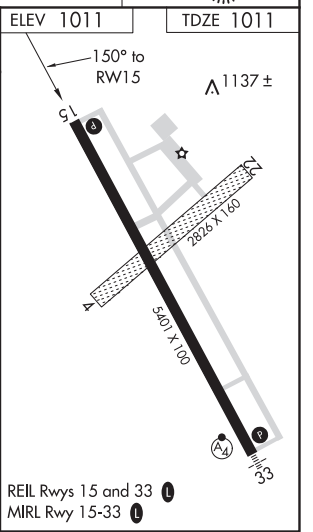
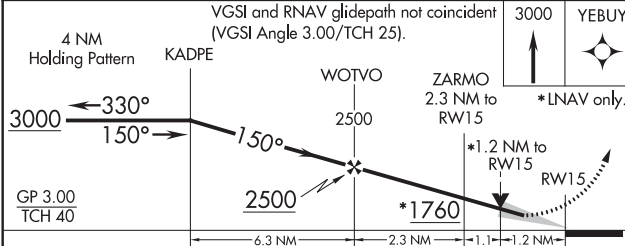
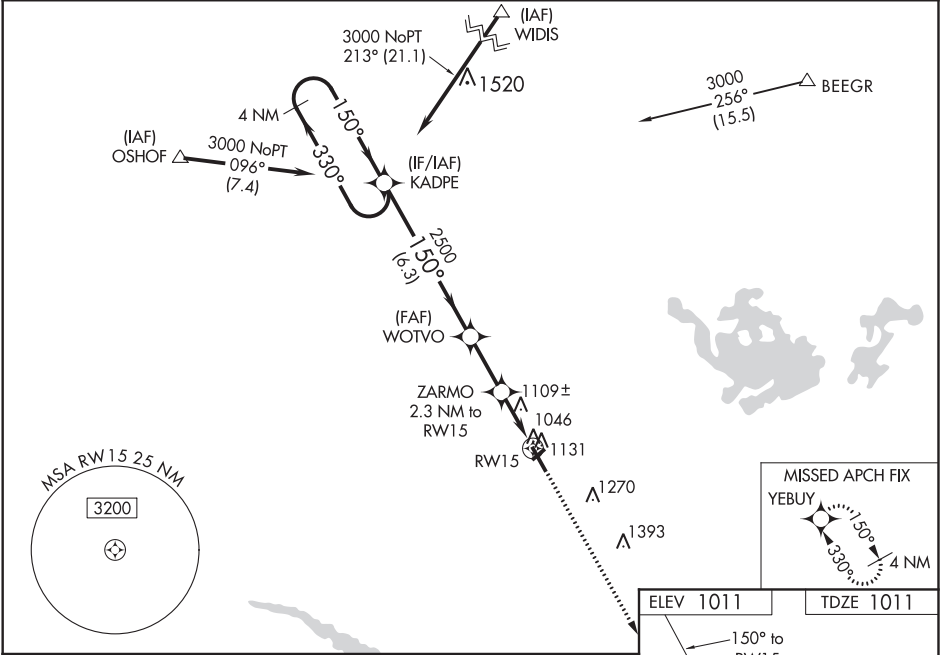
# RNAV (GPS) RWY 15

NEW ULM MUNI (ULM)

**⚠** Baro-VNAV NA when using St. James altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use St James altimeter setting and increase all DA 55 feet and MDA 60 feet; increase LPV and LNAV/VNAV all Cats visibility 1/8 mile and LNAV Cat C/D visibility 1/4 mile. Circling NA to Rwy's 4 and 22.

MISSED APPROACH: Climb to 3000 direct YEBUY and hold.

AWOS-3 <b>118.325</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b> <b>📻</b>
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CATEGORY	A	B	C	D
LPV DA		1261-7/8	250 (300-7/8)	
LNAV/VNAV DA		1292-1	281 (300-1)	
LNAV MDA	1400-1	389 (400-1)	1400-1 1/8	389 (400-1 1/8)
CIRCLING	1440-1 429 (500-1)	1480-1 469 (500-1)	1480-1 1/2 469 (500-1 1/2)	1620-2 609 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>56631</b> <b>W33A</b>	APP CRS <b>330°</b>	Rwy Idg TDZE Apt Elev	<b>5401</b> <b>1011</b> <b>1011</b>
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# RNAV (GPS) RWY 33

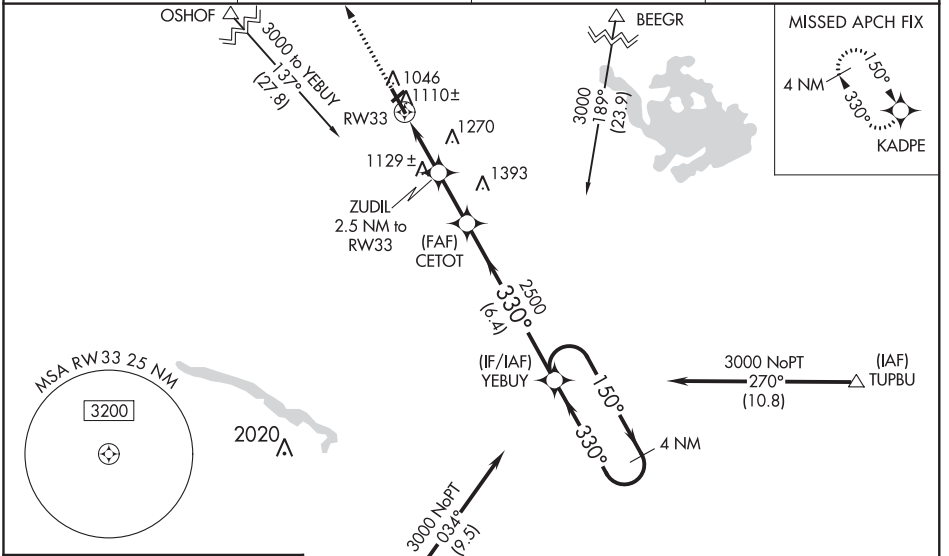
NEW ULM MUNI (ULM)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use St. James altimeter setting and increase all DA 55 feet and all MDA 60 feet: increase LNAV/VNAV all Cats visibility 1/8 mile and LNAV Cats C and D visibility 1/4 mile. Inop table does not apply to LPV all Cats. For inop MALSf, increase LNAV/VNAV and LNAV Cat D visibility 1/4 mile. For inop MALSf, when using St. James altimeter setting, increase LPV all Cats visibility to 1/8 mile, LNAV/VNAV all Cats and LNAV Cat D visibility 1/4 mile. VDP and Baro-VNAV NA when using St. James altimeter setting.

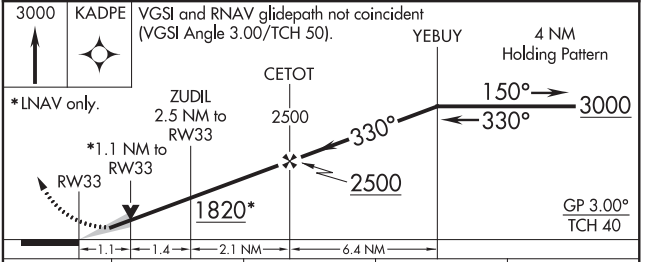
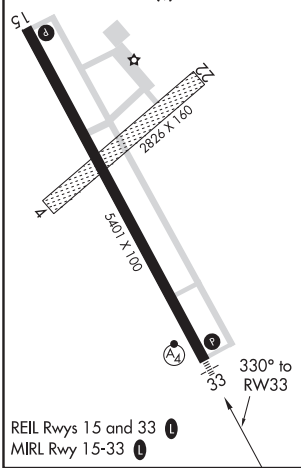
MALSf

MISSED APPROACH: Climb to 3000 direct KADPE and hold.

AWOS-3 <b>118.325</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b> <b>⓪</b>
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ELEV 1011	TDZE 1011
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CATEGORY	A	B	C	D
LPV DA		1211-3/4	200 (200-3/4)	
LNAV/VNAV DA		1298-3/4	287 (300-3/4)	
LNAV MDA		1380-3/4	369 (400-3/4)	
CIRCLING	1420-1 409 (500-1)	1480-1 469 (500-1)	1480-1 1/2 469 (500-1 1/2)	1620-2 609 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



APP CRS	Rwy Idg	<b>3160</b>
<b>262°</b>	TDZE	<b>1117</b>
	Apt Elev	<b>1117</b>

# RNAV (GPS) RWY 26

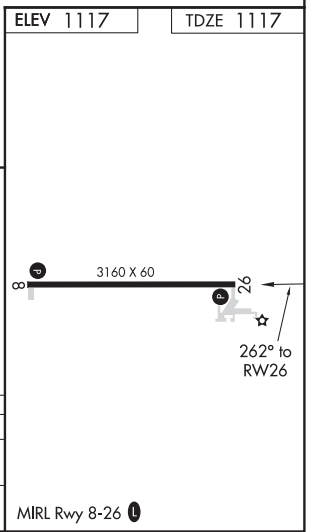
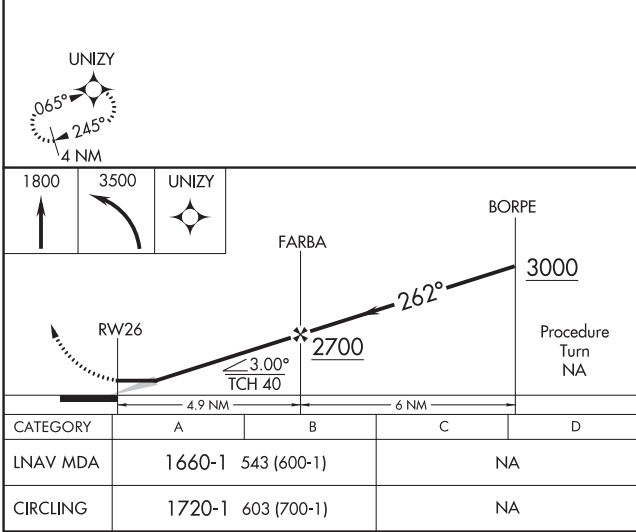
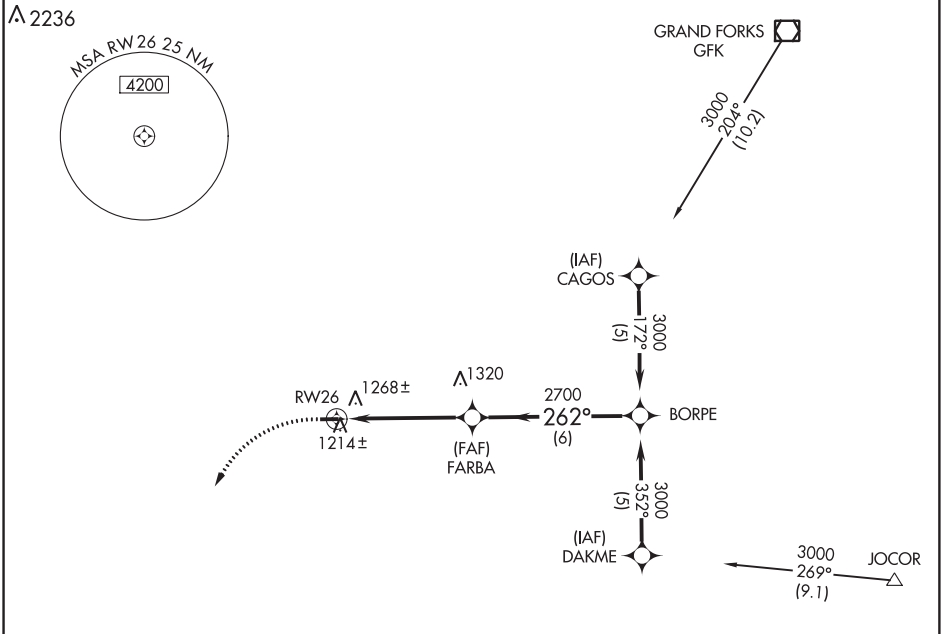
NORTHWOOD MUNI-VINCE FIELD (4V4)

**NA** DME/DME RNP-0.3 NA.  
Use Grand Forks Intl altimeter setting.  
Procedure NA at night.

MISSED APPROACH: Climb to 1800 then climbing left turn to 3500 direct UNIZY WP and hold.

GRAND FORKS APP CON  
**118.1 318.1**

UNICOM  
**122.8 (CTAF)**



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

OAKES, NORTH DAKOTA

AL-9019 (FAA)

14177

APP CRS  
**305°**

Rwy Idg **3505**  
TDZE **1335**  
Apt Elev **1335**

# RNAV (GPS) RWY 30

OAKES MUNI (2D5)

**▽** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Aberdeen altimeter setting; increase all MDA 120 feet and LNAV and Circling Cat C visibility ¼ mile.

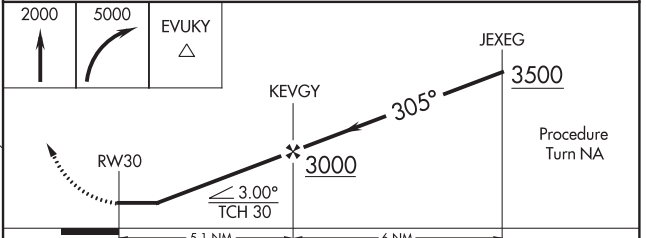
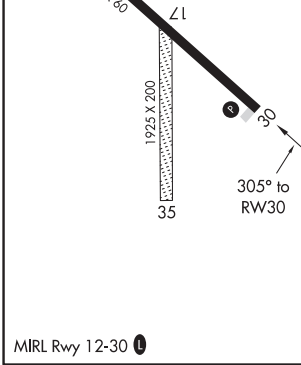
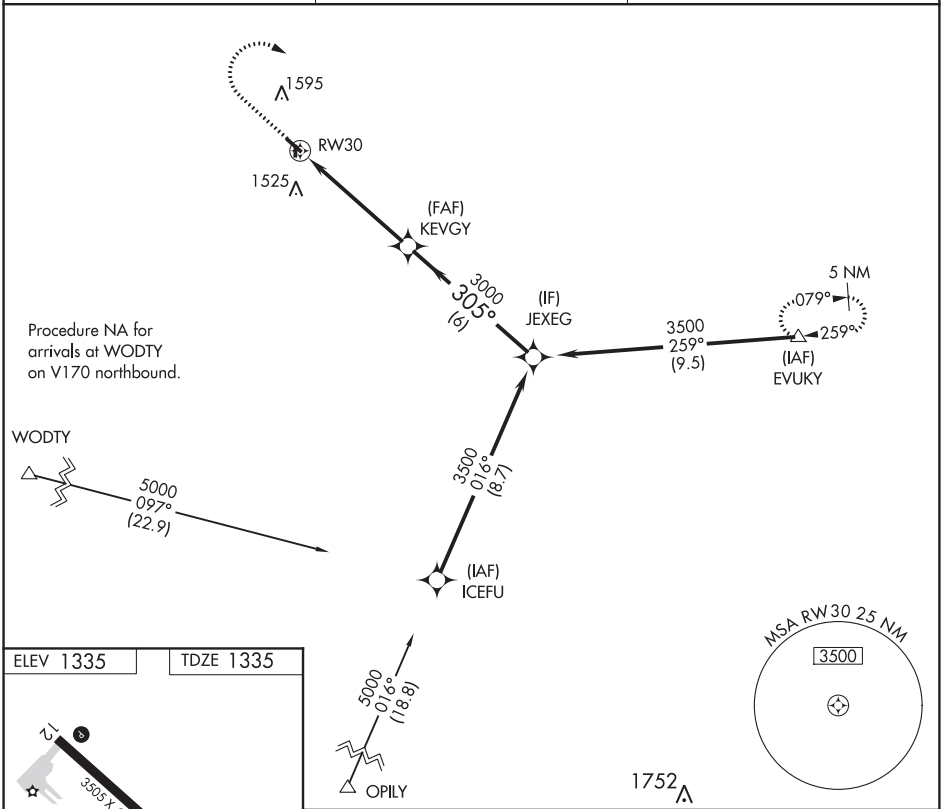
**▲** NA

MISSED APPROACH: Climb to 2000 then climbing right turn to 5000 direct EVUKY and hold.

AWOS-3 **118.675**

MINNEAPOLIS CENTER **124.2 270.3**

CTAF **122.9**



CATEGORY	A	B	C	D
LNAV MDA	1920-1	585 (600-1)	1920-1¾ 585 (600-1¾)	NA
CIRCLING	1920-1	585 (600-1)	2020-2 685 (700-2)	NA

OAKES, NORTH DAKOTA  
Orig-A 26JUN14

46°10'N-98°05'W

# RNAV (GPS) RWY 30

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

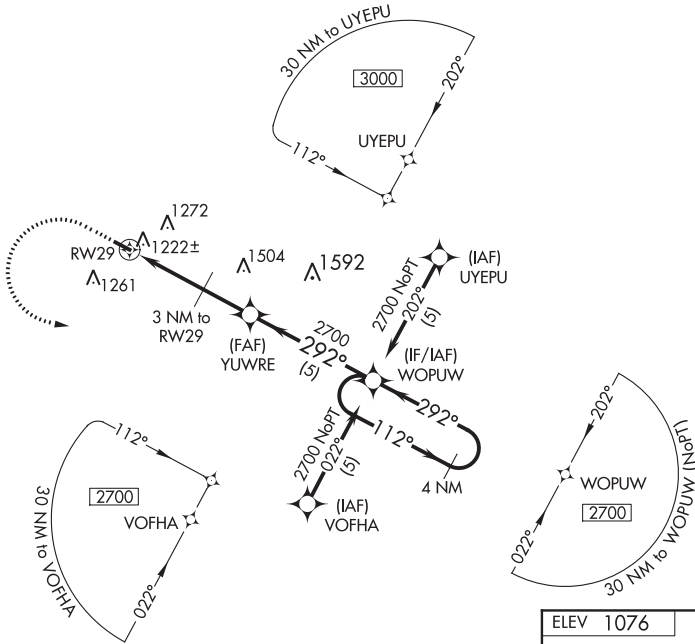
APP CRS <b>292°</b>	Rwy Idg TDZE Apt Elev	<b>3498</b> <b>1076</b> <b>1076</b>
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# RNAV (GPS) RWY 29

OLIVIA RGNL (OVL)

<p>Use Redwood Falls altimeter setting. DME/DME RNP- 0.3 NA.</p>	<p>MISSED APPROACH: Climb to 2000 then climbing left turn to 2700 direct WOPUW WP and hold.</p>
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AWOS-3 <b>119.275</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	UNICOM <b>122.8 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

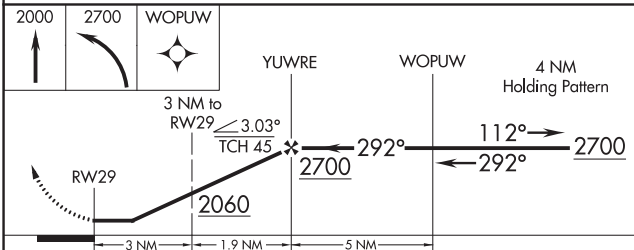
NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1076	TDZE 1076
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Diagram of RWY 29 showing runway length 3498 x 75 and approach direction 292° to RW29.

CATEGORY	A	B	C	D
LNVA MDA	1580-1 504 (600-1)		1580-1½ 504 (600-1½)	
CIRCLING	1620-1 544 (600-1)		1720-1¾ 644 (700-1¾)	1720-2 644 (700-2)

LURL Rwy 11-29



OLIVIA, MINNESOTA

AL-6301 (FAA)

16091

VOR/DME RWF <b>113.3</b> Chan <b>80</b>	APP CRS <b>005°</b>	Rwy Idg TDZE Apt Elev <b>N/A</b> <b>N/A</b> <b>1076</b>
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# VOR/DME or GPS-A

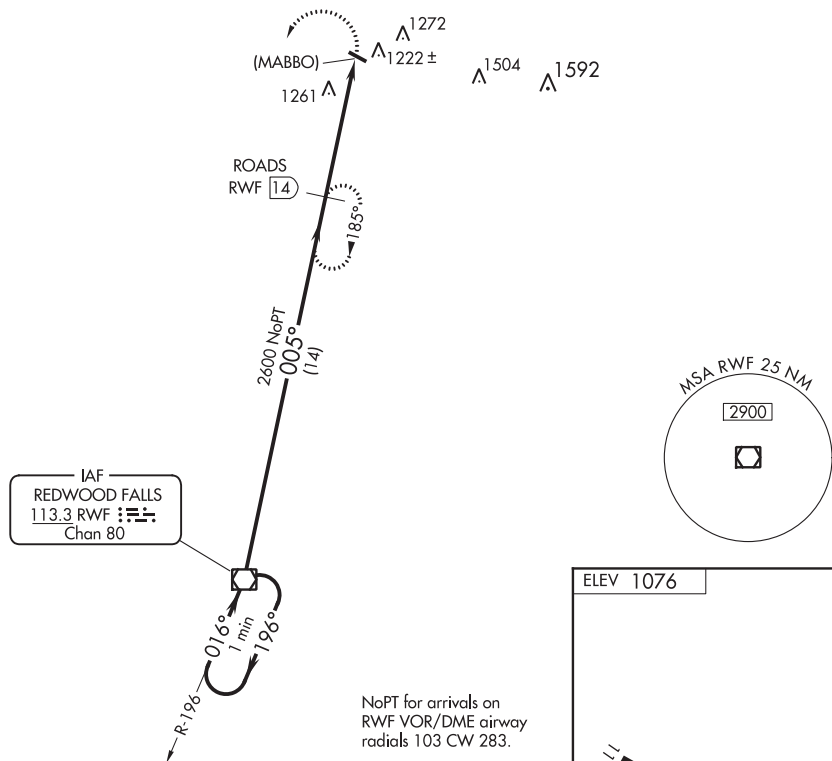
OLIVIA RGNL (OVL)

**NA** Use Redwood Falls altimeter setting. MISSED APPROACH: Climbing left turn to 2600 via RWF R-005 to ROADS 14 DME and hold.

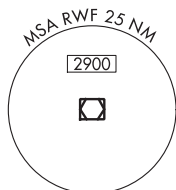
AWOS-3 <b>119.275</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	UNICOM <b>122.8</b> (CTAF)
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NC-1, 10 NOV 2016 to 05 JAN 2017

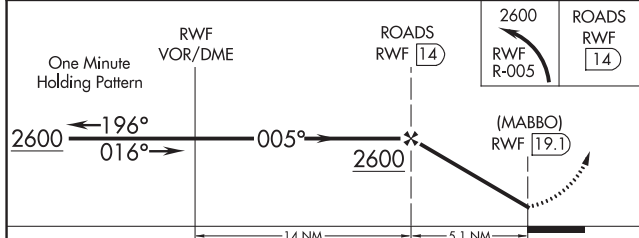
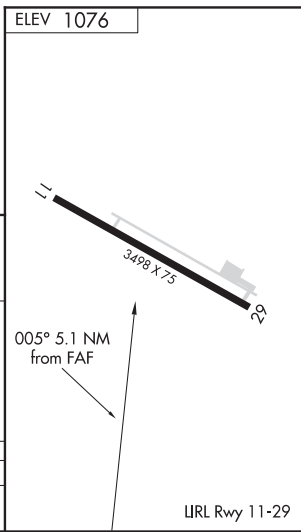
NC-1, 10 NOV 2016 to 05 JAN 2017



IAF  
REDWOOD FALLS  
113.3 RWF  
Chan 80



NoPT for arrivals on RWF VOR/DME airway radials 103 CW 283.



CATEGORY	A	B	C	D
CIRCLING	1620-1	544 (600-1)	1720-1¾ 644 (700-1¾)	1720-2 644 (700-2)

OLIVIA, MINNESOTA  
Amdt 2A 31MAR16

44°47'N-95°02'W

# VOR/DME or GPS-A

OLIVIA RGNL (OVL)

WAAS CH <b>69224</b> <b>W13A</b>	APP CRS <b>136°</b>	Rwy Idg TDZE Apt Elev	<b>4000</b> <b>1313</b> <b>1313</b>
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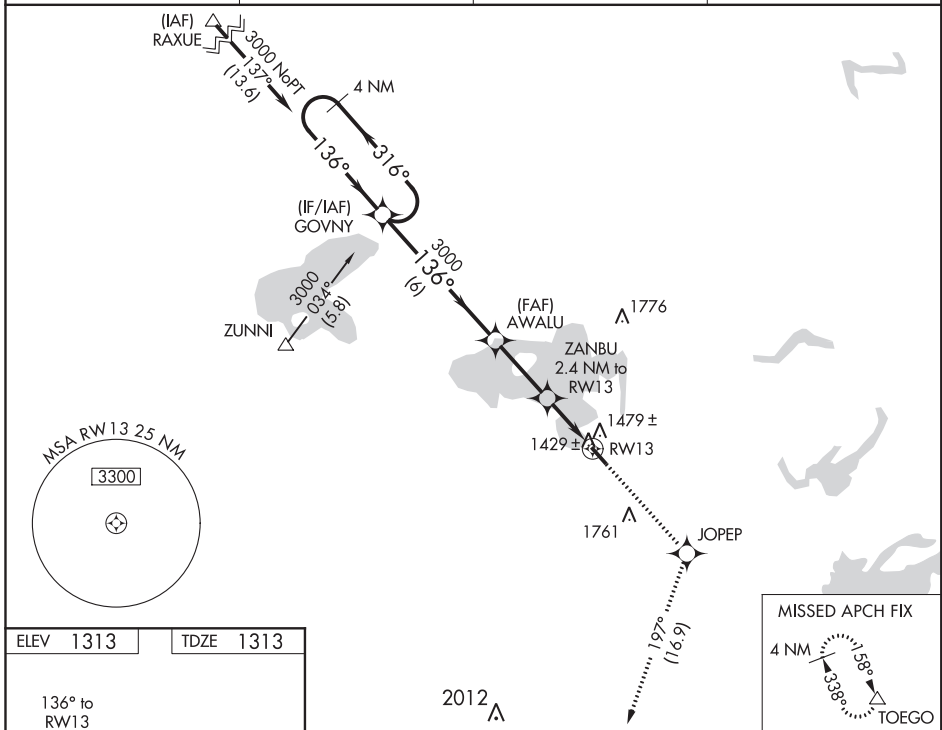
# RNAV (GPS) RWY 13

ORR RGNL(ORB)

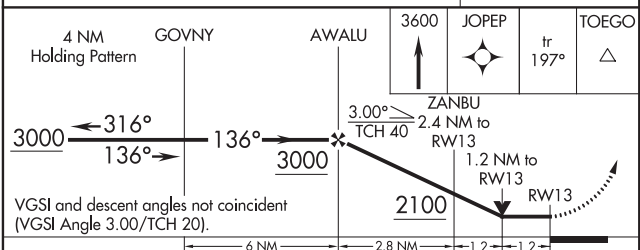
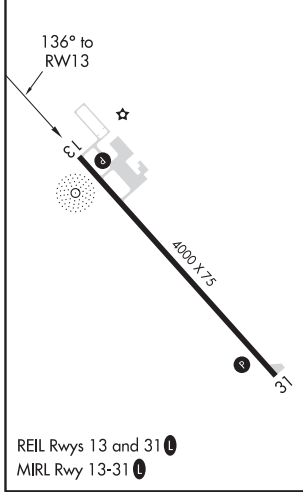
**⚠** DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA. When local altimeter setting not received, use Cook altimeter setting and increase all MDA 40 feet. VDP NA when using Cook altimeter setting.

**⚠** MISSED APPROACH: Climb to 3600 direct JOPEP and on track 197° to TOEGO and hold.

AWOS-3 <b>118.325</b>	MINNEAPOLIS CENTER <b>120.9 377.1</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b> <b>📻</b>
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ELEV 1313	TDZE 1313
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CATEGORY	A	B	C	D
LP MDA	1720-1	407 (500-1)	1720-1 1/8 407 (500-1 1/8)	NA
LNAV MDA	1760-1	447 (500-1)	1760-1 3/8 447 (500-1 3/8)	NA
CIRCLING	1920-1	607 (700-1)	1920-1 3/4 607 (700-1 3/4)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ORR, MINNESOTA

AL-6137 (FAA)

16203

NDB ORB <b>341</b>	APP CRS <b>142°</b>	Rwy Idg <b>4000</b>
		TDZE <b>1313</b>
		Apt Elev <b>1313</b>

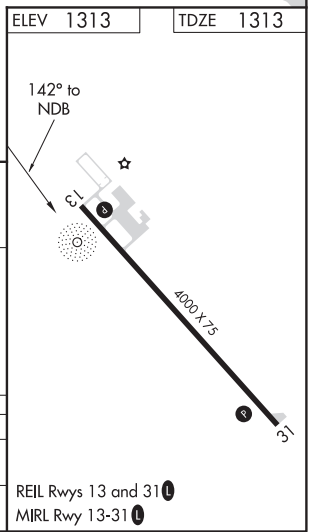
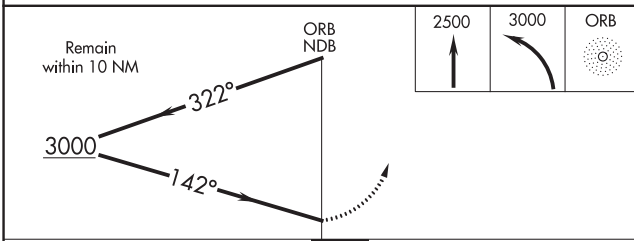
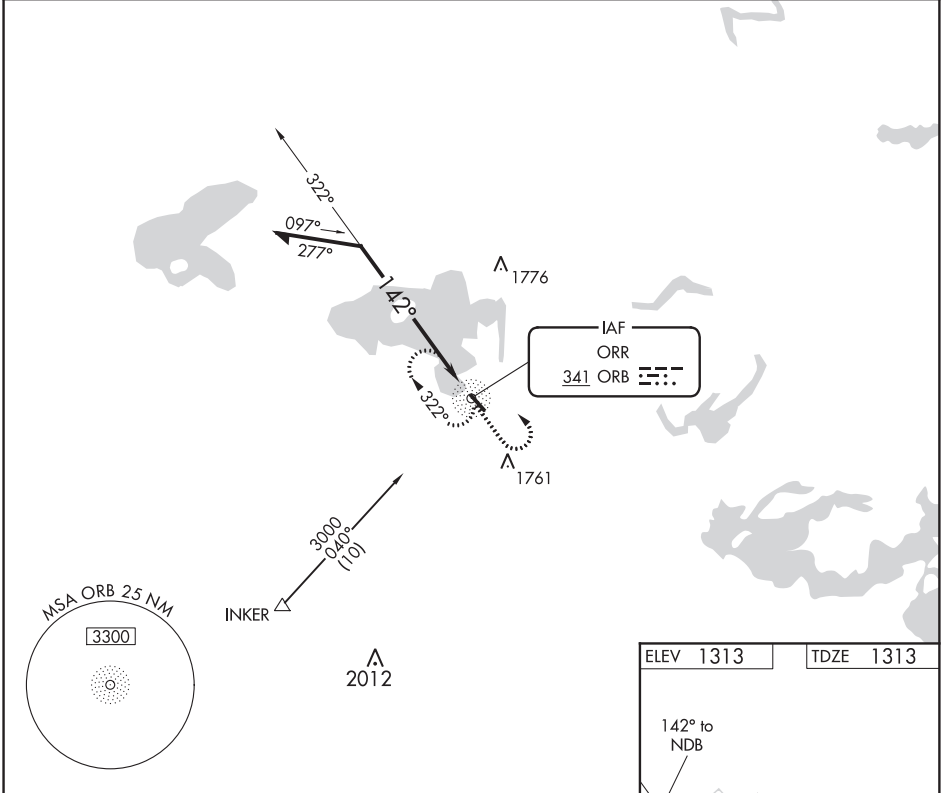
# NDB RWY 13

ORR RGNL (ORB)

**NA** Helicopter visibility reduction below 3/4 SM NA. When local altimeter setting not received, use Cook altimeter setting, and increase all MDA 40 feet, increase Cat D Circling visibility 1/4 mile.

**MISSED APPROACH:** Climb to 2500 then climbing left turn to 3000 direct ORB NDB and hold.

AWOS-3 <b>118.325</b>	MINNEAPOLIS CENTER <b>120.9 377.1</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
S-13	2000-1 687 (700-1)	2000-2 687 (700-2)	2000-2 687 (700-2)	2000-2 1/4 687 (700-2 1/4)
CIRCLING	2000-1 687 (700-1)	2000-2 687 (700-2)	2000-2 687 (700-2)	2120-2 1/2 807 (900-2 1/2)

REIL Rwy 13 and 31  
MIRL Rwy 13-31

ORR, MINNESOTA  
Amdt 8C 21JUL16

48°01'N-92°51'W

# NDB RWY 13

ORR RGNL (ORB)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>87124</b> <b>W34A</b>	APP CRS <b>344°</b>	Rwy Idg TDZE Apt Elev	<b>3417</b> <b>1097</b> <b>1101</b>
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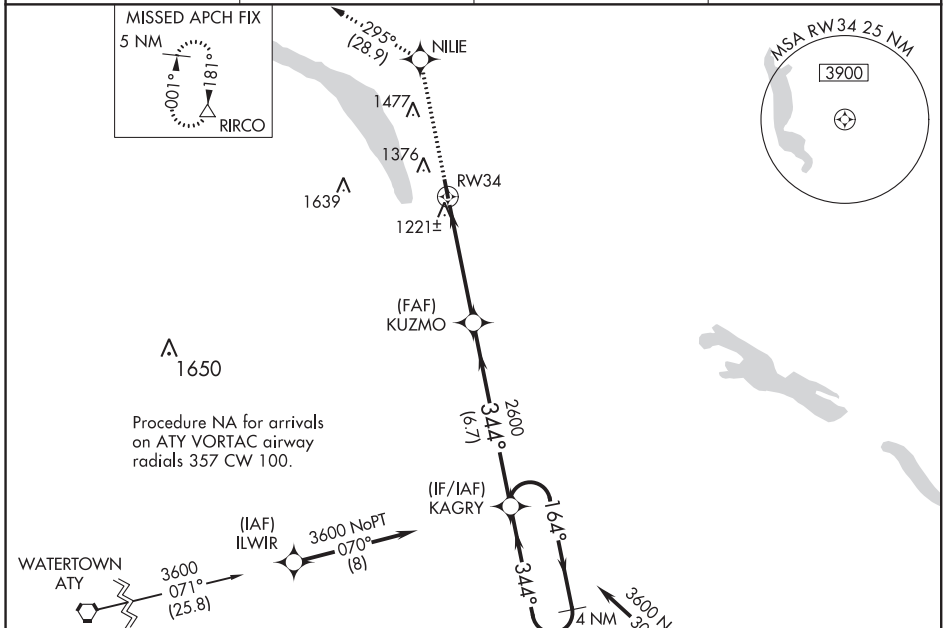
# RNAV (GPS) RWY 34

ORTONVILLE MUNI-MARTINSON FIELD (VVV)

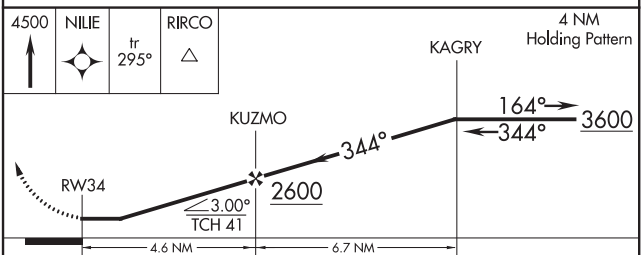
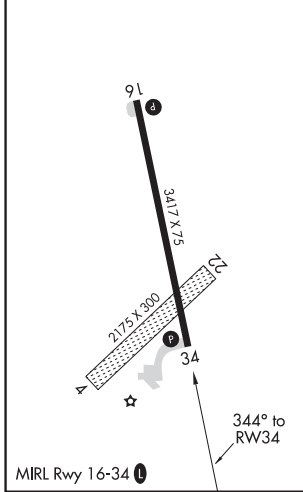
**⚠** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. Procedure NA at night. When local altimeter setting not received, use Appleton altimeter setting and increase all MDA 60 feet, increase LP and LNAV Cat C visibility to 1 3/8 mile and Circling Cat C visibility to 2 miles.

**⚠** MISSED APPROACH: Climb to 4500 direct NILIE and on track 295° to RIRCO and hold.

AWOS-3 <b>119.225</b>	MINNEAPOLIS CENTER <b>128.5 306.2</b>	GCO <b>121.725</b>	UNICOM <b>122.8</b> (CTAF) <b>⓪</b>
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ELEV <b>1101</b>	TDZE <b>1097</b>
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CATEGORY	A	B	C	D
LP MDA	1520-1	423 (500-1)	1520-1 1/4 423 (500-1 1/4)	NA
LNAV MDA	1520-1	423 (500-1)	1520-1 1/4 423 (500-1 1/4)	NA
CIRCLING	1740-1	639 (700-1)	1740-1 3/4 639 (700-1 3/4)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ORTONVILLE, MINNESOTA

AL-6661 (FAA)

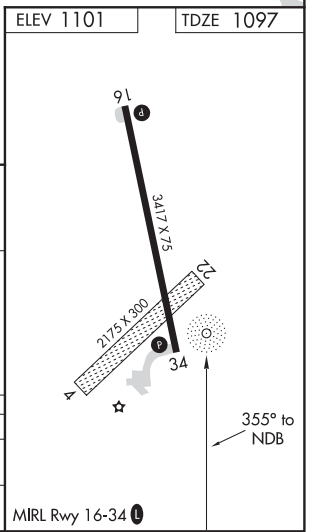
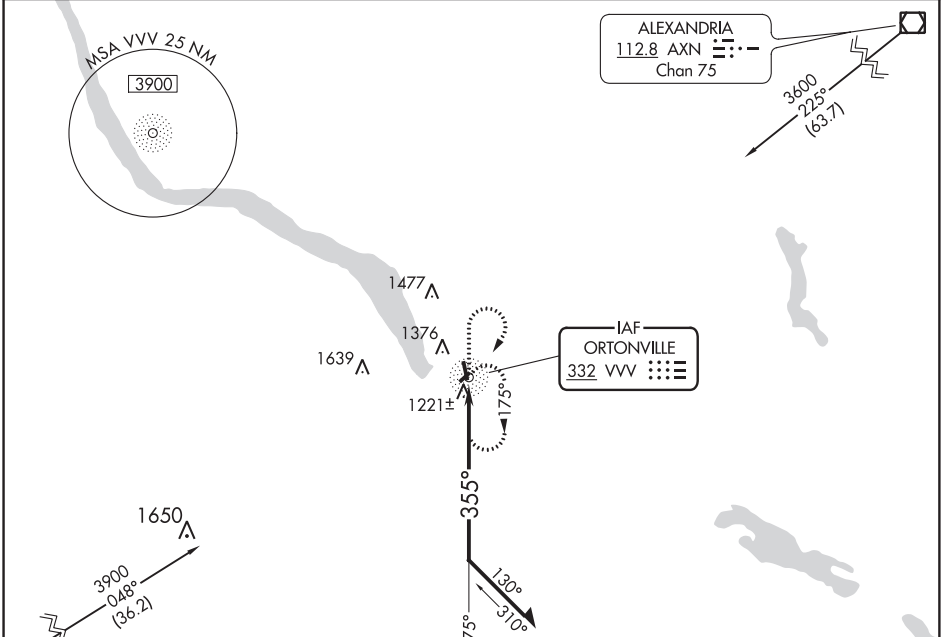
16147

NDB VVV <b>332</b>	APP CRS <b>355°</b>	Rwy Idg TDZE Apt Elev	<b>3417</b> <b>1097</b> <b>1101</b>
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**NDB RWY 34**  
ORTONVILLE MUNI-MARTINSON FIELD (VVV)

<p>-33°C/-27°F</p>	<p>MISSED APPROACH: Climb to 3600 then right turn direct VVV NDB and hold.</p>
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AWOS-3 <b>119.225</b>	MINNEAPOLIS CENTER <b>128.5 306.2</b>	GCO <b>121.725</b>	UNICOM <b>122.8</b> (CTAF)
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CATEGORY	A	B	C	D
S-34	1660-1	563 (600-1)	1660-1½ 563 (600-1½)	NA
CIRCLING	1740-1	639 (700-1)	1740-1¾ 639 (700-1¾)	NA

ORTONVILLE, MINNESOTA  
Amdt 2B 26MAY16

ORTONVILLE MUNI-MARTINSON FIELD (VVV)  
45°18'N-96°25'W

**NDB RWY 34**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

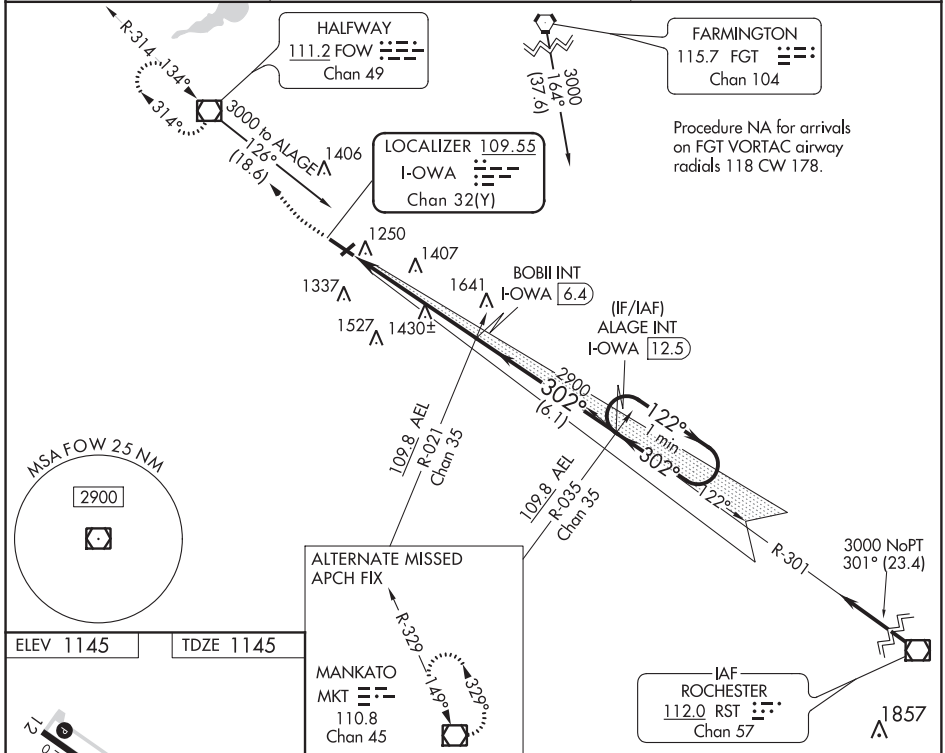


LOC/DME I-OWA <b>109.55</b> Chan 32(Y)	APP CRS <b>302°</b>	Rwy Idg <b>5500</b> TDZE <b>1145</b> Apt Elev <b>1145</b>
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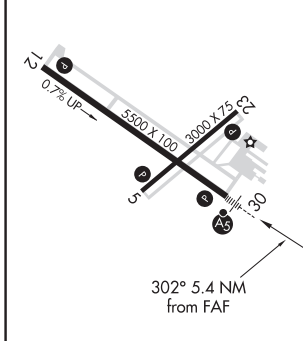
# ILS or LOC RWY 30

OWATONNA DEGNER RGNL (OWA)

<p><b>▼</b> When local altimeter setting not received, use Faribault altimeter setting and increase all DA 41 feet and all MDA 60 feet.</p> <p><b>▲</b> NA Increase S-LOC 30 Cats C/D visibility to 1½ mile and Circling Cat C visibility to 1½ and Cat D Circling visibility to 2½.</p>	<p>MALS R</p>	<p>MISSED APPROACH Climb to 2000 then climbing right turn to 3000 direct FOW VOR/DME and hold.</p>
<p>AWOS-3 <b>128.325</b></p>	<p>ROCHESTER APP CON * <b>119.8 251.125</b></p>	<p>UNICOM <b>122.7</b> (CTAF) <b>0</b></p>



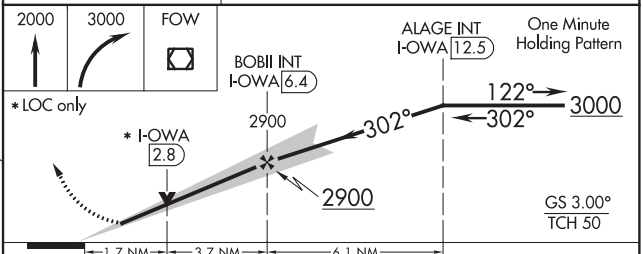
ELEV 1145	TDZE 1145
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MIRL Rwy 5-23 **0**  
 REIL Rwys 5, 12, and 23 **0**  
 HIRL Rwy 12-30 **0**

FAF to MAP 5.4 NM

Knots	60	90	120	150	180
Min:Sec	5:24	3:36	2:42	2:10	1:48



CATEGORY	A	B	C	D
S-ILS 30		1345-½	200 (200-½)	
S-LOC 30	1740-½	595 (600-½)	1740-¼	595 (600-¼)
<b>C</b> CIRCLING	1740-1	595 (600-1)	1740-¾ 595 (600-¾)	1880-2¼ 735 (800-2¼)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>82627</b> W12A	APP CRS <b>122°</b>	Rwy Idg <b>5500</b> TDZE <b>1127</b> Apt Elev <b>1145</b>
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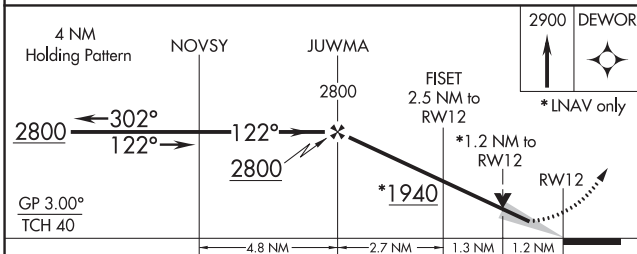
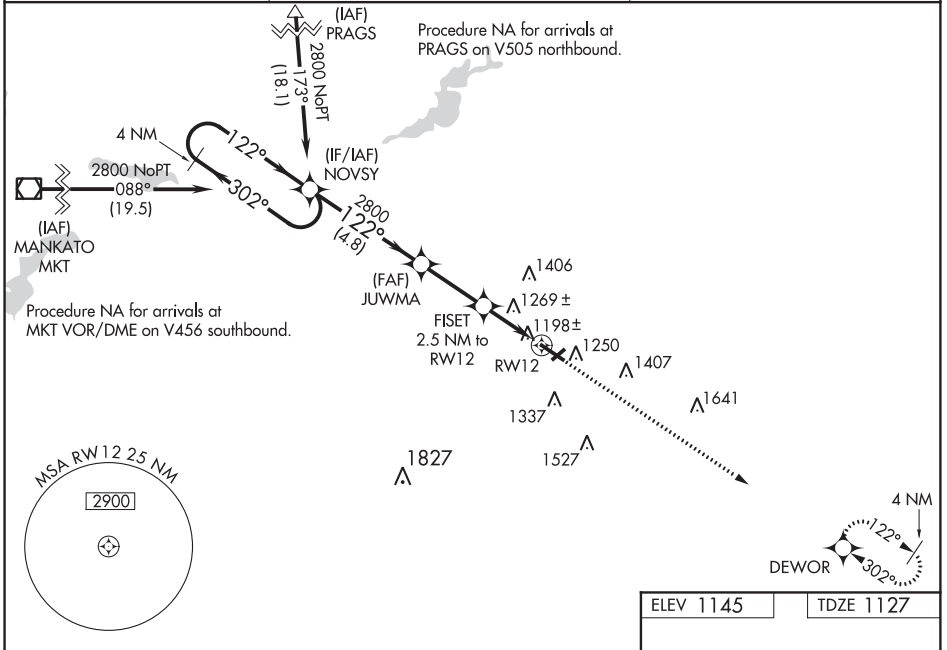
# RNAV (GPS) RWY 12

OWATONNA DEGNER RGNL (OWA)

**⚠** Baro-VNAV NA when using Faribault altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 36°C (96°F). DME/DME RNP-0.3 NA. VDP NA with Faribault altimeter setting. When local altimeter setting not received, use Faribault altimeter setting and increase all DA 41 feet and all MDA 60 feet. Increase LPV all Cats visibility to 1 1/4 mile and LNAV Cat C/D visibility to 1 1/8 mile. Increase Circling Cat C visibility to 1 1/4 mile.

**MISSED APPROACH:** Climb to 2900 direct DEWOR and hold.

AWOS-3 <b>128.325</b>	ROCHESTER APP CON * <b>119.8 251.125</b>	UNICOM <b>122.7 (CTAF)</b>
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ELEV 1145	TDZE 1127
MIRA Rwy 5-23 REIL Rlys 5, 12, and 23 HIRL Rwy 12-30	

CATEGORY	A	B	C	D
LPV DA		1441-1	314 (300-1)	
LNAV/VNAV DA		1400-7/8	273 (300-7/8)	
LNAV MDA	1520-1	393 (400-1)	1520-1 1/8	393 (400-1 1/8)
CIRCLING	1620-1	475 (500-1)	1700-1 1/2	1700-2
			555 (600-1 1/2)	555 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017


NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>86627</b> <b>W30A</b>	APP CRS <b>302°</b>	Rwy Idg <b>5500</b> TDZE <b>1145</b> Apt Elev <b>1145</b>
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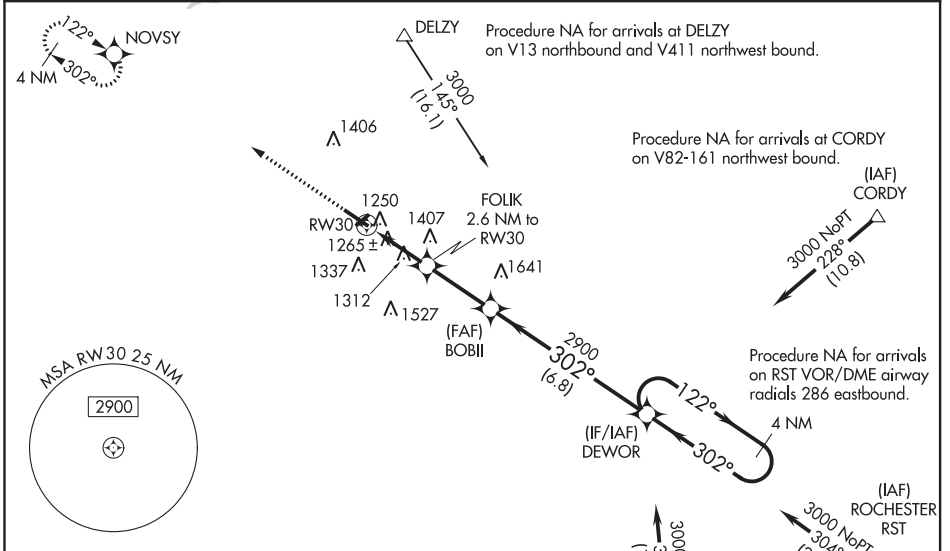
# RNAV (GPS) RWY 30

OWATONNA DEGNER RGNL (OWA)

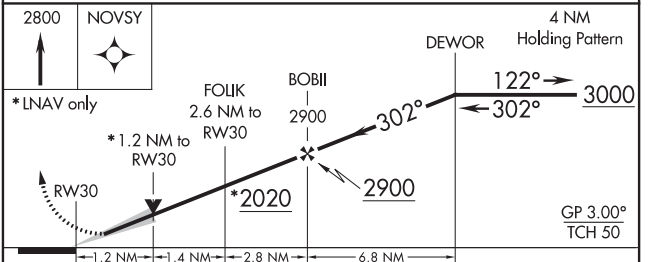
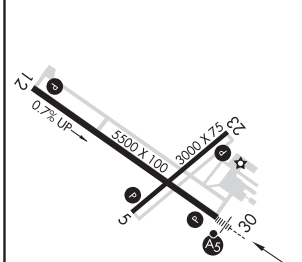
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME/RNP-0.3 NA. When local altimeter setting not received, use Fairbault altimeter setting and increase all DA 41 feet and all MDA 60 feet. Increase LNAV/VNAV all Cats visibility to 1½ mile, increase LNAV Cats C/D visibility to 1 mile, Cat C Circling visibility to 1¾ mile and Cat D visibility to 2½ mile. VDP and Baro-VNAV NA when using Fairbault altimeter setting. For inop MALSR increase LNAV/VNAV all Cats visibility to 1¾ miles. For inop MALSR, when using Fairbault altimeter setting, increase LNAV/VNAV all Cats visibility to 1½ mile, LNAV Cats C/D visibility to 1¾ mile.

**MALSR**  
  
**MISSED APPROACH:**  
 Climb to 2800 direct NOVSY and hold.

AWOS-3 <b>128.325</b>	ROCHESTER APP CON * <b>119.8 251.125</b>	UNICOM <b>122.7 (CTAF)</b>
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ELEV 1145	TDZE 1145
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CATEGORY	A	B	C	D
LPV DA	1345-½		200 (200-½)	
LNAV/VNAV DA	1567-1		422 (500-1)	
LNAV MDA	1580-½	435 (500-½)	1580-¾	435 (500-¾)
<b>C</b> CIRCLING	1640-1 495 (500-1)	1700-1 555 (600-1)	1720-1½ 575 (600-1½)	1880-2¼ 735 (800-2¼)

MIRL Rwy 5-23  
 REIL Rwy 5, 12 and 23  
 HIRL Rwy 12-30

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

OWATONNA, MINNESOTA

AL-5426 (FAA)

15148

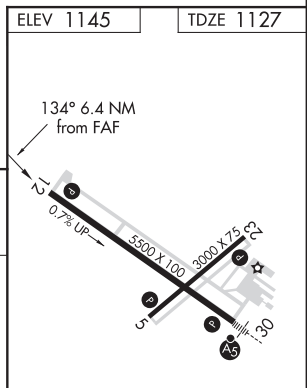
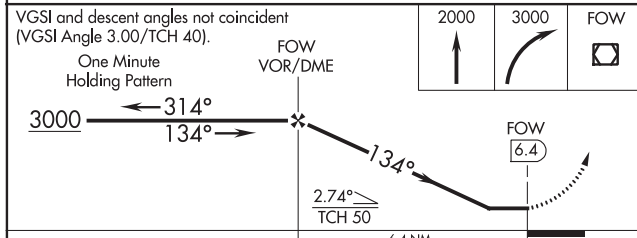
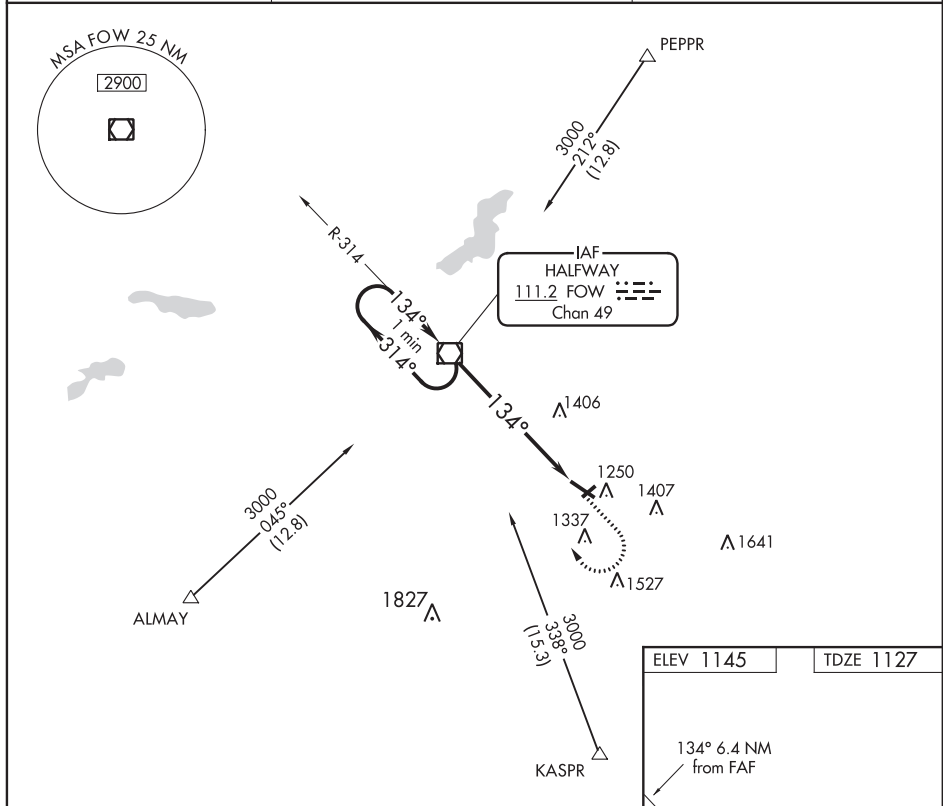
VOR/DME FOW	APP CRS	Rwy Idg	5500
111.2	134°	TDZE	1127
Chan 49		Apt Elev	1145

# VOR RWY 12

OWATONNA DEGNER RGNL (OWA)

<p>▼</p> <p>▲ NA</p>	<p>MISSED APPROACH Climb to 2000 then climbing right turn to 3000 direct FOW VOR/DME and hold.</p>
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<p>AWOS-3</p> <p>128.325</p>	<p>ROCHESTER APP CON *</p> <p>119.8 251.125</p>	<p>UNICOM</p> <p>122.7 (CTAF) ①</p>
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CATEGORY	A	B	C	D
S-12	1560-1	433 (500-1)	1560-1½ 433 (500-1¼)	1560-1½ 433 (500-1½)
CIRCLING	1620-1 475 (500-1)	1700-1 555 (600-1)	1700-1½ 555 (600-1½)	1720-2 575 (600-2)

MRL Rwy 5-23 ①

REIL Rwys 5, 12, and 23 ①

HIRL Rwy 12-30 ①

FAF to MAP 6.4 NM

Knots	60	90	120	150	180
Min:Sec	6:24	4:16	3:12	2:34	2:08

OWATONNA, MINNESOTA  
Amdt 10A 28MAY15

44°07'N-93°16'W

# VOR RWY 12


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

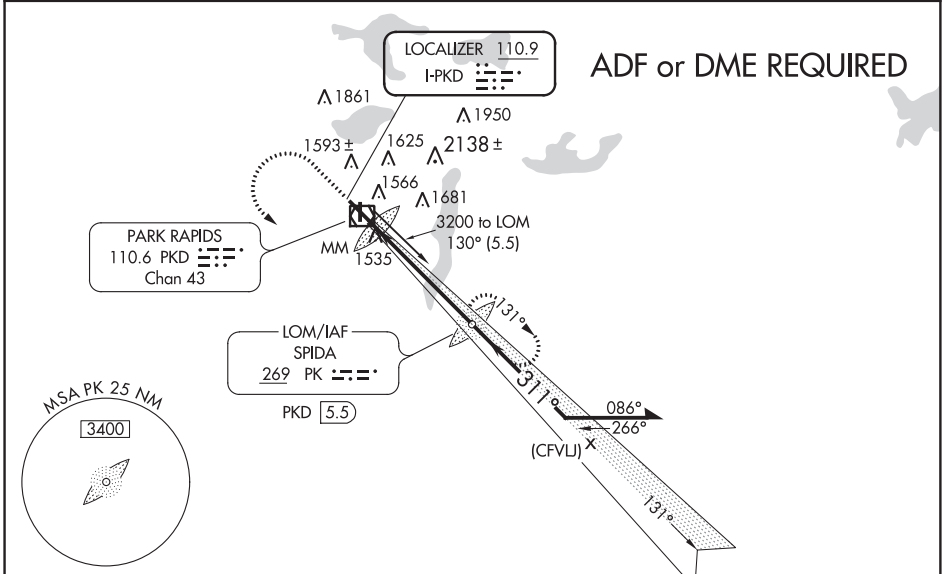
LOC I-PKD <b>110.9</b>	APP CRS <b>311°</b>	Rwy Idg TDZE <b>1444</b> Apt Elev <b>1445</b>
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**ILS or LOC RWY 31**  
PARK RAPIDS MUNI-KONSHOK FIELD (PKD)

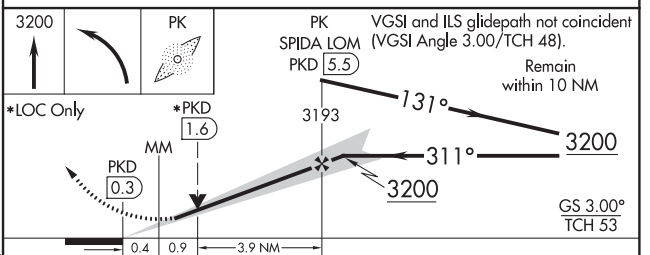
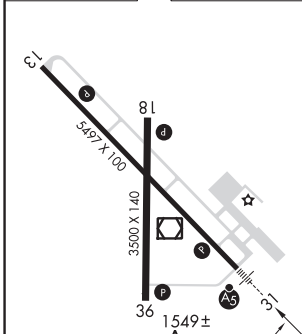
**⚠ NA** Circling Rwy 18, 36 NA at night. ADF required. VDP NA when using Wadena altimeter setting. When local altimeter setting not received, use Wadena altimeter setting and increase DA 75 feet and all MDA 80 feet; increase S-LOC 31 Cat C/D visibility 1/8 mile and increase Circling Cat C visibility 1/4 mile. For inop MALSRL, increase S-LOC 31 Cat C/D visibility to 1 3/8 mile. For inop MALSRL when using Wadena altimeter setting, increase S-ILS 31 all Cats visibility to 7/8 mile.

**MALSRL**  **MISSED APPROACH:** Climb to 3200 then left turn direct SPIDA LOM and hold.

ASOS <b>110.6</b>	PRINCETON RADIO <b>122.1R</b>	UNICOM <b>123.0</b> (CTAF) <b>①</b>
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ELEV 1445	TDZE 1444
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CATEGORY	A	B	C	D
S-ILS 31	1644-1/2 200 (200-1/2)			
S-LOC 31	1920-1/2 476 (500-1/2)		1920-1 476 (500-1)	
<b>①</b> CIRCLING	1920-1 475 (500-1)	1980-1 535 (600-1)	2000-1 1/2 555 (600-1 1/2)	2500-3 1055 (1100-3)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>86925</b> <b>W13A</b>	APP CRS <b>131°</b>	Rwy Idg TDZE Apt Elev	<b>5497</b> <b>1445</b> <b>1445</b>
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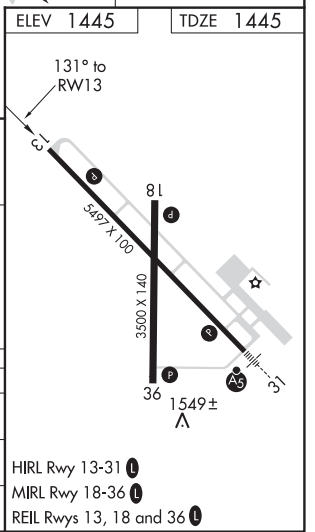
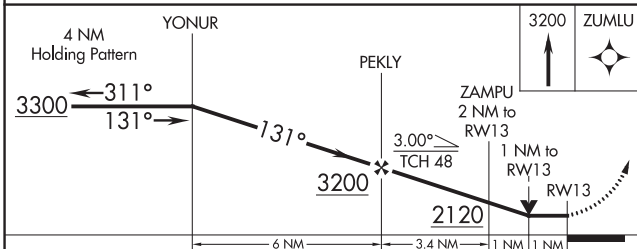
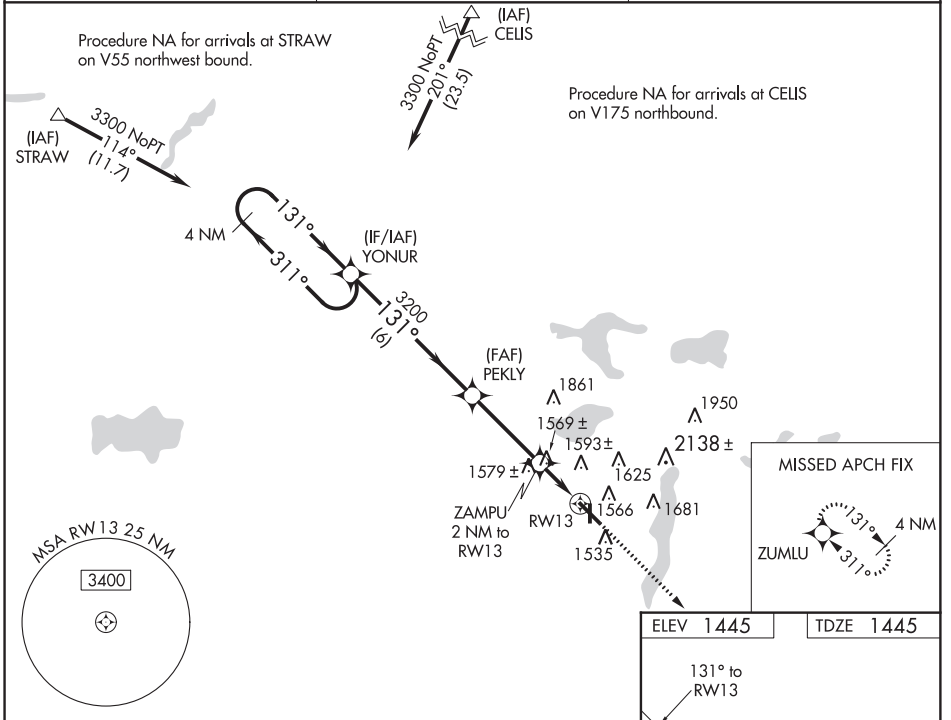
# RNAV (GPS) RWY 13

PARK RAPIDS MUNI-KONSHOK FIELD (PKD)

**⚠** Circling Rwy 18, 36 NA at night. DME/DME RNP-0.3 NA. Helicopter visibility reduction below  $\frac{3}{4}$  SM NA. VDP NA when using Wadena altimeter setting. When local altimeter setting not received, use Wadena altimeter setting and increase all MDA 80 feet; increase LP Cat C/D visibility  $\frac{3}{8}$  mile; increase LNAV Cat C/D and Circling Cat C visibility  $\frac{1}{4}$  mile.

**⚠** MISSED APPROACH: Climb to 3200 direct ZUMLU and hold.

ASOS <b>110.6</b>	PRINCETON RADIO <b>122.1R</b>	UNICOM <b>123.0</b> (CTAF) <b>Ⓛ</b>
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CATEGORY	A	B	C	D
LP MDA	1820-1		375 (400-1)	
LNAV MDA	1840-1	395 (400-1)	1840-1½	395 (400-1½)
<b>C</b> CIRCLING	1900-1 455 (500-1)	1980-1 535 (600-1)	2000-1½ 555 (600-1½)	2500-3 1055 (1100-3)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>82525</b> <b>W31A</b>	APP CRS <b>311°</b>	Rwy Idg TDZE <b>1444</b> Apt Elev <b>1445</b>	<b>5497</b>
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# RNAV (GPS) RWY 31

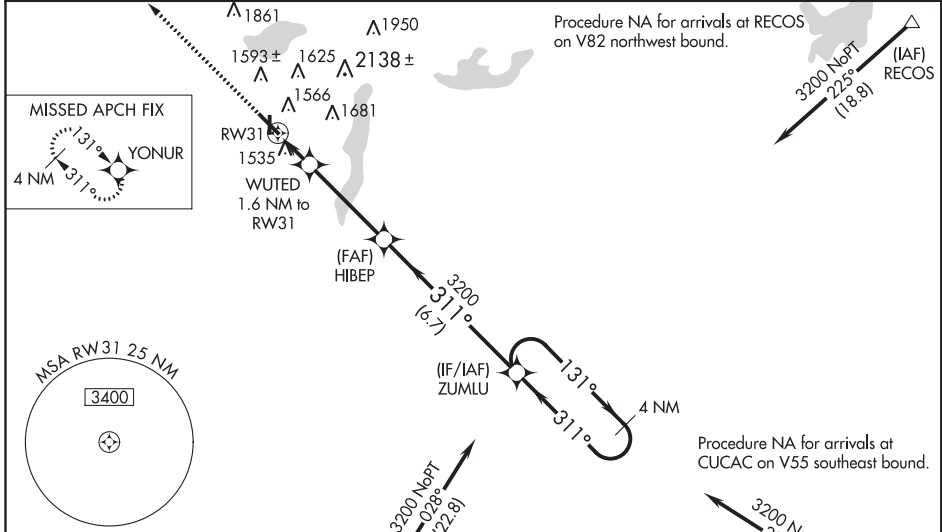
PARK RAPIDS MUNI-KONSHOK FIELD (PKD)

**V** Circling Rwy 18, 36 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 34°C (93°F). Baro-VNAV and VDP NA when using Wadena altimeter setting. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Wadena altimeter setting and increase all DA 75 feet and all MDA 80 feet; increase LNAV/VNAV all Cats and Circling Cat C visibility ¼ mile; increase LNAV Cat C/D visibility ½ mile. For inop MALS, increase LNAV/VNAV all Cats visibility to ¾ mile and LNAV Cat C/D to 1 mile. For inop MALS when using Wadena altimeter setting, increase LPV all Cats visibility to ¾ mile and LNAV/VNAV all Cats to 1 ½ mile.

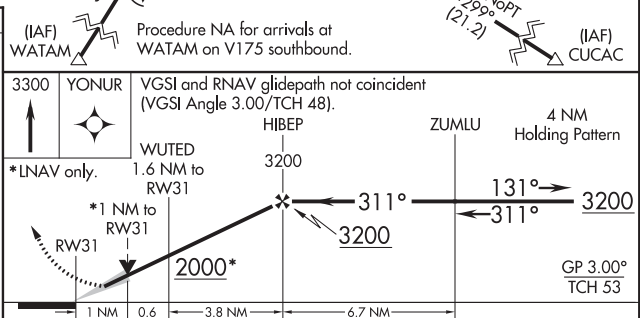
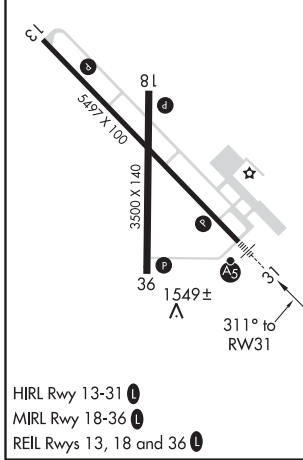
**MALS**

**MISSED APPROACH:**  
Climb to 3300 direct YONUR and hold.

ASOS <b>110.6</b>	PRINCETON RADIO <b>122.1R</b>	UNICOM <b>123.0</b> (CTAF) <b>U</b>
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ELEV <b>1445</b>	TDZE <b>1444</b>
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CATEGORY	A	B	C	D
LPV DA		1644-½	200 (200-½)	
LNAV/VNAV DA		1731-½	287 (300-½)	
LNAV MDA	1800-½	356 (400-½)	1800-⅝	356 (400-⅝)
<b>C</b> CIRCLING	1900-1 455 (500-1)	1980-1 535 (600-1)	2000-1½ 555 (600-1½)	2500-3 1055 (1100-3)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

PARK RAPIDS, MINNESOTA

AL-5298 (FAA)

16203

VOR/DME PKD <b>110.6</b> Chan <b>43</b>	APP CRS <b>136°</b>	Rwy Idg TDZE <b>1445</b> Apt Elev <b>1445</b>
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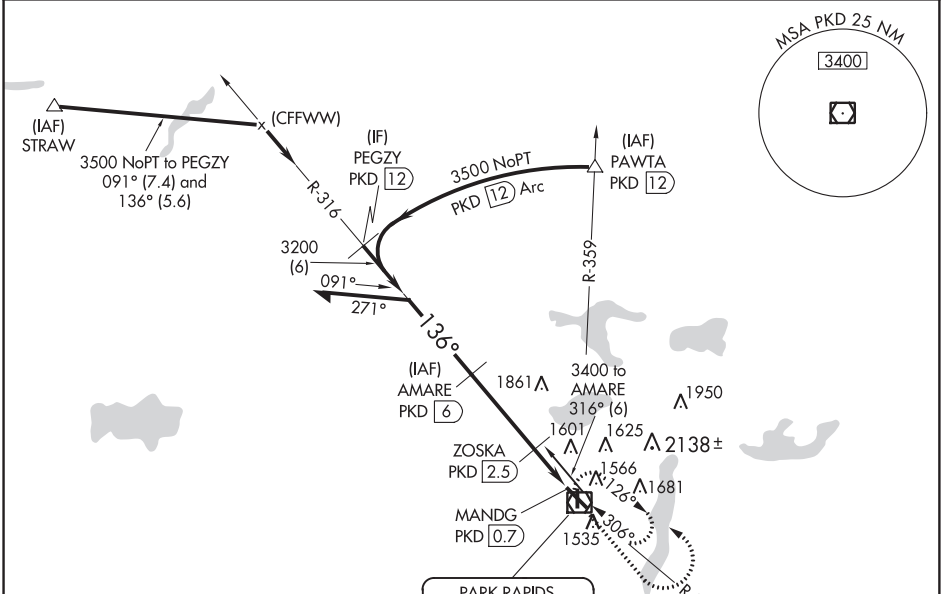
# VOR RWY 13

PARK RAPIDS MUNI-KONSHOK FIELD (PKD)

**⚠** Circling Rwy 18, 36 NA at night. DME required. Helicopter visibility reduction below 3/4 SM NA. VDP NA when using Wadena altimeter setting. When local altimeter setting not received, use Wadena altimeter setting and increase all MDA 80 feet; increase S-13 Cat C/D visibility 1/8 mile and increase Circling Cat C visibility 1/4 mile.

**⚠** MISSED APPROACH: Climb to 3200 then left turn direct PKD VOR/DME and hold.

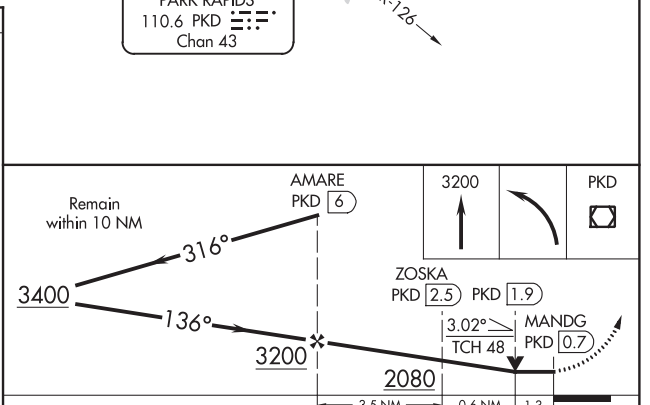
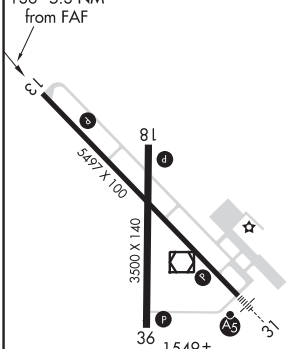
ASOS <b>110.6</b>	PRINCETON RADIO <b>122.1R</b>	UNICOM <b>123.0</b> (CTAF) <b>0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV <b>1445</b>	TDZE <b>1445</b>
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CATEGORY	A	B	C	D
S-13	1900-1	455 (500-1)	1900-1 3/8	455 (500-1 3/8)
<b>C</b> CIRCLING	1900-1 455 (500-1)	1980-1 535 (600-1)	2000-1 1/2 555 (600-1 1/2)	2500-3 1055 (1100-3)

HIRL Rwy 13-31 **0**  
MIRL Rwy 18-36 **0**  
REIL Rws 13, 18 and 36 **0**

PARK RAPIDS, MINNESOTA  
Amdt 9B 23JUN16

PARK RAPIDS MUNI-KONSHOK FIELD (PKD)

46°54'N-95°04'W

# VOR RWY 13



APP CRS	Rwy Idg	<b>3600</b>
<b>150°</b>	TDZE	<b>1417</b>
	Apt Elev	<b>1418</b>

# RNAV (GPS) RWY 15

PARKSTON MUNI (8V3)

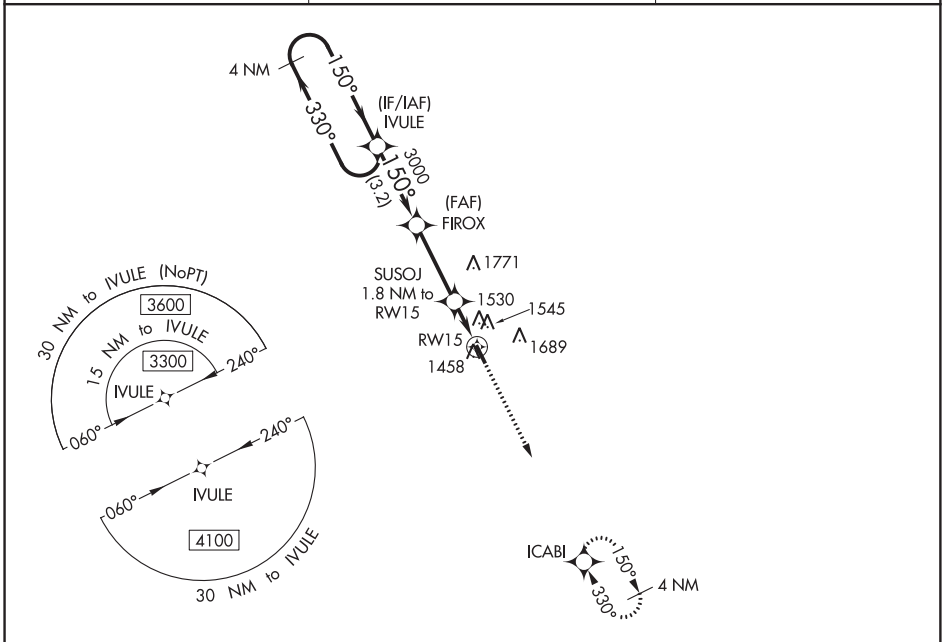
**NA** DME/DME RNP-0.3 NA. Use Mitchell altimeter setting; when not received, use Yankton altimeter setting and increase all MDA 40 feet. Helicopter visibility reduction below 3/4 SM not authorized.

MISSED APPROACH: Climb to 3300 direct ICABI and hold.

MITCHELL ASOS  
**124.175**

MINNEAPOLIS CENTER  
**128.0 385.5**

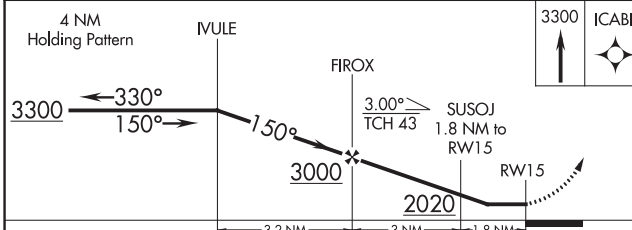
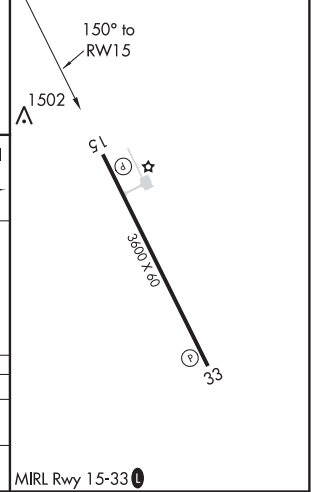
AUNICOM  
**122.8 (CTAF)**



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1418	TDZE 1417
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CATEGORY	A	B	C	D
LNVA MDA	1860-1	443 (500-1)		NA
CIRCLING	1980-1 562 (600-1)	2060-1 642 (700-1)		NA

MRL Rwy 15-33

PARKSTON, SOUTH DAKOTA

AL-10407 (FAA)

15232

WAAS CH <b>62833</b> <b>W33A</b>	APP CRS <b>330°</b>	Rwy Idg <b>3600</b> TDZE <b>1418</b> Apt Elev <b>1418</b>
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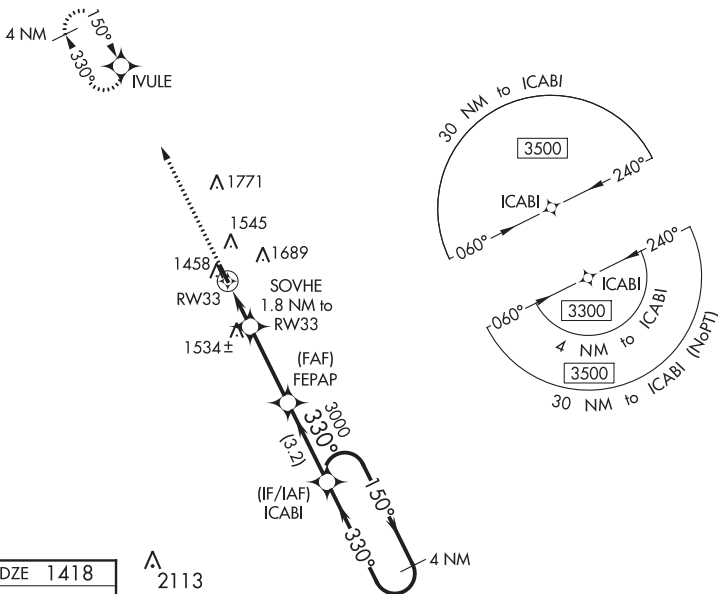
# RNAV (GPS) RWY 33

PARKSTON MUNI (8V3)

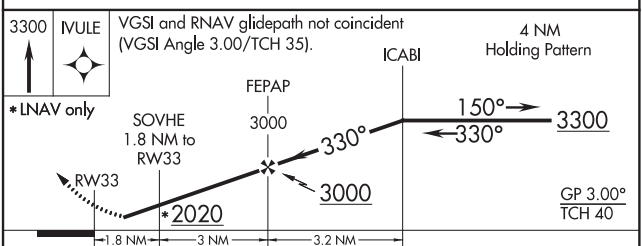
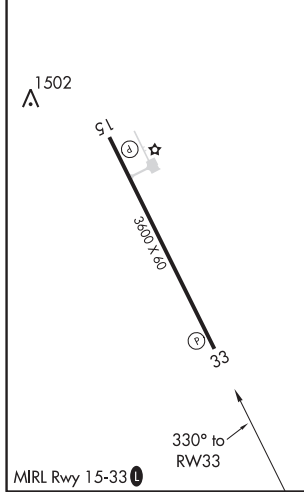
**NA** DME/DME RNP-0.3 NA. Use Mitchell altimeter setting; when not received, use Yankton altimeter setting and increase all DA 32 feet and all MDA 40 feet. Helicopter visibility reduction below 3/4 SM not authorized. Baro-VNAV NA.

MISSED APPROACH: Climb to 3300 direct IVULE and hold.

MITCHELL ASOS <b>124.175</b>	MINNEAPOLIS CENTER <b>128.0 385.5</b>	AUNICOM <b>122.8 (CTAF) ①</b>
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ELEV 1418	TDZE 1418
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CATEGORY	A	B	C	D
LPV DA	1740-1 1/8	322 (400-1 1/8)		NA
LNAV/VNAV DA	1740-1 1/8	322 (400-1 1/8)		NA
LNAV MDA	1860-1	442 (500-1)		NA
<b>C</b> CIRCLING	1980-1 562 (600-1)	2060-1 642 (700-1)		NA

PARKSTON, SOUTH DAKOTA  
Orig-A 05MAR15

43°23'N-97°59'W

# PARKSTON MUNI (8V3)

## RNAV (GPS) RWY 33

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>50133</b> <b>W11A</b>	APP CRS <b>105°</b>	Rwy Idg <b>3302</b> TDZE <b>1183</b> Apt Elev <b>1183</b>
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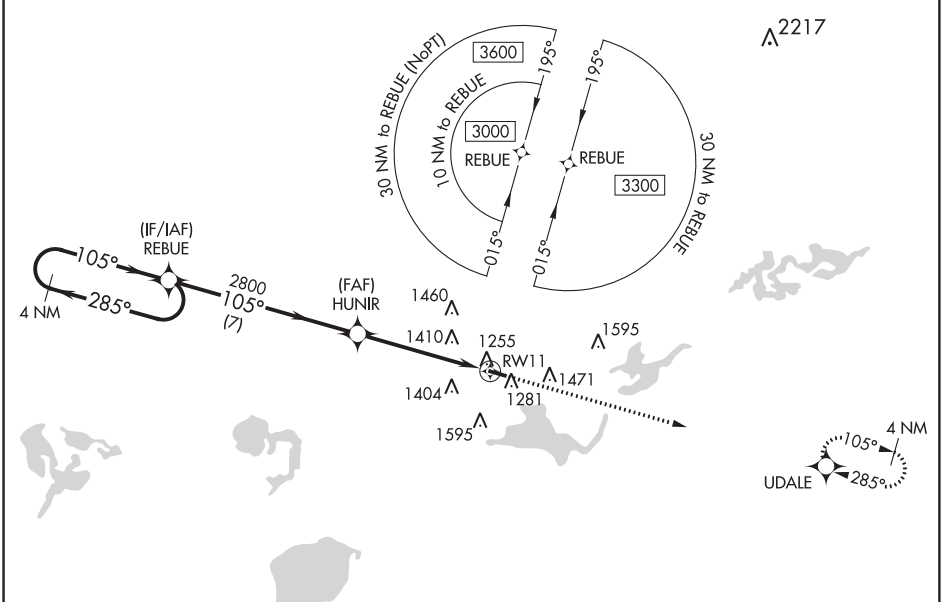
# RNAV (GPS) RWY 11

PAYNESVILLE MUNI (PEX)

**⚠** Baro-VNAV and VDP NA when using Litchfield altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Litchfield altimeter setting and increase all DA 51 feet and all MDA 60 feet; increase LPV and LNAV/VNAV all Cats visibility 1/8 mile and LNAV Cat C and Circling Cat C visibility 1/4 mile.

**MISSED APPROACH:**  
Climb to 3000 direct UDALE and hold.

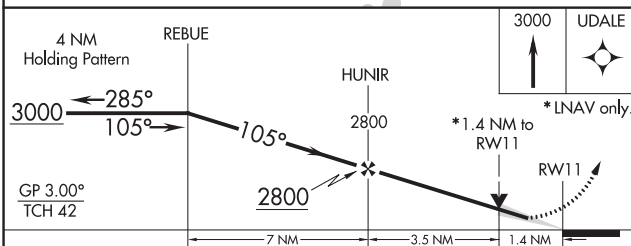
AWOS-3 <b>120,35</b>	MINNEAPOLIS CENTER <b>125.5 323.1</b>	CTAF <b>122.9</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1183	TDZE 1183
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CATEGORY	A	B	C	D
LPV DA	1383-1 200 (200-1)			NA
LNAV/VNAV DA	1653-1 1/8 470 (500-1 1/8)			NA
LNAV MDA	1680-1	497 (500-1)	1680-1 3/8 497 (500-1 3/8)	NA
CIRCLING	1680-1 497 (500-1)	1700-1 517 (600-1)	1780-1 1/2 597 (600-1 1/2)	NA

MIRL Rwy 11-29 **Ⓛ**  
REIL Rws 11 and 29 **Ⓛ**

PAYNESVILLE, MINNESOTA

AL-10366 (FAA)

16091

WAAS CH <b>65633</b> <b>W29A</b>	APP CRS <b>285°</b>	Rwy Idg TDZE <b>1183</b> Apt Elev <b>1183</b>	<b>3302</b>
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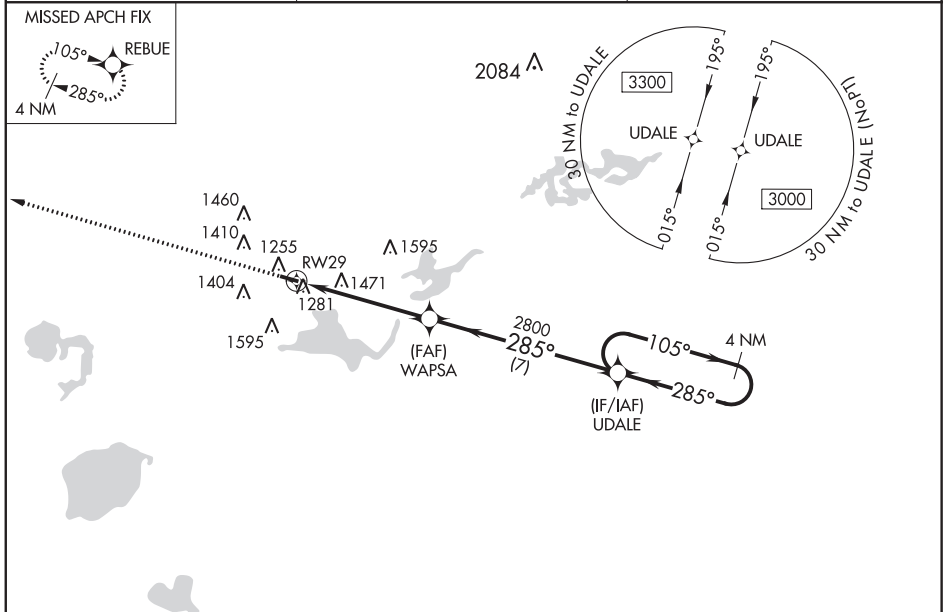
# RNAV (GPS) RWY 29

PAYNESVILLE MUNI (PEX)

**⚠** Baro-VNAV and VDP NA when using Litchfield altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below ¾ SM NA. When local altimeter not received, use Litchfield altimeter setting and increase all DA 51 feet and all MDA 60 feet; increase LNAV/VNAV all Cats and LNAV and Circling Cat C visibility ¼ mile.

**MISSED APPROACH:**  
Climb to 3000 direct REBUE and hold.

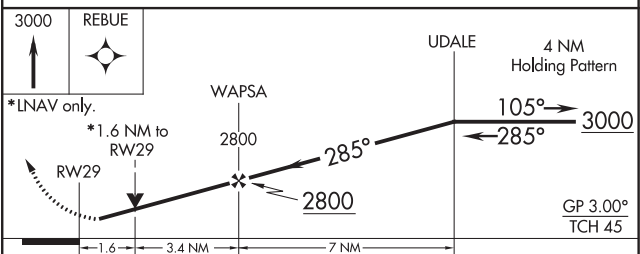
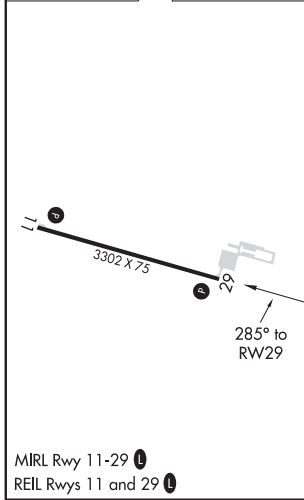
AWOS-3 <b>120.35</b>	MINNEAPOLIS CENTER <b>125.5 323.1</b>	CTAF <b>122.9</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1183	TDZE 1183
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CATEGORY	A	B	C	D
LPV DA	1383-1 200 (200-1)			NA
LNAV/VNAV DA	1810-2¼ 627 (700-2¼)			NA
LNAV MDA	1720-1	537 (600-1)	1720-1½ 537 (600-1½)	NA
CIRCLING	1720-1	537 (600-1)	1780-1½ 597 (600-1½)	NA

PAYNESVILLE, MINNESOTA  
Amdt 1B 15OCT15

45°22'N-94°45'W

# RNAV (GPS) RWY 29

APP CRS	Rwy Idg	<b>3798</b>
<b>338°</b>	TDZE	<b>795</b>
	Apt Elev	<b>795</b>

# RNAV (GPS) RWY 33

PEMBINA MUNI (PMB)

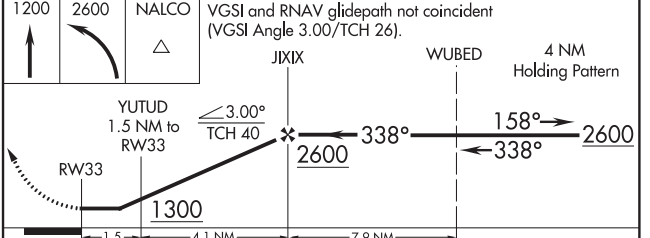
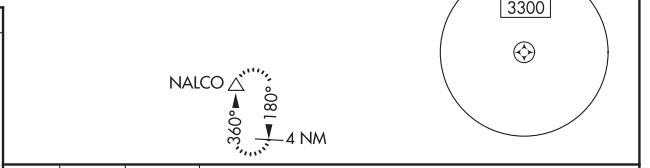
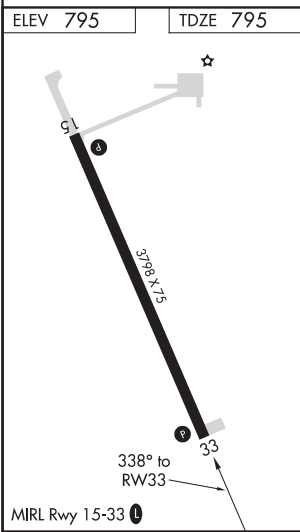
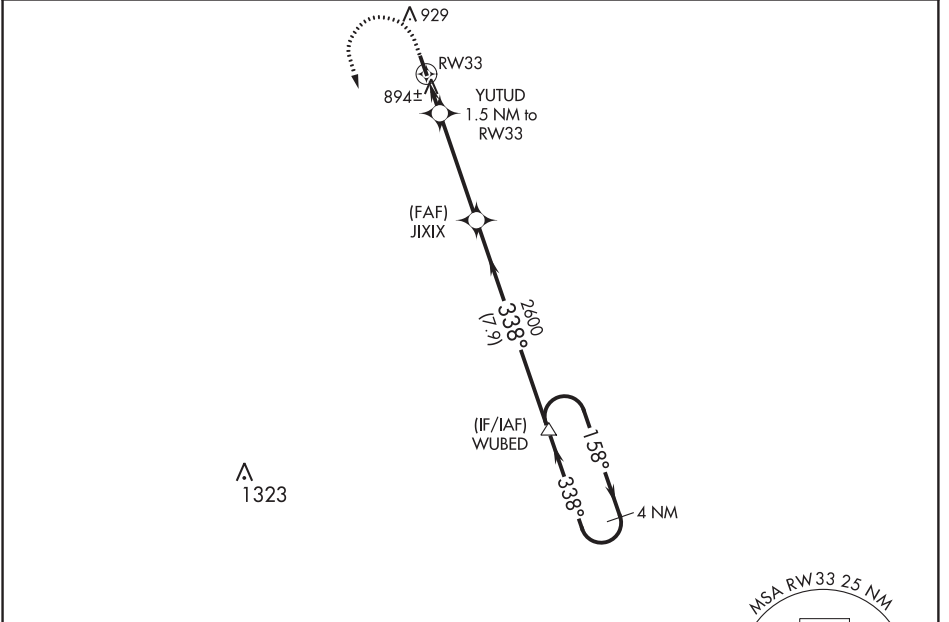
**⚠** DME/DME RNP-0.3 NA. Procedure NA at night. Obtain local altimeter setting on CTAF; when not received use Hallock altimeter setting and increase all MDA 60 feet and LNAV Cat C visibility ¼ mile. Helicopter visibility reduction below 1 SM NA.

**⚠** NA

**❄** -30°C/-22°F

**MISSED APPROACH:** Climb to 1200 then climbing left turn 2600 direct NALCO and hold.

MINNEAPOLIS CENTER <b>132.15 269.6</b>	UNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LNAV MDA	1160-1 365 (400-1)			NA
CIRCLING	1200-1 405 (500-1)	1300-1 505 (600-1)	1300-1½ 505 (600-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

PEMBINA, NORTH DAKOTA

AL-315 (FAA)

16035

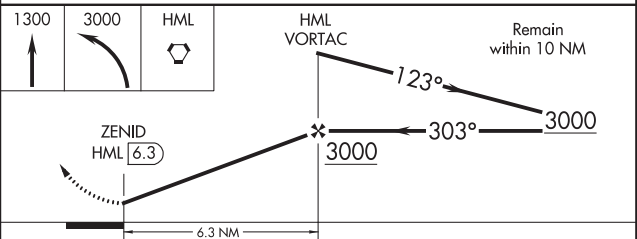
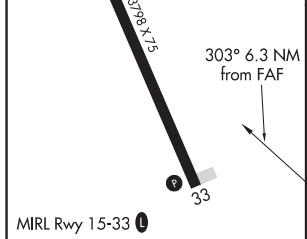
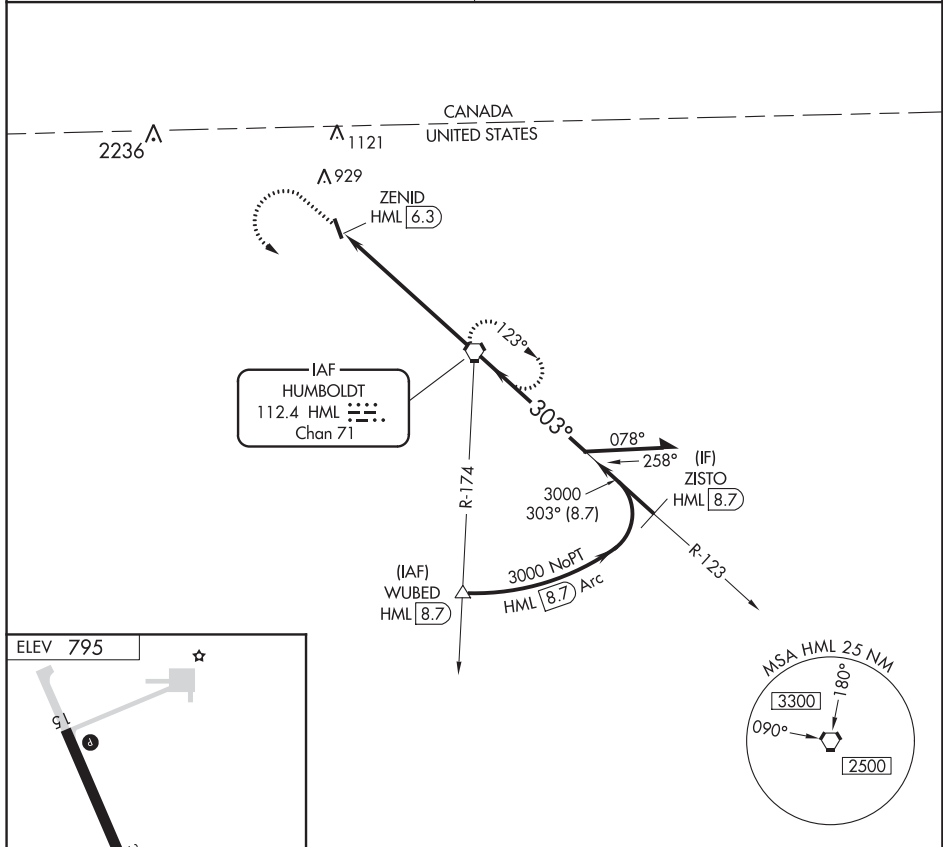
VORTAC HML <b>112.4</b> Chan <b>71</b>	APP CRS <b>303°</b>	Rwy Idg TDZE Apt Elev <b>N/A</b> <b>N/A</b> <b>795</b>
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**VOR-A**  
PEMBINA MUNI (PMB)

**NA** Procedure NA at night. Obtain local altimeter setting on CTAF, when not received use Hallock altimeter setting and increase all MDA 60 feet. MISSED APPROACH: Climb to 1300 then climbing left turn to 3000 direct HML VORTAC and hold.

**-30°C/-22°F**

MINNEAPOLIS CENTER <b>132.15 269.6</b>	UNICOM <b>122.8 (CTAF) 0</b>
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FAF to MAP 6.3 NM		CATEGORY	A	B	C	D
Knots	60 90 120 150 180	CIRCLING	1280-1 485 (500-1)	1300-1 505 (600-1)	1300-1½ 505 (600-1½)	NA
Min:Sec	6:18 4:12 3:09 2:31 2:06					

PEMBINA, NORTH DAKOTA  
Orig 02MAY13

48°57'N-97°14'W

PEMBINA MUNI (PMB)  
**VOR-A**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>62933</b> <b>W13A</b>	APP CRS <b>128°</b>	Rwy Idg TDZE <b>4102</b> <b>1376</b> Apt Elev <b>1376</b>
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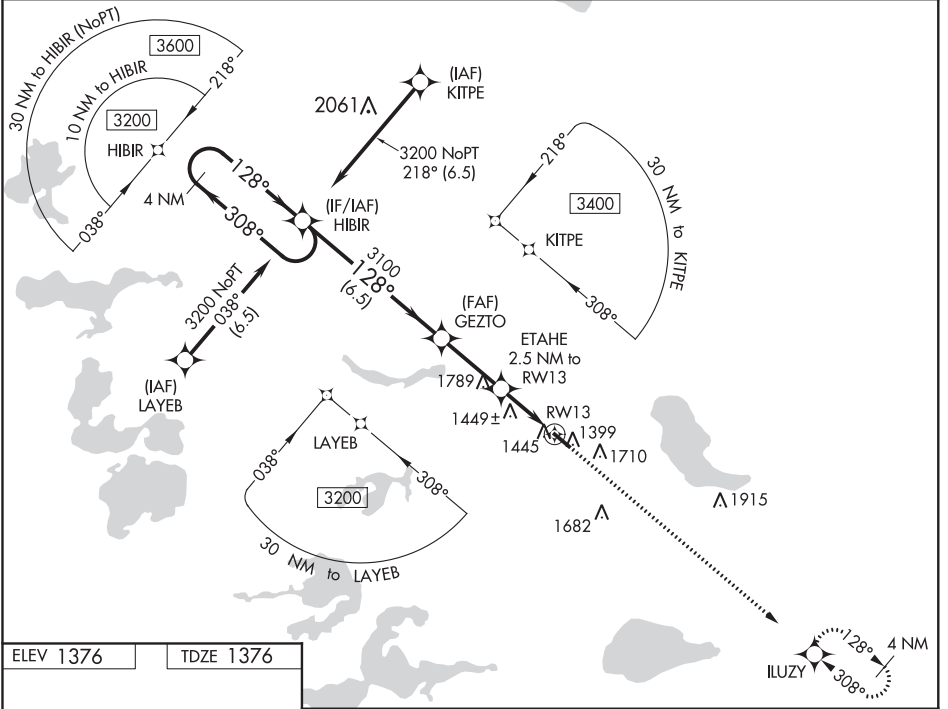
# RNAV (GPS) RWY 13

PERHAM MUNI (16D)

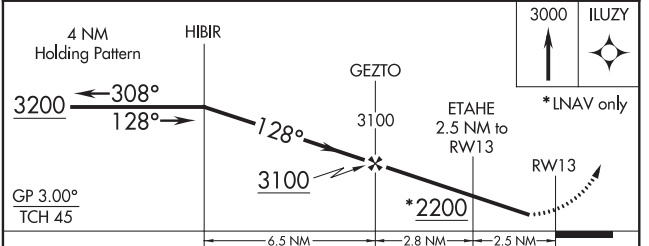
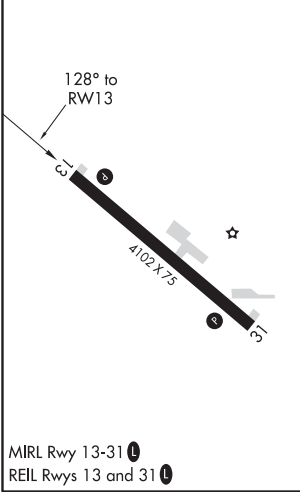
**⚠** Baro-VNAV NA. DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA. Use Detroit Lakes altimeter setting; when not received, use Wadena altimeter setting.

**⚠** NA MISSED APPROACH: Climb to 3000 direct ILUZY and hold.

MINNEAPOLIS CENTER <b>126.1 269.2</b>	GCO <b>121.725</b>	CTAF <b>122.9</b>
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ELEV 1376	TDZE 1376
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CATEGORY	A	B	C	D
LPV DA	1671-1	295 (300-1)		NA
LNAV/VNAV DA	1671-1	295 (300-1)		NA
LNAV MDA	1760-1	384 (400-1)		NA
<b>C</b> CIRCLING	2120-1	744 (800-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

PERHAM, MINNESOTA

AL-9270 (FAA)

16035

WAAS CH <b>78133</b> <b>W31A</b>	APP CRS <b>308°</b>	Rwy ldg TDZE <b>1374</b> Apt Elev <b>1376</b>	<b>4102</b>
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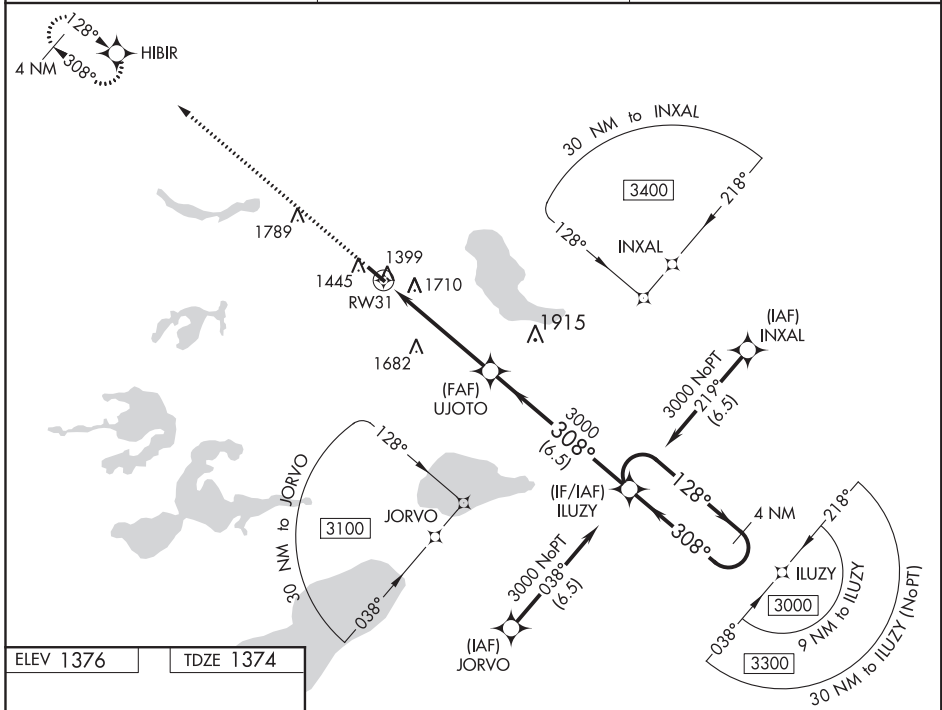
# RNAV (GPS) RWY 31

PERHAM MUNI (16D)

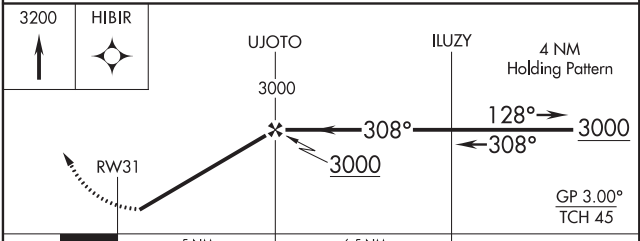
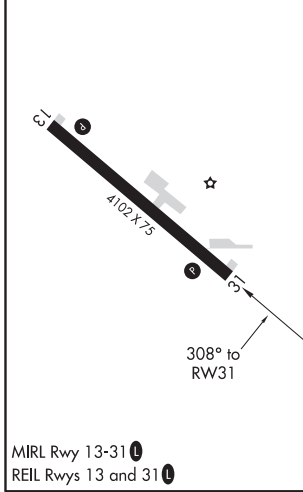
**Baro-VNAV NA. DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA. Use Detroit Lakes altimeter setting; when not received, use Wadena altimeter setting.**

**MISSED APPROACH:** Climb to 3200 direct HIBIR and hold.

MINNEAPOLIS CENTER <b>126.1 269.2</b>	GCO <b>121.725</b>	CTAF <b>122.9</b>
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ELEV 1376	TDZE 1374
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CATEGORY	A	B	C	D
LPV DA	1669-1	295 (300-1)		NA
LNAV/VNAV DA	2158-2½	784 (800-2½)		NA
LNAV MDA	2080-1	706 (800-1)		NA
<b>C</b> CIRCLING	2120-1	744 (800-1)		NA

PERHAM, MINNESOTA  
Amdt 1A 05FEB15

46°37'N-95°36'W

# PERHAM MUNI (16D)

## RNAV (GPS) RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>78434</b> W12A	APP CRS <b>121°</b>	Rwy Idg <b>3998</b> TDZE <b>2209</b> Apt Elev <b>2209</b>
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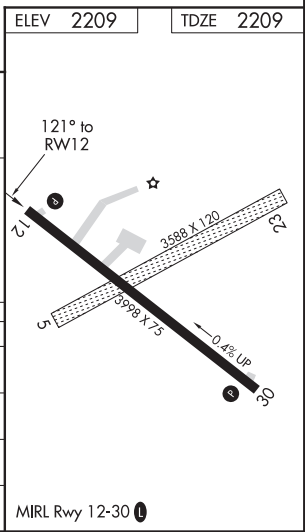
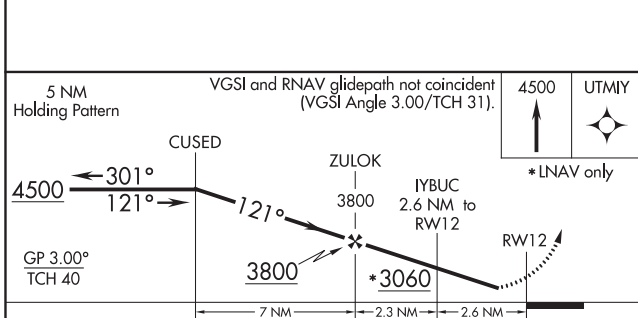
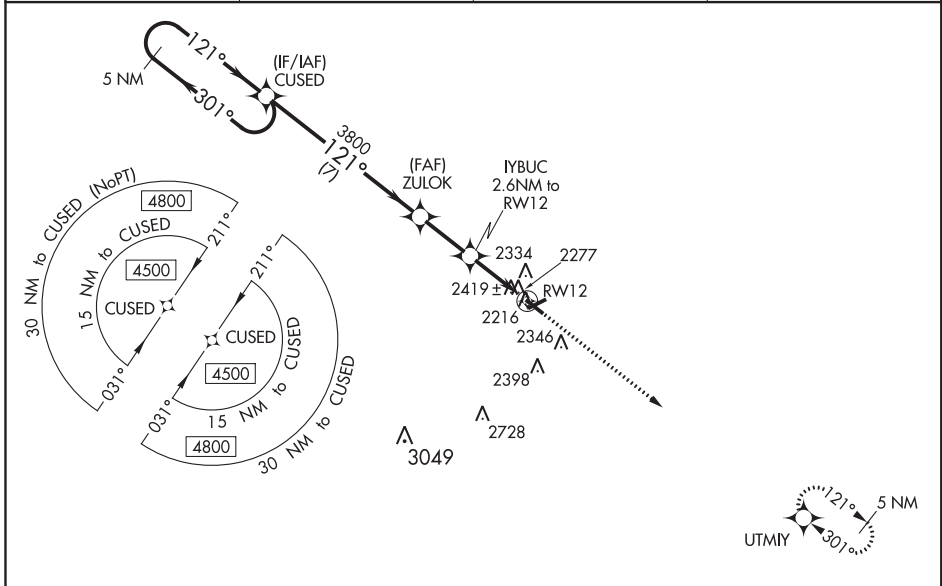
# RNAV (GPS) RWY 12

PHILIP (PHP)

**⚠** DME/DME RNP-0.3 NA. When local altimeter setting not received, use Pierre altimeter setting and increase all DA 204 feet and MDA 220 feet and increase LPV and LNAV/VNAV all Cats visibility 3/8 mile, increase LNAV Cat C visibility 1/2 mile, and increase Circling Cat C visibility 3/4 mile. Helicopter visibility reduction below 1 SM NA. Procedure NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -14°C (7°F) or above 54°C (130°F). Baro-VNAV NA when using Pierre altimeter setting.

**MISSED APPROACH:** Climb to 4500 direct UTMZY and hold.

ASOS <b>118.375</b>	DENVER CENTER <b>127.95 338.2</b>	HURON RADIO <b>122.4</b>	UNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LPV DA	2467-1 258 (300-1)			NA
LNAV/VNAV DA	2742-1 5/8 533 (600-1 7/8)			NA
LNAV MDA	2680-1 471 (500-1)		2680-1 3/8 471 (500-1 3/8)	NA
<b>C</b> CIRCLING	2720-1 511 (600-1)	2760-1 551 (600-1)	2840-1 3/4 631 (700-1 3/4)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>99335</b> <b>W30A</b>	APP CRS <b>301°</b>	Rwy Idg <b>3998</b> TDZE <b>2206</b> Apt Elev <b>2209</b>
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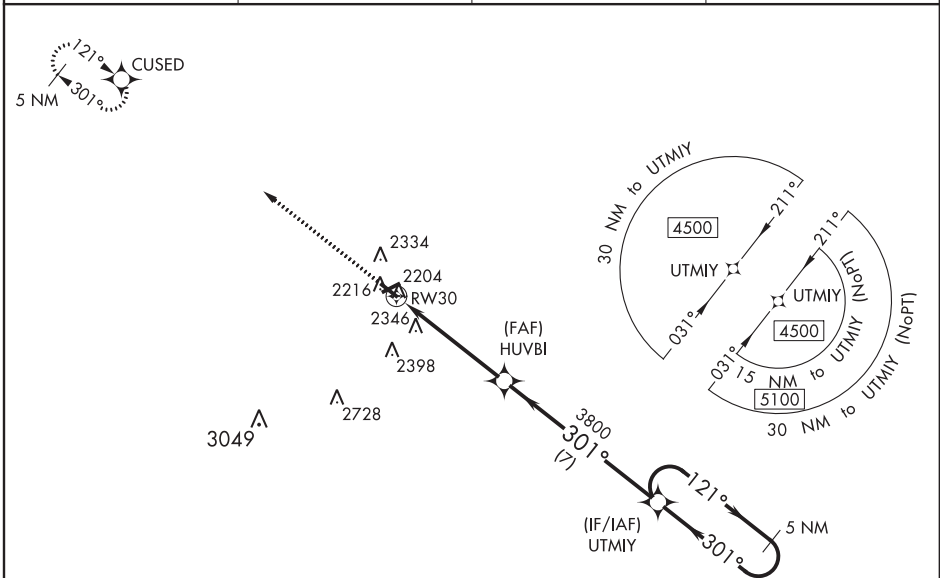
# RNAV (GPS) RWY 30

PHILIP (PHP)

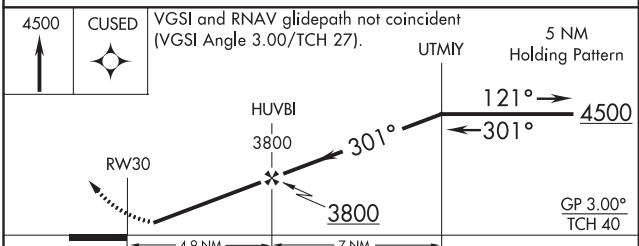
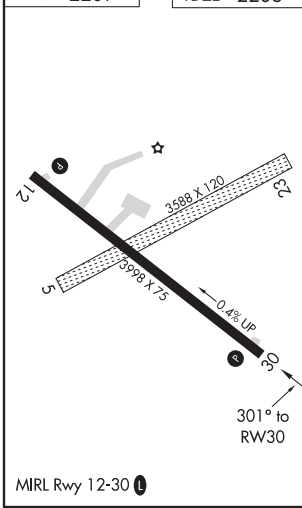
**⚠** DME/DME RNP-0.3 NA. When local altimeter setting not received, use Pierre altimeter setting and increase all DA 204 feet and MDA 220 feet and increase LPV all Cats visibility ½ mile, increase LNAV/VNAV all Cats visibility 1 mile, increase LNAV Cat C visibility ½ mile, and increase Circling Cat C visibility ¾ mile. Helicopter visibility reduction below 1 SM NA. Procedure NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -14°C (7°F) or above 54°C (130°F). Baro-VNAV NA when using Pierre altimeter setting.

**⚠** MISSED APPROACH: Climb to 4500 direct CUSED and hold.

ASOS <b>118.375</b>	DENVER CENTER <b>127.95 338.2</b>	HURON RADIO <b>122.4</b>	UNICOM <b>122.8 (CTAF)</b> <b>📻</b>
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ELEV <b>2209</b>	TDZE <b>2206</b>
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CATEGORY	A	B	C	D
LPV DA	2456-1	250 (300-1)	2456-1 3/8 250 (300-1 3/8)	NA
LNAV/VNAV DA	2794-2		588 (600-2)	NA
LNAV MDA	2620-1	414 (500-1)	2620-1 1/4 414 (500-1 1/4)	NA
<b>C</b> CIRCLING	2720-1 511 (600-1)	2760-1 551 (600-1)	2840-1 3/4 631 (700-1 3/4)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

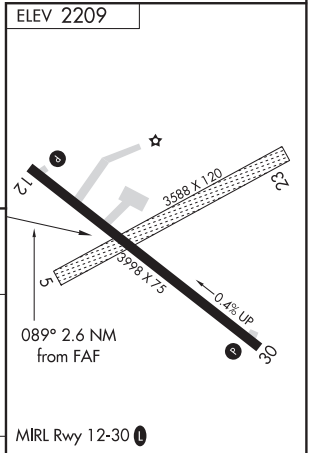
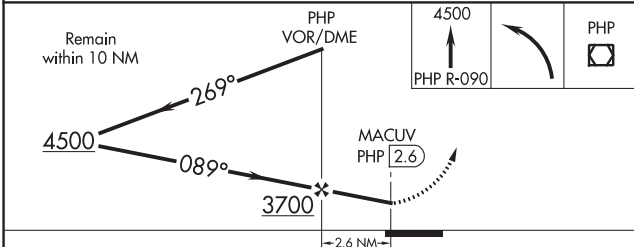
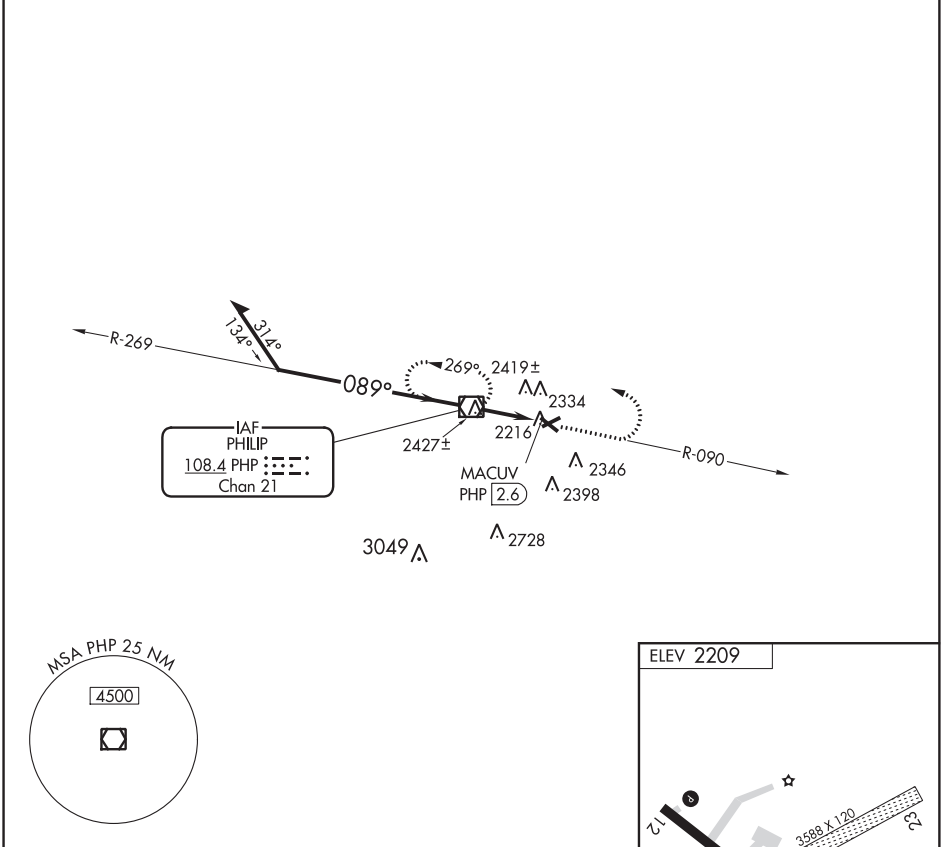
VOR/DME PHP <b>108.4</b> Chan <b>21</b>	APP CRS <b>089°</b>	Rwy Idg TDZE Apt Elev <b>N/A</b> <b>N/A</b> <b>2209</b>
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**VOR-A**  
PHILIP (PHP)

**⚠** Circling to Rwy 12-30 NA at night. When local altimeter setting not received, use Pierre Rgnl altimeter setting and increase all MDA 220 feet, and increase Circling Cat C visibility 3/4 mile.

**⚠** MISSED APPROACH: Climb to 4500 on PHP VOR/DME R-090, then left turn direct PHP VOR/DME and hold.

ASOS <b>118.375</b>	DENVER CENTER <b>127.95 338.2</b>	HURON RADIO <b>122.4</b>	UNICOM <b>122.8 (CTAF)</b> <b>📻</b>
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CATEGORY	A	B	C	D	FAF to MAP 2.6 NM					
	2720-1 511 (600-1)	2760-1 551 (600-1)	2840-1 3/4 631 (700-1 3/4)	NA	Knots	60	90	120	150	180
<b>📻</b> CIRCLING					Min:Sec	2:36	1:44	1:18	1:02	0:52

NC-1, 10 NOV 2016 to 05 JAN 2017

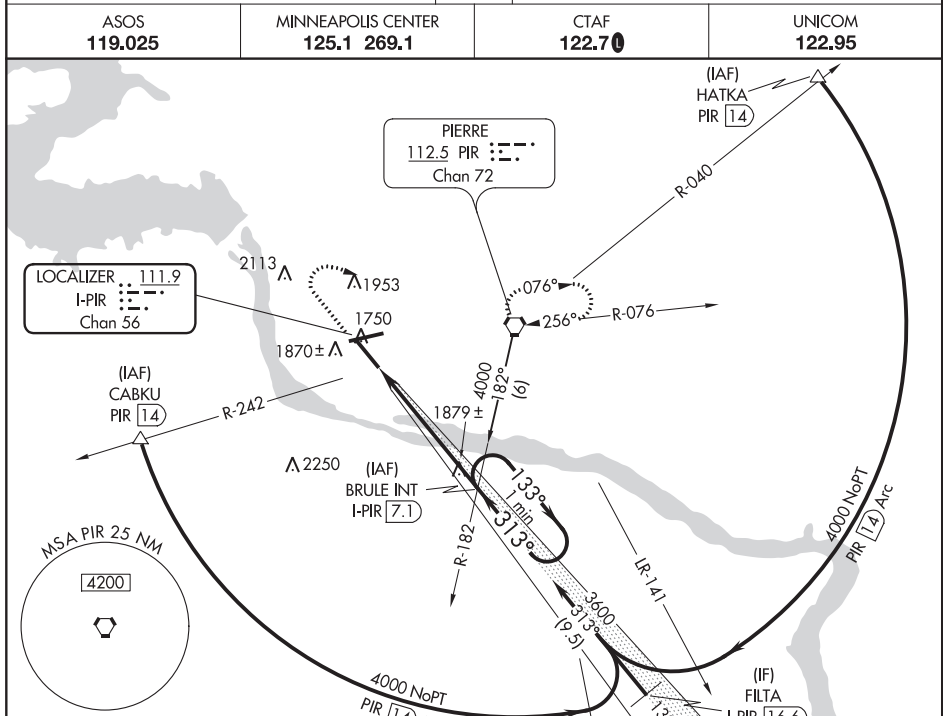
NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-PIR <b>111.9</b> Chan 56	APP CRS <b>313°</b>	Rwy Idg TDZE <b>6900</b> <b>1720</b> Apt Elev <b>1744</b>
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# ILS or LOC RWY 31

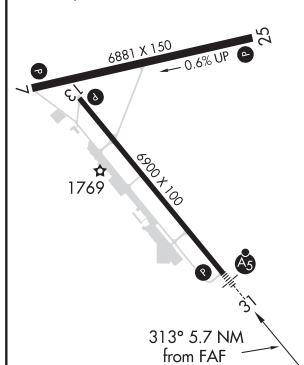
PIERRE RGNL (PIR)

	MISSED APPROACH: Climb to 2400 then climbing right turn to 4000 direct PIR VORTAC and hold, continue climb-in-hold to 4000.		
	ASOS <b>119.025</b>	MINNEAPOLIS CENTER <b>125.1 269.1</b>	CTAF <b>122.7</b>

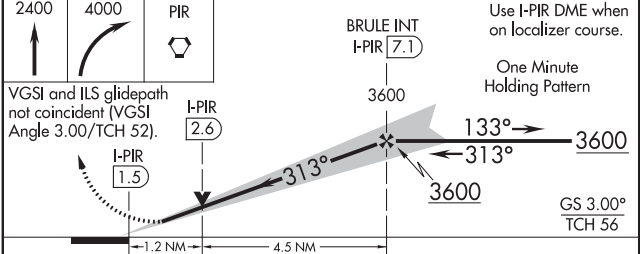


ELEV 1744	D	TDZE 1720
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REIL Rws 7, 13 and 25  
HIRL Rws 7-25 and 13-31



FAF to MAP 5.7 NM					
Knots	60	90	120	150	180
Min:Sec	5:42	3:48	2:51	2:17	1:54



CATEGORY	A	B	C	D
S-ILS 31	1920-½		200 (200-½)	
S-LOC 31	2140-½	420 (400-½)	2140-¾	420 (400-¾)
CIRCLING	2240-1 496 (500-1)		2260-1½ 516 (600-1½)	2300-2 556 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>45804</b> <b>W07A</b>	APP CRS <b>069°</b>	Rwy Idg TDZE Apt Elev	<b>6830</b> <b>1744</b> <b>1744</b>
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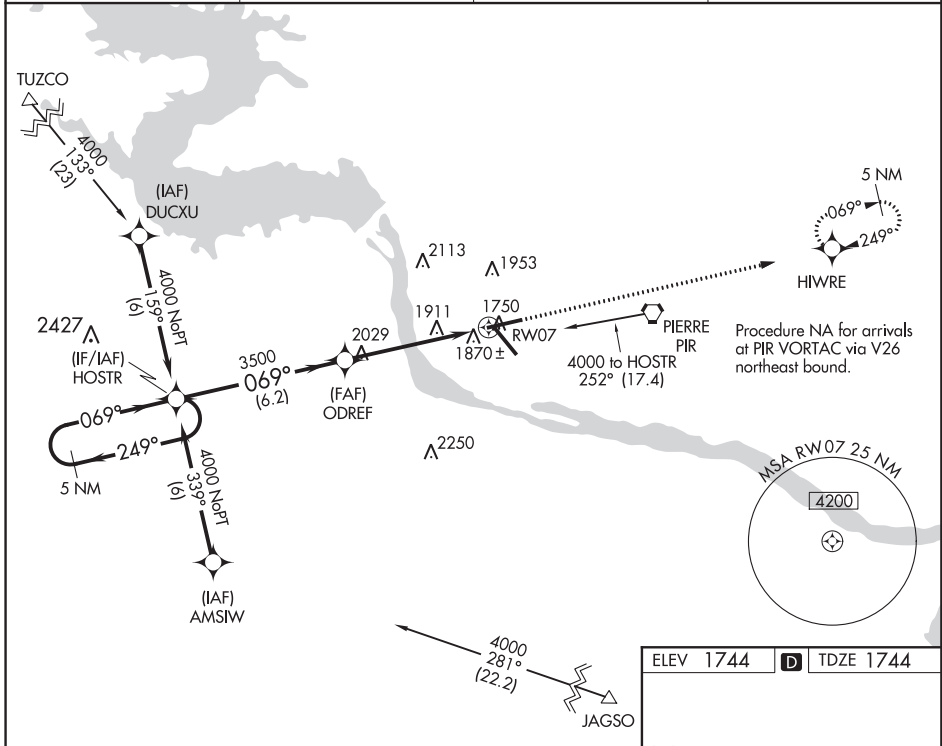
# RNAV (GPS) RWY 7

PIERRE RGNL (PIR)

**▽** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

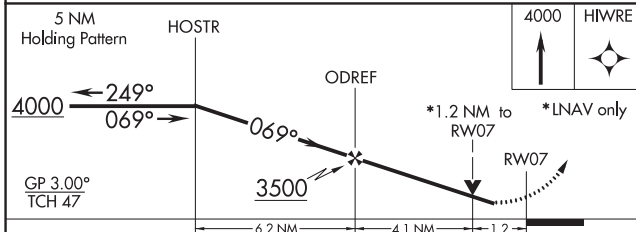
MISSED APPROACH: Climb to 4000 direct HIWRE and hold.

ASOS <b>119.025</b>	MINNEAPOLIS CENTER <b>125.1 269.1</b>	CTAF <b>122.7</b>	UNICOM <b>122.95</b>
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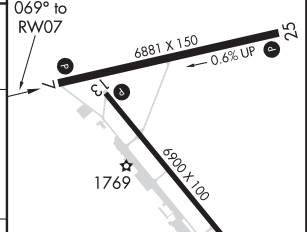


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 1744	<b>D</b> TDZE 1744
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CATEGORY	A	B	C	D
LPV DA		2057-1	313 (400-1)	
LNAV/VNAV DA		2170-1½	426 (500-1½)	
LNAV MDA	2180-1	436 (500-1)	2180-1¼ 436 (500-1¼)	2180-1½ 436 (500-1½)
CIRCLING	2240-1	496 (500-1)	2260-1½ 516 (600-1½)	2300-2 556 (600-2)

REIL Rwy 7, 13, and 25 **1**  
HIRL Rwy 7-25 and 13-31 **1**

PIERRE, SOUTH DAKOTA

AL-324 (FAA)

15232

WAAS CH <b>53404</b> <b>W13A</b>	APP CRS <b>133°</b>	Rwy Idg TDZE Apt Elev	<b>6900</b> <b>1731</b> <b>1744</b>
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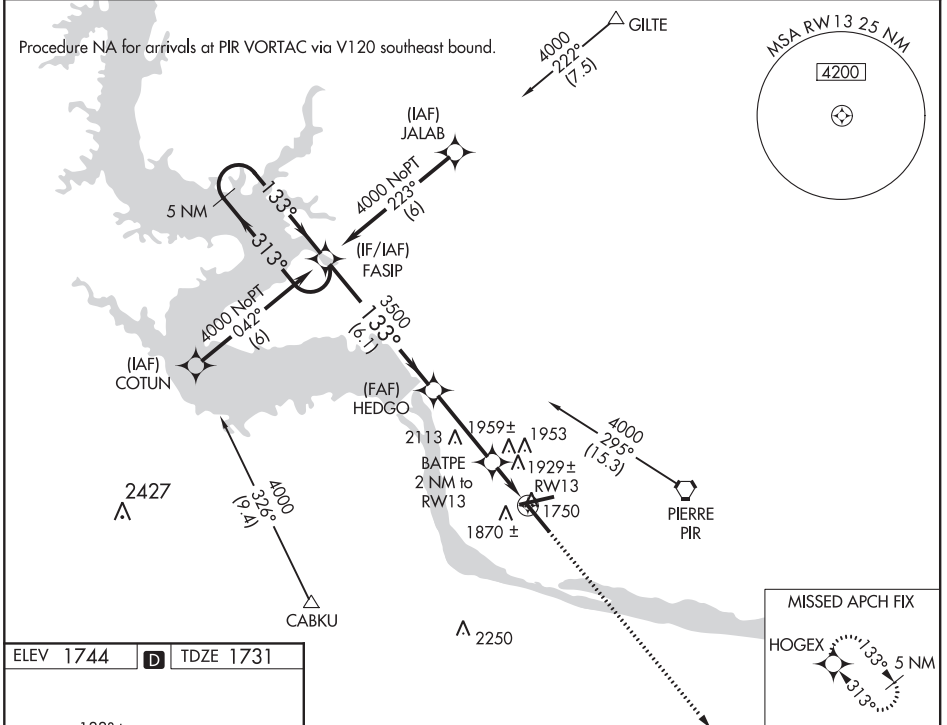
# RNAV (GPS) RWY 13

PIERRE RGNL (PIR)

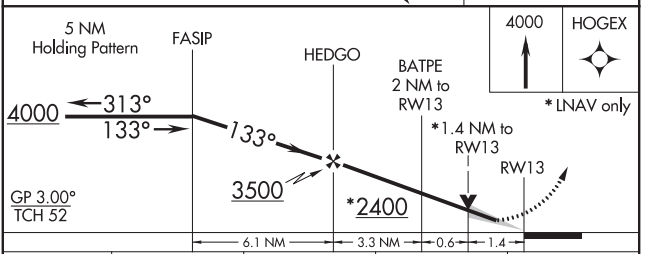
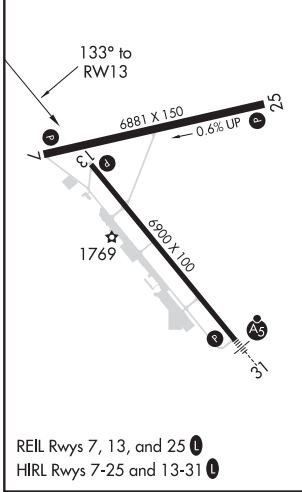
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 4000 direct HOGEX and hold.

ASOS <b>119.025</b>	MINNEAPOLIS CENTER <b>125.1 269.1</b>	CTAF <b>122.7</b>	UNICOM <b>122.95</b>
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ELEV 1744	D	TDZE 1731
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CATEGORY	A	B	C	D
LPV DA		1981- <sup>3</sup> / <sub>4</sub>	250 (300- <sup>3</sup> / <sub>4</sub> )	
LNAV/VNAV DA		2285-2	554 (600-2)	
LNAV MDA	2220-1	489 (500-1)	2220-1 <sup>1</sup> / <sub>4</sub> 489 (500-1 <sup>1</sup> / <sub>4</sub> )	2220-1 <sup>1</sup> / <sub>2</sub> 489 (500-1 <sup>1</sup> / <sub>2</sub> )
CIRCLING	2240-1	496 (500-1)	2260-1 <sup>1</sup> / <sub>2</sub> 516 (600-1 <sup>1</sup> / <sub>2</sub> )	2300-2 556 (600-2)

PIERRE, SOUTH DAKOTA  
Amdt 2 30AUG07

44°23'N-100°17'W

# PIERRE RGNL (PIR)

## RNAV (GPS) RWY 13

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>63104</b> <b>W25A</b>	APP CRS <b>249°</b>	Rwy Idg TDZE Apt Elev	<b>6881</b> <b>1725</b> <b>1744</b>
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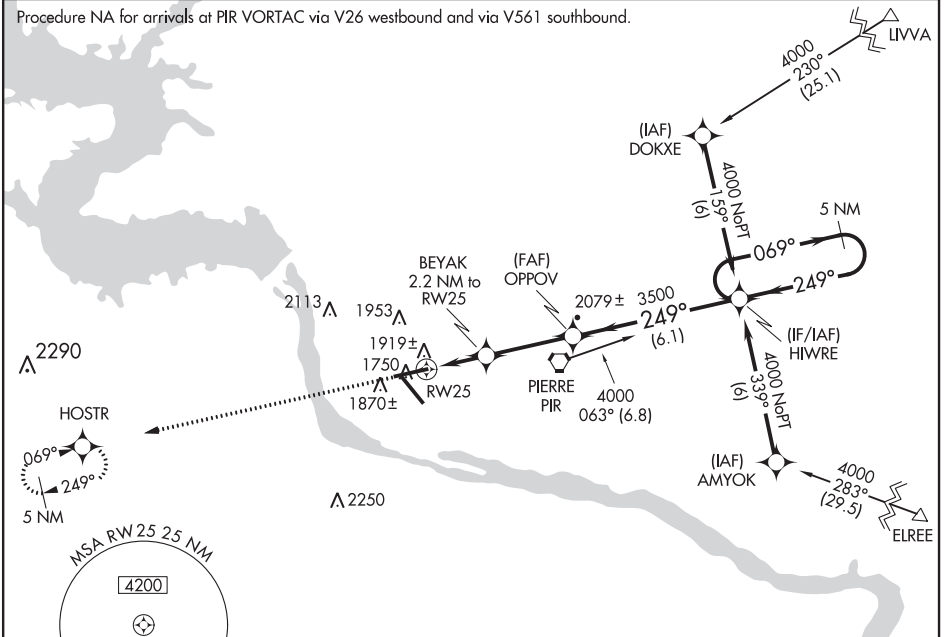
# RNAV (GPS) RWY 25

PIERRE RGNL (PIR)

**▽** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). DME/DME RNP-0,3 NA.

MISSED APPROACH: Climb to 4000 direct HOSTR and hold.

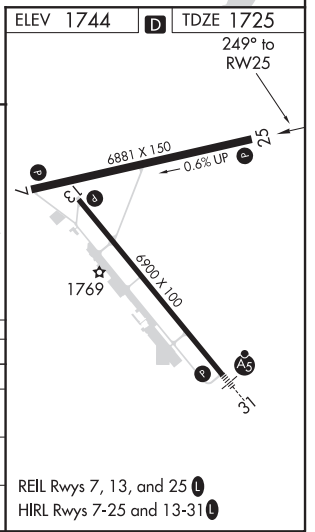
ASOS <b>119.025</b>	MINNEAPOLIS CENTER <b>125.1 269.1</b>	CTAF <b>122.7</b>	UNICOM <b>122.95</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1744	TDZE 1725	249° to RW25	
4000	HOSTR	BEYAK 2.2 NM to RW25	OPPOV
*LNAV only		*1.3 NM to RW25	HIWRE
*2440		3500	4000
1.3 0.9		3.2 NM	6.1 NM
CATEGORY	A	B	C
LPV DA	1975-1		250 (300-1)
LNAV/VNAV DA	2179-1¾		454 (500-1¾)
LNAV MDA	2180-1	455 (500-1)	2180-1½ 455 (500-1½)
CIRCLING	2240-1	496 (500-1)	2260-1½ 516 (600-1½)
			2300-2 556 (600-2)



REIL Rwy 7, 13, and 25  
HIRL Rwy 7-25 and 13-31

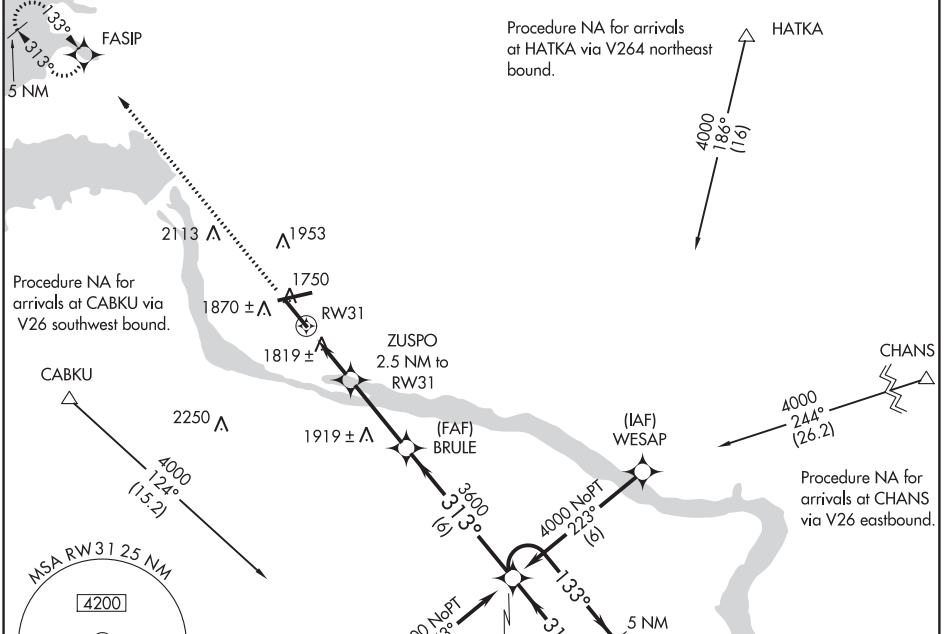
WAAS CH <b>65623</b> <b>W31A</b>	APP CRS <b>313°</b>	Rwy Idg TDZE <b>1720</b>	<b>6900</b> <b>1744</b>
		Apt Elev	<b>1744</b>

# RNAV (GPS) RWY 31

PIERRE RGNL (PIR)

<p><b>▽</b> DME/DME RNP-0.3 NA. Baro-VNAV NA below -18°C (0°F). For inoperative MALSRS increase LPV visibility to ¾ all Cats, and LNAV Cat D visibility to 1¼.</p>	<p>MALSRS </p>	<p>MISSED APPROACH: Climb to 4000 direct FASIP and hold.</p>
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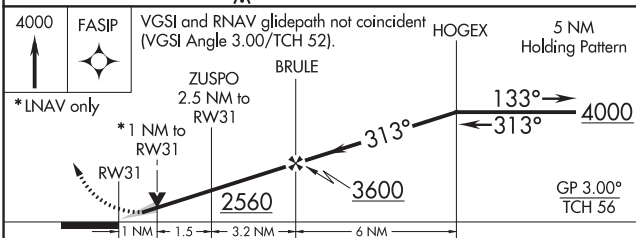
ASOS <b>119.025</b>	MINNEAPOLIS CENTER <b>125.1 269.1</b>	CTAF <b>122.7</b>	UNICOM <b>122.95</b>
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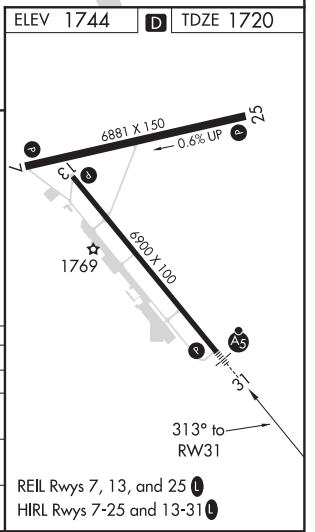
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1744	<b>D</b>	TDZE 1720
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CATEGORY	A	B	C	D
LPV DA		1970-½	250 (300-½)	
LNAV/VNAV DA		2115-¾	395 (400-¾)	
LNAV MDA	2080-½	360 (400-½)		2080-1 360 (400-1)
CIRCLING	2240-1¼	496 (500-1¼)	2260-1½ 516 (600-1½)	2300-2 556 (600-2)





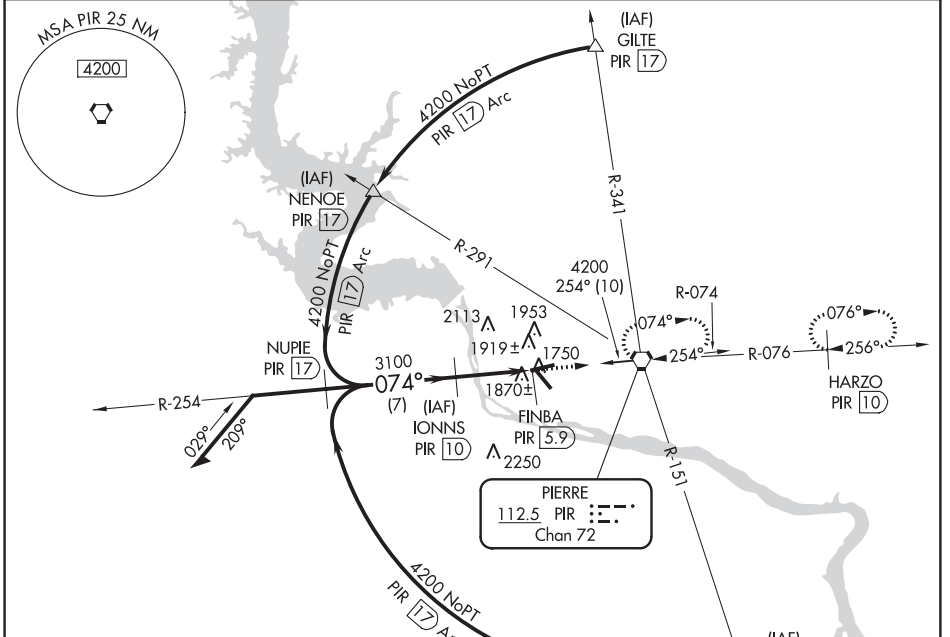
VORTAC PIR <b>112.5</b> Chan 72	APP CRS <b>074°</b>	Rwy Idg TDZE Apt Elev	<b>6830</b> <b>1744</b> <b>1744</b>
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# VOR/DME or TACAN RWY 7

PIERRE RGNL (PIR)

**MISSED APPROACH:** Climb to 4000 then right turn direct PIR VORTAC and hold. (TACAN aircraft continue via PIR R-076 to HARZO 10 DME and hold East, right turns, 256° inbound).

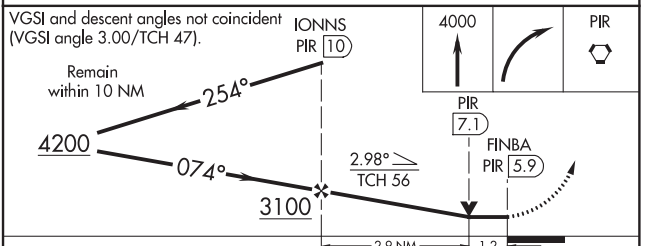
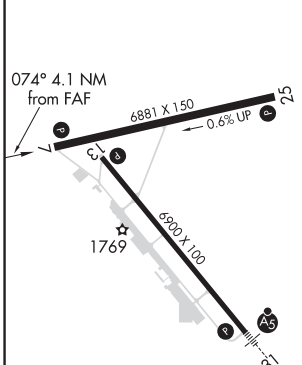
ASOS <b>119.025</b>	MINNEAPOLIS CENTER <b>125.1 269.1</b>	CTAF <b>122.7</b>	UNICOM <b>122.95</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1744	<b>D</b>	TDZE 1744
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CATEGORY	A	B	C	D
S-7	2180-1 436 (500-1)		2180-1¼ 436 (500-1¼)	2180-1½ 436 (500-1½)
CIRCLING	2240-1 496 (500-1)		2260-1½ 516 (600-1½)	2300-2 556 (600-2)

# VOR/DME or TACAN RWY 7

PIERRE, SOUTH DAKOTA

AL-324 (FAA)

14317

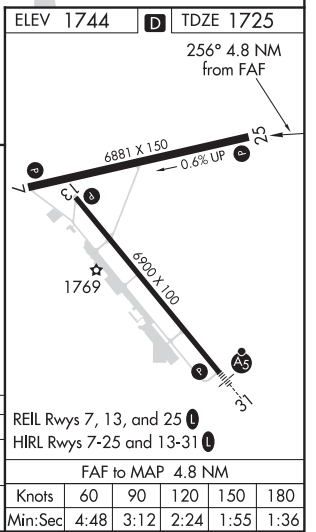
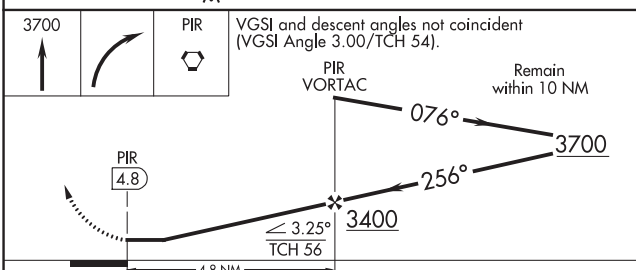
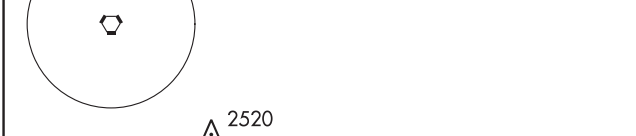
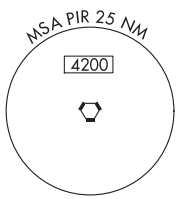
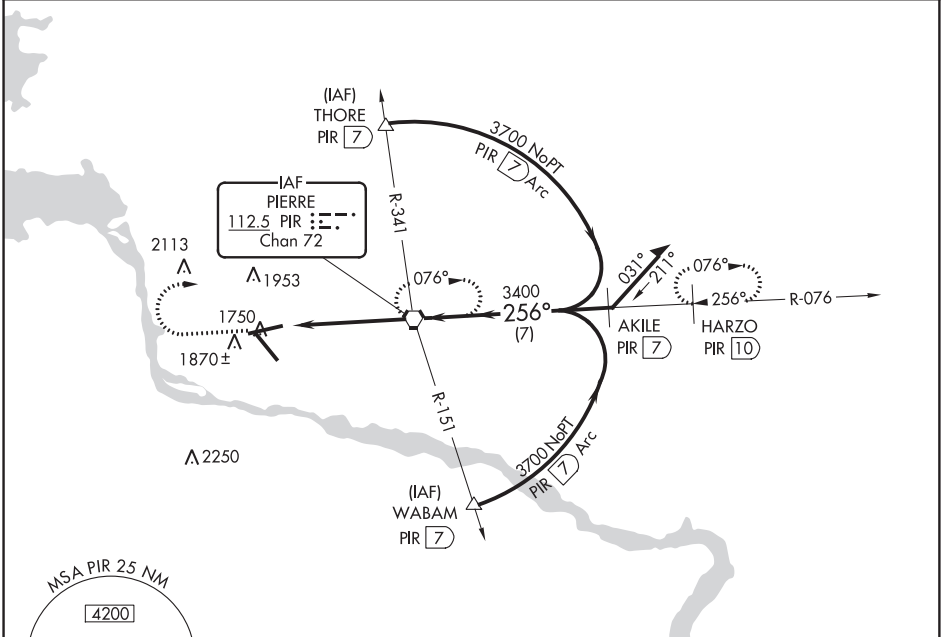
VORTAC PIR <b>112.5</b> Chan 72	APP CRS <b>256°</b>	Rwy ldg TDZE Apt Elev <b>6881</b> <b>1725</b> <b>1744</b>
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# VOR or TACAN RWY 25

PIERRE RGNL (PIR)

**MISSED APPROACH:** Climb to 3700 then right turn direct PIR VORTAC and hold. (TACAN aircraft continue via PIR R-076 to HARZO 10 DME and hold east, right turns, 256° inbound)

ASOS <b>119.025</b>	MINNEAPOLIS CENTER <b>125.1 269.1</b>	CTAF <b>122.7</b>	UNICOM <b>122.95</b>
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CATEGORY	A	B	C	D
S-25	2120-1	395 (400-1)		2120-1 1/4 395 (400-1 1/4)
CIRCLING	2240-1	496 (500-1)	2260-1 1/2 516 (600-1 1/2)	2300-2 556 (600-2)

PIERRE, SOUTH DAKOTA  
Orig-B 31JUL08

44°23'N-100°17'W

# PIERRE RGNL (PIR) VOR or TACAN RWY 25

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

16147

# AIRPORT DIAGRAM

PIERRE RGNL (PIR)  
PIERRE, SOUTH DAKOTA

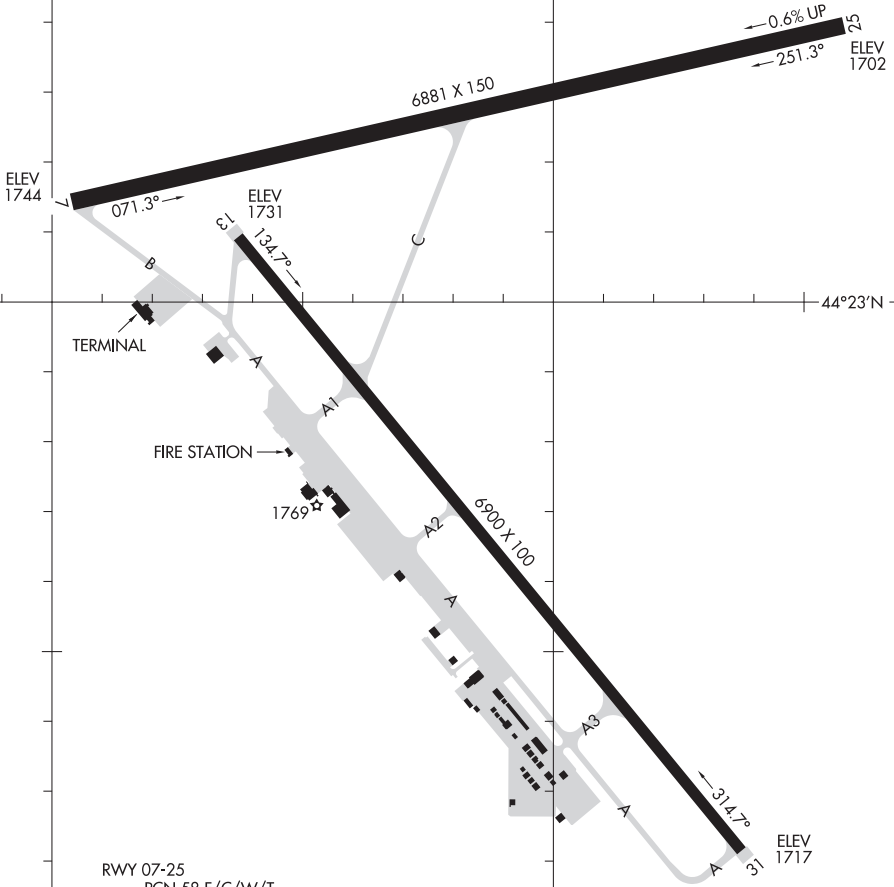
AL-324 (FAA)

ASOS  
119.025  
CTAF  
122.7  
UNICOM  
122.95

**D**

FIELD  
ELEV  
1744

JANUARY 2015  
ANNUAL RATE OF CHANGE  
0.1° W



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

RWY 07-25  
PCN 58 F/C/W/T  
S-91, D-114, 2S-145, 2D-180  
RWY 13-31  
PCN 51 F/C/W/T  
S-91, D-108, 2S-137, 2D-168

100°18'W

100°17'W

44°22'N

44°23'N

# AIRPORT DIAGRAM

16147

PIERRE, SOUTH DAKOTA  
PIERRE RGNL (PIR)

PINE RIDGE, SOUTH DAKOTA

AL-9036 (FAA)

15232

APP CRS	Rwy Idg	<b>5000</b>
<b>299°</b>	TDZE	<b>3333</b>
	Apt Elev	<b>3333</b>

# RNAV (GPS) RWY 30

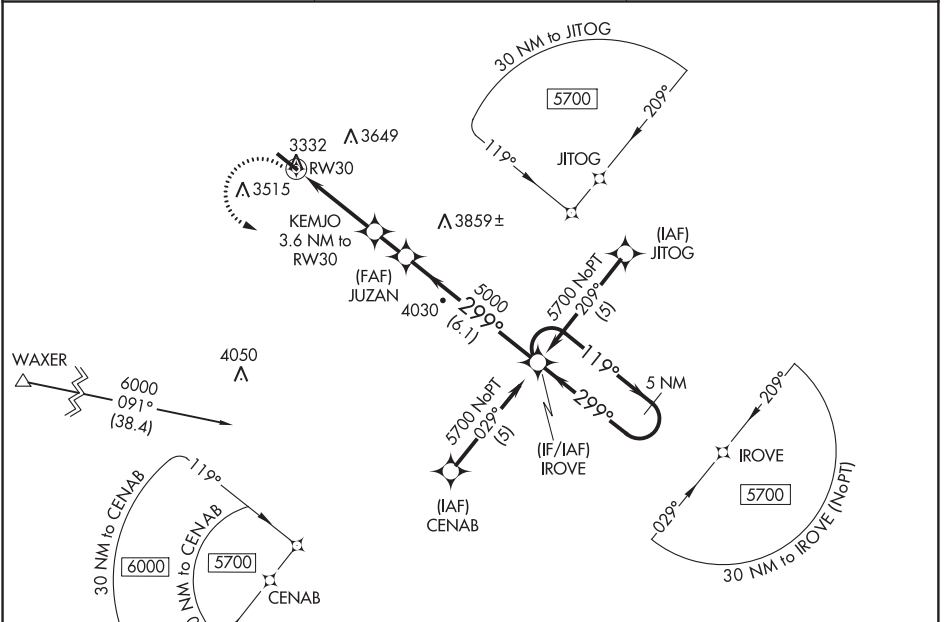
PINE RIDGE (IEN)

**⚠** DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM not authorized. VDP NA when using Chadrone altimeter setting. When local altimeter setting not received, use Chadrone altimeter setting and increase all MDA 80 feet, and Cat A visibility 1/4 mile.

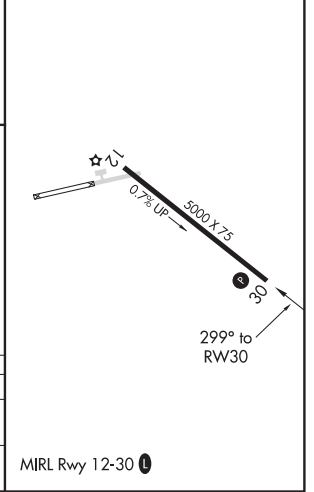
**⚠** -33°C/-27°F

**MISSED APPROACH:** Climbing left turn to 5700 direct IROVE and hold.

<b>ASOS</b> <b>126.775</b>	<b>DENVER CENTER</b> <b>127.95 338.2</b>	<b>CTAF</b> <b>122.9</b> <b>📶</b>
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ELEV 3333	TDZE 3333
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5700	IROVE	VGSI and descent angles not coincident (VGSI Angle 3.00/TCH 28).	5 NM Holding Pattern
	KEMJO	3.6 NM to RWY 30	JUZAN
	RWY 30	2.6 NM to RWY 30	119° →
		≤ 3.04° TCH 40	← 299°
		4520	5000
		2.6 NM	1 NM
		1.4 NM	6.1 NM

CATEGORY	A	B	C	D
LNAV MDA	4180-1 847 (900-1)	4180-1½ 847 (900-1½)	NA	
CIRCLING	4180-1 847 (900-1)	4180-1½ 847 (900-1½)	NA	

PINE RIDGE, SOUTH DAKOTA  
Orig-B 25JUN15

43°01'N-102°30'W

# RNAV (GPS) RWY 30

PINE RIDGE (IEN)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

MIRL Rwy 12-30 **📶**

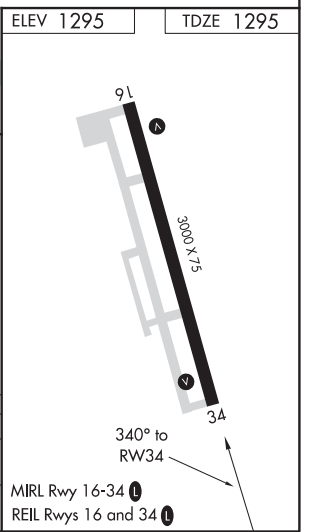
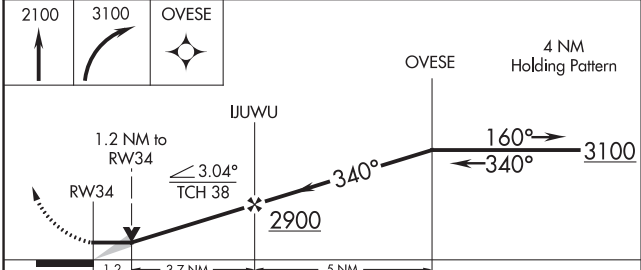
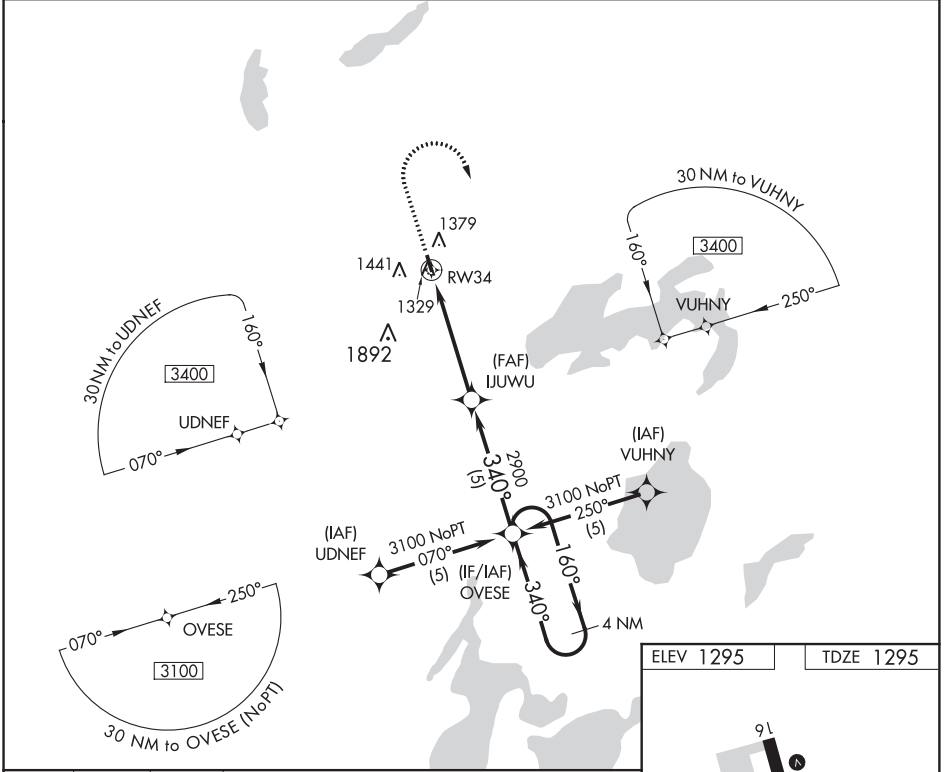
APP CRS	Rwy Idg	<b>3000</b>
<b>340°</b>	TDZE	<b>1295</b>
	Apt Elev	<b>1295</b>

# RNAV (GPS) RWY 34

PINE RIVER RGNL (PWC)

**NA** GPS or RNP-0.3 required. DME/DME RNP-0.3 NA. MISSED APPROACH: Climb to 2100 then climbing right turn to 3100 direct OVESE WP and hold.

ASOS-3 <b>118.525</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	CTAF <b>122.9</b>
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CATEGORY	A	B	C	D
LNVA MDA	1700-1	405 (500-1)	1700-1¼ 405 (500-1¼)	NA
CIRCLING	1760-1	465 (500-1)	1760-1½ 465 (500-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

PINE RIVER, MINNESOTA

AL-9441 (FAA)

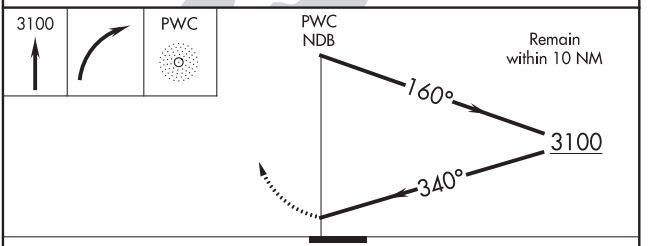
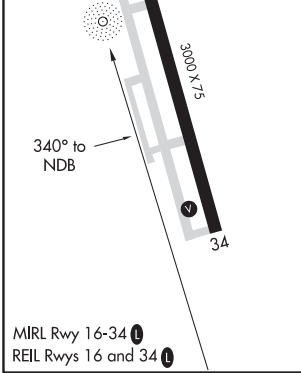
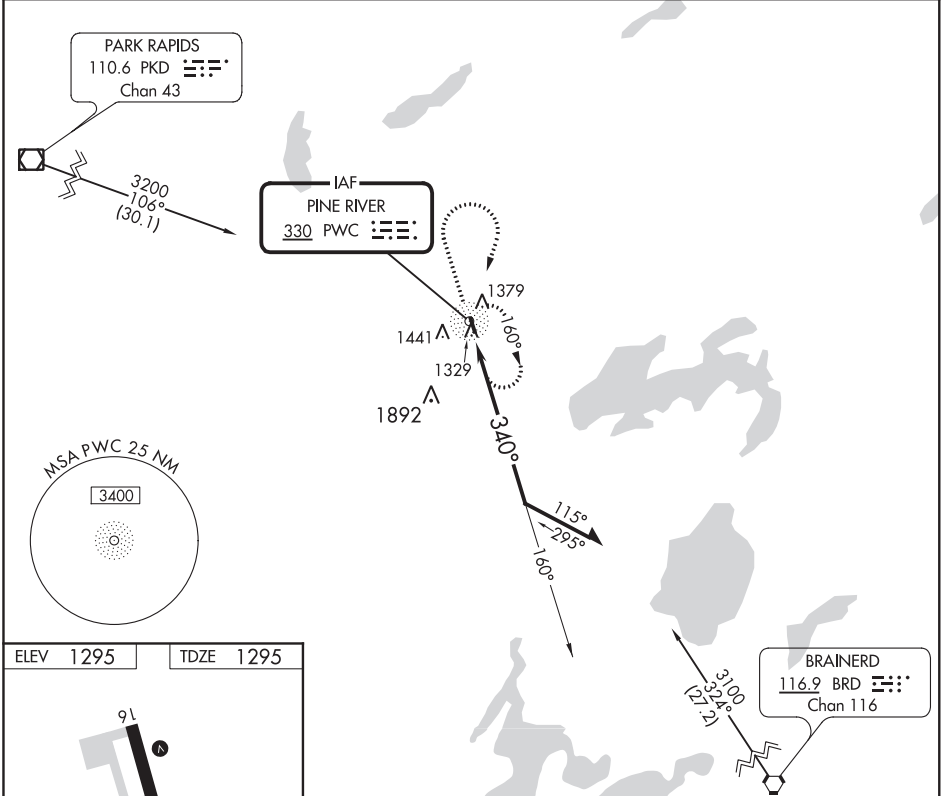
14317

NDB PWC <b>330</b>	APP CRS <b>340°</b>	Rwy Idg TDZE Apt Elev	<b>3000</b> <b>1295</b> <b>1295</b>
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**NDB RWY 34**  
PINE RIVER RGNL (PWC)

**NA** MISSED APPROACH: Climb to 3100 then right turn direct PWC NDB and hold.

ASOS-3 <b>118.525</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	CTAF <b>122.9</b>
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CATEGORY	A	B	C	D
S-34	2060-1 765 (800-1)	2060-1¼ 765 (800-1¼)	2060-2¼ 765 (800-2¼)	NA
CIRCLING	2060-1 765 (800-1)	2060-1¼ 765 (800-1¼)	2060-2¼ 765 (800-2¼)	NA

PINE RIVER, MINNESOTA  
Amdt 1 30NOV00

46°43'N-94°23'W

PINE RIVER RGNL (PWC)  
**NDB RWY 34**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

APP CRS	Rwy Idg	<b>3297</b>
<b>147°</b>	TDZE	<b>1082</b>
	Apt Elev	<b>1082</b>

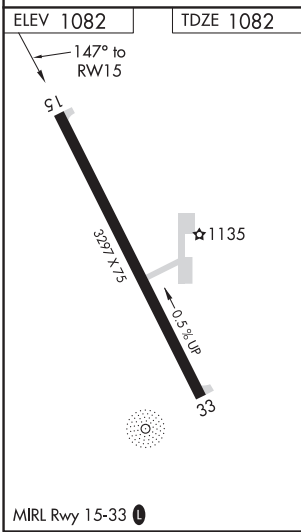
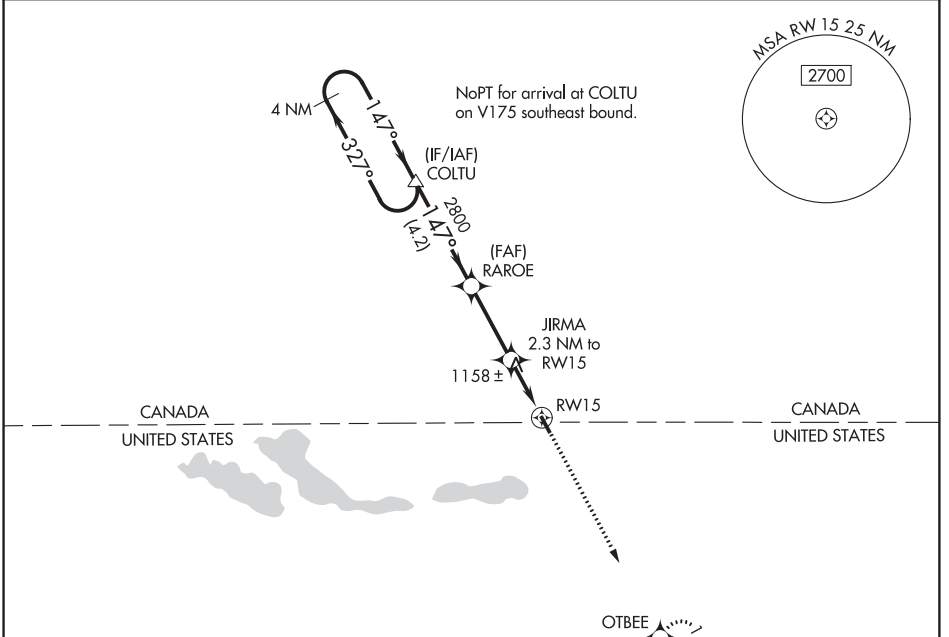
# RNAV (GPS) RWY 15

PINEY PINECREEK BORDER (48Y)

**NA** Use Roseau altimeter setting; when not received, use Warroad altimeter setting and increase all MDA 40 feet. DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA.

MISSED APPROACH: Climb to 3000 direct OTBEE and hold.

MINNEAPOLIS CENTER <b>134.75 251.1</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1082	TDZE 1082		
4 NM Holding Pattern	COLTU	3000	OTBEE
3700	2800	1840	
4.2 NM	3 NM	2.3 NM	
CATEGORY	A	B	C
LNAV MDA	1460-1	378 (400-1)	NA
CIRCLING	1500-1 418 (500-1)	1540-1 458 (500-1)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

APP CRS <b>327°</b>	Rwy Idg <b>3297</b>
	TDZE <b>1081</b>
	Apt Elev <b>1082</b>

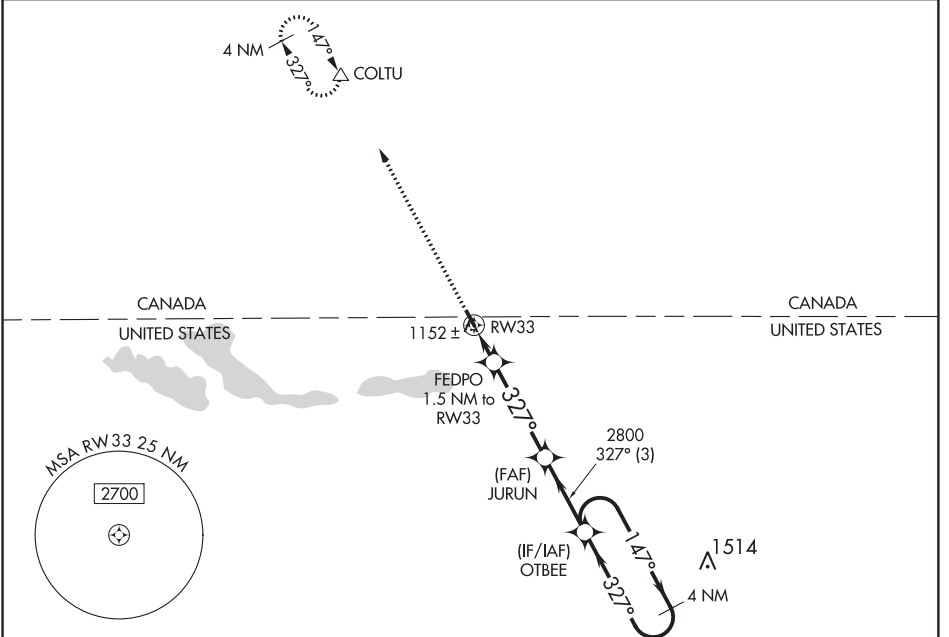
# RNAV (GPS) RWY 33

PINEY PINECREEK BORDER (48Y)

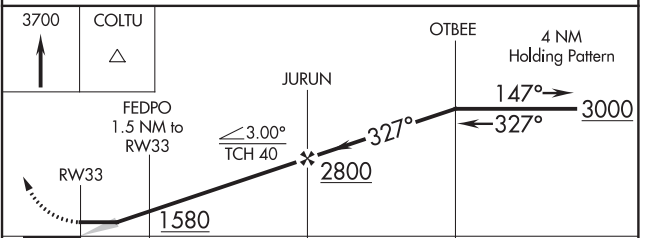
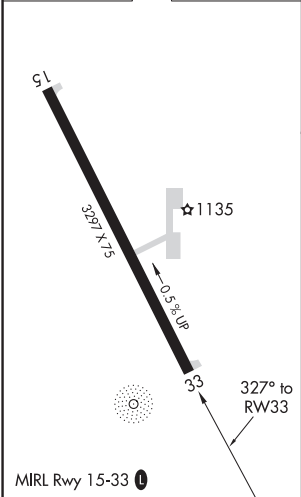
**NA** Use Roseau altimeter setting; when not received, use Warroad altimeter setting and increase all MDA 40 feet. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3700 direct COLTU and hold.

MINNEAPOLIS CENTER <b>134.75 251.1</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1082	TDZE 1081
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CATEGORY	A	B	C	D
LNAV MDA	1440-1	359 (400-1)		NA
CIRCLING	1500-1 418 (500-1)	1540-1 458 (500-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



NDB PFT <b>342</b>	APP CRS <b>317°</b>	Rwy Idg TDZE Apt Elev <b>3297</b> <b>1081</b> <b>1082</b>
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# NDB RWY 33

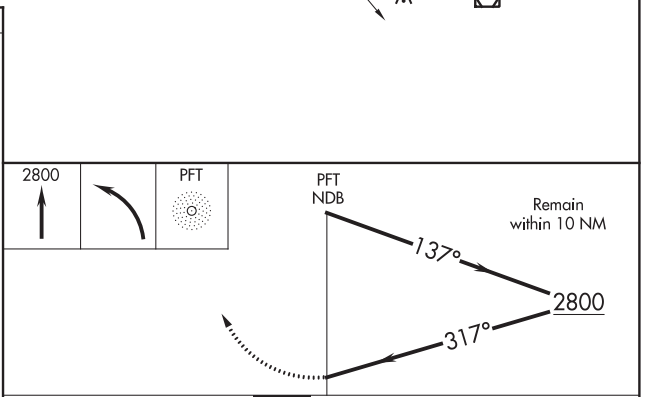
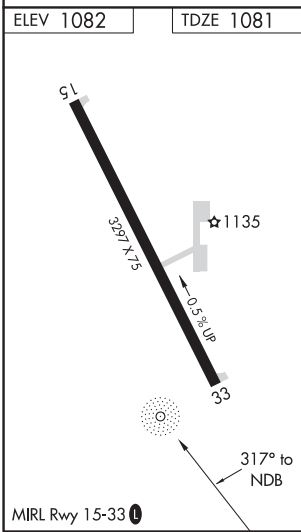
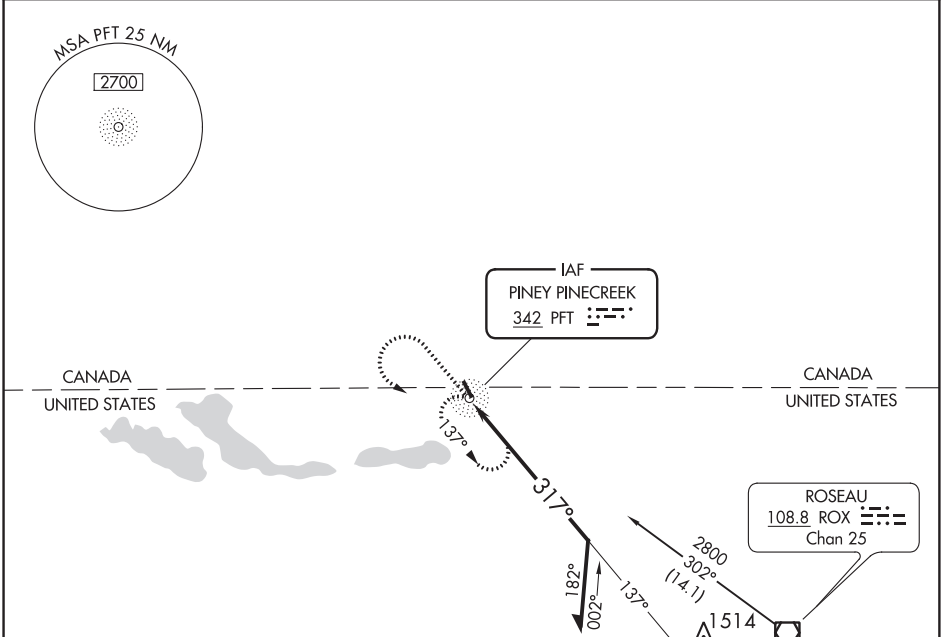
PINEY PINECREEK BORDER (48Y)

**NA** Use Roseau altimeter setting; when not received, use Warroad altimeter setting and increase all MDA 20 feet.

MISSED APPROACH: Climb to 2800 then left turn direct PFT NDB and hold.

MINNEAPOLIS CENTER **134.75 251.1**

UNICOM **122.8 (CTAF)**



CATEGORY	A	B	C	D
S-33	1700-1	619 (700-1)		NA
CIRCLING	1700-1	618 (700-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

PIPESTONE, MINNESOTA

AL-5688 (FAA)

16119

WAAS CH <b>40431</b> <b>W18A</b>	APP CRS <b>181°</b>	Rwy Idg TDZE Apt Elev	<b>4306</b> <b>1737</b> <b>1737</b>
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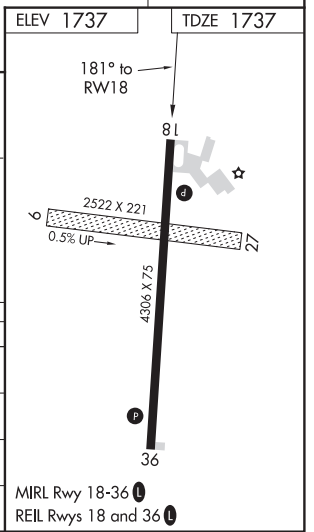
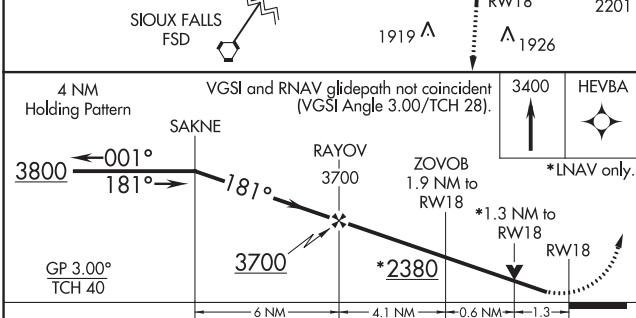
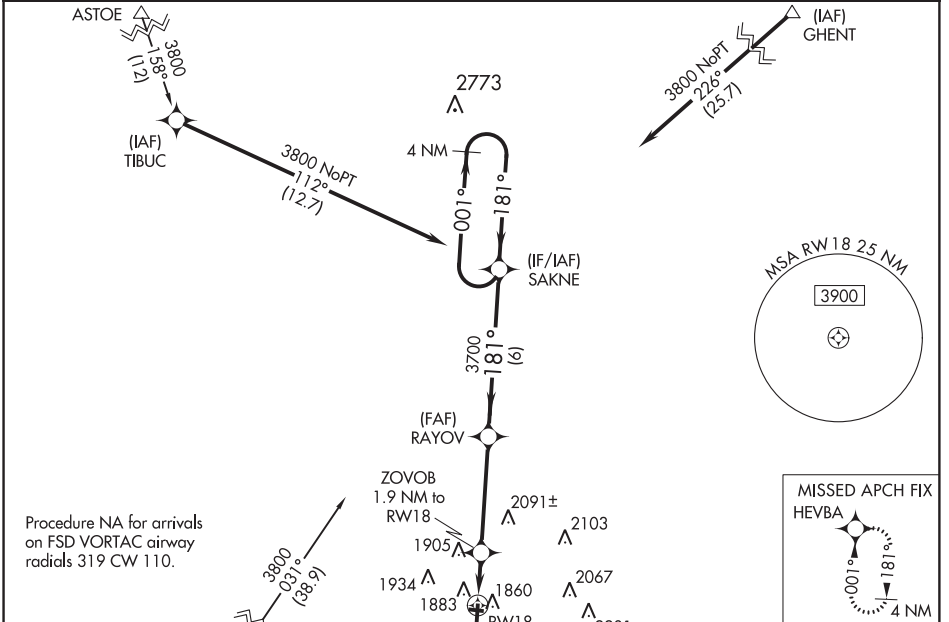
# RNAV (GPS) RWY 18

PIPESTONE MUNI (PQN)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below 18°C (0°F) or above 54°C (130°F). DME/DME RNP -0.3 NA. When local climeter setting not received, use Slayton altimeter setting and increase all DA 68 feet and all MDA 80 feet; increase LPV all Cats, LNAV/VNAV all Cats, and Circling Cat C visibility ¼ mile; increase LNAV Cat C visibility ½ mile. Helicopter visibility reduction below ¾ SM NA. Baro-VNAV and VDP NA with Slayton altimeter setting. Circling NA to Rwy's 9 and 27.

**MISSED APPROACH:** Climb to 3400 direct HEVBA and hold.

AWOS-3 <b>118.375</b>	MINNEAPOLIS CENTER <b>132.05 317.4</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LPV DA	1987-1	250 (300-1)		NA
LNAV/VNAV DA	2034-1	297 (300-1)		NA
LNAV MDA	2180-1	443 (500-1)	2180-1 3/8 443 (500-1 3/8)	NA
CIRCLING	2200-1	463 (500-1)	2280-1 1/2 543 (600-1 1/2)	NA

PIPESTONE, MINNESOTA  
Amdt 1B 28APR16

43°59'N-96°18'W

# RNAV (GPS) RWY 18

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>69332</b> <b>W36A</b>	APP CRS <b>001°</b>	Rwy Idg TDZE Apt Elev	<b>4306</b> <b>1734</b> <b>1737</b>
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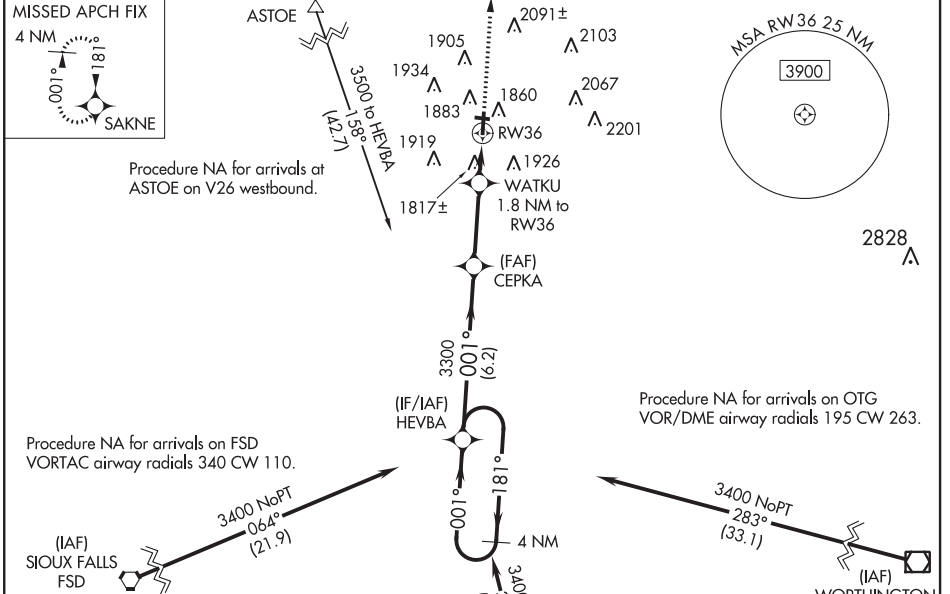
# RNAV (GPS) RWY 36

PIPESTONE MUNI (PQN)

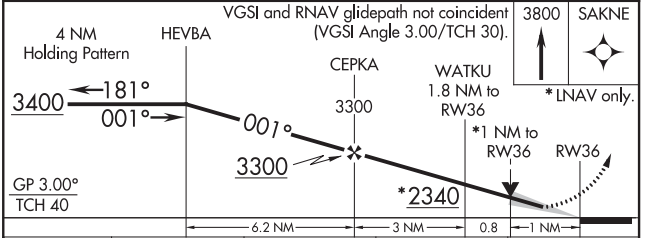
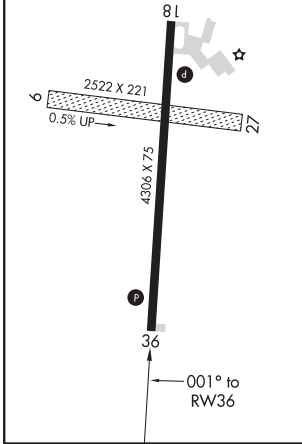
**⚠** Circling NA to Rwy's 9 and 27. For uncompensated Baro-VNAV systems, LNAV-VNAV NA below -18°C (0°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Slayton altimeter setting and increase all DA 68 feet and all MDA 80 feet; increase LPV all Cats visibility 1/8 mile and LNAV/VNAV all Cats, LNAV Cat C and Circling Cat C visibility 1/4 mile. Baro-VNAV and VDP NA with Slayton altimeter setting.

**MISSED APPROACH:**  
Climb to 3800 direct SAKNE and hold.

AWOS-3 <b>118.375</b>	MINNEAPOLIS CENTER <b>132.05 317.4</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1737	TDZE 1734
MIRL Rwy 18-36	
REIL Rwy 18 and 36	



CATEGORY	A	B	C	D
LPV DA		1934-1	200 (200-1)	NA
LNAV/ VNAV DA		1984-1	250 (300-1)	NA
LNAV MDA		2080-1	346 (400-1)	NA
CIRCLING	2200-1	463 (500-1)	2280-1½ 543 (600-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>65829</b> <b>W11A</b>	APP CRS <b>106°</b>	Rwy Idg TDZE Apt Elev	<b>4001</b> <b>1277</b> <b>1277</b>
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# RNAV (GPS) RWY 11

FILLMORE COUNTY (FKA)

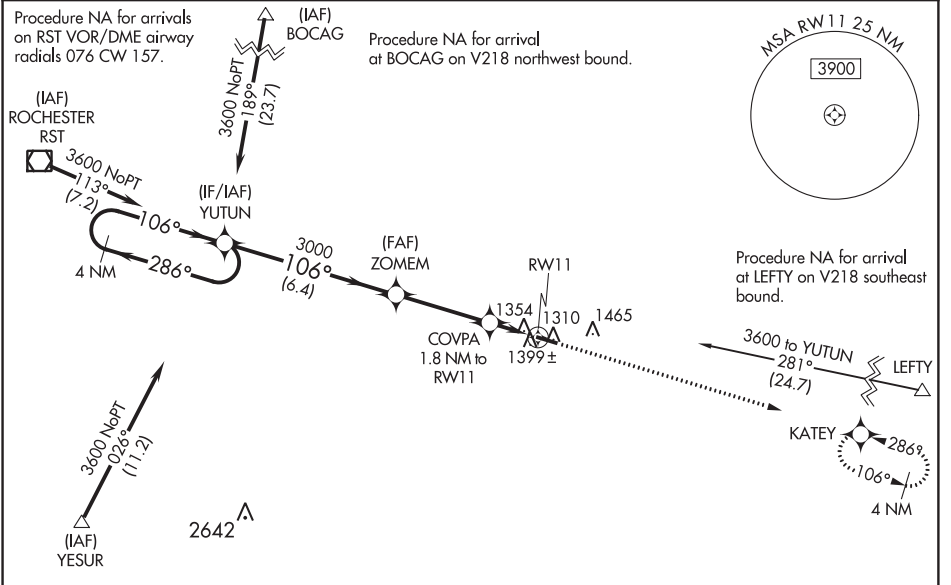
**⚠** DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM not authorized. Baro-VNAV and VDP NA when using Rochester Intl altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). When local altimeter setting not received, use Rochester Intl altimeter setting and increase all DA 51 feet and all MDA 60 feet and increase LPV and LNAV/VNAV all Cats visibility 1/8 mile and LNAV and Circling Cat C visibility 1/4 mile.

**MISSED APPROACH:** Climb to 3200 direct KATEY and hold.

AWOS-3  
**118.55**

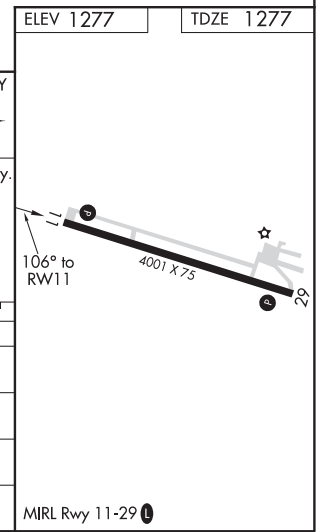
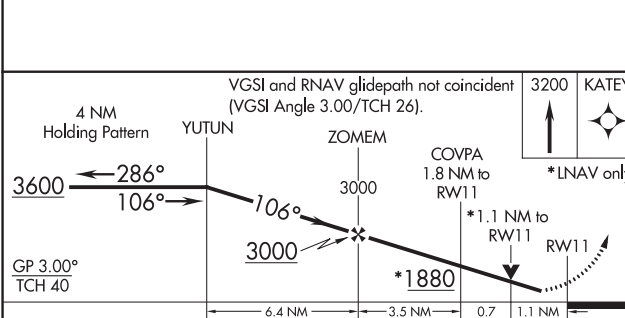
ROCHESTER APP CON\*  
**119.8 251.125**

CTAF  
**122.9**



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D
LPV DA	1527-7/8	250 (300-7/8)		NA
LNAV/VNAV DA	1573-1	296 (300-1)		NA
LNAV MDA	1660-1	383 (400-1)	1660-1 1/8 383 (400-1 1/8)	NA
CIRCLING	1700-1 423 (500-1)	1820-1 543 (600-1)	1820-1 1/2 543 (600-1 1/2)	NA

WAAS CH <b>70529</b> <b>W29A</b>	APP CRS <b>286°</b>	Rwy Idg TDZE Apt Elev	<b>4001</b> <b>1277</b> <b>1277</b>
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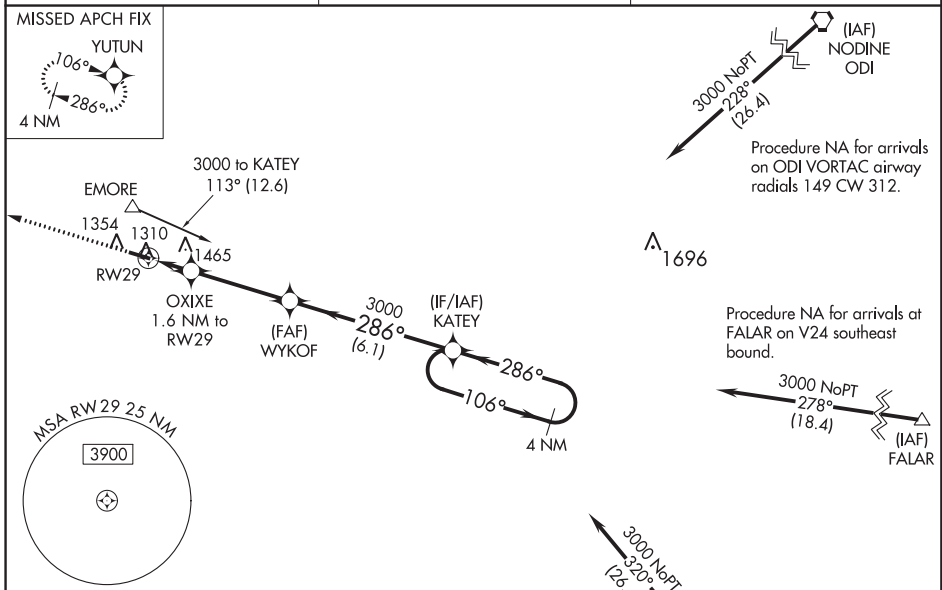
# RNAV (GPS) RWY 29

FILLMORE COUNTY (FKA)

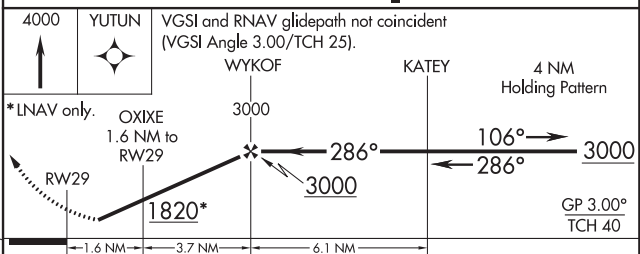
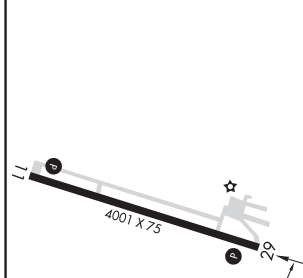
**⚠** DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA. Baro-VNAV NA when using Rochester Intl altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). When local altimeter setting not received, use Rochester Intl altimeter setting and increase all DA 51 feet and all MDA 60 feet and increase LNAV/VNAV all Cats and LNAV Cat C visibility 1/8 mile and Circling Cat C visibility 1/4 mile.

**⚠** MISSED APPROACH: Climb to 4000 direct YUTUN and hold

AWOS-3 <b>118.55</b>	ROCHESTER APP CON* <b>119.8 251.125</b>	CTAF <b>122.9</b>
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ELEV 1277	TDZE 1277
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	A	B	C	D
CATEGORY				
LPV DA		1527-1 250 (300-1)		NA
LNAV/VNAV DA		1550-1 273 (300-1)		NA
LNAV MDA	1700-1	423 (500-1)	1700-1 1/4 423 (500-1 1/4)	NA
CIRCLING	1700-1 423 (500-1)	1820-1 543 (600-1)	1820-1 1/2 543 (600-1 1/2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

PRINCETON, MINNESOTA

AL-9091 (FAA)

15344

APP CRS	Rwy Idg	<b>3900</b>
<b>159°</b>	TDZE	<b>979</b>
	Apt Elev	<b>979</b>

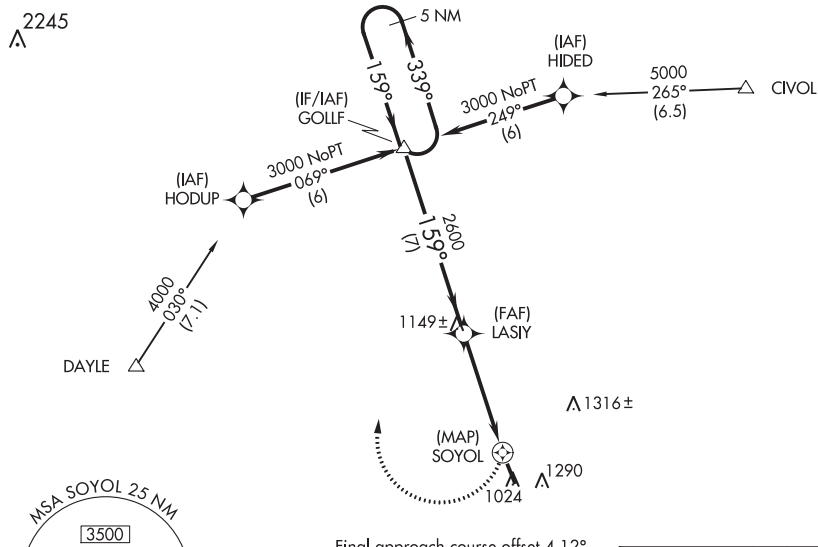
# RNAV (GPS) RWY 15

PRINCETON MUNI (PNM)

<p><b>▽</b> When VGSI inoperative, procedure NA at night. DME/DME RNP-0.3 NA.</p> <p><b>⊗</b> -34°C/-29°F Circling Rwy 33 NA at night.</p>	<p>MISSED APPROACH: Climbing right turn to 3000 direct GOLLF and hold.</p>
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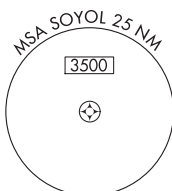
<p>AWOS-3 <b>119.025</b></p>	<p>MINNEAPOLIS CENTER <b>121.05 397.9</b></p>	<p>PRINCETON RADIO <b>121.5 122.2</b> <b>243.0 255.4</b></p>	<p>UNICOM <b>123.0 (CTAF) 0</b></p>
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Procedure NA for arrivals on V413 southbound.



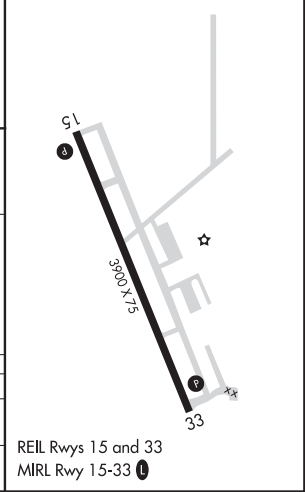
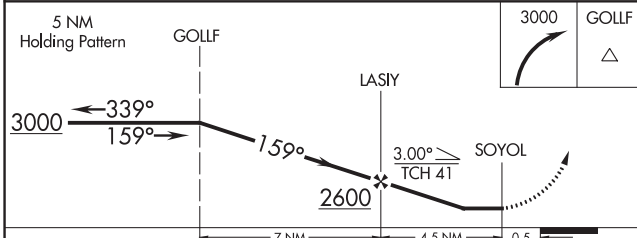
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



Final approach course offset 4.12°

ELEV 979	TDZE 979
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CATEGORY	A	B	C	D
LNVA MDA	1380-1	401 (500-1)	1380-1¼ 401 (500-1¼)	NA
CIRCLING	1640-1	661 (700-1)	1640-1¾ 661 (700-1¾)	NA

PRINCETON, MINNESOTA  
Orig-A 25JUN15

45°34'N-93°36'W

# PRINCETON MUNI (PNM) RNAV (GPS) RWY 15

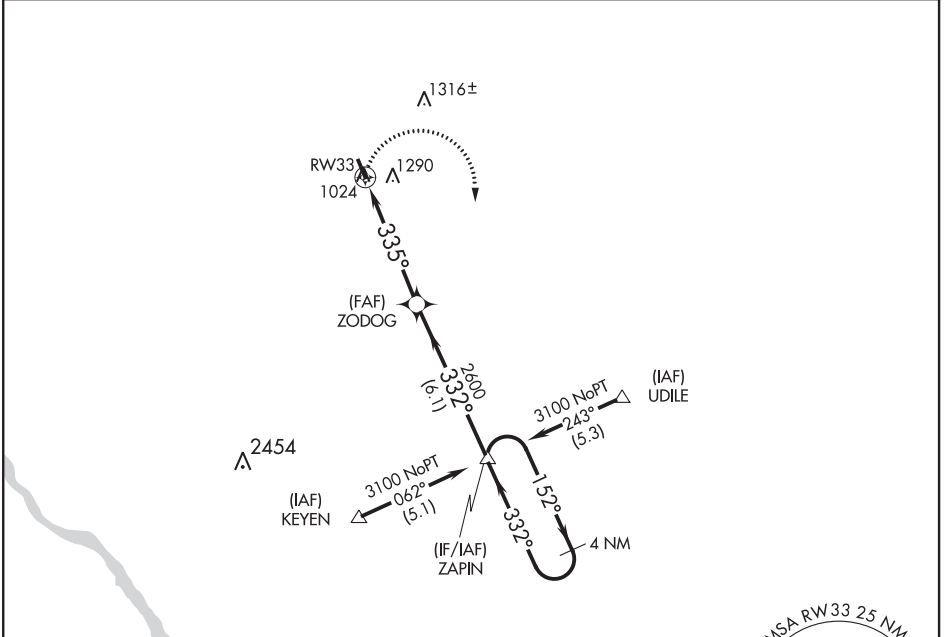
APP CRS <b>335°</b>	Rwy Idg TDZE Apt Elev	<b>3900</b> <b>979</b> <b>979</b>
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# RNAV (GPS) RWY 33

PRINCETON MUNI (PNM)

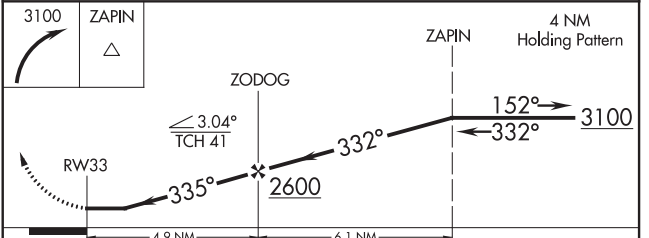
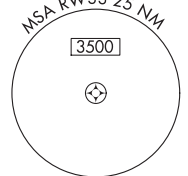
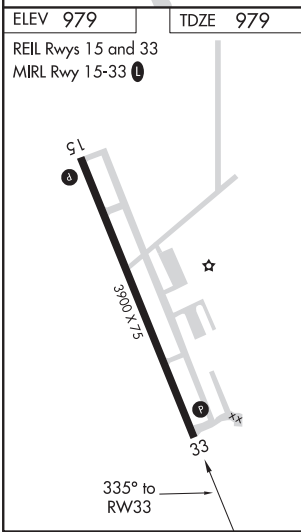
-34°C/-29°F	Procedure NA at night. DME/DME RNP- 0.3 NA.	MISSED APPROACH: Climbing right turn to 3100 direct ZAPIN and hold.
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AWOS-3 <b>119.025</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	PRINCETON RADIO <b>121.5 122.2</b> <b>243.0 255.4</b>	UNICOM <b>123.0</b> (CTAF)
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D
LNAV MDA	1500-1	521 (600-1)	1500-1½ 521 (600-1½)	NA
CIRCLING	1640-1	661 (700-1)	1640-1¾ 661 (700-1¾)	NA

PRINCETON, MINNESOTA

AL-9091 (FAA)

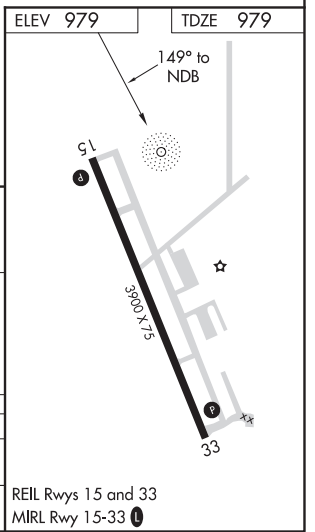
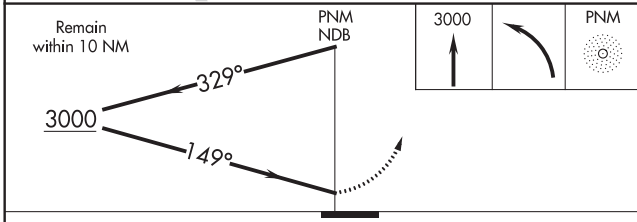
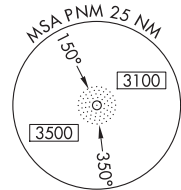
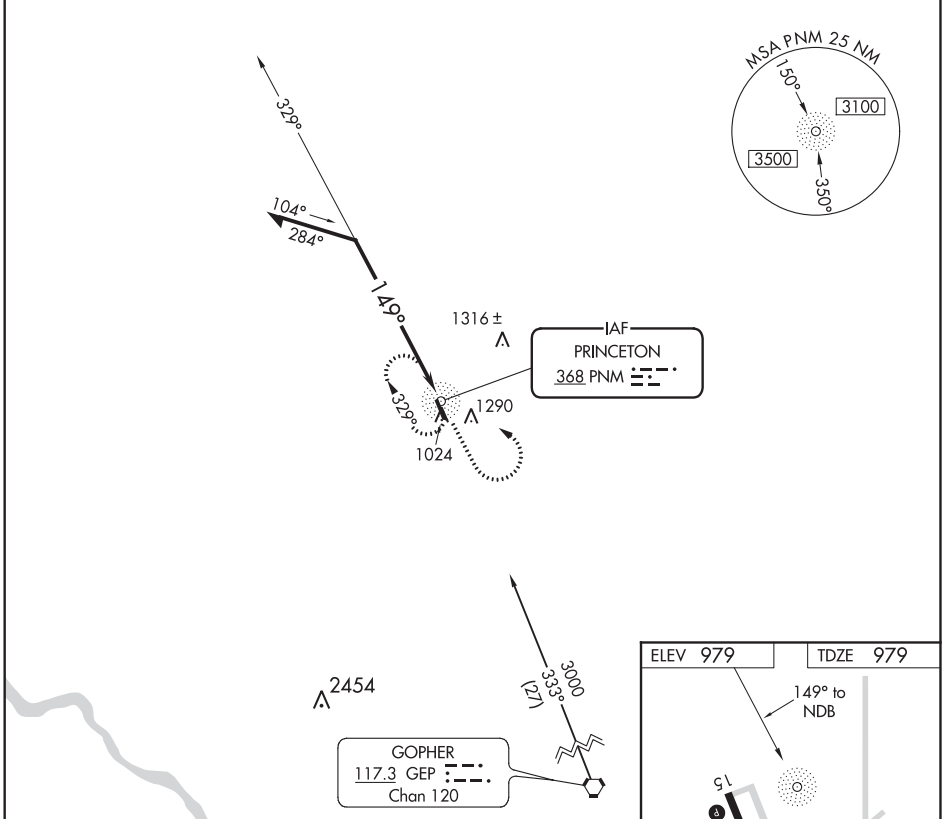
15344

NDB PNM <b>368</b>	APP CRS <b>149°</b>	Rwy Idg TDZE Apt Elev	<b>3900</b> <b>979</b> <b>979</b>
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**NDB RWY 15**  
PRINCETON MUNI (PNM)

-34°C/-29°F		MISSED APPROACH: Climb to 3000 then left turn direct PNM NDB and hold.	
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AWOS-3 <b>119.025</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	PRINCETON RADIO <b>121.5 122.2</b> <b>243.0 255.4</b>	UNICOM <b>123.0</b> (CTAF)
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CATEGORY	A	B	C	D
S-15	1560-1	581 (600-1)	1560-1½ 581 (600-1½)	NA
CIRCLING	1640-1	661 (700-1)	1640-1¾ 661 (700-1¾)	NA

PRINCETON, MINNESOTA  
Amdt 1 12MAY05

45°34'N-93°36'W

PRINCETON MUNI (PNM)  
**NDB RWY 15**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017




LOC/DME I-RAP <b>109.3</b> Chan 30	APP CRS <b>324°</b>	Rwy Idg TDZE Apt Elev	<b>8701</b> <b>3160</b> <b>3204</b>
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# ILS or LOC RWY 32

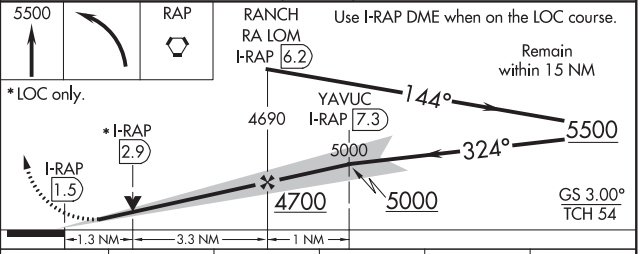
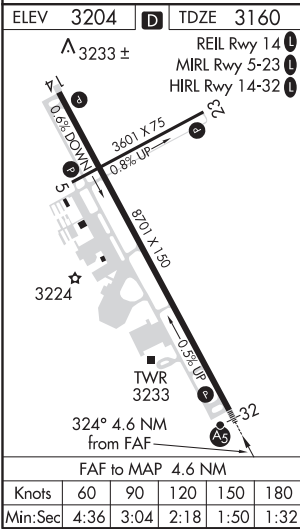
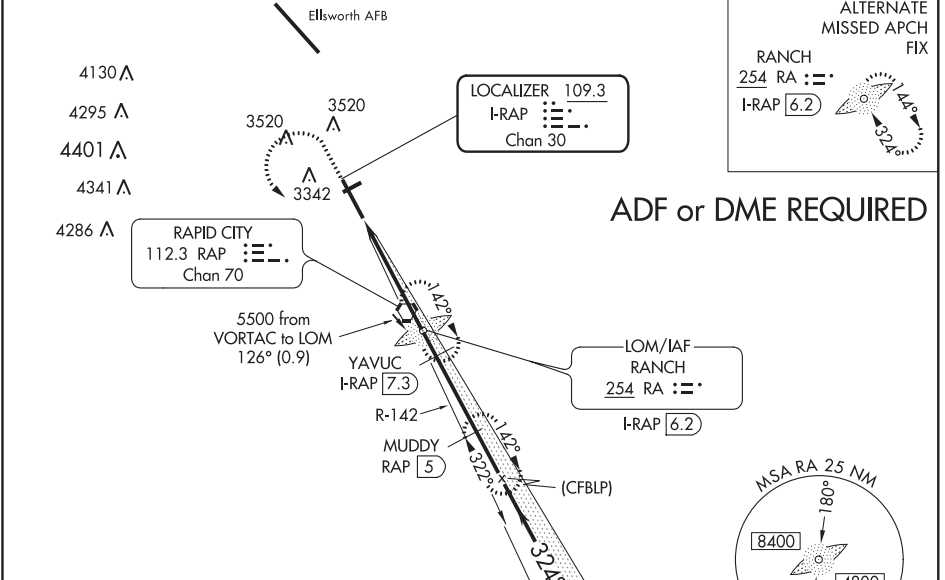
RAPID CITY RGNL (RAP)

**V** VDP NA with Ellsworth AFB altimeter setting. When local altimeter setting not received, use Ellsworth altimeter setting, increase all DA 25 feet, and all MDA 40 feet, increase S-LOC Cat C/D/E visibility to RVR 5000, and Circling Cat C/D visibility 1/4 mile. For inop MALS/R, increase S-ILS 32 Cat E visibility to RVR 4000 and S-LOC 32 Cat E visibility to 1 1/2 . Night landing: Rwy 5 NA. ILS glideslope unusable for coupled approaches below 3360.

**MALS/R** 

**MISSED APPROACH:** Climb to 5500 then left turn direct RAP VORTAC and hold. (TACAN aircraft continue on RAP VORTAC R-142 to MUDDY/RAP 5 DME and hold SE, RT, 322° inbound.)

ASOS <b>118,525</b>	ELLSWORTH APP CON * <b>119.5 259.1</b>	RAPID CITY TOWER * <b>125,85 (CTAF) 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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CATEGORY	A	B	C	D	E
S-ILS 32	3360/24 200 (200-1/2)				
S-LOC 32	3620/24	460 (500-1/2)	3620/45	460 (500-7/8)	
<b>C</b> CIRCLING	3740-1 536 (600-1)	3840-1 636 (700-1)	3840-1 3/4 636 (700-1 3/4)	3940-2 1/4 736 (800-2 1/4)	3960-2 3/4 756 (800-2 3/4)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>60919</b> <b>W14A</b>	APP CRS <b>144°</b>	Rwy Idg TDZE Apt Elev	<b>8701</b> <b>3191</b> <b>3204</b>
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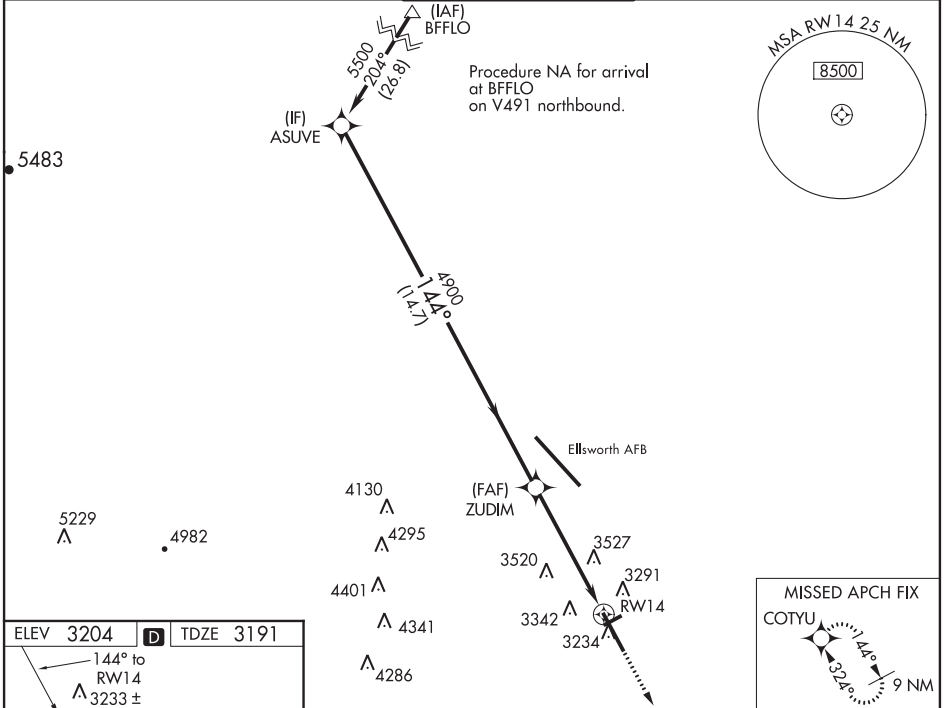
# RNAV (GPS) RWY 14

RAPID CITY RGNL (R.A.P)

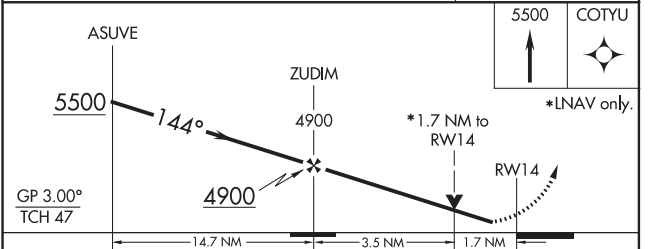
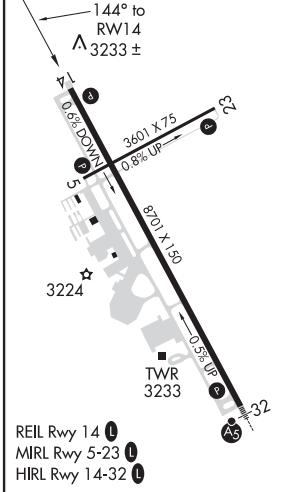
**⚠** Circling to Rwy 5-23 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -1.4°C (7°F) or above 53°C (128°F). When local altimeter setting not received, use Ellsworth AFB altimeter setting and increase all DA 26 feet and all MDA 40 feet and increase Circling Cats C/D visibility ¼. VDP NA with Ellsworth AFB altimeter setting. Baro-VNAV NA when using Ellsworth AFB altimeter setting. Helicopter visibility reduction below 1 SM NA. DME/DME RNP-0.3 NA.

**⚠** MISSED APPROACH: Climb to 5500 direct COTUY and hold.

ASOS <b>118.525</b>	ELLSWORTH APP CON <b>119.5 259.1</b>	RAPID CITY TOWER* <b>125.85 (CTAF) 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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ELEV 3204	<b>D</b>	TDZE 3191
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CATEGORY	A	B	C	D	E
LPV DA	3450-1 259 (300-1)				
LNAV/VNAV DA	3871-2½ 680 (700-2½)				
LNAV MDA	3780-1	589 (600-1)	3780-1¾		589 (600-1¾)
CIRCLING	3780-1 576 (600-1)	3840-1 636 (700-1)	3840-1¾ 636 (700-1¾)	3840-2 636 (700-2)	3960-2¾ 756 (800-2¾)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>40433</b> <b>W23A</b>	APP CRS <b>234°</b>	Rwy Idg TDZE Apt Elev	<b>3601</b> <b>3204</b> <b>3204</b>
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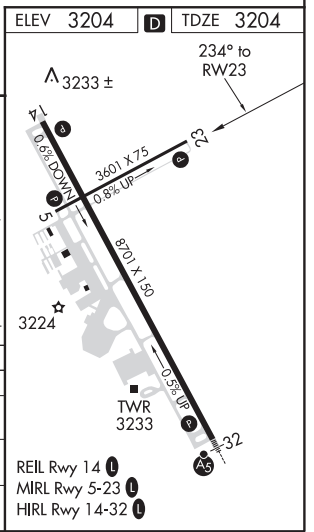
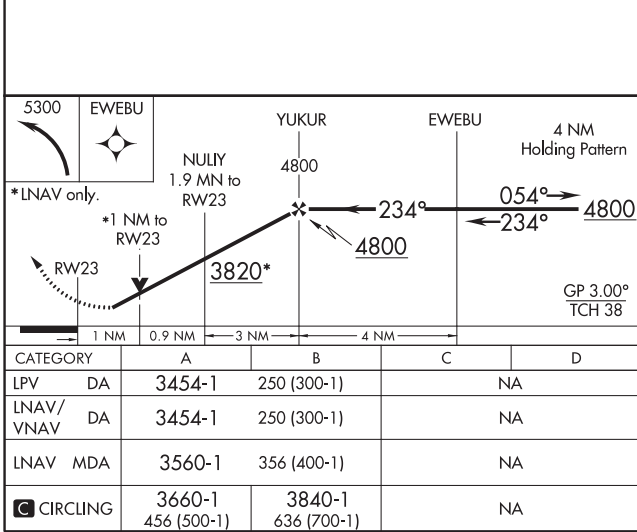
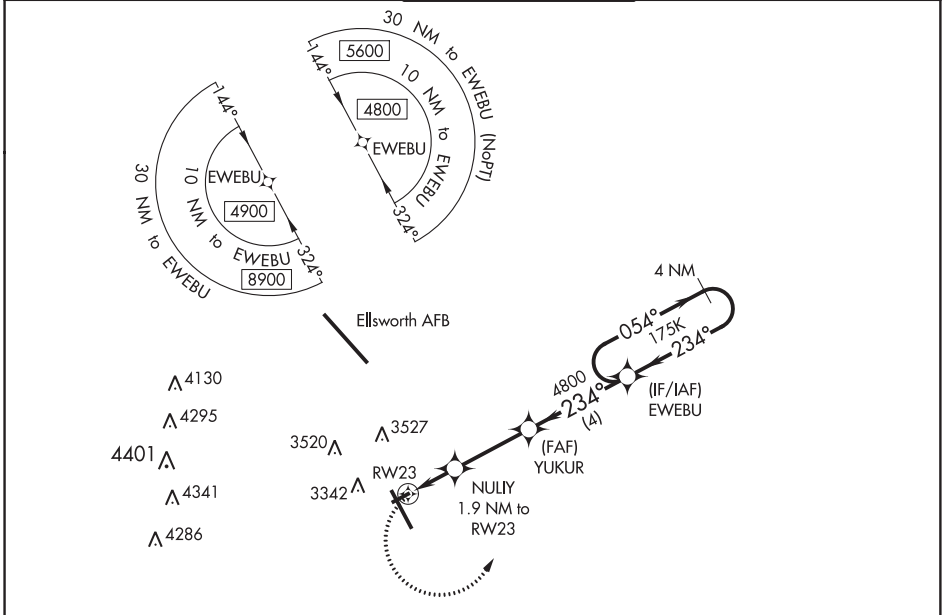
# RNAV (GPS) RWY 23

RAPID CITY RGNL (R.A.P)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -21 °C (-5°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Ellsworth AFB altimeter setting and increase all DA 25 feet and all MDA 40 feet. VDP and Baro-VNAV NA when using Ellsworth AFB altimeter setting.

**MISSED APPROACH:** Climbing left turn to 5300 direct EWEBU and hold.

ASOS <b>118.525</b>	ELLSWORTH APP CON <b>119.5 259.1</b>	<b>RAPID CITY TOWER*</b> <b>125.85 (CTAF) 0 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017


NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>93717</b> <b>W32A</b>	APP CRS <b>324°</b>	Rwy Idg TDZE Apt Elev	<b>8701</b> <b>3160</b> <b>3204</b>
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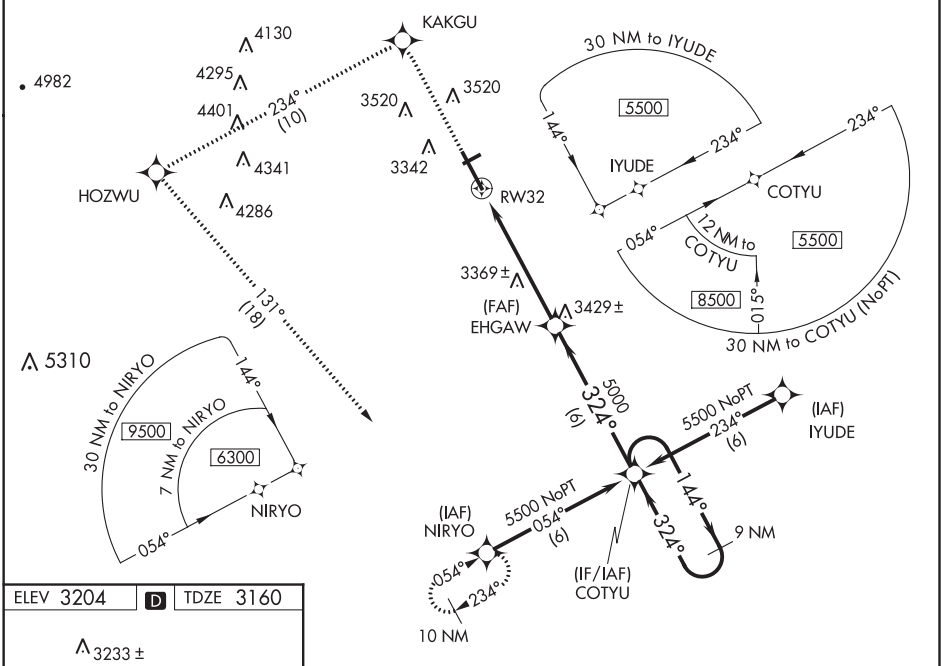
# RNAV (GPS) RWY 32

RAPID CITY RGNL (R.A.P.)

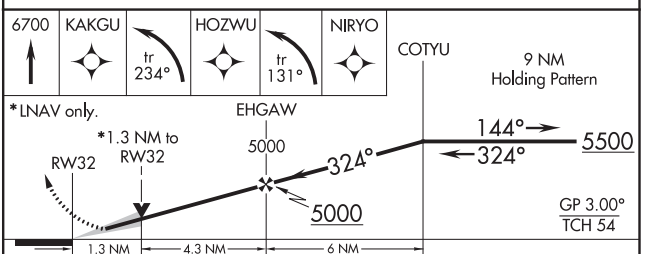
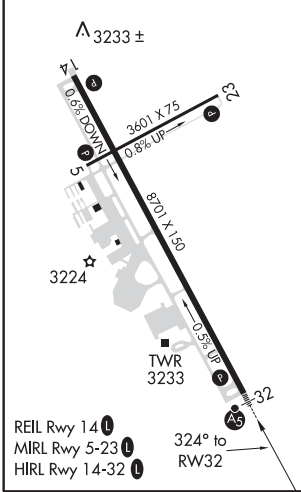
**⚠** Circling to Rwy 5-23 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -21°C (-5°F) or above 42°C (107°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Ellsworth altimeter setting and increase all DA 26 feet and all MDA 40 feet. Baro-VNAV and VDP NA when using Ellsworth altimeter setting. For inoperative MALSR, increase LPV Cat E visibility to RVR 4000, LNAV/VNAV Cat D and E visibility to RVR 5000 and LNAV Cat E visibility to 1½. For inoperative MALSR, increase LNAV Cats C/D/E visibility to 1¾. For inoperative MALSR, when using Ellsworth altimeter setting, increase LNAV Cats A and B visibility to 1, Cats C/D/E to 1¾ and VNAV visibility all Cats to RVR 4500.





**MALSR**  MISSED APPROACH: Climb to 6700 direct KAKGU and left turn on track 234° to HOZWU and left turn on track 131° to NIRYO and hold.

ASOS <b>118.525</b>	ELLSWORTH APP CON <b>119.5 259.1</b>	RAPID CITY TOWER ★ <b>125.85 (CTAF) 125.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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ELEV 3204	<b>D</b>	TDZE 3160
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6700 KAKGU	HOZWU	NIROYO	COTYU	9 NM Holding Pattern	
					
* LNAV only.					
EHGAW					
RWY32					
1.3 NM					
4.3 NM					
6 NM					
5000					
324°					
144°					
5500					
GP 3.00°					
TCH 54					
CATEGORY	A	B	C	D	E
LPV DA	3360/24 200 (200-½)				
LNAV/VNAV DA	3410/24 250 (300-½)		3410/40 250 (300-¾)		
LNAV MDA	3620/24	460 (500-½)	3620/40	3620/50	460 (500-1)
		460 (500-¾)			
<b>C</b> CIRCLING	3660-1	3840-1	3840-1¾	3840-2	3960-2¾
	456 (500-1)	636 (700-1)	636 (700-1¾)	636 (700-2)	756 (800-2¾)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VORTAC RAP <b>112.3</b> Chan <b>70</b>	APP CRS <b>141°</b>	Rwy Idg <b>8701</b> TDZE <b>3191</b> Apt Elev <b>3204</b>
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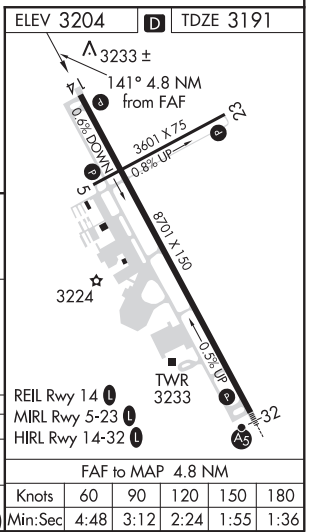
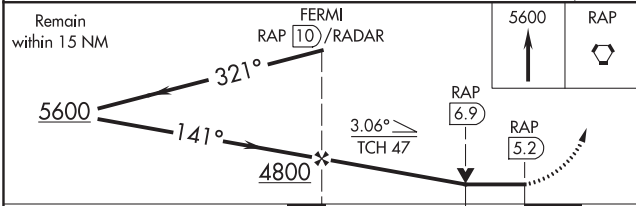
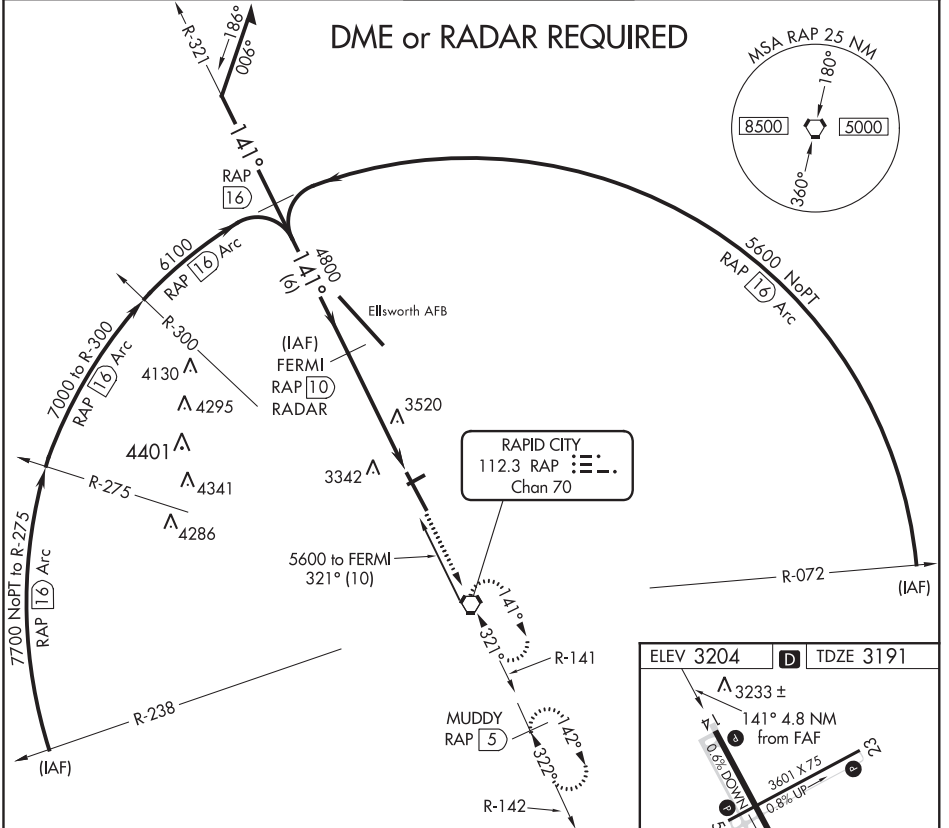
# VOR or TACAN RWY 14

RAPID CITY RGNL (R.A.P)

**⚠** If local altimeter setting not received, use Ellsworth altimeter setting and increase all MDAs 40 feet.  
**⚠** VDP NA when using Ellsworth altimeter setting.

MISSED APPROACH: Climb to 5600 direct RAP VORTAC and hold, continue climb-in-hold to 5600. (TACAN aircraft continue via RAP R-142 to MUDDY 5 DME and hold SE, RT, 322° inbound.)

ASOS <b>118.525</b>	ELLSWORTH APP CON <b>119.5 259.1</b>	RAPID CITY TOWER* <b>125.85 (CTAF) 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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CATEGORY	A	B	C	D	E
S-14	3780-1	589 (600-1)	3780-1½ 589 (600-1½)	3780-1¾ 589 (600-1¾)	3780-2 589 (600-2)
<b>C</b> CIRCLING	3780-1 576 (600-1)	3840-1 636 (700-1)	3840-1¾ 636 (700-1¾)	3840-2 636 (700-2)	3960-2¾ 756 (800-2¾)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VORTAC RAP <b>112.3</b> Chan <b>70</b>	APP CRS <b>322°</b>	Rwy Idg TDZE Apt Elev	<b>8701</b> <b>3160</b> <b>3204</b>
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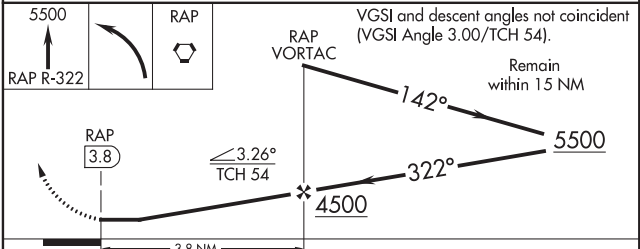
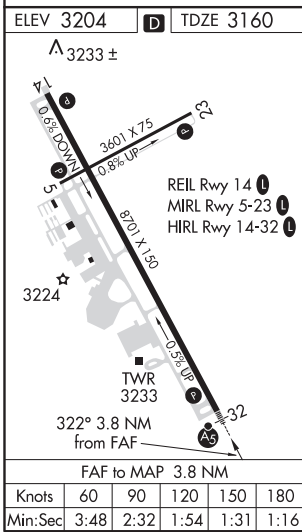
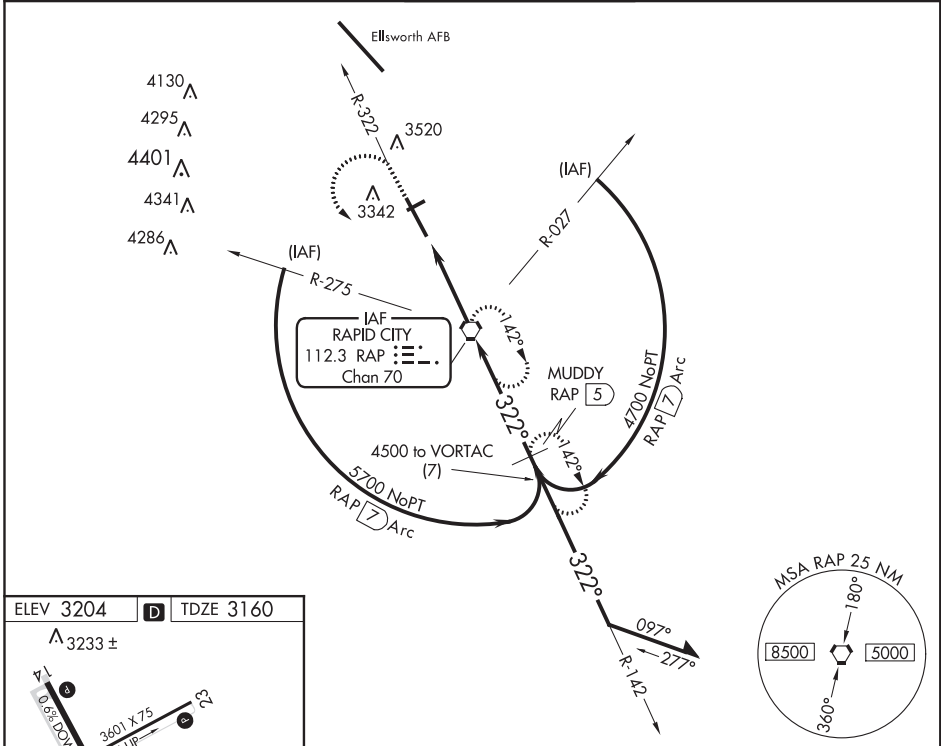
# VOR or TACAN RWY 32

RAPID CITY RGNL (R.A.P.)

**⚠** For inoperative MALSRL increase S-32 visibility all Cats to 1. When local altimeter setting not received, use Ellsworth altimeter setting and increase all MDA 40 ft and S-32 visibility all Cats to RVR 4500. For inoperative MALSRL when using Ellsworth altimeter setting, increase visibility all Cats to 1.

**MALSRL** MISSED APPROACH: Climb to 5500 via RAP R-322 then left turn direct RAP VORTAC and hold. (TACAN aircraft continue via RAP R-142 to MUDDY 5 DME and hold SE, RT, 322° inbound.)

ASOS <b>118.525</b>	ELLSWORTH APP CON <b>119.5 259.1</b>	RAPID CITY TOWER ★ <b>125.85 (CTAF) 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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CATEGORY	A	B	C	D	E
S-32	3440/40 280 (300-¾)				
<b>C</b> CIRCLING	3660-1 456 (500-1)	3840-1 636 (700-1)	3840-1¾ 636 (700-1¾)	3840-2 636 (700-2)	3960-2¾ 756 (800-2¾)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

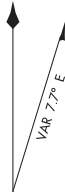
# AIRPORT DIAGRAM

RAPID CITY RGNL (R.A.P)  
RAPID CITY, SOUTH DAKOTA

ASOS  
118.525  
RAPID CITY TOWER ★  
125.85 257.8  
GND CON  
121.9

AL-877 (FAA)

3233 ±



JANUARY 2015  
ANNUAL RATE OF CHANGE  
0.1° W

FIELD  
ELEV  
3204

ELEV  
3191

144.1°

0.6% DOWN

3601 X 75

234.1°

44°03'N

GENERAL AVIATION RAMP  
HANGAR

ELEV  
3173

054.1°

30.8% UP

NON MOVEMENT  
AREA

HANGAR

GENERAL AVIATION RAMP

8701 X 150

HANGAR

3224

GENERAL AVIATION RAMP

FIRE STATION

TERMINAL

ARNG

TWR  
3233

RWY 05-23

PCN 15 F/C/X/T

S-12.5

RWY 14-32

PCN 65 R/C/W/T

S-140, D-190, 2S-175, 2D-300

324.1°

0.5% UP

44°02'N

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.  
READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

ELEV  
3143

103°04'W

103°03'W

# AIRPORT DIAGRAM

RAPID CITY, SOUTH DAKOTA  
RAPID CITY RGNL (R.A.P)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CAMP RIPLEY, MINNESOTA

# ILS or LOC/DME RWY 31

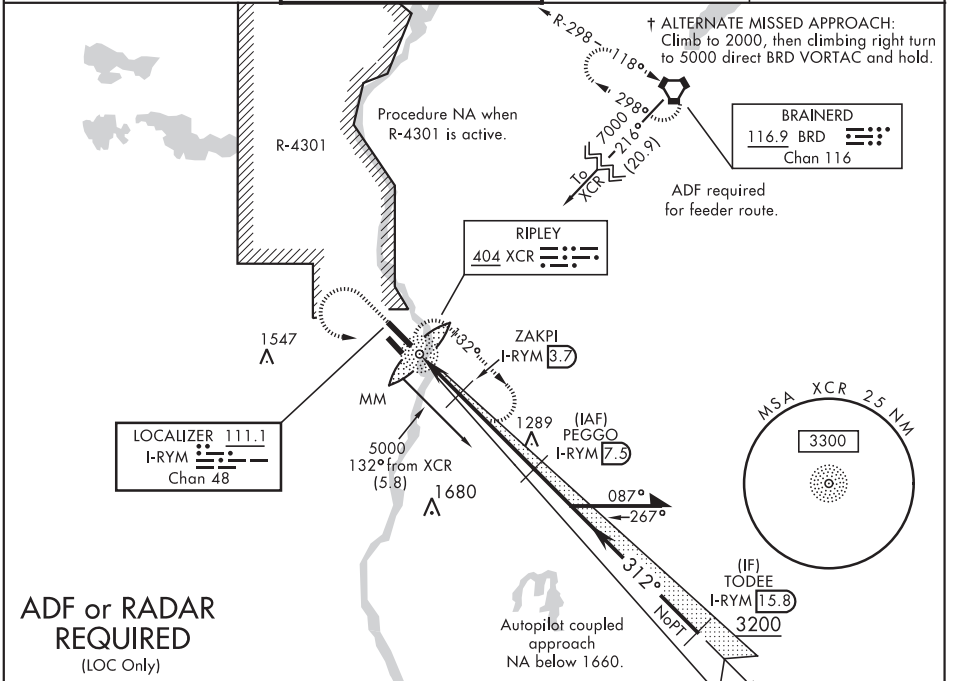
LOC I-RYM <b>111.1</b> Chan <b>48</b>	APCH CRS <b>312°</b>	Rwy Idg THRE Arpt Elev <b>6100</b> <b>1146</b> <b>1152</b>
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AL-5226 [USA]

RAY S. MILLER AAF (KRYM)

<p>▼ * When ALS inop, increase CAT D vis to 1 1/8 miles.</p> <p>▲ NA</p>	<p>MALSF <b>A4</b></p>	<p>† MISSED APPROACH: Climb to 2000, then climbing left turn to 3300 direct XCR NDB and hold. Continue climb in hold to 3300, or as directed by ATC.</p>
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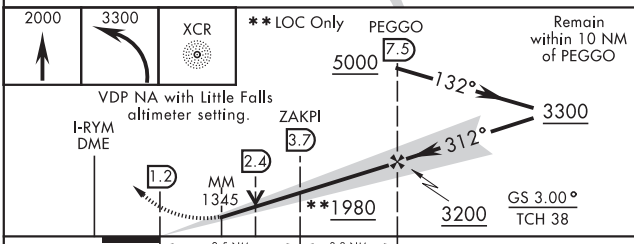
MINNEAPOLIS CENTER <b>118.05 239.0</b>	MILLER TOWER ★ <b>126.2 0 254.4 49.2</b>	CLNC DEL <b>126.2</b>	AWOS-3 <b>142.95</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

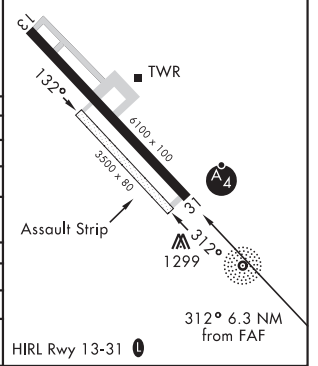
NC-1, 10 NOV 2016 to 05 JAN 2017

## ADF or RADAR REQUIRED (LOC Only)



ELEV 1152	THRE 1146
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CATEGORY	A	B	C	D
S-ILS 31	1346-3/4		200	(200-3/4)
S-LOC 31	1580-3/4	434 (500-3/4)	1580-1	434 (500-1)
CIRCLING	1640-1	1660-1	1720-1 1/2	2080-3
	488 (500-1)	508 (500-1)	568 (600-1 1/2)	928 (1000-3)
LITTLE FALLS ALTIMETER SETTING MINIMUMS				
S-ILS 31	1370-3/4		224	(300-3/4)
S-LOC 31*	1620-3/4	474 (500-3/4)	1620-1 1/8	474 (500-1 1/8)
CIRCLING	1680-1	528 (600-1)	1760-1 1/2	2120-3
			608 (700-1 1/2)	968 (1000-3)



CAMP RIPLEY, MINNESOTA  
Amdt 5 10DEC15

46°05'N-94°21'W

RAY S. MILLER AAF (KRYM)

# ILS or LOC/DME RWY 31

CAMP RIPLEY, MINNESOTA

# RNAV (GPS) RWY 13

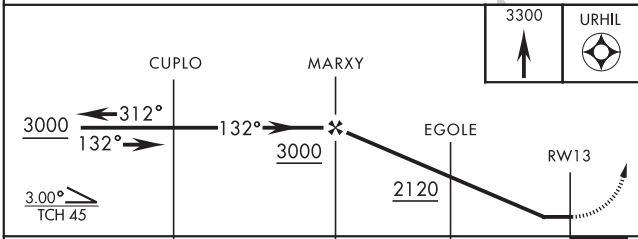
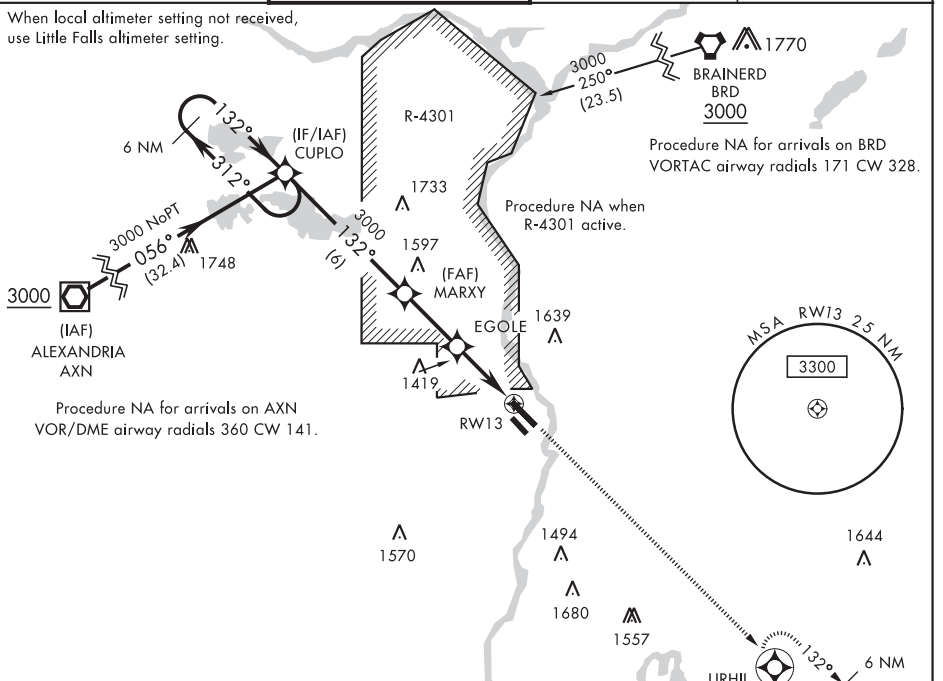
APCH CRS <b>132°</b>	Rwy Idg <b>6100</b>
	THRE <b>1152</b>
	Arpt Elev <b>1152</b>

AL-5226 [USA]

RAY S. MILLER AAF (KRYM)

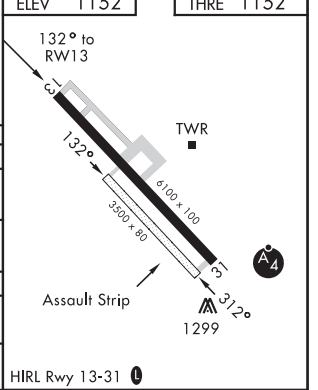
<b>▽</b> DME/DME RNP-0.3 NA. Procedure NA at night.	MISSED APPROACH: Climb to 3300 direct URHIL and hold.
<b>▲</b> NA Helicopter vis reduction below 1 SM NA.	

MINNEAPOLIS CENTER <b>118.05 239.0</b>	MILLER TOWER ★ <b>126.2 0 254.4 49.2</b>	CLNC DEL <b>126.2</b>	AWOS-3 <b>142.95</b>
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ELEV 1152	THRE 1152
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CATEGORY	A	B	C	D
LNVA MDA	1680-1 528 (600-1)	1680-1½ 528 (600-1½)		
<b>C</b> CIRCLING	1680-1 528 (600-1)	1720-1½ 568 (600-1½)	2080-3 928 (1000-3)	
LITTLE FALLS ALTIMETER SETTING				
LNVA MDA	1720-1 568 (600-1)	1720-1⅝ 568 (600-1⅝)		
<b>C</b> CIRCLING	1720-1 568 (600-1)	1760-1¾ 608 (700-1¾)	2120-3 968 (1000-3)	



CAMP RIPLEY, MINNESOTA  
Amdt 1 27JUN13

46°05'N-94°21'W

RAY S. MILLER AAF (KRYM)

# RNAV (GPS) RWY 13

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

CAMP RIPLEY, MINNESOTA

# RNAV (GPS) RWY 31

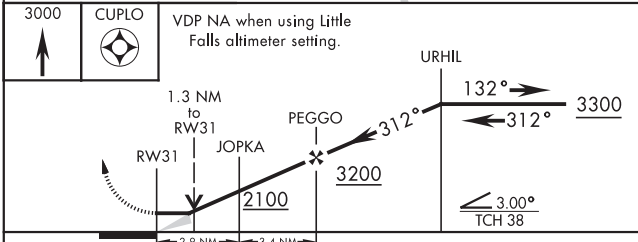
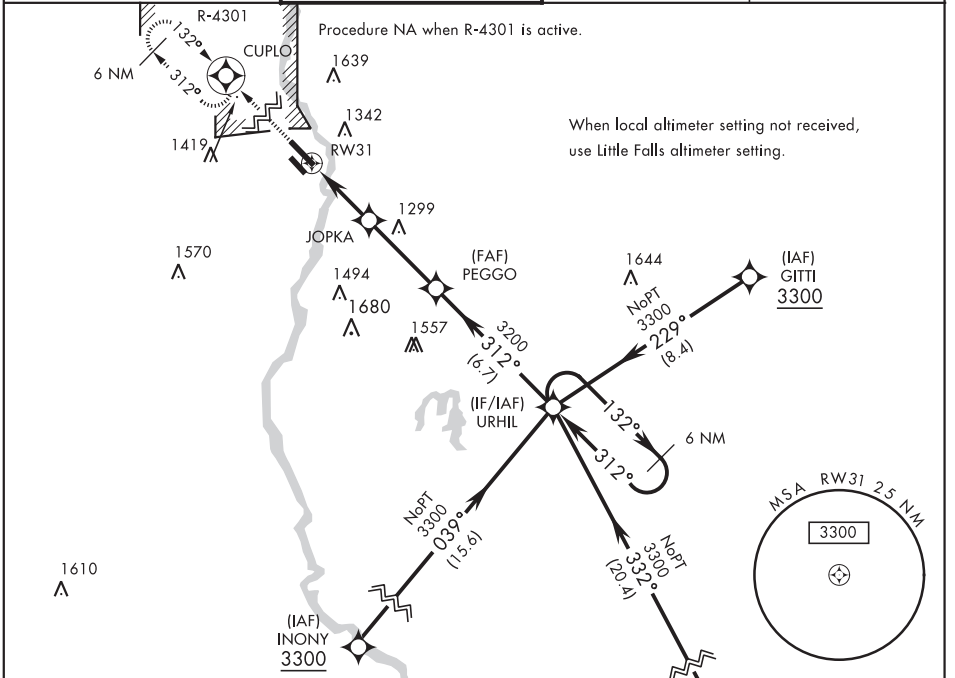
APCH CRS	Rwy Idg	<b>6100</b>
<b>312°</b>	THRE	<b>1146</b>
	Arpt Elev	<b>1152</b>

AL-5226 [USA]

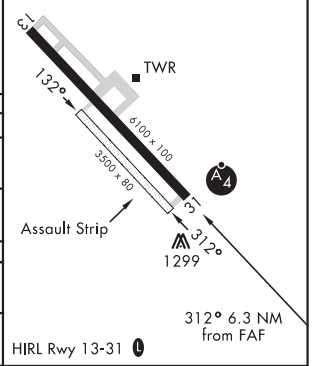
RAY S. MILLER AAF (KRYM)

<b>▽</b> * When ALS inop, increase CAT D vis to 1¼ miles.	<b>MALSF</b> 	MISSED APPROACH: Climb to 3000 direct CUPLO and hold.
<b>▲</b> NA DME/DME RNP-0.3 NA.		

MINNEAPOLIS CENTER <b>118.05 239.0</b>	MILLER TOWER ★ <b>126.2 0 254.4 49.2</b>	CLNC DEL <b>126.2</b>	AWOS-3 <b>142.95</b>
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ELEV 1152	THRE 1146
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CATEGORY	A	B	C	D
RNAV MDA *	1580-¾ 434 (500-¾)	1580-1 434 (500-1)		
<b>C</b> CIRCLING	1640-1 488 (500-1)	1660-1 508 (500-1)	1720-1½ 568 (600-1½)	2080-3 928 (1000-3)
LITTLE FALLS ALTIMETER SETTING				
RNAV MDA *	1620-¾ 474 (500-¾)	1620-1½ 474 (500-1½)		
<b>C</b> CIRCLING	1680-1 528 (600-1)	1760-1¾ 608 (700-1¾)	2120-3 968 (1000-3)	

CAMP RIPLEY, MINNESOTA  
Amdt 2 10DEC15

46°05'N-94°21'W

RAY S. MILLER AAF (KRYM)

# RNAV (GPS) RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

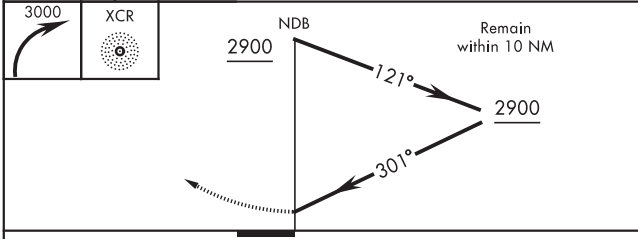
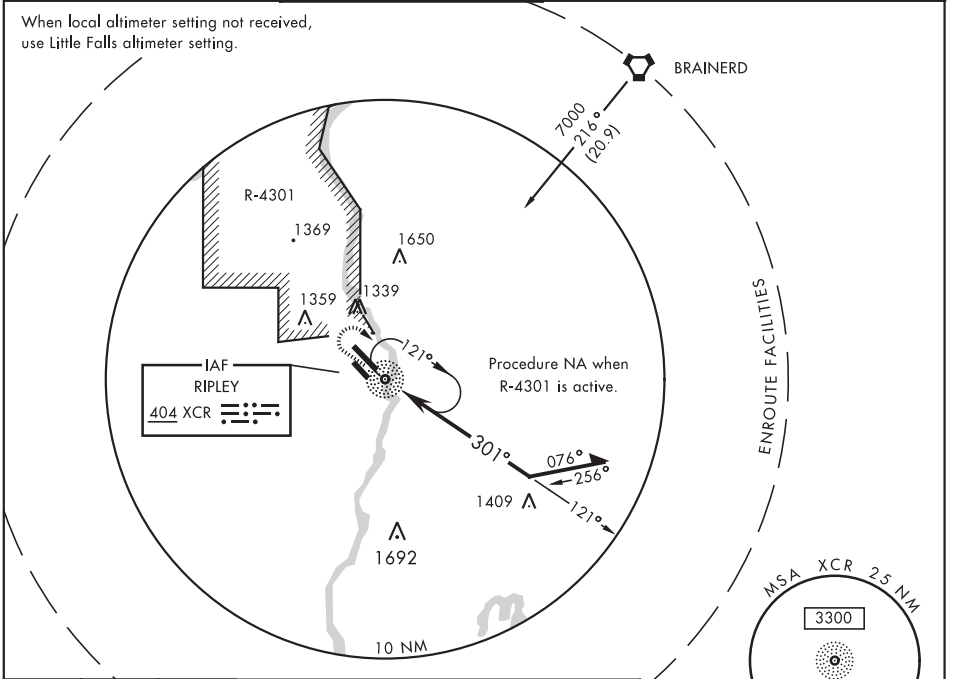
CAMP RIPLEY, MINNESOTA

# NDB RWY 31

NDB XCR <b>404</b>	APCH CRS <b>301°</b>	Rwy Idg THRE <b>1146</b> Arpt Elev <b>1152</b>	AL-5226 [USA]	RAY S. MILLER AAF (KRYM)
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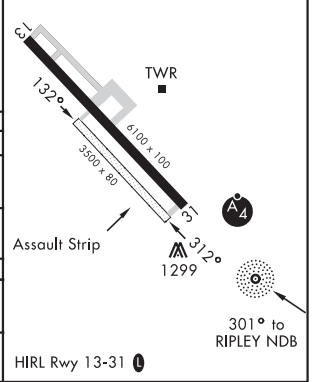
<p><b>V</b> * For inoperative ALS, increase Cats CD vis to 1 7/8 miles.</p> <p><b>A</b> NA ** For inoperative ALS, increase Cats CD vis to 2 miles.</p>	<p>MALSF <b>A4</b></p> <p>MISSED APPROACH: Climbing right turn to 3000 in XCR NDB holding pattern.</p>
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MINNEAPOLIS CENTER <b>118.05 239.0</b>	MILLER TOWER ★ <b>126.2 0 254.4 49.2</b>	CLNC DEL <b>126.2</b>	AWOS-3 <b>142.95</b>
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ELEV 1152	THRE 1146
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CATEGORY	A	B	C	D
S-31*	1820-3/4 674 (700-3/4)	1820-1 3/4 674 (700-1 3/4)	1820-1 3/4 668 (700-1 3/4)	2080-3 (1000-3)
CIRCLING	1820-1 668 (700-1)	1820-1 3/4 668 (700-1 3/4)	1820-1 3/4 668 (700-1 3/4)	2080-3 (1000-3)
LITTLE FALLS ALTIMETER SETTING MINIMUMS				
S-31**	1860-3/4 714 (800-3/4)	1860-1 7/8 714 (800-1 7/8)	1860-1 7/8 714 (800-1 7/8)	2120-3 (1000-3)
CIRCLING	1860-1 708 (800-1)	1860-1 708 (800-1)	1860-2 708 (800-2)	2120-3 (1000-3)



CAMP RIPLEY, MINNESOTA 46°05'N-94°21'W RAY S. MILLER AAF (KRYM)

# NDB RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC I-RGK <b>110.1</b>	APP CRS <b>091°</b>	Rwy Idg TDZE Apt Elev	<b>5010</b> <b>778</b> <b>778</b>
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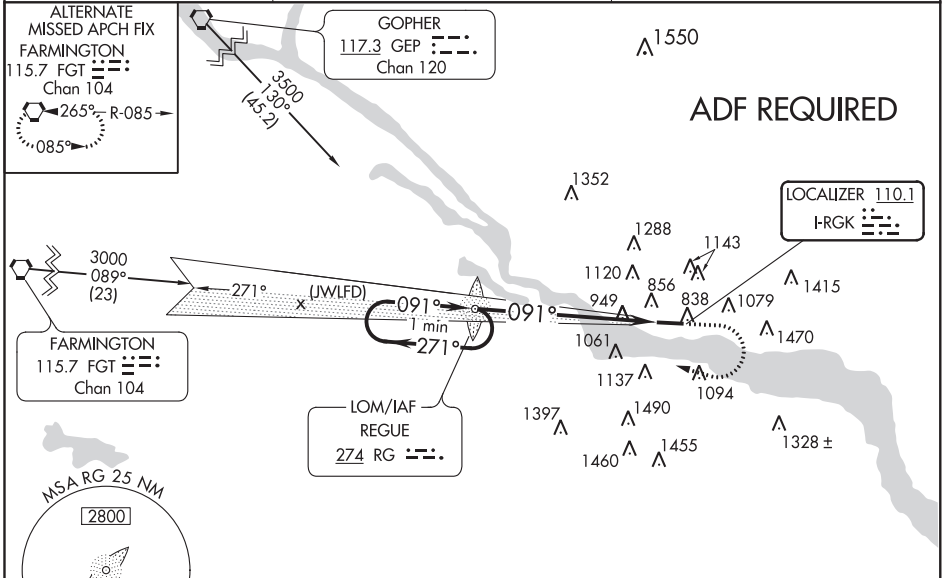
# ILS or LOC RWY 9

RED WING RGNL (RGK)

**ADF Required.** When local altimeter setting not received, use South St. Paul altimeter setting and increase all DA 72 feet and all MDA 80 feet; increase S-LOC 9 Cat C/D visibility 1/8 mile, and Circling Cat A/C/D visibility 1/4 mile. For inop MALS, increase S-LOC 9 Cat C/D visibility 1/4 mile. For inop MALS when using South St. Paul altimeter setting, increase S-ILS 9 all Cats visibility 3/8 mile, and S-LOC 9 Cat C/D visibility 3/4 mile.

**MALS** MISSED APPROACH: Climb to 2000 then climbing right turn to 3000 direct REGUE LOM and hold.

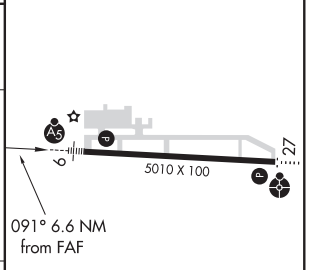
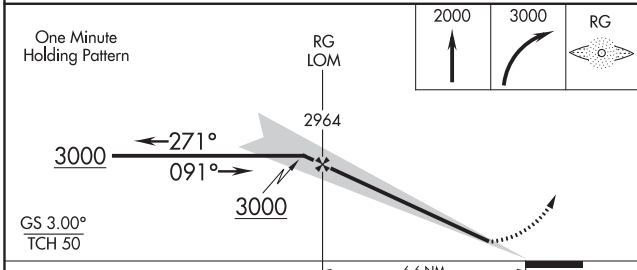
AWOS-3 <b>119.25</b>	MINNEAPOLIS APP CON <b>121.2</b>	UNICOM <b>123.05 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 778	TDZE 778
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CATEGORY	A	B	C	D
S-ILS 9	978-1/2		200 (200-1/2)	
S-LOC 9	1520-1/2 742 (800-1/2)	1520-3/4 742 (800-3/4)	1520-1 3/4	742 (800-1 3/4)
CIRCLING	1520-1 742 (800-1)	1520-1 1/4 742 (800-1 1/4)	1540-2 1/4 762 (800-2 1/4)	1540-2 1/2 762 (800-2 1/2)

HRL Rwy 9-27	FAF to MAP 6.6 NM				
Knots	60	90	120	150	180
Min:Sec	6:36	4:24	3:18	2:38	2:12

RED WING, MINNESOTA

AL-6662 (FAA)

16147

WAAS CH <b>56526</b> <b>W09A</b>	APP CRS <b>091°</b>	Rwy Idg TDZE Apt Elev	<b>5010</b> <b>778</b> <b>778</b>
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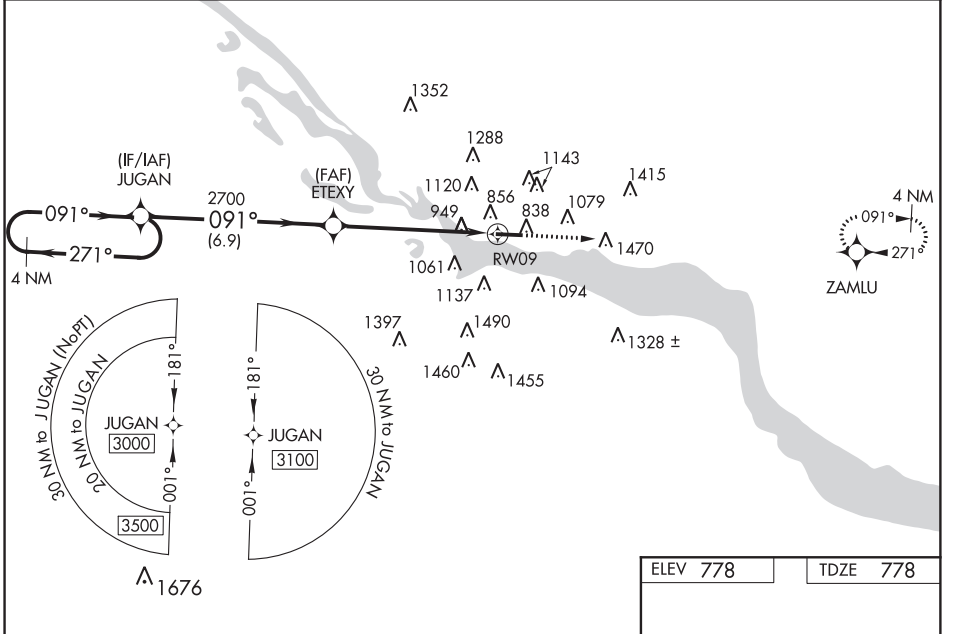
# RNAV (GPS) RWY 9

RED WING RGNL (RGK)

**⚠** Baro-VNAV NA when using South St. Paul altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 38°C (100°F). DME/DME RNP-0.3 NA. VDP NA with South St. Paul altimeter setting. When local altimeter setting not received, use South St. Paul altimeter setting and increase all DA 72 feet and all MDA 80 feet; increase LNAV/VNAV visibility  $\frac{3}{8}$  mile all Cats, LNAV and Circling Cat B/C/D visibility  $\frac{1}{4}$  mile. For inop MALS, increase LNAV Cat C/D visibility  $\frac{3}{8}$  mile. For inop MALS when using South St. Paul altimeter setting, increase LPV visibility  $\frac{3}{8}$  mile all Cats, LNAV/VNAV all Cats and LNAV Cat C/D visibility  $\frac{3}{4}$  mile.

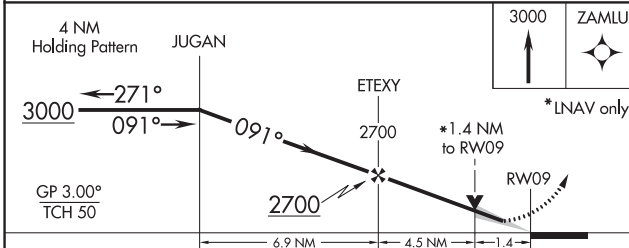
**MALS** MISSED APPROACH: Climb to 3000 direct ZAMLU and hold.

AWOS-3 <b>119.25</b>	MINNEAPOLIS APP CON <b>121.2</b>	UNICOM <b>123.05 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 778	TDZE 778
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**HIRL** Rwy 9-27

CATEGORY	A	B	C	D
LPV DA		978- $\frac{1}{2}$	200 (200- $\frac{1}{2}$ )	
LNAV/VNAV DA		1160- $\frac{3}{4}$	382 (400- $\frac{3}{4}$ )	
LNAV MDA	1260- $\frac{1}{2}$	482 (500- $\frac{1}{2}$ )	1260-1	482 (500-1)
CIRCLING	1480-1 702 (800-1)	1520-1 742 (800-1)	1540-2 $\frac{1}{4}$ 762 (800-2 $\frac{1}{4}$ )	1540-2 $\frac{1}{2}$ 762 (800-2 $\frac{1}{2}$ )

RED WING, MINNESOTA  
Amdt 1A 28MAY15

44°35'N-92°29'W

RED WING RGNL (RGK)  
**RNAV (GPS) RWY 9**

APP CRS	Rwy Idg	<b>5010</b>
<b>271°</b>	TDZE	<b>777</b>
	Apt Elev	<b>778</b>

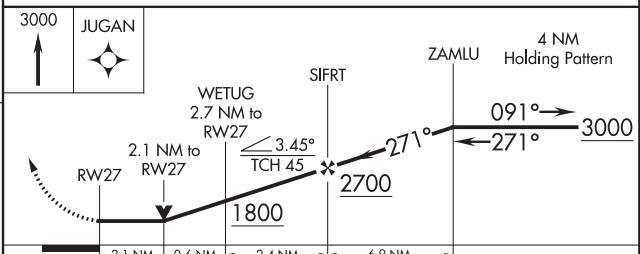
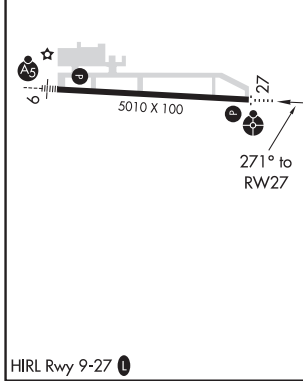
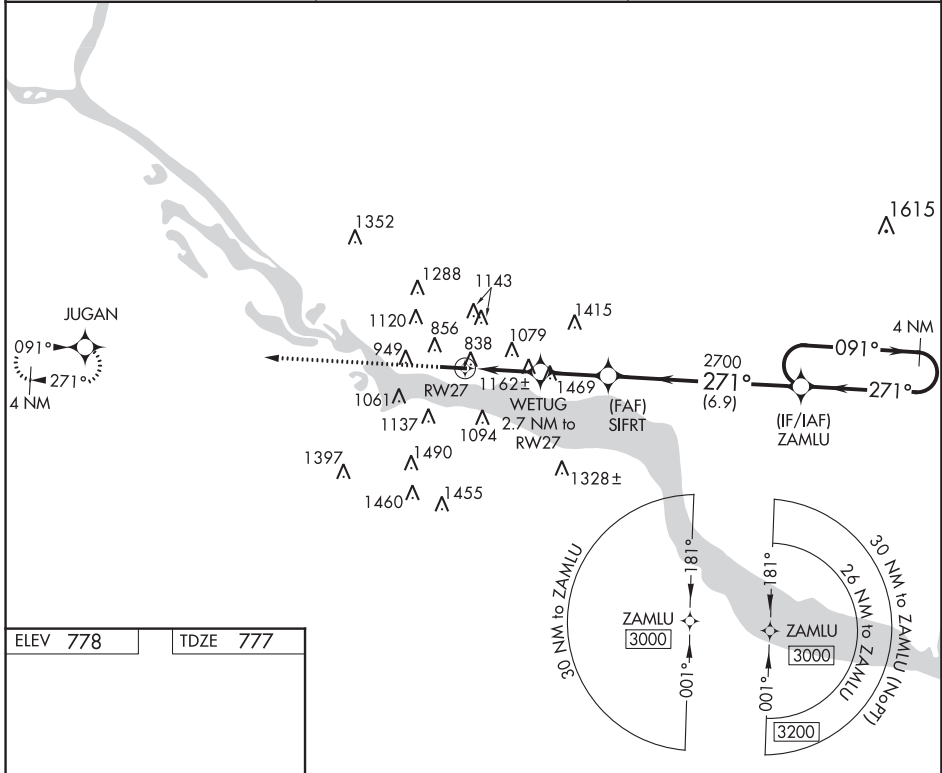
# RNAV (GPS) RWY 27

RED WING RGNL (RGK)

**⚠** DME/DME RNP-0.3 NA. VDP NA with South St. Paul altimeter setting. When local altimeter setting not received, use South St. Paul altimeter setting; increase all MDA 80 feet and LNAV Cat C visibility ½ mile, Circling Cat A and C visibility ¼ mile. Helicopter visibility reduction below ¾ SM NA. Inop table does not apply to LNAV Cat C.

**ODALS** MISSED APPROACH: Climb to 3000 direct JUGAN and hold.

AWOS-3 <b>119.25</b>	MINNEAPOLIS APP CON <b>121.2</b>	UNICOM <b>123.05 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LNAV MDA	1520-¾ 743 (800-¾)	1520-1¼ 743 (800-1¼)	1520-2 743 (800-2)	NA
CIRCLING	1520-1 742 (800-1)	1520-1¼ 742 (800-1¼)	1540-2¼ 762 (800-2¼)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>86610</b> W30A	APP CRS <b>304°</b>	Rwy Idg <b>4001</b> TDZE <b>1024</b> Apt Elev <b>1024</b>
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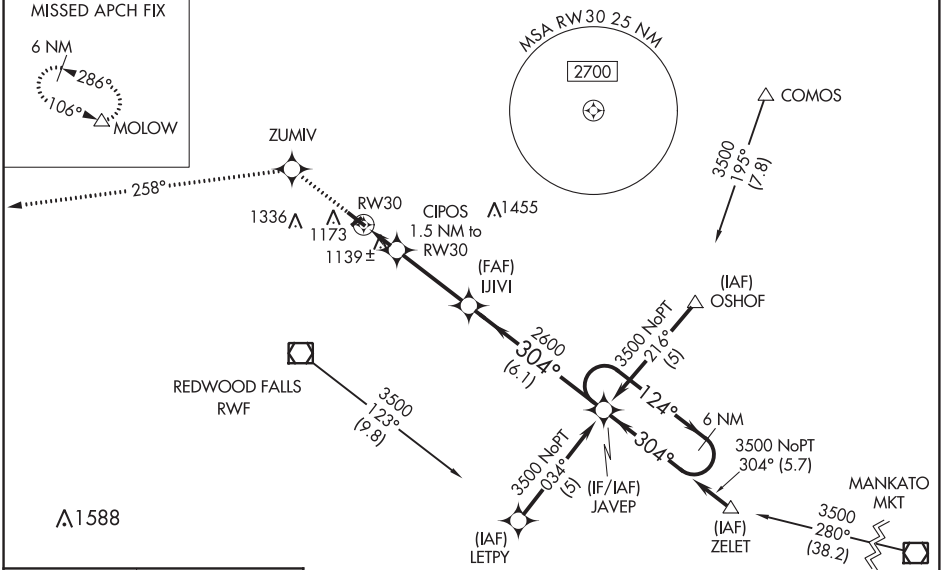
# RNAV (GPS) RWY 30

REDWOOD FALLS MUNI (RWF)

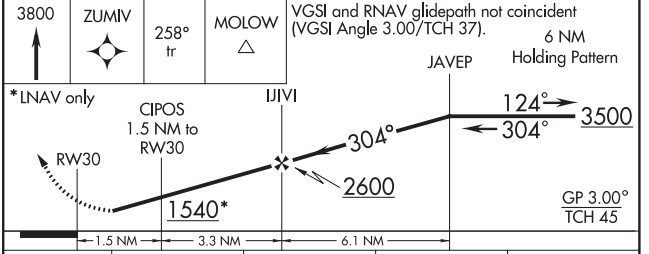
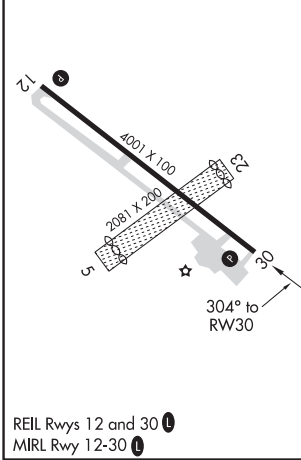
**⚠** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.  
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F).  
 Baro-VNAV NA when using Olivia Rgnl altimeter setting.  
 When local altimeter setting not received, use Olivia Rgnl altimeter setting and increase all DA/MDA 40 feet and LNAV Cat C visibility ¼ mile.

**MISSED APPROACH:** Climb to 3800 direct ZUMIV and via 258° track to MOLOW and hold.

ASOS <b>126.575</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	UNICOM <b>123.0 (CTAF) 0</b>
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ELEV 1024	TDZE 1024
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CATEGORY	A	B	C	D
LPV DA	1304-1 280 (300-1)			
LNAV/VNAV DA	1440-1½ 416 (500-1½)			
LNAV MDA	1400-1 376 (400-1)			1400-1¼ 376 (400-1¼)
CIRCLING	1480-1 456 (500-1)	1580-1 556 (600-1)	1580-1½ 556 (600-1½)	1700-2¼ 676 (700-2¼)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



VOR/DME RWF <b>113.3</b> Chan <b>80</b>	APP CRS <b>016°</b>	Rwy Idg TDZE Apt Elev	<b>N/A</b> <b>N/A</b> <b>1024</b>
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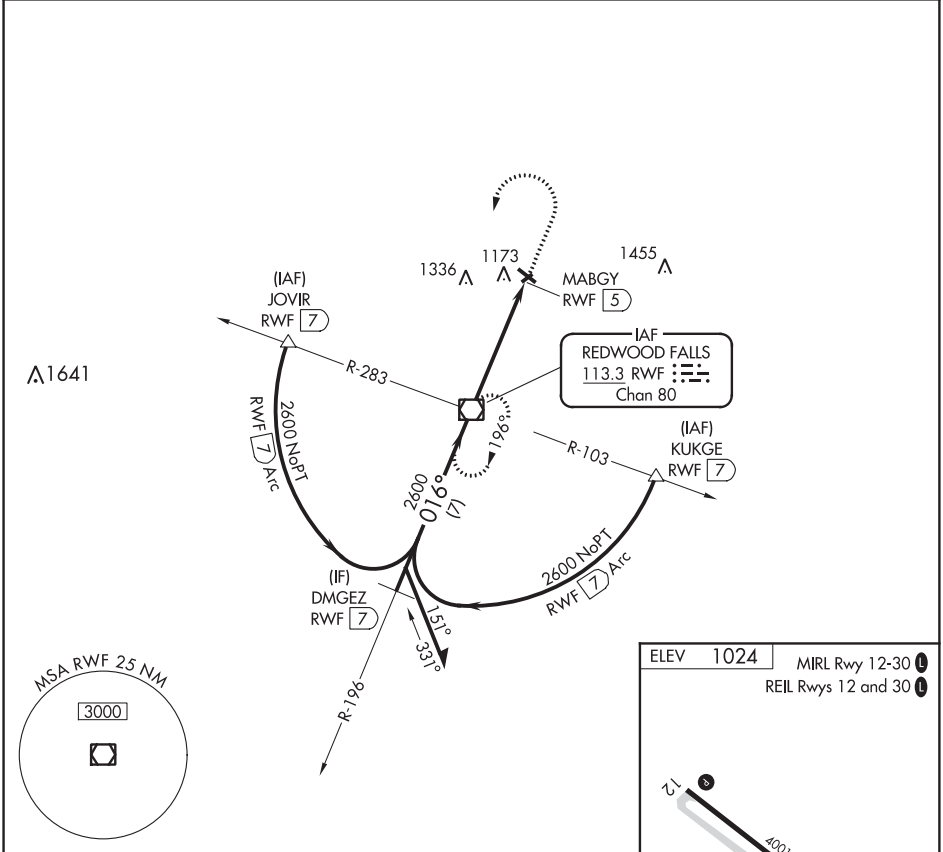
# VOR-A

REDWOOD FALLS MUNI (RWF)

**⚠** When local altimeter setting not received, use Olivia Rgnl altimeter setting and increase all MDA 40 feet.

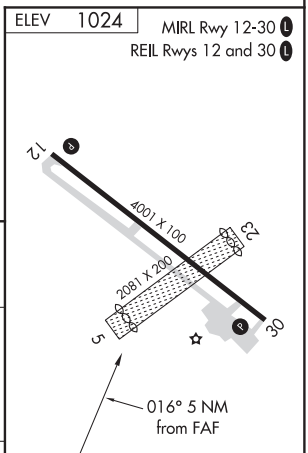
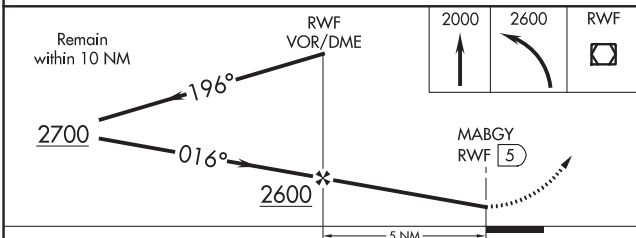
**MISSED APPROACH:** Climb to 2000 then climbing left turn to 2600 direct RWF VOR/DME and hold.

ASOS <b>126.575</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	UNICOM <b>123.0</b> (CTAF) <b>Ⓛ</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D	FAF to MAP 5 NM					
	1540-1 516 (600-1)	1580-1 556 (600-1)	1580-1½ 556 (600-1½)	1700-2¼ 676 (700-2¼)	Knots	60	90	120	150	180
CIRCLING					Min:Sec	5:00	3:20	2:30	2:00	1:40

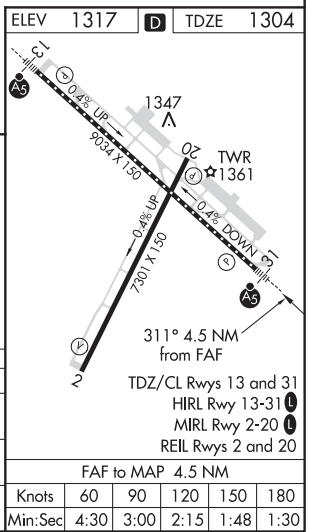
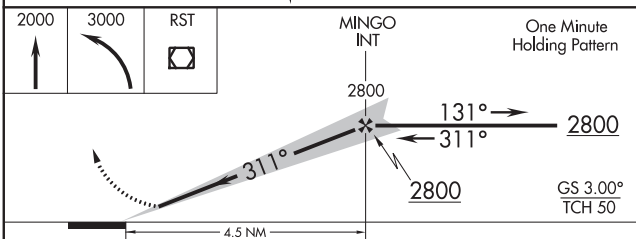
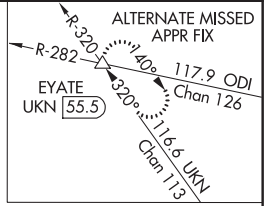
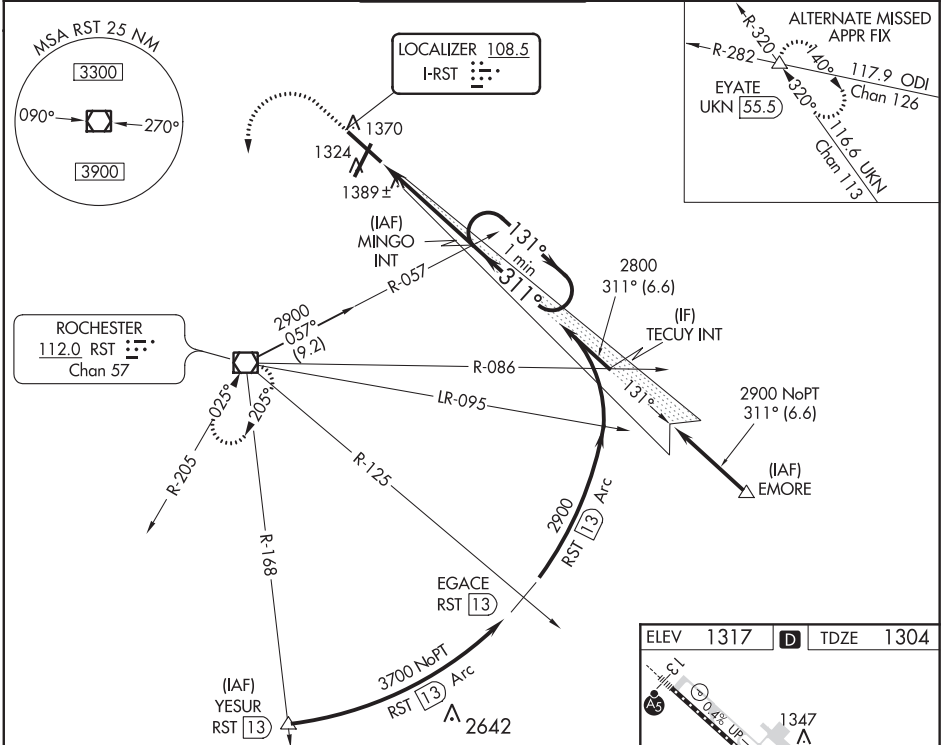


LOC I-RST <b>108.5</b>	APP CRS <b>311°</b>	Rwy Idg TDZE Apt Elev	<b>9033</b> <b>1304</b> <b>1317</b>
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# ILS or LOC RWY 31

ROCHESTER INTL (RST)

  -27°C/-17°F	MALSR 	MISSED APPROACH: Climb to 2000 then climbing left turn to 3000 direct RST VOR/DME and hold.		
ATIS <b>120.5</b>	ROCHESTER APP CON * <b>119.8 251.125</b>	ROCHESTER TOWER * <b>118.3 (CTAF) 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>



CATEGORY	A	B	C	D
S-ILS 31	1504/18		200 (200-½)	
S-LOC 31	1660/24		356 (400-½)	
CIRCLING	1720-1	1780-1	1780-1½	1880-2
	403 (500-1)	463 (500-1)	463 (500-1½)	563 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ROCHESTER, MINNESOTA

AL-5041 (FAA)

16035

WAAS CH <b>69621</b> <b>W02A</b>	APP CRS <b>025°</b>	Rwy Idg <b>7300</b> TDZE <b>1317</b> Apt Elev <b>1317</b>
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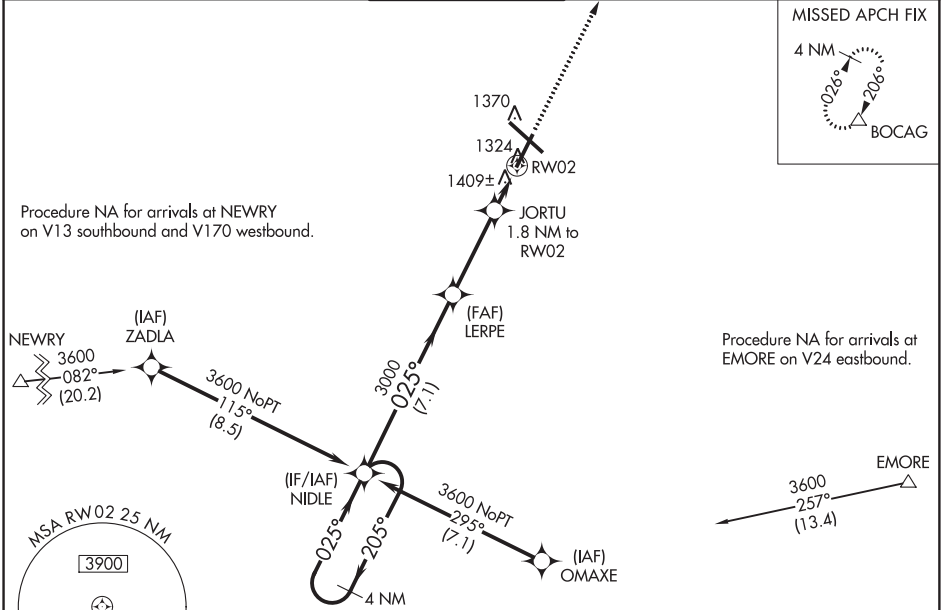
# RNAV (GPS) RWY 2

ROCHESTER INTL (RST)

**V** ASR For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -28°C (-18°F) or above 35°C (95°F). When VGSI inop, Straight-in/  
**3x** -27°C/-17°F Circling Rwy 2 procedure NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3400 direct BOCAG and hold, continue climb-in-hold to 4800.

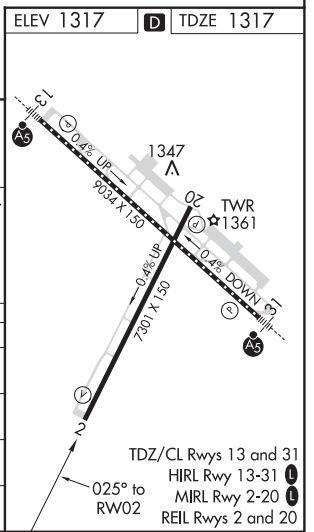
ATIS <b>120.5</b>	ROCHESTER APP CON ★ <b>119.8 251.125</b>	ROCHESTER TOWER ★ <b>118.3 (CTAF) 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1317		D TDZE 1317		
4 NM Holding Pattern		BOCAG		
3600 ← 205°		3400 ↑		
→ 025°		△		
GP 3.00°		*LNAV only.		
TCH 47		3000		
NIDLE		LERPE		
3000		JORTU 1.8 NM to RWY 2		
→ 025°		*1920		
7.1 NM		3.4 NM		
		1.8 NM		
CATEGORY	A	B	C	D
LPV DA		1567-1	250 (300-1)	
LNAV/VNAV DA		1592-1	275 (300-1)	
LNAV MDA		1660-1	343 (400-1)	
CIRCLING	1720-1 403 (500-1)	1780-1 463 (500-1)	1780-1½ 463 (500-1½)	1880-2 563 (600-2)



ROCHESTER, MINNESOTA  
Amdt 3A 28MAY15

43°54'N-92°30'W

# ROCHESTER INTL (RST)

## RNAV (GPS) RWY 2

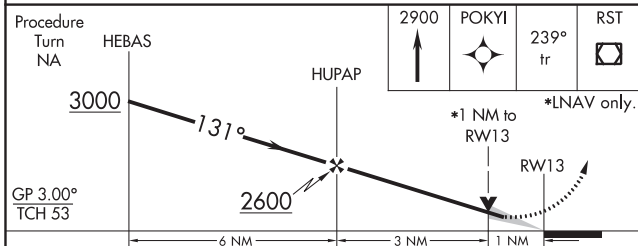
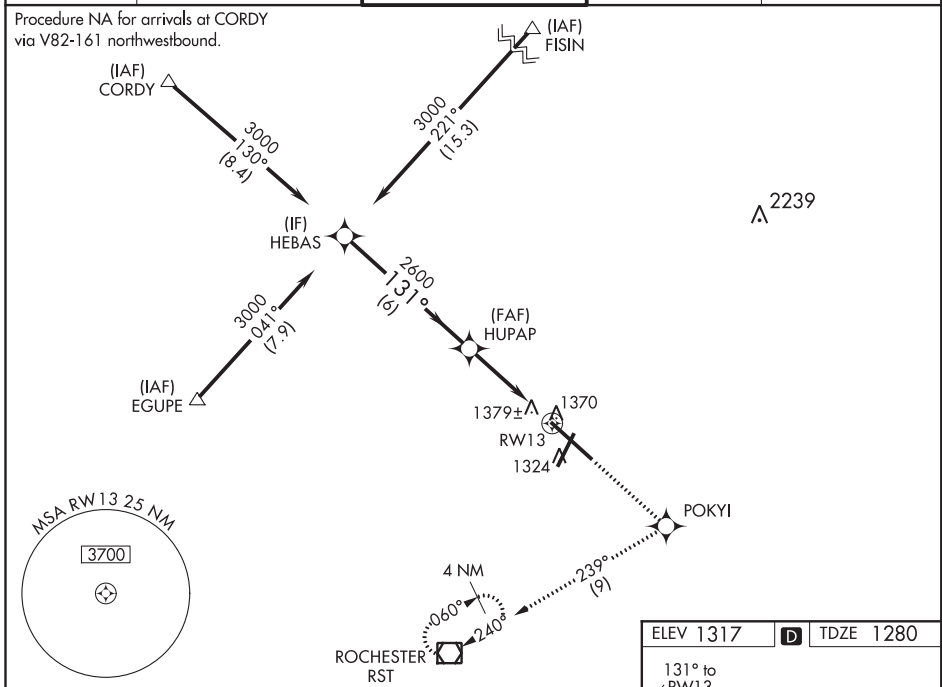
WAAS CH <b>90202</b> <b>W13A</b>	APP CRS <b>131°</b>	Rwy Idg <b>9033</b> TDZE <b>1280</b> Apt Elev <b>1317</b>
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# RNAV (GPS) RWY 13

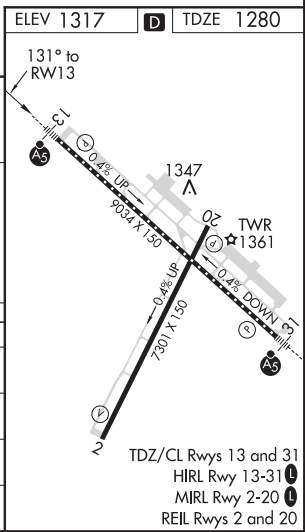
ROCHESTER INTL (RST)

ASR ✪ -27°C/-17°F	DME/DME RNP-0.3 NA. For uncompensated Baro-VNAV system, LNAV/VNAV NA below -17°C (2°F) or above 45°C (114°F). For inop MALSRL increase LPV all Cats visibility to RVR 5000 and LNAV Cat D visibility to RVR 6000.	MALSRL 	MISSED APPROACH: Climb to 2900 direct POKYI and via 239° track to RST VOR/DME and hold.
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ATIS <b>120.5</b>	ROCHESTER APP CON* <b>119.8 251.125</b>	ROCHESTER TOWER* <b>118.3 (CTAF) 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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CATEGORY	A	B	C	D
LPV DA		1530/24	250 (300-½)	
LNAV/VNAV DA		1679/50	399 (400-1)	
LNAV MDA	1640/24	360 (400-½)		1640/50 360 (400-1)
CIRCLING	1720-1½ 403 (500-1½)	1780-1½	463 (500-1½)	1880-2 563 (600-2)



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>57922</b> <b>W20A</b>	APP CRS <b>206°</b>	Rwy Idg TDZE Apt Elev	<b>7300</b> <b>1305</b> <b>1317</b>
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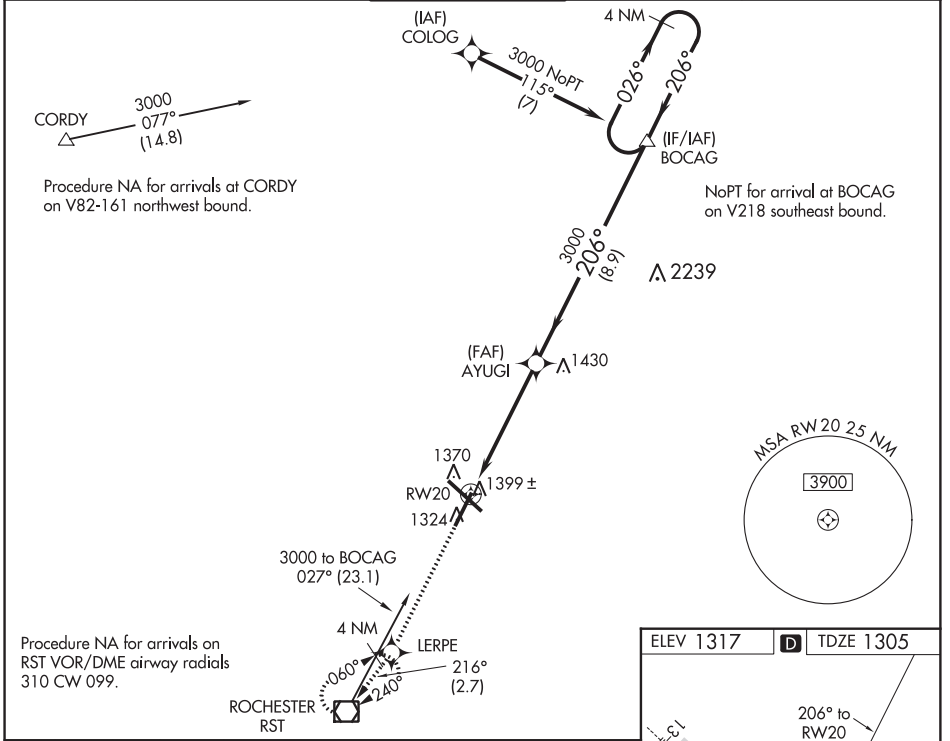
# RNAV (GPS) RWY 20

ROCHESTER INTL (RST)

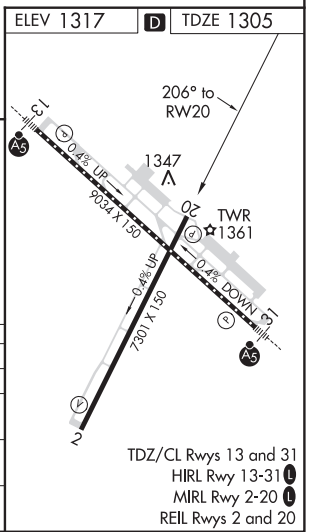
**ASR** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -28°C (-18°F) or above 35°C (95°F). When VGSI inop, Straight-in/Circling Rwy 20 procedure NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.

**MISSED APPROACH:** Climb to 3000 direct LERPE on track 216° to RST VOR/DME and hold.

ATIS <b>120.5</b>	ROCHESTER APP CON ★ <b>119.8 251.125</b>	ROCHESTER TOWER ★ <b>118.3 (CTAF) 0 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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3000	LERPE	tr 216°	RST	VGSI and RNAV glidepath not coincident (VGSI Angle 3.05/TCH 50).
↑	☉		☐	
	AYUGI		BOCAG	4 NM Holding Pattern
	3000		3000	
		206°	026°	
			206°	
				GP 3.00° TCH 50
		5.2 NM	8.9 NM	
CATEGORY	A	B	C	D
LPV DA		1555-1	250 (300-1)	
LNAV/VNAV DA		1603-1	298 (300-1)	
LNAV MDA		1660-1	355 (400-1)	
CIRCLING	1720-1 403 (500-1)	1780-1 463 (500-1)	1780-1½ 463 (500-1½)	1880-2 563 (600-2)



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

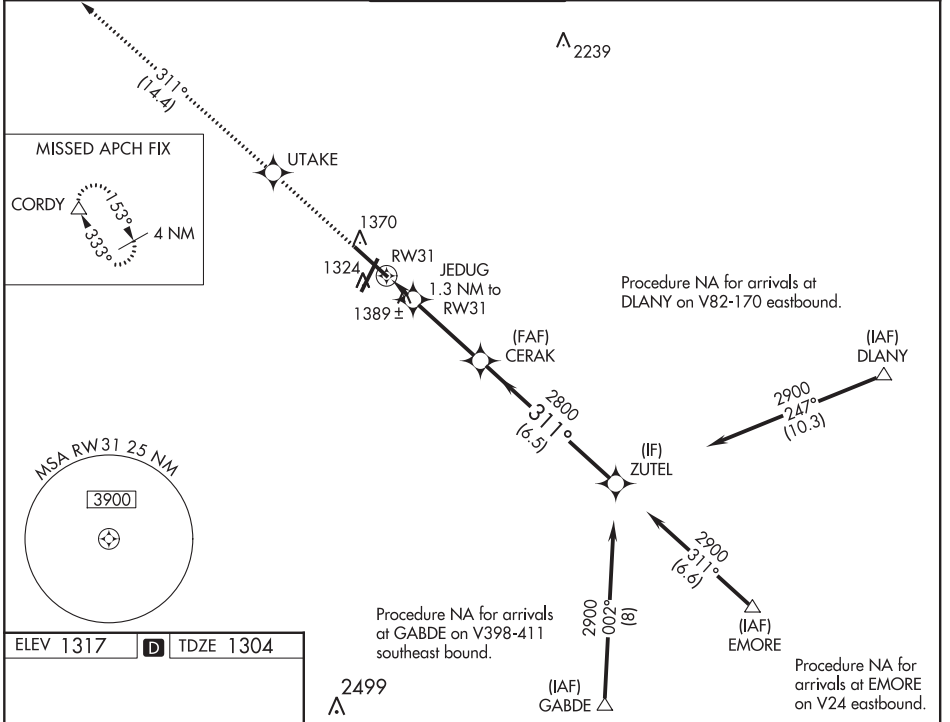
WAAS CH <b>49028</b> <b>W31A</b>	APP CRS <b>311°</b>	Rwy Idg TDZE Apt Elev	<b>9033</b> <b>1304</b> <b>1317</b>
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# RNAV (GPS) RWY 31

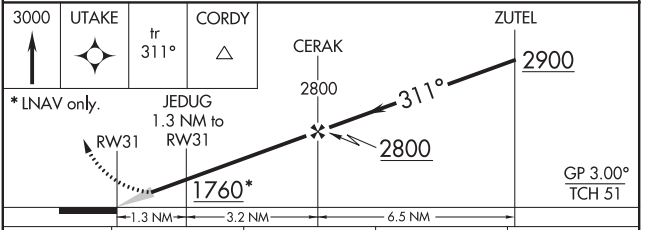
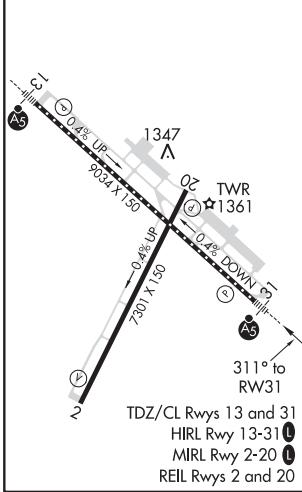
ROCHESTER INTL (RST)

<b>ASR</b> -27°C/-17°F	For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -28°C (-18°F) or above 35°C (95°F). DME/DME RNP-0.3 NA.	<b>MALSR</b> 	<b>MISSED APPROACH:</b> Climb to 3000 direct UTAKE and on track 311° to CORDY and hold.
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<b>ATIS</b> <b>120.5</b>	<b>ROCHESTER APP CON*</b> <b>119.8 251.125</b>	<b>ROCHESTER TOWER*</b> <b>118.3 (CTAF) 257.8</b>	<b>GND CON</b> <b>121.9</b>	<b>UNICOM</b> <b>122.95</b>
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ELEV 1317	<b>D</b>	TDZE 1304
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CATEGORY	A	B	C	D
LPV DA		1504/24	200 (200-½)	
LNAV/VNAV DA		1620/32	316 (400-¾)	
LNAV MDA	1680/24	376 (400-½)	1680/35	376 (400-¾)
CIRCLING	1720-1 403 (500-1)	1780-1 463 (500-1)	1780-1½ 463 (500-1½)	1880-2 563 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

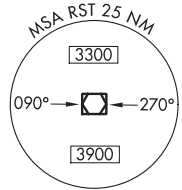
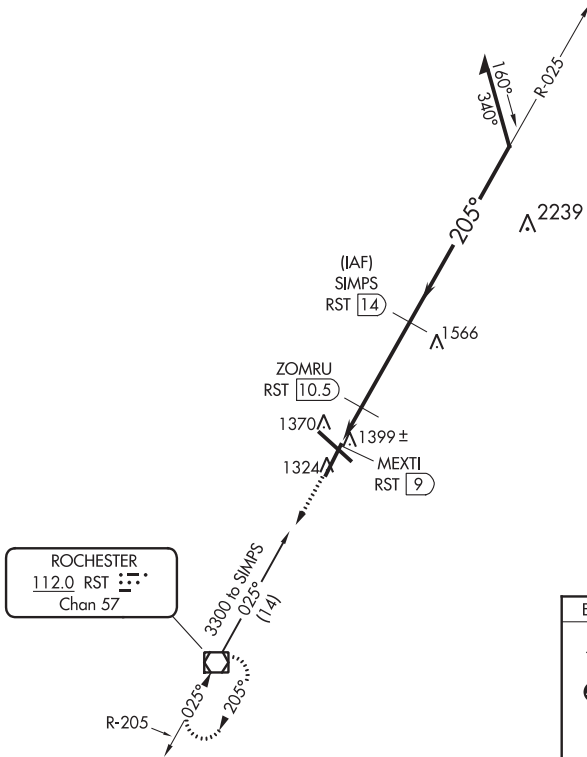
NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME RST	APP CRS	Rwy Idg	<b>7300</b>
<b>112.0</b>	<b>205°</b>	THRE	<b>1282</b>
Chan <b>57</b>		Apt Elev	<b>1317</b>

**VOR/DME RWY 20**  
ROCHESTER INTL (RST)

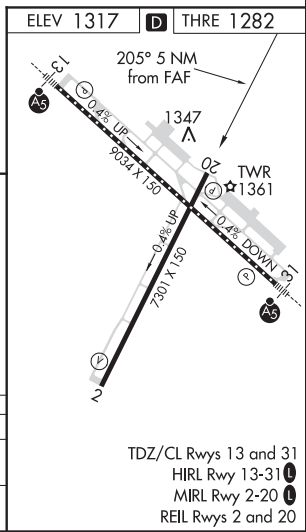
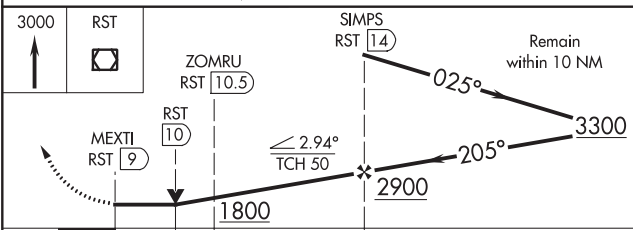
ASR -27°C/-17°F	MISSED APPROACH: Climb to 3000 direct RST VOR/DME and hold.			
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ATIS <b>120.5</b>	ROCHESTER APP CON * <b>119.8 251.125</b>	ROCHESTER TOWER * <b>118.3 (CTAF) 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D
S-20	1660-1 378 (400-1)			
CIRCLING	1720-1 403 (500-1)	1780-1 463 (500-1)	1780-1½ 463 (500-1½)	1880-2 563 (600-2)

TDZ/CL Rwy 13 and 31  
HIRL Rwy 13-31  
MIRL Rwy 2-20  
REIL Rwy 2 and 20



VOR/DME RST <b>112.0</b> Chan <b>57</b>	APP CRS <b>025°</b>	Rwy Idg <b>7300</b> TDZE <b>1317</b> Apt Elev <b>1317</b>
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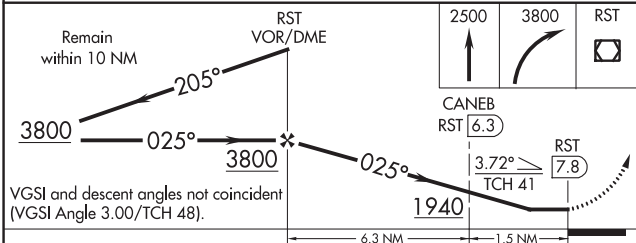
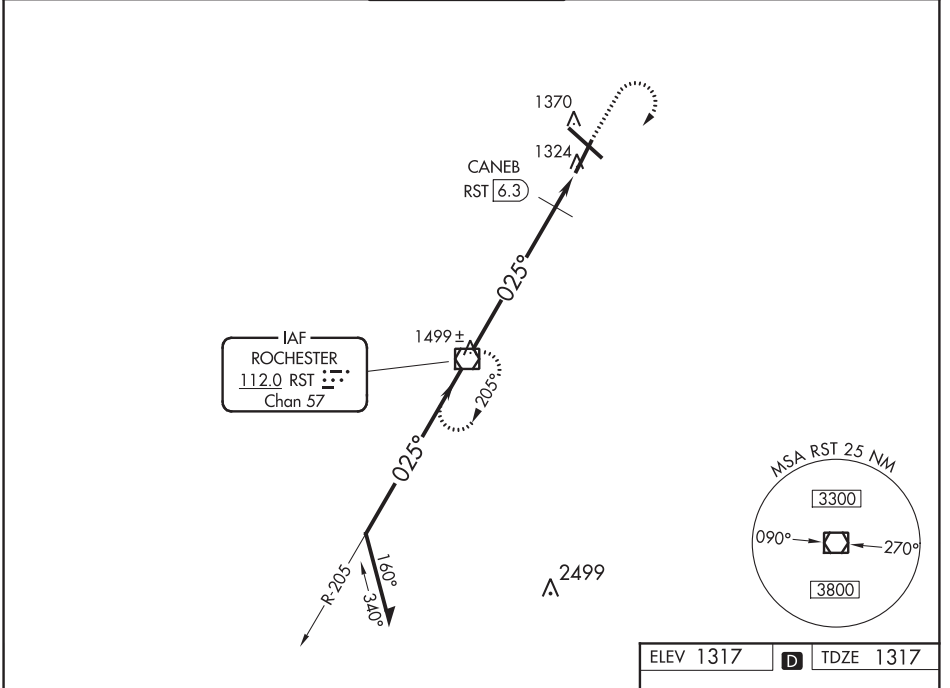
# VOR RWY 2

ROCHESTER INTL (RST)

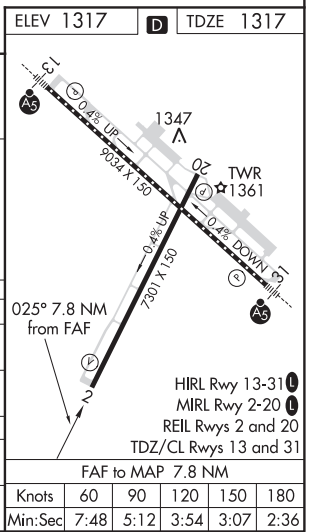
ASR  
-27°C/-17°F

MISSED APPROACH: Climb to 2500 then climbing right turn to 3800 direct RST VOR/DME and hold.

ATIS <b>120.5</b>	ROCHESTER APP CON ★ <b>119.8 251.125</b>	ROCHESTER TOWER ★ <b>118.3 (CTAF) 257.8</b>	GND CON <b>121.9</b>	UNICOM <b>122.95</b>
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CATEGORY	A	B	C	D
S-2	1940-1	623 (700-1)	1940-1¾ 623 (700-1¾)	1940-2 623 (700-2)
CIRCLING	1940-1	623 (700-1)	1940-1¾ 623 (700-1¾)	1940-2 623 (700-2)
DME MINIMUMS				
S-2	1680-1 363 (400-1)		NA	
CIRCLING	1720-1 403 (500-1)	1780-1 463 (500-1)	1780-1½ 463 (500-1½)	1880-2 563 (600-2)



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ROCHESTER, MINNESOTA

AL-5041 (FAA)

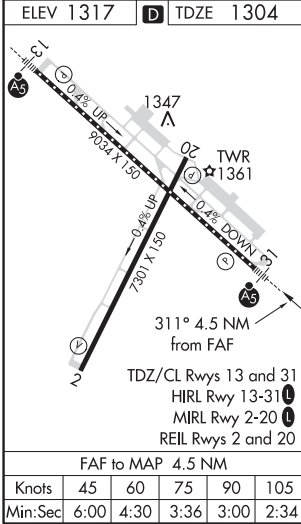
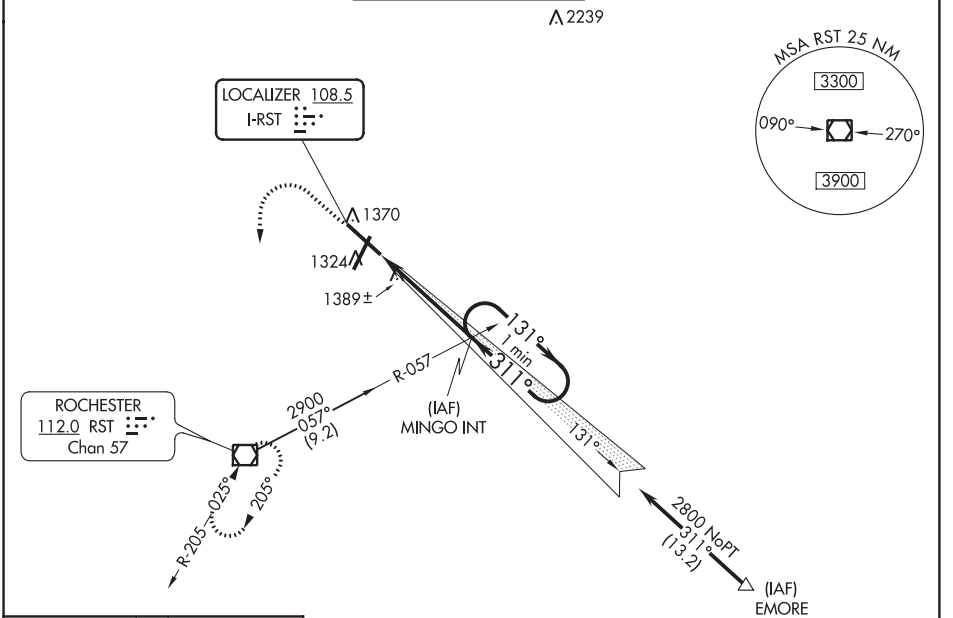
15288

LOC I-RST <b>108.5</b>	APP CRS <b>311°</b>	Rwy Idg TDZE Apt Elev	<b>9033</b> <b>1304</b> <b>1317</b>
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# COPTER ILS or LOC RWY 31

ROCHESTER INTL (RST)

<p>For inop MALSR, increase visibility to RVR 2400.</p> <p>ASR</p> <p>-27°C/-17°F</p>	<p>MALSR</p>	<p>MISSED APPROACH: Climb to 2000 then climbing left turn to 3000 direct RST VOR/DME and hold.</p>		
		<p>ATIS</p> <p><b>120.5</b></p>	<p>ROCHESTER APP CON*</p> <p><b>119.8 251.125</b></p>	<p>ROCHESTER TOWER*</p> <p><b>118.3 (CTAF) 257.8</b></p>



<p>ELEV 1317 TDZE 1304</p>		<p>2000 3000 RST</p>		<p>MINGO INT</p>		<p>One Minute Holding Pattern</p>	
		<p>2800</p>		<p>2800</p>		<p>GS 3.00° TCH 50</p>	
<p>4.5 NM</p>		<p>2800</p>		<p>131°</p>		<p>2800</p>	
<p>311°</p>		<p>2800</p>		<p>311°</p>		<p>2800</p>	
<p>CATEGORY</p>	<p>COPTER</p>	<p>B</p>	<p>C</p>	<p>D</p>			
<p>S-ILS 31</p>	<p>1504/16 200 (200-¼)</p>				<p>NA</p>		
<p>S-LOC 31</p>	<p>1660/16 356 (400-¼)</p>				<p>NA</p>		
<p>CIRCLING</p>	<p>NA</p>						

ROCHESTER, MINNESOTA  
Amdt 2 15JAN09

43°54'N-92°30'W

# ROCHESTER INTL (RST) COPTER ILS or LOC RWY 31

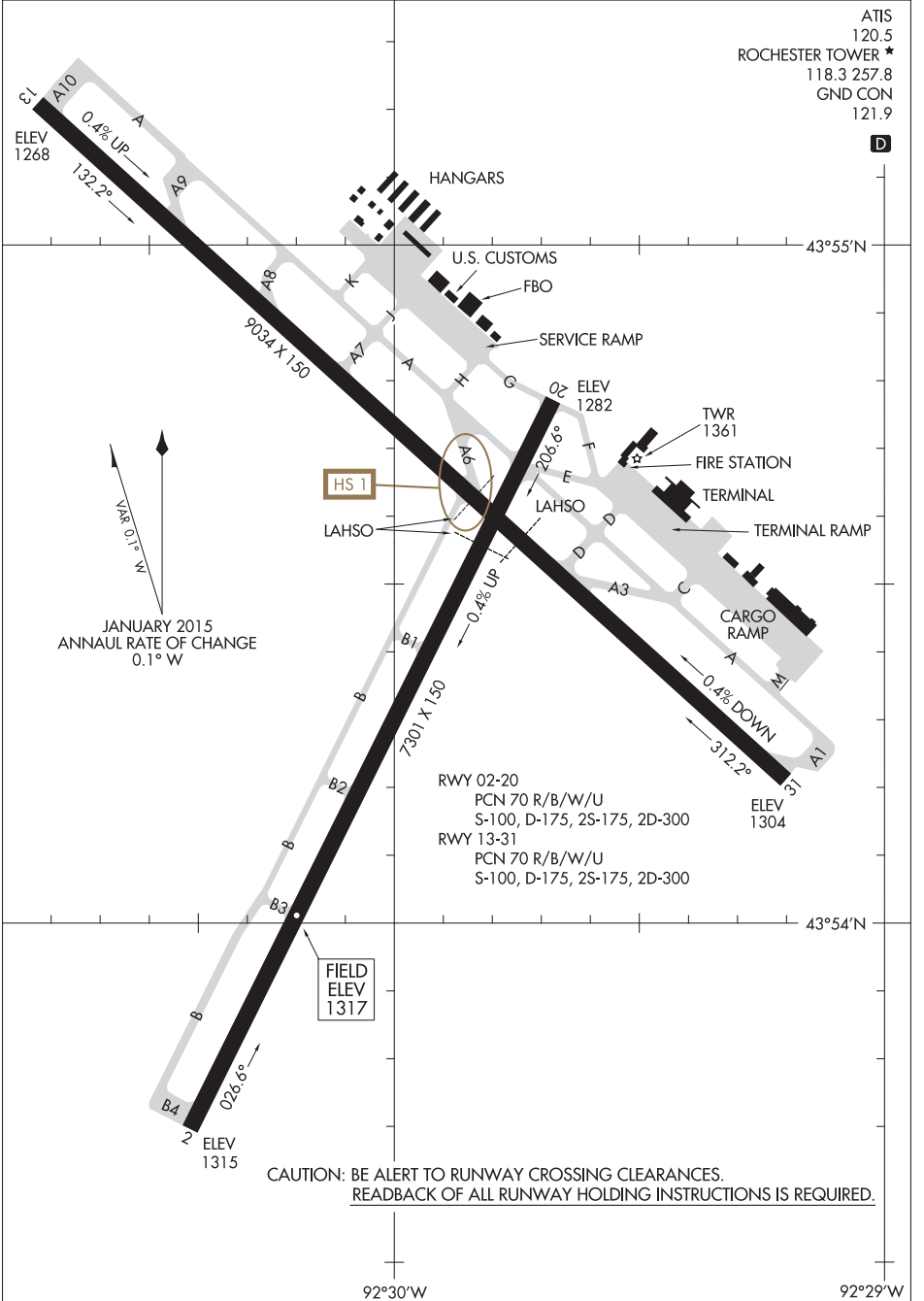
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

AL-5041 (FAA)

ROCHESTER INTL (RST)  
ROCHESTER, MINNESOTA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

ROCHESTER, MINNESOTA  
ROCHESTER INTL (RST)

WAAS CH <b>81834</b> <b>W32A</b>	APP CRS <b>325°</b>	Rwy Idg <b>4300</b> TDZE <b>1819</b> Apt Elev <b>1823</b>
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# RNAV (GPS) RWY 32

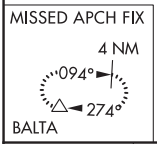
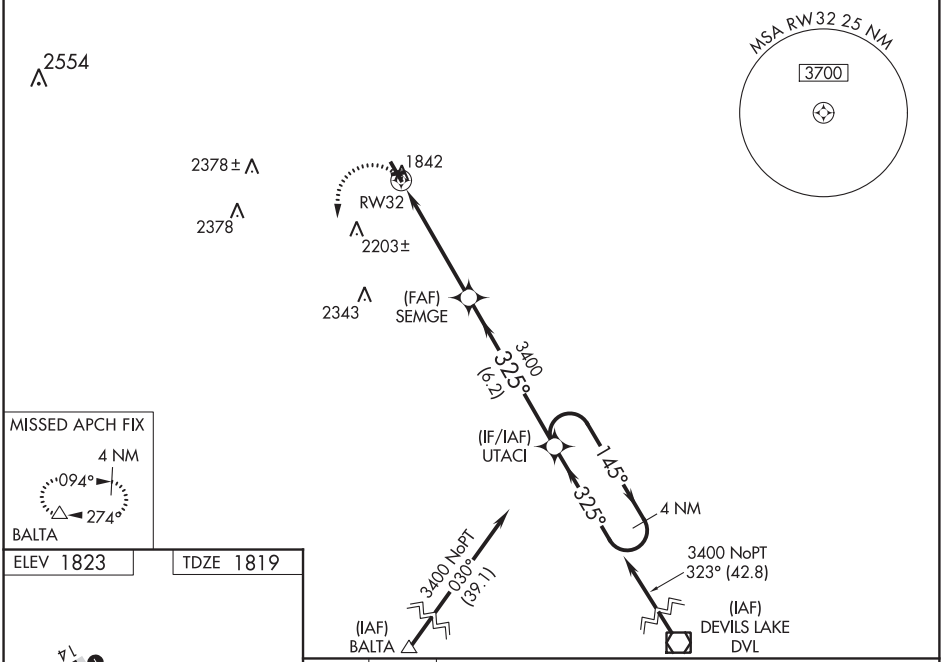
ROLLA MUNI (Ø6D)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F).  
**⚠** DME/DME RNP-0.3 NA. Baro-VNAV and VDP NA when using Cando Muni altimeter setting.  
 Helicopter visibility reduction below 3/4 SM NA. When local altimeter setting not received, use Cando Muni altimeter setting and increase all DA 114 feet and LPV visibility 1/2 mile all Cats and LNAV/VNAV visibility 3/4 mile all Cats; increase all MDA 120 feet and LNAV Cat C and D visibility 1/2 mile; increase Circling Cat C visibility 3/4 mile, Cat D visibility 1/4 mile.

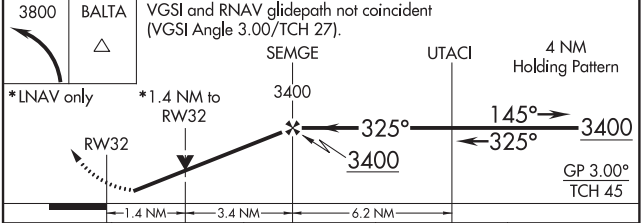
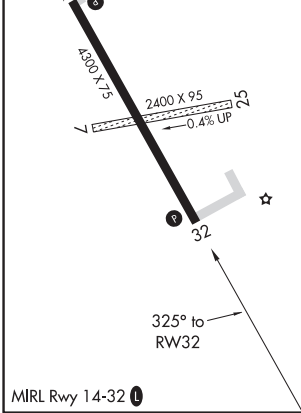
**MISSED APPROACH:**  
 Climbing left turn to 3800 direct BALTA and hold.

AWOS-3 <b>118.125</b>	CANDO MUNI AWOS-3 <b>118.325</b>	MINNEAPOLIS CENTER <b>127.6 279.6</b>	UNICOM <b>122.8 (CTAF) Ø</b>
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CANADA  
 UNITED STATES



ELEV 1823	TDZE 1819
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CATEGORY	A	B	C	D
LPV DA		2069-1	250 (300-1)	
LNAV/VNAV DA		2172-1 1/4	353 (400-1 1/4)	
LNAV MDA	2300-1	481 (500-1)	2300-1 3/8	481 (500-1 3/8)
<b>C</b> CIRCLING	2300-1 477 (500-1)	2340-1 517 (600-1)	2560-2 737 (800-2)	2700-2 3/4 877 (900-2 3/4)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>56304</b> <b>W16A</b>	APP CRS <b>162°</b>	Rwy Idg TDZE Apt Elev	<b>4401</b> <b>1055</b> <b>1060</b>
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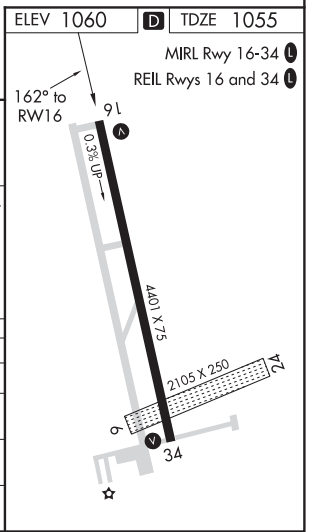
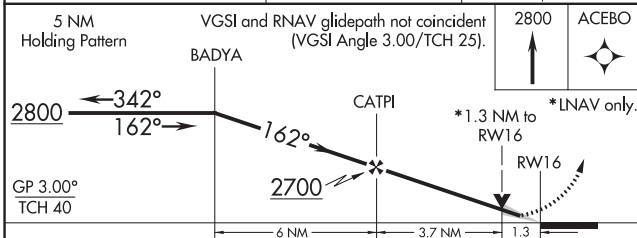
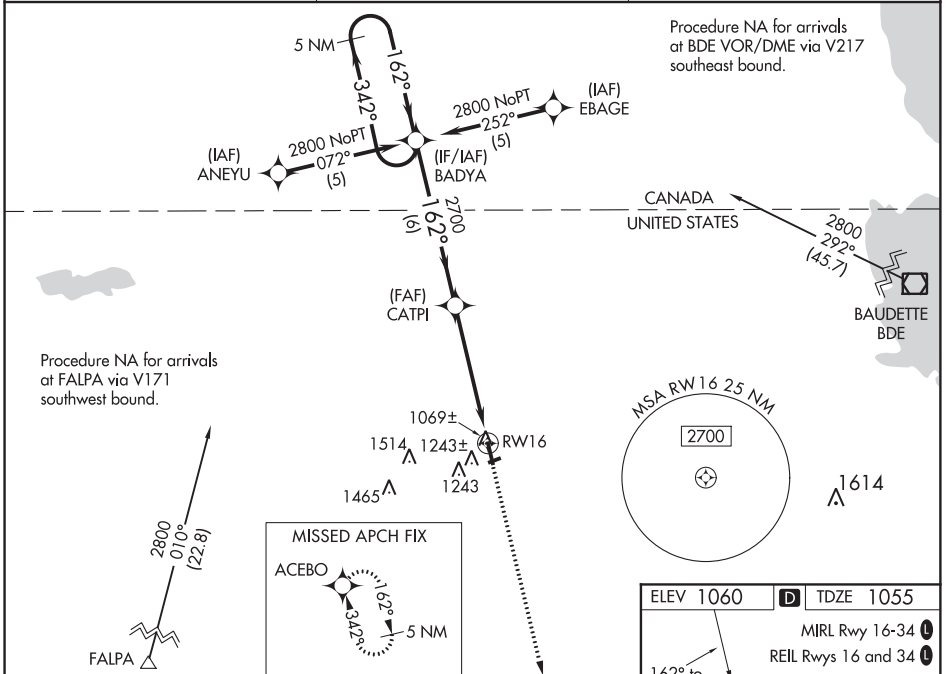
# RNAV (GPS) RWY 16

ROSEAU MUNI/RUDY BILLBERG FIELD (R.O.X)

**⚠** If local altimeter setting not received, use Warroad altimeter setting and increase all DAs 36 feet/MDAs 40 feet.  
**⚠** VDP NA when using Warroad altimeter setting.  
**⚠** Baro-VNAV NA when using Warroad altimeter setting.  
 For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 2800 direct ACEBO and hold.

AWOS-3 <b>108.8</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	UNICOM <b>122.8</b> (CTAF) <b>Ⓛ</b>
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CATEGORY	A	B	C	D
LPV DA		1305-1	250 (300-1)	
LNAV/VNAV DA		1403-1 ¼	348 (400-1 ¼)	
LNAV MDA	1500-1	445 (500-1)	1500-1 ¼ 445 (500-1 ¼)	1500-1 ½ 445 (500-1 ½)
CIRCLING	1600-1	540 (600-1)	1600-1 ½ 540 (600-1 ½)	1640-2 580 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ROSEAU, MINNESOTA

AL-5635 (FAA)

16259

WAAS CH <b>99404</b> <b>W34A</b>	APP CRS <b>342°</b>	Rwy Idg TDZE Apt Elev	<b>4401</b> <b>1060</b> <b>1060</b>
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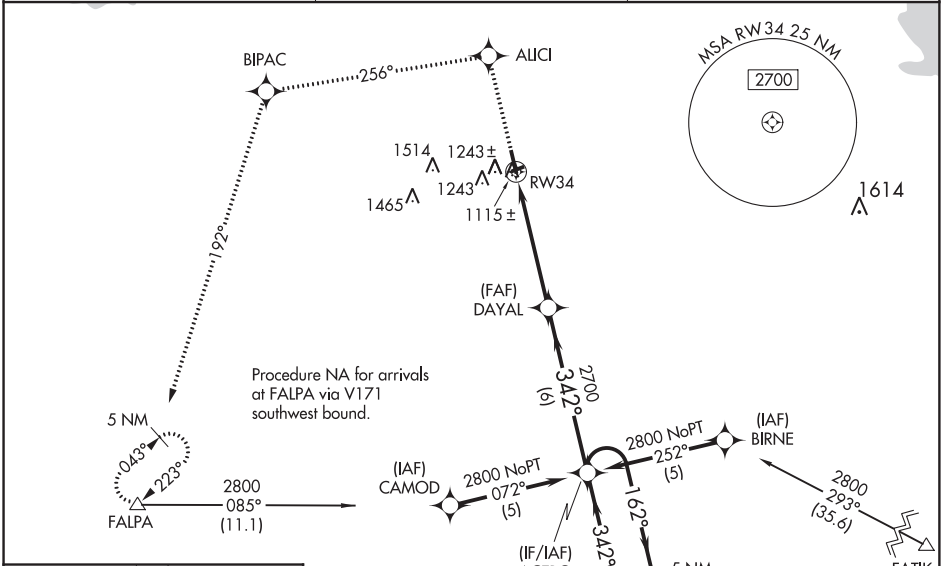
# RNAV (GPS) RWY 34

ROSEAU MUNI/RUDY BILLBERG FIELD (R.O.X)

**⚠** If local altimeter setting not received, use Warroad altimeter setting and increase all DAs 36 feet/MDAs 40 feet.  
**⚠** VDP NA when using Warroad altimeter setting.  
**⚠** Baro-VNAV NA when using Warroad altimeter setting.  
 For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F).  
 Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.

**MISSED APPROACH:** Climb to 2900 direct ALCI and via 256° track to BIPAC and 192° track to FALPA and hold.

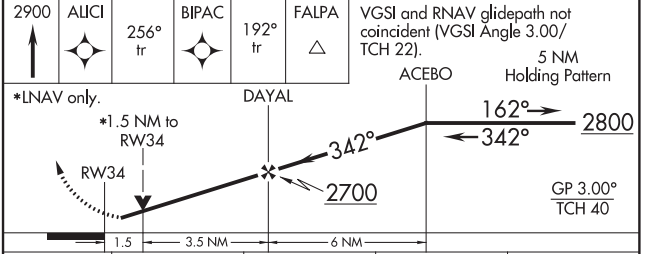
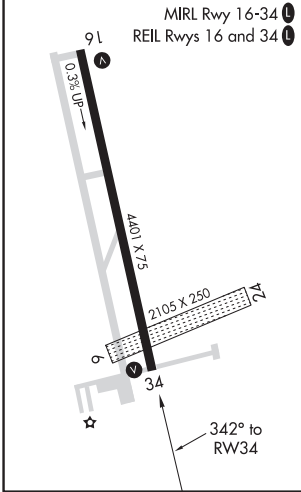
AWOS-3 <b>108.8</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	UNICOM <b>122.8</b> (CTAF) <b>1</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1060	<b>D</b>	TDZE 1060
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CATEGORY	A	B	C	D
LPV DA	1310-1 250 (300-1)			
LNAV/VNAV DA	1485-1½ 425 (500-1½)			
LNAV MDA	1560-1	500 (500-1)	1560-1¼ 500 (500-1¼)	1560-1½ 500 (500-1½)
CIRCLING	1600-1	540 (600-1)	1600-1½ 540 (600-1½)	1640-2 580 (600-2)

ROSEAU, MINNESOTA  
Orig 30AUG07

ROSEAU MUNI/RUDY BILLBERG FIELD (R.O.X)  
48°51'N-95°42'W  
**RNAV (GPS) RWY 34**

ROSEAU, MINNESOTA

AL-5635 (FAA)

16259

VOR/DME ROX <b>108.8</b> Chan 25	APP CRS <b>156°</b>	Rwy Idg TDZE Apt Elev	<b>4401</b> <b>1055</b> <b>1060</b>
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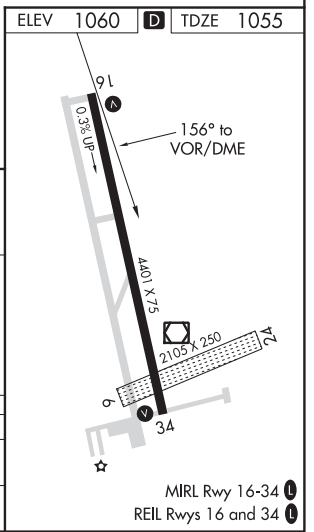
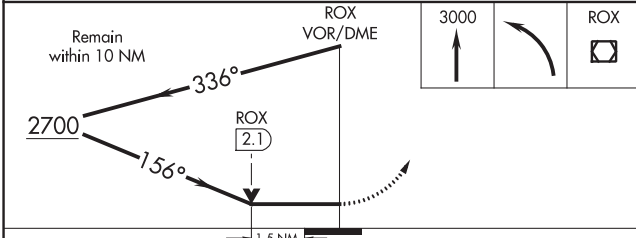
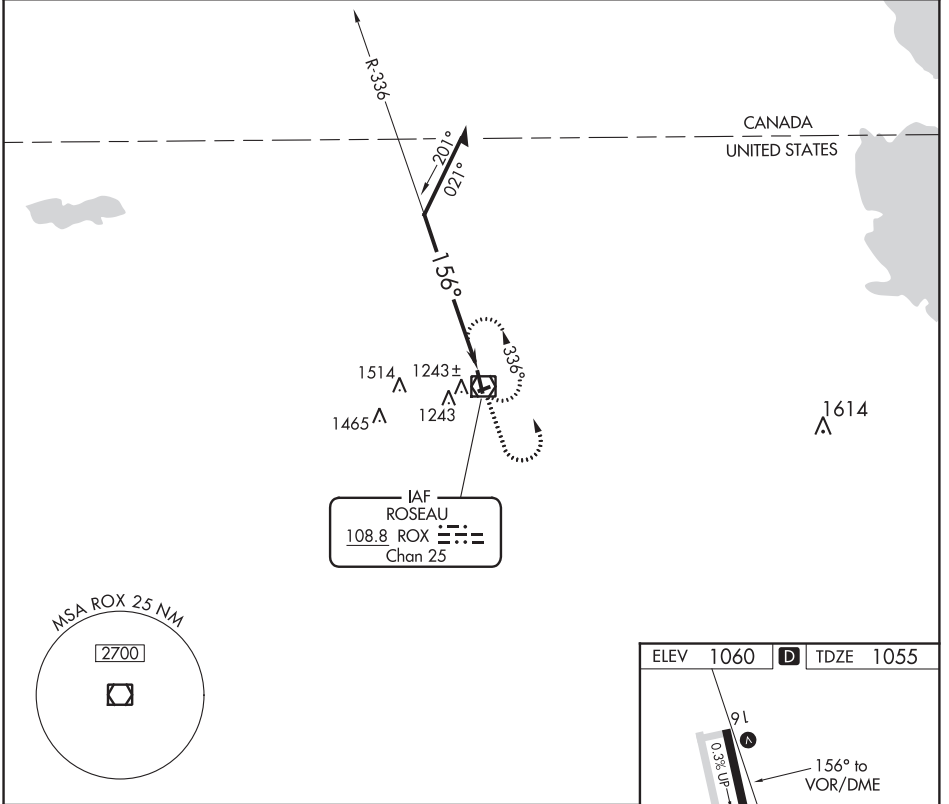
# VOR RWY 16

ROSEAU MUNI/RUDY BILLBERG FIELD (ROX)

**⚠** If local altimeter setting not received, use Warroad altimeter setting and increase all MDAs 40 feet.  
**⚠** NA VDP NA when using Warroad altimeter setting.

MISSED APPROACH: Climb to 3000 then left turn direct ROX VOR/DME and hold.

AWOS-3 <b>108.8</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	UNICOM <b>122.8 (CTAF)</b> <b>Ⓛ</b>
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CATEGORY	A	B	C	D
S-16	1560-1	505 (500-1)	1560-1½	505 (500-1½)
CIRCLING	1600-1	540 (600-1)	1600-1½ 540 (600-1½)	1640-2 580 (600-2)

ROSEAU, MINNESOTA  
Amdt 8 30AUG07

# VOR RWY 16

ROSEAU MUNI/RUDY BILLBERG FIELD (ROX)

48°51'N-95°42'W  
543

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ROSEAU, MINNESOTA

AL-5635 (FAA)

16259

VOR/DME ROX <b>108.8</b> Chan <b>25</b>	APP CRS <b>349°</b>	Rwy Idg TDZE Apt Elev	<b>4401</b> <b>1060</b> <b>1060</b>
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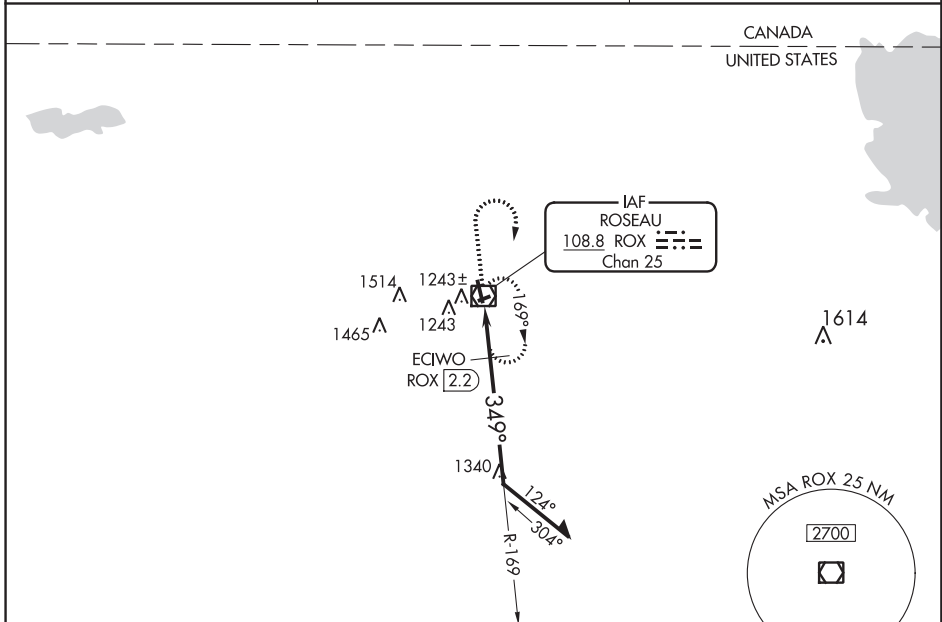
# VOR RWY 34

ROSEAU MUNI/RUDY BILLBERG FIELD (ROX)

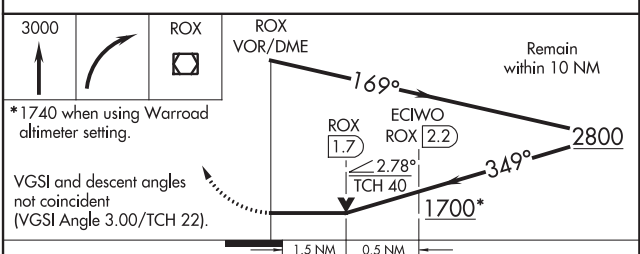
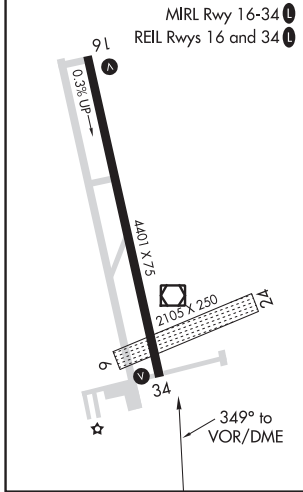
**▽** If local altimeter setting not received, use Warroad altimeter setting and increase all MDAs 40 feet.  
**△ NA** VDP NA when using Warroad altimeter setting.  
 Visibility reduction by helicopters NA.

MISSED APPROACH: Climb to 3000 then right turn direct ROX VOR/DME and hold.

AWOS-3 <b>108.8</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	UNICOM <b>122.8 (CTAF)</b> <b>Ⓛ</b>
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ELEV 1060	<b>D</b>	TDZE 1060
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CATEGORY	A	B	C	D
S-34	1700-1	640 (700-1)	1700-1¾ 640 (700-1¾)	1700-2 640 (700-2)
CIRCLING	1700-1	640 (700-1)	1700-1¾ 640 (700-1¾)	1700-2 640 (700-2)
ECIWO FIX MINIMUMS				
S-34	1560-1	500 (500-1)	1560-1¼ 500 (500-1¼)	1560-1½ 500 (500-1½)
CIRCLING	1600-1	540 (600-1)	1600-1½ 540 (600-1½)	1640-2 580 (600-2)

ROSEAU, MINNESOTA  
Amdt 1 30AUG07

ROSEAU MUNI/RUDY BILLBERG FIELD (ROX)  
48°51'N-95°42'W

# VOR RWY 34

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>58124</b> <b>W12A</b>	APP CRS <b>121°</b>	Rwy Idg TDZE Apt Elev	<b>3600</b> <b>1542</b> <b>1549</b>
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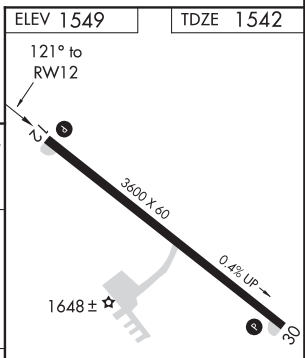
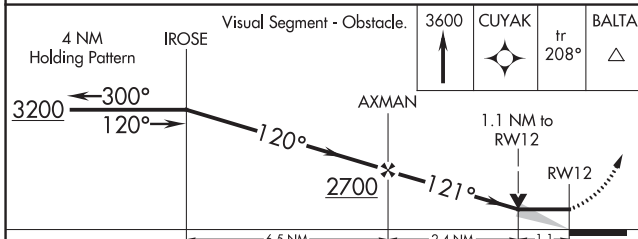
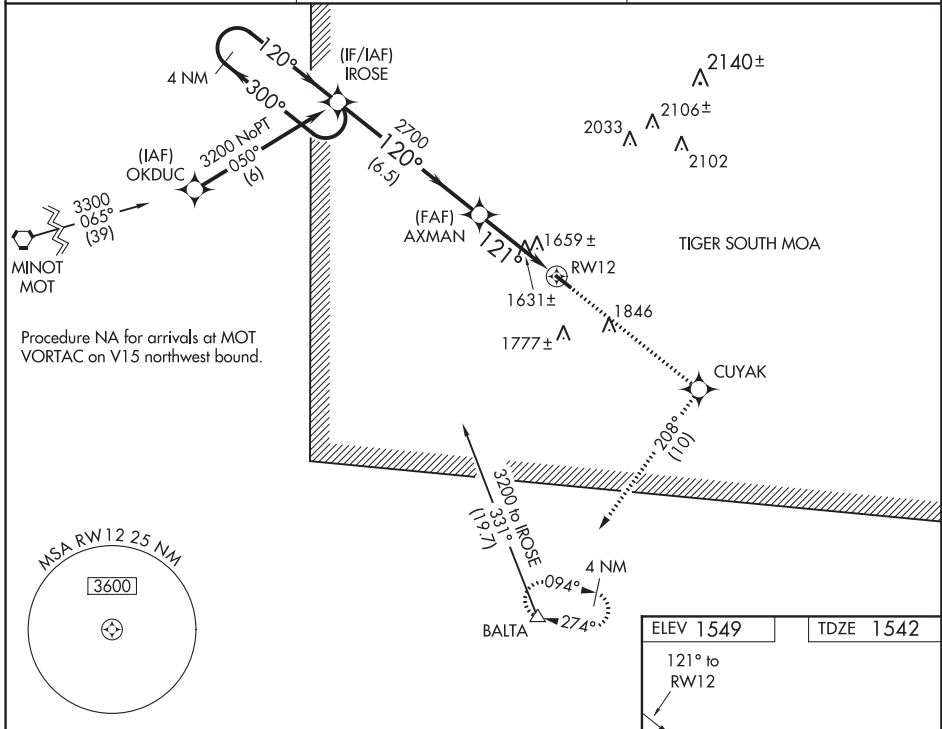
# RNAV (GPS) RWY 12

RUGBY MUNI (RUG)

**⚠** DME/DME RNP-0.3 NA. When local altimeter setting not received, use Devils Lake altimeter setting and increase all MDA 140 feet, increase LP and LNAV Cat C visibility 3/8 mile and Circling Cat C visibility 1/2 mile.

MISSED APPROACH: Climb to 3600 direct CUYAK and on track 208° to BALTA and hold.

AWOS-3 <b>118.475</b>	GRAND FORKS RADIO <b>122.2</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
LP MDA	1900-1 358 (400-1)			NA
LNAV MDA	1920-1	378 (400-1)	1920-1 3/8 378 (400-1 3/8)	NA
CIRCLING	2000-1 451 (500-1)	2160-1 611 (700-1)	2160-1 3/4 611 (700-1 3/4)	NA

MIRL Rwy 12-30

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>99524</b> <b>W30A</b>	APP CRS <b>301°</b>	Rwy Idg TDZE Apt Elev	<b>3600</b> <b>1549</b> <b>1549</b>
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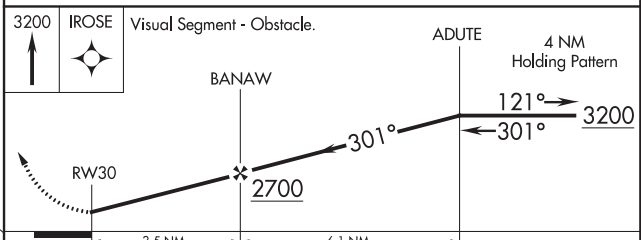
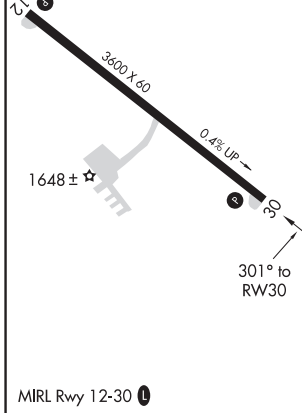
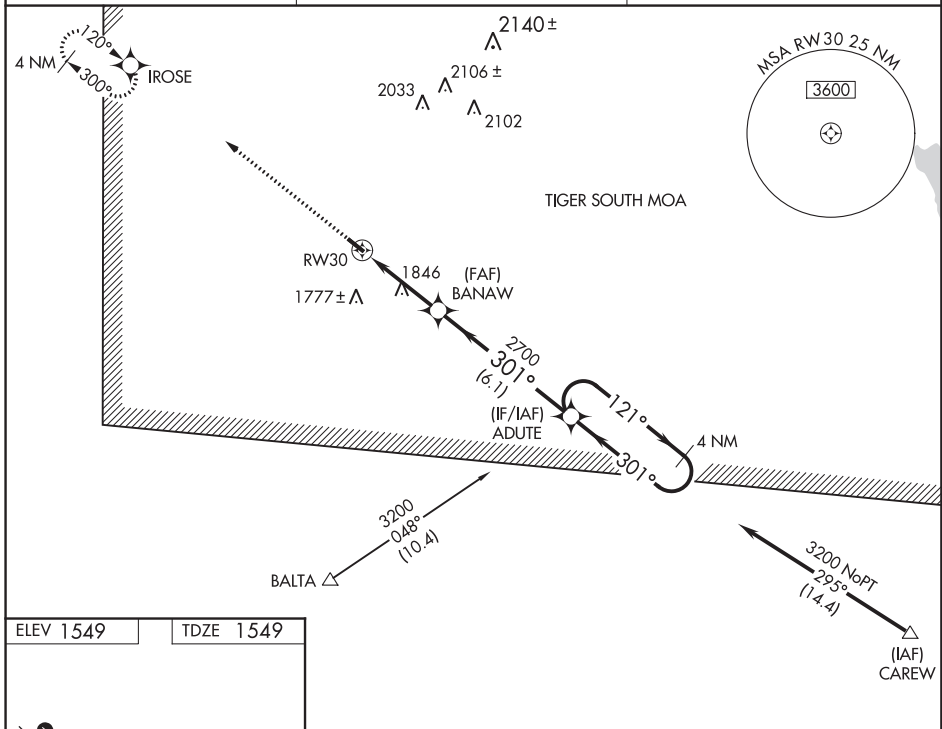
# RNAV (GPS) RWY 30

RUGBY MUNI (RUG)

**▽** DME/DME RNP-0.3 NA. When local altimeter setting not received, use Devils Lake altimeter setting and increase all MDA 140 feet, increase LP and LNAV Cats B/C visibility ¼ mile, and Circling Cat B visibility ¼ mile and Cat C visibility ½ mile. Rwy 30 helicopter visibility reduction below ¾ SM NA.

**▲** MISSED APPROACH: Climb to 3200 direct IROSE and hold.

AWOS-3 <b>118.475</b>	GRAND FORKS RADIO <b>122.2</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
LP MDA	2160-1	611 (700-1)	2160-1¾ 611 (700-1¾)	NA
LNAV MDA	2160-1	611 (700-1)	2160-1¾ 611 (700-1¾)	NA
CIRCLING	2160-1	611 (700-1)	2160-1¾ 611 (700-1¾)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>49020</b> <b>W34A</b>	APP CRS <b>339°</b>	Rwy Idg TDZE Apt Elev	<b>4397</b> <b>926</b> <b>926</b>
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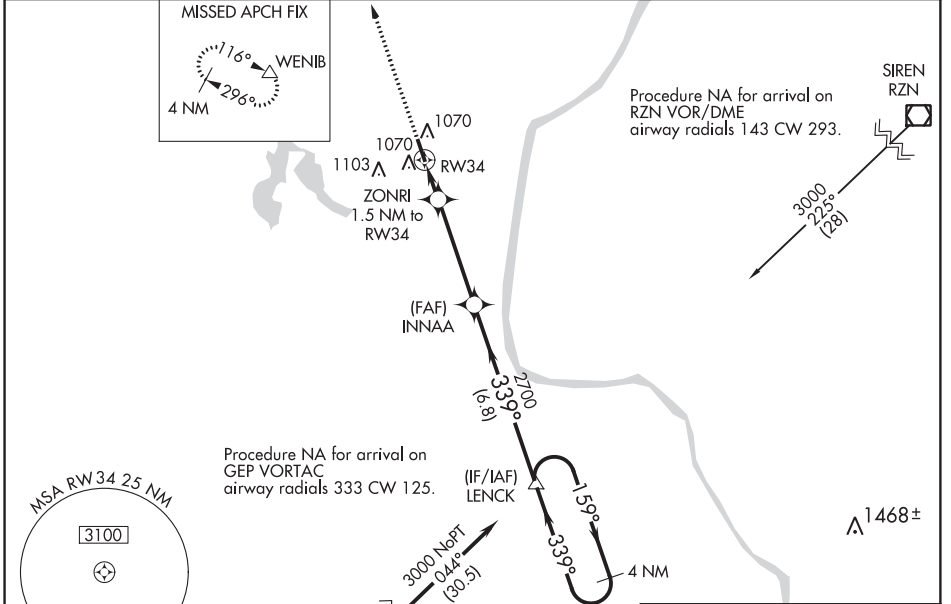
# RNAV (GPS) RWY 34

RUSH CITY RGNL (ROS)

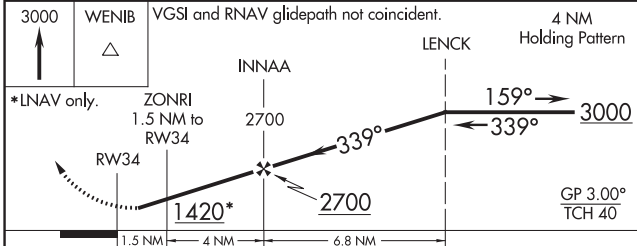
**⚠** Baro-VNAV NA when using Cambridge altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Cambridge Muni altimeter setting and increase all DA/MDA 40 feet; increase LNAV/VNAV all Cats visibility ¼ mile and LNAV Cat C visibility ½ mile.

**⚠** MISSED APPROACH: Climb to 3000 direct WENIB and hold. When authorized by ATC, continue climb-in-hold to 6000.

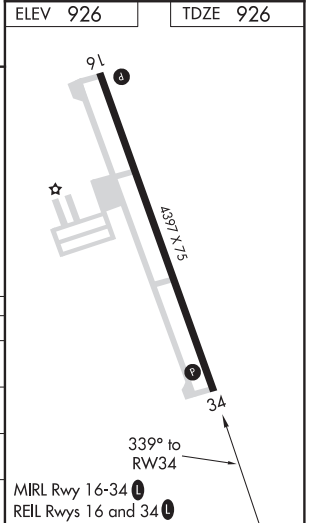
AWOS-3 <b>118.8</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	GCO <b>121.725</b>	CTAF <b>122.90</b>
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ELEV 926	TDZE 926
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CATEGORY	A	B	C	D
LPV DA		1190-1	264 (300-1)	NA
LNAV/VNAV DA		1240-1	314 (400-1)	NA
LNAV MDA	1320-1	394 (400-1)	1320-1½ 394 (400-1½)	NA
CIRCLING	1440-1	514 (600-1)	1440-1½ 514 (600-1½)	NA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

RUSH CITY, MINNESOTA

AL-9377 (FAA)

16203

NDB ROS <b>282</b>	APP CRS <b>329°</b>	Rwy Idg <b>4397</b>
		TDZE <b>926</b>
		Apt Elev <b>926</b>

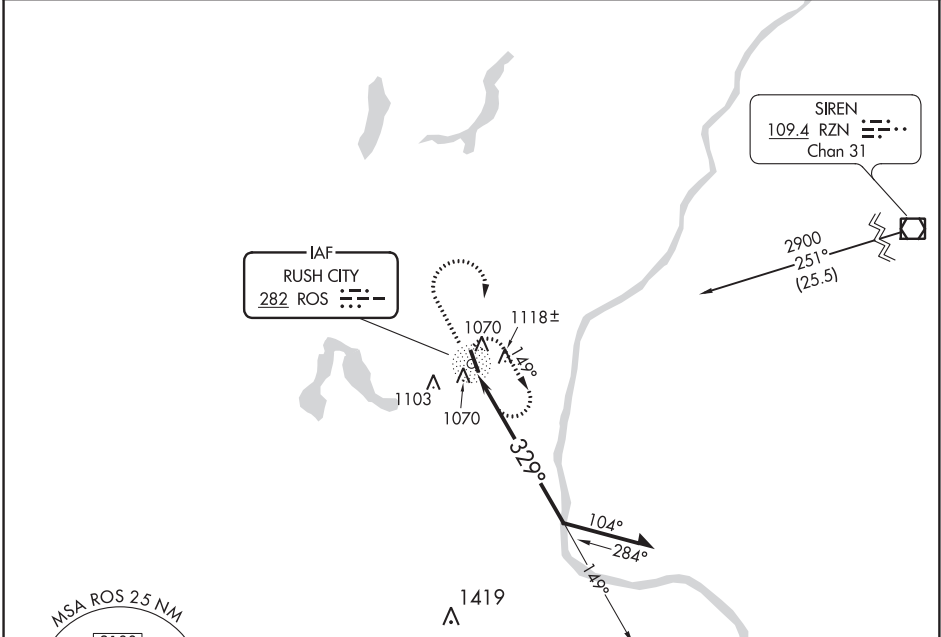
# NDB RWY 34

RUSH CITY RGNL (ROS)

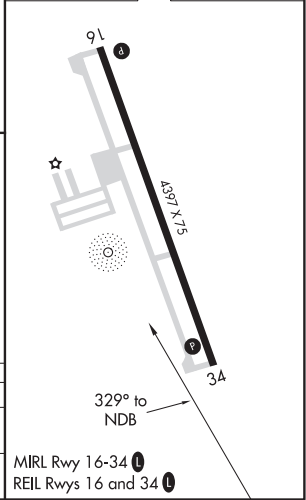
**▽**  
**△** NA

MISSED APPROACH: Climb to 2900, then right turn direct ROS NDB and hold.

AWOS-3 <b>118.8</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	GCO <b>121.725</b>	CTAF <b>122.9</b> <b>L</b>
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ELEV 926	TDZE 926
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CATEGORY	A	B	C	D
S-34	1480-1	554 (600-1)	1480-1½ 554 (600-1½)	1480-1¾ 554 (600-1¾)
CIRCLING	1480-1	554 (600-1)	1480-1½ 554 (600-1½)	1480-2 554 (600-2)

RUSH CITY, MINNESOTA  
Orig-A 05FEB15

45°42'N-92°57'W

# RUSH CITY RGNL (ROS)

## NDB RWY 34

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

APP CRS <b>341°</b>	Rwy Idg <b>3200</b>
	TDZE <b>1209</b>
	Apt Elev <b>1211</b>

# RNAV (GPS) RWY 34

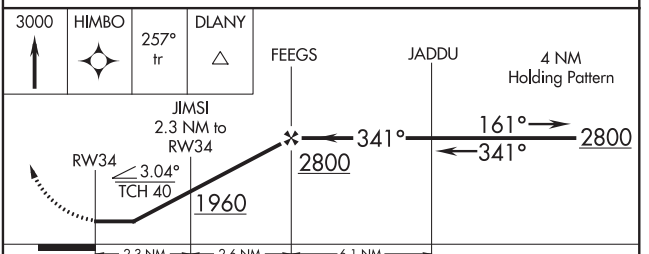
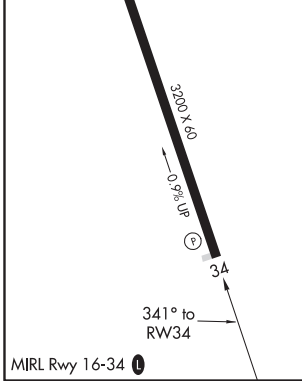
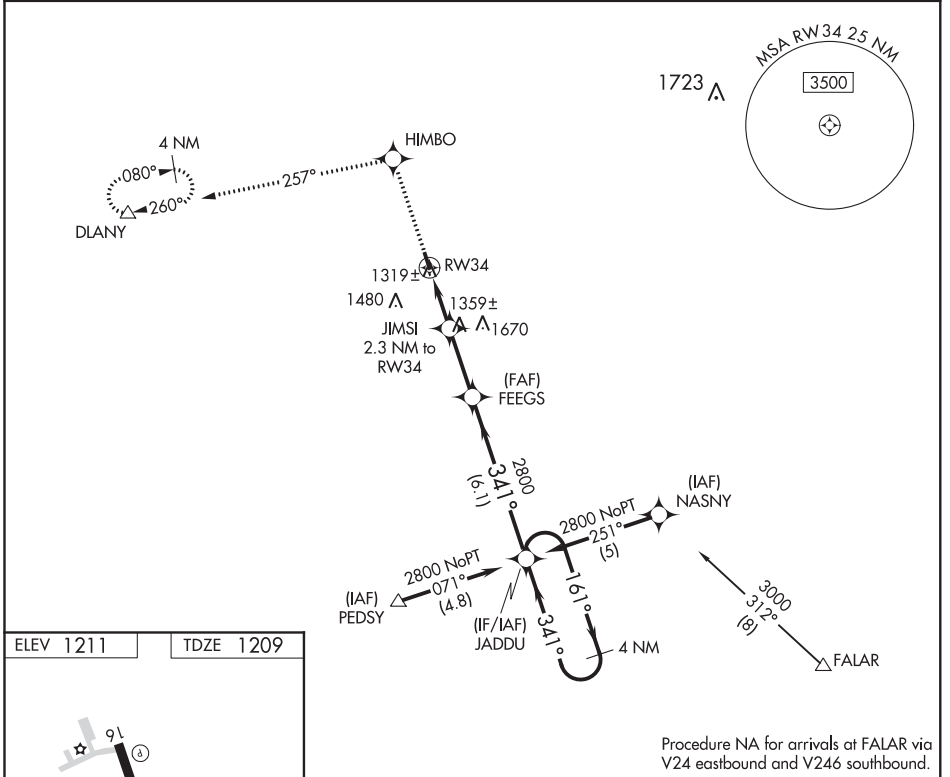
RUSHFORD MUNI (55Y)

**NA**  
 DME/DME RNP-0.3 NA.  
 Visibility reduction by helicopters NA.  
 Use Preston altimeter setting, when not received use Winona altimeter setting and increase all MDA 80 feet.

MISSED APPROACH: Climb to 3000 direct HIMBO and via 257° track to DLANY and hold.

ROCHESTER APP CON ★  
**119.8 251.125**

CTAF  
**122.9**



CATEGORY	A	B	C	D
LNAV MDA	1620-1	411 (500-1)	1620-1¼ 411 (500-1½)	NA
CIRCLING	1720-1	509 (600-1)	1720-1½ 509 (600-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

RUSHFORD, MINNESOTA

AL-6563 (FAA)

15232

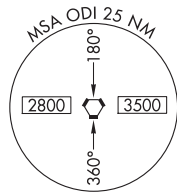
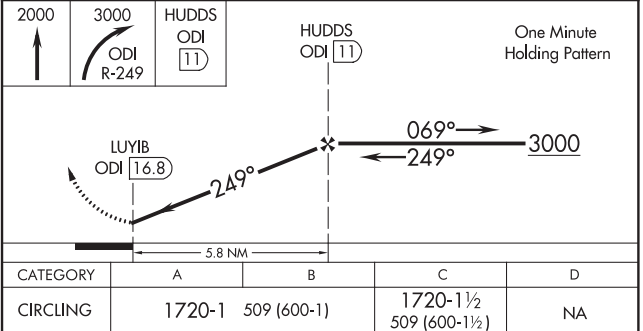
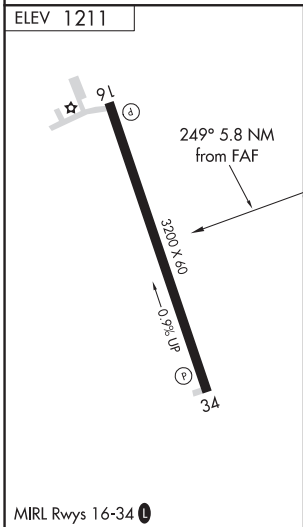
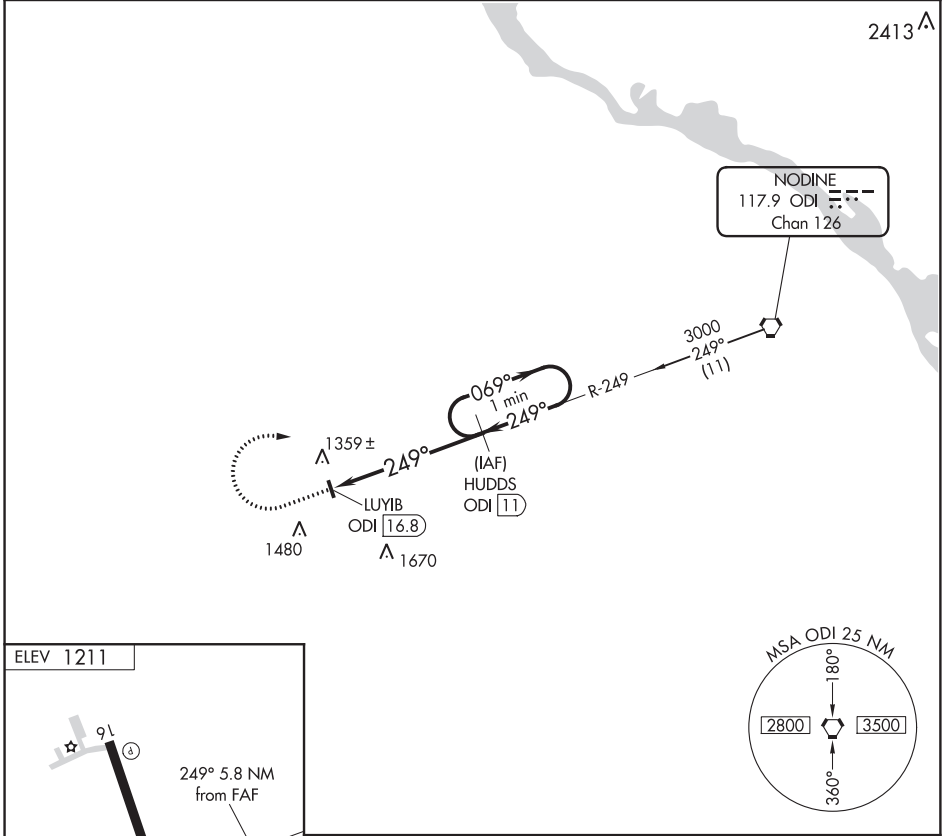
VORTAC ODI <b>117.9</b> Chan <b>126</b>	APP CRS <b>249°</b>	Rwy Idg TDZE Apt Elev	<b>N/A</b> <b>N/A</b> <b>1211</b>
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**VOR/DME-A**  
RUSHFORD MUNI (55Y)

**NA** Use Preston altimeter setting, when not received use Winona altimeter setting and increase all MDA 80 feet.

MISSED APPROACH: Climb to 2000, then climbing right turn to 3000 via ODI VORTAC R-249 to HUDDS/ODI 11 DME and hold.

ROCHESTER APP CON * <b>119.8 251.125</b>	CTAF <b>122.9</b>
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RUSHFORD, MINNESOTA  
Amdt 2 15JAN09

43°49'N-91°50'W

RUSHFORD MUNI (55Y)  
**VOR/DME-A**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

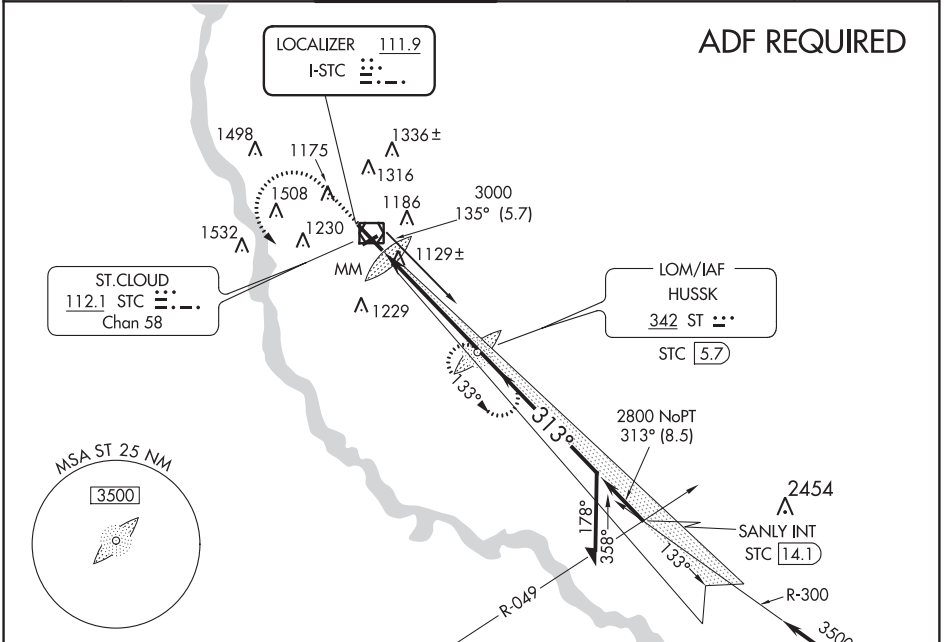
LOC I- <b>STC</b>	APP CRS <b>313°</b>	Rwy Idg <b>7000</b>
<b>111.9</b>		TDZE <b>1019</b>
		Apt Elev <b>1031</b>

# ILS or LOC RWY 31

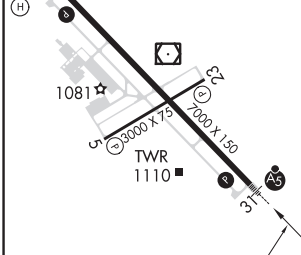
ST. CLOUD RGNL (STC)

<p><b>NA</b> When local altimeter setting not received, use Little Falls altimeter setting and increase all DA 76 feet and all MDA 80 feet.</p>	<p><b>MALS</b></p>	<p><b>MISSED APPROACH:</b> Climb to 3000, then left turn direct HUSSK LOM and hold.</p>
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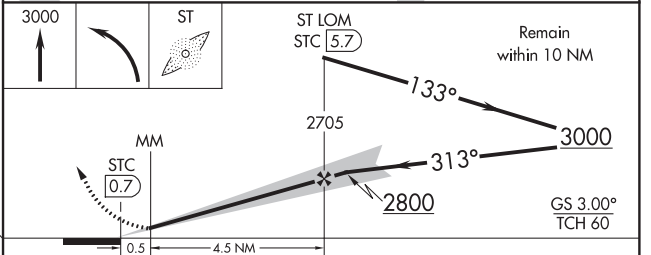
ATIS <b>119.375</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	ST. CLOUD TOWER ★ <b>118.25 (CTAF)</b>	GND CON <b>123.75</b>	PRINCETON RADIO <b>122.5</b>	UNICOM <b>123.5</b>
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ELEV 1031	<b>D</b>	TDZE 1019
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FAF to MAP 5 NM					
Knots	60	90	120	150	180
Min:Sec	5:00	3:20	2:30	2:00	1:40



CATEGORY	A	B	C	D
S-ILS 31	1219-½		200 (200-½)	
S-LOC 31	1380-½		361 (400-½)	
			1380-¾ 361 (400-¾)	
CIRCLING	1500-1 469 (500-1)		1500-1½ 1620-2 469 (500-1½) 590 (600-2)	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# ILS or LOC/DME RWY 13

ST. CLOUD RGNL (STC)

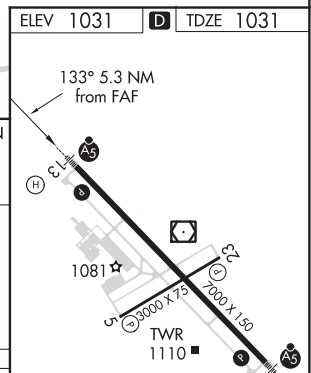
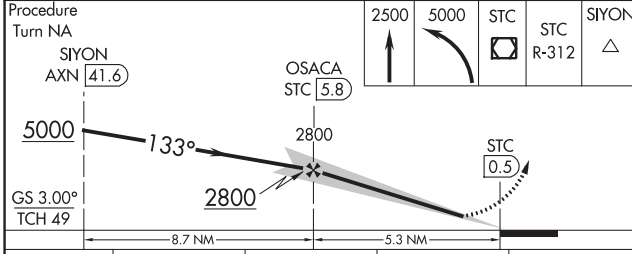
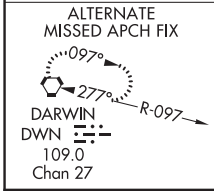
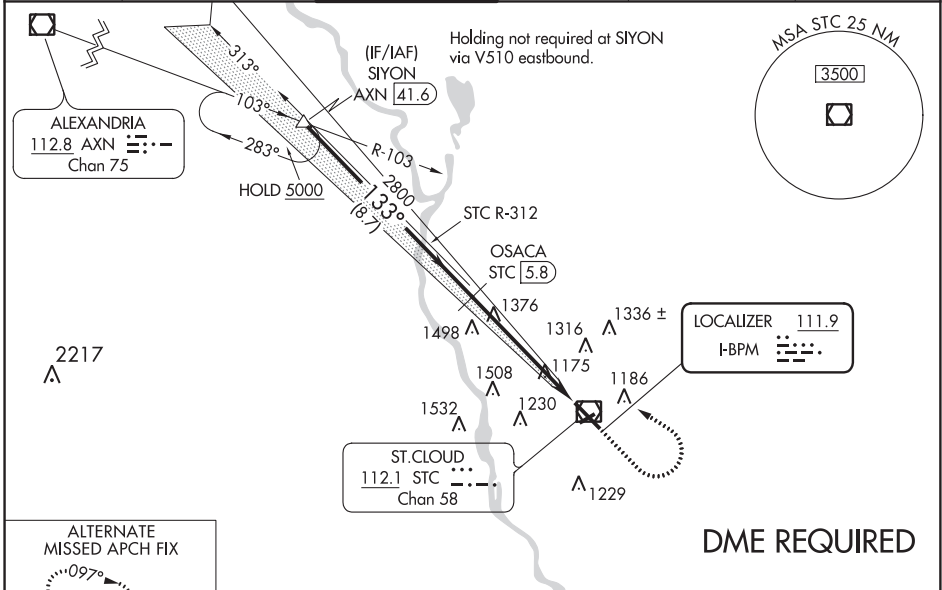
LOC I-BPM <b>111.9</b>	APP CRS <b>133°</b>	Rwy Idg TDZE Apt Elev	<b>7000</b> <b>1031</b> <b>1031</b>
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**⚠** Circling to Rwy 5-23 NA at night. DME from STC VOR/DME. Simultaneous reception of I-BPM and STC DME required. DME required. When local altimeter setting not received, use Little Falls altimeter setting and increase DA to 1307 and all MDAs 80 feet. Increase S-LOC 13 Cats C/D and Circling Cats C/D visibility 1/4 mile. For inoperative MALSRL when using Little Falls altimeter setting, increase S-ILS 13 all Cats visibility 1/2 mile.

**MALSRL**  
A5

**MISSED APPROACH:** Climb to 2500 then climbing left turn to 5000 direct STC VOR/DME and via STC VOR/DME R-312 to SIYON/AXN VOR/DME 41.6 DME and hold.

ATIS <b>119.375</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	ST. CLOUD TOWER * <b>118.25 (CTAF)</b> 0	GND CON <b>123.75</b>	PRINCETON RADIO <b>122.5</b>	UNICOM <b>123.5</b>
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CATEGORY	A	B	C	D
S-ILS 13	1231-1/2		200 (200-1/2)	
S-LOC 13	1680-1/2	649 (700-1/2)	1680-1 1/4 649 (700-1 1/4)	1680-1 1/2 649 (700-1 1/2)
CIRCLING	1680-1	649 (700-1)	1680-1 3/4 649 (700-1 3/4)	1680-2 649 (700-2)

MRL Rwy 5-23 0  
HIRL Rwy 13-31 0

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



APP CRS	Rwy Idg	<b>3000</b>
<b>056°</b>	TDZE	<b>1022</b>
	Apt Elev	<b>1031</b>

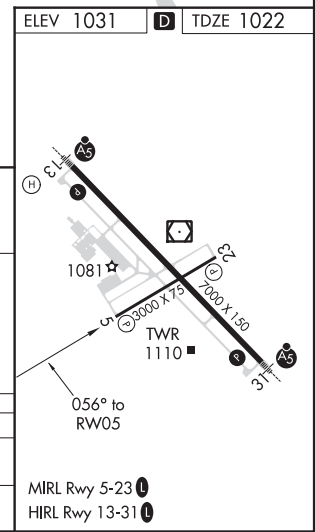
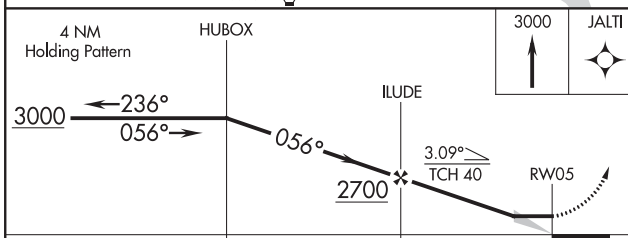
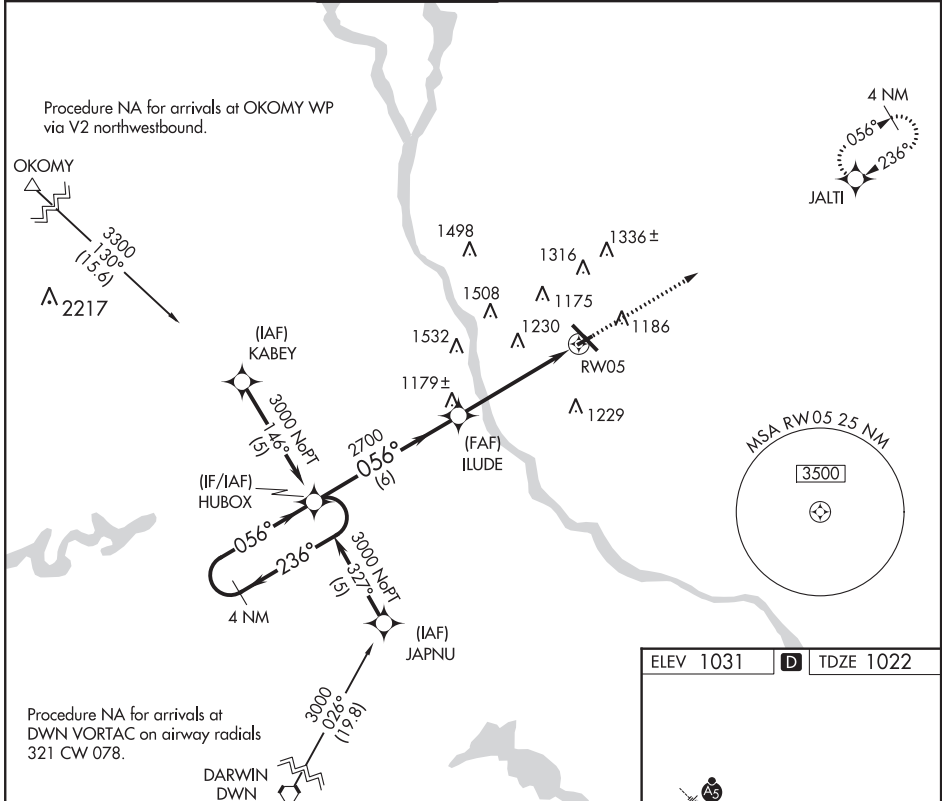
# RNAV (GPS) RWY 5

ST. CLOUD RGNL (STC)

**▼** When local altimeter setting not received, use Little Falls altimeter setting and increase cll MDA 80 feet and LNAV Cat C visibility ¼ mile. Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.

MISSED APPROACH: Climb to 3000 direct JALTI WP and hold.

ATIS <b>119.375</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	ST. CLOUD TOWER ★ <b>118.25 (CTAF) 0</b>	GND CON <b>123.75</b>	PRINCETON RADIO <b>122.5</b>	UNICOM <b>123.5</b>
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CATEGORY	A	B	C	D
LNAV MDA	1400-1 378 (400-1)			NA
CIRCLING	1500-1	469 (500-1)	1500-1½ 469 (500-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



APP CRS <b>236°</b>	Rwy Idg <b>3000</b>
	TDZE <b>1022</b>
	Apt Elev <b>1031</b>

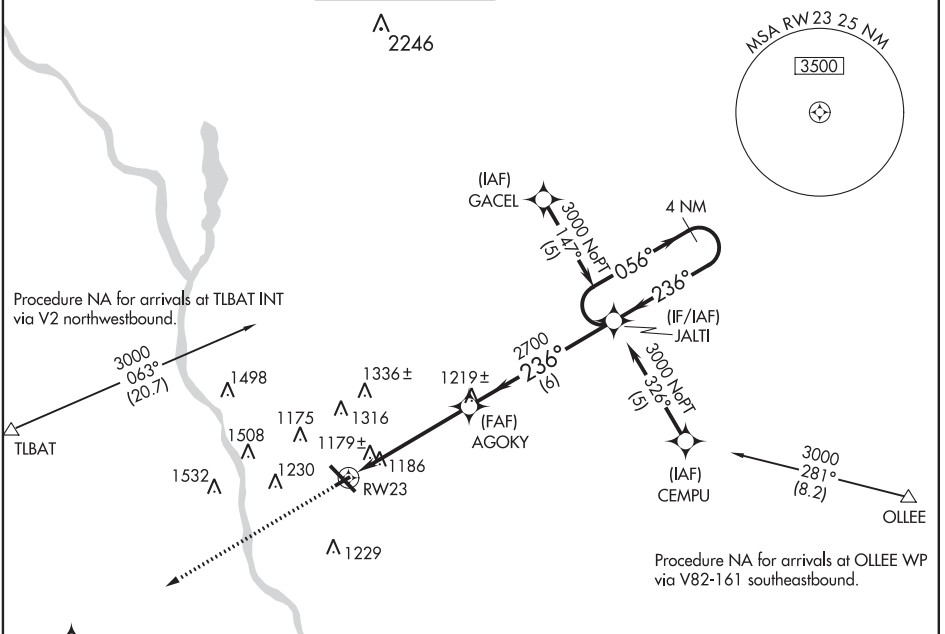
# RNAV (GPS) RWY 23

ST. CLOUD RGNL (STC)

**⚠** When local altimeter setting not received, use Little Falls altimeter setting and increase all MDA 80 feet and LNAV Cat C visibility 1/4 mile. Visibility reduction by helicopters NA. DME/DME RNP-0.3 NA.

**⚠** MISSED APPROACH: Climb to 3000 direct HUBOX WP and hold.

ATIS <b>119.375</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	ST. CLOUD TOWER ★ <b>118.25 (CTAF) 0</b>	GND CON <b>123.75</b>	PRINCETON RADIO <b>122.5</b>	UNICOM <b>123.5</b>
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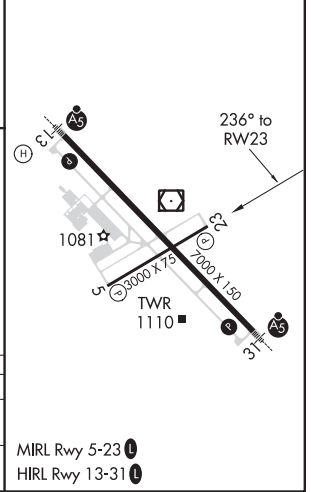


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 1031	<b>D</b> TDZE 1022
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3000	HUBOX	JALTI	4 NM Holding Pattern
RWY 23	AGOKY	2700	3000
5 NM	6 NM		

CATEGORY	A	B	C	D
LNAV MDA	1440-1	418 (500-1)	1440-1 1/4 418 (500-1 1/4)	NA
CIRCLING	1500-1	469 (500-1)	1500-1 1/2 469 (500-1 1/2)	NA

WAAS CH <b>61213</b> <b>W31A</b>	APP CRS <b>313°</b>	Rwy Idg TDZE Apt Elev	<b>7000</b> <b>1020</b> <b>1031</b>
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# RNAV (GPS) RWY 31

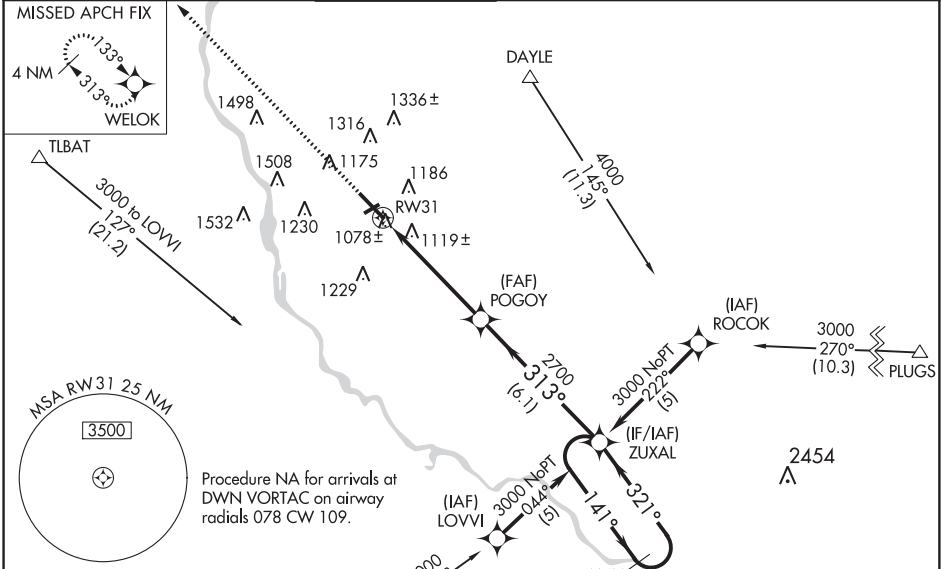
ST. CLOUD RGNL (STC)

**⚠** DME/DME RNP-0.3 NA. Circling to Rwy 5-23 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (114°F). When local altimeter setting not received, use Little Falls altimeter setting and increase all DA 76 feet and all MDA 80 feet. Increase LNAV/ VNAV visibility ¼ mile all Cats. For inoperative MALSR, increase LNAV Cat D visibility ¼ mile. For inoperative MALSR when using Little Falls altimeter setting, increase LPV all Cats visibility ½ mile. Baro-VNAV and VDP NA when using Little Falls altimeter setting.

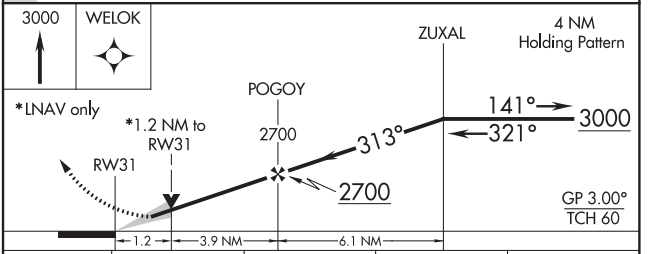
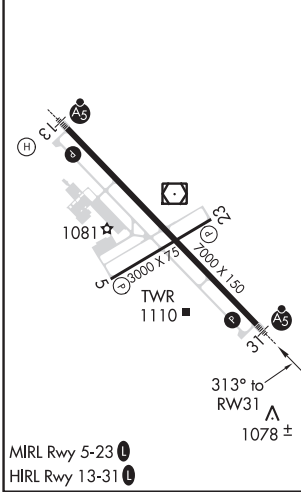
MALSR

MISSED APPROACH:  
Climb to 3000 direct  
WELOK and hold.

ATIS <b>119.375</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	ST. CLOUD TOWER * <b>118.25 (CTAF) 0</b>	GND CON <b>123.75</b>	PRINCETON RADIO <b>122.5</b>	UNICOM <b>123.5</b>
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ELEV 1031	<b>D</b>	TDZE 1020
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CATEGORY	A	B	C	D
LPV DA		1220-½	200 (200-½)	
LNAV/VNAV DA		1379-¾	359 (400-¾)	
LNAV MDA	1440-½	420 (500-½)	1440-¾ 420 (500-¾)	1440-1 420 (500-1)
CIRCLING	1500-1	469 (500-1)	1500-½ 469 (500-½)	1620-2 589 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

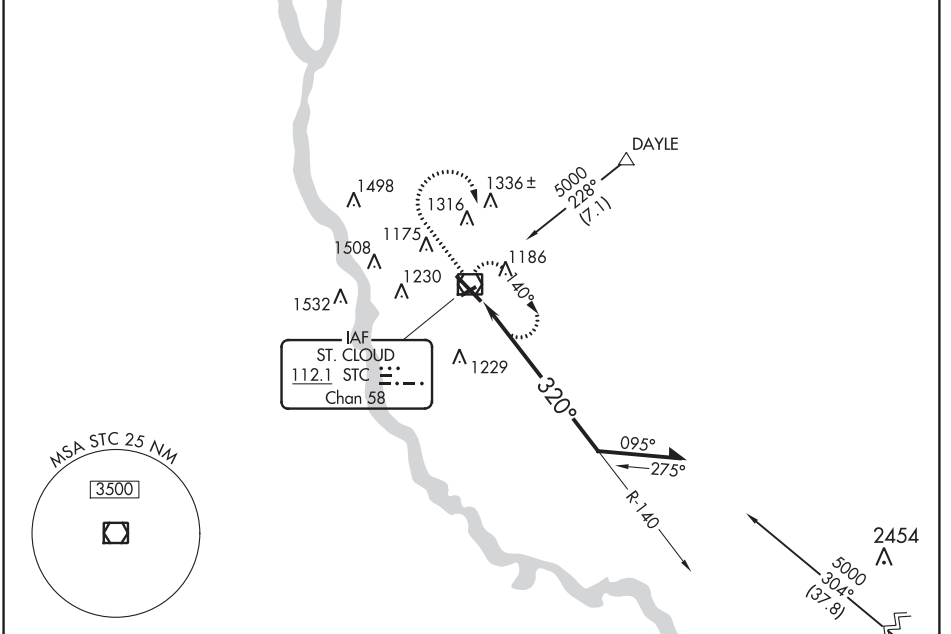
VOR/DME STC <b>112.1</b> Chan <b>58</b>	APP CRS <b>320°</b>	Rwy Idg TDZE <b>1019</b> Apt Elev <b>1031</b>	<b>7000</b>
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# VOR RWY 31

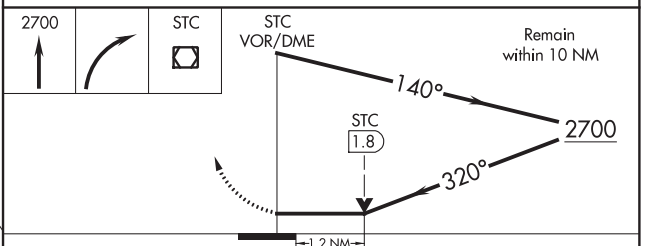
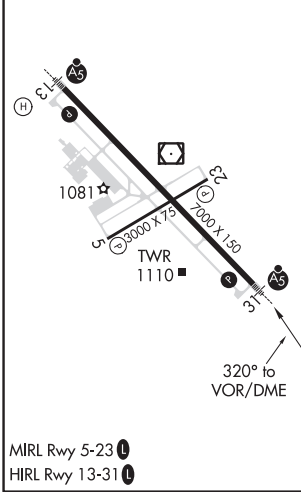
ST. CLOUD RGNL (STC)

For inoperative MALSR, increase Cat D visibility to 1 1/4. When local altimeter setting not received, use Little Falls altimeter setting and increase all MDA 80 feet.	MALSR	MISSED APPROACH: Climb to 2700, then right turn direct STC VOR/DME and hold.
	MALSR	

ATIS <b>119.375</b>	MINNEAPOLIS CENTER <b>121.05 397.9</b>	ST. CLOUD TOWER ★ <b>118.25 (CTAF)</b>	GND CON <b>123.75</b>	PRINCETON RADIO <b>122.5</b>	UNICOM <b>123.5</b>
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ELEV 1031	<b>D</b>	TDZE 1019
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CATEGORY	A	B	C	D
S-31	1440-1/2	421 (500-1/2)	1440-3/4 421 (500-3/4)	1440-1 421 (500-1)
CIRCLING	1500-1	469 (500-1)	1500-1 1/2 469 (500-1 1/2)	1620-2 590 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

AL-5799 (FAA)

ST. CLOUD RGNL (STC)  
ST. CLOUD, MINNESOTA

ATIS  
119.375  
ST. CLOUD TOWER ★  
118.25  
GND CON  
123.75



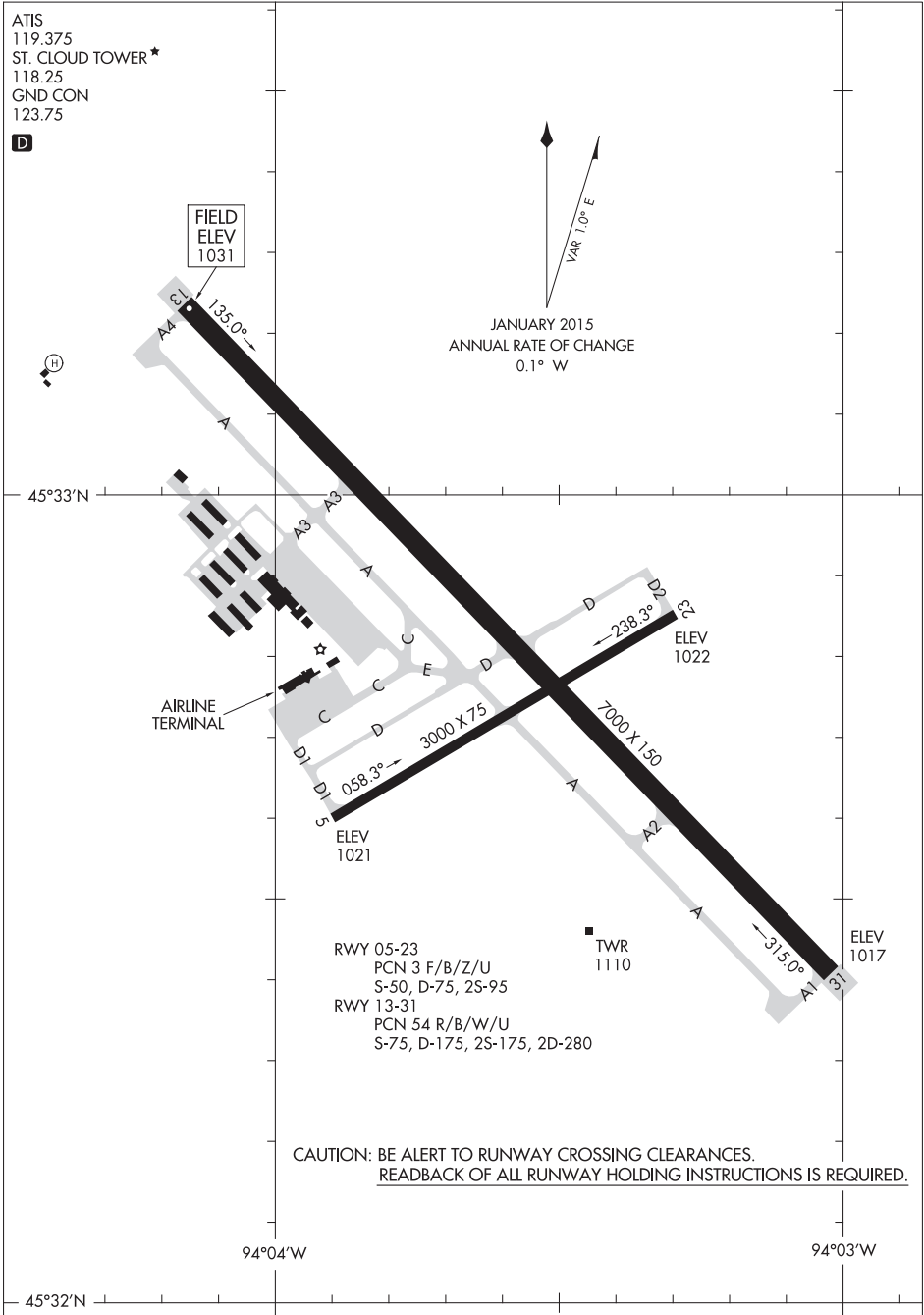
FIELD  
ELEV  
1031



JANUARY 2015  
ANNUAL RATE OF CHANGE  
0.1° W

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



AIRLINE  
TERMINAL

RWY 05-23  
PCN 3 F/B/Z/U  
S-50, D-75, 2S-95  
RWY 13-31  
PCN 54 R/B/W/U  
S-75, D-175, 2S-175, 2D-280

TWR  
1110

CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.  
READBCK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.

# AIRPORT DIAGRAM

ST. CLOUD, MINNESOTA  
ST. CLOUD RGNL (STC)

WAAS CH <b>58138</b> <b>W15A</b>	APP CRS <b>148°</b>	Rwy Idg <b>4000</b> TDZE <b>1067</b> Apt Elev <b>1067</b>
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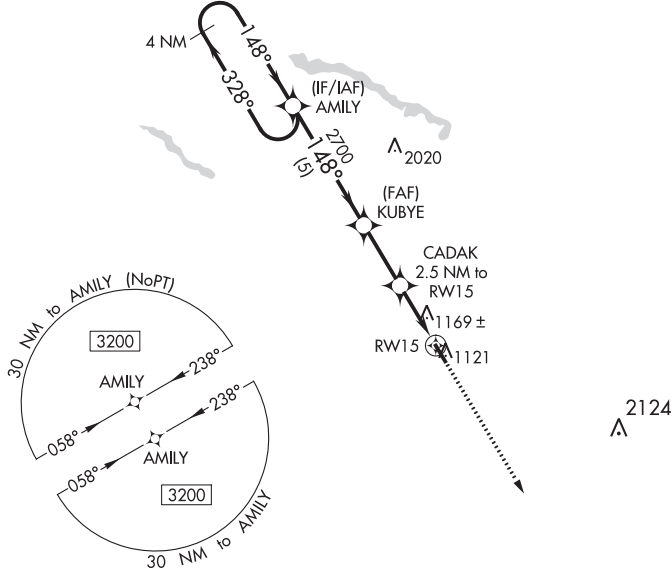
# RNAV (GPS) RWY 15

ST JAMES MUNI (JYJG)

**⚠** DME/DME RNP-0.3 NA. For uncompensated Baro-VNAV systems, procedure NA below -17°C (2°F) or above 54°C (130°F). Baro-VNAV and VDP NA when using New Ulm altimeter setting. When local altimeter not received, use New Ulm, MN altimeter setting and increase LPV DA to 1372 feet and LNAV/VNAV DA to 1530 feet, and all MDA 60 feet.

**MISSED APPROACH:** Climb to 3200 direct PUGJU and hold.

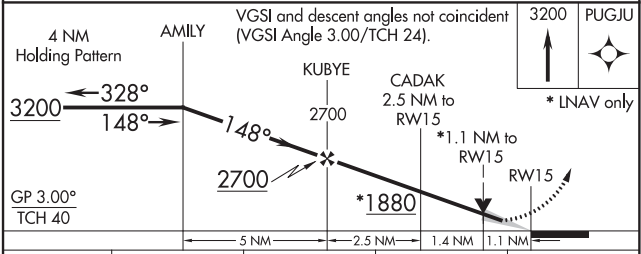
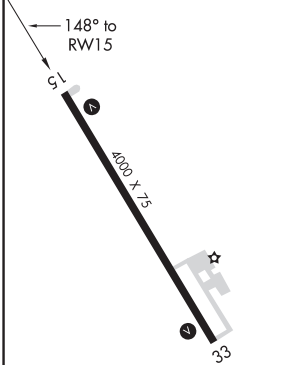
AWOS-3 <b>260</b>	MINNEAPOLIS CENTER <b>127.75 257.7</b>	GCO <b>121.725</b>	CTAF <b>122.9</b> <b>Ⓛ</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1067	TDZE 1067
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CATEGORY	A	B	C	D
LPV DA	1317-1	250 (300-1)		NA
LNAV/VNAV DA	1475-1 <sup>3</sup> / <sub>8</sub>	408 (500-1 <sup>3</sup> / <sub>8</sub> )		NA
LNAV MDA	1420-1	353 (400-1)		NA
CIRCLING	1500-1 433 (500-1)	1520-1 453 (500-1)		NA

MIRL Rwy 15-33 **Ⓛ**  
REIL Rwy 15 and 33 **Ⓛ**

ST. JAMES, MINNESOTA  
Amdt 1 31MAR16

43°59'N-94°33'W  
559

# ST JAMES MUNI (JYJG) RNAV (GPS) RWY 15

WAAS CH <b>53538</b> <b>W33A</b>	APP CRS <b>328°</b>	Rwy ldg TDZE Apt Elev	<b>4000</b> <b>1067</b> <b>1067</b>
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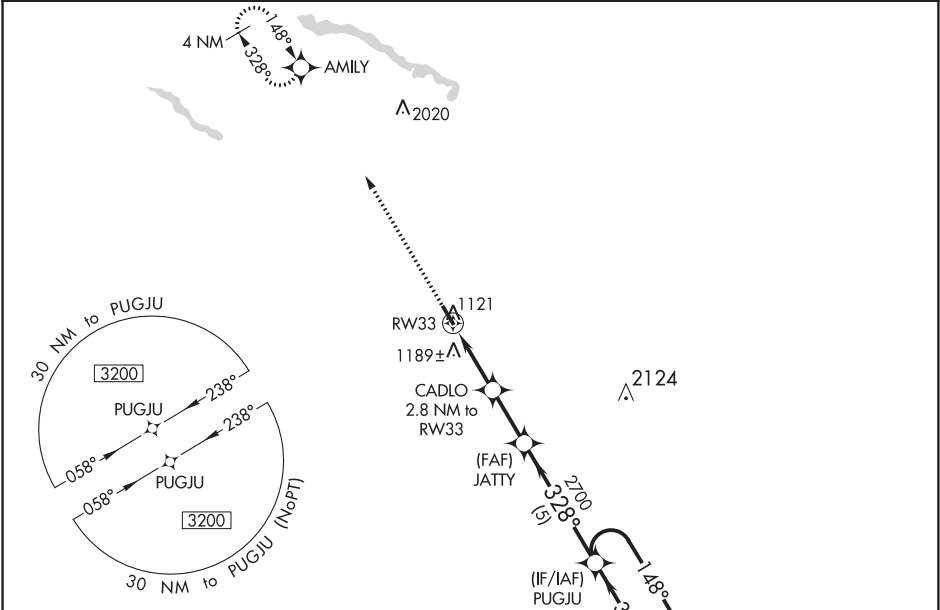
# RNAV (GPS) RWY 33

ST JAMES MUNI (JYG)

**⚠** For uncompensated Baro-VNAV systems, procedure NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA. Baro-VNAV and VDP NA when using New Ulm altimeter setting. When local altimeter setting not received, use New Ulm, MN altimeter setting and increase LPV DA to 1398 feet, LNAV/VNAV DA to 1549 feet, and all MDA 60 feet.

**MISSED APPROACH:** Climb to 3200 direct AMILY and hold.

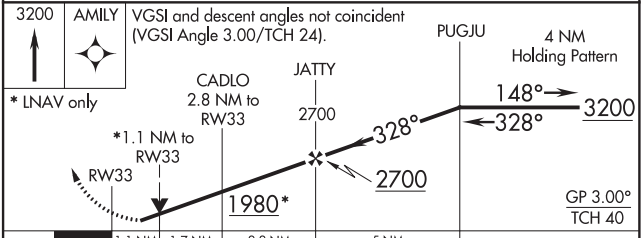
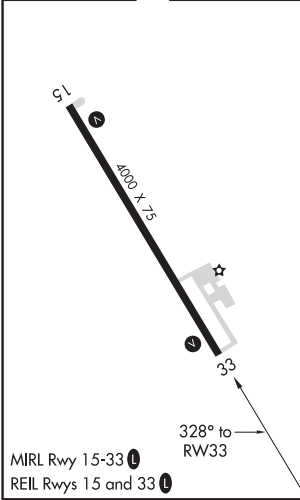
AWOS-3 <b>260</b>	MINNEAPOLIS CENTER <b>127.75 257.7</b>	GCO <b>121.725</b>	CTAF <b>122.9</b> <b>Ⓛ</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1067	TDZE 1067
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CATEGORY	A	B	C	D
LPV DA	1343-1	276 (300-1)		NA
LNAV/VNAV DA	1494-1½	427 (500-1½)		NA
LNAV MDA	1440-1	373 (400-1)		NA
CIRCLING	1500-1 433 (500-1)	1520-1 453 (500-1)		NA



NDB JYG <b>260</b>	APP CRS <b>343°</b>	Rwy Idg <b>4000</b>
		TDZE <b>1067</b>
		Apt Elev <b>1067</b>

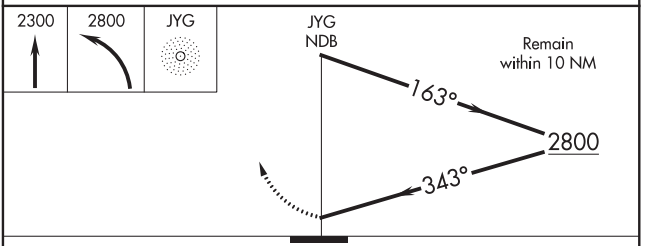
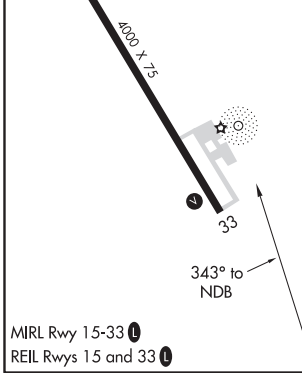
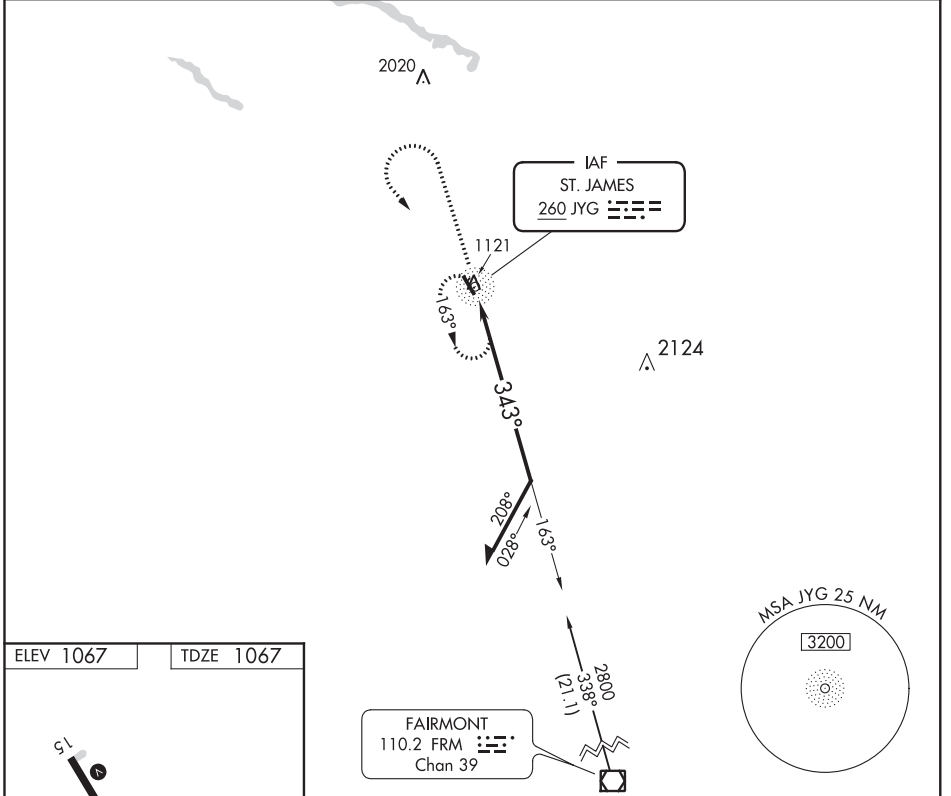
# NDB RWY 33

ST JAMES MUNI (JYG)

**NA** Helicopter visibility reduction below 3/4 SM NA. When local altimeter setting not received, use New Ulm altimeter setting: increase all MDA 60 feet.

**MISSED APPROACH:** Climb to 2300 then climbing left turn to 2800 direct JYG NDB and hold.

AWOS-3 <b>260</b>	MINNEAPOLIS CENTER <b>127.75 257.7</b>	GCO <b>121.725</b>	CTAF <b>122.9</b>
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CATEGORY	A	B	C	D
S-33	1660-1	593 (600-1)	NA	
CIRCLING	1660-1	593 (600-1)	NA	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ST. PAUL, MINNESOTA

AL-5455 (FAA)

16035

# RNAV (GPS) RWY 32

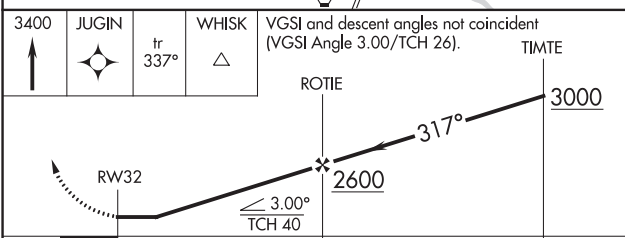
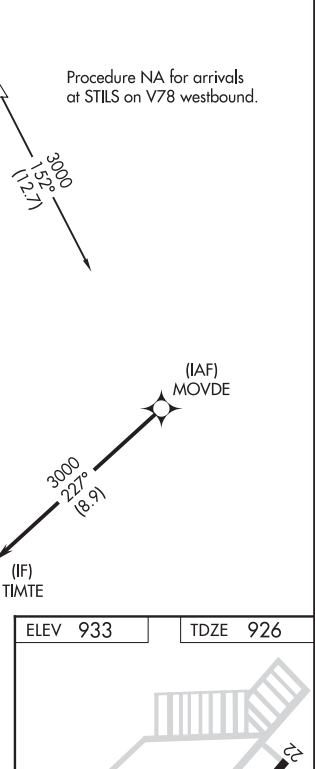
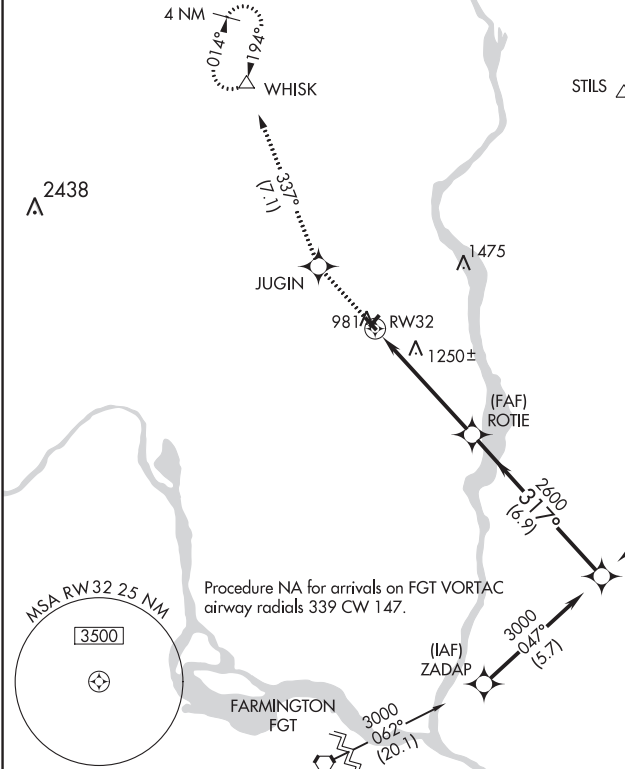
LAKE ELMO (21D)

APP CRS <b>317°</b>	Rwy Idg <b>2849</b>
	TDZE <b>926</b>
	Apt Elev <b>933</b>

**⚠** DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use St Paul Downtown Holman Field altimeter setting and increase all MDA 60 feet, increase LNAV Cat C visibility 1/8 mile and Circling Cat C visibility 1/4 mile. Circling Rwy 14/22 NA at night. When VGSI inoperative, Straight-In/Circling Rwy 32 procedure NA at night.

**⚠** MISSED APPROACH: Climb to 3400 direct JUGIN and on track 337° to WHISK and hold.

AWOS-3 <b>120.075</b>	MINNEAPOLIS APP CON <b>121.2</b>	CINC DEL <b>118.625</b>	UNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LNAV MDA	1500-1	574 (600-1)	1500-1 1/8 574 (600-1 1/8)	NA
CIRCLING	1500-1 567 (600-1)	1560-1 627 (700-1)	1600-1 3/4 667 (700-1 3/4)	NA

REIL Rwy 14 and 32 0

MIRL Rwy 14-32 0

ST. PAUL, MINNESOTA  
Amdt 1A 28MAY15

45°00'N-92°51'W

# RNAV (GPS) RWY 32

LAKE ELMO (21D)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

NDB PPI <b>400</b>	APP CRS <b>023°</b>	Rwy Idg <b>2496</b>
		TDZE <b>933</b>
		Apt Elev <b>933</b>

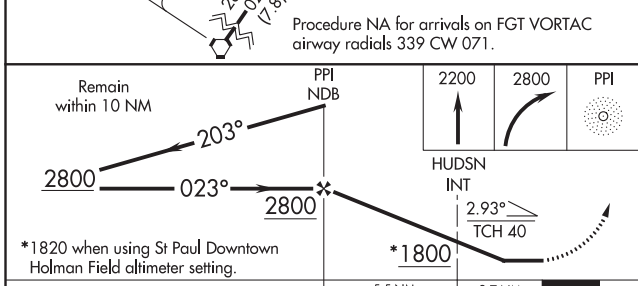
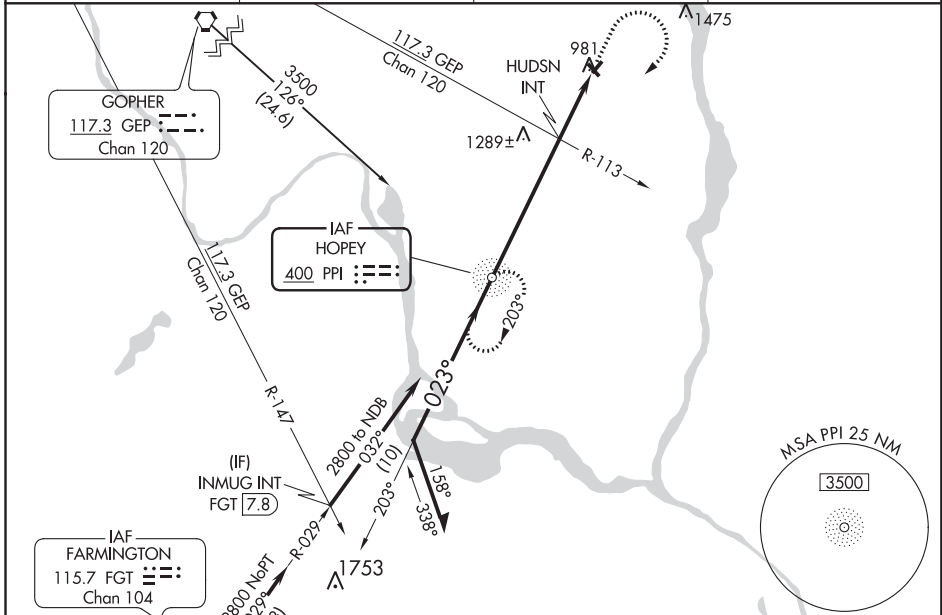
# NDB RWY 4

LAKE ELMO (21D)

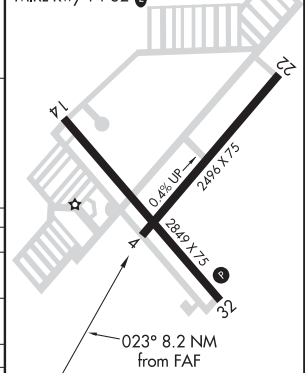
**⚠** Straight-in minimums NA at night. Visibility reduction by helicopters NA. When local altimeter setting not received, use St Paul Downtown Holman Field altimeter setting and increase all MDA 60 feet, increase S-4 Cat A and Circling Cat C visibility ¼ mile. HUDSN fix minimums; increase all Cats C visibility ½ mile. Circling Rwys 14/22 NA at night. When VGSI inoperative, Circling Rwy 32 NA at night.

**⚠** MISSED APPROACH: Climb to 2200 then climbing right turn to 2800 direct PPI NDB and hold.

AWOS-3 <b>120.075</b>	MINNEAPOLIS APP CON <b>121.2</b>	CLNC DEL <b>118.625</b>	UNICOM <b>122.8 (CTAF) ①</b>
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ELEV 933	TDZE 933
REIL Rwys 14 and 32 ①	MIRL Rwy 14-32 ①



CATEGORY	A	B	C	D
S-4	1800-1 867 (900-1)	1800-1¼ 867 (900-1¼)	1800-2½ 867 (900-2½)	NA
CIRCLING	1800-1¼	867 (900-1¼)	1800-2½ 867 (900-2½)	NA
HUDSN FIX MINIMUMS				
S-4	1600-1	667 (700-1)	1600-1⅞ 667 (700-1⅞)	NA
CIRCLING	1600-1	667 (700-1)	1600-1⅞ 667 (700-1⅞)	NA

FAF to MAP 8.2 NM					
Knots	60	90	120	150	180
Min:Sec	8:12	5:28	4:06	3:17	2:44

NC-1, 10 NOV 2016 to 05 JAN 2017

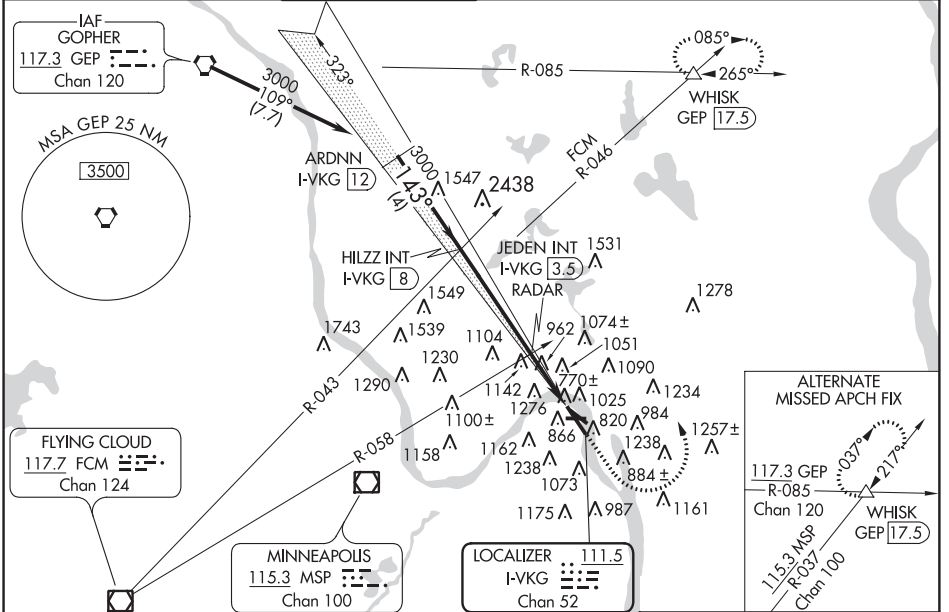
NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-VKG <b>111.5</b> Chan 52	APP CRS <b>143°</b>	Rwy Idg TDZE Apt Elev <b>6148</b> <b>705</b> <b>705</b>
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# ILS or LOC RWY 14

## ST PAUL DOWNTOWN HOLMAN FIELD (STP)

<p>⚠ Visibility reduction by helicopters NA. When local altimeter setting not received, use South St Paul altimeter setting. Inop table does not apply to S-ILS 14. For inop MALSRS increase S-LOC-14 Cat A and B visibility to RVR 5000. JEDEN fix minimums: increase S-LOC-14 Cat A and B visibility to RVR 5000.</p>			<p>MALSRS AS</p>		<p>MISSED APPROACH: Climb to 1700 then climbing left turn to 3000 via heading 350° and via FCM VOR/DME R-046 to WHISK INT/GEP 17.5 DME and hold.</p>	
ATIS <b>118.35</b>	MINNEAPOLIS APP CON <b>121.2</b>	ST. PAUL TOWER ★ <b>119.1</b> (CTAF) <b>257.8</b>	GND CON <b>121.675</b>	CLNC DEL <b>121.675</b>	MINNEAPOLIS CLNC DEL <b>121.675</b> (when tower closed)	UNICOM <b>122.95</b>



Procedure Turn	VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 50).			1700	3000	FCM	WHISK
NA	ARDNN I-VKG [12]	HILZZ INT I-VKG [8]	JEDEN INT I-VKG [3.5]	↑	hdg 350°	R-046	△
GS 3.00° TCH 53	<p>3000 — 143° — 3000</p> <p>4 NM — 4.5 NM — 2.4 NM</p>		JEDEN INT I-VKG [3.5] RADAR	*LOC only.			
CATEGORY	A	B	C	D			
S-ILS 14	955/40			250 (300-¾)			
S-LOC 14	1520/40	815 (900-¾)	1520-2 815 (900-2)	1520-2¼ 815 (900-2¼)			
CIRCLING	1580-1 875 (900-1)	1580-1¼ 875 (900-1¼)	1580-2½ 875 (900-2½)	1580-2¾ 875 (900-2¾)			
JEDEN FIX MINIMUMS							
S-LOC 14	1360/40	655 (700-¾)	1360/60 655 (700-1¼)	1360-1½ 655 (700-1½)			
CIRCLING	1580-1 875 (900-1)	1580-1¼ 875 (900-1¼)	1580-2½ 875 (900-2½)	1580-2¾ 875 (900-2¾)			

ELEV 705	TDZE 705
<p>143° 6.9 NM from FAF</p> <p>4004 X 150</p> <p>3642 X 100</p> <p>6491 X 150</p> <p>TWR</p> <p>MRL Rwy 9-27</p> <p>REIL Rwy 31</p> <p>REIL Rwy 32</p> <p>HIRL Rwys 14-32 and 13-31</p> <p>FAF to MAP 6.9 NM</p>	
Knots	60 90 120 150 180
Min:Sec	6:54 4:36 3:27 2:46 2:18

LOC/DME I-BAO <b>111.5</b> Chan 52	APP CRS <b>323°</b>	Rwy Idg TDZE Apt Elev <b>6109</b> <b>704</b> <b>705</b>
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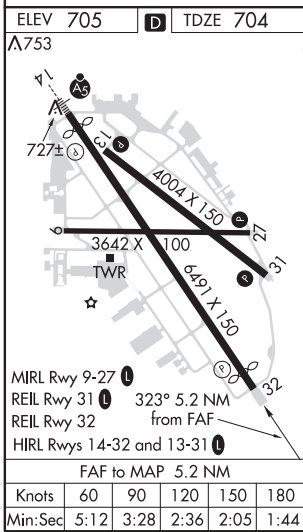
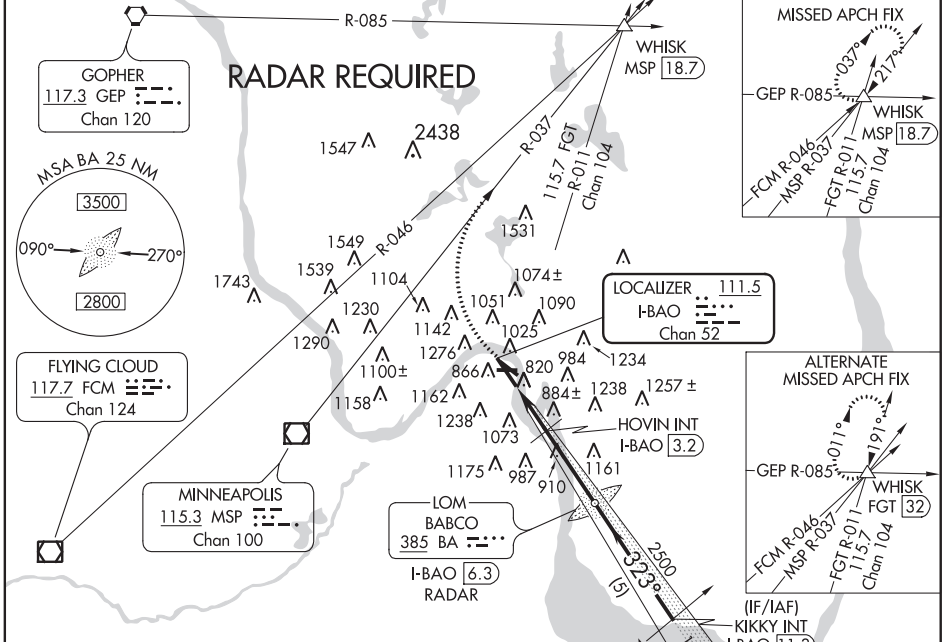
# ILS or LOC RWY 32

ST PAUL DOWNTOWN HOLMAN FIELD (STP)

Visibility reduction by helicopters NA. When local altimeter setting not received, use South St. Paul Muni altimeter setting. RADAR or DME required.

MISSED APPROACH: Climb to 1200 then climbing right turn to 4000 via heading 010° and MSP R-037 to WHISK INT/MSP 18.7 DME and hold.

ATIS <b>118.35</b>	MINNEAPOLIS APP CON <b>121.2</b>	ST. PAUL TOWER * <b>119.1</b> (CTAF) <b>257.8</b>	GND CON <b>121.675</b>	CLNC DEL <b>121.675</b>	MINNEAPOLIS CLNC DEL <b>121.675</b> (when tower closed)	UNICOM <b>122.95</b>
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1200	4000	MSP R-037	WHISK	BABCO LOM I-BAO [6.3] RADAR	KIKKY INT I-BAO [11.3] RADAR	Procedure Turn NA
*LOC only:		I-BAO [1.1]	HOVIN INT I-BAO [3.2]	2414	323°	2500
		1440*	2500	2500	GS 3.00° TCH 40	
		-2.1 NM	-3.1 NM	5 NM		
CATEGORY	A	B	C	D		
S-ILS 32	954/50		250 (300-1)			
S-LOC 32	1440/50	736 (800-1)	1440-2 736 (800-2)	1440-2½ 736 (800-2½)		
CIRCLING	1580-1 875 (900-1)	1580-1¼ 875 (900-1¼)	1580-2½ 875 (900-2½)	1580-2¾ 875 (900-2¾)		
HOVIN FIX MINIMUMS						
S-LOC 32	1280/50	576 (600-1)	1280-1½ 576 (600-1½)	1280-1¾ 576 (600-1¾)		
CIRCLING	1580-1 875 (900-1)	1580-1¼ 875 (900-1¼)	1580-2½ 875 (900-2½)	1580-2¾ 875 (900-2¾)		

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NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>62828</b> <b>W14A</b>	APP CRS <b>143°</b>	Rwy Idg TDZE Apt Elev	<b>6148</b> <b>705</b> <b>705</b>
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# RNAV (GPS) RWY 14

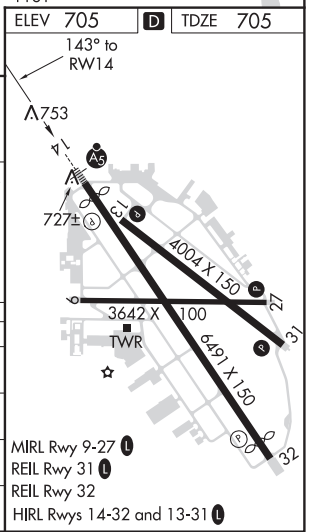
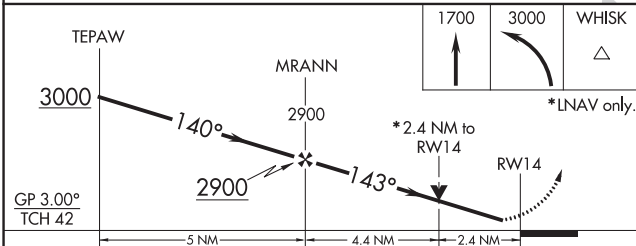
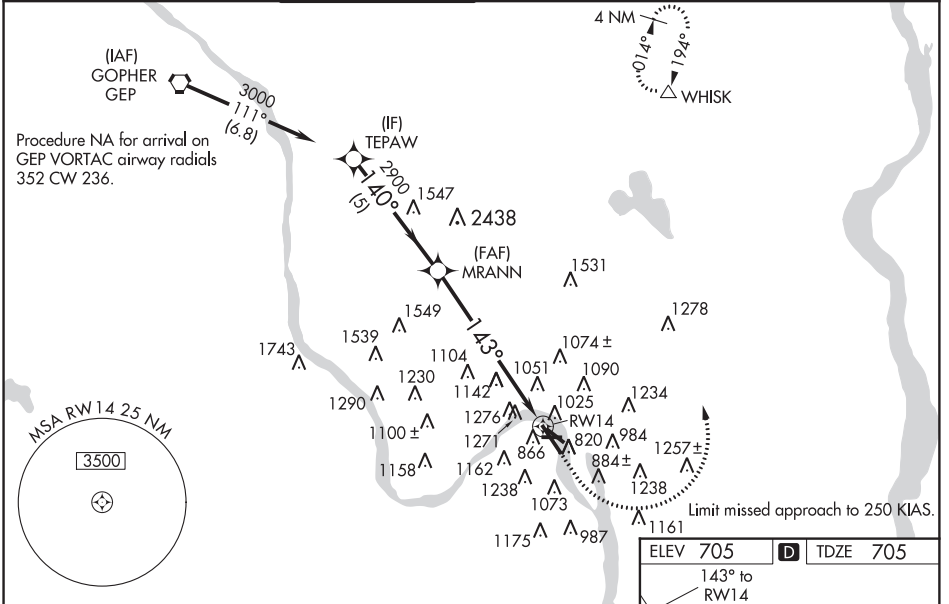
## ST PAUL DOWNTOWN HOLMAN FIELD (STP)

When local altimeter setting not received, use South St Paul Muni-Richard E Fleming Field altimeter setting. Circling to Rwy 9 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 39°C (102°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When VGSI inop, Circling Rwy 13 NA at night. For inop MALS, increase LPV all Cats visibility to RVR 4500, LNAV/VNAV all Cats visibility to 2¾ mile, and LNAV Cat A visibility to RVR 5000, Cats C and D to 2½ mile. Baro-VNAV and VDP NA when using South St Paul Muni-Richard E Fleming Field altimeter setting.

**MALS**

**MISSED APPROACH:**  
Climb to 1700 then climbing left turn to 3000 direct WHISK and hold.

ATIS <b>118.35</b>	MINNEAPOLIS APP CON <b>121.2</b>	ST. PAUL TOWER * <b>119.1</b> (CTAF) <b>257.8</b>	GND CON <b>121.675</b>	CLNC DEL <b>121.675</b>	MINNEAPOLIS CLNC DEL <b>121.675</b> (when tower closed)	UNICOM <b>122.95</b>
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	ELEV 705		D TDZE 705	
CATEGORY	A	B	C	D
LPV DA		955/40	250 (300-¾)	
LNAV/VNAV DA		1502-2½	797 (800-2½)	
LNAV MDA	1520/40	815 (900-¾)	1520-1⅞	815 (900-1⅞)
CIRCLING	1580-1¼	875 (900-1¼)	1580-2½	1580-2¾
			875 (900-2½)	875 (900-2¾)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

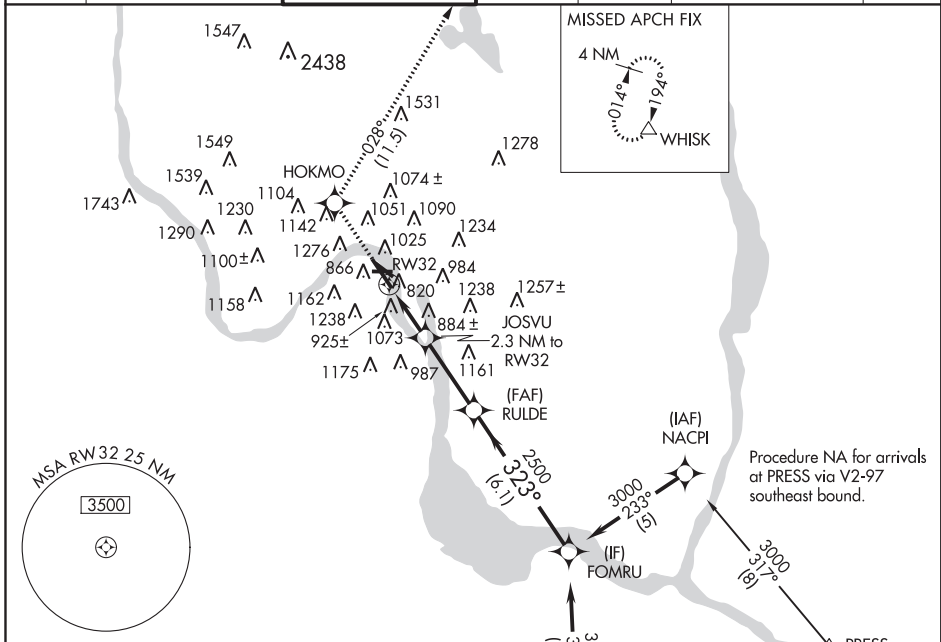
WAAS CH <b>50123</b> <b>W32A</b>	APP CRS <b>323°</b>	Rwy Idg TDZE Apt Elev	<b>6109</b> <b>704</b> <b>705</b>
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# RNAV (GPS) RWY 32

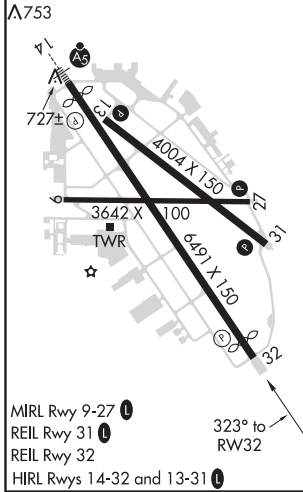
ST PAUL DOWNTOWN HOLMAN FIELD (STP)

**⚠** DME/DME RNP-0.3 NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -20°C (-4°F) or above 54°C (130°F).  
**⚠** -29°C/-20°F Circling to Rwy 9, 13, 27 NA at night.  
**⚠** MISSED APPROACH: Climb to 3000 direct HOKMO and via 028° track to WHISK and hold.

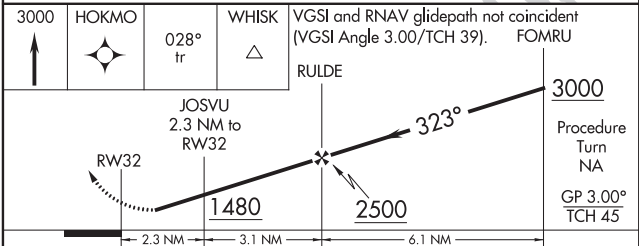
ATIS <b>118.35</b>	MINNEAPOLIS APP CON <b>121.2</b>	ST. PAUL TOWER ★ <b>119.1</b> (CTAF) <b>0 257.8</b>	GND CON <b>121.675</b>	CLNC DEL <b>121.675</b>	MINNEAPOLIS CLNC DEL <b>121.675</b> (when tower closed)	UNICOM <b>122.95</b>
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ELEV <b>705</b>	<b>D</b>	TDZE <b>704</b>
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Procedure NA for arrivals at LDASH via V218 southeast bound.  
 Procedure NA for arrivals at PRESS via V2-97 southeast bound.



CATEGORY	A	B	C	D
LPV DA	1082-1¼ 378 (400-1¼)			
LNAV/VNAV DA	1377-2½ 673 (700-2½)			
LNAV MDA	1320-1	616 (700-1)	1320-1¾ 616 (700-1¾)	1320-2 616 (700-2)
CIRCLING	1580-2½ 875 (900-2½)			1580-2¾ 875 (900-2¾)

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NC-1, 10 NOV 2016 to 05 JAN 2017

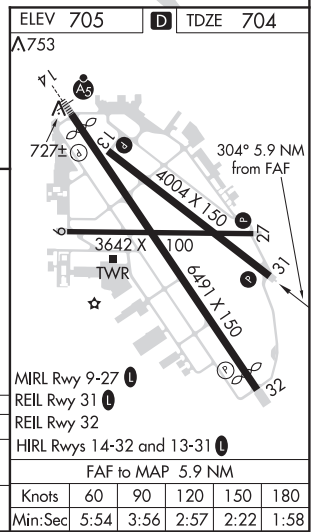
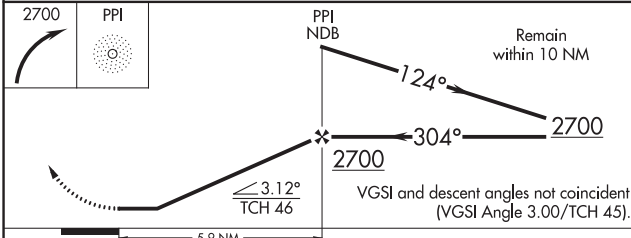
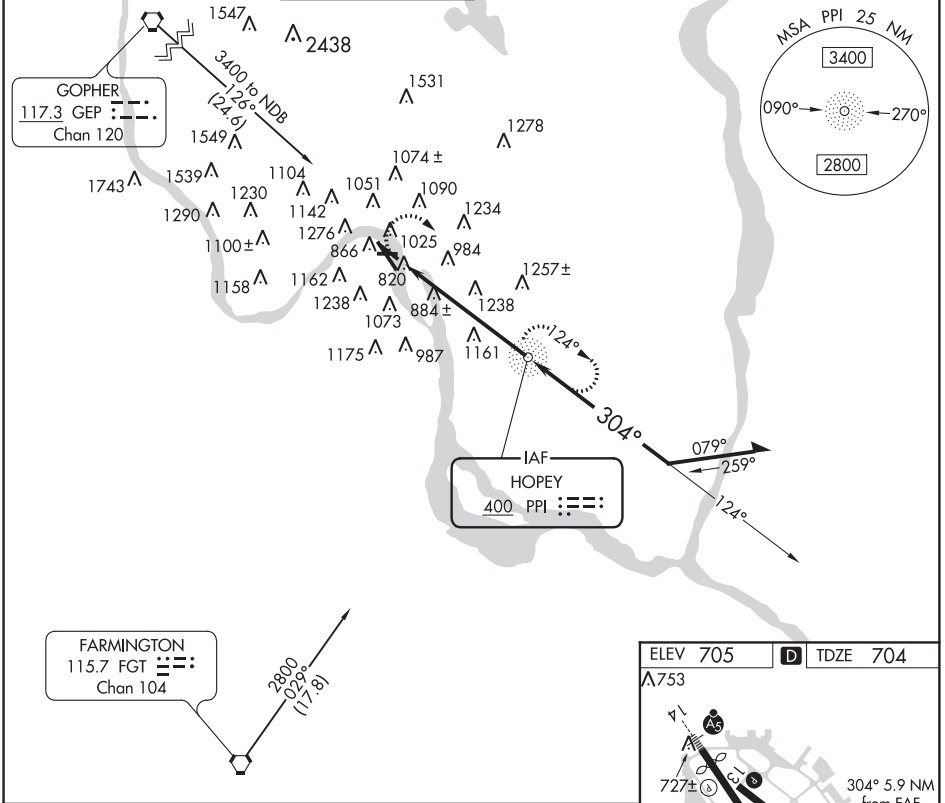
NDB PPI <b>400</b>	APP CRS <b>304°</b>	Rwy Idg <b>4004</b>
	TDZE <b>704</b>	
	Apt Elev <b>705</b>	

# NDB RWY 31

ST PAUL DOWNTOWN HOLMAN FIELD (STP)

NA -29°C/-20°F		MISSED APPROACH: Climbing right turn to 2700 direct PPI NDB and hold.			
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ATIS <b>118.35</b>	MINNEAPOLIS APP CON <b>121.2</b>	ST. PAUL TOWER ★ <b>119.1(CTAF) 257.8</b>	GND CON <b>121.675</b>	CLNC DEL <b>121.675</b>	MINNEAPOLIS CLNC DEL <b>121.675</b> (when tower closed)	UNICOM <b>122.95</b>
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CATEGORY	A	B	C	D
S-31	1600-1¼ 896 (900-1¼)	1600-2¾ 896 (900-2¾)	1600-3 896 (900-3)	1600-3 896 (900-3)
CIRCLING	1600-1¼ 895 (900-1¼)	1600-2¾ 895 (900-2¾)	1600-3 895 (900-3)	1600-3 895 (900-3)

FAF to MAP 5.9 NM					
Knots	60	90	120	150	180
Min:Sec	5:54	3:56	2:57	2:22	1:58

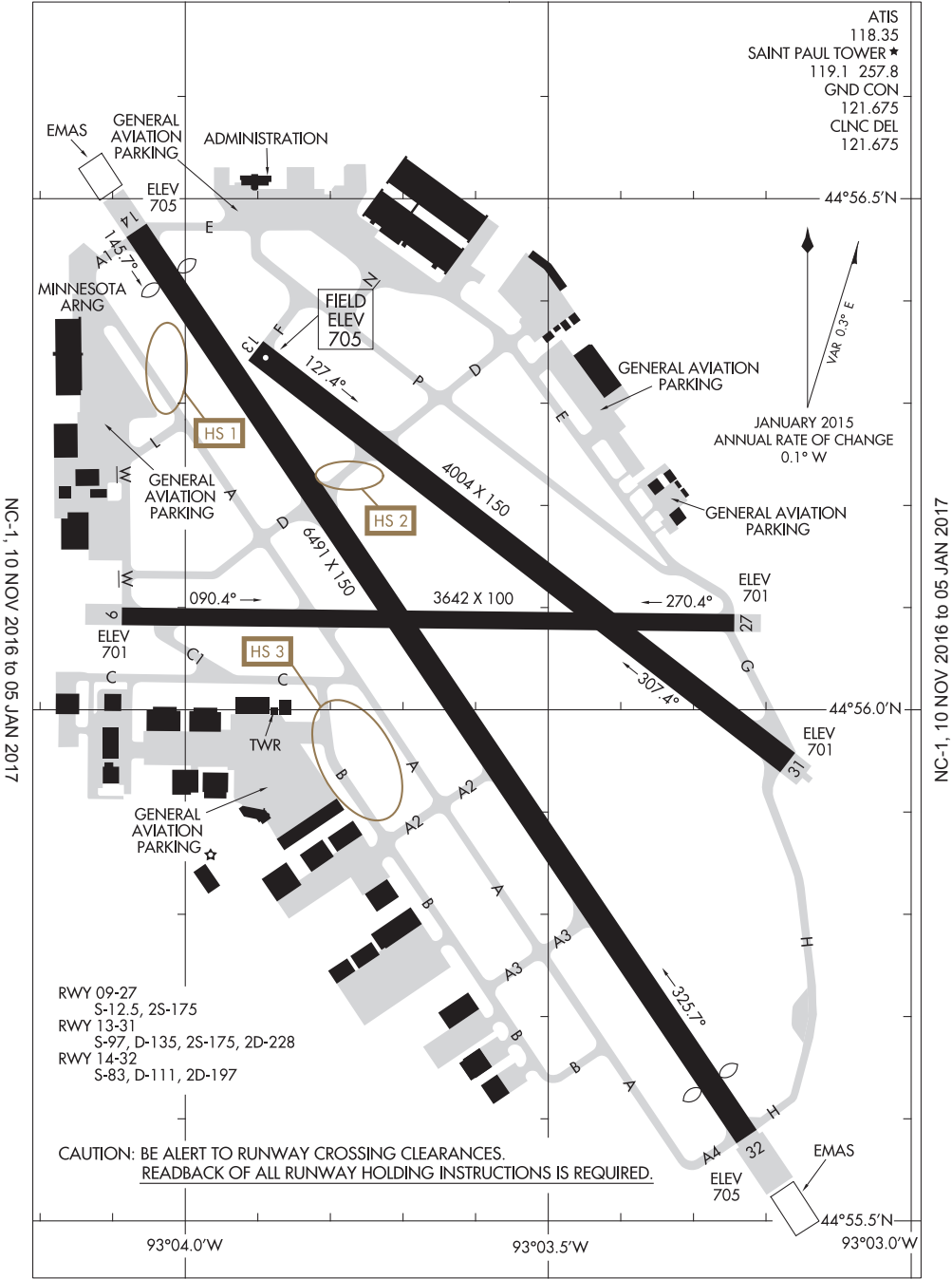
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



# AIRPORT DIAGRAM

ST PAUL DOWNTOWN HOLMAN FLD (STP)  
 AL-263 (FAA)  
 ST PAUL, MINNESOTA



ATIS 118.35  
 SAINT PAUL TOWER ★ 119.1 257.8  
 GND CON 121.675  
 CLNC DEL 121.675

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RWY 09-27 S-12.5, 2S-175  
 RWY 13-31 S-97, D-135, 2S-175, 2D-228  
 RWY 14-32 S-83, D-111, 2D-197

**CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.  
 READBACK OF ALL RUNWAY HOLDING INSTRUCTIONS IS REQUIRED.**

# AIRPORT DIAGRAM

ST PAUL, MINNESOTA  
 ST PAUL DOWNTOWN HOLMAN FLD (STP)

16315

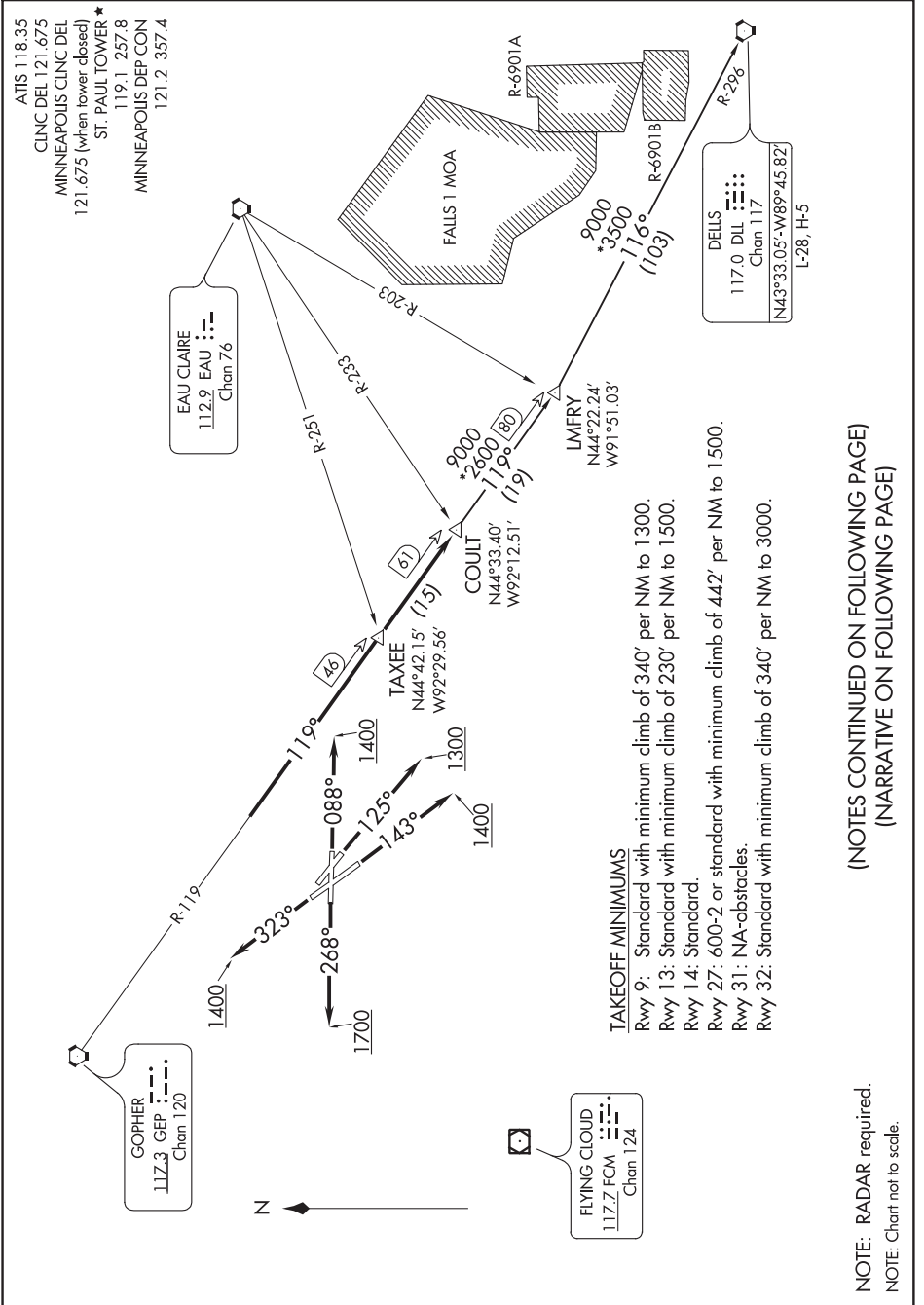
# COULT SIX DEPARTURE

ST PAUL DOWNTOWN HOLMAN FIELD (STP)

SL-263 (FAA)

ST. PAUL, MINNESOTA

NC-1, 10 NOV 2016 to 05 JAN 2017



(NOTES CONTINUED ON FOLLOWING PAGE)  
(NARRATIVE ON FOLLOWING PAGE)

NC-1, 10 NOV 2016 to 05 JAN 2017

# COULT SIX DEPARTURE

ST. PAUL, MINNESOTA

ST PAUL DOWNTOWN HOLMAN FIELD (STP)



DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb heading 088° to 1400 for RADAR vectors to intercept GEP R-119 to COULT INT/GEP 61 DME, thence . . . .

TAKEOFF RUNWAY 13: Climb heading 125° to 1300 for RADAR vectors to intercept GEP R-119 to COULT INT/GEP 61 DME, thence . . . .

TAKEOFF RUNWAY 14: Climb heading 143° to 1400 for RADAR vectors to intercept GEP R-119 to COULT INT/GEP 61 DME, thence . . . .

TAKEOFF RUNWAY 27: Climb heading 268° to 1700 for RADAR vectors to intercept GEP R-119 to COULT INT/GEP 61 DME, thence . . . .

TAKEOFF RUNWAY 32: Climb heading 323° to 1400 for RADAR vectors to intercept GEP R-119 to COULT INT/GEP 61 DME, thence . . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

DELLS TRANSITION (COULT6.DLL): From over COULT INT on GEP R-119 to LMFYR INT then on DLL R-296 to DLL VORTAC.

TAKEOFF OBSTACLE NOTES

- Rwy 9: Mobile crane 1362' from DER, 124' left of centerline, 68' AGL/758' MSL.  
Trees and silo 1464' from DER, 178' right of centerline, up to 116' AGL/816' MSL.  
Trees and pole beginning 1.1 NM from DER, left and right of centerline, up to 100' AGL/1099' MSL.
- Rwy 13: Tree and tower beginning 1125' from DER, 609' left of centerline, up to 67' AGL/767' MSL.  
Tree, pole, vent on building, stacks, and obstruction light on stack beginning 1672' from DER, 55' right of centerline, up to 120' AGL/820' MSL.  
Trees beginning 1.9 NM from DER, 2938' left of centerline, up to 100' AGL/1020' MSL.
- Rwy 14: Trees, obstruction light on DME antenna, and pole beginning 290' from DER, 1' right of centerline, up to 129' AGL/819' MSL.  
Trees and pole beginning 1099' from DER, 6' left of centerline, up to 87' AGL/777' MSL.
- Rwy 27: Trees, light pole, and flagpole beginning 617' from DER, 198' left of centerline, up to 119' AGL/829' MSL.  
Obstruction light on antenna, buildings, tower, and tree beginning 810' from DER, 26' right of centerline, up to 165' AGL/955' MSL.  
Trees and building beginning 3886' from DER, 120' left of centerline, up to 84' AGL/1014' MSL.  
Tower 1.7 NM from DER, 633' left of centerline, 569' AGL/1279' MSL.
- Rwy 32: Vehicle on road, trees, railroad, poles, and navaid beginning 179' from DER, 267' right of centerline, up to 58' AGL/758' MSL.  
Vehicle on road, railroad, and trees beginning 192' from DER, up to 59' AGL/759' MSL.  
Navaid 257' from DER, on centerline, 26' AGL/726 MSL.  
Trees, poles, buildings, and tower beginning 3674' from DER, 616' right of centerline, up to 157' AGL/973' MSL.  
Trees, buildings, tower, sign, and stack beginning 1924' from DER, 378' left of centerline, up to 143' AGL/969' MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

(DWN6.DWN) 16259

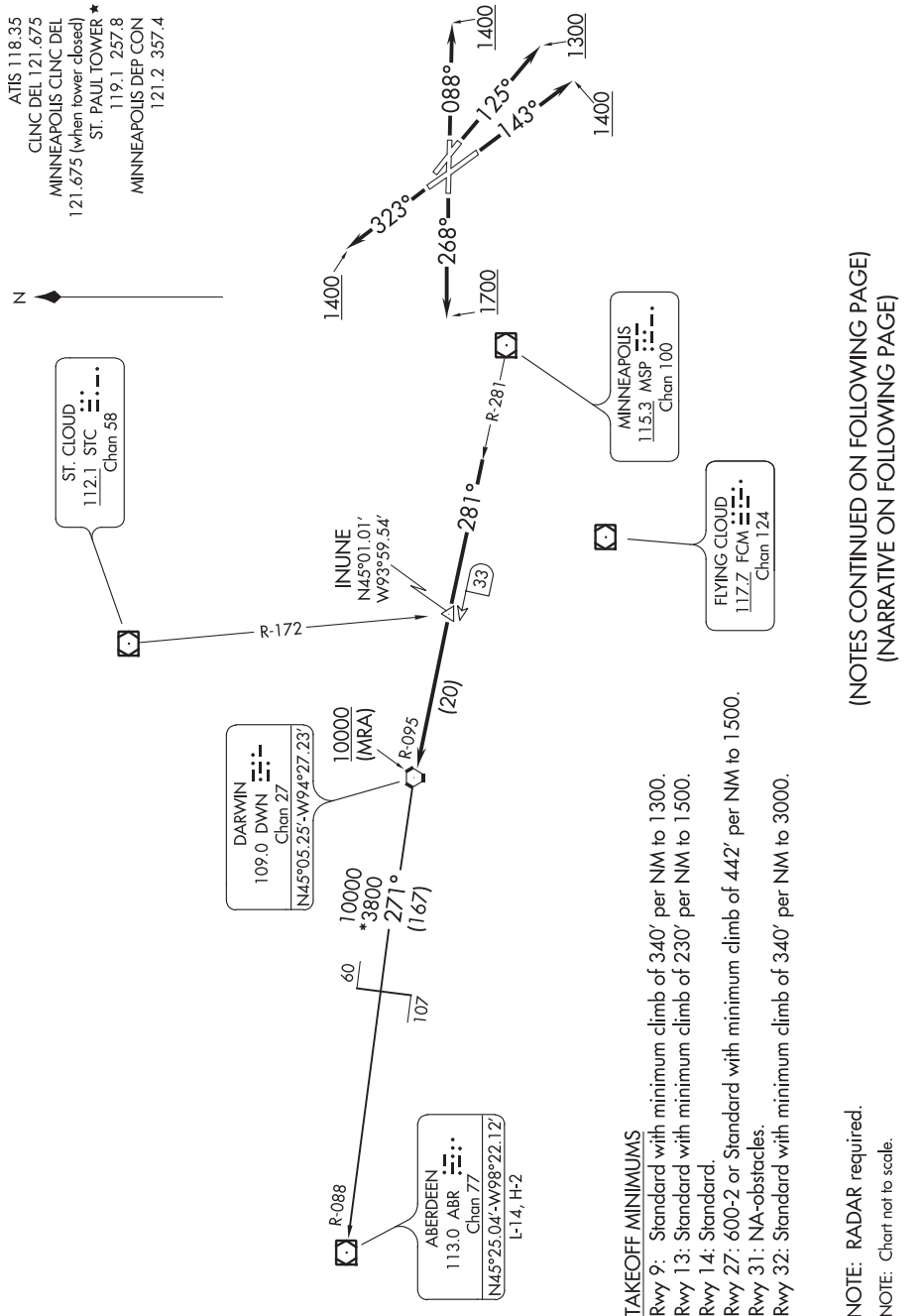
# DARWIN SIX DEPARTURE

ST PAUL DOWNTOWN HOLMAN FIELD (STP)

SL-263 (FAA)

ST. PAUL, MINNESOTA

NC-1, 10 NOV 2016 to 05 JAN 2017



(NOTES CONTINUED ON FOLLOWING PAGE)  
(NARRATIVE ON FOLLOWING PAGE)

NOTE: RADAR required.  
NOTE: Chart not to scale.

NC-1, 10 NOV 2016 to 05 JAN 2017

# DARWIN SIX DEPARTURE

(DWN6.DWN) 06FEB14

ST. PAUL, MINNESOTA  
ST PAUL DOWNTOWN HOLMAN FIELD (STP)



DEPARTURE ROUTE DESCRIPTION

- TAKEOFF RUNWAY 9: Climb heading 088° to 1400 for RADAR vectors to MSP VOR/DME then on MSP R-281 and DWN R-095 to DWN VORTAC, thence . . . .
- TAKEOFF RUNWAY 13: Climb heading 125° to 1300 for RADAR vectors to MSP VOR/DME then on MSP R-281 and DWN R-095 to DWN VORTAC, thence . . . .
- TAKEOFF RUNWAY 14: Climb heading 143° to 1400 for RADAR vectors to MSP VOR/DME then on MSP R-281 and DWN R-095 to DWN VORTAC, thence . . . .
- TAKEOFF RUNWAY 27: Climb heading 268° to 1700 for RADAR vectors to MSP VOR/DME then on MSP R-281 and DWN R-095 to DWN VORTAC, thence . . . .
- TAKEOFF RUNWAY 32: Climb heading 323° to 1400 for RADAR vectors to MSP VOR/DME then on MSP R-281 and DWN R-095 to DWN VORTAC, thence . . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

ABERDEEN TRANSITION (DWN6.ABR): From over DWN VORTAC on DWN R-271 and ABR R-088 to ABR VOR/DME.

TAKEOFF OBSTACLE NOTES

- Rwy 9: Mobile crane 1362' from DER, 124' left of centerline, 68' AGL/758' MSL.  
Trees and silo 1464' from DER, 178' right of centerline, up to 116' AGL/816' MSL.  
Trees and pole beginning 1.1 NM from DER, left and right of centerline, up to 100' AGL/1099' MSL.
- Rwy 13: Tree and tower beginning 1125' from DER, 609' left of centerline, up to 67' AGL/767' MSL.  
Tree, pole, vent on building, stacks, and obstruction light on stack beginning 1672' from DER, 55' right of centerline, up to 120' AGL/820' MSL.  
Trees beginning 1.9 NM from DER, 2938' left of centerline, up to 100' AGL/1020' MSL.
- Rwy 14: Trees, obstruction light on DME antenna, and pole beginning 290' from DER, 1' right of centerline, up to 129' AGL/819' MSL.  
Trees and pole beginning 1099' from DER, 6' left of centerline, up to 87' AGL/777' MSL.
- Rwy 27: Trees, light pole, and flagpole beginning 617' from DER, 198' left of centerline, up to 119' AGL/829' MSL.  
Obstruction light on antenna, buildings, tower, and tree beginning 810' from DER, 26' right of centerline, up to 165' AGL/955' MSL.  
Trees and building beginning 3886' from DER, 120' left of centerline, up to 84' AGL/1014' MSL.  
Tower 1.7 NM from DER, 633' left of centerline, 569' AGL/1279' MSL.
- Rwy 32: Vehicle on road, trees, railroad, poles, and navaid beginning 179' from DER, 267' right of centerline, up to 58' AGL/758' MSL.  
Vehicle on road, railroad, and trees beginning 192' from DER, up to 59' AGL/759' MSL.  
Navaid 257' from DER, on centerline, 26' AGL/726 MSL.  
Trees, poles, buildings, and tower beginning 3674' from DER, 616' right of centerline, up to 157' AGL/973' MSL.  
Trees, buildings, tower, sign, and stack beginning 1924' from DER, 378' left of centerline, up to 143' AGL/969' MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

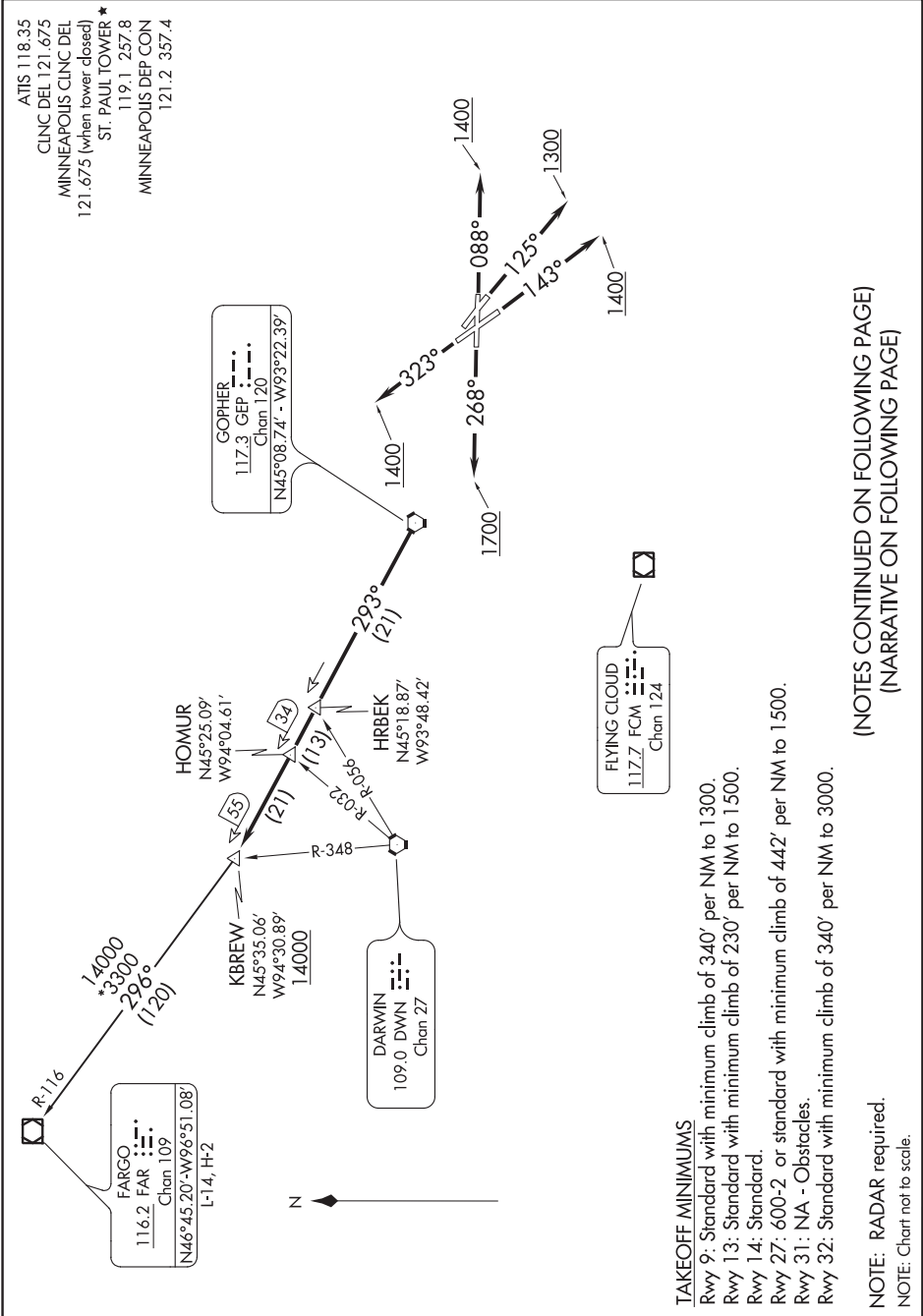
NC-1, 10 NOV 2016 to 05 JAN 2017

# KBREW EIGHT DEPARTURE

ST PAUL DOWNTOWN HOLMAN FIELD (STP)  
ST. PAUL, MINNESOTA

SL-263 (FAA)

NC-1, 10 NOV 2016 to 05 JAN 2017



(NOTES CONTINUED ON FOLLOWING PAGE)  
(NARRATIVE ON FOLLOWING PAGE)

### TAKEOFF MINIMUMS

- Rwy 9: Standard with minimum climb of 340' per NM to 1300.
- Rwy 13: Standard with minimum climb of 230' per NM to 1500.
- Rwy 14: Standard.
- Rwy 27: 600-2 or standard with minimum climb of 442' per NM to 1500.
- Rwy 31: NA - Obstacles.
- Rwy 32: Standard with minimum climb of 340' per NM to 3000.

NOTE: RADAR required.

NOTE: Chart not to scale.

NC-1, 10 NOV 2016 to 05 JAN 2017

# KBREW EIGHT DEPARTURE

ST. PAUL, MINNESOTA  
ST PAUL DOWNTOWN HOLMAN FIELD (STP)

(KBREW8.KBREW) 10NOV16



DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb heading 088° to 1400 for RADAR vectors to GEP VORTAC then on GEP R-293 to KBREW INT/GEP 55 DME, thence . . . .

TAKEOFF RUNWAY 13: Climb heading 125° to 1300 for RADAR vectors to GEP VORTAC then on GEP R-293 to KBREW INT/GEP 55 DME, thence . . . .

TAKEOFF RUNWAY 14: Climb heading 143° to 1400 for RADAR vectors to GEP VORTAC then on GEP R-293 to KBREW INT/GEP 55 DME, thence . . . .

TAKEOFF RUNWAY 27: Climb heading 268° to 1700 for RADAR vectors to GEP VORTAC then on GEP R-293 to KBREW INT/GEP 55 DME, thence . . . .

TAKEOFF RUNWAY 32: Climb heading 323° to 1400 for RADAR vectors to GEP VORTAC then on GEP R-293 to KBREW INT/GEP 55 DME, thence . . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

FARGO TRANSITION (KBREW8.FAR): From over KBREW INT on FAR R-116 to FAR VOR/DME.

TAKEOFF OBSTACLE NOTES

- Rwy 9: Mobile crane 1362' from DER, 124' left of centerline, 68' AGL/758' MSL.  
Trees and silo 1464' from DER, 178' right of centerline, up to 116' AGL/816' MSL.  
Trees and pole beginning 1.1 NM from DER, left and right of centerline, up to 100' AGL/1099' MSL.
- Rwy 13: Tree and tower beginning 1125' from DER, 609' left of centerline, up to 67' AGL/767' MSL.  
Tree, pole, vent on building, stacks, and obstruction light on stack beginning 1672' from DER, 55' right of centerline, up to 120' AGL/820' MSL.  
Trees beginning 1.9 NM from DER, 2938' left of centerline, up to 100' AGL/1020' MSL.
- Rwy 14: Trees, obstruction light on DME antenna, and pole beginning 290' from DER, 1' right of centerline, up to 129' AGL/819' MSL.  
Trees and pole beginning 1099' from DER, 6' left of centerline, up to 87' AGL/777' MSL.
- Rwy 27: Trees, light pole, and flagpole beginning 617' from DER, 198' left of centerline, up to 119' AGL/829' MSL.  
Obstruction light on antenna, buildings, tower, and tree beginning 810' from DER, 26' right of centerline, up to 165' AGL/955' MSL.  
Trees and building beginning 3885' from DER, 120' left of centerline, up to 84' AGL/1014' MSL.  
Tower 1.7 NM from DER, 633' left of centerline, up to 569' AGL/1279' MSL.
- Rwy 32: Vehicle on road, trees, railroad, poles, and navaid beginning 179' from DER, 267' right of centerline, up to 58' AGL/758' MSL.  
Vehicle on road, railroad, and trees beginning 192' from DER, up to 59' AGL/759' MSL.  
Navaid 257' from DER, on centerline, 26' AGL/726 MSL.  
Trees, poles, buildings, and tower beginning 3674' from DER, 616' right of centerline, up to 157' AGL/973' MSL.  
Trees, buildings, tower, sign, and stack beginning 1924' from DER, 378' left of centerline, up to 143' AGL/969' MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# ORSKY NINE DEPARTURE

SL-263 (FAA)

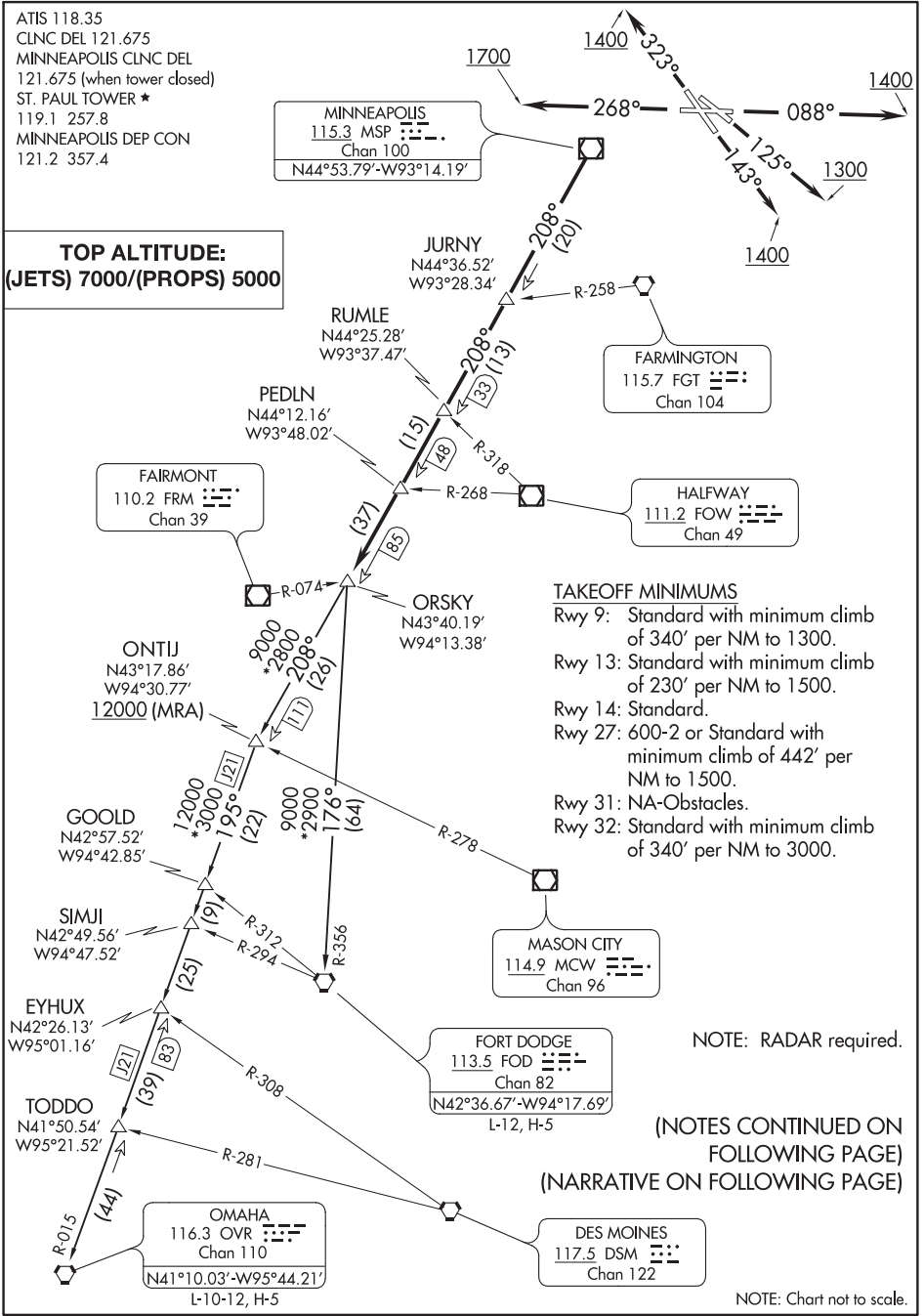
ST PAUL DOWNTOWN HOLMAN FIELD (STP)

ST PAUL, MINNESOTA

ATIS 118.35  
 CLNC DEL 121.675  
 MINNEAPOLIS CLNC DEL  
 121.675 (when tower closed)  
 ST. PAUL TOWER ★  
 119.1 257.8  
 MINNEAPOLIS DEP CON  
 121.2 357.4

MINNEAPOLIS  
 115.3 MSP  
 Chan 100  
 N44°53.79'-W93°14.19'

**TOP ALTITUDE:  
 (JETS) 7000/(PROPS) 5000**



### TAKEOFF MINIMUMS

- Rwy 9: Standard with minimum climb of 340' per NM to 1300.
- Rwy 13: Standard with minimum climb of 230' per NM to 1500.
- Rwy 14: Standard.
- Rwy 27: 600-2 or Standard with minimum climb of 442' per NM to 1500.
- Rwy 31: NA-Obstacles.
- Rwy 32: Standard with minimum climb of 340' per NM to 3000.

NOTE: RADAR required.

(NOTES CONTINUED ON  
 FOLLOWING PAGE)  
 (NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

# ORSKY NINE DEPARTURE

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017





DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb heading 088° to 1400 for RADAR vectors to MSP VOR/DME then on MSP R-208 to ORSKY INT/MSP 85 DME, thence . . . .

TAKEOFF RUNWAY 13: Climb heading 125° to 1300 for RADAR vectors to MSP VOR/DME then on MSP R-208 to ORSKY INT/MSP 85 DME, thence . . . .

TAKEOFF RUNWAY 14: Climb heading 143° to 1400 for RADAR vectors to MSP VOR/DME then on MSP R-208 to ORSKY INT/MSP 85 DME, thence . . . .

TAKEOFF RUNWAY 27: Climb heading 268° to 1700 for RADAR vectors to MSP VOR/DME then on MSP R-208 to ORSKY INT/MSP 85 DME, thence . . . .

TAKEOFF RUNWAY 32: Climb heading 323° to 1400 for RADAR vectors to MSP VOR/DME then on MSP R-208 to ORSKY INT/MSP 85 DME, thence . . . .

. . . .via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

FORT DODGE TRANSITION (ORSKY9.FOD): From over ORSKY INT on FOD R-356 to FOD VORTAC.

OMAHA TRANSITION (ORSKY9.OVR): From over ORSKY INT on MSP R-208 to ONTIJ INT, then on OVR R-015 to OVR VORTAC.

TAKEOFF OBSTACLE NOTES

Rwy 9: Mobile crane 1362' from DER, 124' left of centerline, 68' AGL/758' MSL.  
Trees and silo 1464' from DER, 178' right of centerline, up to 116' AGL/816' MSL.  
Trees and pole beginning 1.1 NM from DER, left and right of centerline, up to 100' AGL/1009' MSL.

Rwy 13: Tree and tower beginning 1125' from DER, 609' left of centerline, up to 67' AGL/767' MSL.  
Tree, pole, vent on building, stacks, and obstruction light on stack beginning 1672' from DER, 55' right of centerline, up to 120' AGL/820' MSL.  
Trees beginning 1.9 NM from DER, 2938' left of centerline, up to 100' AGL/1020' MSL.

Rwy 14: Trees, obstruction light on DME antenna, and pole beginning 290' from DER, 1' right of centerline, up to 129' AGL/819' MSL.  
Trees and pole beginning 1099' from DER, 6' left of centerline, up to 87' AGL/777' MSL.

Rwy 27: Trees, light pole, and flagpole beginning 617' from DER, 198' left of centerline, up to 119' AGL/829' MSL.  
Obstruction light on antenna, buildings, tower, and tree beginning 810' from DER, 26' right of centerline, up to 165' AGL/955' MSL.  
Trees and building beginning 3886' from DER, 120' left of centerline, up to 84' AGL/1014' MSL.  
Tower 1.7 NM from DER, 633' left of centerline, 569' AGL/1279' MSL.

Rwy 32: Vehicle on road, trees, railroad, poles, and navaid beginning 179' from DER, 267' right of centerline, up to 58' AGL/758' MSL.  
Vehicle on road, railroad, and trees beginning 192' from DER, 207' left of centerline, up to 59' AGL/759' MSL.  
Navaid 257' from DER, on centerline, 26' AGL/726 MSL.  
Trees, poles, buildings, and tower beginning 3674' from DER, 616' right of centerline, up to 157' AGL/973' MSL.  
Trees, buildings, tower, sign, and stack beginning 1924' from DER, 378' left of centerline, up to 143' AGL/969' MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

(RST8.RST) 16203

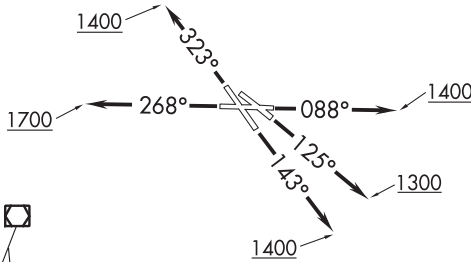
# ROCHESTER EIGHT DEPARTURE

SL-263 (FAA)

ST PAUL DOWNTOWN HOLMAN FIELD (STP)

ST. PAUL, MINNESOTA

ATIS 118.35  
 CLNC DEL  
 121.675  
 MINNEAPOLIS CLNC DEL  
 121.675 (when tower closed)  
 ST. PAUL TOWER \*  
 119.1 257.8  
 MINNEAPOLIS DEP CON  
 121.2 357.4



FLYING CLOUD  
 117.7 FCM  
  
 Chan 124

FARMINGTON  
 115.7 FGT  
  
 Chan 104  
 N44°37.86'-W93°10.92'

FOBUG  
 N44°25.33'  
 W93°02.18'  
 4000

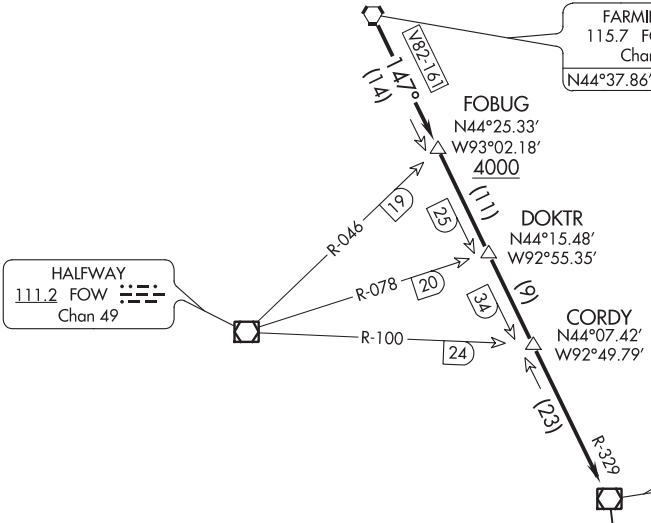
DOKTR  
 N44°15.48'  
 W92°55.35'

CORDY  
 N44°07.42'  
 W92°49.79'

HALFWAY  
 111.2 FOW  
  
 Chan 49

ROCHESTER  
 112.0 RST  
  
 Chan 57  
 N43°46.97'-W92°35.82'

WATERLOO  
 112.2 ALO  
  
 Chan 59  
 N42°33.39'-W92°23.94'  
 L-28, H-5



NOTE: RADAR required.

### TAKEOFF MINIMUMS

- Rwy 9: Standard with minimum climb of 340' per NM to 1300.
- Rwy 13: Standard with minimum climb of 230' per NM to 1500.
- Rwy 14: Standard.
- Rwy 27: 600-2 or standard with minimum climb of 442' per NM to 1500.
- Rwy 31: NA - Obstacles.
- Rwy 32: Standard with minimum climb of 340' per NM to 3000.

(NOTES CONTINUED ON FOLLOWING PAGE)

(NARRATIVE ON FOLLOWING PAGE)

NOTE: Chart not to scale.

# ROCHESTER EIGHT DEPARTURE

(RST8.RST) 21JUL16

ST. PAUL, MINNESOTA

ST PAUL DOWNTOWN HOLMAN FIELD (STP)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb heading 088° to 1400 for RADAR vectors to FGT VORTAC then via FGT R-147 and RST R-329 to RST VOR/DME. Cross FOBUG INT/FGT 14 DME at or above 4000, thence . . . .

TAKEOFF RUNWAY 13: Climb heading 125° to 1300 for RADAR vectors to FGT VORTAC then via FGT R-147 and RST R-329 to RST VOR/DME. Cross FOBUG INT/FGT 14 DME at or above 4000, thence . . . .

TAKEOFF RUNWAY 14: Climb heading 143° to 1400 for RADAR vectors to FGT VORTAC then via FGT R-147 and RST R-329 to RST VOR/DME. Cross FOBUG INT/FGT 14 DME at or above 4000, thence . . . .

TAKEOFF RUNWAY 27: Climb heading 268° to 1700 for RADAR vectors to FGT VORTAC then via FGT R-147 and RST R-329 to RST VOR/DME. Cross FOBUG INT/FGT 14 DME at or above 4000, thence . . . .

TAKEOFF RUNWAY 32: Climb heading 323° to 1400 for RADAR vectors to FGT VORTAC then via FGT R-147 and RST R-329 to RST VOR/DME. Cross FOBUG INT/FGT 14 DME at or above 4000, thence . . . .

. . . . via assigned transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

WATERLOO TRANSITION (RST8.ALO): From over RST VOR/DME on RST R-168 and ALO R-347 to ALO VOR/DME.

TAKEOFF OBSTACLE NOTES

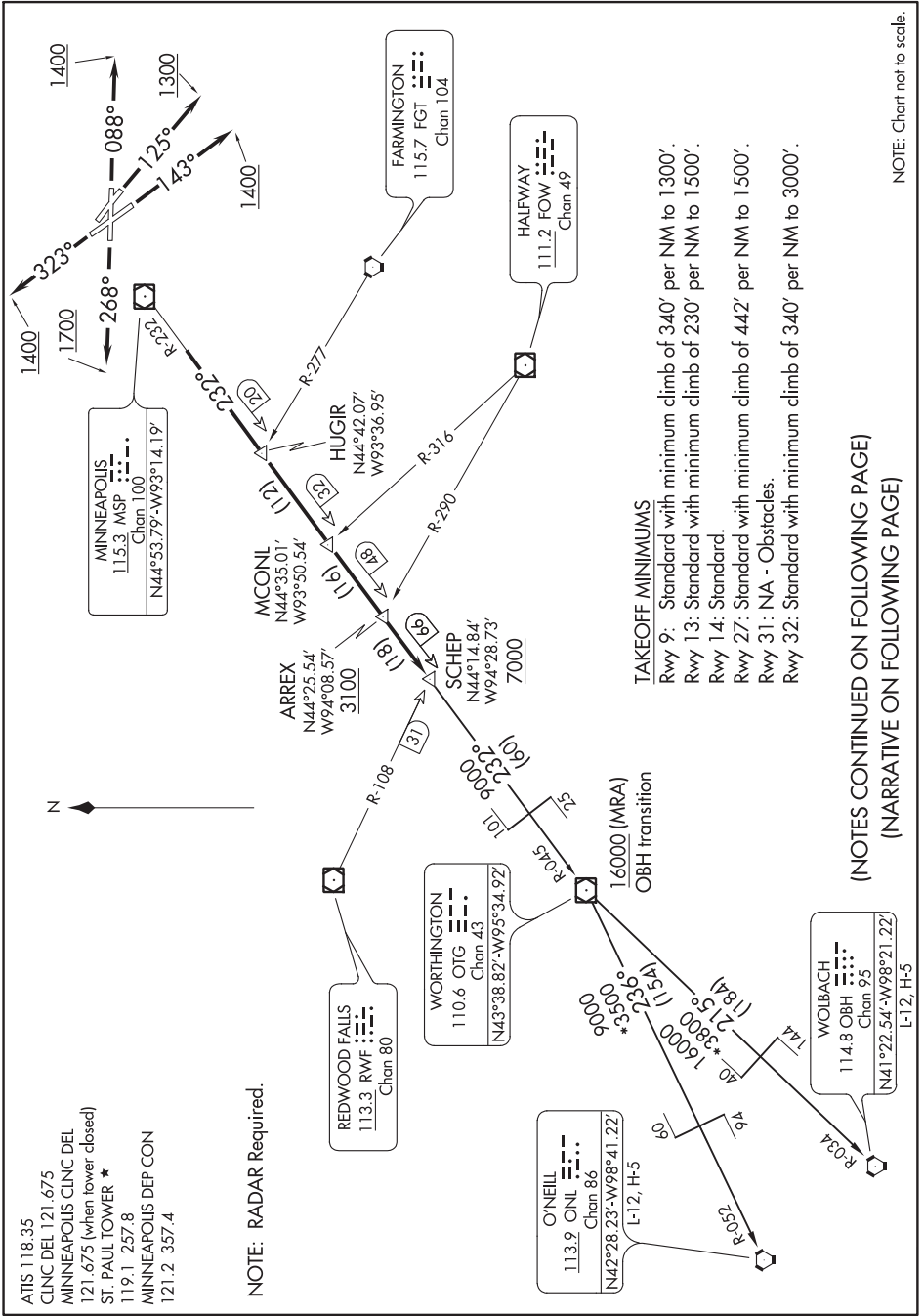
- Rwy 9: Mobile crane 1362' from DER, 124' left of centerline, 68' AGL/758' MSL.  
Trees and silo 1464' from DER, 178' right of centerline, up to 116' AGL/816' MSL.  
Trees and pole beginning 1.1 NM from DER, left and right of centerline, up to 100' AGL/1099' MSL.
- Rwy 13: Tree and tower beginning 1125' from DER, 609' left of centerline, up to 67' AGL/767' MSL.  
Tree, pole, vent on buildings, stacks, and obstruction light on stack beginning 1672' from DER, 55' right of centerline, up to 120' AGL/820' MSL.  
Trees beginning 1.9 NM from DER, 2938' left of centerline, up to 100' AGL/1020' MSL.
- Rwy 14: Trees, obstruction light on DME antenna, and pole beginning 290' from DER, 1' right of centerline, up to 129' AGL/819' MSL.
- Rwy 27: Trees and pole beginning 1099' from DER, 6' left of centerline, up to 87' AGL/777' MSL.  
Trees, light pole, and flagpole beginning 617' from DER, 198' left of centerline, up to 119' AGL/829' MSL.  
Obstruction light on antenna, buildings, tower, and tree beginning 810' from DER, 26' right of centerline, up to 165' AGL/955' MSL.  
Trees and building beginning 3886' from DER, 120' left of centerline, up to 84' AGL/1014' MSL.  
Tower 1.7 NM from DER, 633' left of centerline, 569' AGL/1279' MSL.
- Rwy 32: Vehicle on road, trees, railroad, poles, and navaid beginning 179' from DER, 267' right of centerline, up to 58' AGL/758' MSL.  
Vehicle on road, railroad, and trees beginning 192' from DER, up to 59' AGL/759' MSL.  
Navaid 257' from DER, on centerline, 26' AGL/726 MSL.  
Trees, poles, buildings, and tower beginning 3674' from DER, 616' right of centerline, up to 157' AGL/973' MSL.  
Trees, buildings, tower, sign, and stack beginning 1924' from DER, 378' left of centerline, up to 143' AGL/969' MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# SCHEP EIGHT DEPARTURE

NC-1, 10 NOV 2016 to 05 JAN 2017



NOTE: Chart not to scale.

### TAKEOFF MINIMUMS

- Rwy 9: Standard with minimum climb of 340' per NM to 1300'.
- Rwy 13: Standard with minimum climb of 230' per NM to 1500'.
- Rwy 14: Standard.
- Rwy 27: Standard with minimum climb of 442' per NM to 1500'.
- Rwy 31: NA - Obstacles.
- Rwy 32: Standard with minimum climb of 340' per NM to 3000'.

(NOTES CONTINUED ON FOLLOWING PAGE)  
(NARRATIVE ON FOLLOWING PAGE)

# SCHEP EIGHT DEPARTURE

(SCHEP8.SCHEP) 06FEB14

NC-1, 10 NOV 2016 to 05 JAN 2017



DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb heading 088° to 1400 for RADAR vectors to MSP VOR/DME, then via MSP R-232 to SCHEP INT/MSP 66 DME, thence . . . .

TAKEOFF RUNWAY 13: Climb heading 125° to 1300 for RADAR vectors to MSP VOR/DME then via MSP R-232 to SCHEP INT/MSP 66 DME, thence . . . .

TAKEOFF RUNWAY 14: Climb heading 143° to 1400 for RADAR vectors to MSP VOR/DME then via MSP R-232 to SCHEP INT/MSP 66 DME, thence . . . .

TAKEOFF RUNWAY 27: Climb heading 268° to 1700 for RADAR vectors to MSP VOR/DME then via MSP R-232 to SCHEP INT/MSP 66 DME, thence . . . .

TAKEOFF RUNWAY 32: Climb heading 323° to 1400 for RADAR vectors to MSP VOR/DME then via MSP R-232 to SCHEP INT/MSP 66 DME, thence . . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

O'NEILL TRANSITION (SCHEP8.ONL): From over SCHEP INT on MSP R-232 and OTG R-045 to OTG VOR/DME, then on OTG R-236 and ONL R-052 to ONL VORTAC.

WOLBACH TRANSITION (SCHEP8.OBH): From over SCHEP INT on MSP R-232 and OTG R-045 to OTG VOR/DME, then on OTG R-215 and OBH R-034 to OBH VORTAC.

TAKEOFF OBSTACLE NOTES

- Rwy 9: Mobile crane 1362' from DER, 124' left of centerline, 68' AGL/758' MSL.  
Trees and silo 1464' from DER, 178' right of centerline, up to 116' AGL/816' MSL.  
Trees and pole beginning 1.1 NM from DER, left and right of centerline, up to 100' AGL/1099' MSL.
- Rwy 13: Tree and tower beginning 1125' from DER, 609' left of centerline, up to 67' AGL/767' MSL.  
Tree, pole, vent on building, stacks, and obstruction light on stack beginning 1672' from DER, 55' right of centerline, up to 120' AGL/820' MSL.  
Trees beginning 1.9 NM from DER, 2938' left of centerline, up to 100' AGL/1020' MSL.
- Rwy 14: Trees, obstruction light on DME antenna, and pole beginning 290' from DER, 1' right of centerline, up to 129' AGL/819' MSL.  
Trees and pole beginning 1099' from DER, 6' left of centerline, up to 87' AGL/777' MSL.
- Rwy 27: Trees, light pole, and flagpole beginning 617' from DER, 198' left of centerline, up to 119' AGL/829' MSL.  
Obstruction light on antenna, buildings, tower, and tree beginning 810' from DER, 26' right of centerline, up to 165' AGL/955' MSL.  
Trees and building beginning 3886' from DER, 120' left of centerline, up to 84' AGL/1014' MSL.  
Tower 1.7 NM from DER, 633' left of centerline, 559' AGL/1279' MSL.
- Rwy 32: Vehicle on road, trees, railroad, poles, and navaid beginning 179' from DER, 267' right of centerline, up to 58' AGL/758' MSL.  
Vehicle on road, railroad, and trees beginning 192' from DER, up to 59' AGL/759' MSL.  
Navaid 257' from DER, on centerline, 26' AGL/726 MSL.  
Trees, poles, buildings, and tower beginning 3674' from DER, 616' right of centerline, up to 157' AGL/973' MSL.  
Trees, buildings, tower, sign, and stack beginning 1924' from DER, 378' left of centerline, up to 143' AGL/969' MSL.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

(WLSTN6.WLSTN) 16259

# WLSTN SIX DEPARTURE

ST PAUL DOWNTOWN HOLMAN FIELD (STP)  
SL-263 (FAA) ST. PAUL, MINNESOTA

NC-1, 10 NOV 2016 to 05 JAN 2017

ATIS 118.35  
CLNC DEL 121.675  
MINNEAPOLIS CLNC DEL  
121.675 (when tower closed)  
ST. PAUL TOWER ★  
119.1 257.8  
MINNEAPOLIS DEP CON  
121.2 357.4

GREEN BAY  
115.5 GRB  
Chan 102  
N44°33.31'W88°11.69'  
L-31, H-2

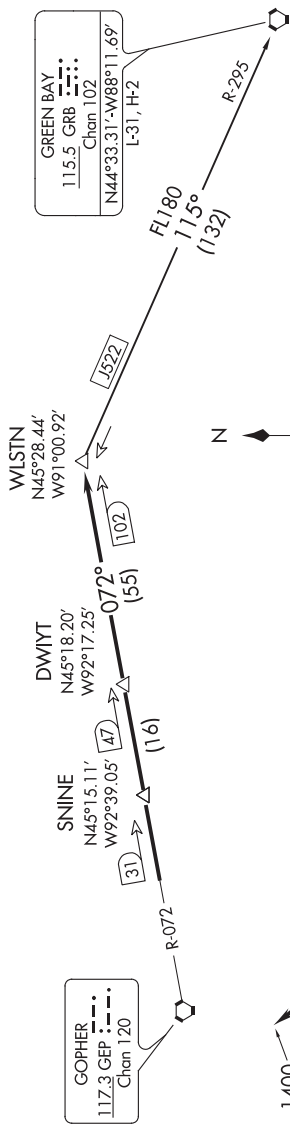
WLSTN  
N45°28.44'  
W91°00.92'

DWYTT  
N45°18.20'  
W92°17.25'

SNINE  
N45°15.11'  
W92°39.05'

GOPHER  
117.3 GEP  
Chan 120

MINNEAPOLIS  
115.3 MSP  
Chan 100



### TAKEOFF MINIMUMS

- Rwy 9: Standard with minimum climb of 340' per NM to 1300.
- Rwy 13: Standard with minimum climb of 230' per NM to 1500.
- Rwy 14: Standard.
- Rwy 27: 600-2 or standard with minimum climb of 442' per NM to 1500.
- Rwy 31: NA-Obstacles.
- Rwy 32: Standard with minimum climb of 340' per NM to 3000.

(NOTES CONTINUED ON FOLLOWING PAGE)  
(NARRATIVE ON FOLLOWING PAGE)

NOTE: RADAR required  
NOTE: Chart not to scale.

WLSTN SIX DEPARTURE  
(WLSTN6.WLSTN) 06FEB14

ST. PAUL, MINNESOTA  
ST PAUL DOWNTOWN HOLMAN FIELD (STP)

NC-1, 10 NOV 2016 to 05 JAN 2017



DEPARTURE ROUTE DESCRIPTION

TAKEOFF RWY 9: Climb heading 088° to 1400 for RADAR vectors to GEP R-072 to WLSTN/GEP 102 DME, thence . . . .  
TAKEOFF RWY 13: Climb heading 125° to 1300 for RADAR vectors to GEP R-072 to WLSTN/GEP 102 DME, thence . . . .  
TAKEOFF RWY 14: Climb heading 143° to 1400 for RADAR vectors to GEP R-072 to WLSTN/GEP 102 DME, thence . . . .  
TAKEOFF RWY 27: Climb heading 268° to 1700 for RADAR vectors to GEP R-072 to WLSTN/GEP 102 DME, thence . . . .  
TAKEOFF RWY 32: Climb heading 323° to 1400 for RADAR vectors to GEP R-072 to WLSTN/GEP 102 DME, thence . . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

GREEN BAY TRANSITION (WLSTN6.GRB): From over WLSTN INT on GRB R-295 to GRB VORTAC.

TAKEOFF OBSTACLE NOTES

- Rwy 9: Mobile crane 1362' from DER, 124' left of centerline, 68' AGL/758' MSL.  
Trees and silo 1464' from DER, 178' right of centerline, up to 116' AGL/816' MSL.  
Trees and pole beginning 1.1 NM from DER, left and right of centerline, up to 100' AGL/1099' MSL.
- Rwy 13: Tree and tower beginning 1125' from DER, 609' left of centerline, up to 67' AGL/767' MSL.  
Tree, pole, vent on building, stacks, and obstruction light on stack beginning 1672' from DER, 55' right of centerline, up to 120' AGL/820' MSL.  
Trees beginning 1.9 NM from DER, 2938' left of centerline, up to 100' AGL/1020' MSL.
- Rwy 14: Trees, obstruction light on DME antenna, and pole beginning 290' from DER, 1' right of centerline, up to 129' AGL/819' MSL.  
Trees and pole beginning 1099' from DER, 6' left of centerline, up to 87' AGL/777' MSL.
- Rwy 27: Trees, light pole, and flagpole beginning 617' from DER, 198' left of centerline, up to 119' AGL/829' MSL.  
Obstruction light on antenna, buildings, tower, and tree beginning 810' from DER, 26' right of centerline, up to 165' AGL/955' MSL.  
Trees and building beginning 3886' from DER, 120' left of centerline, up to 84' AGL/1014' MSL.  
Tower 1.7 NM from DER, 633' left of centerline, 569' AGL/1279' MSL.
- Rwy 32: Vehicle on road, trees, railroad, poles, and navaid beginning 179' from DER, 267' right of centerline, up to 58' AGL/758' MSL.  
Vehicle on road, railroad, and trees beginning 192' from DER, up to 59' AGL/759' MSL.  
Navaid 257' from DER, on centerline, 26' AGL/726 MSL.  
Trees, poles, buildings, and tower beginning 3674' from DER, 616' right of centerline, up to 157' AGL/973' MSL.  
Trees, buildings, tower, sign, and stack beginning 1924' from DER, 378' left of centerline, up to 143' AGL/969' MSL.

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DEPARTURE ROUTE DESCRIPTION

TAKEOFF RUNWAY 9: Climb heading 088° to 1400 for RADAR vectors to MSP VOR/DME then on MSP R-138 to JEDET INT/MSP 34 DME, at or above 4000; then on ODI R-301 to ZMBRO INT/ODI 50 DME, thence . . . .

TAKEOFF RUNWAY 13: Climb heading 125° to 1300 for RADAR vectors to MSP VOR/DME then on MSP R-138 to JEDET INT/MSP 34 DME, at or above 4000; then on ODI R-301 to ZMBRO INT/ODI 50 DME, thence . . . .

TAKEOFF RUNWAY 14: Climb heading 143° to 1400 for RADAR vectors to MSP VOR/DME then on MSP R-138 to JEDET INT/MSP 34 DME, at or above 4000; then on ODI R-301 to ZMBRO INT/ODI 50 DME, thence . . . .

TAKEOFF RUNWAY 27: Climb heading 268° to 1700 for RADAR vectors to MSP VOR/DME then on MSP R-138 to JEDET INT/MSP 34 DME, at or above 4000; then on ODI R-301 to ZMBRO INT/ODI 50 DME, thence . . . .

TAKEOFF RUNWAY 32: Climb heading 323° to 1400 for RADAR vectors to MSP VOR/DME then on MSP R-138 to JEDET INT/MSP 34 DME, at or above 4000; then on ODI R-301 to ZMBRO INT/ODI 50 DME, thence . . . .

. . . . via transition or assigned route. Expect clearance to filed altitude/flight level 10 (ten) minutes after departure.

NODINE TRANSITION (ZMBRO6.ODI): From over ZMBRO INT on ODI R-301 to ODI VORTAC.

TAKEOFF OBSTACLE NOTES

- Rwy 9: Mobile crane 1362' from DER, 124' left of centerline, 68' AGL/758' MSL.  
Trees and silo 1464' from DER, 178' right of centerline, up to 116' AGL/816' MSL.  
Trees and pole beginning 1.1 NM from DER, left and right of centerline, up to 100' AGL/1099' MSL.
- Rwy 13: Tree and tower beginning 1125' from DER, 609' left of centerline, up to 67' AGL/767' MSL.  
Tree, pole, vent on building, stacks, and obstruction light on stack beginning 1672' from DER, 55' right of centerline, up to 120' AGL/820' MSL.  
Trees beginning 1.9 NM from DER, 2938' left of centerline, up to 100' AGL/1020' MSL.
- Rwy 14: Trees, obstruction light on DME antenna, and pole beginning 290' from DER, 1' right of centerline, up to 129' AGL/819' MSL.  
Trees and pole beginning 1099' from DER, 6' left of centerline, up to 87' AGL/777' MSL.
- Rwy 27: Trees, light pole, and flagpole beginning 617' from DER, 198' left of centerline, up to 119' AGL/829' MSL.  
Obstruction light on antenna, buildings, tower, and tree beginning 810' from DER, 26' right of centerline, up to 165' AGL/955' MSL.  
Trees and building beginning 3886' from DER, 120' left of centerline, up to 84' AGL/1014' MSL.  
Tower 1.7 NM from DER, 633' left of centerline, 569' AGL/1279' MSL.
- Rwy 32: Vehicle on road, trees, railroad, poles, and navaid beginning 179' from DER, 267' right of centerline, up to 58' AGL/758' MSL.  
Vehicle on road, railroad, and trees beginning 192' from DER, up to 59' AGL/759' MSL.  
Navaid 257' from DER, on centerline, 26' AGL/726' MSL.  
Trees, poles, buildings, and tower beginning 3674' from DER, 616' right of centerline, up to 157' AGL/973' MSL.  
Trees, buildings, tower, sign, and stack beginning 1924' from DER, 378' left of centerline, up to 143' AGL/969' MSL.

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WAAS CH <b>97636</b> <b>W14A</b>	APP CRS <b>148°</b>	Rwy Idg TDZE Apt Elev	<b>3296</b> <b>1242</b> <b>1244</b>
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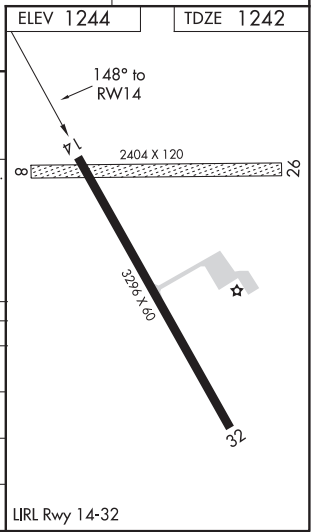
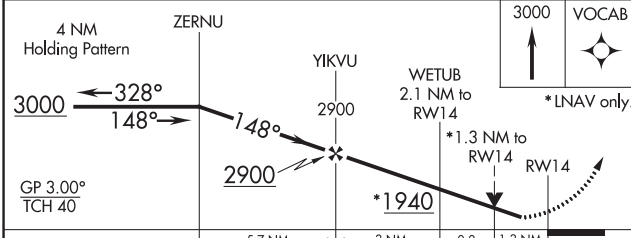
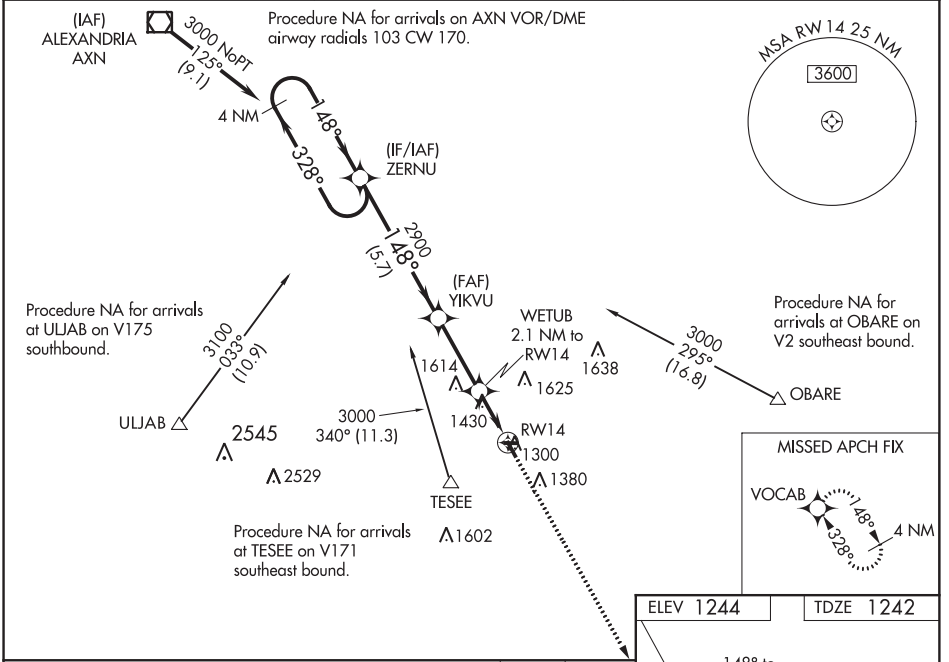
# RNAV (GPS) RWY 14

SAUK CENTRE MUNI (D39)

**⚠** Baro-VNAV NA when using Glenwood altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. VDP NA with Glenwood altimeter setting. When local altimeter setting not received, use Glenwood altimeter setting and increase all DA/MDA 60 feet, increase LNAV/VNAV all Cats visibility 1/8 mile. Helicopter visibility reduction below 3/4 SM not authorized. Night landing: Rwy 8, 26 NA.

**MISSED APPROACH:**  
Climb to 3000 direct VOCAB and hold.

AWOS-3 <b>118.475</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	CTAF <b>122.9</b>
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CATEGORY	A	B	C	D
LPV DA	1492-1	250 (300-1)		NA
LNAV/VNAV DA	1500-1	258 (300-1)		NA
LNAV MDA	1680-1	438 (500-1)		NA
<b>C</b> CIRCLING	1700-1 456 (500-1)	1740-1 496 (500-1)		NA

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WAAS CH <b>56622</b> <b>W32A</b>	APP CRS <b>328°</b>	Rwy Idg TDZE Apt Elev	<b>3296</b> <b>1242</b> <b>1244</b>
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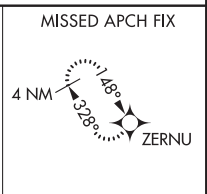
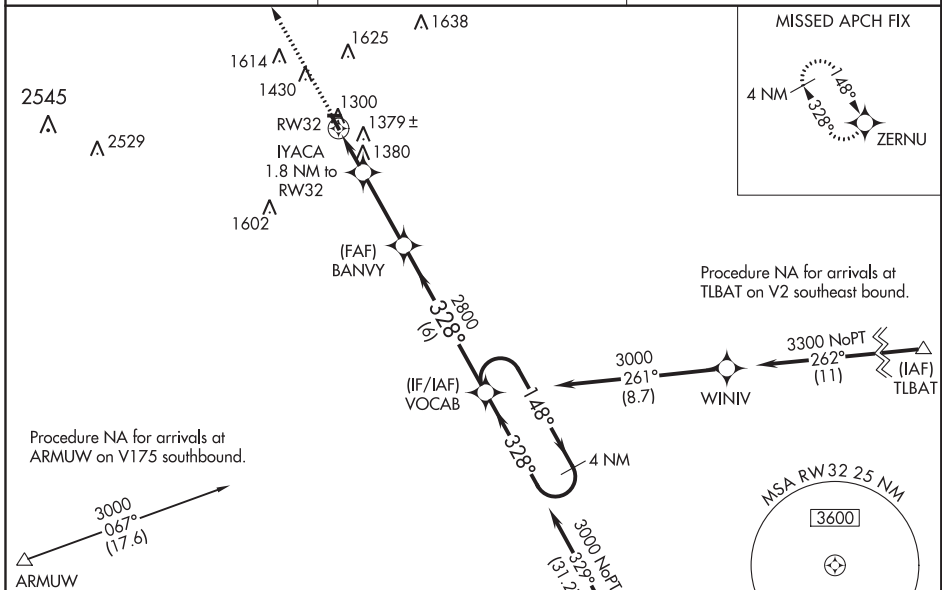
# RNAV (GPS) RWY 32

SAUK CENTRE MUNI (D39)

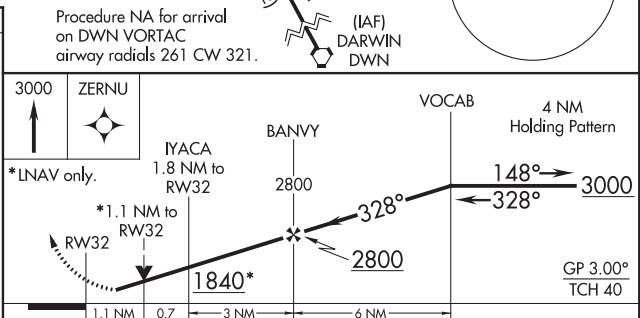
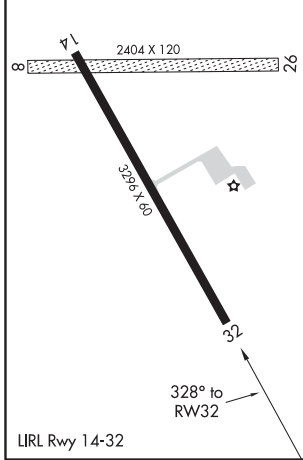
**⚠** Baro-VNAV NA when using Glenwood altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). When local altimeter setting not received, use Glenwood altimeter setting and increase all DA/MDA 60 feet, and increase LNAV/VNAV all Cats visibility ¼ mile. DME/DME RNP-0.3 NA. VDP NA with Glenwood altimeter setting. Helicopter visibility reduction below ¾ SM not authorized. Night landing: Rwy 8, 26 NA.

MISSED APPROACH: Climb to 3000 direct ZERNU and hold.

AWOS-3 <b>118.475</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	CTAF <b>122.9</b>
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ELEV 1244	TDZE 1242
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CATEGORY	A	B	C	D
LPV DA	1492-1	250 (300-1)		NA
LNAV/VNAV DA	1541-1	299 (300-1)		NA
LNAV MDA	1640-1	398 (400-1)		NA
<b>C</b> CIRCLING	1700-1 456 (500-1)	1740-1 496 (500-1)		NA

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SILVER BAY, MINNESOTA

AL-9090 (FAA)

15344

APP CRS	Rwy Idg	<b>3200</b>
<b>252°</b>	TDZE	<b>1089</b>
	Apt Elev	<b>1089</b>

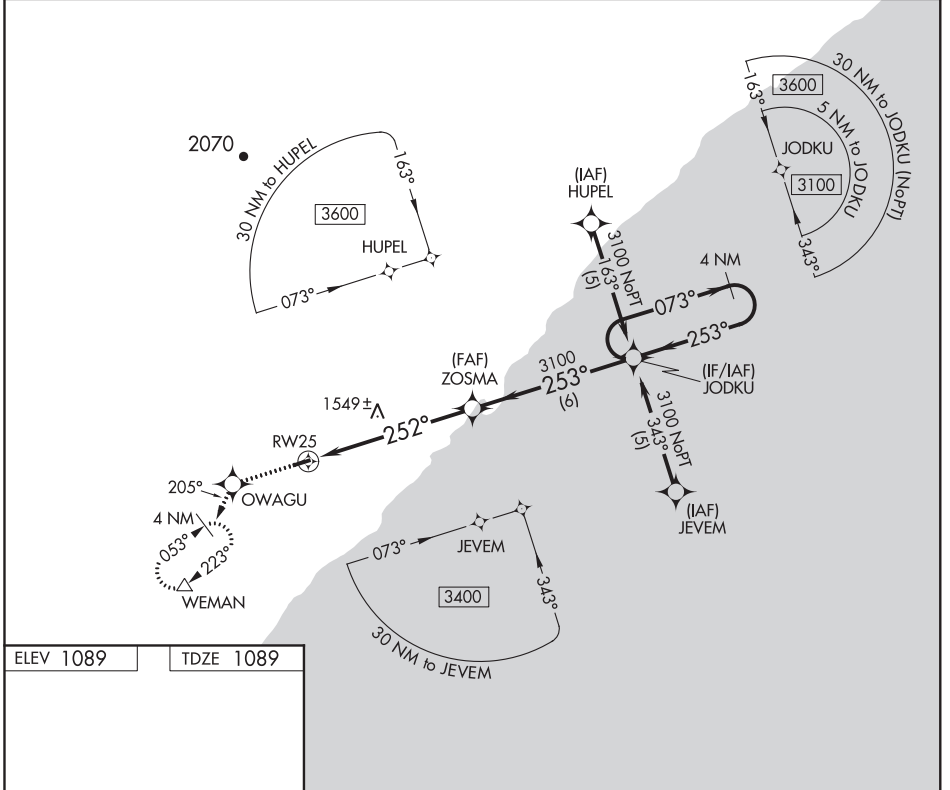
# RNAV (GPS) RWY 25

SILVER BAY MUNI (BFW)

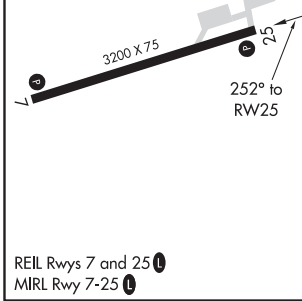
**⚠** DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA.  
**⚠** When local altimeter setting not received, use Two Harbors altimeter setting and increase all MDA 60 feet, and increase LNAV and Circling visibility Cat B ¼ mile. Procedure NA at night.  
**❄** -32°C/-26°F

**MISSED APPROACH:** Climb to 3300 direct OWAGU and on track 205° to WEMAN and hold.

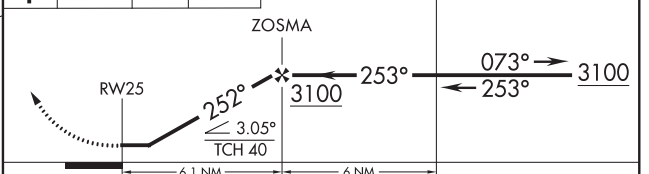
AWOS-3 <b>350</b>	MINNEAPOLIS CENTER <b>134,55 290.5</b>	CTAF <b>122.9</b>
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ELEV 1089	TDZE 1089
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3300 OWAGU tr 205° WEMAN VGSI and descent angles not coincident. JODKU 4 NM Holding Pattern



CATEGORY	A	B	C	D
LNAV MDA	1820-1	731 (800-1)	NA	
CIRCLING	1820-1	731 (800-1)	NA	

SILVER BAY, MINNESOTA  
 Orig-A 25JUN15

47°15'N-91°25'W

# RNAV (GPS) RWY 25

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

NDB BFW <b>350</b>	APP CRS <b>264°</b>	Rwy Idg <b>3200</b>
		TDZE <b>1089</b>
		Apt Elev <b>1089</b>

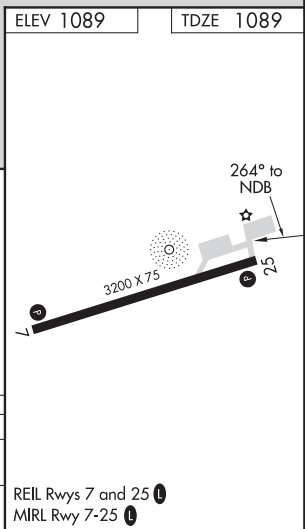
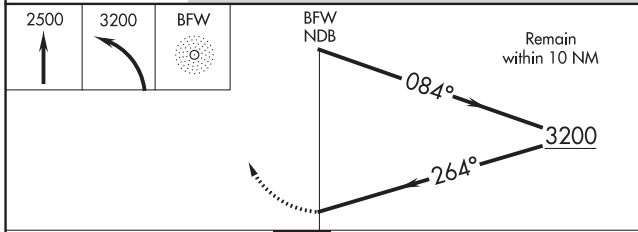
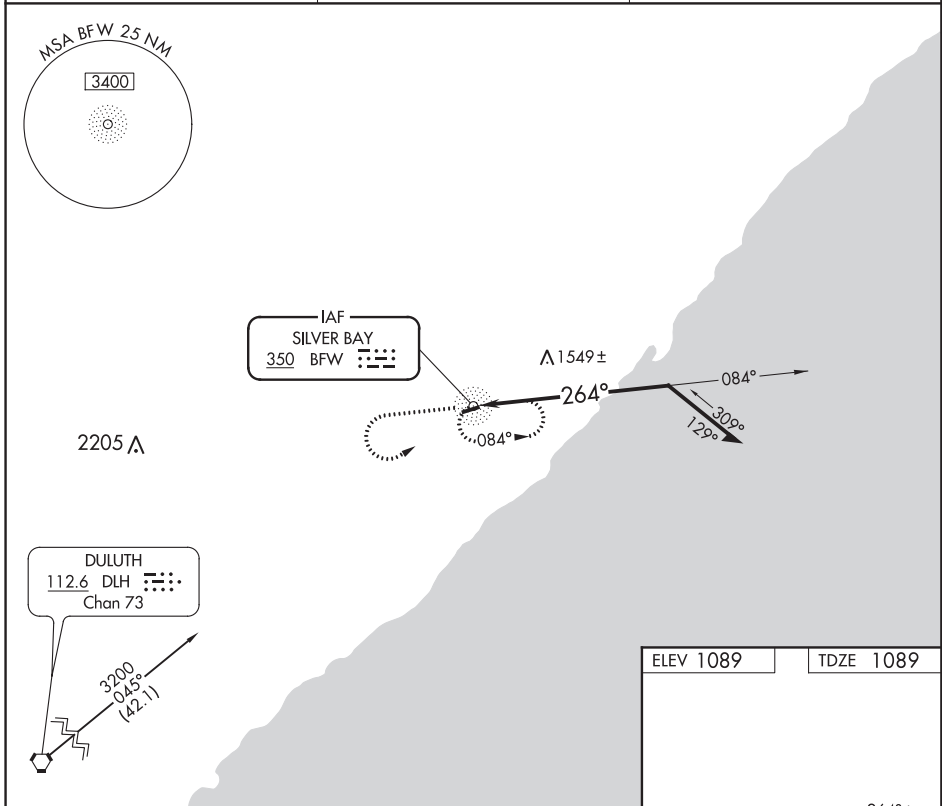
# NDB RWY 25

SILVER BAY MUNI (BFW)

**NA** Procedure NA at night. Helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Two Harbors altimeter setting and increase all MDA 60 feet.

**MISSED APPROACH:** Climb to 2500 then climbing left turn to 3200 direct BFW NDB and hold.

AWOS-3 <b>350</b>	MINNEAPOLIS CENTER <b>134,55 290,5</b>	CTAF <b>122.9</b>
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CATEGORY	A	B	C	D
S-25	1900-1 811 (900-1)	1900-1¼ 811 (900-1¼)		NA
CIRCLING	1900-1 811 (900-1)	1900-1¼ 811 (900-1¼)		NA

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LOC I-FSD <b>109.9</b>	APP CRS <b>030°</b>	Rwy Idg TDZE Apt Elev	<b>8999</b> <b>1424</b> <b>1430</b>
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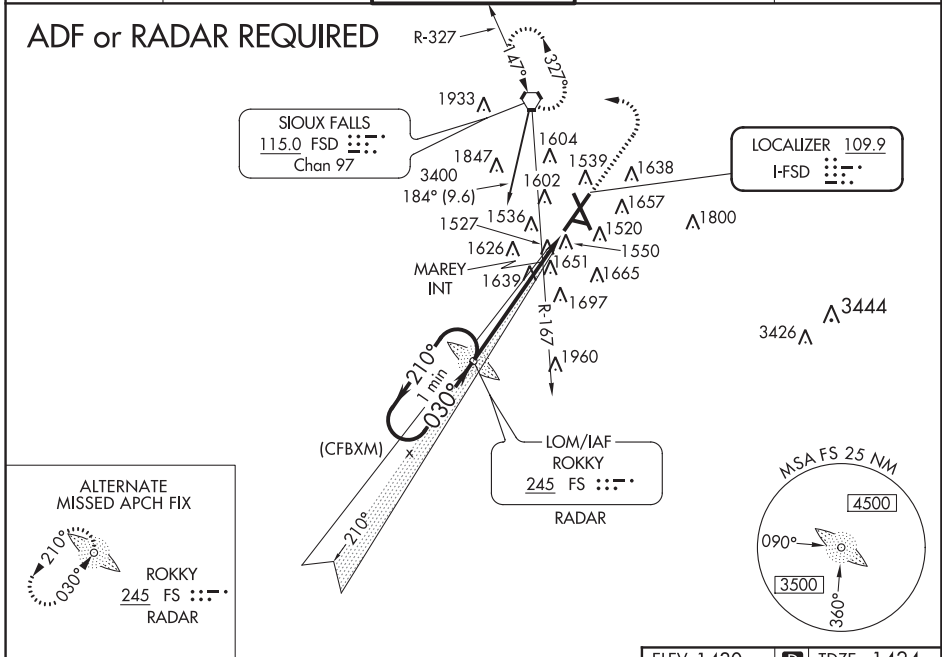
# ILS or LOC RWY 3

JOE FOSS FIELD (FSD)

<b>ASR</b>		MISSED APPROACH: Climb to 3400 then left turn direct FSD VORTAC and hold.
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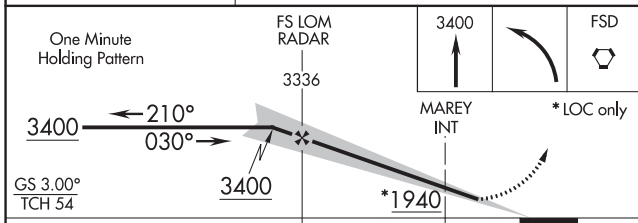
ATIS <b>126.6</b>	SIoux FALLS APP CON* <b>125.8 267.9</b>	SIoux FALLS TOWER* <b>118.3 (CTAF) 257.8</b>	GND CON <b>121.9 348.6</b>	UNICOM <b>122.725</b>
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## ADF or RADAR REQUIRED

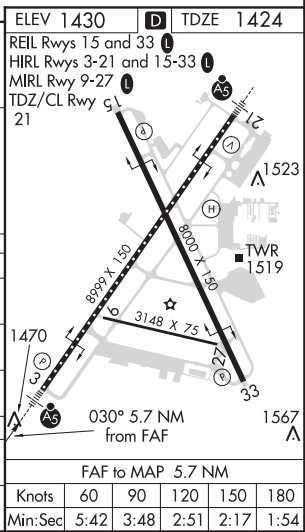


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D
S-ILS 3	1674/24 250 (300-½)			
S-LOC 3	1940/24	516 (600-½)	1940/55	516 (600-1½)
CIRCLING	1980-1	550 (600-1)	1980-1½ 550 (600-1½)	2040-2 610 (700-2)
MAREY FIX MINIMUMS (DUAL VOR RECEIVERS REQUIRED)				
S-LOC 3	1800/24	376 (400-½)	1800/35	376 (400-¾)
CIRCLING	1980-1	550 (600-1)	1980-1½ 550 (600-1½)	2040-2 610 (700-2)



Knots	60	90	120	150	180
Min:Sec	5:42	3:48	2:51	2:17	1:54



WAAS CH <b>97722</b> <b>W03A</b>	APP CRS <b>030°</b>	Rwy Idg TDZE Apt Elev	<b>8999</b> <b>1424</b> <b>1430</b>
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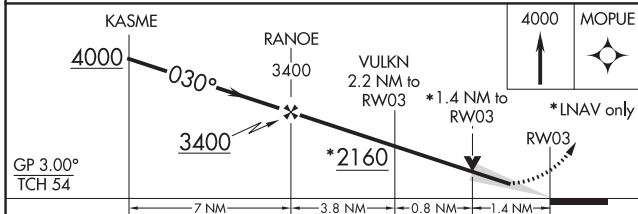
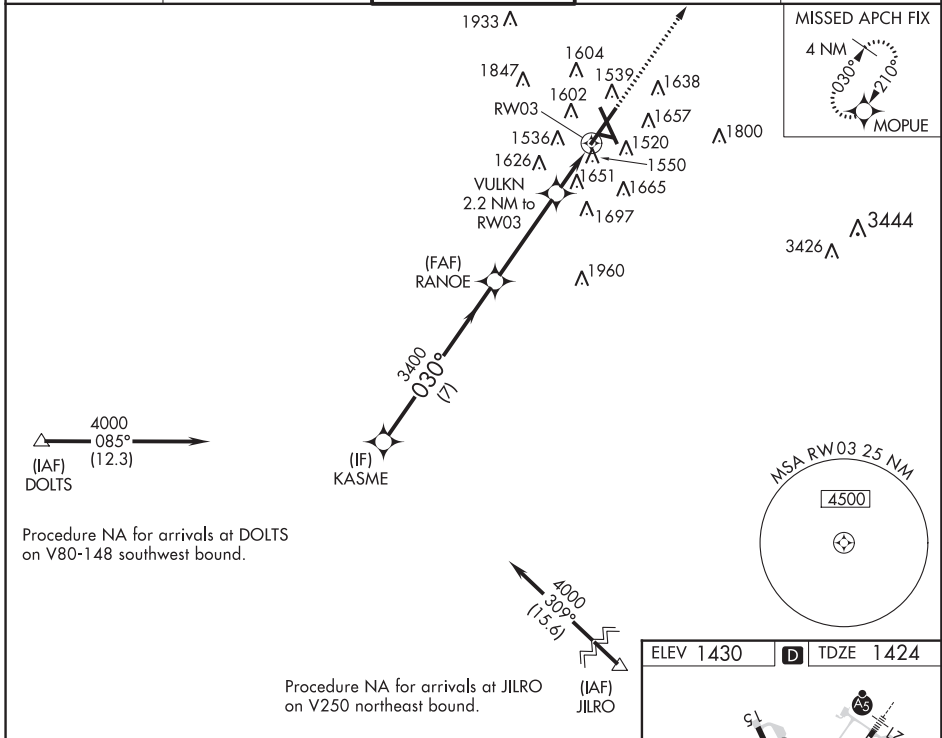
# RNAV (GPS) RWY 3

JOE FOSS FIELD (F'SD)

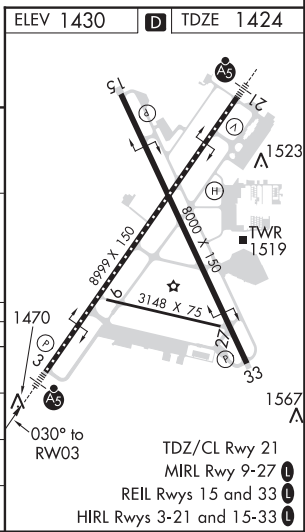
**ASR** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. For inop MALS R increase LNAV/VNAV all Cats visibility to RVR 4500 and LNAV Cat C/D visibility to 1½ mile.

**MALS R** MISSED APPROACH: Climb to 4000 direct MOPUE and hold.

ATIS <b>126.6</b>	SIoux FALLS APP CON* <b>125.8 267.9</b>	SIoux FALLS TOWER* <b>118.3 (CTAF) 0 257.8</b>	GND CON <b>121.9 348.6</b>	UNICOM <b>122.725</b>
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CATEGORY	A	B	C	D
LPV DA		1674/24	250 (300-½)	
LNAV/VNAV DA		1711/24	287 (300-½)	
LNAV MDA	1920/24	496 (500-½)	1920/50	496 (500-1)
CIRCLING	1980-1	550 (600-1)	1980-1½ 550 (600-1½)	2040-2 610 (700-2)



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NC-1, 10 NOV 2016 to 05 JAN 2017





SIoux FALLS, SOUTH DAKOTA

AL-396 (FAA)

16091

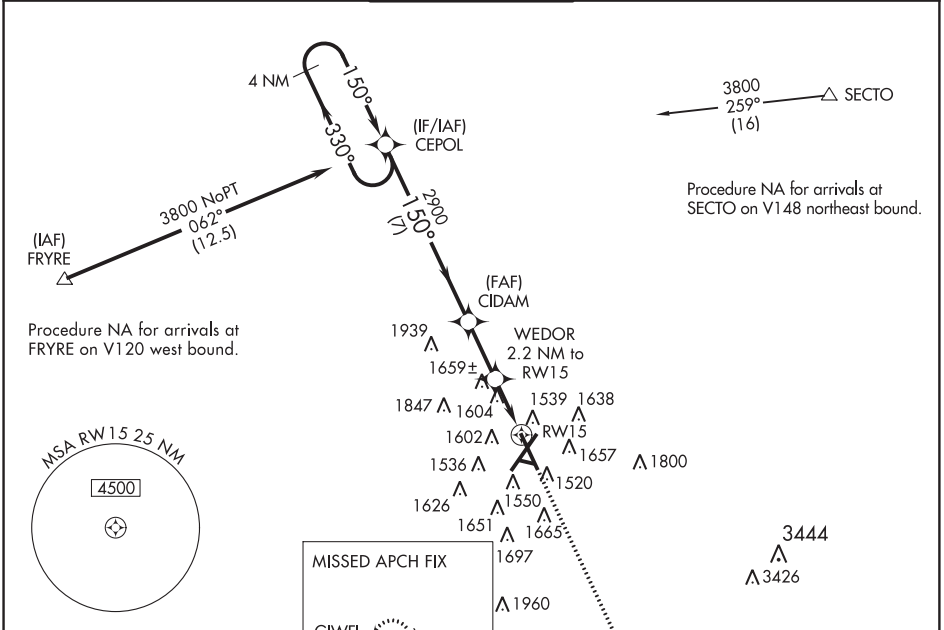
WAAS CH <b>90235</b> <b>W15A</b>	APP CRS <b>150°</b>	Rwy Idg TDZE Apt Elev	<b>8000</b> <b>1429</b> <b>1430</b>
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# RNAV (GPS) RWY 15

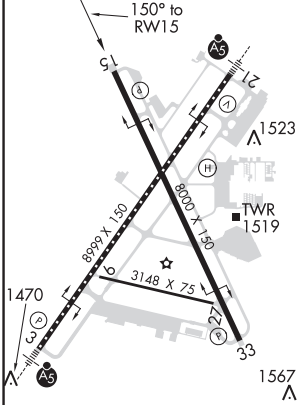
JOE FOSS FIELD (FSD)

<b>▽</b> ASR	For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -21°C (-5°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below ¾ SM not authorized.	<b>MISSED APPROACH:</b> Climb to 3800 direct GIWFI and hold.
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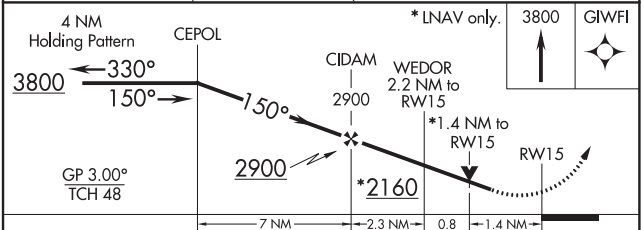
ATIS <b>126.6</b>	SIoux FALLS APP CON * <b>125.8 267.9</b>	SIoux FALLS TOWER * <b>118.3 (CTAF) 0 257.8</b>	GND CON <b>121.9 348.6</b>	UNICOM <b>122.725</b>
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ELEV 1430	<b>D</b>	TDZE 1429
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TDZ/CL Rwy 15  
MIRL Rwy 9-27  
REIL Rwy 15 and 33  
HIRL Rwy 3-21 and 15-33



CATEGORY	A	B	C	D
LPV DA		1839-1½	410 (500-1½)	
LNNAV/VNAV DA		1906-1½	477 (500-1½)	
LNNAV MDA	1920-1	491 (500-1)	1920-1½	491 (500-1½)
<b>C</b> CIRCLING	1980-1	550 (600-1)	2200-2¼ 770 (800-2¼)	2200-2½ 770 (800-2½)

SIoux FALLS, SOUTH DAKOTA  
Amdt 1A 05FEB15

43°35'N-96°45'W

# RNAV (GPS) RWY 15

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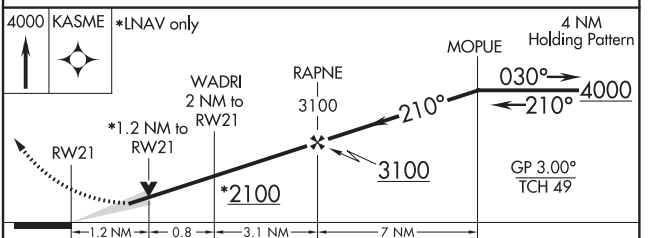
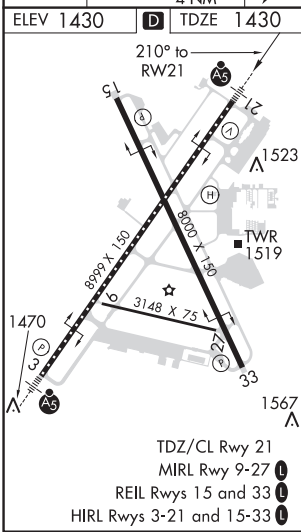
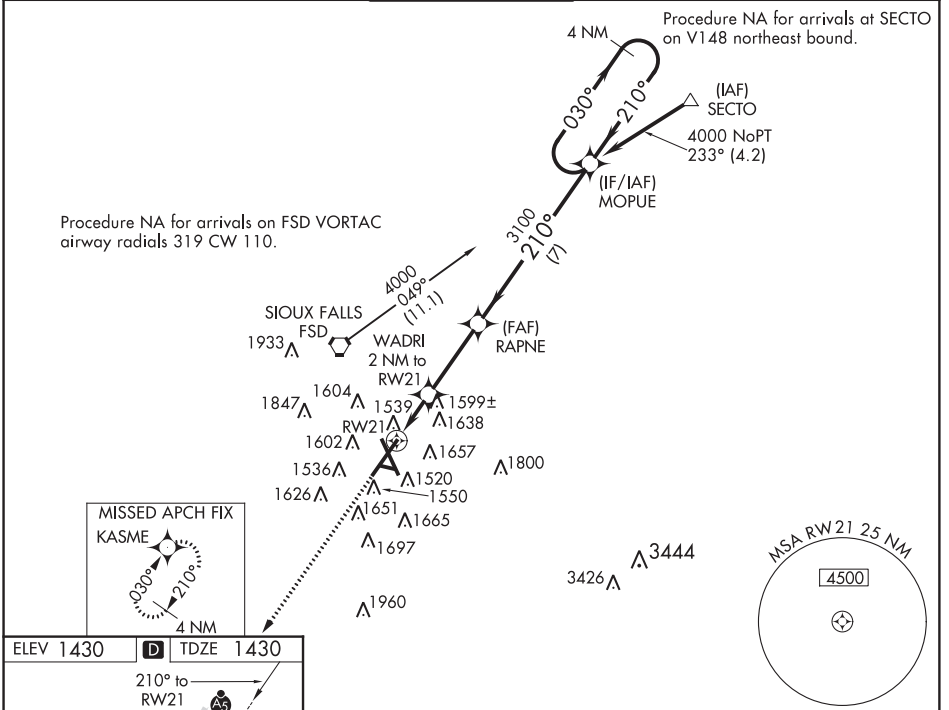
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WAAS CH <b>99323</b> <b>W21A</b>	APP CRS <b>210°</b>	Rwy Idg TDZE Apt Elev	<b>8999</b> <b>1430</b> <b>1430</b>
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# RNAV (GPS) RWY 21

JOE FOSS FIELD (FSD)

ASR	DME/DME RNP-0.3 NA. Baro-VNAV NA.	MALSR	MISSED APPROACH: Climb to 4000 direct KASME and hold.	
ATIS <b>126.6</b>	SIoux FALLS APP CON* <b>125.8 267.9</b>	SIoux FALLS TOWER* <b>118.3 (CTAF) 0 257.8</b>	GND CON <b>121.9 348.6</b>	UNICOM <b>122.725</b>



CATEGORY	A	B	C	D
LPV DA		1630/24	200 (200-½)	
LNAV/VNAV DA		1735/24	305 (400-½)	
LNAV MDA	1860/24	430 (500-½)	1860/40	430 (500-¾)
CIRCLING	1980-1	550 (600-1)	1980-1½ 550 (600-1½)	2040-2 610 (700-2)

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NC-1, 10 NOV 2016 to 05 JAN 2017

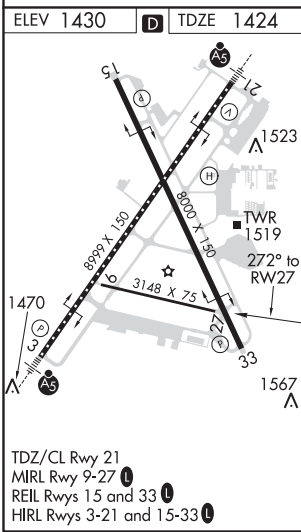
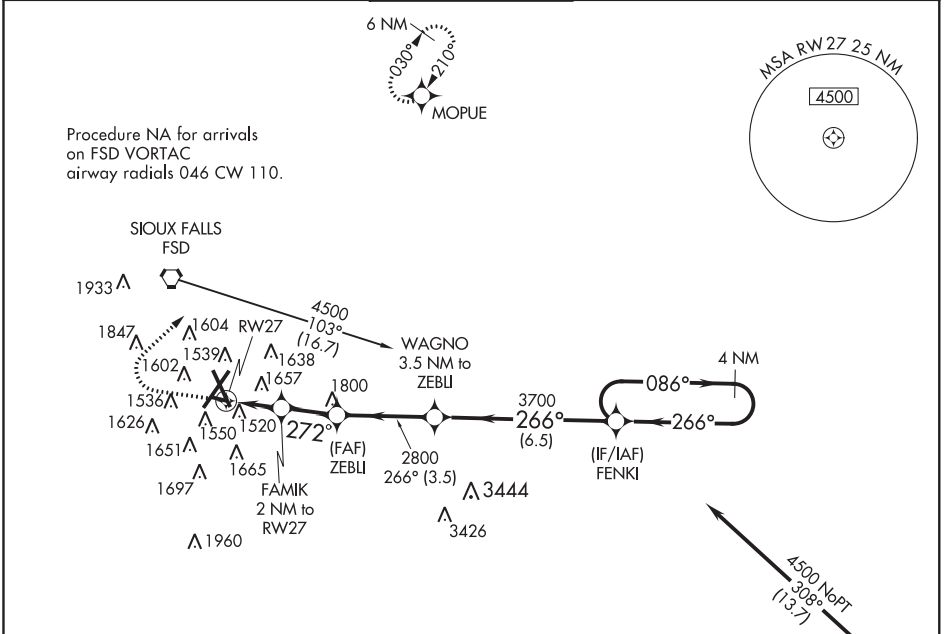
APP CRS <b>272°</b>	Rwy Idg <b>3148</b> TDZE <b>1424</b> Apt Elev <b>1430</b>
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# RNAV (GPS) RWY 27

JOE FOSS FIELD (FSD)

NA ASR	DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA.	MISSED APPROACH: Climb to 2500, then climbing right turn to 4000 direct MOPUE WP and hold.		
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ATIS <b>126.6</b>	SIoux FALLS APP CON* <b>125.8 267.9</b>	SIoux FALLS TOWER* <b>118.3</b> (CTAF) <b>257.8</b>	GND CON <b>121.9 348.6</b>	UNICOM <b>122.725</b>
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	2500	4000	MOPUE				
	↑	↪	☀				
	FAMIK 2 NM to RWY 27		ZEBLI	WAGNO 3.5 NM to ZEBLI	FENKI	4 NM Holding Pattern	
	RWY 27	3.15° TCH 40	2800	3700	266°	086°	4500
	2 NM	2 NM	3.5 NM	6.5 NM	← 266°		
CATEGORY	A		B		C		D
LNNAV MDA	1960-1		536 (600-1)				NA
CIRCLING	1980-1		550 (600-1)				NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>40135</b> <b>W33A</b>	APP CRS <b>330°</b>	Rwy Idg TDZE <b>1424</b> Apt Elev <b>1430</b>	<b>8000</b>
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# RNAV (GPS) RWY 33

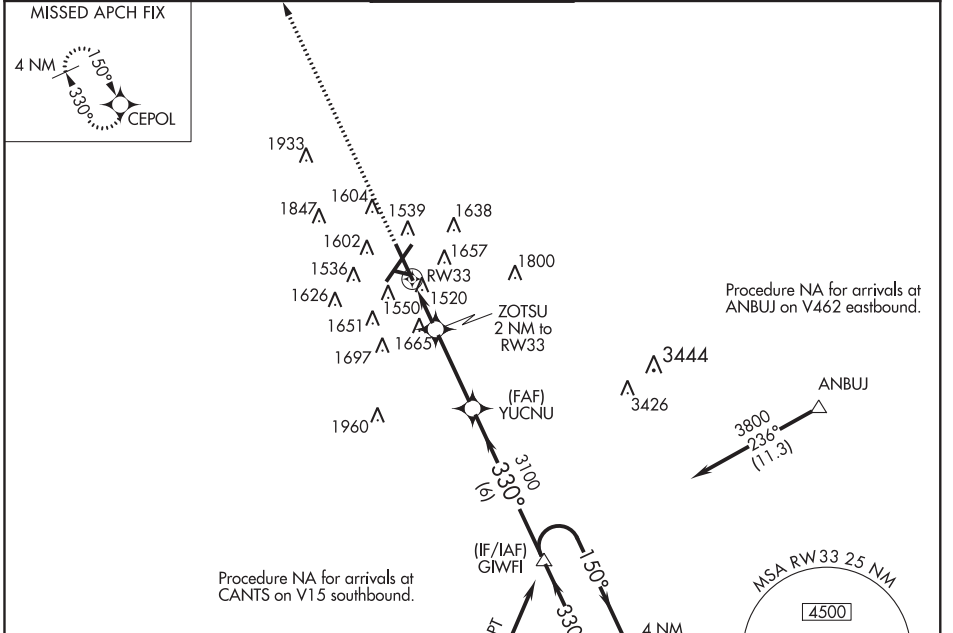
JOE FOSS FIELD (FSD)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -22°C (-7°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM not authorized.

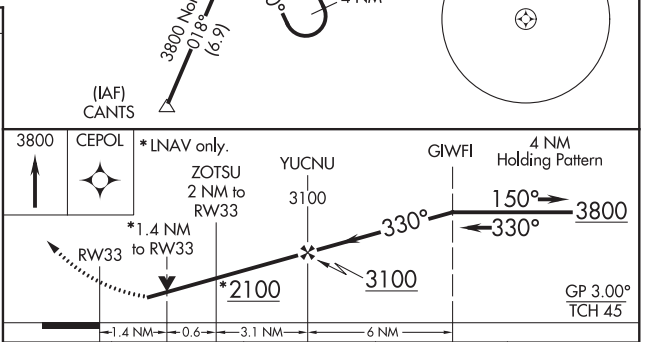
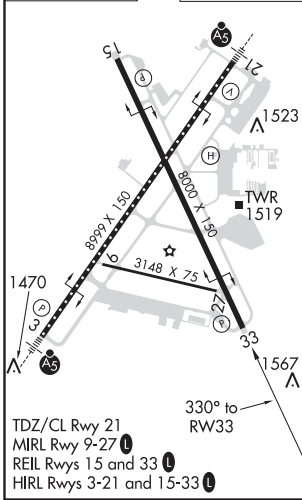
**ASR**

**MISSED APPROACH:** Climb to 3800 direct CEPOL and hold.

ATIS <b>126.6</b>	SIoux FALLS APP CON * <b>125.8 267.9</b>	SIoux FALLS TOWER * <b>118.3</b> (CTAF) <b>0 257.8</b>	GND CON <b>121.9 348.6</b>	UNICOM <b>122.725</b>
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ELEV 1430	<b>D</b>	TDZE 1424
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CATEGORY	A	B	C	D
LPV DA		1725-1	301 (300-1)	
LNAV/VNAV DA		1979-1 1/8	555 (600-1 1/8)	
LNAV MDA	1920-1	496 (500-1)	1920-1 3/8	496 (500-1 3/8)
<b>C</b> CIRCLING	1980-1	550 (600-1)	2200-2 1/4 770 (800-2 1/4)	2200-2 1/2 770 (800-2 1/2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

SIoux FALLS, SOUTH DAKOTA

AL-396 (FAA)

16091

VORTAC FSD <b>115.0</b> Chan <b>97</b>	APP CRS <b>326°</b>	Rwy Idg TDZE Apt Elev	<b>8000</b> <b>1424</b> <b>1430</b>
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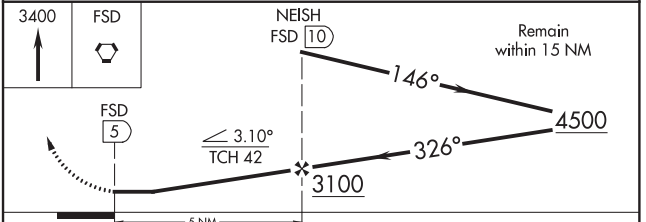
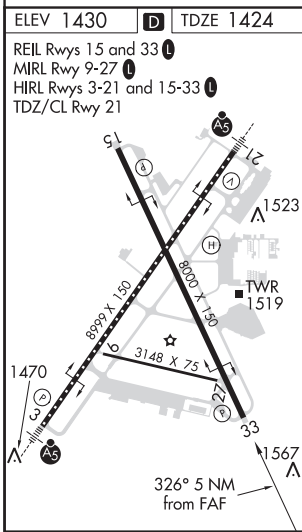
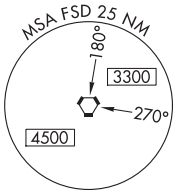
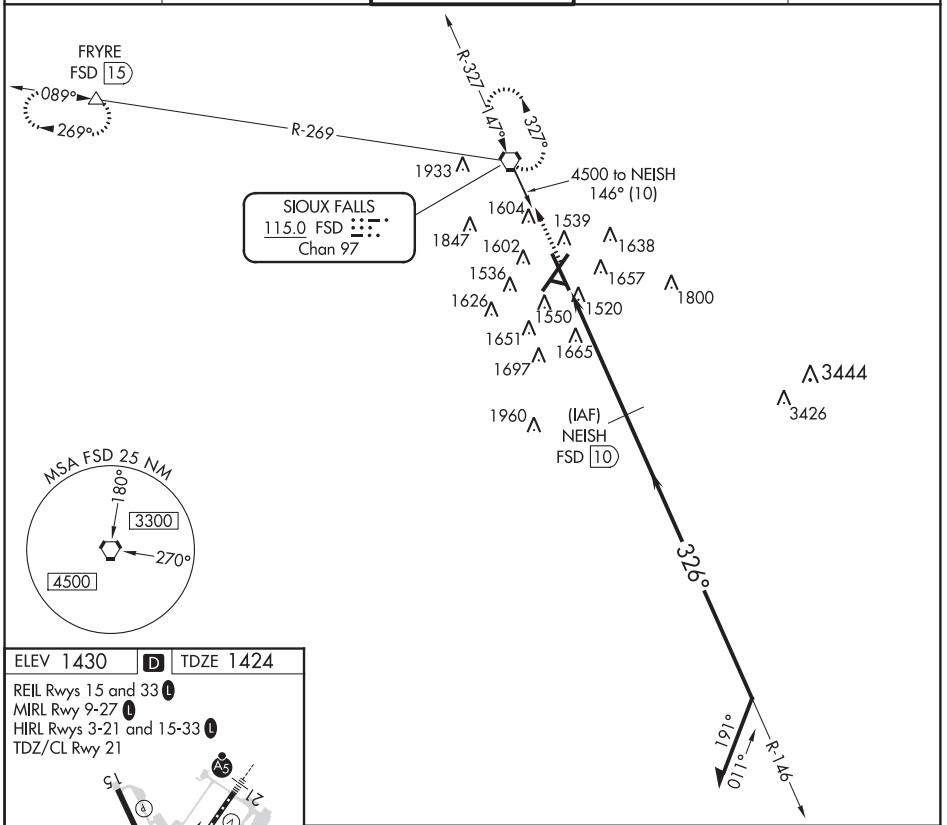
# VOR/DME or TACAN RWY 33

JOE FOSS FIELD (FSD)

**ASR** Helicopter visibility reduction below  $\frac{3}{4}$  SM NA.

MISSED APPROACH: Climb to 3400 direct FSD VORTAC and hold. (TACAN aircraft continue climb to 5000 via FSD R-269 to FRYRE 15 DME and hold west, right turns, 089° inbound.)

ATIS <b>126.6</b>	SIoux FALLS APP CON* <b>125.8 267.9</b>	SIoux FALLS TOWER* <b>118.3</b> (CTAF) <b>257.8</b>	GND CON <b>121.9 348.6</b>	UNICOM <b>122.725</b>
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CATEGORY	A	B	C	D	E
S-33	1940-1	516 (600-1)	1940-1 $\frac{3}{8}$ 516 (600-1 $\frac{3}{8}$ )		
CIRCLING	1980-1	550 (600-1)	1980-1 $\frac{1}{2}$ 550 (600-1 $\frac{1}{2}$ )	2040-2 610 (700-2)	2300-3 870 (900-3)

SIoux FALLS, SOUTH DAKOTA  
Amdt 12D 05FEB15

43°35'N-96°45'W

# VOR/DME or TACAN RWY 33

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

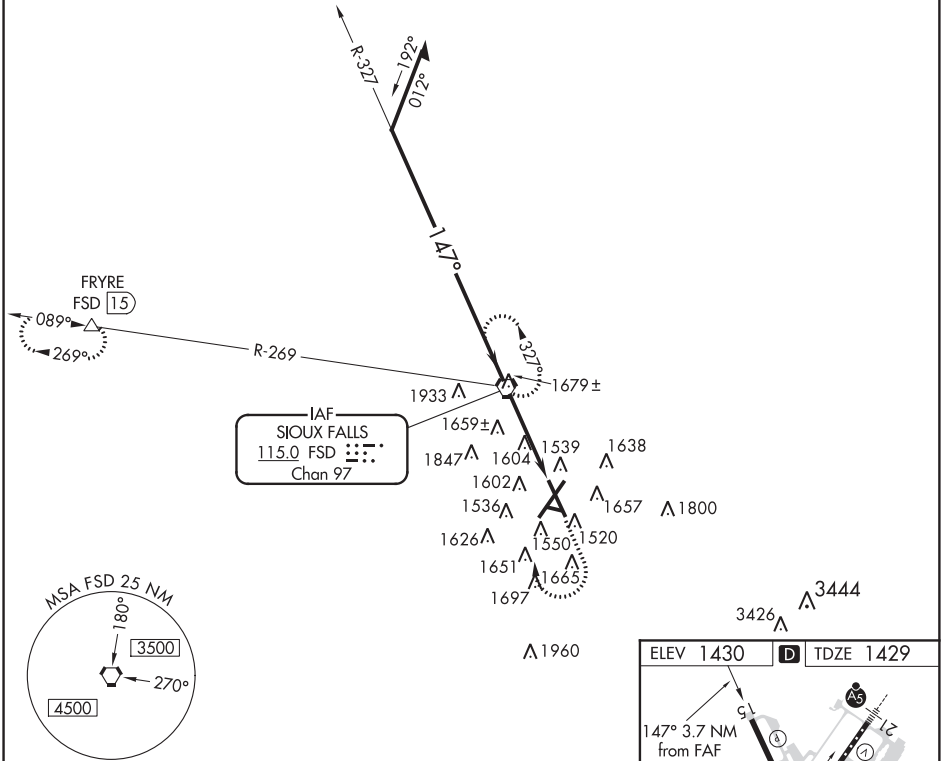
VORTAC FSD <b>115.0</b> Chan <b>97</b>	APP CRS <b>147°</b>	Rwy Idg <b>8000</b> TDZE <b>1429</b> Apt Elev <b>1430</b>
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# VOR or TACAN RWY 15

JOE FOSS FIELD (FSD)

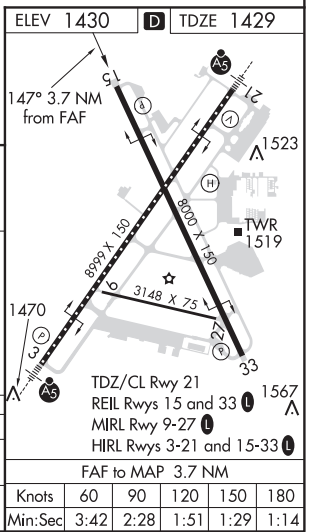
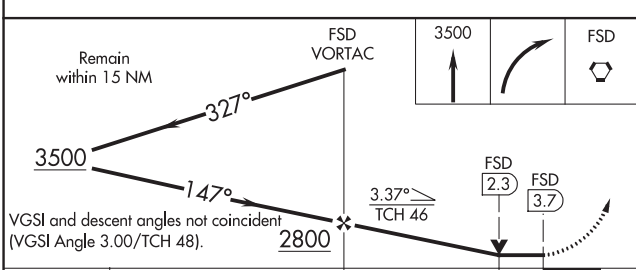
**MISSED APPROACH:** Climb to 3500 then right turn direct FSD VORTAC and hold. (TACAN aircraft continue climb to 5000 via FSD R-269 to FRYRE 15 DME and hold west, right turns, 089° inbound)

ATIS <b>126.6</b>	SIoux FALLS APP CON* <b>125.8 267.9</b>	SIoux FALLS TOWER* <b>118.3</b> (CTAF) <b>257.8</b>	GND CON <b>121.9 348.6</b>	UNICOM <b>122.725</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D	E
S-15	1920-1	491 (500-1)	1920-1 <sup>3</sup> / <sub>8</sub> 491 (500-1 <sup>3</sup> / <sub>8</sub> )		
CIRCLING	1980-1	550 (600-1)	1980-1 <sup>1</sup> / <sub>2</sub> 550 (600-1 <sup>1</sup> / <sub>2</sub> )	2040-2 610 (700-2)	2300-3 870 (900-3)

Knots	60	90	120	150	180
Min:Sec	3:42	2:28	1:51	1:29	1:14





WAAS CH <b>50538</b> <b>W16A</b>	APP CRS <b>164°</b>	Rwy ldg TDZE Apt Elev	<b>3400</b> <b>1162</b> <b>1162</b>
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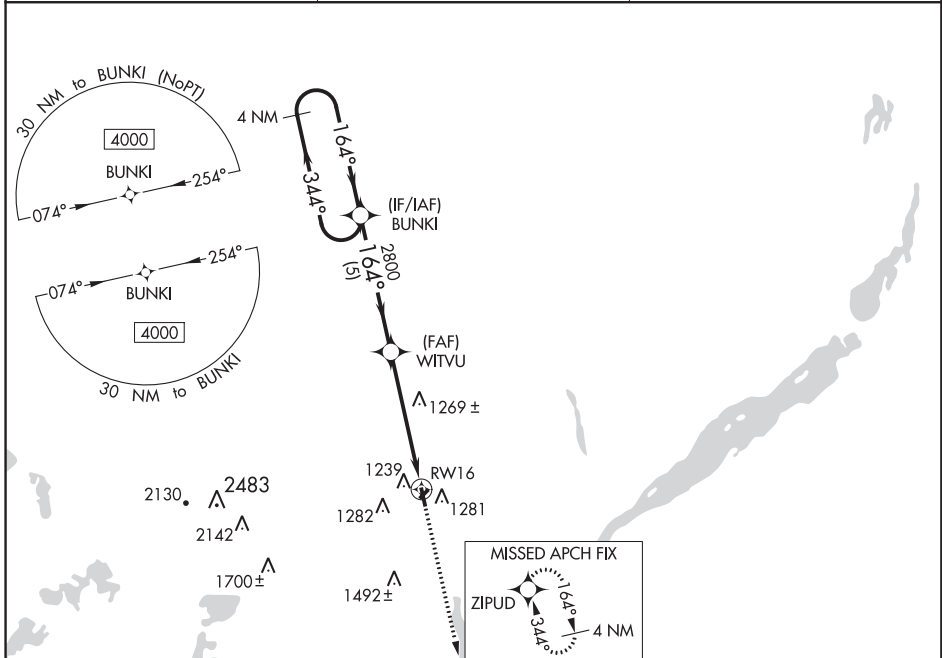
# RNAV (GPS) RWY 16

SISETON MUNI (8D3)

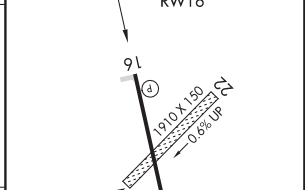
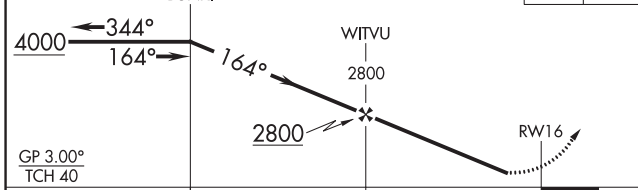
**⚠** Circling NA to Rwy 4 and 22. Baro-VNAV NA. DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA. Use Wheaton altimeter setting; when not received, use Ortonville altimeter setting and increase LPV DA to 1496 feet, LNAV/VNAV DA to 1516 feet and all MDA 20 feet. Increase LNAV/VNAV Cats A/B visibility 1/2 mile.

**⚠** MISSED APPROACH: Climb to 4000 direct ZIPUD and hold, continue climb-in-hold to 4000.

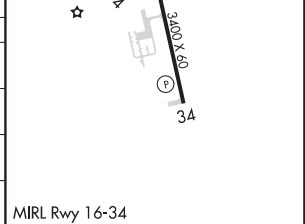
WHEATON AWOS-3 <b>118.775</b>	MINNEAPOLIS CENTER <b>128.5 306.2</b>	CTAF <b>122.9</b>
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4 NM Holding Pattern	VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 30)	4000 ZIPUD	ELEV 1162	TDZE 1162
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CATEGORY	A	B	C	D
LPV DA	1478-1 1/8	316 (400-1 1/8)		NA
LNAV/VNAV DA	1498-1 1/8	336 (400-1 1/8)		NA
LNAV MDA	1600-1	438 (500-1)		NA
<b>C</b> CIRCLING	1660-1 498 (500-1)	1700-1 538 (600-1)		NA



SISETON, SOUTH DAKOTA  
Orig 21JUL16

45°40'N-97°00'W

SISETON MUNI (8D3)  
**RNAV (GPS) RWY 16**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

SISSETON, SOUTH DAKOTA

AL-10412 (FAA)

16203

WAAS CH <b>56638</b> <b>W34A</b>	APP CRS <b>344°</b>	Rwy ldg TDZE <b>1162</b> Apt Elev <b>1162</b>	<b>3400</b>
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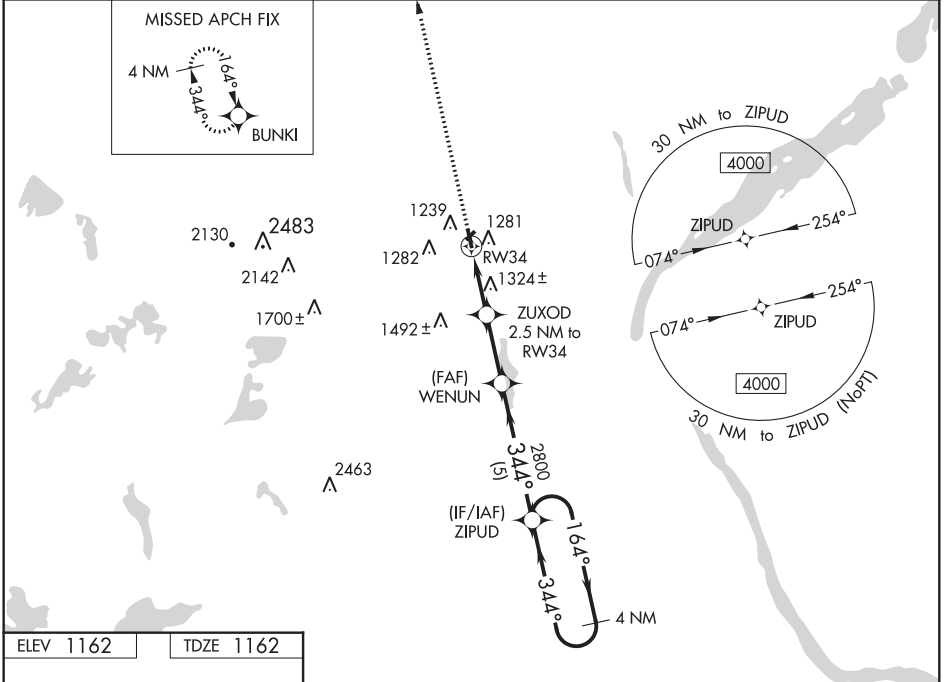
# RNAV (GPS) RWY 34

SISSETON MUNI (8D3)

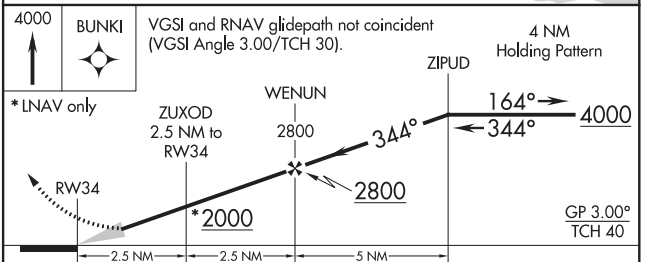
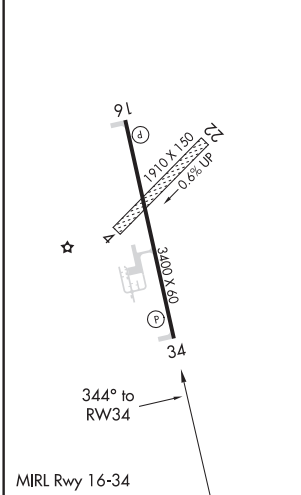
**NA** Circling NA to Rwy 4 and 22. Baro-VNAV NA. DME/DME RNP-0.3 NA.  
 Use Wheaton altimeter setting, when not received, use Ortonville altimeter setting and increase LPV DA to 1496 feet, LNAV/VNAV DA to 1673 feet and all MDA 20 feet.  
 Increase LPV Cats A/B visibility 1/8 mile.

**MISSED APPROACH:** Climb to 4000 direct BUNKI and hold, continue climb in hold to 4000.

WHEATON AWOS-3 <b>118.775</b>	MINNEAPOLIS CENTER <b>123.5 306.2</b>	CTAF <b>122.9</b>
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ELEV 1162	TDZE 1162
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CATEGORY	A	B	C	D
LPV DA	1478-1	316 (400-1)		NA
LNAV/VNAV DA	1655-1¾	493 (500-1¾)		NA
LNAV MDA	1640-1	478 (500-1)		NA
<b>C</b> CIRCLING	1660-1 498 (500-1)	1700-1 538 (600-1)		NA

SISSETON, SOUTH DAKOTA  
 Orig 21JUL16

45°40'N-97°00'W

# RNAV (GPS) RWY 34

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>53633</b> <b>W17A</b>	APP CRS <b>176°</b>	Rwy Idg TDZE <b>1623</b> Apt Elev <b>1623</b>	<b>3005</b>
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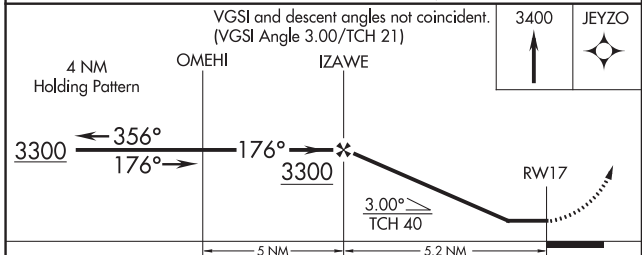
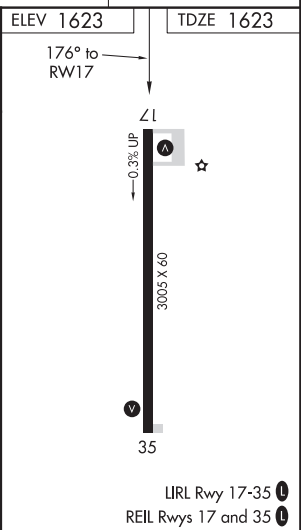
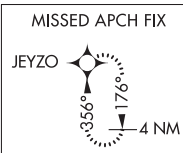
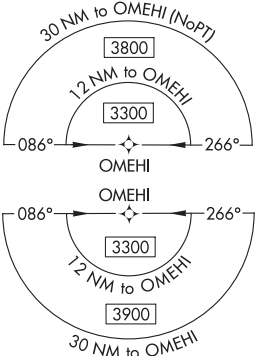
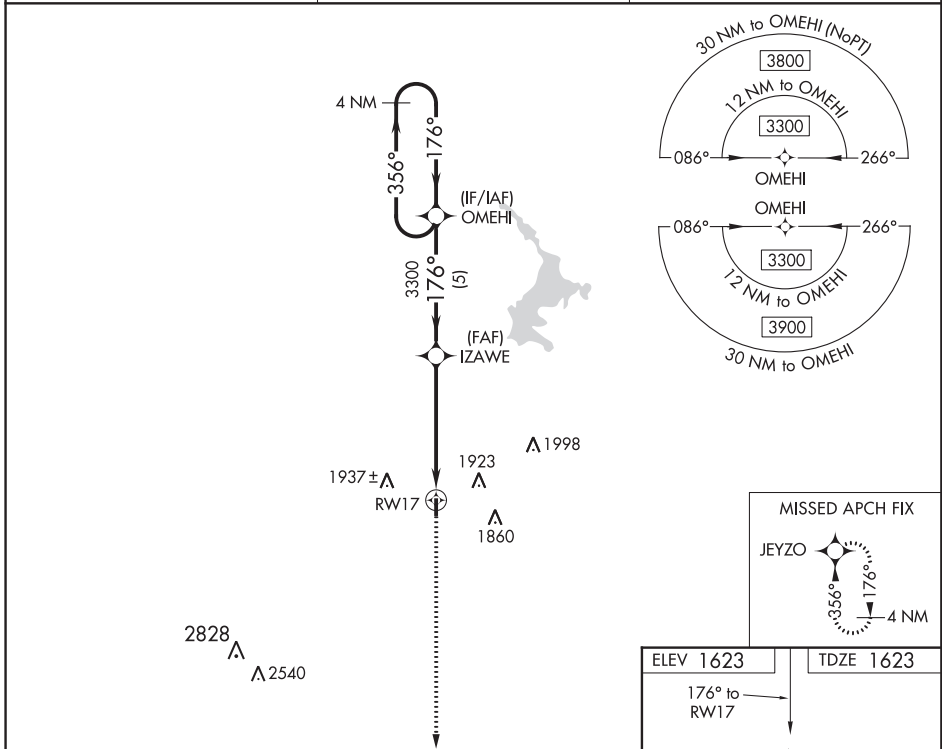
# RNAV (GPS) RWY 17

SLAYTON MUNI (DVP)

**⚠** When local altimeter setting not received, use Tracy Muni altimeter setting and increase all MDAs 80 feet. DME/DME RNP-0.3 NA. Procedure NA at night. Helicopter visibility reduction below 1 SM NA.

**MISSED APPROACH:** Climb to 3400 direct JEYZO and hold.

AWOS-3 <b>118.55</b>	MINNEAPOLIS CENTER <b>132.05 317.4</b>	CTAF <b>122.9</b> <b>0</b>
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CATEGORY	A	B	C	D
LP MDA	2100-1	477 (500-1)		NA
LNNAV MDA	2120-1	497 (500-1)		NA
<b>C</b> CIRCLING	2120-1 497 (500-1)	2300-1 677 (700-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LURL Rwy 17-35 **0**  
REIL Rwys 17 and 35 **0**

SLAYTON, MINNESOTA

AL-9379 (FAA)

15148

APP CRS	Rwy Idg	<b>3005</b>
<b>356°</b>	TDZE	<b>1623</b>
	Apt Elev	<b>1623</b>

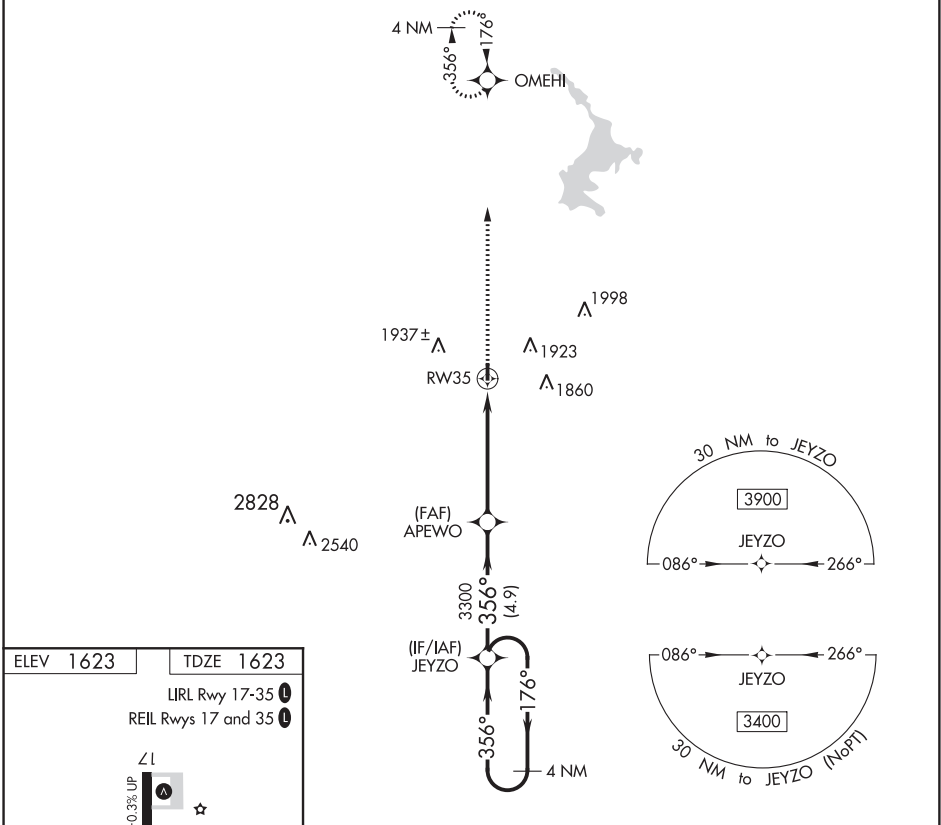
# RNAV (GPS) RWY 35

SLAYTON MUNI (DVP)

**⚠** When local altimeter setting not received, use Tracy Muni altimeter setting and increase all MDAs 80 feet. DME/DME RNP-0.3 NA. Procedure NA at night.  
**⚠** Helicopter visibility reduction below 1 SM NA.

**MISSED APPROACH:** Climb to 3300 direct OMEHI and hold.

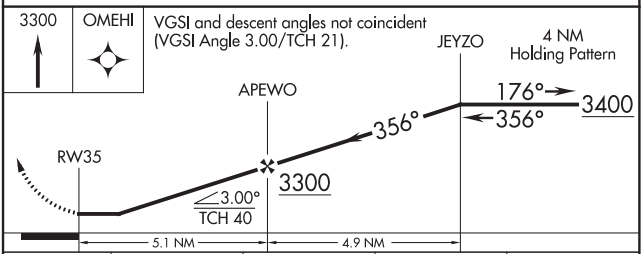
AWOS-3 <b>118.55</b>	MINNEAPOLIS CENTER <b>132.05 317.4</b>	CTAF <b>122.9 0</b>
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ELEV 1623	TDZE 1623
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LIRL Rwy 17-35 **⚠**  
 REIL Rws 17 and 35 **⚠**

356° to RWY 35



CATEGORY	A	B	C	D
LNAV MDA	2140-1	517 (600-1)		NA
<b>C</b> CIRCLING	2140-1 517 (600-1)	2300-1 677 (700-1)		NA

SLAYTON, MINNESOTA  
 Orig-A 28MAY15

43°59'N-95°47'W

# RNAV (GPS) RWY 35

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>99636</b> <b>W34A</b>	APP CRS <b>342°</b>	Rwy Idg TDZE Apt Elev	<b>4002</b> <b>820</b> <b>821</b>
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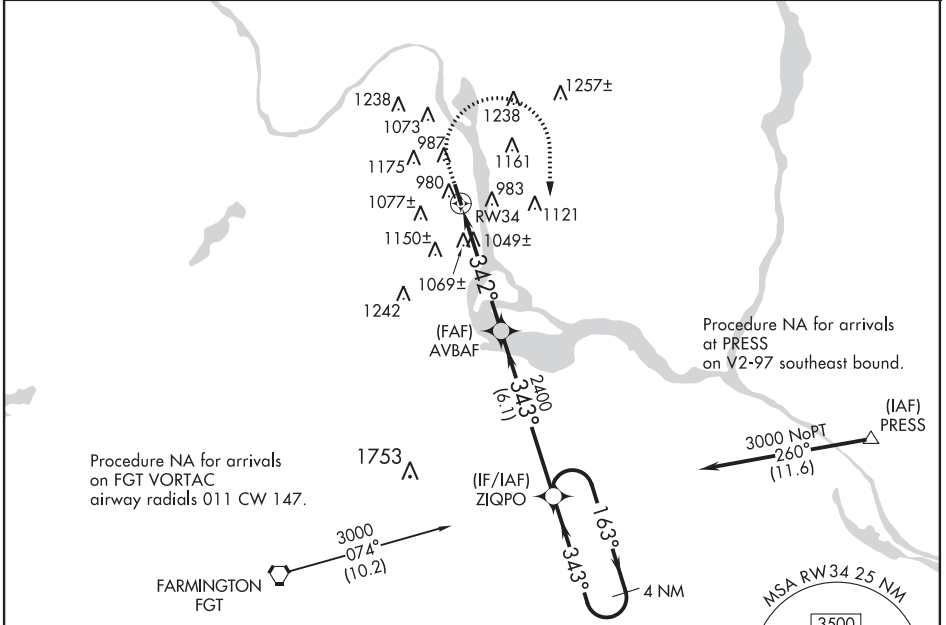
# RNAV (GPS) RWY 34

SOUTH ST PAUL MUNI-RICHARD E FLEMING FIELD (SGS)

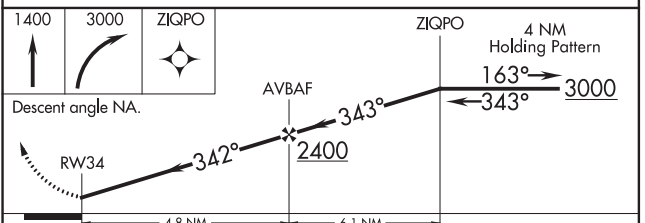
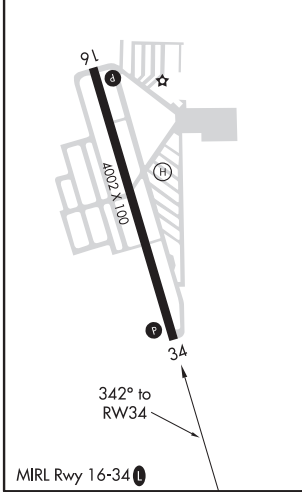
**⚠** DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA. When local altimeter setting not received, use Minneapolis-St Paul Intl/Wold-Chamberlain altimeter setting and increase all MDA 40 feet. Increase LNAV Cat C/D visibility 1/8 mile and Circling Cat D visibility 1/4 mile.

MISSED APPROACH: Climb to 1400 then climbing right turn to 3000 direct ZIQPO and hold.

AWOS-3 <b>119.425</b>	MINNEAPOLIS APP CON <b>121.2</b>	CLNC DEL <b>118.2</b>	UNICOM <b>122.7 (CTAF) 0</b>
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ELEV 821	TDZE 820
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CATEGORY	A	B	C	D
LP MDA	1300-1	480 (500-1)	1300-1 3/8	480 (500-1 3/8)
LNAV MDA	1320-1	500 (500-1)	1320-1 3/8	500 (500-1 3/8)
<b>C</b> CIRCLING	1400-1 579 (600-1)	1540-1 719 (800-1)	1540-2 719 (800-2)	1620-2 1/2 799 (800-2 1/2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

SOUTH ST PAUL, MINNESOTA

AL-5190 (FAA)

16147

LOC/DME I-SGS <b>108.35</b> Chan 20 (Y)	APP CRS <b>342°</b>	Rwy Idg <b>4002</b> TDZE <b>820</b> Apt Elev <b>821</b>
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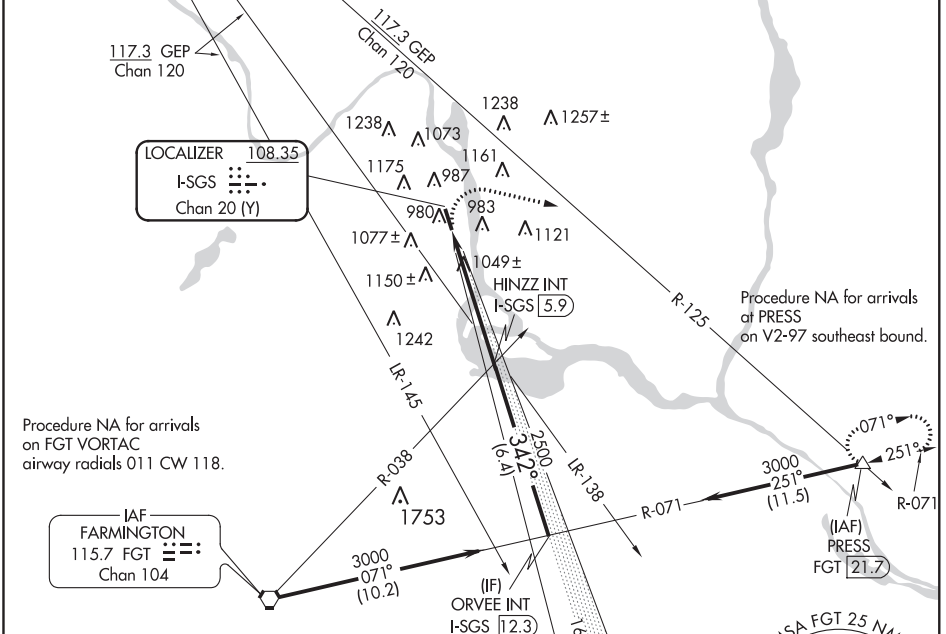
# LOC RWY 34

SOUTH ST PAUL MUNI-RICHARD E FLEMING FIELD (SGS)

**NA** Helicopter visibility reduction below 3/4 SM NA. When local altimeter setting not received, use Minneapolis-St Paul Intl/Wold-Chamberlain altimeter setting and increase all MDA 40 feet. Increase Circling Cat C/D visibility 1/4 mile.

MISSED APPROACH: Climbing right turn to 3000 on heading 100° and on GEP VORTAC R-125 to PRESS INT/21.7 DME and hold.

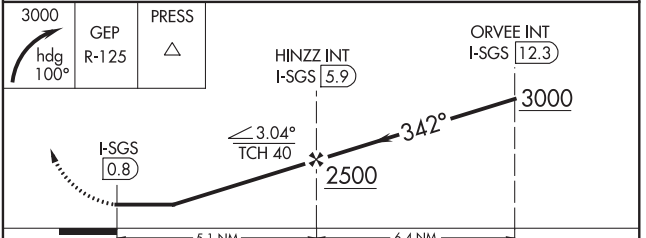
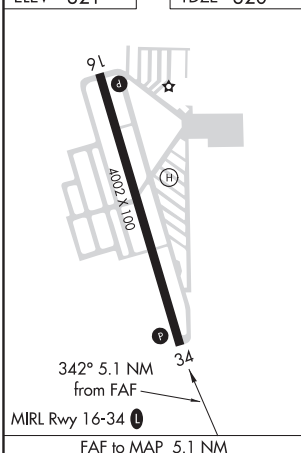
AWOS-3 <b>119.425</b>	MINNEAPOLIS APP CON <b>121.2</b>	CLNC DEL <b>118.2</b>	UNICOM <b>122.7 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 821	TDZE 820
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CATEGORY	A	B	C	D
S-34	1300-1	480 (500-1)	1300-1 <sup>3</sup> / <sub>8</sub>	480 (500-1 <sup>3</sup> / <sub>8</sub> )
<b>C</b> CIRCLING	1400-1 579 (600-1)	1540-1 719 (800-1)	1540-2 719 (800-2)	1620-2 <sup>1</sup> / <sub>2</sub> 799 (800-2 <sup>1</sup> / <sub>2</sub> )

SOUTH ST PAUL, MINNESOTA  
Amdt 1B 20AUG15

SOUTH ST PAUL MUNI-RICHARD E FLEMING FIELD (SGS)  
44°51'N-93°02'W

# LOC RWY 34

**NDB-B**

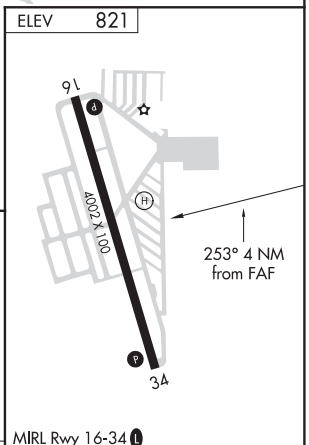
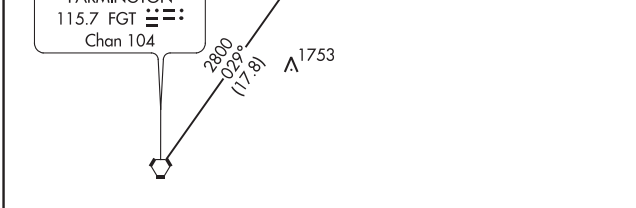
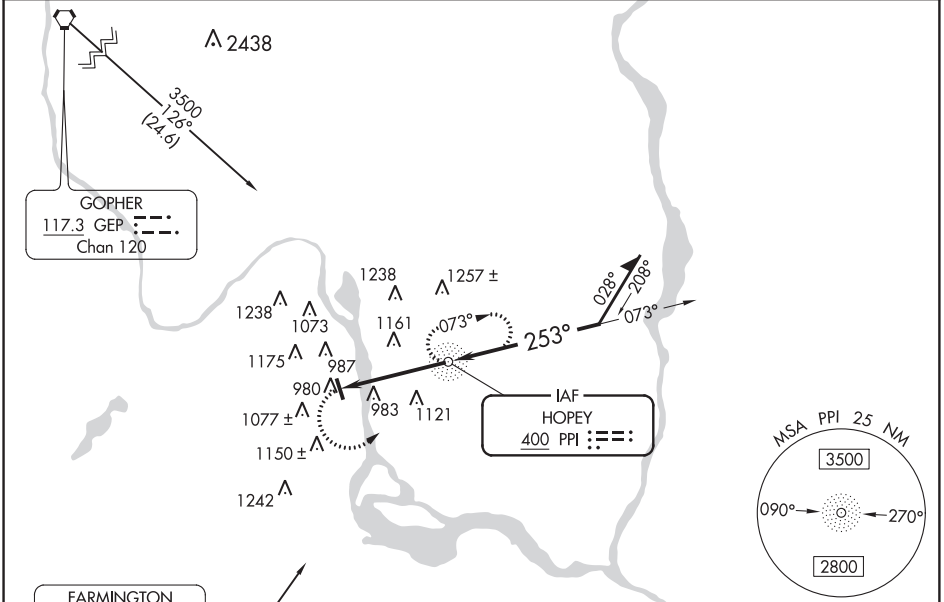
SOUTH ST PAUL MUNI-RICHARD E FLEMING FIELD (SGS)

NDB PPI <b>400</b>	APP CRS <b>253°</b>	Rwy Idg TDZE Apt Elev	<b>N/A</b> <b>N/A</b> <b>821</b>
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**NA** When local altimeter setting not received, use Minneapolis Wold-Chamberlain Intl altimeter setting and increase all MDA 40 feet. Increase Cat C/D visibility 1/4 mile.

MISSED APPROACH: Climbing left turn to 2700 direct PPI NDB and hold, continue climb-in-hold to 2700.

AWOS-3 <b>119.425</b>	MINNEAPOLIS APP CON <b>121.2</b>	CLNC DEL <b>118.2</b>	UNICOM <b>122.7 (CTAF)</b>
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ELEV 821	Remain within 10 NM				
2700 PPI	2700				
PPI NDB	2600				
073°	253°				
4 NM					

CATEGORY	A	B	C	D	FAF to MAP 4 NM					
<b>C</b> CIRCLING	1520-1 699 (700-1)	1540-1 719 (800-1)	1540-2 719 (800-2)	1620-2½ 799 (800-2½)	Knots	60	90	120	150	180
					Min:Sec	4:00	2:40	2:00	1:36	1:20

**NDB-B**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>70621</b> <b>W13A</b>	APP CRS <b>124°</b>	Rwy Idg TDZE Apt Elev	<b>6401</b> <b>3884</b> <b>3933</b>
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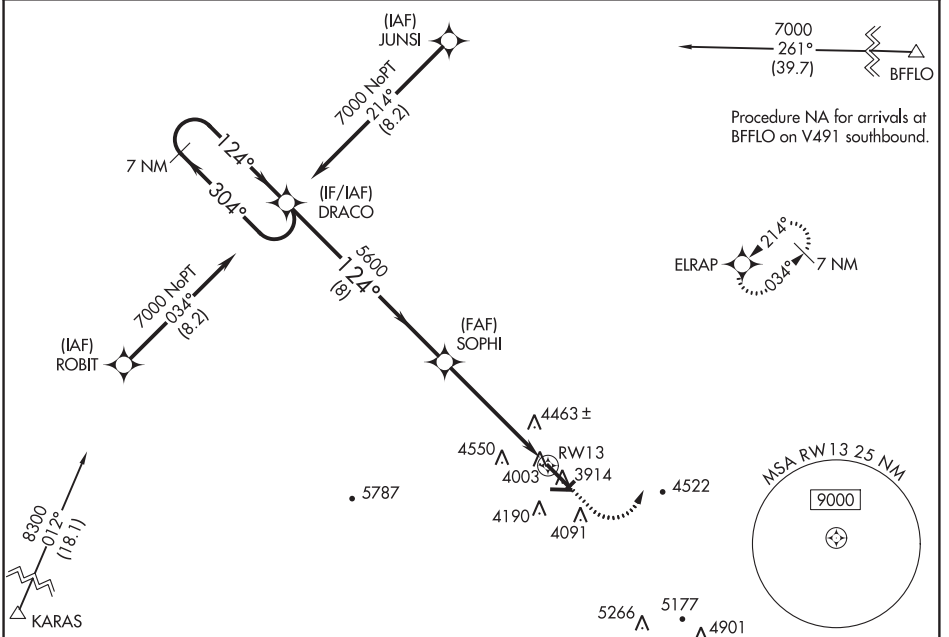
# RNAV (GPS) RWY 13

BLACK HILLS-CLYDE ICE FIELD (SPF)

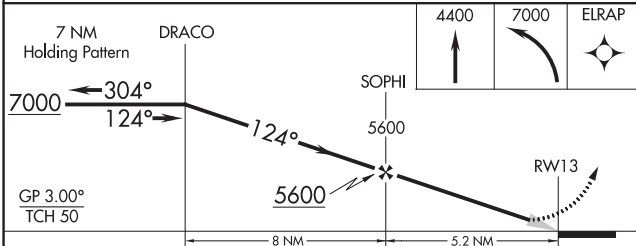
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -22°C (-7°F) or above 54°C (130°F). When local altimeter setting not received, procedure NA. DME/DME RNP-0.3 NA.

**⚠** MISSED APPROACH: Climb to 4400 then climbing left turn to 7000 direct ELRAP and hold.

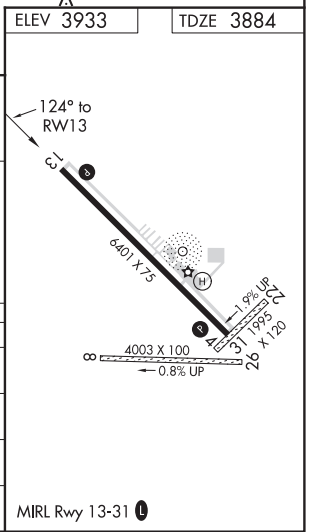
AWOS-3 <b>118.325</b>	ELLSWORTH APP CON <b>119.5 259.1</b>	GCO <b>121.725</b>	UNICOM <b>122.7 (CTAF)</b> <b>0</b>
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ELEV 3933	TDZE 3884
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CATEGORY	A	B	C	D
LPV DA	4219-1 1/8	335 (300-1 1/8)		NA
LNAV/VNAV DA	4811-4	927 (900-4)		NA
LNAV MDA	4700-1 816 (800-1)	4700-1 1/4 816 (800-1 1/4)	4700-2 1/2 816 (800-2 1/2)	NA
CIRCLING	4760-1 1/4 827 (900-1 1/4)	4780-1 1/4 847 (900-1 1/4)	4880-2 3/4 947 (1000-2 3/4)	NA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



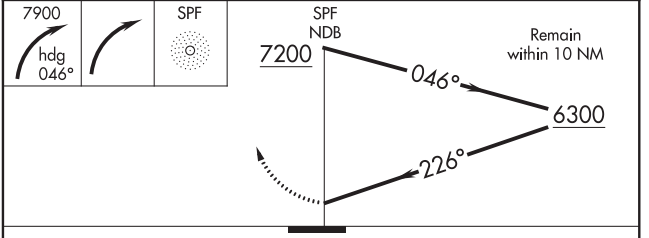
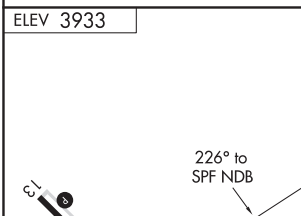
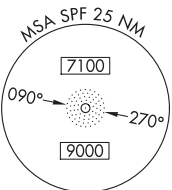
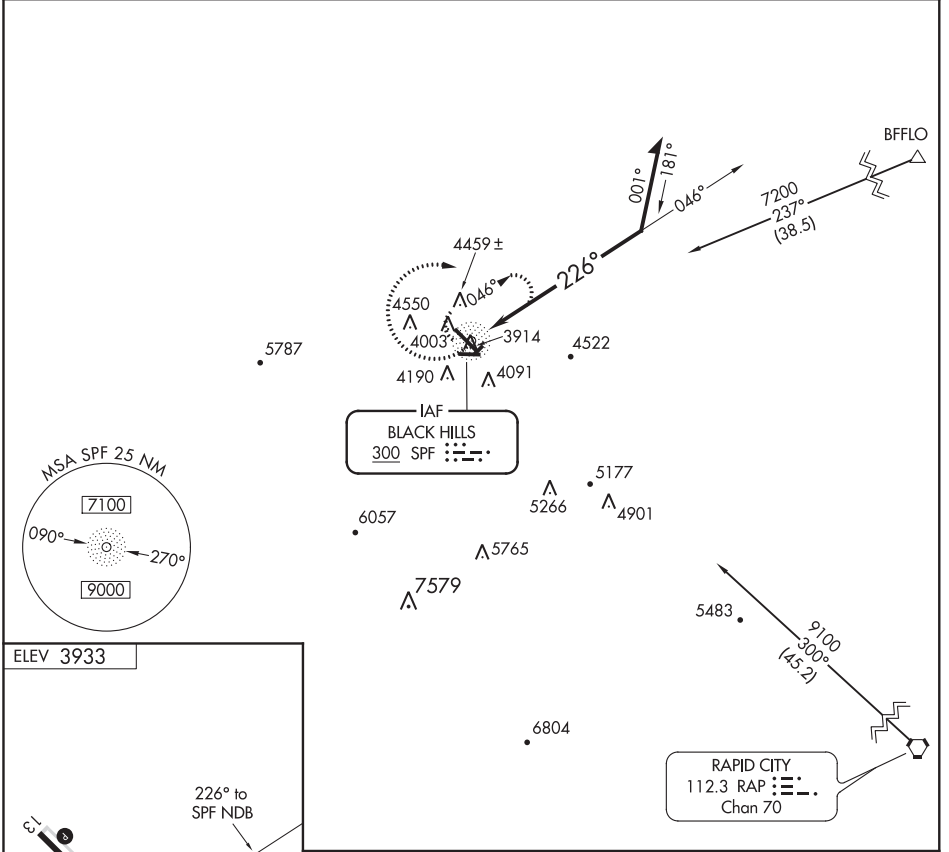


NDB SPF <b>300</b>	APP CRS <b>226°</b>	Rwy Idg TDZE Apt Elev	<b>N/A</b> <b>N/A</b> <b>3933</b>
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**NDB-A**  
BLACK HILLS-CLYDE ICE FIELD (SPF)

-27°C/-17°F		MISSED APPROACH: Climbing right turn to 7900 on heading 046° then right turn direct SPF NDB and hold.	
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AWOS-3 <b>118.325</b>	ELLSWORTH APP CON <b>119.5 259.1</b>	GCO <b>121.725</b>	UNICOM <b>122.7 (CTAF)</b>
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MIRL Rwy 13-31

CATEGORY	A	B	C	D
CIRCLING	4920-1¼ 987 (1000-1¼)	4920-1½ 987 (1000-1½)	NA	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

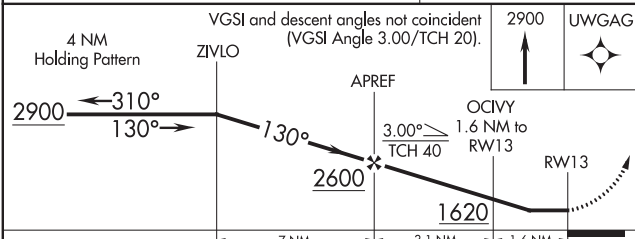
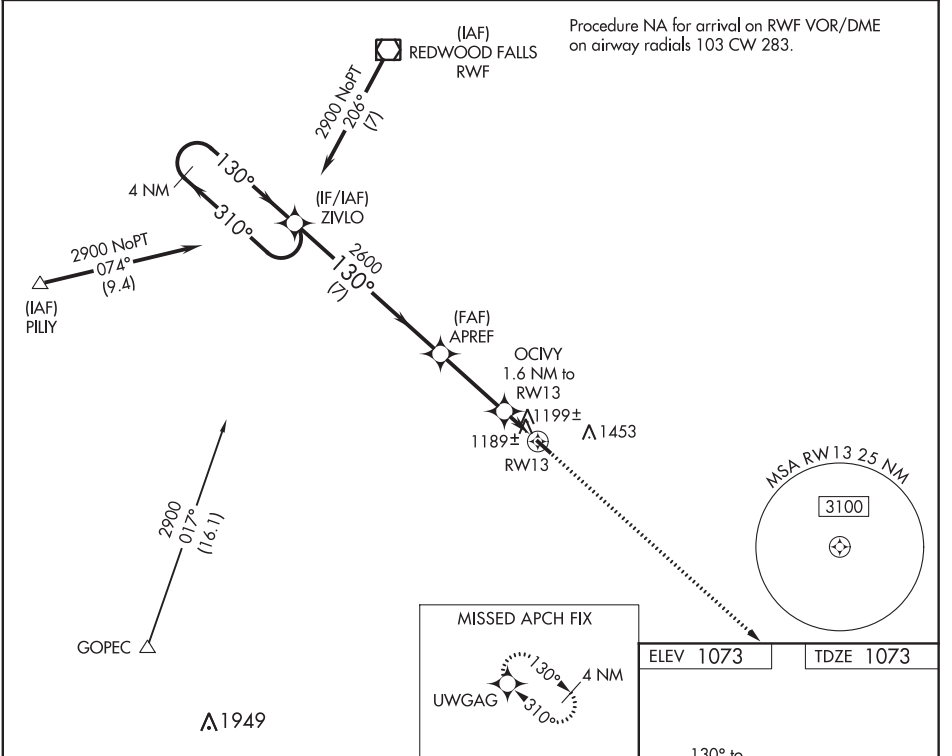
WAAS CH <b>86331</b> <b>W13A</b>	APP CRS <b>130°</b>	Rwy Idg TDZE Apt Elev	<b>3402</b> <b>1073</b> <b>1073</b>
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# RNAV (GPS) RWY 13

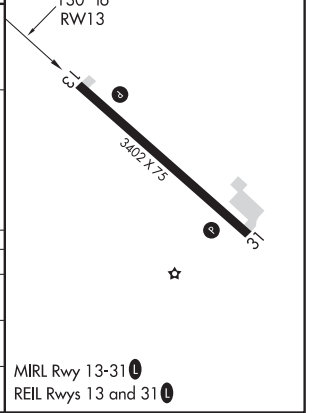
SPRINGFIELD MUNI (D42)

<p><b>DME/DME RNP-0.3 NA.</b></p> <p><b>NA</b> Helicopter visibility reduction below 3/4 SM not authorized. Use Redwood Falls altimeter setting; when not received, use New Ulm altimeter setting.</p>	<p><b>MISSED APPROACH:</b> Climb to 2900 direct UWGAG and hold.</p>
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<p>REDWOOD FALLS ASOS <b>126.575</b></p>	<p>MINNEAPOLIS CENTER <b>127.1 290.2</b></p>	<p>UNICOM <b>122.8 (CTAF)</b></p>
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CATEGORY	A	B	C	D
LP MDA	1500-1	427 (500-1)	1500-1 1/4 427 (500-1 1/4)	NA
LNAV MDA	1520-1	447 (500-1)	1520-1 3/8 447 (500-1 3/8)	NA
CIRCLING	1660-1	587 (600-1)	1820-2 1/4 747 (800-2 1/4)	NA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

SPRINGFIELD, MINNESOTA

AI-6505 (FAA)

16203

APP CRS	Rwy Idg	<b>3402</b>
<b>310°</b>	TDZE	<b>1073</b>
	Apt Elev	<b>1073</b>

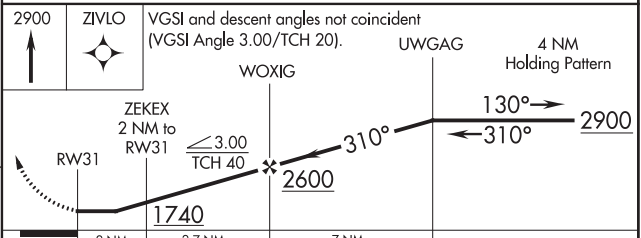
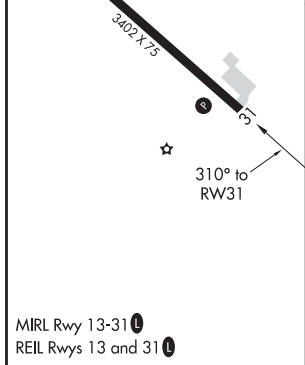
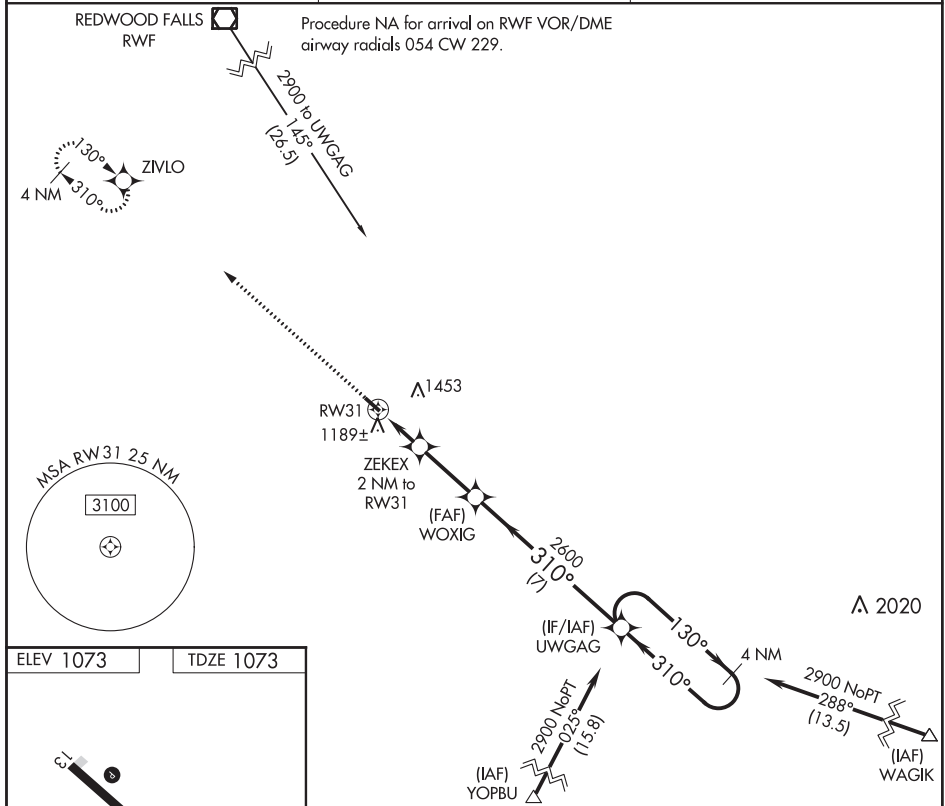
# RNAV (GPS) RWY 31

SPRINGFIELD MUNI (D42)

**NA** DME/DME RNP-0.3 NA. Use Redwood Falls altimeter setting; when not received, use New Ulm altimeter setting.

MISSED APPROACH: Climb to 2900 direct ZIVLO and hold.

REDWOOD FALLS ASOS <b>126.575</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
LNAV MDA	1500-1	427 (500-1)	1500-1¼ 427 (500-1¼)	NA
CIRCLING	1660-1	587 (600-1)	1820-2¼ 747 (800-2¼)	NA

SPRINGFIELD, MINNESOTA  
Orig-B 21JUL16

44°14'N-95°00'W

# RNAV (GPS) RWY 31

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME RWF <b>113.3</b> Chan <b>80</b>	APP CRS <b>152°</b>	Rwy Idg <b>3402</b> TDZE <b>1073</b> Apt Elev <b>1073</b>
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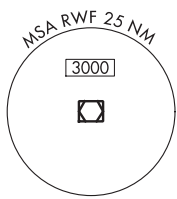
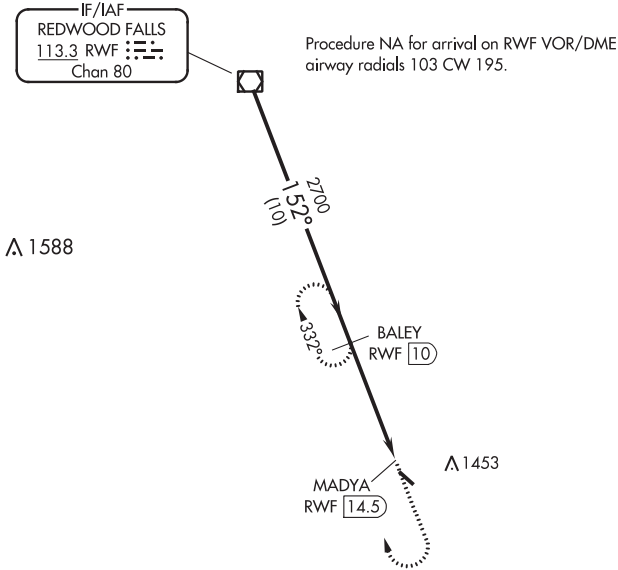
# VOR/DME RWY 13

SPRINGFIELD MUNI (D42)

**⚠** Use Redwood Falls altimeter setting; when not received, use New Ulm altimeter setting. Procedure NA at night.  
**⚠** NA Helicopter visibility reduction below 1 SM not authorized.

MISSED APPROACH: Climb to 2000 then climbing right turn to 2700 on RWF VOR/DME R-152 to BAILEY/RWF 10 DME and hold.

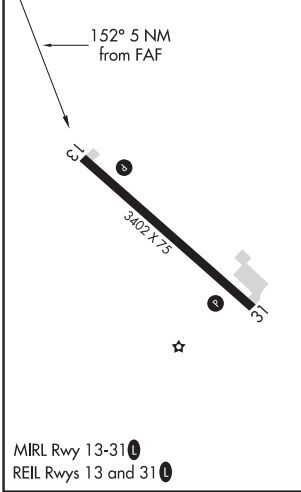
REDWOOD FALLS ASOS <b>126.575</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	UNICOM <b>122.8 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1073	TDZE 1073
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VGSI and descent angles not coincident (VGSI Angle 3.00/TCH 20).

RWF VOR/DME	BAILEY RWF 10	MADYA RWF 14.5
2700	2700	14.5
10 NM	4.5 NM	0.5 NM
152°	3.01° TCH 40	

CATEGORY	A	B	C	D
S-13	1620-1	547 (600-1)	1620-1½ 547 (600-1½)	NA
CIRCLING	1660-1	587 (600-1)	1820-2¼ 747 (800-2¼)	NA

STANLEY, NORTH DAKOTA

AL-9455 (FAA)

14317

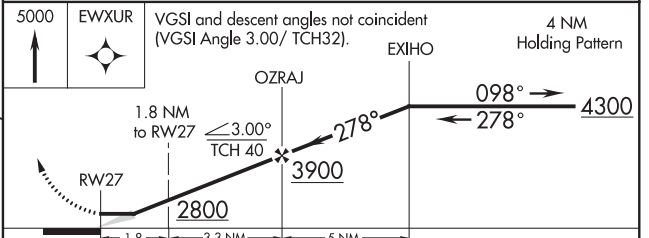
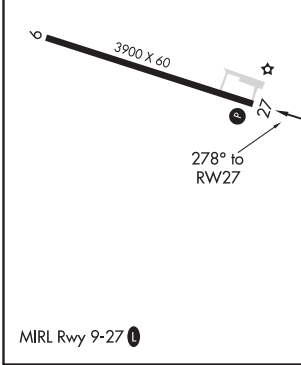
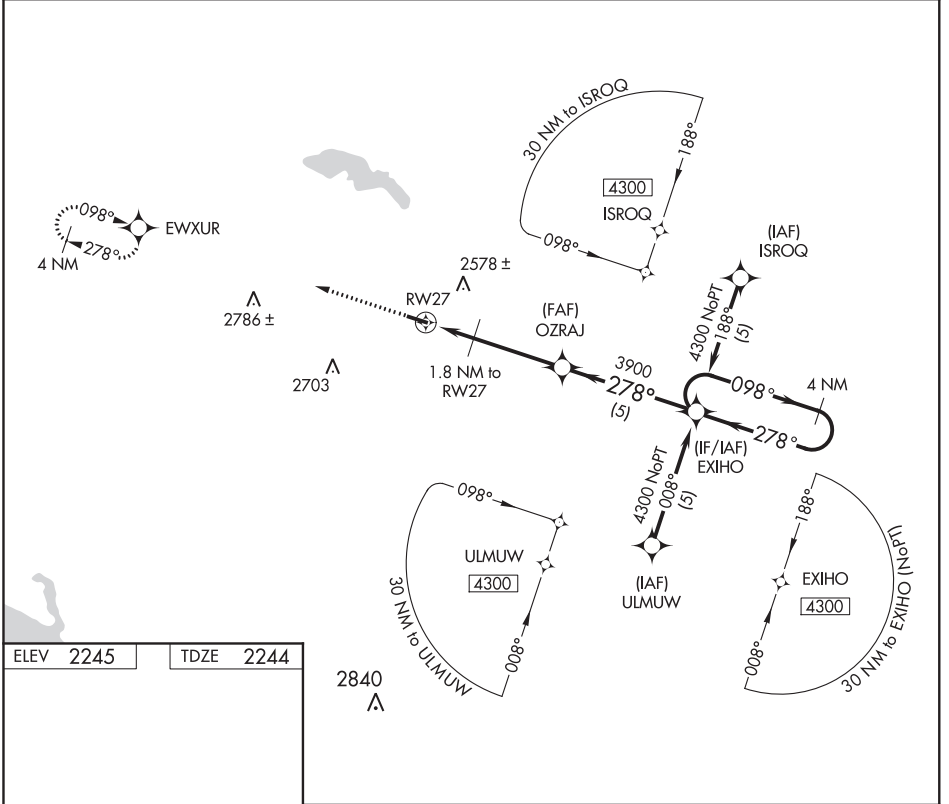
APP CRS <b>278°</b>	Rwy Idg <b>3900</b>
	TDZE <b>2244</b>
	Apt Elev <b>2245</b>

# RNAV (GPS) RWY 27

STANLEY MUNI (Ø8D)

**▽** Use Minot altimeter setting.  
**△NA** GPS or RNP-0.3 required. DME/DME RNP-0.3 NA. MISSED APPROACH: Climb to 5000 direct EWXUR WP and hold.

AWOS-3 <b>121.1</b>	MINNEAPOLIS CENTER <b>127.6 279.6</b>	CTAF <b>122.9</b> <b>Ø</b>
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CATEGORY	A	B	C	D
LNAV MDA	2740-1	496 (500-1)	NA	
CIRCLING	2880-1	635 (700-1)	NA	

STANLEY, NORTH DAKOTA  
 Orig 27DEC01

48°18' N - 102°24' W

# STANLEY MUNI (Ø8D) RNAV (GPS) RWY 27

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

APP CRS <b>144°</b>	Rwy Idg <b>3305</b>
	TDZE <b>1288</b>
	Apt Elev <b>1288</b>

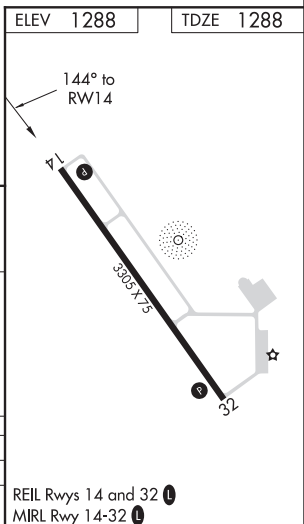
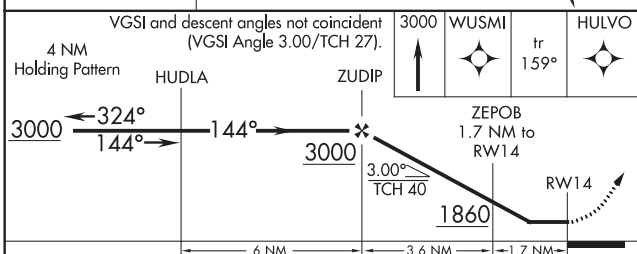
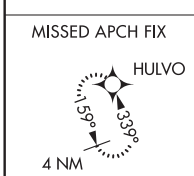
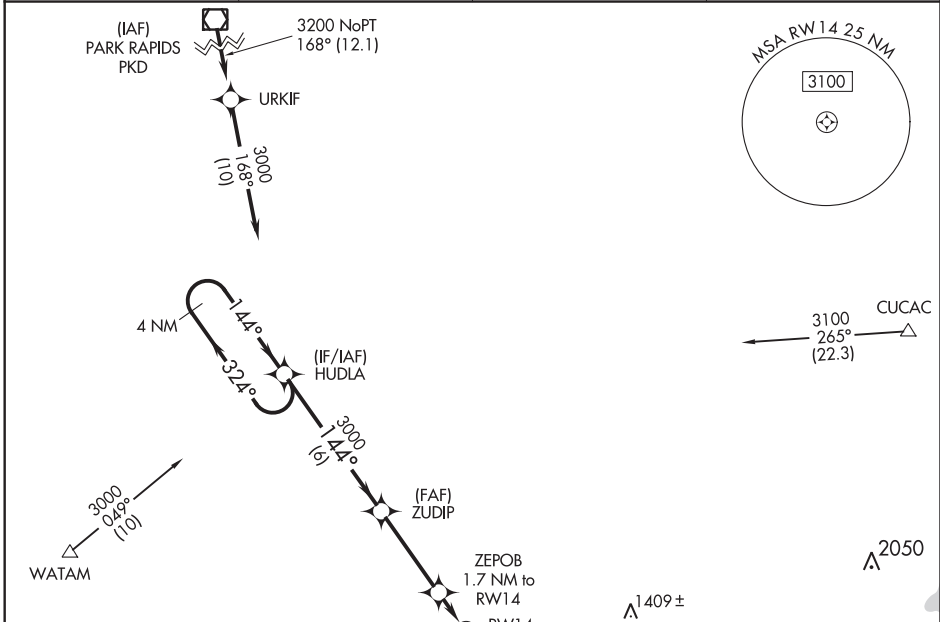
# RNAV (GPS) RWY 14

STAPLES MUNI (SAZ)

**⚠** When VGSI inop, Straight-in/Circling Rwy 14 procedure NA at night. DME/DME RNP-0.3 NA.  
**⚠** Visibility reduction by helicopters NA. When local altimeter setting not received, use Pine River altimeter setting and increase all MDA 80 feet, increase S-14 Cat C visibility 3/8 mile, and increase Circling Cat C visibility 1/4 mile.

**MISSED APPROACH:**  
 Climb to 3000 direct WUSMI and on track 159° to HULVO and hold.

AWOS-3 <b>118.325</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	GCO <b>121.725</b>	CTAF <b>122.9</b>
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CATEGORY	A	B	C	D
LNAY MDA	1660-1 372 (400-1)			NA
CIRCLING	1780-1	492 (500-1)	1940-1 3/4 652 (700-1 3/4)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>97528</b> <b>W32A</b>	APP CRS <b>324°</b>	Rwy Idg TDZE Apt Elev	<b>3305</b> <b>1287</b> <b>1288</b>
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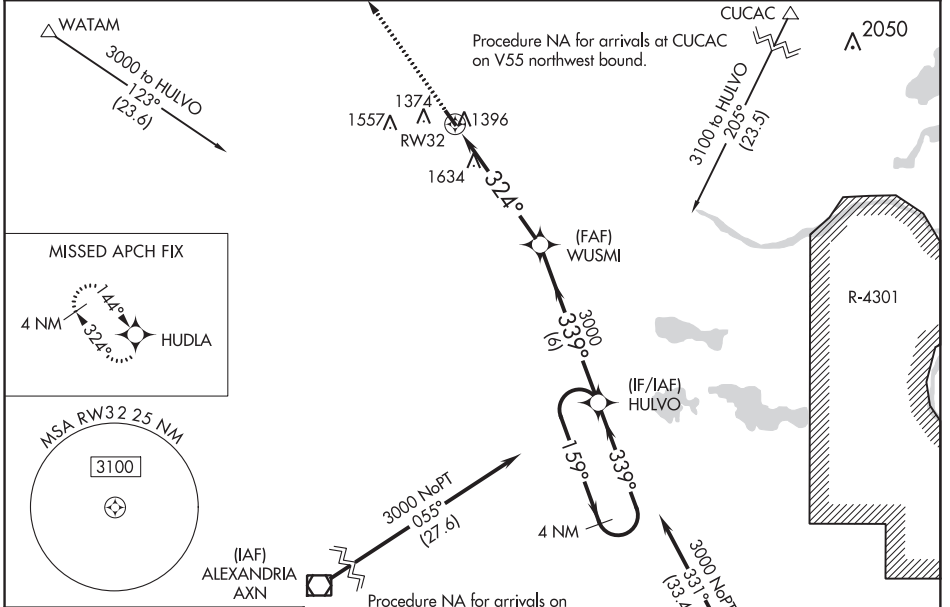
# RNAV (GPS) RWY 32

STAPLES MUNI (SAZ)

**⚠** When VGSi inop, Circling Rwy 14 NA at night. Baro-VNAV NA when using Pine River altimeter setting.  
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F).  
 When VGSi inop, Straight-in/Circling Rwy 32 procedure NA at night. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Pine River altimeter setting and increase all DA 64 feet and all MDA 80 feet and increase LPV all Cats, LNAV/VNAV all Cats, LNAV Cat C and Circling Cat C visibility ¼ mile.

**MISSED APPROACH:**  
Climb to 3000 direct HUDLA and hold.

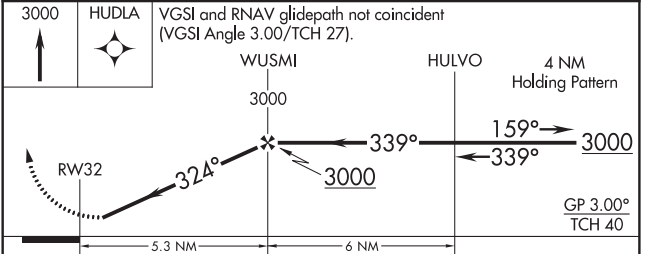
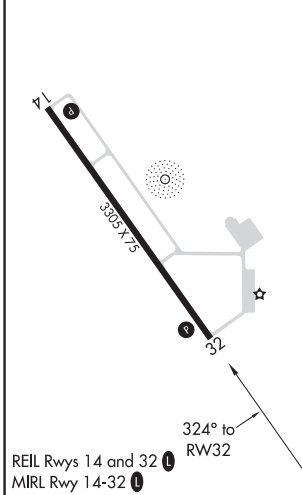
AWOS-3 <b>118.325</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	GCO <b>121.725</b>	CTAF <b>122.9</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1288	TDZE 1287
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CATEGORY	A	B	C	D
LPV DA	1592-1 305 (400-1)			NA
LNAV/VNAV DA	1965-2½ 678 (700-2½)			NA
LNAV MDA	1900-1	613 (700-1)	1900-1¾ 613 (700-1¾)	NA
CIRCLING	1900-1	612 (700-1)	1940-1¾ 652 (700-1¾)	NA



NDB SAZ <b>257</b>	APP CRS <b>137°</b>	Rwy Idg TDZE Apt Elev	<b>3305</b> <b>1288</b> <b>1288</b>
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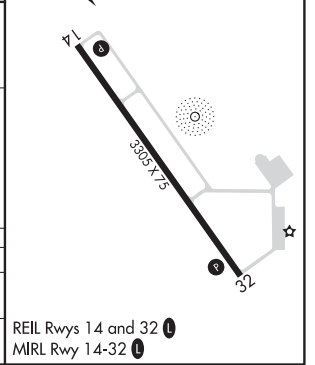
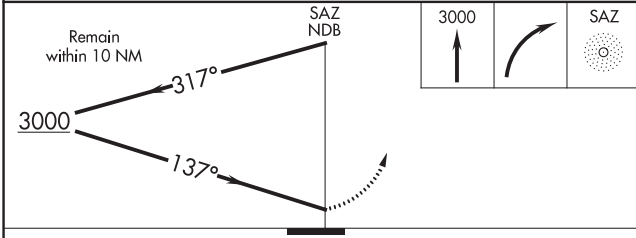
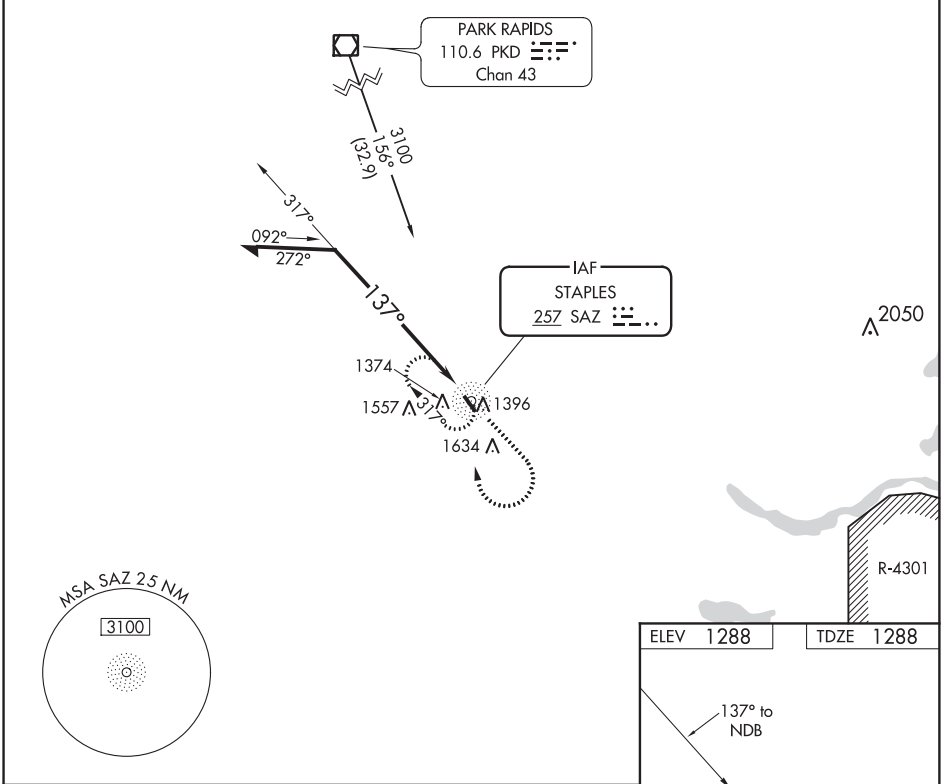
# NDB RWY 14

STAPLES MUNI (SAZ)

**▽** When VGSJ inop, Straight-in/Circling Rwy 14 procedure NA at night.  
**▲ NA** Visibility reduction by helicopters NA. When local altimeter setting not received, use Pine River altimeter setting and increase all MDA 80 feet and increase S-14 and Circling Cat C visibility ¼ mile.

MISSED APPROACH: Climb to 3000 then right turn direct SAZ NDB and hold.

AWOS-3 <b>118.325</b>	MINNEAPOLIS CENTER <b>118.05 239.0</b>	GCO <b>121.725</b>	CTAF <b>122.9</b>
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CATEGORY	A	B	C	D
S-14	1920-1	632 (700-1)	1920-1¼ 632 (700-1¼)	NA
CIRCLING	1920-1	632 (700-1)	1940-1¼ 652 (700-1¼)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

STURGIS, SOUTH DAKOTA

# RNAV (GPS) RWY 11

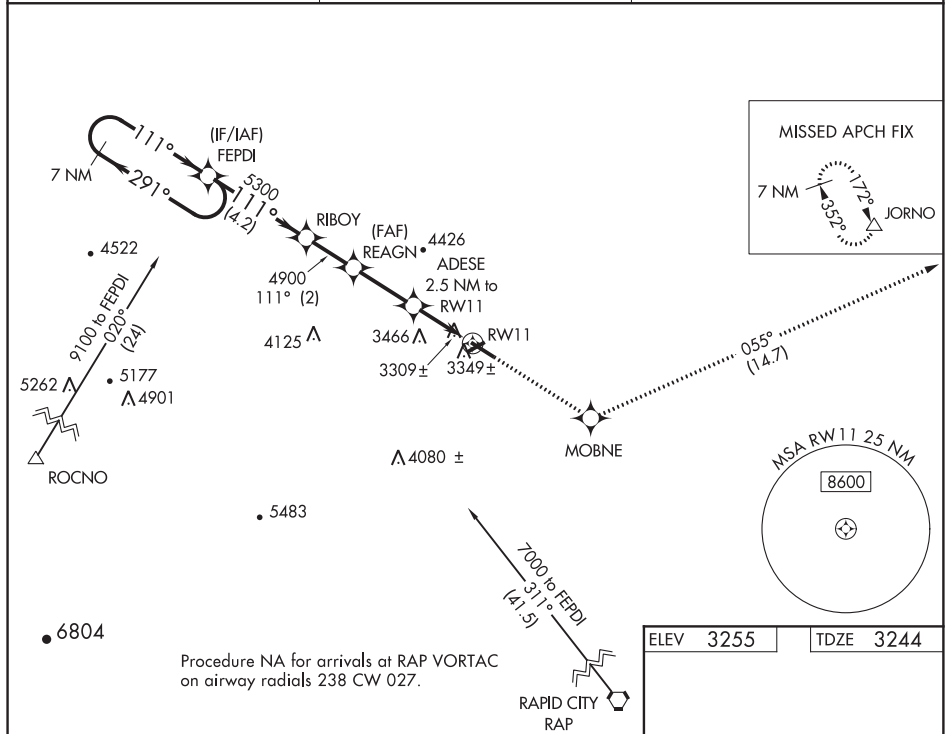
STURGIS MUNI (49B)

WAAS CH <b>53432</b> <b>W11A</b>	APP CRS <b>111°</b>	Rwy Idg TDZE Apt Elev	<b>5100</b> <b>3244</b> <b>3255</b>
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**▽** DME/DME RNP-0.3 NA. Use Ellsworth AFB altimeter setting, when not received, use Spearfish altimeter setting and increase all MDA 100 feet, and increase LP Cat C visibility 3/8 mile, LNAV Cat C visibility 1/4 mile and Circling Cat C visibility 1/2 mile. Helicopter visibility reduction below 3/4 SM NA. Circling NA to Rwy 5 and 23.

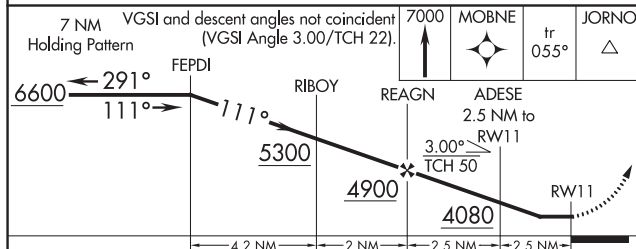
**△** NA MISSED APPROACH: Climb to 7000 direct MOBNE and on track 055° to JORNO and hold.

ELLSWORTH APP CON <b>119.5 259.1</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF) 0</b>
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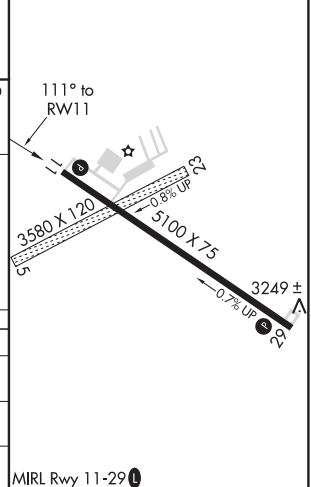


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



ELEV 3255	TDZE 3244
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CATEGORY	A	B	C	D
LP MDA	3620-1 376 (400-1)			NA
LNAV MDA	3660-1	416 (500-1)	3660-1 1/8 416 (500-1 1/8)	NA
CIRCLING	3700-1 445 (500-1)	3880-1 625 (700-1)	3900-1 3/4 645 (700-1 3/4)	NA

MIRL Rwy 11-29 0

STURGIS, SOUTH DAKOTA  
Amdt 1B 17SEP15

44°25'N-103°23'W

STURGIS MUNI (49B)  
**RNAV (GPS) RWY 11**

WAAS CH <b>90321</b> <b>W29A</b>	APP CRS <b>292°</b>	Rwy Idg TDZE Apt Elev	<b>5100</b> <b>3231</b> <b>3255</b>
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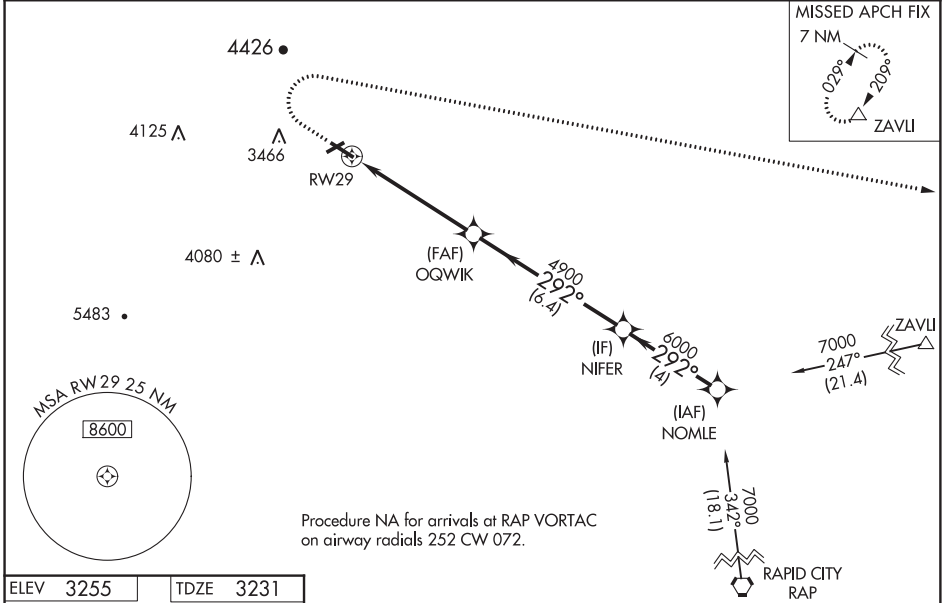
# RNAV (GPS) RWY 29

STURGIS MUNI (49B)

**NA** Baro-VNAV NA. DME/DME RNP-0.3 NA. Use Ellsworth AFB altimeter setting, when not received, use Spearfish altimeter setting and increase all DA 87 feet and all MDA 100 feet and increase LPV Cat A/B visibility 1/2 mile, and LPV (with climb gradient) Cat C visibility 1/2 mile. Circling NA to Rwy 5 and 23.  
 \* Missed approach requires minimum climb of 364 feet per NM to 4900.

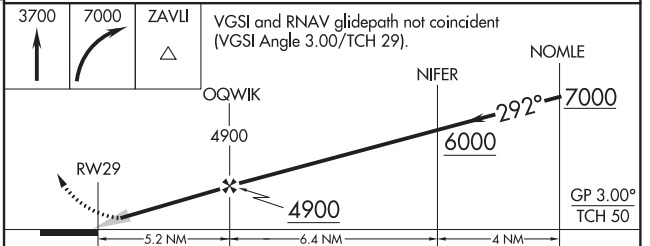
MISSED APPROACH: Climb to 3700 then climbing right turn to 7000 direct ZAVLI and hold.

ELLSWORTH APP CON <b>119.5 259.1</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF) 0</b>
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Procedure NA for arrivals at RAP VORTAC on airway radials 252 CW 072.

ELEV <b>3255</b>	TDZE <b>3231</b>
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CATEGORY	A	B	C	D
*LPV DA	3532-1 301 (300-1)			NA
LPV DA	3532-1	301 (300-1)	4073-3 842 (900-3)	NA
LNAV/VNAV DA	3532-1	301 (300-1)	3986-3 755 (800-3)	NA
LNAV MDA	3640-1	409 (400-1)	4280-3 1049 (1100-3)	NA
CIRCLING	3700-1 445 (500-1)	3880-1 625 (700-1)	4280-3 1025 (1100-3)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC I-HYZ <b>110.5</b>	APP CRS <b>313°</b>	Rwy Idg TDZE Apt Elev	<b>6304</b> <b>1114</b> <b>1119</b>
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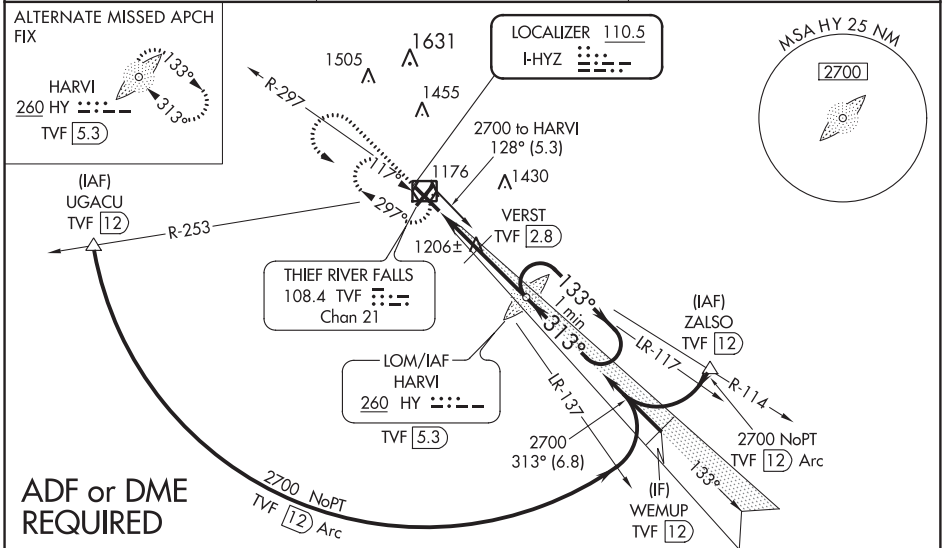
**ILS or LOC RWY 31**  
THIEF RIVER FALLS RGNL (TVF)

▼ When local alimeter setting not received, use Crookston alimeter setting and increase all DA 82 feet, and all MDA 100 feet. Increase S-LOC 31 Cat C/D visibility ¼ mile, Circling Cat C/D visibility ¼ mile; increase VERST fix minimums S-LOC 31 Cat C/D visibility ¼ mile and Circling Cat C/D visibility ¼ mile. For inoperative MALSR, increase S-LOC 31 Cats C/D visibility to 1 ⅜ mile. Increase VERST fix minimums S-LOC 31 all Cats visibility to 1 mile. For inoperative MALSR, when using Crookston alimeter setting, increase S-ILS 31 all Cats visibility to ⅞ mile. Increase S-LOC 31 Cats C/D visibility to 1 ⅜ mile. #DME from TVF VOR/DME

MALSR

MISSED APPROACH:  
Climb to 2700 then left turn direct TVF VOR/DME and hold.

AWOS-3PT <b>108.4</b>	MINNEAPOLIS CENTER <b>132.15 269.6</b>	UNICOM <b>122.8 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1119 **D** TDZE 1114

HIRL Rwy 13-31 **0**  
MIRL Rwy 4-22 **0**  
REIL Rwys 4, 13 and 22 **0**

FAF to MAP 4.5 NM

Knots	60	90	120	150	180
Min:Sec	4:30	3:00	2:15	1:48	1:30

2700 TVF

HARVI HY LOM TVF 5.3

\*1680 when using Crookston alimeter setting.

One Minute Holding Pattern

VERST TVF 2.8

2605

1580\*

2700

133°

313°

GS 3.00°  
TCH 55

CATEGORY	A	B	C	D
S-ILS 31	1314-½		200 (200-½)	
S-LOC 31	1580-½	466 (500-½)	1580-1 466 (500-1)	
<b>C</b> CIRCLING	1580-1	461 (500-1)	1820-2 701 (800-2)	1980-2¾ 861 (900-2¾)
VERST FIX MINIMUMS #				
S-LOC 31	1460-½	346 (400-½)	1460-⅝	346 (400-⅝)
<b>C</b> CIRCLING	1540-1 421 (500-1)	1580-1 461 (500-1)	1820-2 701 (800-2)	1980-2¾ 861 (900-2¾)

WAAS CH <b>70636</b> <b>W04A</b>	APP CRS <b>037°</b>	Rwy Idg TDZE Apt Elev	<b>4997</b> <b>1116</b> <b>1119</b>
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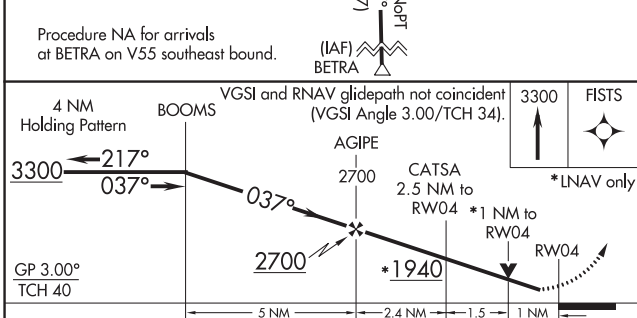
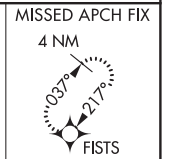
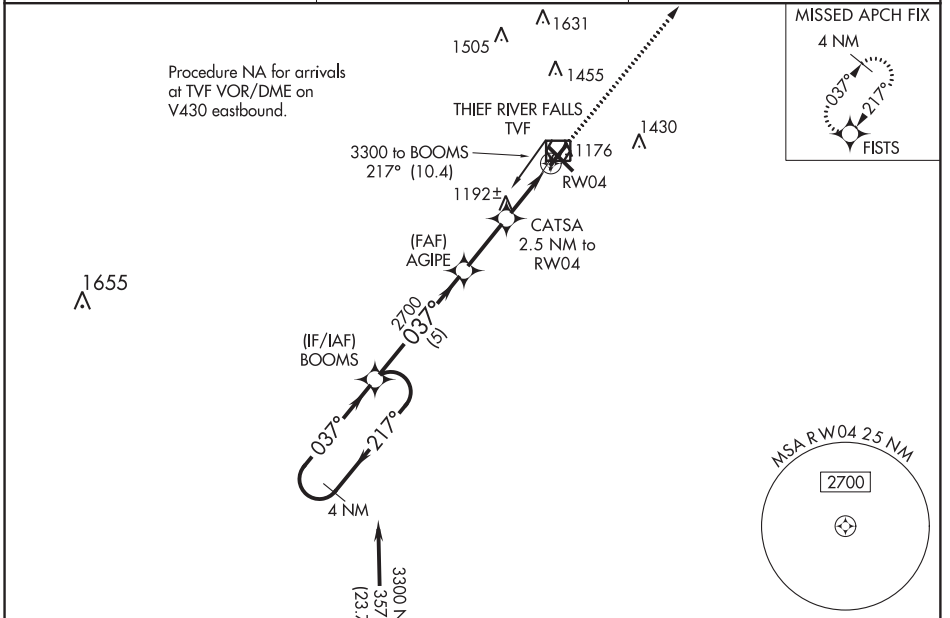
# RNAV (GPS) RWY 4

THIEF RIVER FALLS RGNL (TVF)

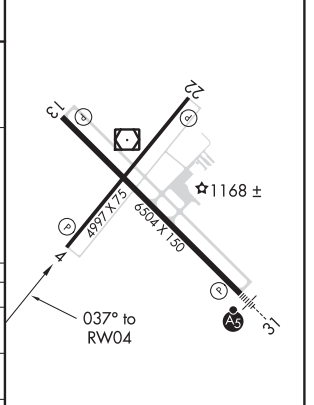
**⚠** Baro-VNAV and VDP NA when using Crookston altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA. When local altimeter setting not received, use Crookston altimeter setting and increase all DA 82 feet and all MDA 100 feet. Increase LPV and LNAV/VNAV all Cats visibility to 1 1/2 mile.

**MISSED APPROACH:**  
Climb to 3300 direct FISTS and hold.

AWOS-3PT <b>108.4</b>	MINNEAPOLIS CENTER <b>132.15 269.6</b>	UNICOM <b>122.8 (CTAF)</b> <b>📻</b>
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ELEV 1119	<b>D</b> TDZE 1116
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CATEGORY	A	B	C	D
LPV DA	1366-1	250 (300-1)		NA
LNAV/VNAV DA	1366-1	250 (300-1)		NA
LNAV MDA	1460-1	344 (400-1)		NA
<b>C</b> CIRCLING	1540-1 421 (500-1)	1580-1 461 (500-1)		NA

HIRL Rwy 13-31 **📻**  
MIRL Rwy 4-22 **📻**  
REIL Rws 4, 13 and 22 **📻**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>72711</b> <b>W13A</b>	APP CRS <b>133°</b>	Rwy Idg TDZE Apt Elev	<b>6504</b> <b>1115</b> <b>1119</b>
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# RNAV (GPS) RWY 13

THIEF RIVER FALLS RGNL (TVF)

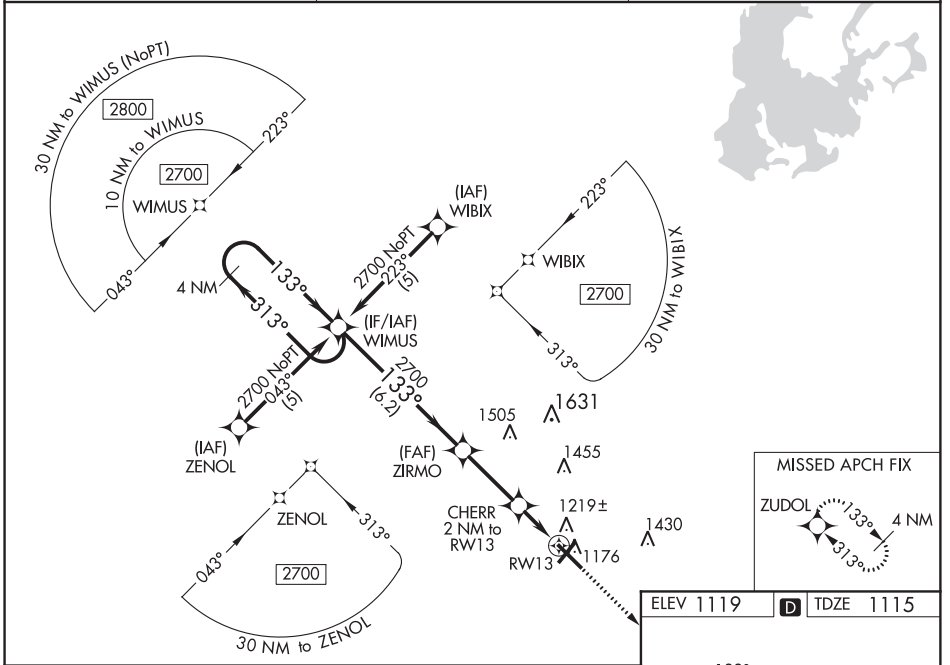
**⚠** Baro-VNAV and VDP NA when using Crookston altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA.  
**⚠** When local altimeter setting not received, use Crookston altimeter setting and increase all DA 82 feet and all MDA 100 feet. Increase LPV all Cats visibility 1/8 mile, LNAV/VNAV all Cats visibility 1/4 mile, and increase LNAV Cats C/D visibility to 1 3/8 mile.

MISSED APPROACH:  
Climb to 2700 direct  
ZUDOL and hold.

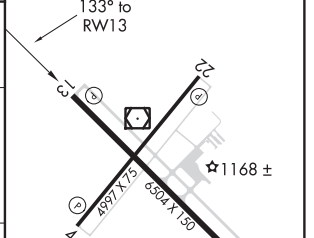
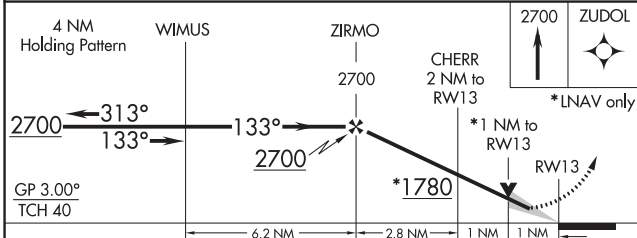
AWOS-3PT  
**108.4**

MINNEAPOLIS CENTER  
**132.15 269.6**

UNICOM  
**122.8 (CTAF) 0**



ELEV 1119 **D** TDZE 1115



CATEGORY	A	B	C	D
LPV DA	1365-1		250 (300-1)	
LNAV/VNAV DA	1436-1 1/4		321 (400-1 1/4)	
LNAV MDA	1480-1		365 (400-1)	
CIRCLING	1540-1	1580-1	1580-1 1/2	1480-1 1/4
	421 (500-1)	461 (500-1)	461 (500-1 1/2)	365 (400-1 1/4)
				1680-2
				561 (600-2)

HIRL Rwy 13-31 **0**  
 MIRL Rwy 4-22 **0**  
 REIL Rws 4, 13 and 22 **0**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>77836</b> <b>W22A</b>	APP CRS <b>217°</b>	Rwy Idg TDZE Apt Elev	<b>4997</b> <b>1119</b> <b>1119</b>
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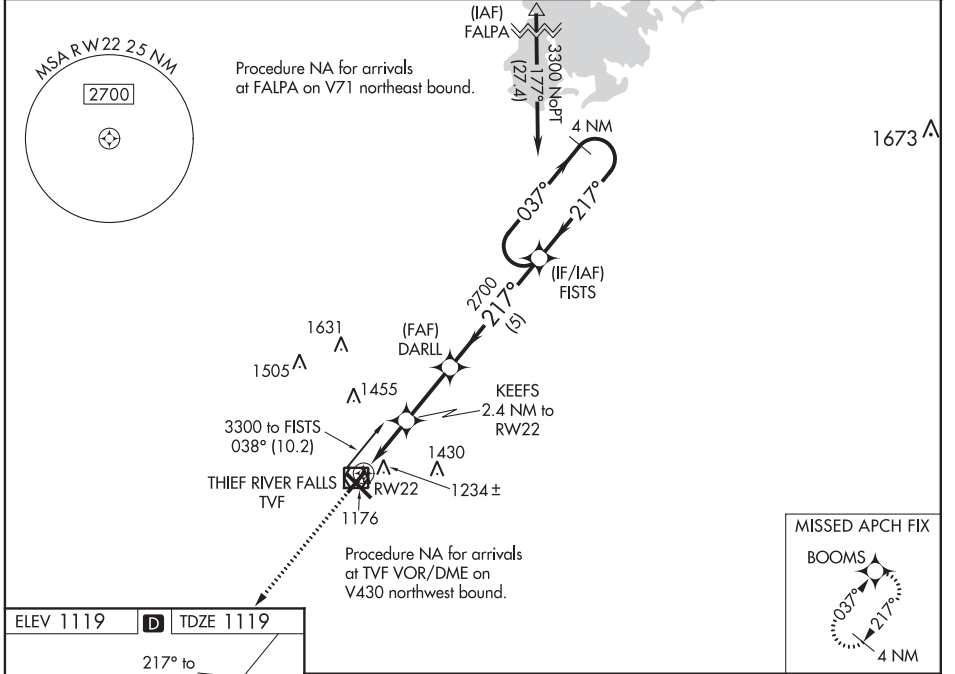
# RNAV (GPS) RWY 22

THIEF RIVER FALLS RGNL (TVF)

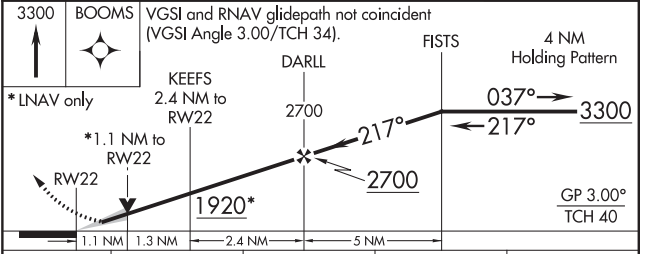
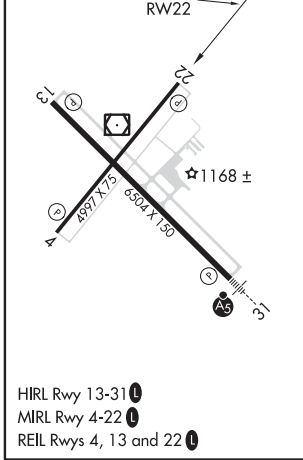
**⚠** Baro-VNAV and VDP NA when using Crookston altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Crookston altimeter setting and increase all DA 82 feet and all MDA 100 feet. Increase LPV all Cats visibility to 1 1/8 mile and LNAV/VNAV all Cats visibility to 1 1/4 mile.

**MISSED APPROACH:**  
Climb 3300 direct  
BOOMS and hold.

AWOS-3PT <b>108.4</b>	MINNEAPOLIS CENTER <b>132.15 269.6</b>	UNICOM <b>122.8 (CTAF)</b> <b>📻</b>
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ELEV 1119	<b>D</b>	TDZE 1119
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CATEGORY	A	B	C	D
LPV DA	1369-1	250 (300-1)		NA
LNAV/VNAV DA	1396-1	277 (300-1)		NA
LNAV MDA	1500-1	381 (400-1)		NA
<b>C</b> CIRCLING	1540-1 421 (500-1)	1580-1 461 (500-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>69311</b> <b>W31A</b>	APP CRS <b>313°</b>	Rwy Idg TDZE Apt Elev	<b>6304</b> <b>1114</b> <b>1119</b>
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# RNAV (GPS) RWY 31

THIEF RIVER FALLS RGNL (TVF)

**⚠** Baro-VNAV and VDP NA when using Crookston altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F).  
**⚠** DME/DME RNP-0.3 NA. When local altimeter setting not received, use Crookston altimeter setting and increase all DA 82 feet and all MDA 100 feet. Increase LPV all Cats visibility to 5/8 mile, LNAV/VNAV all Cats visibility to 7/8 mile, LNAV Cats C/D visibility to 1 1/4 mile, and Circling Cat C visibility to 1 1/8 mile. For inoperative MALS, increase LNAV Cats C/D visibility to 1 1/8 mile. For inoperative MALS, when using Crookston altimeter setting, increase LPV all Cats visibility to 1 1/8 mile, LNAV/VNAV all Cats visibility to 1 1/4 mile, LNAV Cats C/D visibility to 1 1/8 mile.

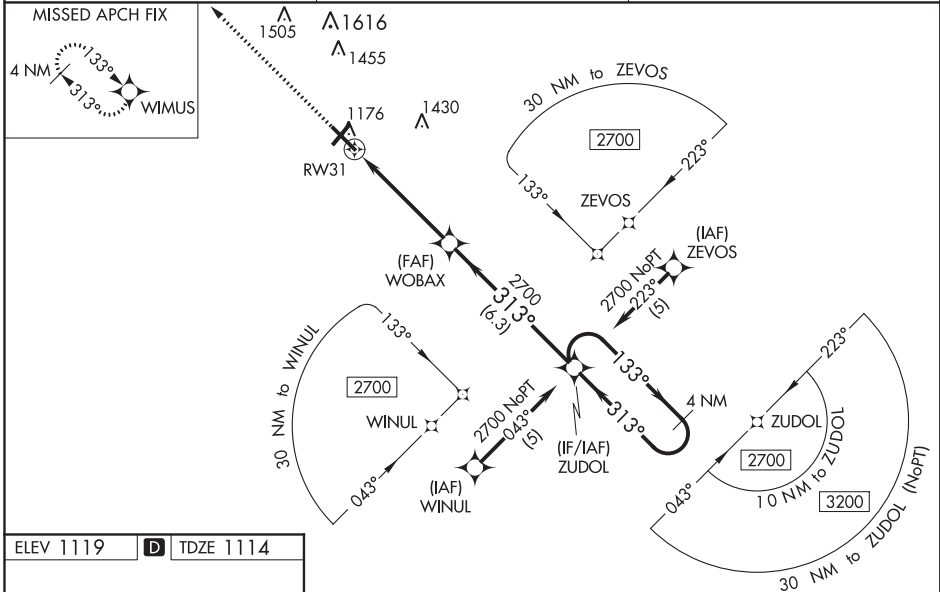


**MISSED APPROACH:**  
Climb to 2700 direct WIMUS and hold.

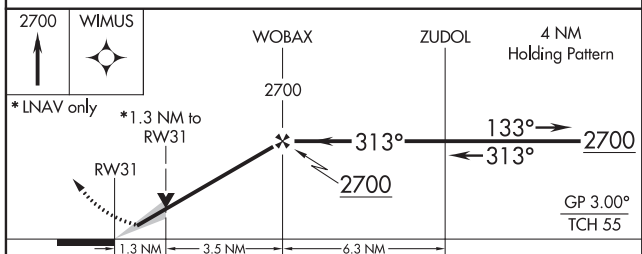
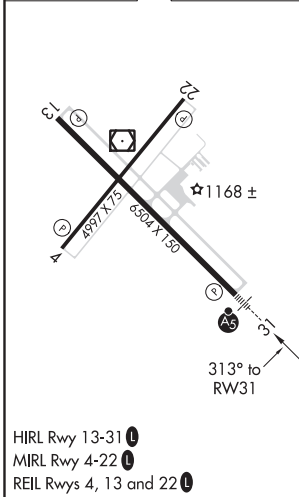
AWOS-3PT  
**108.4**

MINNEAPOLIS CENTER  
**132.15 269.6**

UNICOM  
**122.8 (CTAF)**



ELEV 1119 **D** TDZE 1114



CATEGORY	A	B	C	D
LPV DA		1364-1/2	250 (300-1/2)	
LNAV/VNAV DA		1428-1/2	314 (400-1/2)	
LNAV MDA	1580-1/2	466 (500-1/2)	1580-1	466 (500-1)
CIRCLING	1580-1	461 (500-1)	1580-1 1/2	1680-2
			461 (500-1 1/2)	561 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



VOR/DME TVF <b>108.4</b> Chan 21	APP CRS <b>117°</b>	Rwy Idg TDZE Apt Elev	<b>6504</b> <b>1114</b> <b>1116</b>
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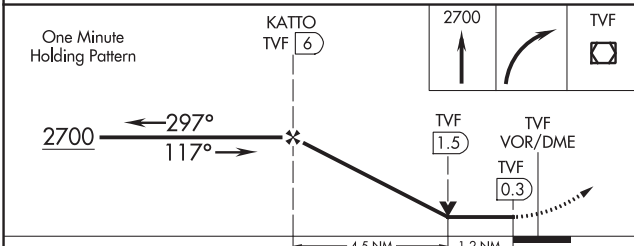
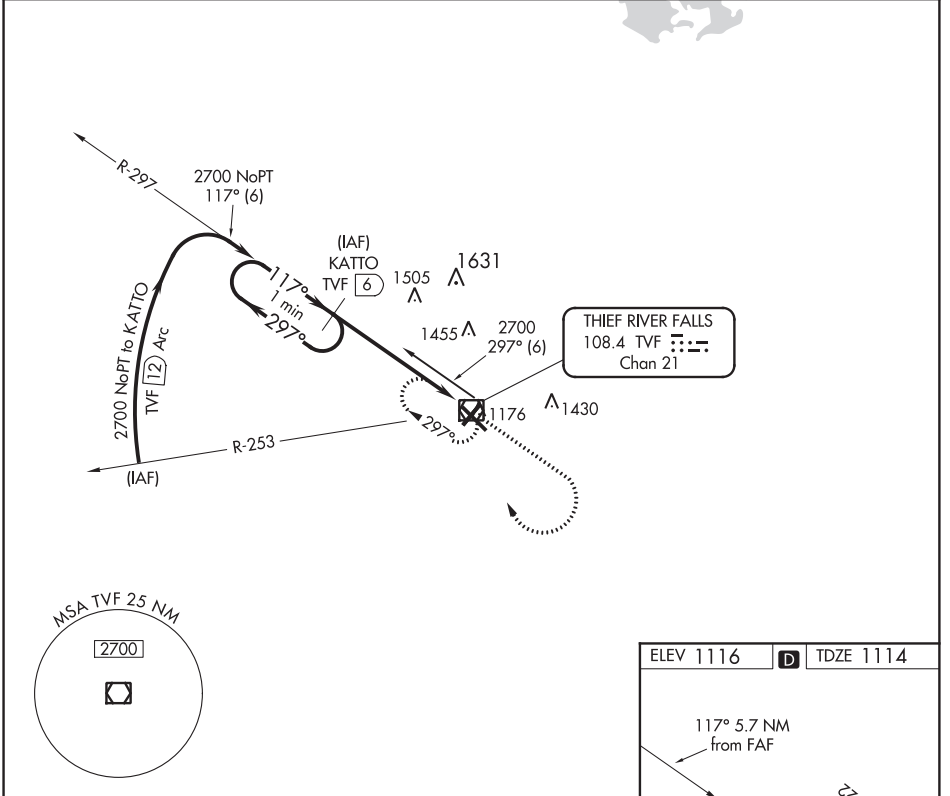
# VOR/DME RWY 13

THIEF RIVER FALLS RGNL (TVF)

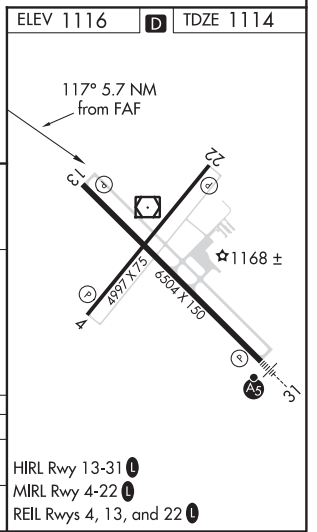
**⚠** Circling Rwy 4, 22 NA at night.

MISSED APPROACH: Climb to 2700 then right turn direct TVF VOR/DME and hold.

AWOS-3PT <b>108.4</b>	MINNEAPOLIS CENTER <b>132.15 269.6</b>	UNICOM <b>122.8</b> (CTAF) <b>📻</b>
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CATEGORY	A	B	C	D
S-13	1520-1	406 (500-1)	1520-1¼	406 (500-1¼)
CIRCLING	1540-1 424 (500-1)	1580-1 464 (500-1)	1580-1½ 464 (500-1½)	1680-2 564 (600-2)



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

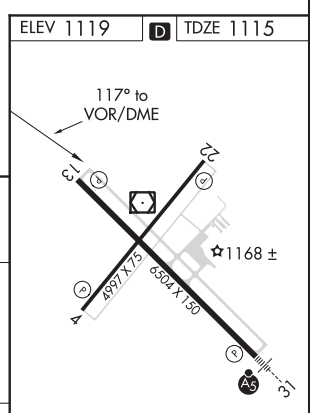
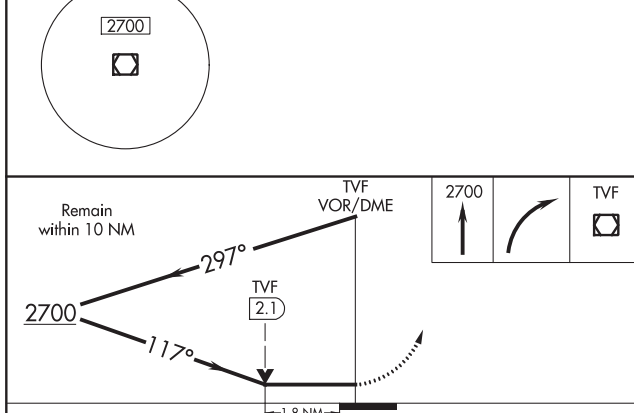
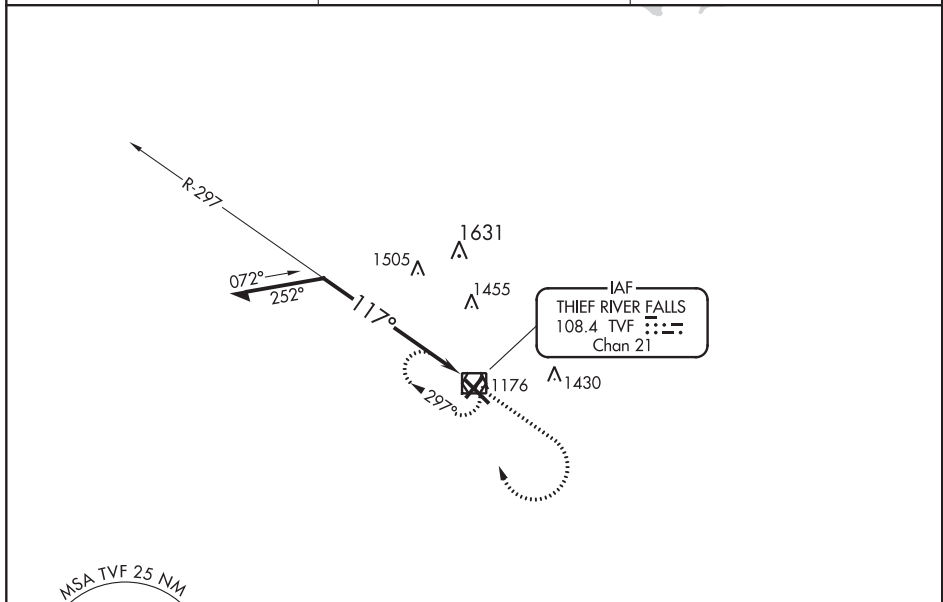
VOR/DME TVF <b>108.4</b> Chan <b>21</b>	APP CRS <b>117°</b>	Rwy Idg TDZE <b>1115</b> Apt Elev <b>1119</b>	<b>6504</b>
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**VOR RWY 13**  
THIEF RIVER FALLS RGNL (TVF)

**⚠** Circling Rwy 4, 22 NA at night.  
**⚠** VDP NA when using Crookston altimeter setting.  
 When local altimeter setting not received, use Crookston altimeter setting and increase all MDA 100 feet and increase Cat C and D visibilities ¼ mile.

MISSED APPROACH: Climb to 2700 then right turn direct TVF VOR/DME and hold.

AWOS-3PT <b>108.4</b>	MINNEAPOLIS CENTER <b>132.15 269.6</b>	UNICOM <b>122.8</b> (CTAF) <b>L</b>
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CATEGORY	A	B	C	D
S-13	1740-1 625 (700-1)		1740-1¾ 625 (700-1¾)	1740-2 625 (700-2)
CIRCLING	1740-1 621 (700-1)		1740-1¾ 621 (700-1¾)	1740-2 621 (700-2)

HIRL Rwy 13-31 **L**  
 MIRL Rwy 4-22 **L**  
 REIL Rws 4, 13, and 22 **L**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

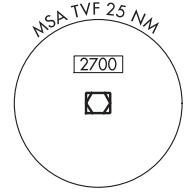
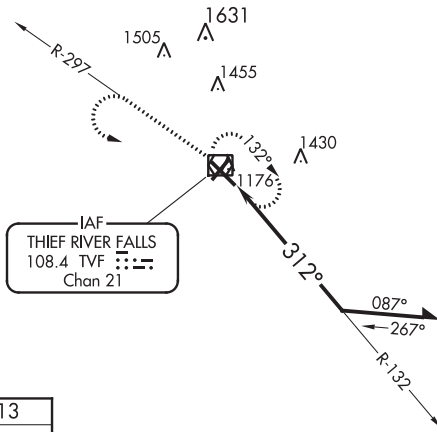
VOR/DME TVF <b>108.4</b> Chan 21	APP CRS <b>312°</b>	Rwy Idg TDZE Apt Elev	<b>6304</b> <b>1113</b> <b>1116</b>
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# VOR RWY 31

THIEF RIVER FALLS RGNL (TVF)

<p>Circling Rwy 4,22 NA at night.</p>	<p>MALS R</p>	<p>MISSED APPROACH: Climb to 2700 via TVF R-297 then left turn direct TVF VOR/DME and hold.</p>
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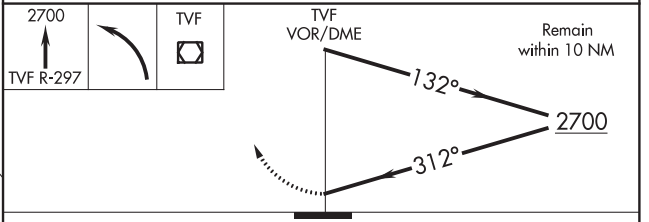
AWOS-3PT <b>108.4</b>	MINNEAPOLIS CENTER <b>132.15 269.6</b>	UNICOM <b>122.8</b> (CTAF)
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ELEV 1116 TDZE 1113

HIRL Rwy 13-31   
MIRL Rwy 4-22   
REIL Rwy 4, 13, and 22

312° to VOR/DME



CATEGORY	A	B	C	D
S-31	1540-1/2	427 (500-1/2)	1540-3/4 427 (500-3/4)	1540-1 427 (500-1)
CIRCLING	1540-1 424 (500-1)	1580-1 464 (500-1)	1580-1 1/2 464 (500-1 1/2)	1680-2 564 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

AL-5201 (FAA)

THIEF RIVER FALLS RGNL (TVF)  
THIEF RIVER FALLS, MINNESOTA

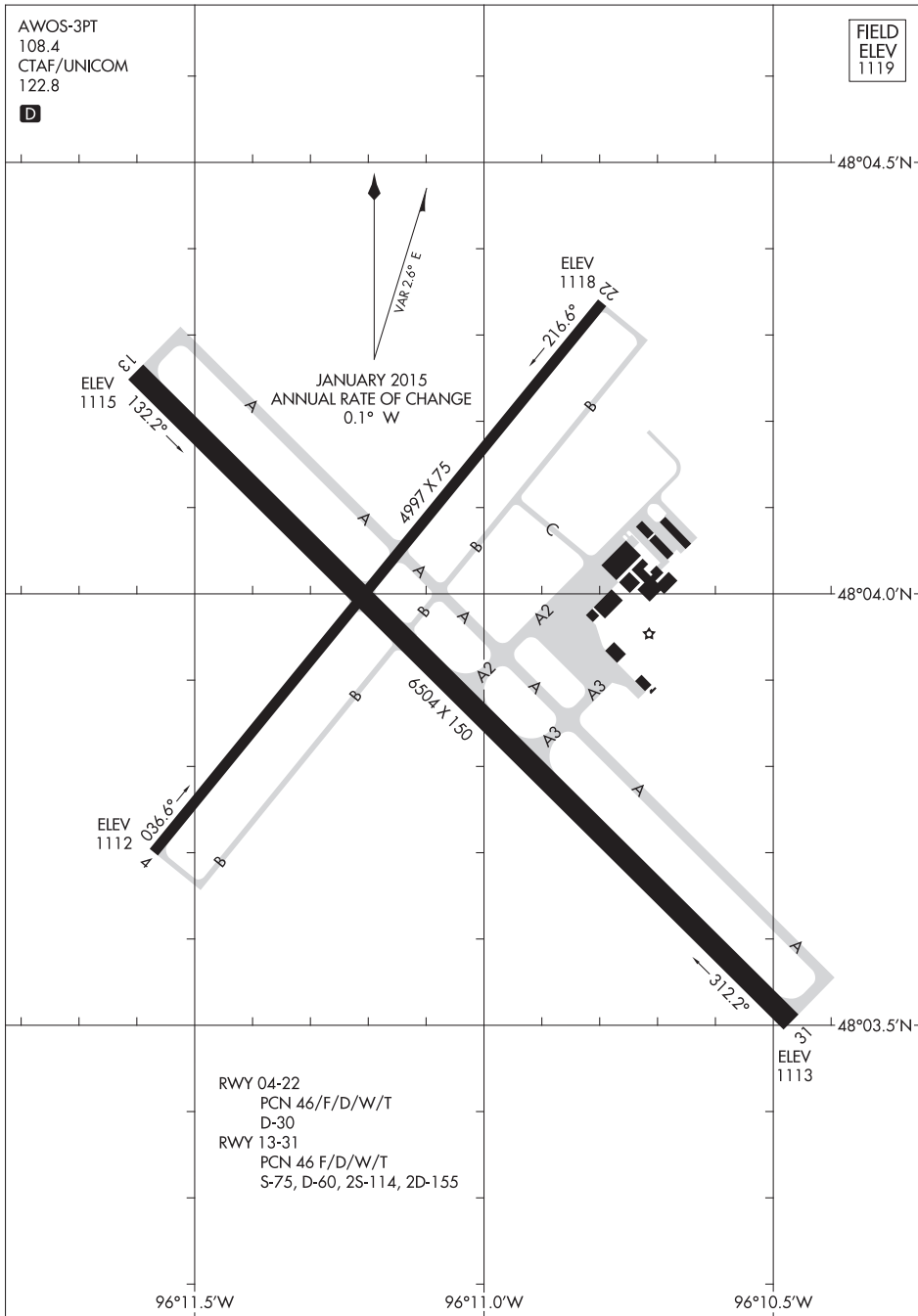
AWOS-3PT  
108.4  
CTAF/UNICOM  
122.8



FIELD  
ELEV  
1119

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



RWY 04-22  
PCN 46/F/D/W/T  
D-30

RWY 13-31  
PCN 46 F/D/W/T  
S-75, D-60, 2S-114, 2D-155

# AIRPORT DIAGRAM

THIEF RIVER FALLS, MINNESOTA  
THIEF RIVER FALLS RGNL (TVF)

WAAS CH <b>82139</b> <b>W12A</b>	APP CRS <b>125°</b>	Rwy Idg TDZE Apt Elev	<b>5102</b> <b>2253</b> <b>2271</b>
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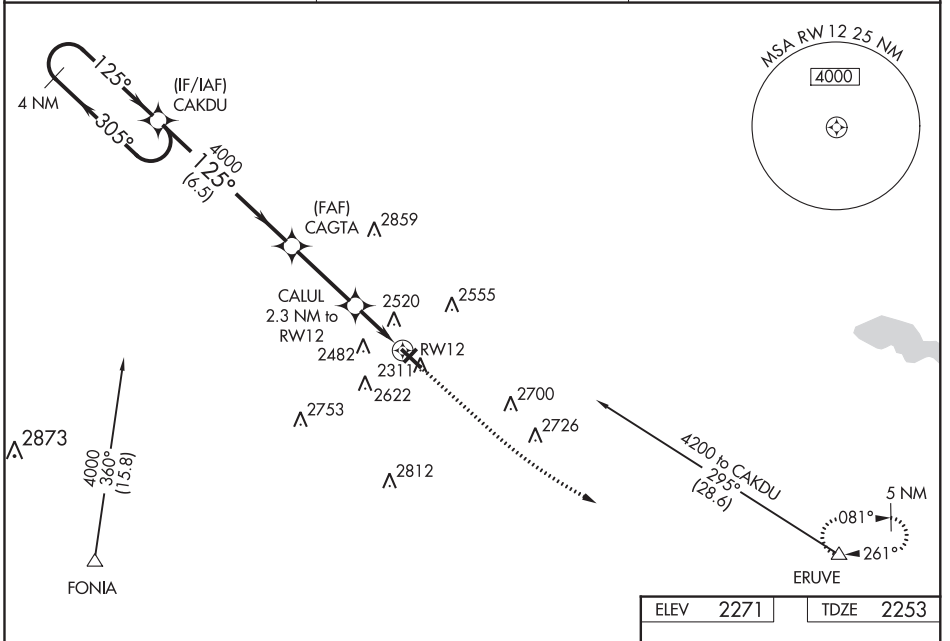
# RNAV (GPS) RWY 12

TIOGA MUNI (D60)

**⚠** For uncompensated Baro-VNAV systems, procedure NA below -19°C (-2°F) or above 54°C (130°F). Baro-VNAV and VDP NA when using Williston altimeter setting.  
**⚠** DME/DME RNP-0.3 NA. When local altimeter setting not received use Williston altimeter setting; increase LPV DA to 2618 feet and all visibilities ¼ SM; increase LNAV/VNAV DA to 2934 feet and all visibilities ½ SM; increase all MDA 120 feet and LNAV visibility Cats C and D ¾ SM and Circling visibility Cat B ¼ SM and Cats C and D ½ SM.

**MISSED APPROACH:** Climb to 2700 then climbing left turn to 5000 direct ERUVE and hold.

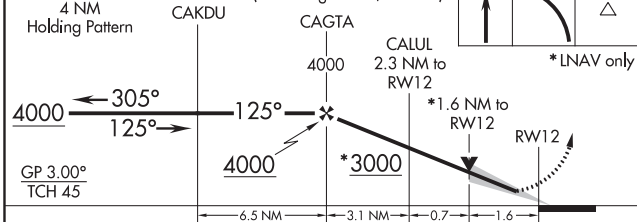
AWOS-3 <b>118.575</b>	MINNEAPOLIS CENTER <b>127.6 279.6</b>	CTAF <b>122.9</b>
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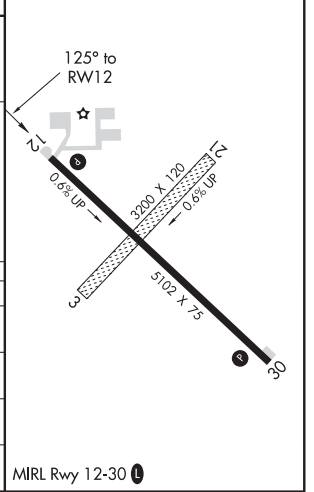
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

4 NM Holding Pattern  
 VGS1 and RNAV glidepath not coincident (VGS1 Angle 3.00/TCH 26).  
 2700 5000 ERUVE  
 \*LNAV only



ELEV	2271	TDZE	2253
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CATEGORY	A	B	C	D
LPV DA	2503-1		250 (300-1)	
LNAV/VNAV DA	2819-2		566 (600-2)	
LNAV MDA	2780-1	527 (600-1)	2780-1½	527 (600-1½)
<b>C</b> CIRCLING	2820-1 549 (600-1)	2980-1 709 (800-1)	2980-2 709 (800-2)	3000-2¼ 729 (800-2¼)

WAAS CH <b>56630</b> <b>W30A</b>	APP CRS <b>305°</b>	Rwy Idg TDZE Apt Elev	<b>5102</b> <b>2271</b> <b>2271</b>
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# RNAV (GPS) RWY 30

TIOGA MUNI (D60)

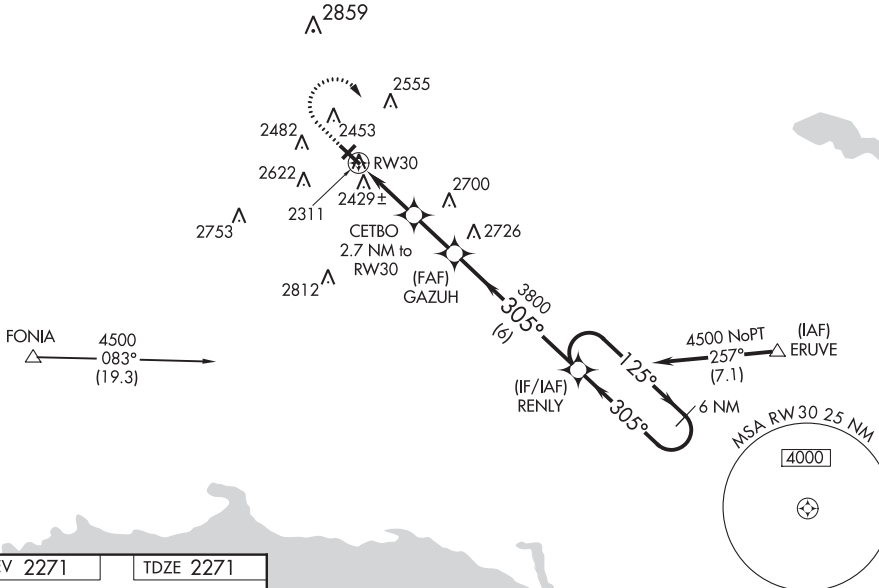
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (2°F) or above 54°C (130°F). When VGSI inop, Straight-in/Circling Rwy 30 procedure NA at night. DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. When local altimeter setting not received, use Williston altimeter setting and increase all DA 115 feet and all MDA 120 feet, increase LPV visibility all Cats and LNAV Cat C/D visibility ¼ mile, LNAV/VNAV all Cats ⅓ mile, Circling Cat C and D ½ mile. Baro-VNAV NA when using Williston altimeter setting.

**MISSED APPROACH:** Climb to 3200 then climbing right turn to 4500 direct RENLY and hold.

AWOS-3  
**118.575**

MINNEAPOLIS CENTER  
**127.6 279.6**

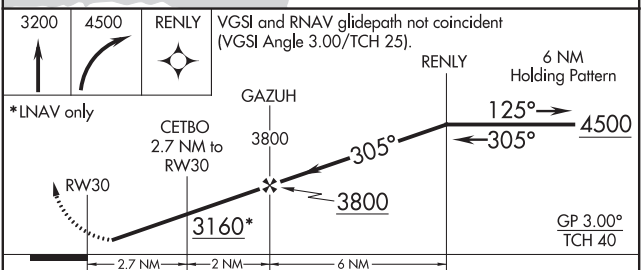
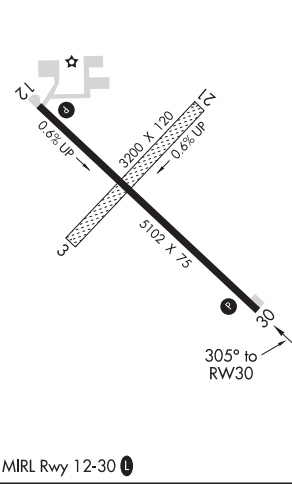
CTAF  
**122.9**



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 2271	TDZE 2271
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CATEGORY	A	B	C	D
LPV DA	2521-1 250 (300-1)			
LNAV/VNAV DA	2610-1½ 339 (400-1½)			
LNAV MDA	2720-1 449 (500-1)		2720-1⅓ 449 (500-1⅓)	
CIRCLING	2760-1 489 (500-1)	2840-1 569 (600-1)	2840-1½ 569 (600-1½)	2980-2¼ 709 (800-2¼)

APP CRS <b>088°</b>	Rwy Idg <b>3400</b>
	TDZE <b>1369</b>
	Apt Elev <b>1370</b>

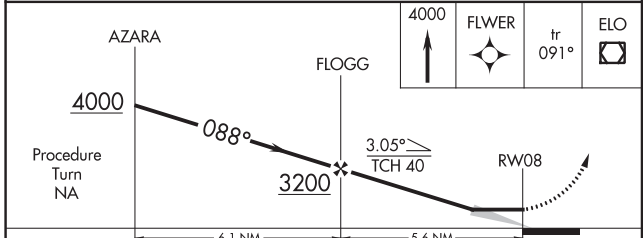
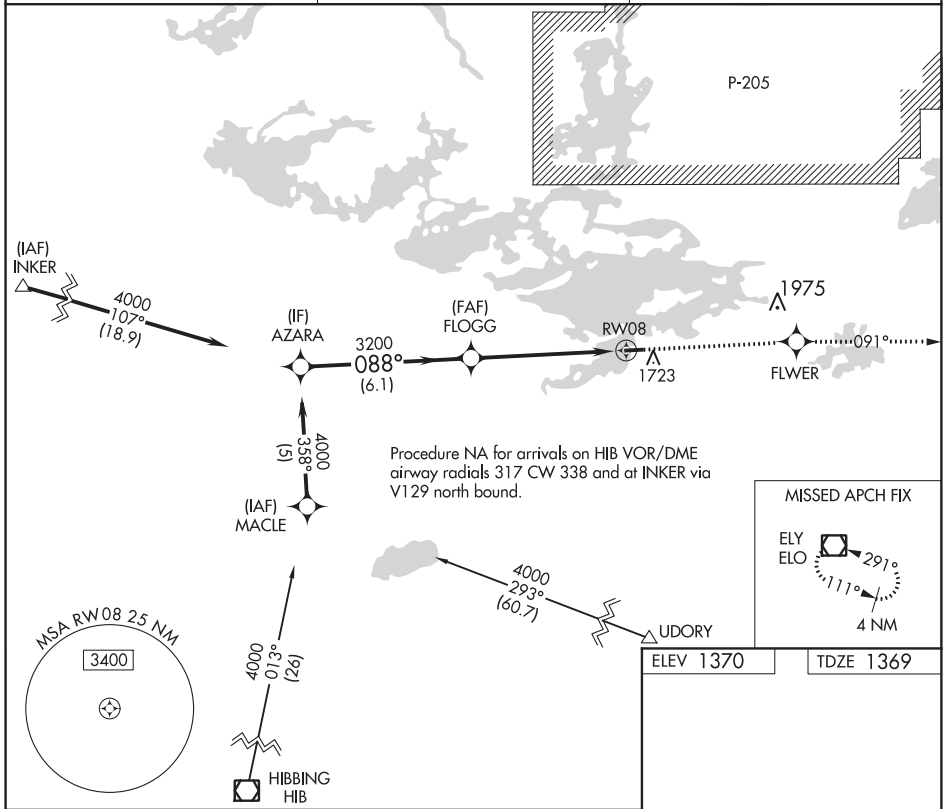
# RNAV (GPS) RWY 8

TOWER MUNI (12D)

**NA** DME/DME RNP- 0.3 NA. Procedure NA at night. Use Cook altimeter setting, when not received, use Ely altimeter setting and increase all MDA 20 feet and increase LNAV Cat C visibility ¼ mile.

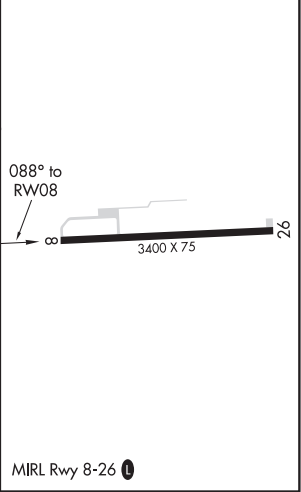
**MISSED APPROACH:** Climb to 4000 direct FLWER and via 091° track to ELO VOR/DME and hold.

<b>COOK AWOS-3</b> <b>118.175</b>	<b>MINNEAPOLIS CENTER</b> <b>127.9 281.45</b>	<b>CTAF</b> <b>122.9</b>
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ELEV 1370	TDZE 1369
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CATEGORY	A	B	C	D
LNAV MDA	1960-1	591 (600-1)	1960-1½ 591 (600-1½)	NA
CIRCLING	2120-1 750 (800-1)	2120-1¼ 750 (800-1¼)	2120-2¼ 750 (800-2¼)	NA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

TOWER, MINNESOTA

AL-10374 (FAA)

16231

APP CRS  
**268°**  
Rwy Idg **3400**  
TDZE **1370**  
Apt Elev **1370**

# RNAV (GPS) RWY 26

TOWER MUNI (12D)

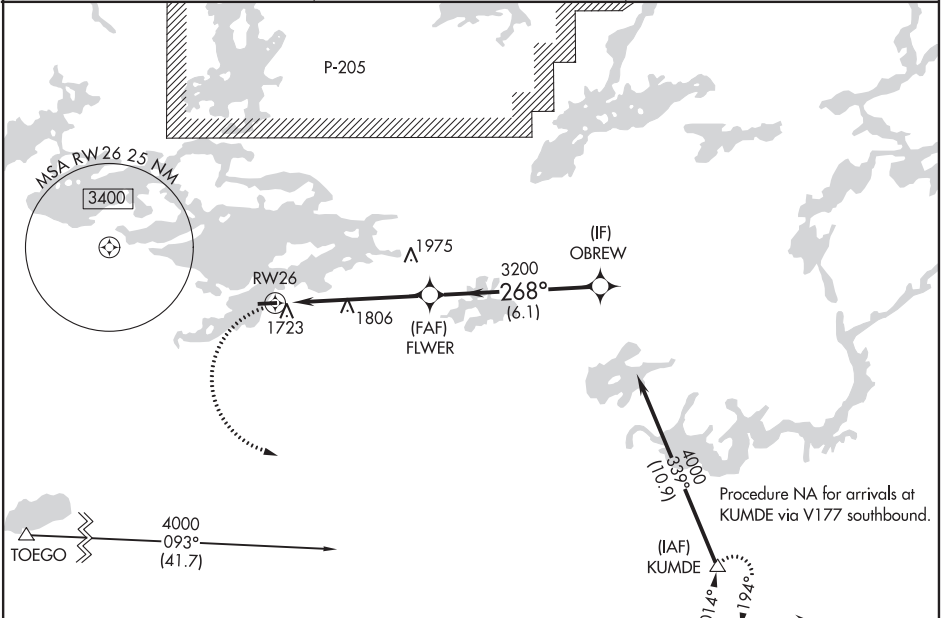
**⚠** DME/DME RNP-0.3 NA. Procedure NA at night.  
**⚠** NA Rwy 8, 26 helicopter visibility reduction below 1 SM NA.  
**⚠** Use Cook altimeter setting, when not received, use Ely altimeter setting and increase all MDA 20 feet and increase Cat B and C visibility ¼ mile.

MISSED APPROACH: Climbing left turn to 4000 direct KUMDE and hold.

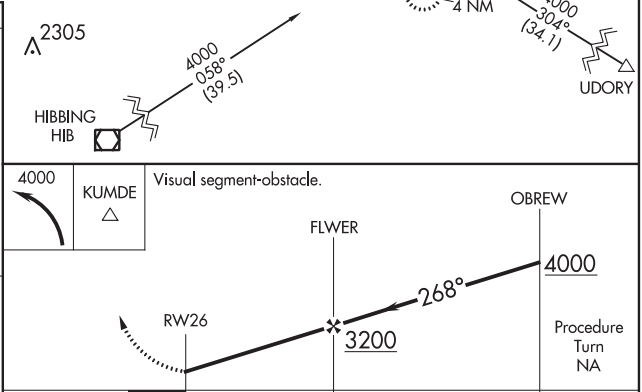
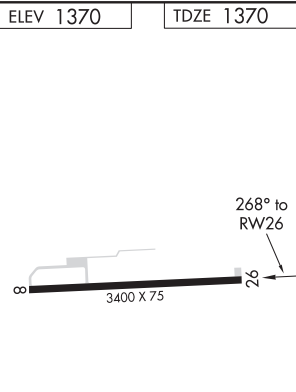
COOK AWOS-3  
**118.175**

MINNEAPOLIS CENTER  
**127.9 281.45**

CTAF  
**122.9** **Ⓛ**



ELEV 1370 TDZE 1370



CATEGORY	A	B	C	D
LNAV MDA	2100-1	730 (800-1)	2100-2 730 (800-2)	NA
CIRCLING	2120-1 750 (800-1)	2120-1¼ 750 (800-1¼)	2120-2¼ 750 (800-2¼)	NA

MIRL Rwy 8-26 **Ⓛ**

TOWER, MINNESOTA  
Orig-A 18AUG16

47°49'N-92°17'W

# RNAV (GPS) RWY 26

TOWER MUNI (12D)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



APP CRS <b>114°</b>	Rwy Idg <b>3100</b>
	TDZE <b>1336</b>
	Apt Elev <b>1340</b>

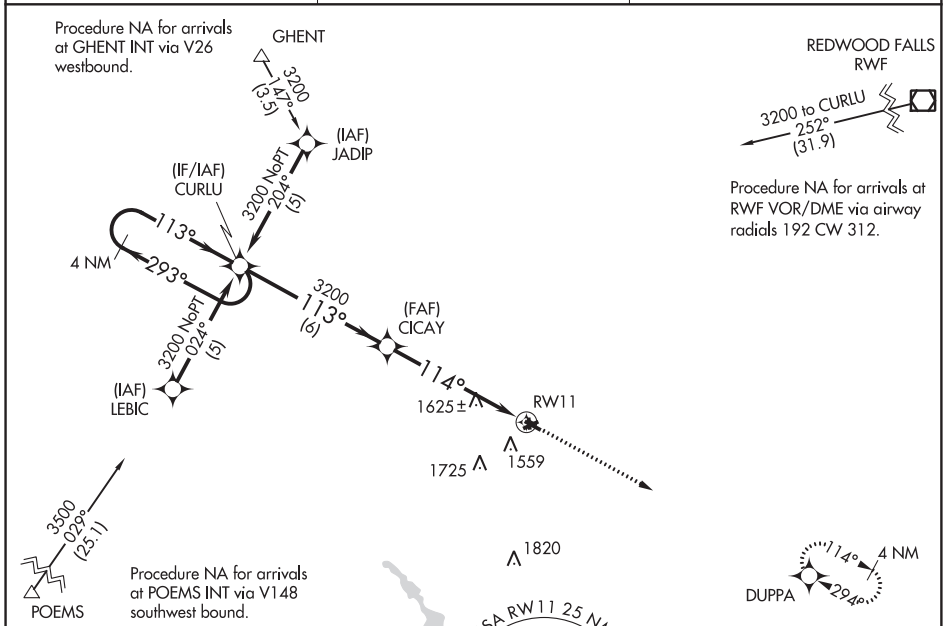
# RNAV (GPS) RWY 11

TRACY MUNI (TKC)

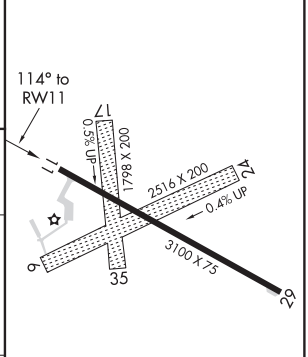
**▼** DME/DME RNP-0.3 NA.  
**▲ NA** If local altimeter setting not received, use Marshall/Ryan altimeter setting and increase all MDAs 60 feet.  
 Procedure NA at night.

MISSED APPROACH: Climb to 3000 direct DUPPA and hold.

AWOS-3 <b>120.0</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	CTAF <b>122.9</b>
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ELEV 1340	TDZE 1336
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CATEGORY	A	B	C	D
LNVA MDA	1900-1	564 (600-1)		NA
CIRCLING	1960-1	620 (700-1)		NA

MIRL Rwy 11-29 **●**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

TRACY, MINNESOTA

AL-9494 (FAA)

16147

APP CRS <b>294°</b>	Rwy Idg <b>3100</b>
	TDZE <b>1336</b>
	Apt Elev <b>1340</b>

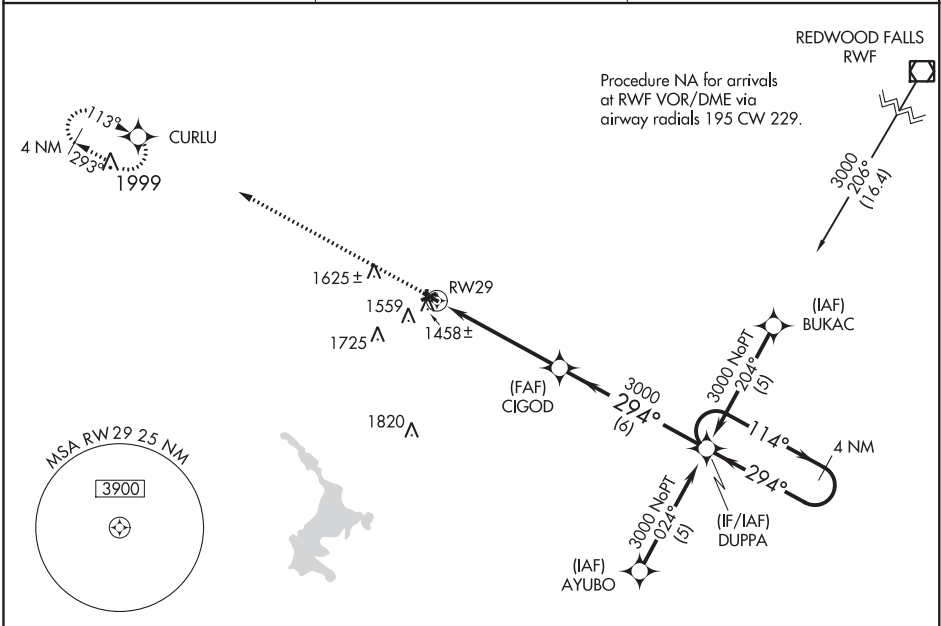
# RNAV (GPS) RWY 29

TRACY MUNI (TKC)

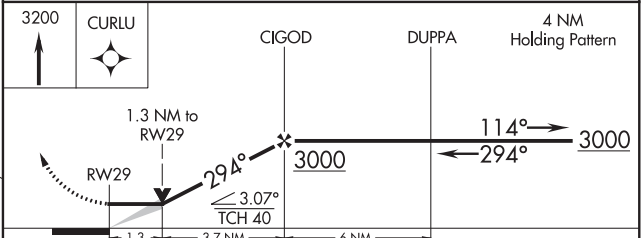
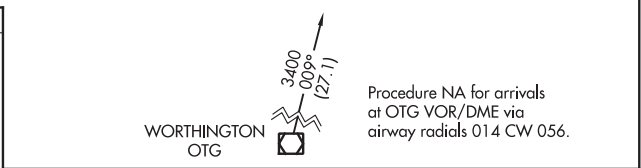
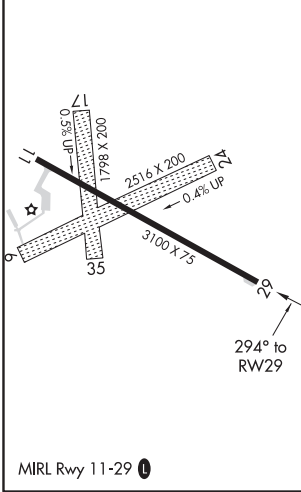
**NA** DME/DME RNP-0.3 NA.  
If local altimeter setting not received, use Marshall/Ryan altimeter setting and increase all MDAs 60 feet.  
Procedure NA at night.

MISSED APPROACH: Climb to 3200 direct CURLU and hold.

AWOS-3 <b>120.0</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	CTAF <b>122.9</b>
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ELEV 1340	TDZE 1336
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CATEGORY	A	B	C	D
LNNAV MDA	1780-1	444 (500-1)	NA	
CIRCLING	1920-1	580 (600-1)	NA	

TRACY, MINNESOTA  
Orig 17MAR05

44°15'N - 95°36'W

# RNAV (GPS) RWY 29

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>53721</b> <b>W06A</b>	APP CRS <b>061°</b>	Rwy Idg TDZE Apt Elev	<b>4400</b> <b>1073</b> <b>1073</b>
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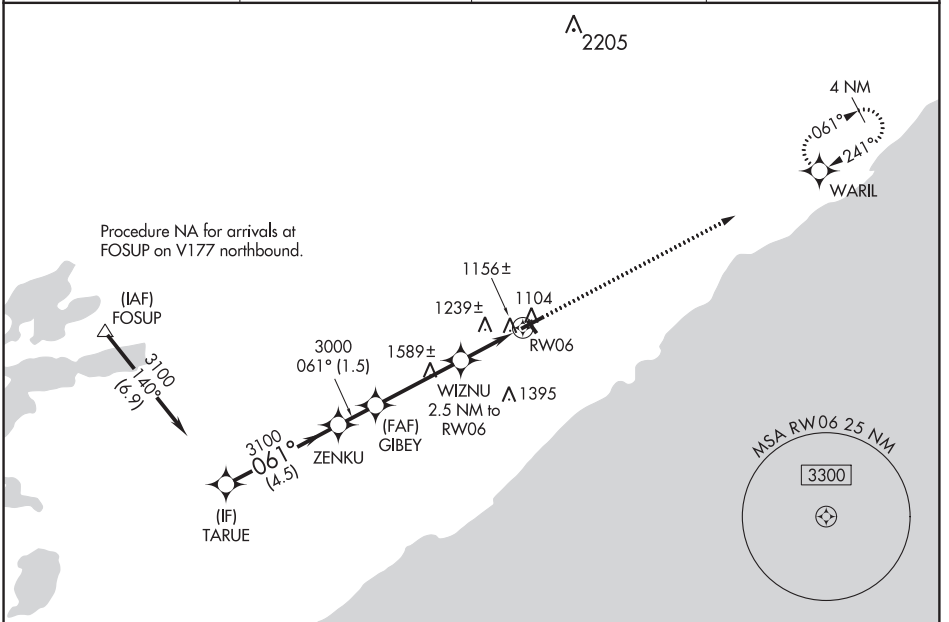
# RNAV (GPS) RWY 6

RICHARD B HELGESON (TWM)

**⚠** When local altimeter setting not received, use Silver Bay Muni altimeter setting and increase all MDA 60 feet. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When VGSI inoperative, procedure NA at night. When VGSI inoperative, Circling Rwy 24 NA at night.

**⚠** MISSED APPROACH: Climb to 3000 direct WARIL and hold.

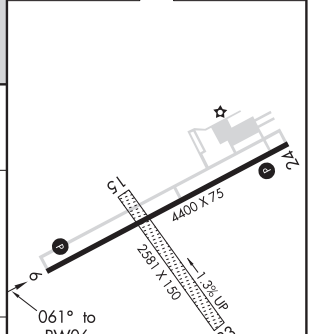
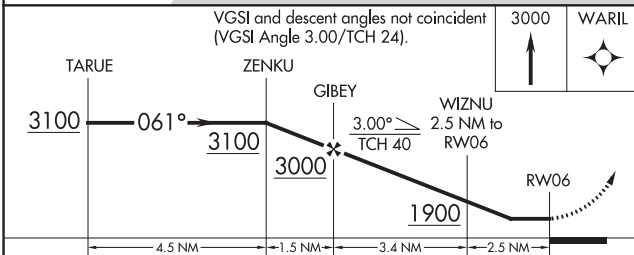
AWOS-3 <b>119.325</b>	DULUTH APP CON <b>125.45 233.7</b>	GCO <b>121.725</b>	CTAF <b>122.9</b> <b>Ⓛ</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1073	TDZE 1073
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CATEGORY	A	B	C	D
LP MDA	1420-1	347 (400-1)		NA
LNAV MDA	1500-1	427 (500-1)		NA
CIRCLING	1600-1 527 (600-1)	1680-1 607 (700-1)		NA

MIRL Rwy 6-24 **Ⓛ**

REIL Rws 6 and 24 **Ⓛ**

WAAS CH <b>90521</b> <b>W24A</b>	APP CRS <b>241°</b>	Rwy Idg TDZE Apf Elev	<b>4400</b> <b>1073</b> <b>1073</b>
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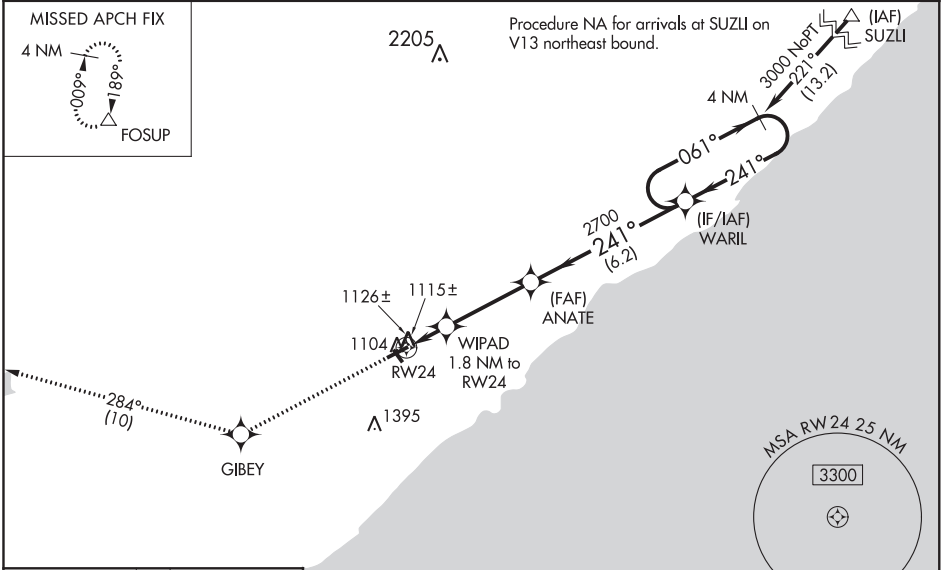
# RNAV (GPS) RWY 24

RICHARD B HELGESON (TWM)

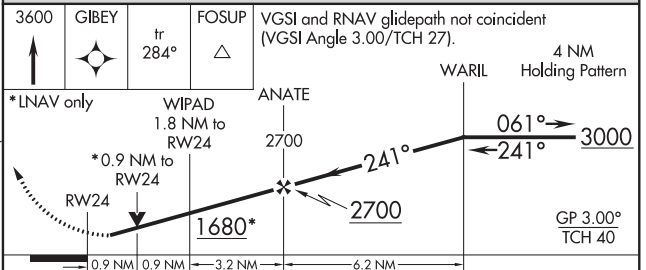
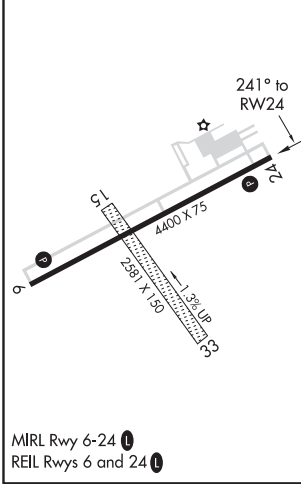
**⚠** Baro-VNAV NA when using Silver Bay Muni altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). When local altimeter setting not received, use Silver Bay Muni altimeter setting and increase all DA 44 feet and all MDA 60 feet. Increase LPV and LNAV/VNAV Cats A/B visibility ½ mile. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. VDP NA with Silver Bay Muni altimeter setting. When VGSI inop, Straight-in/Circling NA at night to Rwy 6. When VGSI inop, Circling NA at night to Rwy 24.

**⚠** MISSED APPROACH: Climb to 3600 direct GIBEY and on track 284° to FOSUP and hold.

AWOS-3 <b>119.325</b>	DULUTH APP CON <b>125.45 233.7</b>	GCO <b>121.725</b>	CTAF <b>122.9</b>
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ELEV 1073	TDZE 1073
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CATEGORY	A	B	C	D
LPV DA	1323-7/8	250 (300-7/8)		NA
LNAV/VNAV DA	1323-7/8	250 (300-7/8)		NA
LNAV MDA	1380-1	307 (400-1)		NA
CIRCLING	1600-1	1680-1		NA
	527 (600-1)	607 (700-1)		

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>70618</b> <b>W13A</b>	APP CRS <b>127°</b>	Rwy Idg TDZE Apt Elev	<b>4202</b> <b>1402</b> <b>1402</b>
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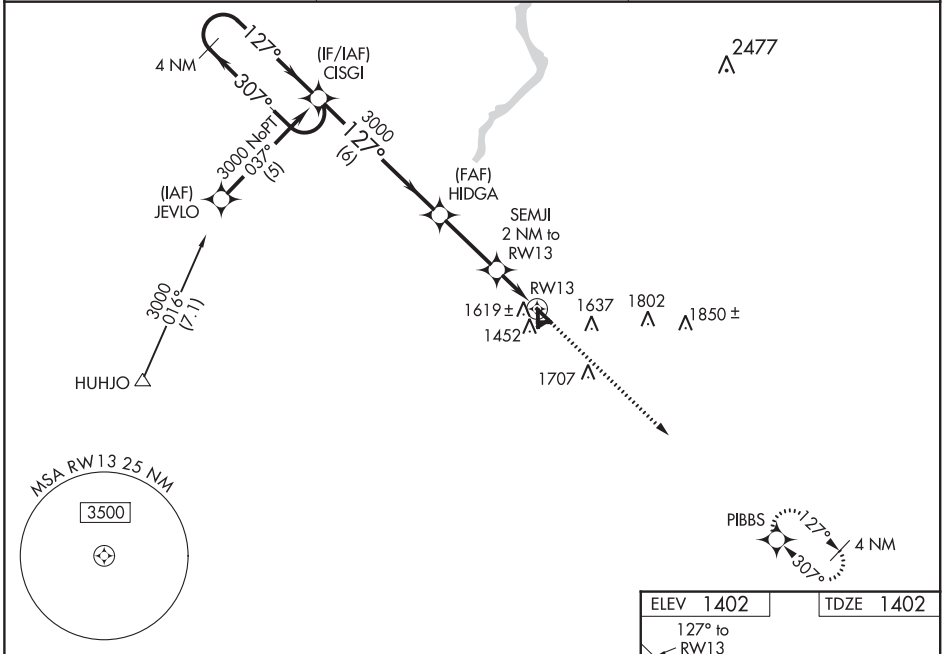
# RNAV (GPS) RWY 13

BARNES COUNTY MUNI (BAC)

**⚠ NA** Baro-VNAV NA when using Jamestown altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Jamestown altimeter setting and increase all DA 77 feet and all MDA 80 feet, increase LPV all Cats, LNAV/VNAV all Cats and LNAV Cat C visibility ¼ mile, and increase Circling Cat C visibility ½ mile.

MISSED APPROACH: Climb to 3100 direct PIBBS and hold.

AWOS-3 <b>118.725</b>	MINNEAPOLIS CENTER <b>124.2 270.3</b>	UNICOM <b>122.8 (CTAF) 0</b>
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4 NM Holding Pattern

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 28).

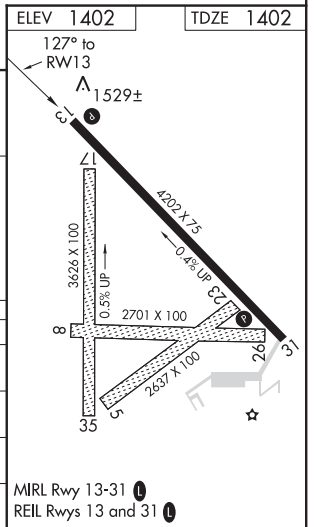
3100 PIBBS

\*LNAV only

\*2040

GP 3.00° TCH 40

CATEGORY	A	B	C	D
LPV DA	1652-1	250 (300-1)		NA
LNAV/VNAV DA	1889-1¾	487 (500-1¾)		NA
LNAV MDA	1880-1	478 (500-1)	1880-1¼ 478 (500-1¼)	NA
CIRCLING	1920-1 518 (600-1)	2000-1 598 (600-1)	2000-1½ 598 (600-1½)	NA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>65918</b> <b>W31A</b>	APP CRS <b>307°</b>	Rwy Idg TDZE Apt Elev	<b>4202</b> <b>1394</b> <b>1402</b>
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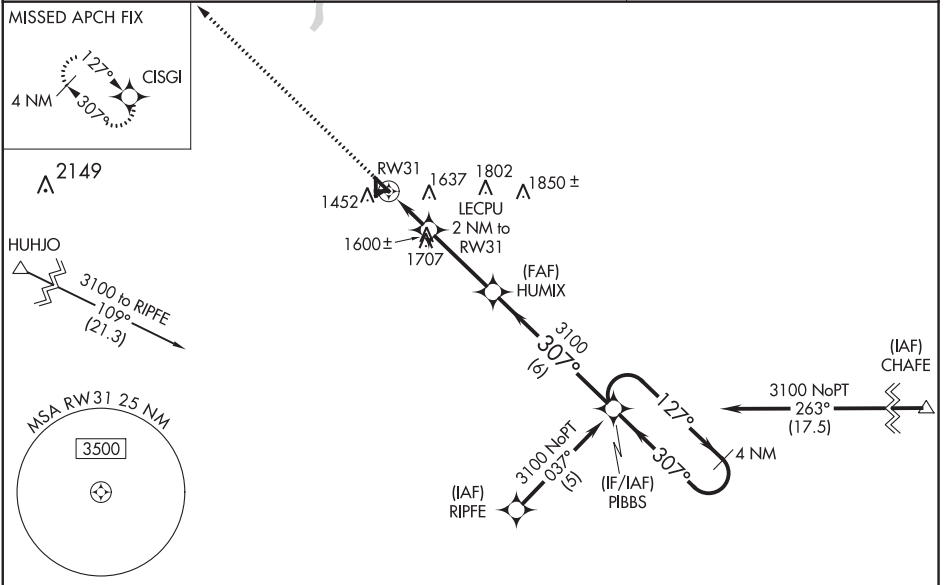
# RNAV (GPS) RWY 31

BARNES COUNTY MUNI (BAC)

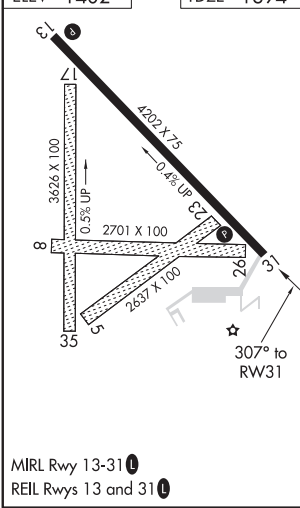
**NA** Baro-VNAV NA when using Jamestown altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Jamestown altimeter setting and increase LPV DA 77 feet and LNAV/VNAV DA 227 feet, and all MDA 80 feet; increase LPV all Cats visibility ¼ mile, LNAV/VNAV all Cats visibility ¾ mile and increase Circling Cat C visibility ½ mile.

MISSED APPROACH: Climb to 3000 direct CISGI and hold.

AWOS-3 <b>118.725</b>	MINNEAPOLIS CENTER <b>124.2 270.3</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1402	TDZE 1394
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VALLEY CITY, NORTH DAKOTA

Orig 29JUL10

CATEGORY	A	B	C	D
LPV DA	1644-1	250 (300-1)		NA
LNAV/VNAV DA	1717-1¼	323 (400-1¼)		NA
LNAV MDA	1900-1	506 (500-1)	1900-1½ 506 (500-1½)	NA
CIRCLING	1920-1 518 (600-1)	2000-1 598 (600-1)	2000-1½ 598 (600-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>72836</b> <b>W12A</b>	APP CRS <b>123°</b>	Rwy Idg <b>4105</b> TDZE <b>1147</b> Apt Elev <b>1147</b>
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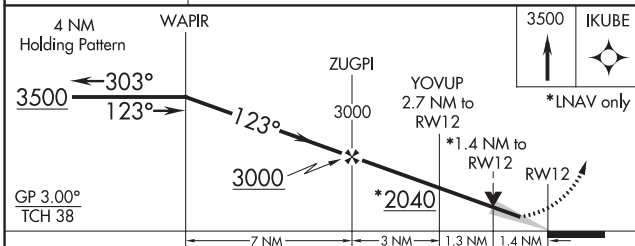
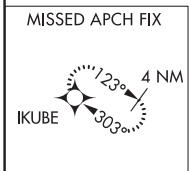
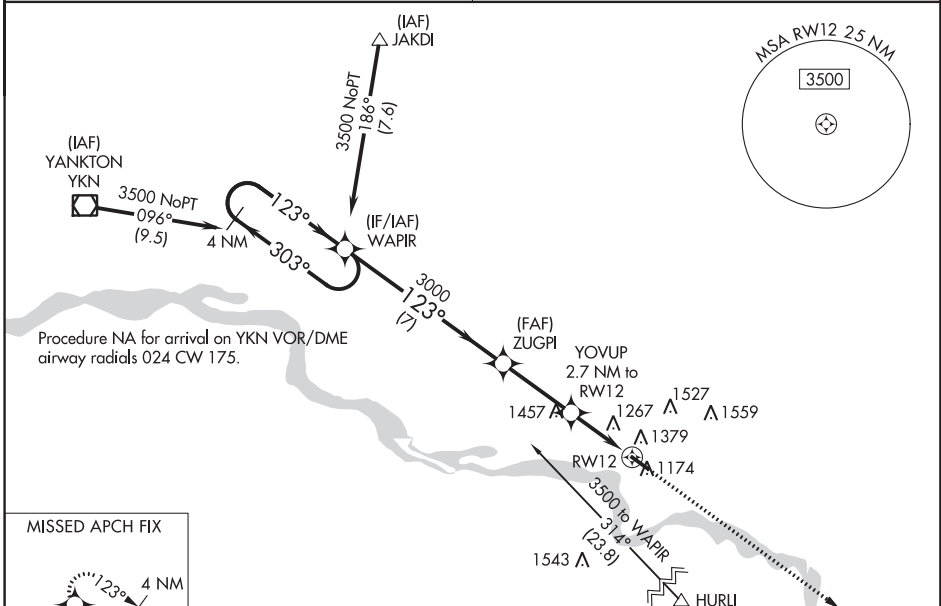
# RNAV (GPS) RWY 12

HAROLD DAVIDSON FIELD (VMR)

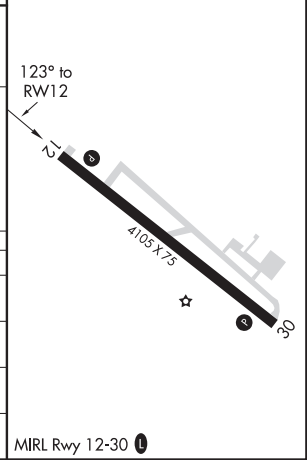
**▼** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter not received, use Yankton altimeter setting and increase all DA 73 feet and all MDA 80 feet, increase LPV all Cats visibility 1/8 mile, increase LNAV/VNAV all Cats visibility, LNAV and Circling Cat C visibilities 1/4 mile. Baro-VNAV and VDP NA when using Yankton altimeter setting.

**MISSED APPROACH:**  
Climb to 3500 direct IKUBE and hold.

SIoux CITY APP CON * <b>124.6 307.0</b>	AUNICOM <b>122.8 (CTAF)</b>
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ELEV 1147	TDZE 1147
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CATEGORY	A	B	C	D
LPV DA	1397-1	250 (300-1)		NA
LNAV/VNAV DA	1587-1½	440 (500-1½)		NA
LNAV MDA	1620-1	473 (500-1)	1620-1⅜ 473 (500-1⅜)	NA
<b>C</b> CIRCLING	1680-1	533 (600-1)	1840-2 693 (700-2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>53614</b> <b>W30A</b>	APP CRS <b>303°</b>	Rwy Idg <b>4105</b> TDZE <b>1147</b> Apt Elev <b>1147</b>
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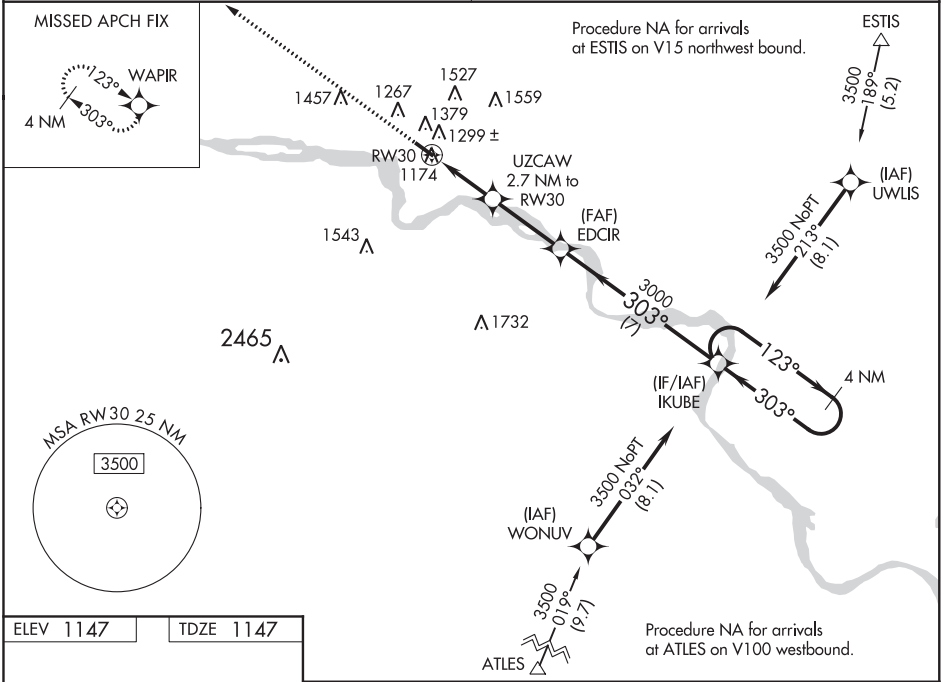
# RNAV (GPS) RWY 30

HAROLD DAVIDSON FIELD (VMR)

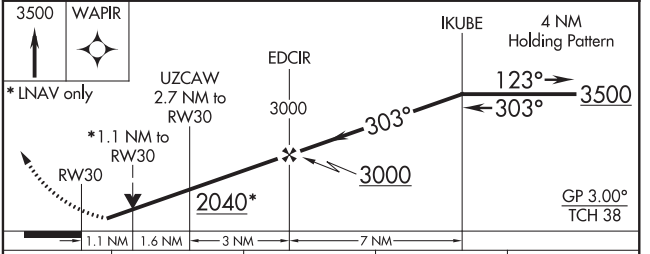
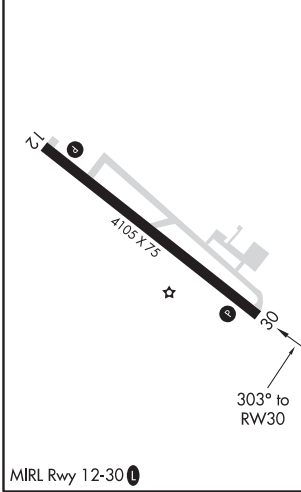
**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F).  
**⚠** DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA. Baro-VNAV and VDP NA when using Yankton altimeter setting. When local altimeter not received, use Yankton altimeter setting and increase all DA 73 feet and all MDA 80 feet, increase LPV all Cats visibility 1/8 mile, LNAV/VNAV all Cats and LNAV Cat C and Circling Cat C visibility 1/4 mile.

MISSED APPROACH: Climb to 3500 direct WAPIR and hold.

SIOUX CITY APP CON * <b>124.6 307.0</b>	AUNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1147	TDZE 1147
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CATEGORY	A	B	C	D
LPV DA		1397-1 250 (300-1)		NA
LNAV/VNAV DA		1451-1 304 (400-1)		NA
LNAV MDA		1520-1 373 (400-1)		NA
<b>C</b> CIRCLING	1680-1	533 (600-1)	1840-2 693 (700-2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>58033</b> <b>W16A</b>	APP CRS <b>159°</b>	Rwy Idg TDZE Apt Elev	<b>4007</b> <b>1368</b> <b>1368</b>
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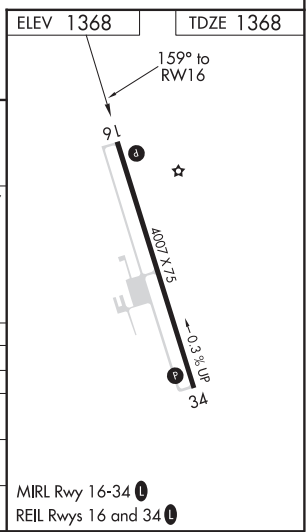
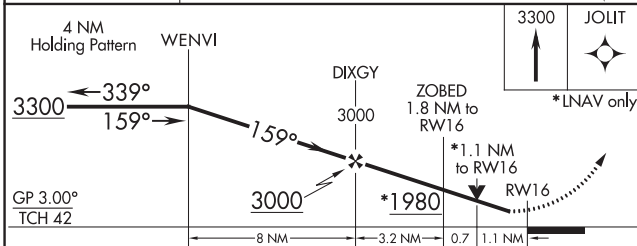
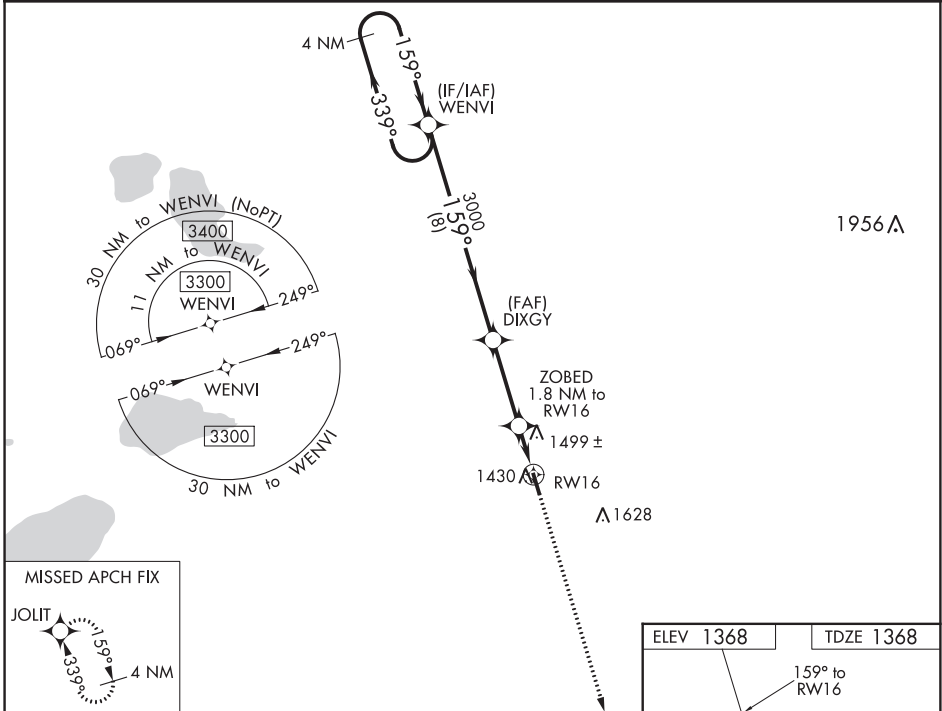
# RNAV (GPS) RWY 16

WADENA MUNI (ADC)

**⚠** DME/DME RNP-0.3 NA. Helicopter visibility reduction below 1 SM NA. VDP and Baro-VNAV NA with Staples altimeter setting. When local altimeter setting not received, use Staples altimeter setting and increase all DA 52 feet and all MDA 60 feet, increase LNAV/VNAV visibility 1/8 mile, LNAV Cat C visibility 1/4 mile and Circling Cat C visibility 1/4 mile. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (1°F) or above 54°C (130°F).

**MISSED APPROACH:**  
Climb to 3300 direct JOLIT and hold.

AWOS-3 <b>128.325</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LPV DA	1631-1	263 (300-1)		NA
LNAV/VNAV DA	1767-1 1/8	399 (400-1 1/8)		NA
LNAV MDA	1760-1	392 (400-1)	1760-1 1/8 392 (400-1 1/8)	NA
CIRCLING	1780-1 412 (500-1)	1820-1 452 (500-1)	1940-1 1/2 572 (600-1 1/2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>70633</b> <b>W34A</b>	APP CRS <b>339°</b>	Rwy ldg TDZE Apt Elev	<b>4007</b> <b>1364</b> <b>1368</b>
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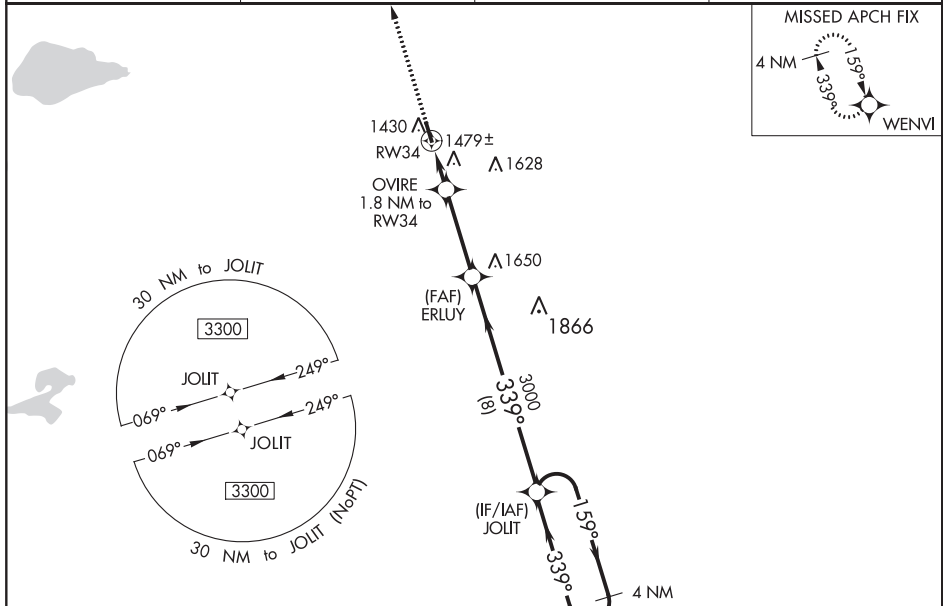
# RNAV (GPS) RWY 34

WADENA MUNI (ADC)

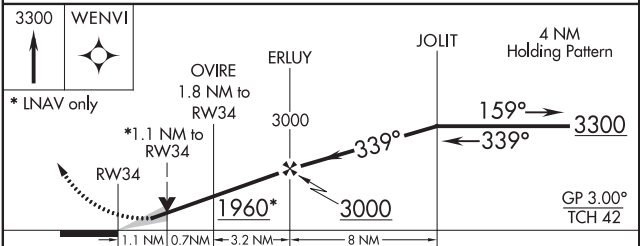
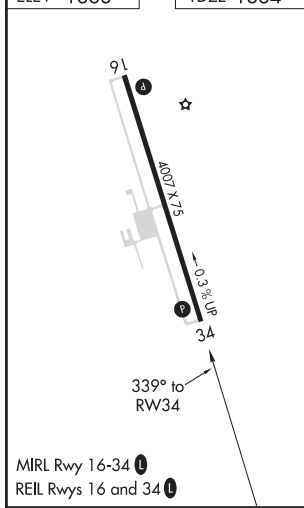
**⚠** DME/DME RNP-0.3 NA. VDP and Baro-VNAV NA with Staples altimeter setting. When local altimeter setting not received, use Staples altimeter setting and increase all DA 52 feet and all MDA 60 feet, increase LNAV/VNAV visibility 1/8 mile, LNAV Cat C visibility 1/4 mile and Circling Cat C visibility 1/4 mile. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (1°F) or above 54°C (130°F).

MISSED APPROACH: Climb to 3300 direct WENVI and hold.

AWOS-3 <b>128.325</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1368      TDZE 1364



CATEGORY	A	B	C	D
LPV DA	1614-1	250 (300-1)		NA
LNAV/VNAV DA	1791-1½	427 (500-1½)		NA
LNAV MDA	1740-1	376 (400-1)	1740-1½ 376 (400-1½)	NA
<b>C</b> CIRCLING	1780-1 412 (500-1)	1820-1 452 (500-1)	1940-1½ 572 (600-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>53334</b> <b>W09A</b>	APP CRS <b>090°</b>	Rwy Idg TDZE <b>1478</b> Apt Elev <b>1478</b>
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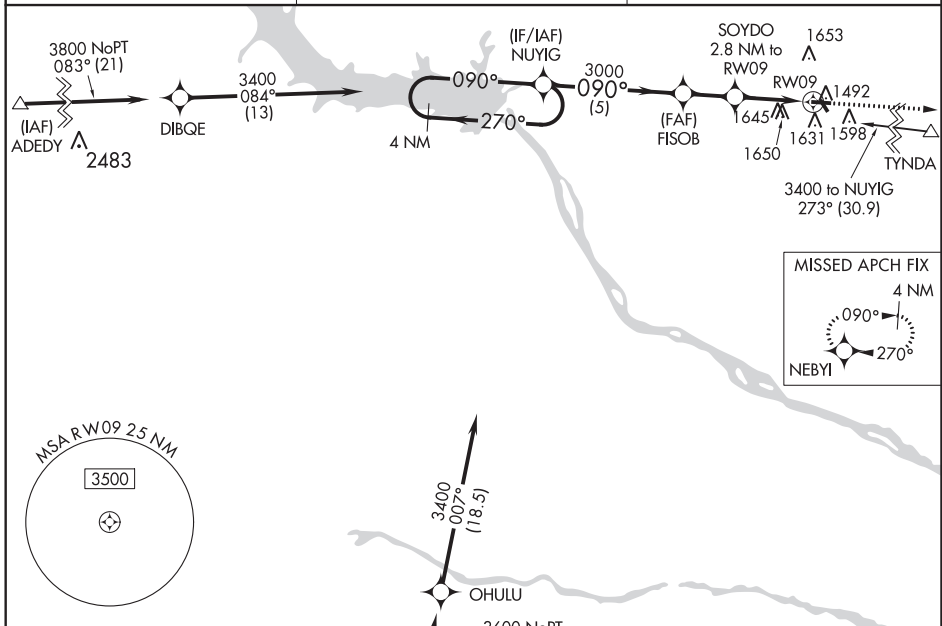
# RNAV (GPS) RWY 9

WAGNER MUNI (AGZ)

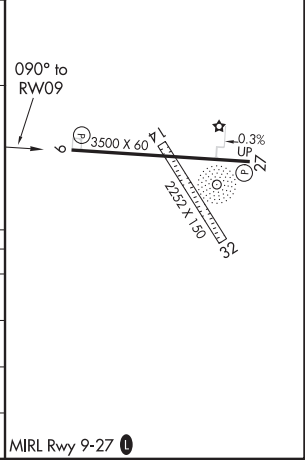
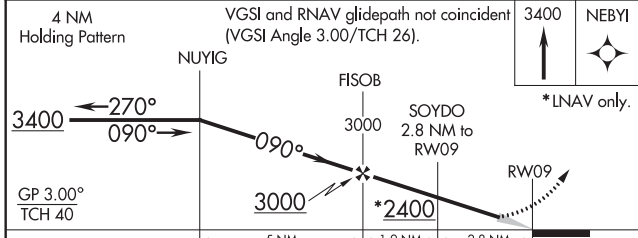
**NA** Circling to Rwy 27 NA at night. Baro-VNAV NA. DME/DME RNP-0.3 NA. Use Yankton altimeter setting; when not received use O'Neill altimeter setting and increase all DA 51 feet, all MDA 60 feet and increase LPV all Cats visibility 1/8 mile, and LNAV/VNAV all Cats visibility 1/2 mile.

MISSED APPROACH: Climb to 3400 direct NEBYI and hold.

YANKTON AWOS-3 <b>111.4</b>	MINNEAPOLIS CENTER <b>128.0 257.95</b>	AUNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1478	TDZE 1478
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CATEGORY	A	B	C	D
LPV DA	1847-1¼	369 (400-1¼)		NA
LNAV/VNAV DA	2053-2	575 (600-2)		NA
LNAV MDA	2020-1	542 (600-1)		NA
<b>C</b> CIRCLING	2080-1	602 (700-1)		NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>40134</b> <b>W27A</b>	APP CRS <b>270°</b>	Rwy Idg TDZE <b>1476</b> Apt Elev <b>1478</b>	<b>3500</b>
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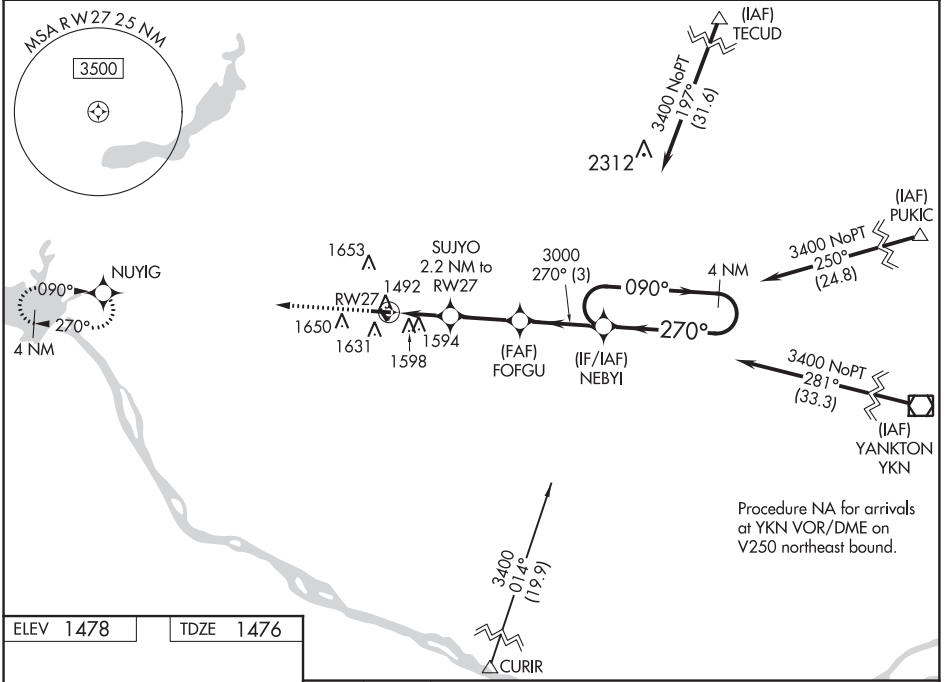
# RNAV (GPS) RWY 27

WAGNER MUNI (AGZ)

**NA** Baro-VNAV NA. DME/DME RNP-0.3 NA. Use Yankton altimeter setting; when not received, use O'Neill altimeter setting and increase all DA 51 feet, all MDA 60 feet and increase LPV all Cats and LNAV/VNAV all Cats visibility 1/8 mile. Rwy 27 Straight-in and Circling minimums NA at night. Helicopter visibility reduction below 1 SM not authorized.

**MISSED APPROACH:** Climb to 3400 direct NUYIG and hold.

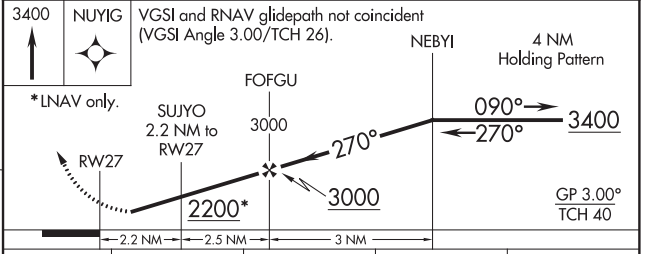
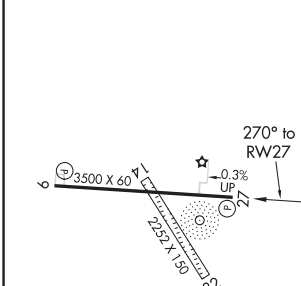
YANKTON AWOS-3 <b>111.4</b>	MINNEAPOLIS CENTER <b>128.0 257.95</b>	AUNICOM <b>122.8 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV <b>1478</b>	TDZE <b>1476</b>
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CATEGORY	A	B	C	D
LPV DA	1845-1¼	369 (400-1¼)		NA
LNAV/VNAV DA	2004-1⅞	528 (600-1⅞)		NA
LNAV MDA	1980-1	504 (600-1)		NA
<b>C</b> CIRCLING	2080-1	602 (700-1)		NA

APP CRS <b>151°</b>	Rwy Idg <b>5100</b>
	TDZE <b>968</b>
	Apt Elev <b>968</b>

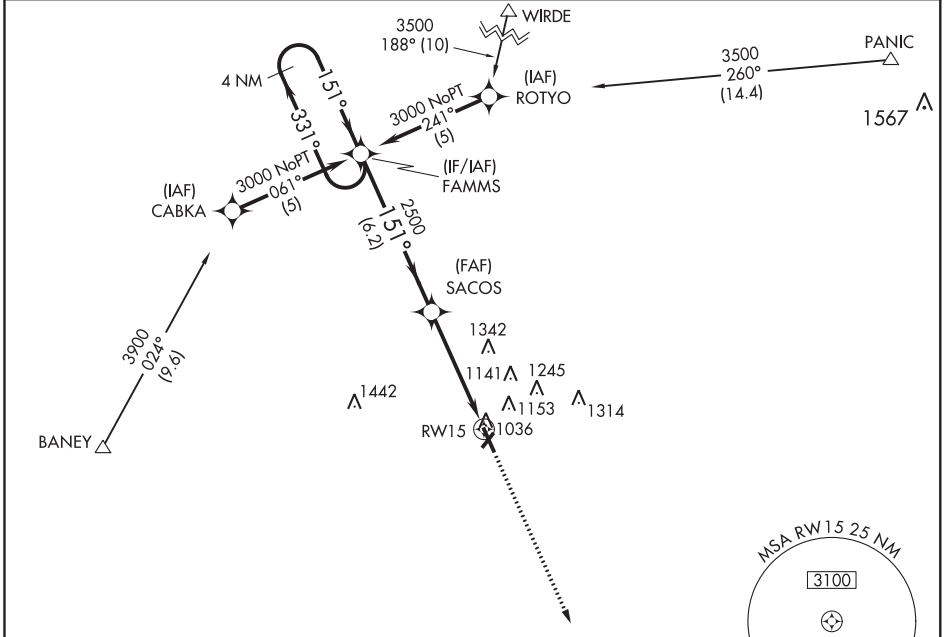
# RNAV (GPS) RWY 15

HARRY STERN (BWP)

**NA** DME/DME RNP-0.3 NA. Circling to Rwy 3/21 NA at night.  
 If local altimeter setting not received, use Fergus Falls, MN altimeter setting and increase all MDAs 80 feet.  
 VDP NA when using Fergus Falls, MN altimeter setting.

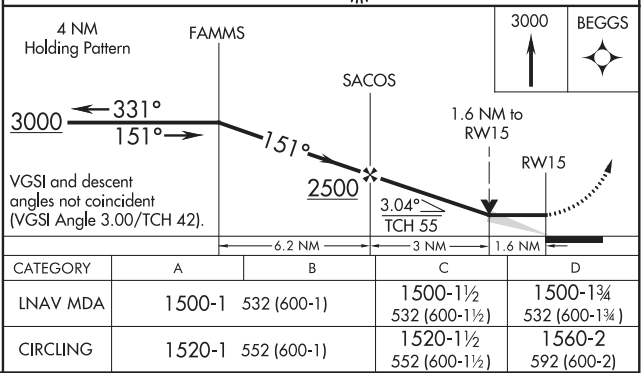
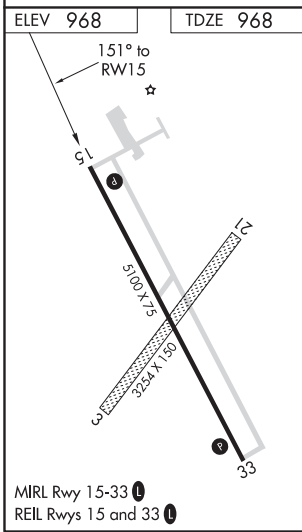
MISSED APPROACH: Climb to 3000 direct BEGGS and hold.

AWOS-3 <b>127.875</b>	GRAND FORKS RADIO <b>122.425</b>	UNICOM <b>123.0 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAHPETON, NORTH DAKOTA

AL-6654 (FAA)

16035

WAAS CH <b>77930</b> <b>W33A</b>	APP CRS <b>331°</b>	Rwy Idg TDZE <b>968</b> Apt Elev <b>968</b>	<b>5100</b>
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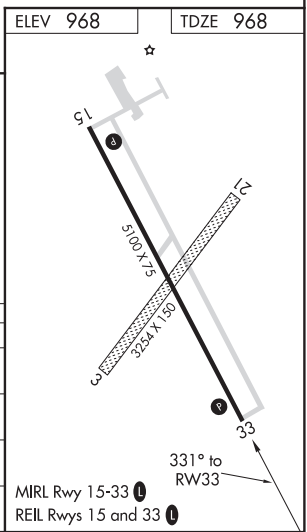
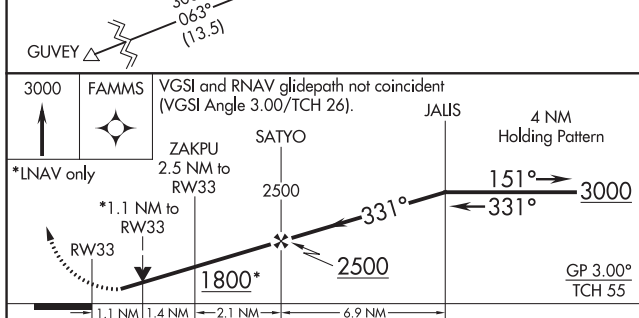
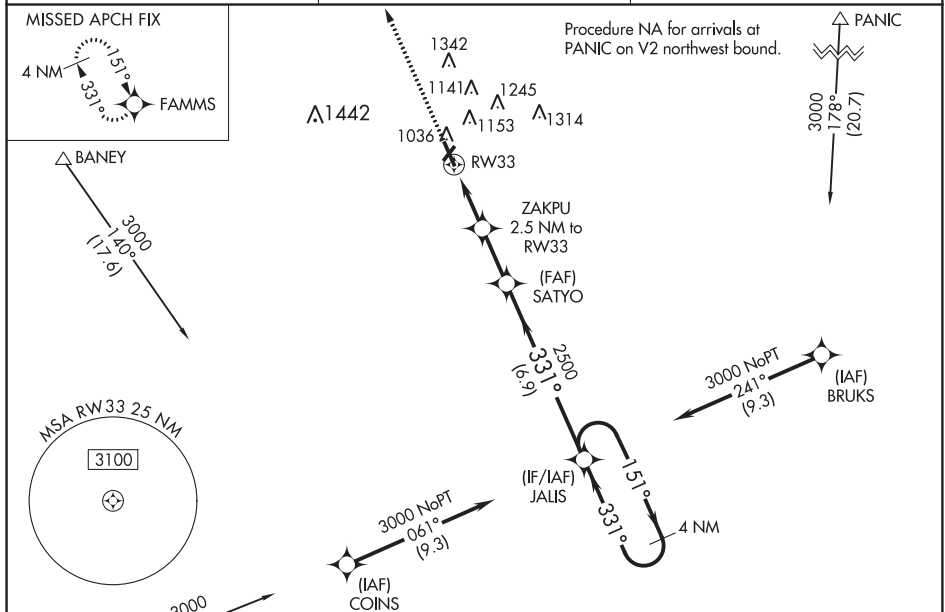
# RNAV (GPS) RWY 33

HARRY STERN (BWP)

**⚠** When VGSi inop, Circling Rwy 15 NA at night. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Fergus Falls altimeter setting and increase all DA/MDA 80 feet and all visibility 3/8 mile. Baro-VNAV and VDP NA when using Fergus Falls altimeter setting.

**MISSED APPROACH:** Climb to 3000 direct FAMMS and hold.

AWOS-3 <b>127.875</b>	GRAND FORKS RADIO <b>122.425</b>	UNICOM <b>123.0 (CTAF)</b>
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CATEGORY	A	B	C	D
LPV DA		1218-3/4	250 (300-3/4)	
LNAV/VNAV DA		1252-7/8	284 (300-7/8)	
LNAV MDA		1340-1	372 (400-1)	
CIRCLING	1520-1	552 (600-1)	1520-1 1/2 552 (600-1 1/2)	1560-2 592 (600-2)

WAHPETON, NORTH DAKOTA  
Amdt 1A 02APR15

46°15'N-96°36'W

# RNAV (GPS) RWY 33

HARRY STERN (BWP)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

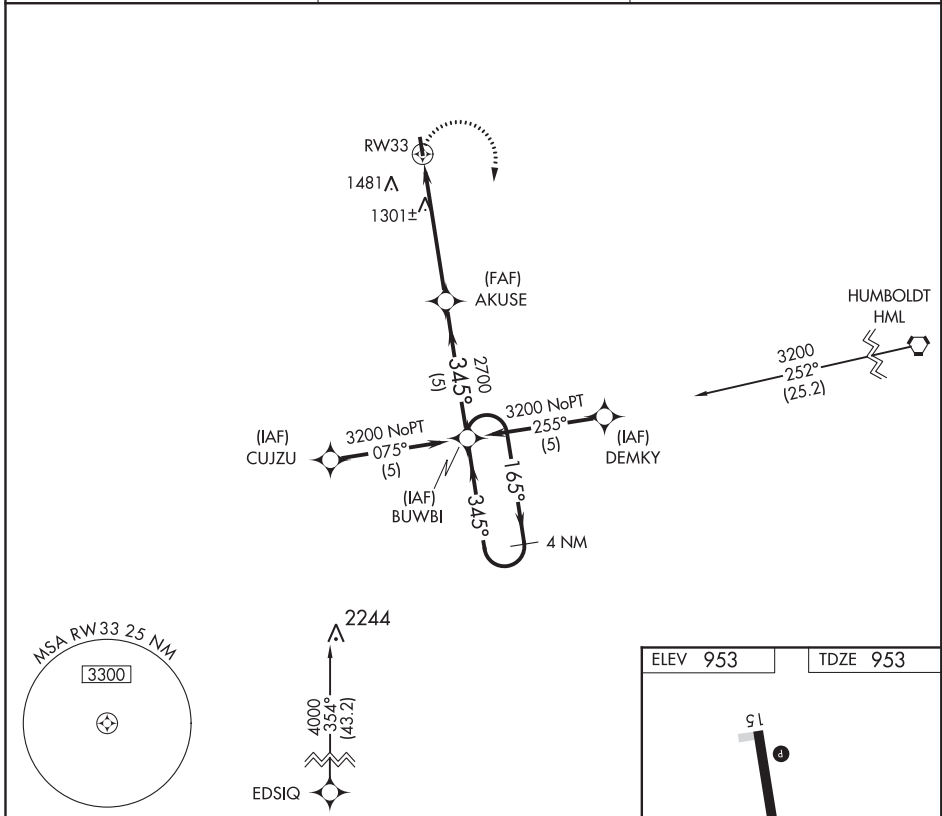
APP CRS <b>345°</b>	Rwy Idg <b>3400</b>
	TDZE <b>953</b>
	Apt Elev <b>953</b>

# RNAV (GPS) RWY 33

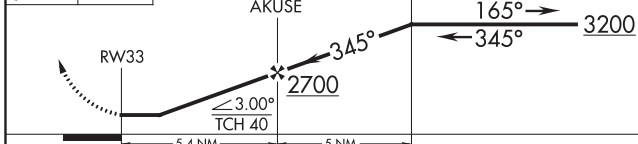
WALHALLA MUNI (96D)

<p><b>▽</b> Use Hallock Muni altimeter setting.  <b>△ NA</b> DME/DME RNP-0.3 NA.          Helicopter visibility reduction below ¾ SM NA.</p>	<p><b>MISSED APPROACH:</b> Climbing right turn to 3200 direct BUWBI WP and hold.</p>
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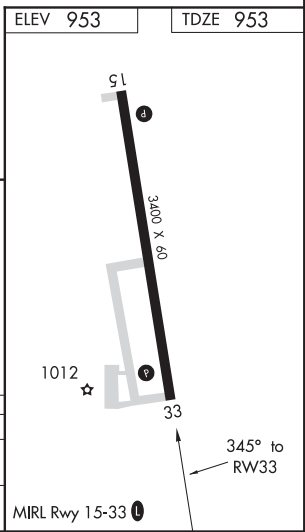
AWOS-3PT <b>118.175</b>	MINNEAPOLIS CENTER <b>132.15 269.6</b>	CTAF <b>122.9</b>
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3200	BUWBI	VGSI and descent angles not coincident (VGSI Angle 3.00/TCH 28).	4 NM Holding Pattern
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CATEGORY	A	B	C	D
LNVA MDA	1680-1	727 (800-1)		NA
CIRCLING	1680-1	727 (800-1)		NA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WALKER, MINNESOTA

AL-10403 (FAA)

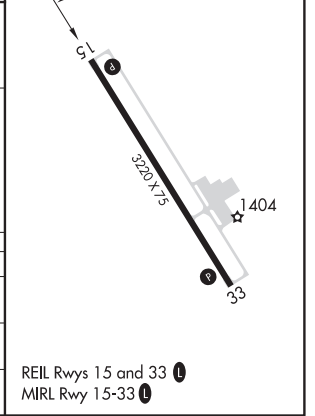
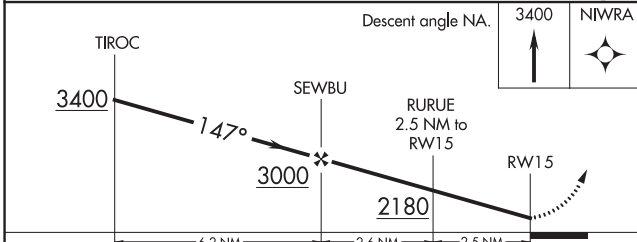
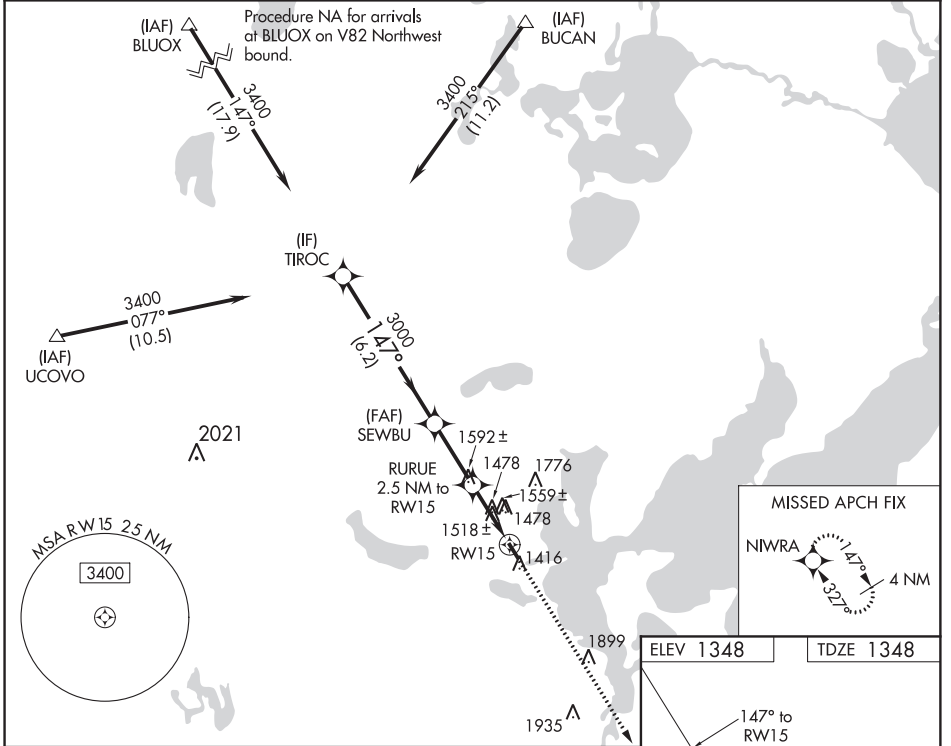
16035

WAAS CH <b>73034</b> <b>W15A</b>	APP CRS <b>147°</b>	Rwy Idg TDZE <b>1348</b> Apt Elev <b>1348</b>	<b>3220</b>
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# RNAV (GPS) RWY 15

WALKER MUNI (Y49)

<p><b>⚠</b> DME/DME RNP-0.3 NA. When local altimeter not received, use Longville altimeter setting and increase all MDA 60 feet; increase LP and LNAV Cat C visibility 1/8 mile and Circling Cat C visibility 1/4 mile. Procedure NA at night. Helicopter visibility reduction below 1 SM NA.</p>		<p>MISSED APPROACH: Climb to 3400 direct NIWRA and hold.</p>
AWOS-3PT <b>119.0</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	CTAF <b>122.90</b>



CATEGORY	A	B	C	D
LP MDA	1780-1	432 (500-1)	1780-1 1/4 432 (500-1 1/4)	NA
LNAV MDA	1820-1	472 (500-1)	1820-1 3/8 472 (500-1 3/8)	NA
<b>C</b> CIRCLING	1860-1	512 (600-1)	2140-2 1/4 792 (800-2 1/4)	NA

WALKER, MINNESOTA  
Amdt 1 20AUG15

47°10'N-94°39'W

# RNAV (GPS) RWY 15

WALKER MUNI (Y49)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



WAAS CH <b>82734</b> <b>W33A</b>	APP CRS <b>327°</b>	Rwy Idg <b>3220</b> TDZE <b>1348</b> Apt Elev <b>1348</b>
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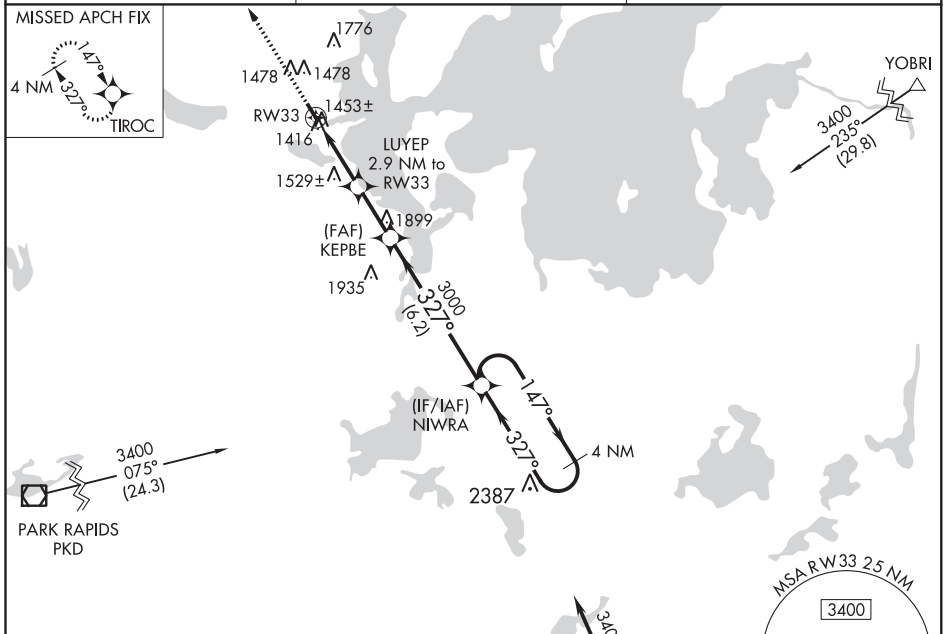
# RNAV (GPS) RWY 33

WALKER MUNI (Y49)

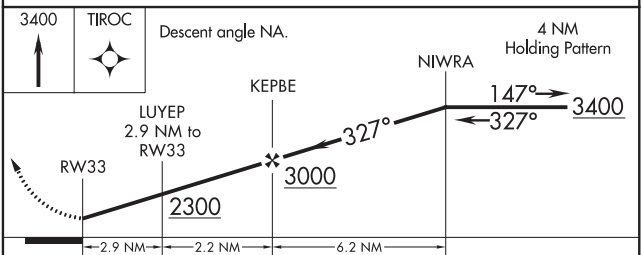
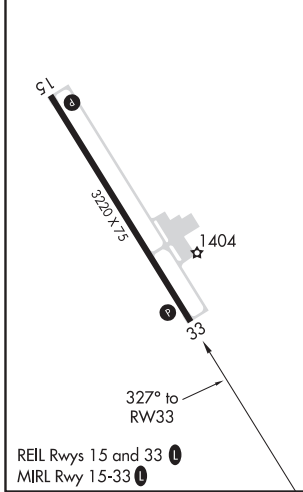
**⚠** DME/DME RNP-0.3 NA. When local altimeter not received, use Longville altimeter setting and increase all MDA 60 feet; increase LP and Circling Cat C visibility ¼ mile; increase LNAV Cat C visibility ½ mile. Procedure NA at night. Helicopter visibility reduction below 1 SM NA.

**⚠** MISSED APPROACH: Climb to 3400 direct TIROC and hold.

AWOS-3PT <b>119.0</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	CTAF <b>122.90</b>
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ELEV 1348	TDZE 1348
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CATEGORY	A	B	C	D
LP MDA	1720-1 372 (400-1)			NA
LNAV MDA	1780-1	432 (500-1)	1780-1¼ 432 (500-1¼)	NA
<b>C</b> CIRCLING	1860-1	512 (600-1)	2140-2¼ 792 (800-2¼)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

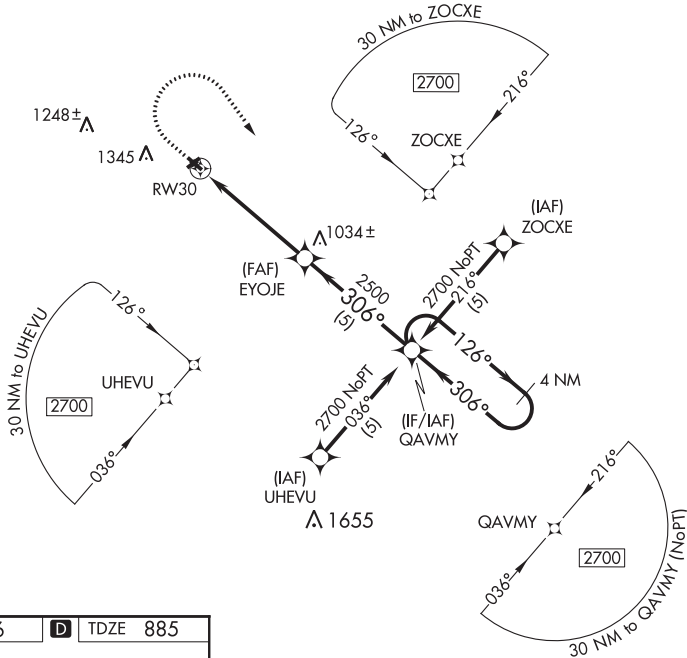
APP CRS <b>306°</b>	Rwy Idg TDZE Apt Elev	<b>3199</b> <b>885</b> <b>886</b>
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# RNAV (GPS) RWY 30

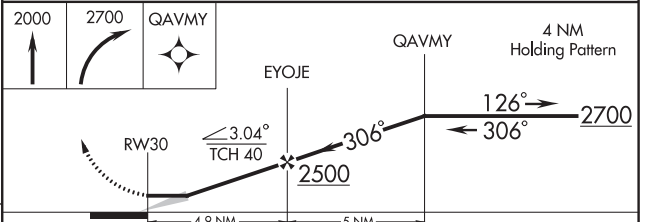
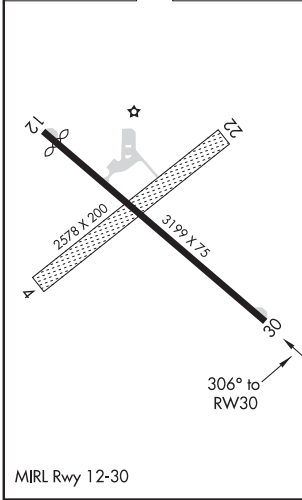
WARREN MUNI (D37)

**NA** Use Crookston Muni-Kirkwood Field altimeter setting. MISSED APPROACH: Climb to 2000, then climbing right turn to 2700 direct QAVMY WP and hold.

GRAND FORKS APP CON **118.1 318.1** UNICOM **122.8** (CTAF)



ELEV 886	<b>D</b>	TDZE 885
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CATEGORY	A	B	C	D
LNAV MDA	1480-1	595 (600-1)	NA	
CIRCLING	1480-1	594 (600-1)	NA	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-SWE <b>110.1</b> Chan <b>38</b>	APP CRS <b>315°</b>	Rwy Idg <b>5400</b> TDZE <b>1076</b> Apt Elev <b>1076</b>
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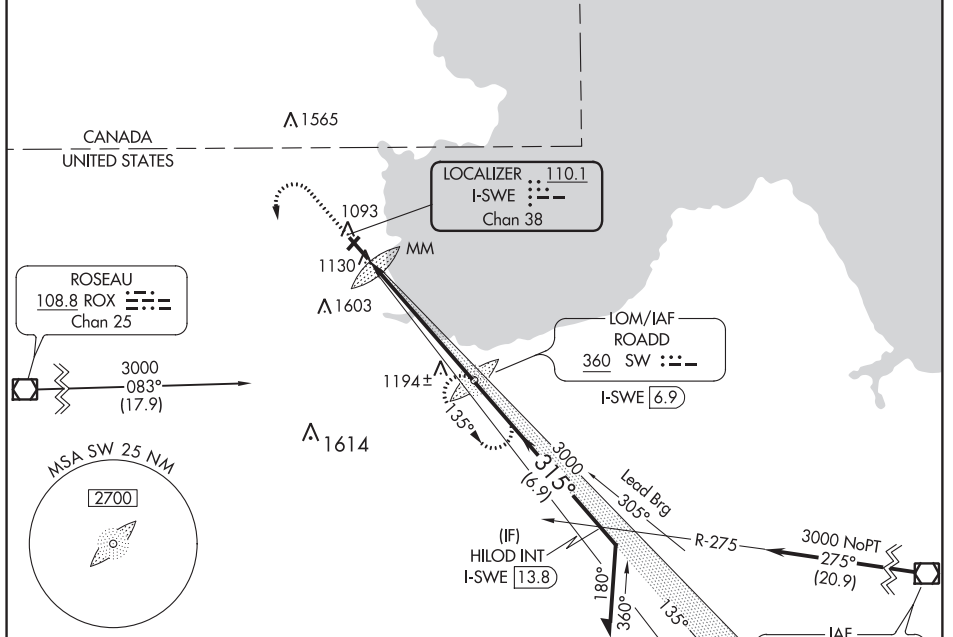
# ILS or LOC RWY 31

WARROAD INTL MEMORIAL (R.T)

**NA** When local altimeter setting not received, use Roseau altimeter setting and increase DA to 1312 feet; increase all MDA 40 feet and LOC Cat C/D visibility 1/8 mile.

**MALSR** MISSED APPROACH: Climb to 3000 then left turn direct ROADD LOM/I-SWE 6.9 DME and hold.

AWOS-3 <b>119.925</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	GCO <b>121.725</b>	UNICOM <b>123.05</b> (CTAF) <b>0</b>
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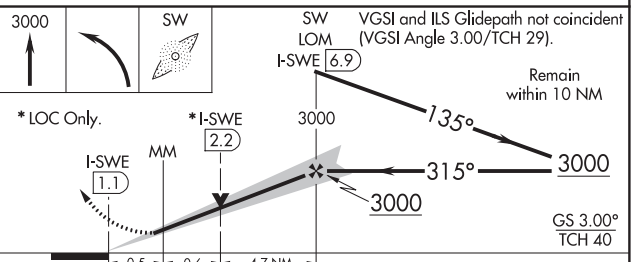
ELEV 1076	TDZE 1076
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HIRL Rwy 13-31 **0**  
REIL Rwy 13 **0**

FAF to MAP 5.8 NM

Knots	60	90	120	150	180
Min:Sec	5:48	3:52	2:54	2:19	1:56

## ADF or DME REQUIRED



CATEGORY	A	B	C	D
S-ILS 31		1276-1/2	200 (200-1/2)	
S-LOC 31	1460-1/2	384 (400-1/2)	1460-5/8	384 (400-5/8)
<b>C</b> CIRCLING	1500-1 424 (500-1)	1540-1 464 (500-1)	1960-2 3/4 884 (900-2 3/4)	1960-3 884 (900-3)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>69437</b> <b>W13A</b>	APP CRS <b>135°</b>	Rwy Idg TDZE Apt Elev	<b>5400</b> <b>1076</b> <b>1076</b>
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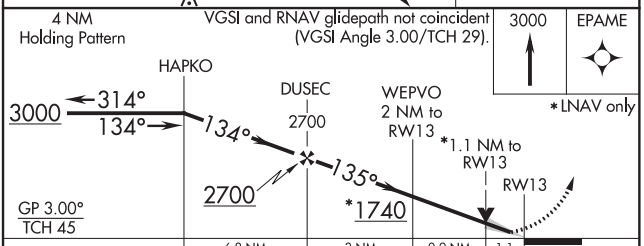
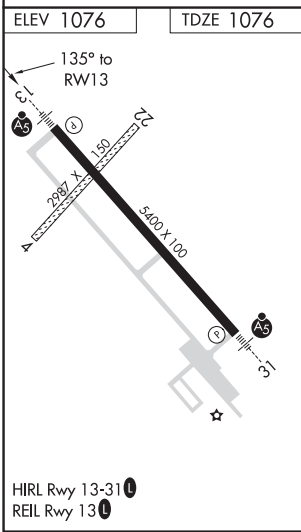
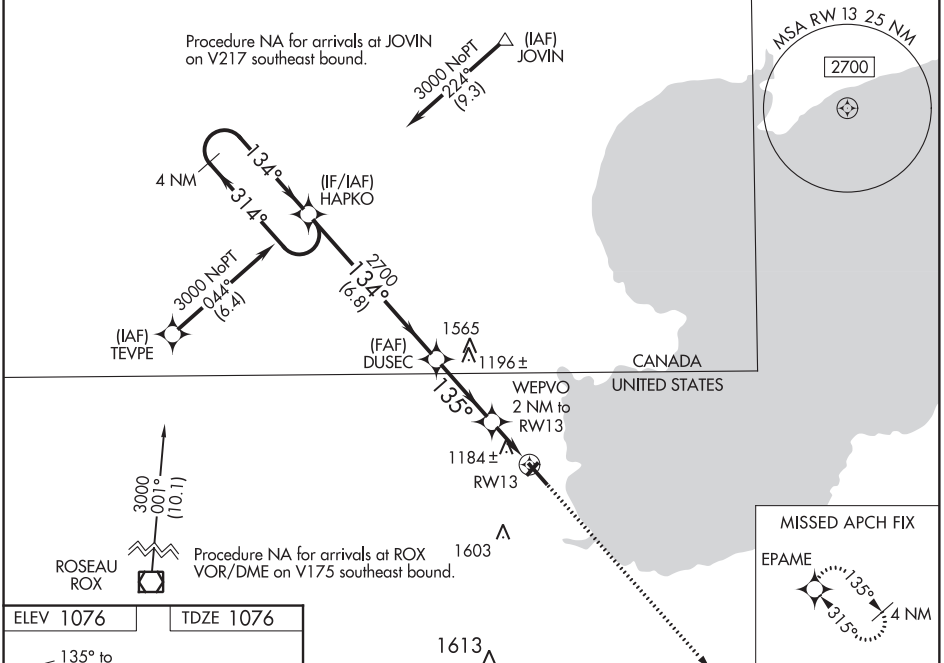
# RNAV (GPS) RWY 13

WARROAD INTL MEMORIAL (R.R.T)

**Baro-VNAV NA** when using Roseau altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -21°C (-5°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. VDP NA with Roseau altimeter setting. When local altimeter setting not received, use Roseau altimeter setting and increase all DA 36 feet, all MDA 40 feet, and increase LNAV/VNAV all Cats and LNAV Cat C/D visibility 1/8 mile.

**MALSR**  
MISSED APPROACH:  
Climb to 3000 direct EPAME and hold.

AWOS-3 <b>119.925</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	GCO <b>121.725</b>	UNICOM <b>123.05</b> (CTAF) <b>0</b>
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CATEGORY	A	B	C	D
LPV DA		1276-3/4	200 (200-3/4)	
LNAV/VNAV DA		1365-1	289 (300-1)	
LNAV MDA		1440-1	364 (400-1)	
<b>C</b> CIRCLING	1500-1 424 (500-1)	1540-1 464 (500-1)	1960-23/4 884 (900-23/4)	1960-3 884 (900-3)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>42706</b> W31A	APP CRS <b>315°</b>	Rwy Idg TDZE <b>1074</b> Apt Elev <b>1074</b>
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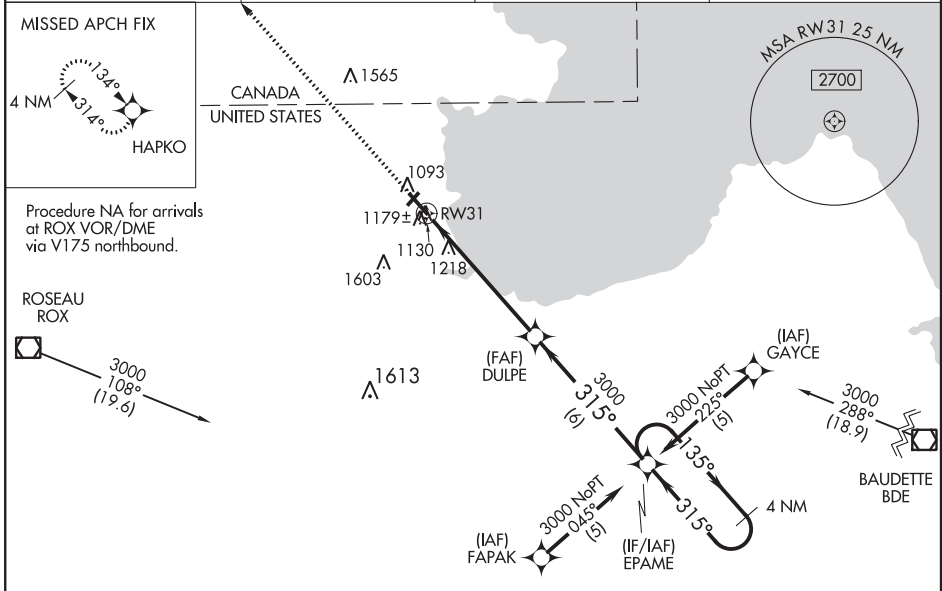
# RNAV (GPS) RWY 31

WARROAD INTL MEMORIAL (R.R.T)

**Baro-VNAV NA** when using Roseau altimeter setting. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Roseau altimeter setting and increase all DAs 36 feet and all MDAs 40 feet and increase, LNAV/VNAV all Cats and LNAV Cat D visibilities ¼ mile. VDP NA when using Roseau altimeter setting. For inop MALS/R when using Roseau altimeter setting increase LPV all Cats visibility to 1 mile. For uncompensated Baro-VNAV systems, LNAV-VNAV NA below -17°C (2°F) or above 47°C (116°F).

**MALS/R**  
MISSED APPROACH:  
Climb to 3000 direct HAPKO and hold.

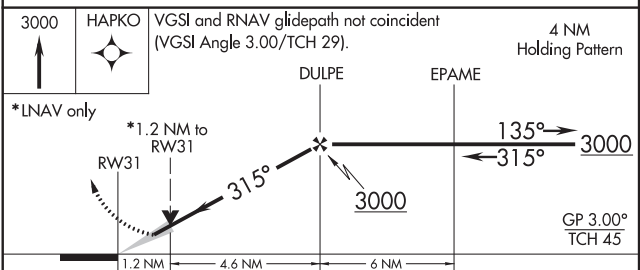
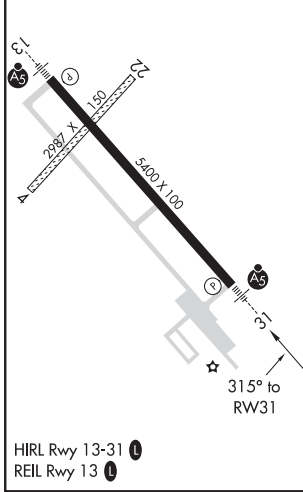
AWOS-3 <b>119.925</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	GCO <b>121.725</b>	UNICOM <b>123.05 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1074	TDZE 1074
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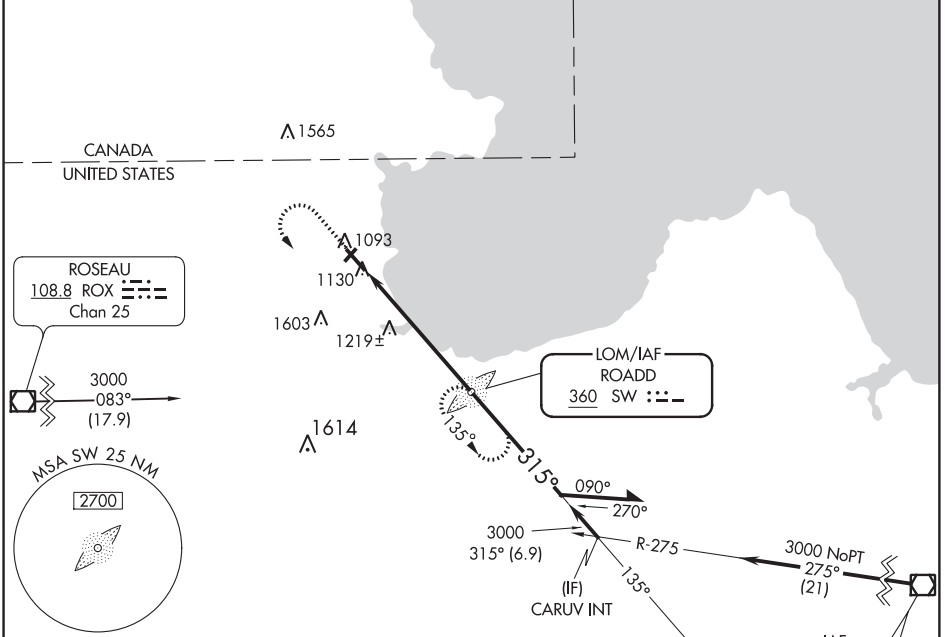
CATEGORY	A	B	C	D
LPV DA		1324-½	250 (300-½)	
LNAV/VNAV DA		1449-¾	375 (400-¾)	
LNAV MDA	1480-½	406 (500-½)	1480-¾ 406 (500-¾)	1480-1 406 (500-1)
CIRCLING	1500-1 426 (500-1)	1540-1 466 (500-1)	1540-1½ 466 (500-1½)	1640-2 566 (600-2)

LOM SW <b>360</b>	APP CRS <b>315°</b>	Rwy Idg TDZE Apt Elev	<b>5400</b> <b>1076</b> <b>1076</b>
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**NDB RWY 31**  
WARROAD INTL MEMORIAL (R.R.T)

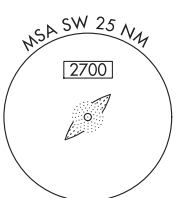
NA -36°C/-33°F	When local altimeter setting not received, use Roseau altimeter setting and increase all MDA 40 feet.	MALS A5	MISSED APPROACH: Climb to 3000 then left turn ROADD LOM and hold.
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AWOS-3 <b>119.925</b>	MINNEAPOLIS CENTER <b>134.75 251.1</b>	GCO <b>121.725</b>	UNICOM <b>123.05 (CTAF)</b>
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ROSEAU  
108.8 ROX  
Chan 25

3000  
083°  
(17.9)

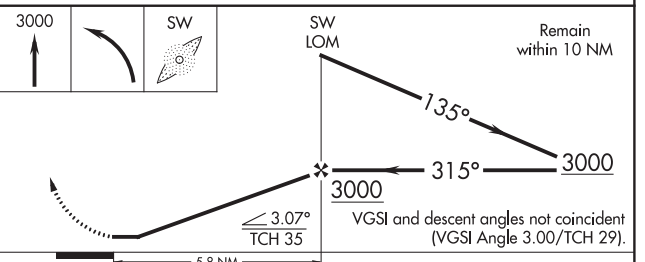
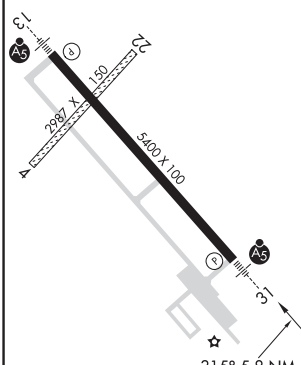


LOM/IAF  
ROADD  
360 SW

IAF  
BAUDETTE  
111.6 BDE  
Chan 53

Procedure NA for arrivals at BDE VOR/DME on V217 Southeast bound.

ELEV 1076	TDZE 1076
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FAF to MAP 5.8 NM					
Knots	60	90	120	150	180
Min:Sec	5:48	3:52	2:54	2:19	1:56

CATEGORY	A	B	C	D
S-31	1540-3/4	464 (500-3/4)	1540-1	464 (500-1)
CIRCLING	1540-1	464 (500-1)	1960-2 3/4 884 (900-2 3/4)	1960-3 884 (900-3)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>70532</b> <b>W15A</b>	APP CRS <b>152°</b>	Rwy Idg TDZE <b>1127</b> Apt Elev <b>1127</b>	<b>3399</b>
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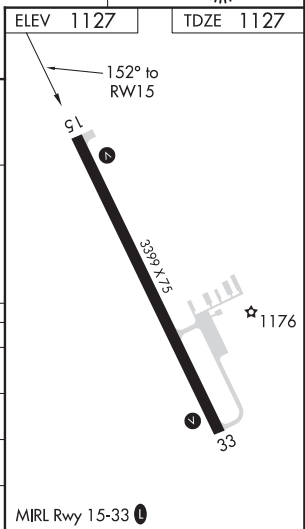
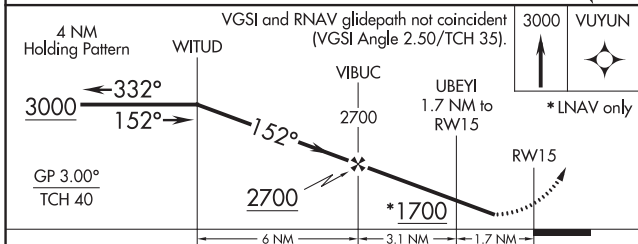
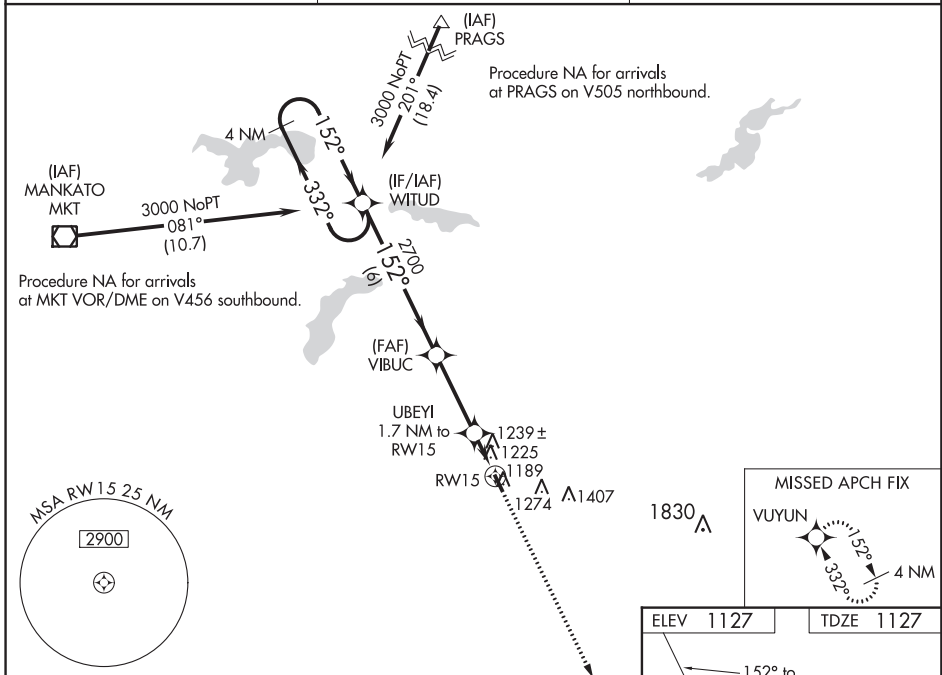
# RNAV (GPS) RWY 15

WASECA MUNI (ACQ)

**⚠** Baro-VNAV NA when using Owatonna altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 54°C (130°F). Procedure NA at night. DME/DME RNP-0.3 NA. When local altimeter setting not received, use Owatonna altimeter setting and increase all DA 34 feet and all MDA 40 feet; increase LNAV and Circling Cat C visibility ¼ mile. Helicopter visibility reduction below 1 SM NA.

**MISSED APPROACH:**  
Climb to 3000 direct VUYUN and hold.

AWOS-3 <b>118.425</b>	MINNEAPOLIS CENTER <b>132.35 307.3</b>	UNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LPV DA	1377-1 250 (300-1)			NA
LNAV/VNAV DA	1389-1	262 (300-1)	1389-1½ 262 (300-1½)	NA
LNAV MDA	1540-1	413 (500-1)	1540-1½ 413 (500-1½)	NA
<b>C</b> CIRCLING	1560-1 433 (500-1)	1620-1 493 (500-1)	1760-1¾ 633 (700-1¾)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WASECA, MINNESOTA

AL-6150 (FAA)

15092

WAAS CH <b>86532</b> <b>W33A</b>	APP CRS <b>332°</b>	Rwy Idg TDZE <b>1125</b> Apt Elev <b>1127</b>	<b>3399</b>
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# RNAV (GPS) RWY 33

WASECA MUNI (ACQ)

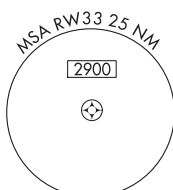
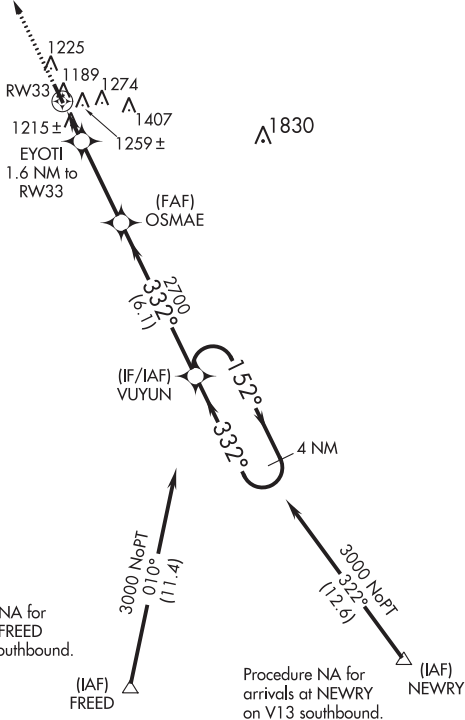
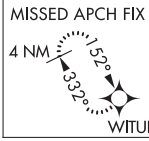
**⚠** When local altimeter setting not received, use Owatonna altimeter setting and increase all MDAs 40 feet, increase LP and LNAV Cat C visibility 1/8 mile and Circling Cat C visibility 1/8 mile. DME/DME RNP-0.3 NA. Procedure NA at night. Helicopter visibility reduction below 1 SM NA.

MISSED APPROACH:  
Climb to 3000 direct  
WITUD and hold.

AWOS-3  
**118.425**

MINNEAPOLIS CENTER  
**132.35 307.3**

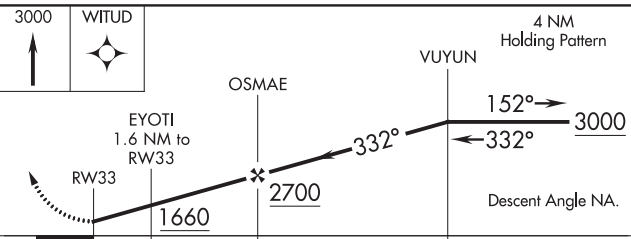
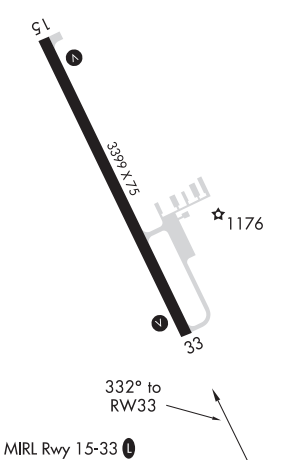
UNICOM  
**122.8 (CTAF) 0**



ELEV 1127	TDZE 1125
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Procedure NA for arrivals at FREED on V505 southbound.

Procedure NA for arrivals at NEWRY on V13 southbound.



CATEGORY	A	B	C	D
LP MDA	1480-1 355 (400-1)			NA
LNAV MDA	1520-1	395 (400-1)	1520-1 1/8 395 (400-1 1/8)	NA
<b>C</b> CIRCLING	1560-1 433 (500-1)	1620-1 493 (500-1)	1760-1 1/2 633 (700-1 1/2)	NA

WASECA, MINNESOTA  
Orig-A 02APR15

44°04'N-93°33'W

# RNAV (GPS) RWY 33

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

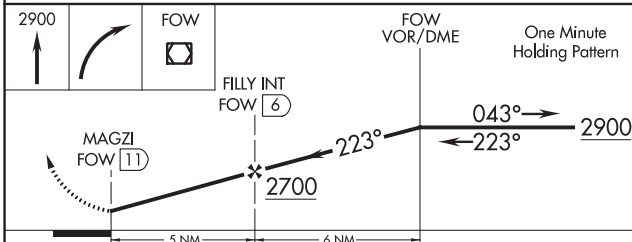
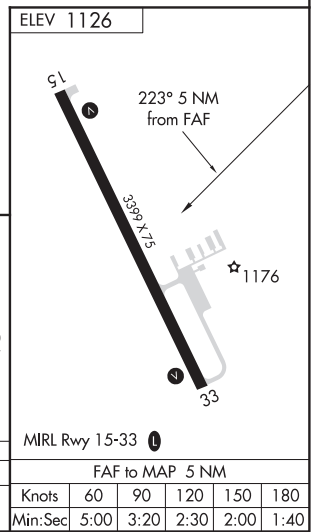
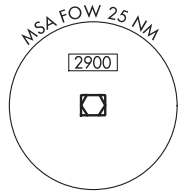
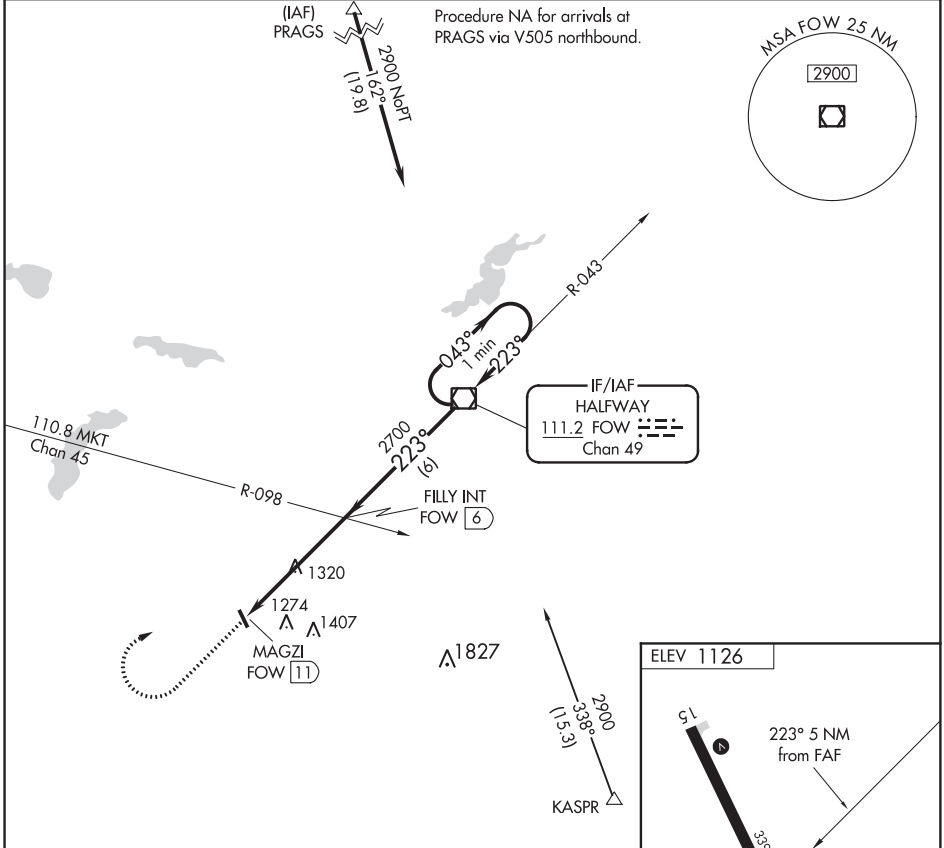


VOR/DME FOW <b>111.2</b> Chan <b>49</b>	APP CRS <b>223°</b>	Rwy Idg TDZE Apt Elev <b>N/A</b> <b>N/A</b> <b>1126</b>
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**VOR-A**  
WASECA MUNI (ACQ)

**NA** When local altimeter setting not received, use Owatonna altimeter setting and increase all MDA 40 feet. MISSED APPROACH: Climb to 2900 then right turn direct FOW VOR/DME and hold.

AWOS-3 <b>118.425</b>	MINNEAPOLIS CENTER <b>132.35 307.3</b>	UNICOM <b>122.8</b> (CTAF) <b>L</b>
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CATEGORY	A	B	C	D	FAF to MAP 5 NM					
CIRCLING	1620-1 494 (500-1)	1640-1 514 (600-1)	1660-1½ 534 (600-1½)	NA	Knots	60	90	120	150	180
					Min:Sec	5:00	3:20	2:30	2:00	1:40

NC-1, 10 NOV 2016 to 05 JAN 2017

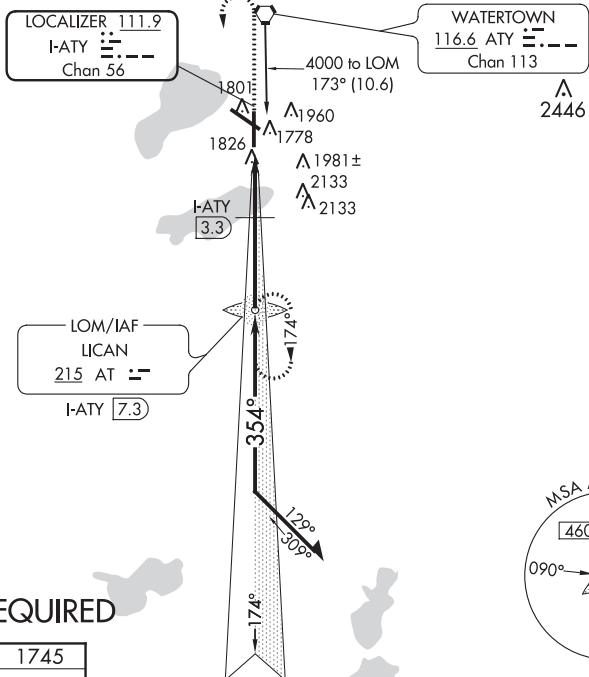
NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-ATY <b>111.9</b> Chan <b>56</b>	APP CRS <b>354°</b>	Rwy Idg <b>6893</b> TDZE <b>1745</b> Apt Elev <b>1749</b>
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# ILS or LOC RWY 35

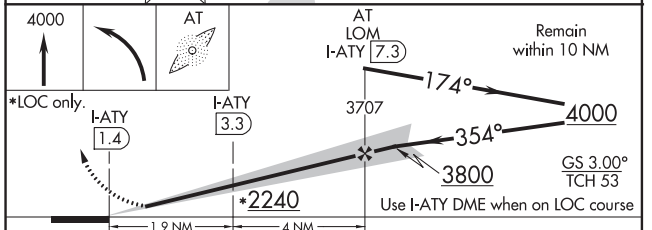
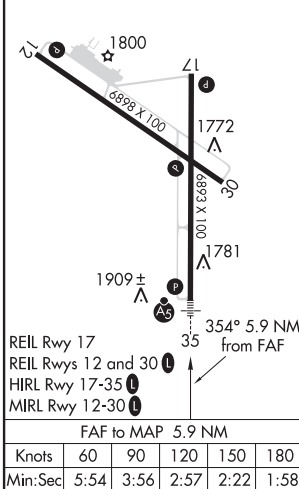
WATERTOWN RGNL (ATY)

<p>S-LOC 35 DME minimums, increase Cat D visibility 1/4 mile for inoperative MALSRS.</p>	<p>MALSRS</p>	<p>MISSED APPROACH: Climb to 4000 then left turn direct ILCAN LOM/I-ATY 7.3 DME and hold.</p>
<p>ASOS <b>126.625</b></p>	<p>MINNEAPOLIS CENTER <b>128.5 306.2</b></p>	<p>UNICOM <b>123.05 (CTAF) 0</b></p>



**ADF or DME REQUIRED**

ELEV 1749	D	TDZE 1745
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CATEGORY	A	B	C	D
S-ILS 35		1945-1/2	200 (200-1/2)	
S-LOC 35	2240-1/2	495 (500-1/2)	2240-3/4 495 (500-3/4)	2240-1 495 (500-1)
CIRCLING	2260-1	511 (600-1)	2260-1 1/2 511 (600-1 1/2)	2340-2 591 (600-2)
DME MINIMUMS				
S-LOC 35	2080-1/2	335 (400-1/2)		2080-3/4 335 (400-3/4)
CIRCLING	2260-1	511 (600-1)	2260-1 1/2 511 (600-1 1/2)	2340-2 591 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>53405</b> <b>W12A</b>	APP CRS <b>118°</b>	Rwy Idg TDZE Apt Elev	<b>6898</b> <b>1749</b> <b>1749</b>
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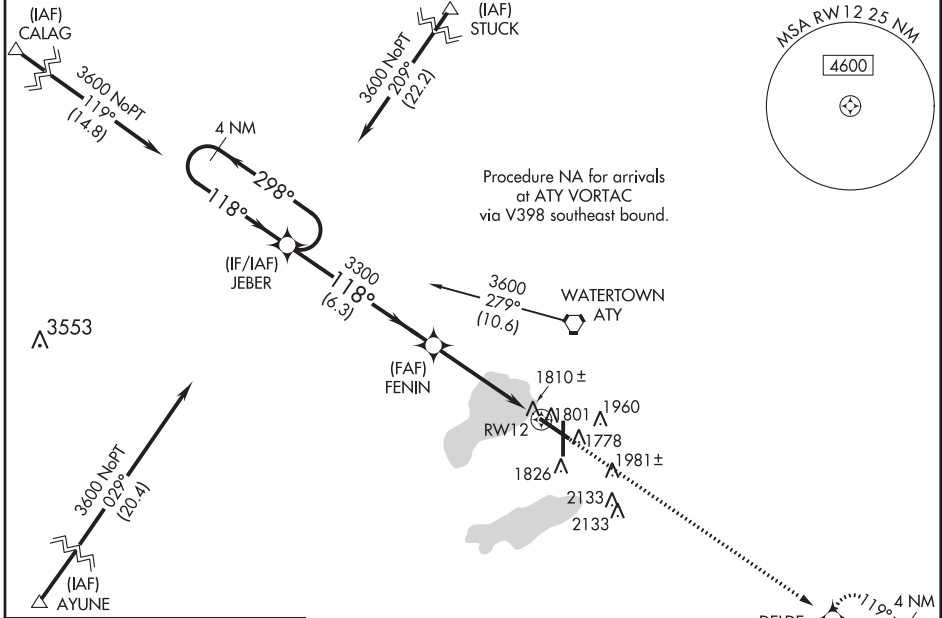
# RNAV (GPS) RWY 12

WATERTOWN RGNL (ATY)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). DME/DME RNP -0.3 NA. Visibility reduction by helicopters NA. If local altimeter setting not received, use Brookings altimeter setting and increase all DAs 105 feet and all MDAs 120 feet. VDP NA when using Brookings altimeter setting. Baro-VNAV NA when using Brookings altimeter setting.

**MISSED APPROACH:**  
Climb to 3600 direct DELDE and hold.

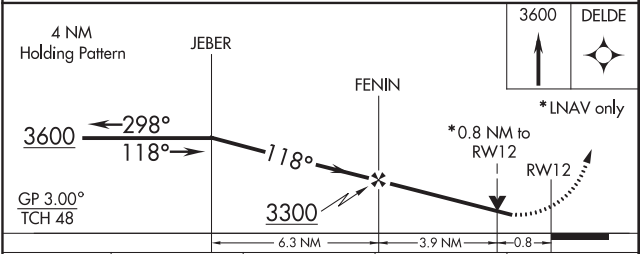
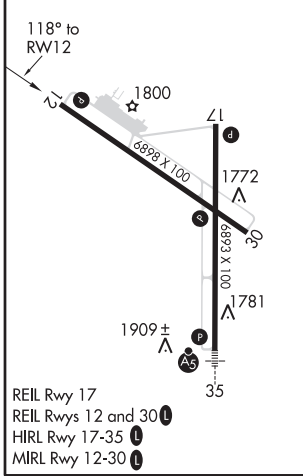
ASOS <b>126.625</b>	MINNEAPOLIS CENTER <b>128.5 306.2</b>	UNICOM <b>123.05 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1749	<b>D</b>	TDZE 1749
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CATEGORY	A	B	C	D
LPV DA		2021-1	272 (300-1)	
LNAV/VNAV DA		2076-1¼	327 (400-1¼)	
LNAV MDA		2060-1	311 (400-1)	
CIRCLING	2260-1	511 (600-1)	2260-1½ 511 (600-1½)	2340-2 591 (600-2)

WAAS CH <b>82305</b> <b>W17A</b>	APP CRS <b>174°</b>	Rwy Idg TDZE <b>1740</b> Apt Elev <b>1749</b>	<b>6893</b> <b>1740</b> <b>1749</b>
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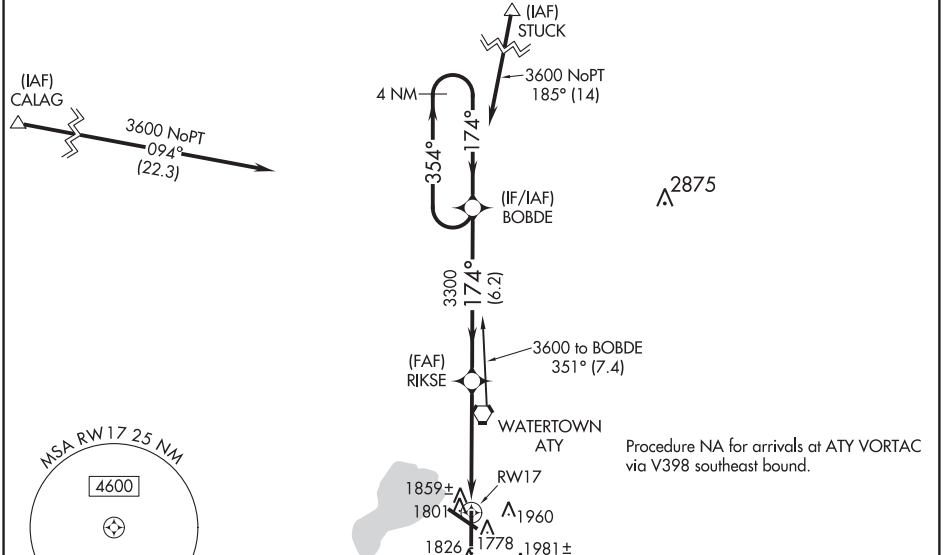
# RNAV (GPS) RWY 17

WATERTOWN RGNL (ATY)

**⚠** Baro-VNAV NA when using Brookings altimeter setting. DME/DME RNP-0.3 NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). VDP NA when using Brookings altimeter setting. If local altimeter setting not received, use Brookings altimeter setting and increase all DAs 105 feet and all MDAs 120 feet.

MISSED APPROACH: Climb to 4000 direct APEDE and via 154° track to VESTY and hold.

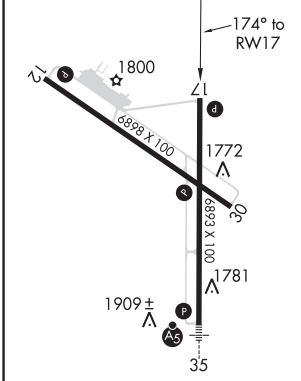
ASOS <b>126.625</b>	MINNEAPOLIS CENTER <b>128.5 306.2</b>	UNICOM <b>123.05 (CTAF) 0</b>
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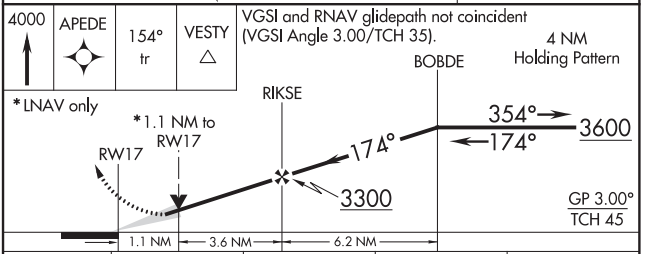
NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1749	<b>D</b>	TDZE 1740
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- REIL Rwy 17
- REIL Rwy 12 and 30 **0**
- HIRL Rwy 17-35 **0**
- MIRL Rwy 12-30 **0**



CATEGORY	A	B	C	D
LPV DA	2054-1		314 (400-1)	
LNAV/VNAV DA	2129-1¼		389 (400-1¼)	
LNAV MDA	2120-1 380 (400-1)		2120-1¼ 380 (400-1¼)	
CIRCLING	2260-1 511 (600-1)		2260-1½ 511 (600-1½) 2340-2 591 (600-2)	

WAAS CH <b>50305</b> <b>W30A</b>	APP CRS <b>299°</b>	Rwy Idg <b>6898</b> TDZE <b>1736</b> Apt Elev <b>1749</b>
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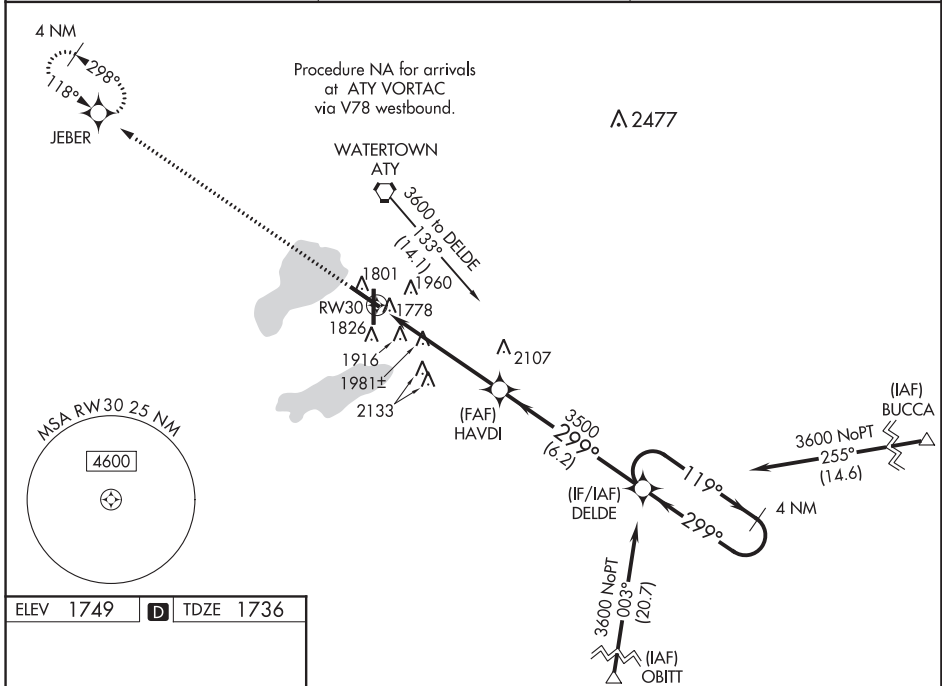
# RNAV (GPS) RWY 30

WATERTOWN RGNL (ATY)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Brookings altimeter setting and increase all DA 105 feet and all MDA 120 feet, increase LPV and LNAV/VNAV all Cats. visibility ¼ mile, LNAV and Circling Cat. B visibility ¼ mile, Cat. C/D visibility ½ mile. VDP NA when using Brookings altimeter setting. Baro-VNAV NA when using Brookings altimeter setting.

**MISSED APPROACH:**  
Climb to 3600 direct JEBER and hold.

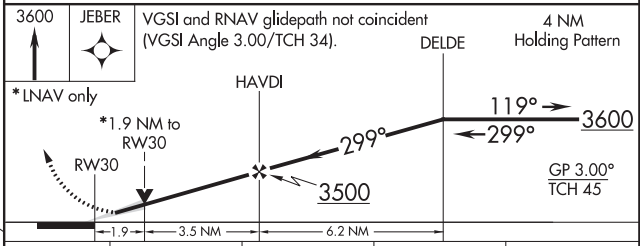
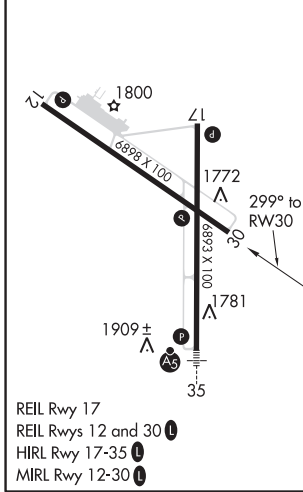
ASOS <b>126.625</b>	MINNEAPOLIS CENTER <b>128.5 306.2</b>	UNICOM <b>123.05 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1749	<b>D</b>	TDZE 1736
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CATEGORY	A	B	C	D
LPV DA	1990-1 254 (300-1)			
LNAV/VNAV DA	2208-1¾ 472 (500-1¾)			
LNAV MDA	2360-1 624 (700-1)	2360-1¾ 624 (700-1¾)	2360-2 624 (700-2)	2360-2 624 (700-2)
CIRCLING	2360-1 611 (700-1)	2360-1¾ 611 (700-1¾)	2360-2 611 (700-2)	2360-2 611 (700-2)

WATERTOWN, SOUTH DAKOTA

AL-444 (FAA)


15288

WAAS CH <b>82614</b> <b>W35A</b>	APP CRS <b>354°</b>	Rwy Idg TDZE <b>6893</b> <b>1745</b> Apt Elev <b>1749</b>
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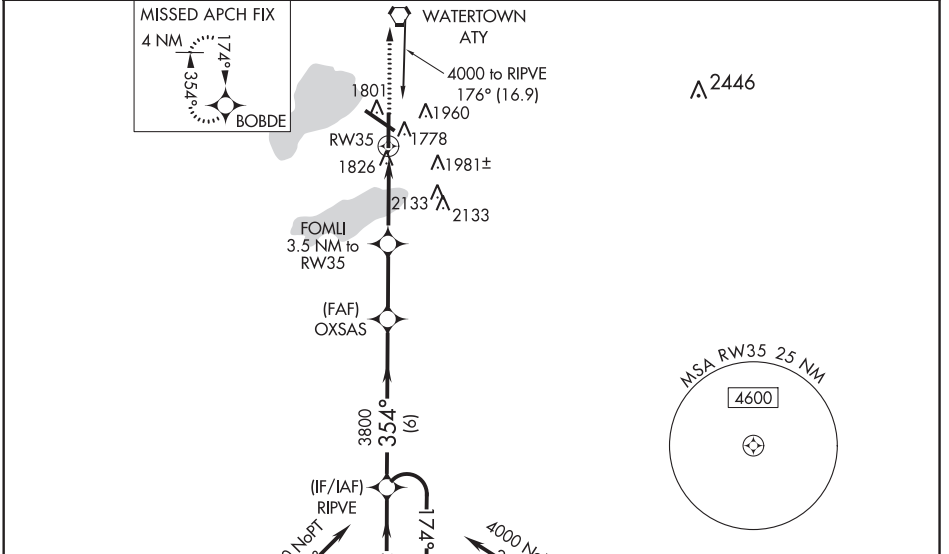
# RNAV (GPS) RWY 35

WATERTOWN RGNL (ATY)

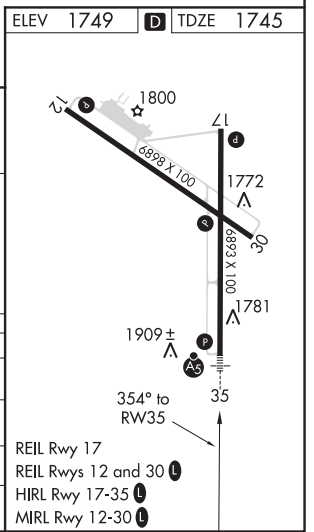
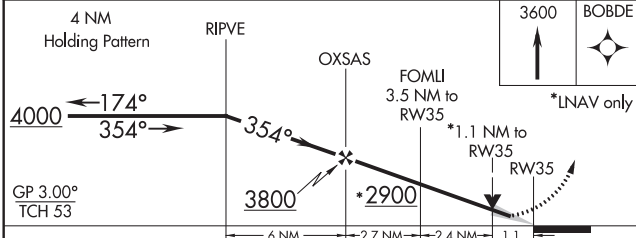
For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). DME/DME RNP -0.3 NA. VDP and Baro-VNAV NA when using Brookings altimeter setting. When local altimeter setting not received, use Brookings altimeter setting and increase all DA 105 feet and all MDA 120 feet, increase LNAV/VNAV all Cats visibility 1/2 mile, increase LNAV Cat C/D visibility 1/4 mile. For inoperative MALSR increase LNAV Cat C/D visibility 1/4 mile. Inoperative table does not apply to LPV all Cats, LNAV Cats A/B. When using Brookings altimeter setting, inoperative table does not apply to LPV all Cats, LNAV Cats A/B.

MALSR  MISSED APPROACH: Climb to 3600 direct BOBDE and hold.

ASOS <b>126.625</b>	MINNEAPOLIS CENTER <b>128.5 306.2</b>	UNICOM <b>123.05 (CTAF) 0</b>
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ELEV 1749	D	TDZE 1745
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CATEGORY	A	B	C	D
LPV DA	1945-1		200 (200-1)	
LNAV/VNAV DA	2180-1		435 (500-1)	
LNAV MDA	2160-1		415 (500-1)	
CIRCLING	2260-1 511 (600-1)		2260-1 1/2 511 (600-1 1/2)	
	2260-2 591 (600-2)		2340-2 591 (600-2)	

WATERTOWN, SOUTH DAKOTA  
Orig 27AUG09

44°55'N-97°09'W

# WATERTOWN RGNL (ATY) RNAV (GPS) RWY 35

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-ATY <b>111.9</b> Chan <b>56</b>	APP CRS <b>174°</b>	Rwy Idg TDZE Apt Elev	<b>6893</b> <b>1740</b> <b>1749</b>
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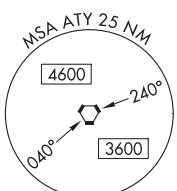
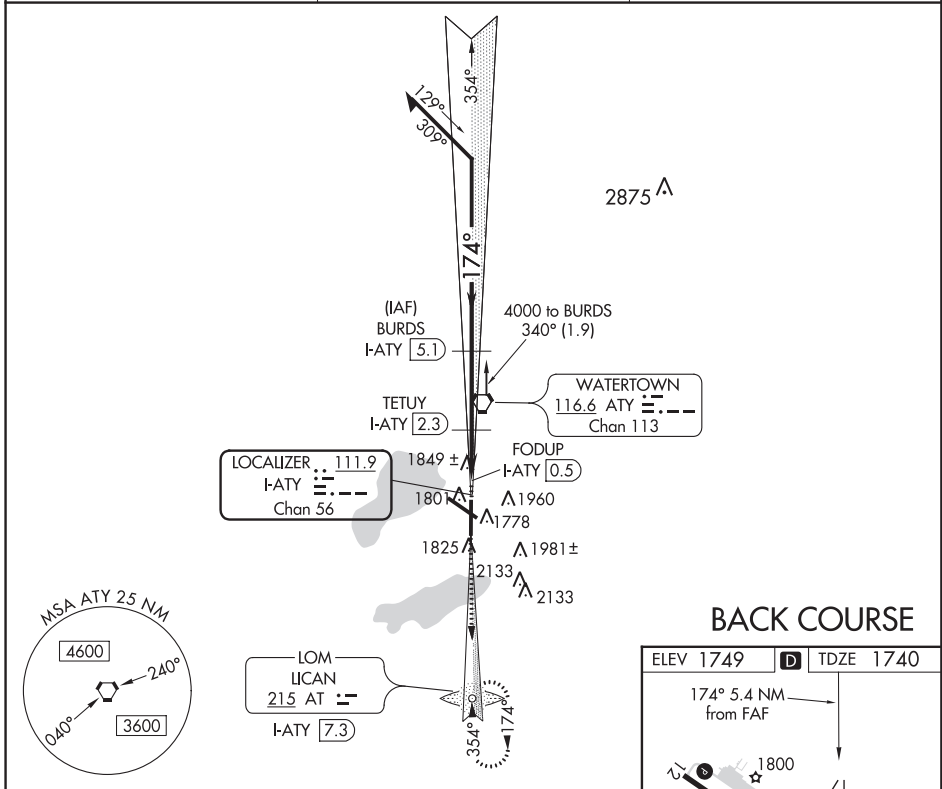
# LOC/DME BC RWY 17

WATERTOWN RGNL (ATY)

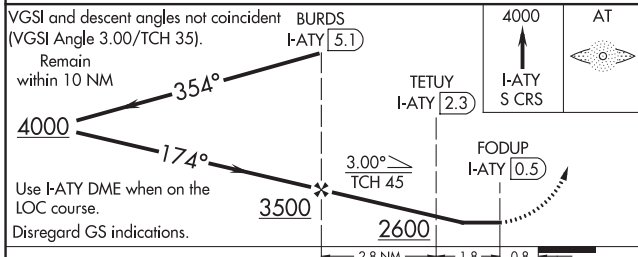
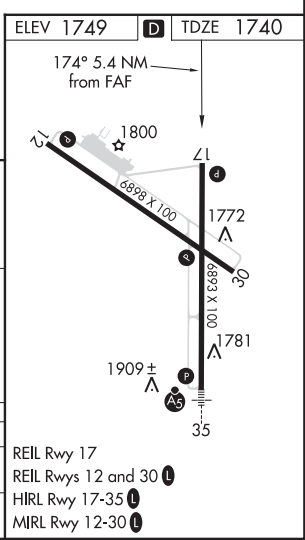
**⚠** When local altimeter setting not received, use Brookings altimeter setting and increase all MDA 120 feet and increase all Cat C and D visibilities ¼ mile.

**⚠** MISSED APPROACH: Climb to 4000 via I-ATY south course to ILCAN LOM/I-ATY 7.3 DME and hold.

ASOS <b>126.625</b>	MINNEAPOLIS CENTER <b>128.5 306.2</b>	UNICOM <b>123.05</b> (CTAF) <b>Ⓛ</b>
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## BACK COURSE



CATEGORY	A	B	C	D
S-17	2120-1	380 (400-1)		2120-1½ 380 (400-1½)
CIRCLING	2260-1	511 (600-1)	2260-1½ 511 (600-1½)	2340-2 591 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VORTAC ATY <b>116.6</b> Chan <b>113</b>	APP CRS <b>177°</b>	Rwy Idg TDZE <b>1740</b> Apt Elev <b>1749</b>	<b>6893</b>
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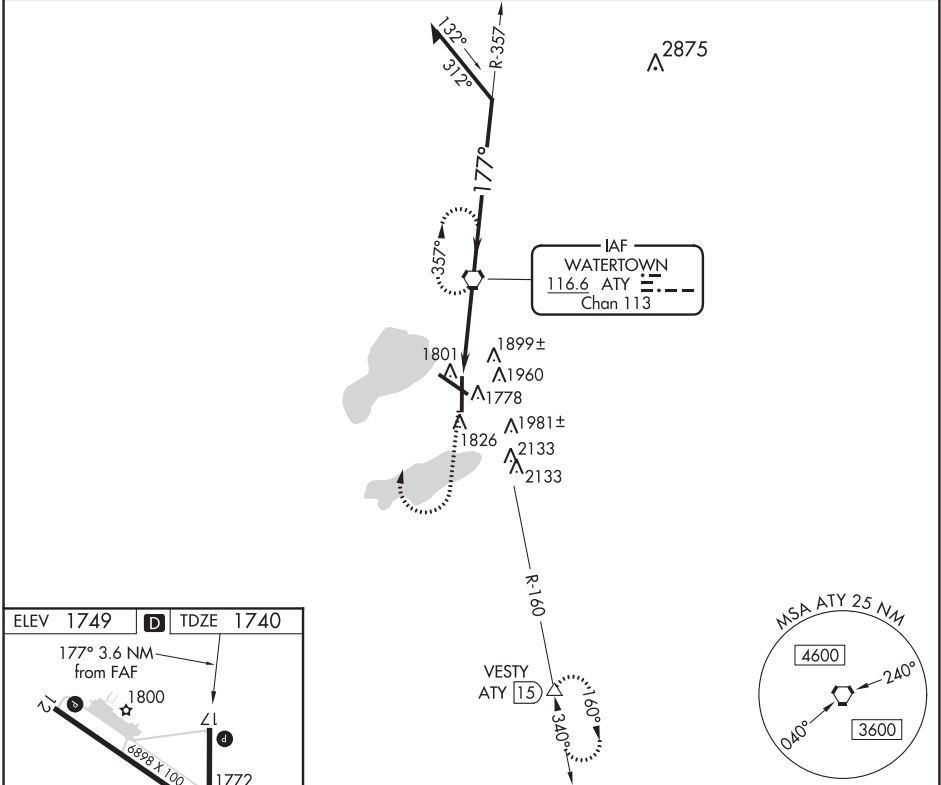
# VOR or TACAN RWY 17

WATERTOWN RGNL (ATY)

**⚠** Visibility reduction by helicopters NA. If local altimeter setting not received, use Brookings altimeter setting and increase all MDAs 120 feet. VDP NA when using Brookings altimeter setting.

**MISSED APPROACH:** Climb to 2400 then climbing right turn to 4000 direct ATY VORTAC and hold. (TACAN aircraft climb to 5000 via ATY VORTAC R-160 to VESTY/15 DME and hold south, right turns, 340° inbound.)

ASOS <b>126.625</b>	MINNEAPOLIS CENTER <b>128.5 306.2</b>	UNICOM <b>123.05 (CTAF)</b> <b>📻</b>
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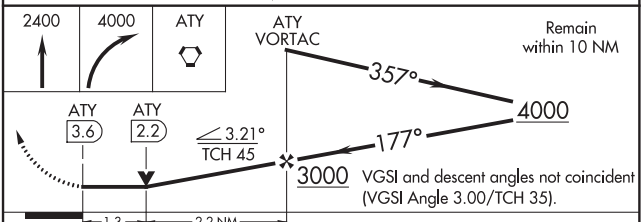


ELEV 1749	<b>D</b>	TDZE 1740
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**Profile View:** Shows vertical clearance from FAF (177° 3.6 NM) to MAP (3.6 NM). Altitudes include 1800, 1772, 1781, 1909±, and 35. Obstacle 1801 is 3.6 NM from FAF.

**REIL Rwy 17**  
**REIL Rws 12 and 30** **📻**  
**HIRL Rwy 17-35** **📻**  
**MIRL Rwy 12-30** **📻**

FAF to MAP 3.6 NM					
Knots	60	90	120	150	180
Min:Sec	3:36	2:24	1:48	1:26	1:12



CATEGORY	A	B	C	D
S-17	2200-1	460 (500-1)	2200-1¼ 460 (500-1¼)	2200-1½ 460 (500-1½)
CIRCLING	2260-1	511 (600-1)	2260-1½ 511 (600-1½)	2340-2 591 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



15176

# AIRPORT DIAGRAM

AL-444 (FAA)

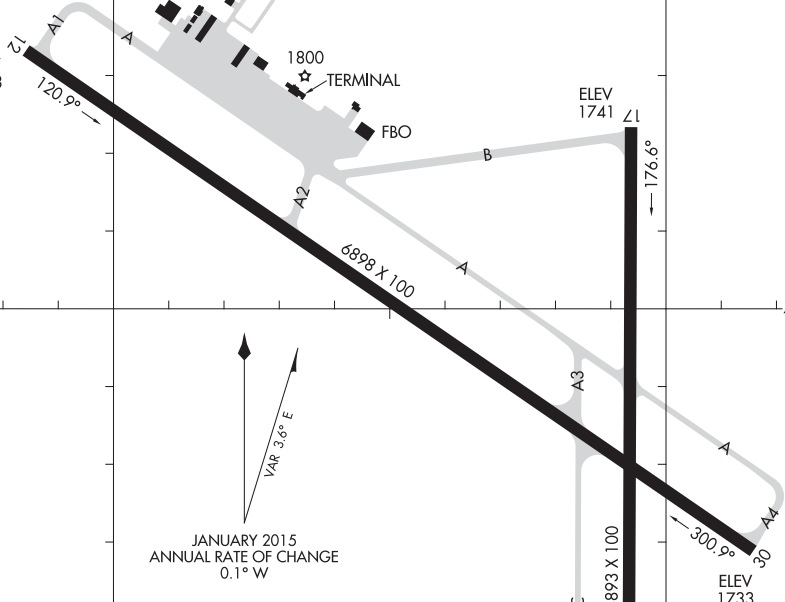
WATERTOWN RGNL (ATY)  
WATERTOWN, SOUTH DAKOTA

ASOS  
126.625  
CTAF/UNICOM  
123.050

FIELD  
ELEV  
1749



ELEV  
1748



44°55'N

44°54'N

97°10'W

97°09'W

VAR 3.6° E  
 JANUARY 2015  
 ANNUAL RATE OF CHANGE  
 0.1° W

RWY 12-30  
 PCN 30 R/D/X/T  
 S-80, D-97, 2S-137, 2D-160  
 RWY 17-35  
 PCN 50 R/B/W/T  
 S-120, D-177, 2S-137, 2D-301

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

15176

WATERTOWN, SOUTH DAKOTA  
WATERTOWN RGNL (ATY)

WATFORD CITY, NORTH DAKOTA

AL-9026 (FAA)

16203

WAAS CH <b>70717</b> <b>W12A</b>	APP CRS <b>126°</b>	Rwy Idg TDZE Apt Elev	<b>4402</b> <b>2090</b> <b>2111</b>
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# RNAV (GPS) RWY 12

WATFORD CITY MUNI (S25)

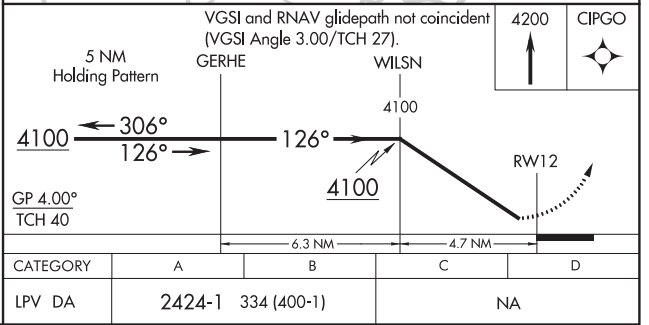
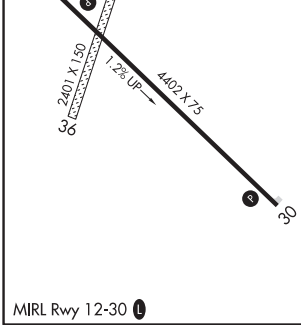
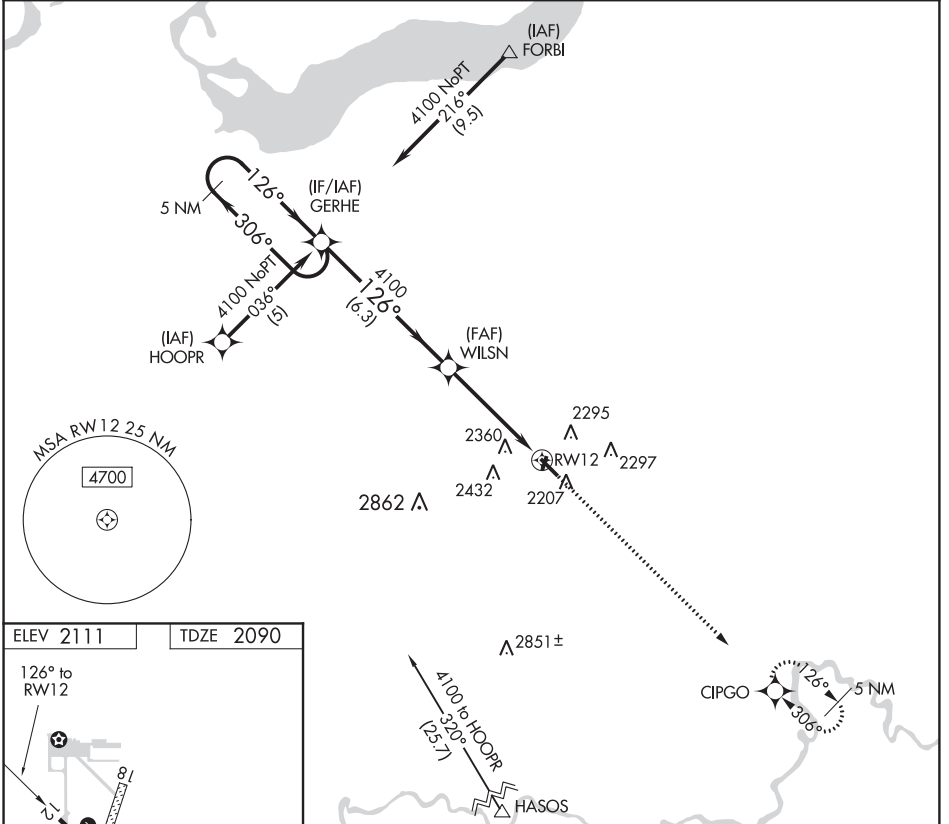
**⚠** DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA. When local altimeter setting not received, use Williston altimeter setting and increase all DA 82 feet and visibility all Cats 1/4 mile. Circling to Rwy 18, 36 NA.

**⚠** NA

**⚠** -35°C/-31°F

MISSED APPROACH: Climb to 4200 direct CIPGO and hold.

AWOS-3 <b>118.125</b>	SALT LAKE CENTER <b>126.85 305.2</b>	UNICOM <b>122.8</b> (CTAF) <b>Ⓛ</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WATFORD CITY, NORTH DAKOTA  
Orig-B 23JUN16

47°48'N-103°15'W

# WATFORD CITY MUNI (S25) RNAV (GPS) RWY 12

WAAS CH <b>69318</b> <b>W30A</b>	APP CRS <b>306°</b>	Rwy Idg TDZE Apt Elev	<b>4402</b> <b>2111</b> <b>2111</b>
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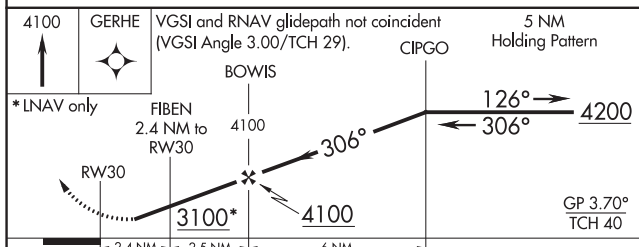
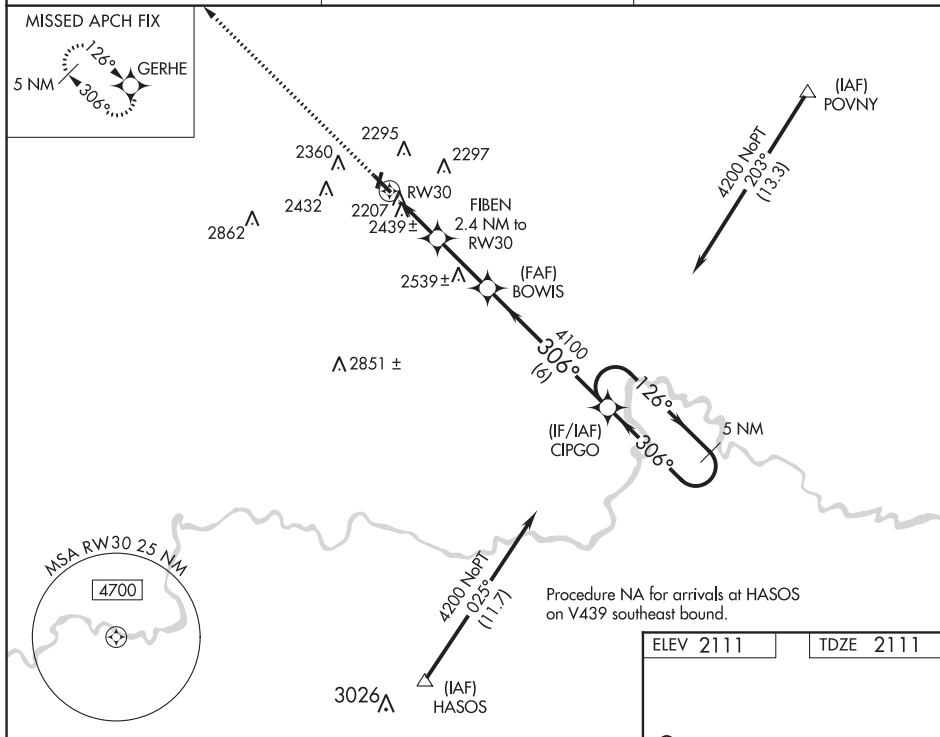
# RNAV (GPS) RWY 30

WATFORD CITY MUNI (S25)

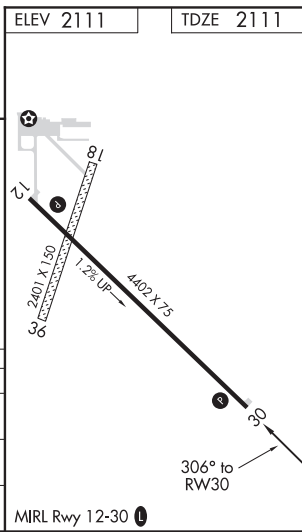
**▽** DME/DME RNP-0.3 NA. Helicopter visibility reduction below 3/4 SM NA.  
**▲** NA. When local altimeter setting not received, use Williston altimeter setting and increase all DA 82 feet and all MDA 100 feet, increase LPV visibility all Cats 1/4 mile. Circling to Rwy's 18, 36 NA.  
**✈** -35°C/-31°F

MISSED APPROACH: Climb to 4100 direct GERHE and hold.

AWOS-3 <b>118.125</b>	SALT LAKE CENTER <b>126.85 305.2</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
LPV DA	2567-1¼	456 (500-1¼)		NA
RNAV MDA	2700-1	589 (600-1)		NA
CIRCLING	2740-1	629 (700-1)		NA



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>42530</b> <b>W16A</b>	APP CRS <b>159°</b>	Rwy Idg TDZE Apt Elev	<b>3298</b> <b>1023</b> <b>1023</b>
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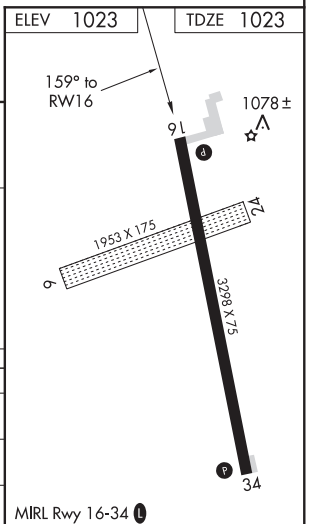
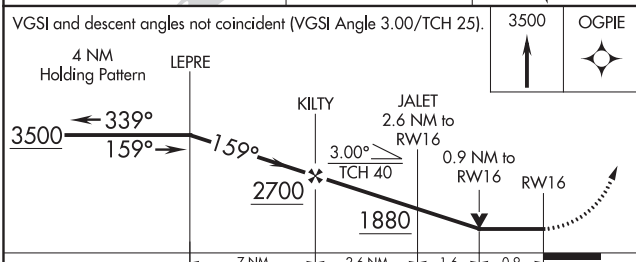
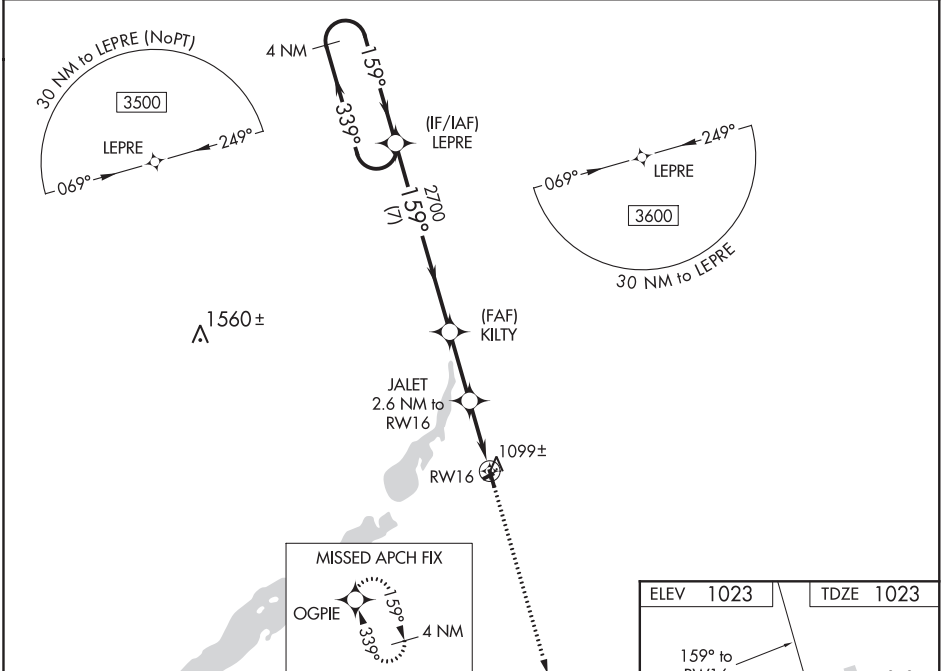
# RNAV (GPS) RWY 16

WHEATON MUNI (ETH)

**⚠** When VGSi inop, Circling Rwy 34 NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.  
**⚠** VDP NA with Wahpeton/Harry Stern altimeter setting. When local altimeter setting not received, use Wahpeton/Harry Stern altimeter setting and increase all MDA 80 feet, increase LP Cat C visibility to 1 1/8 and LNAV Cat C visibility to 1 1/4 mile.

MISSED APPROACH: Climb to 3500 direct OGPiE and hold.

AWOS-3 <b>118.775</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	PRINCETON RADIO <b>122.25</b>	UNICOM <b>122.8</b> (CTAF) <b>📻</b>
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CATEGORY	A	B	C	D
LP MDA	1340-1	317 (400-1)		NA
LNAV MDA	1360-1	337 (400-1)		NA
CIRCLING	1480-1	457 (500-1)	1480-1 1/2 457 (500-1 1/2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>86730</b> <b>W34A</b>	APP CRS <b>339°</b>	Rwy Idg TDZE Apt Elev	<b>3298</b> <b>1023</b> <b>1023</b>
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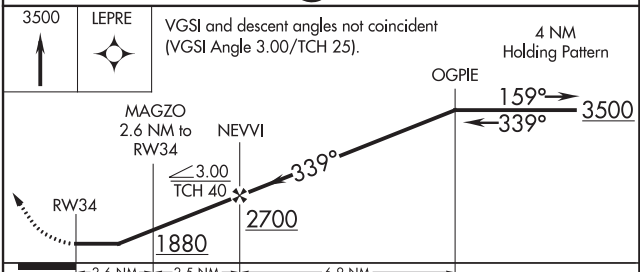
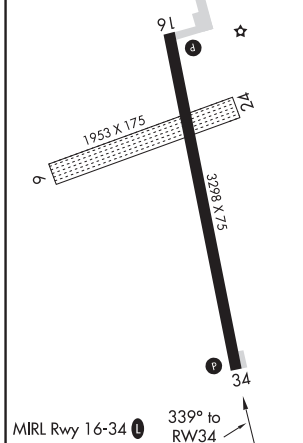
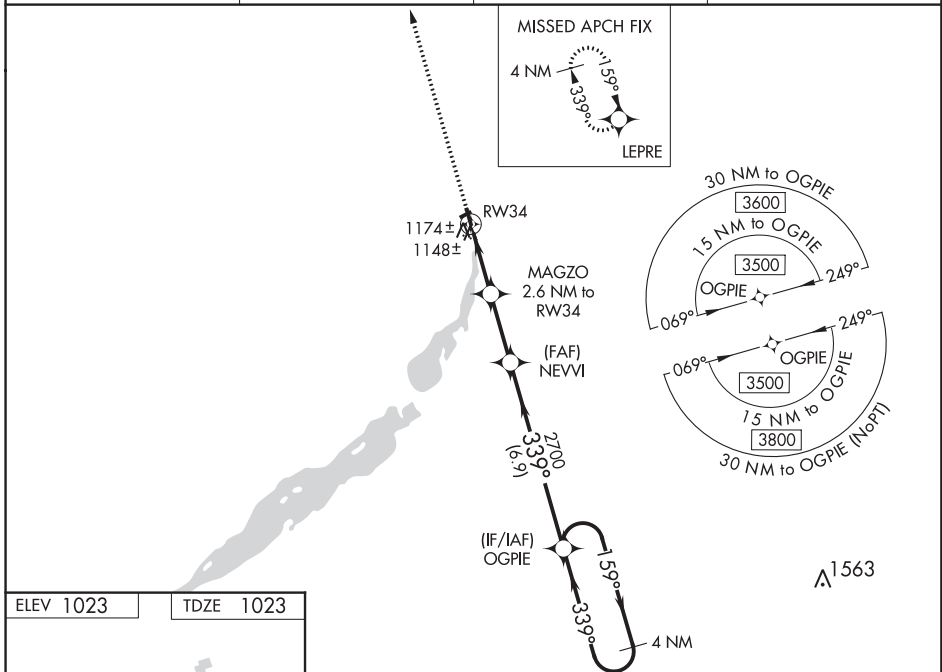
# RNAV (GPS) RWY 34

WHEATON MUNI (ETH)

**⚠** When VGSI inop, Straight-in/Circling Rwy 34 procedure NA at night.  
DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA.  
When local altimeter setting not received, use Wahpeton/Harry Stern altimeter setting and increase all MDA 80 feet and LP Cat C and LNAV Cat C visibility to 1 3/8 mile.

MISSED APPROACH: Climb to 3500 direct LEPRE and hold.

AWOS-3 <b>118.775</b>	MINNEAPOLIS CENTER <b>126.1 269.2</b>	PRINCETON RADIO <b>122.25</b>	UNICOM <b>122.8 (CTAF) ①</b>
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CATEGORY	A	B	C	D
LP MDA	1400-1 377 (400-1)			NA
LNAV MDA	1440-1	417 (500-1)	1440-1 1/8 417 (500-1 1/8)	NA
CIRCLING	1480-1	457 (500-1)	1480-1 1/2 457 (500-1 1/2)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

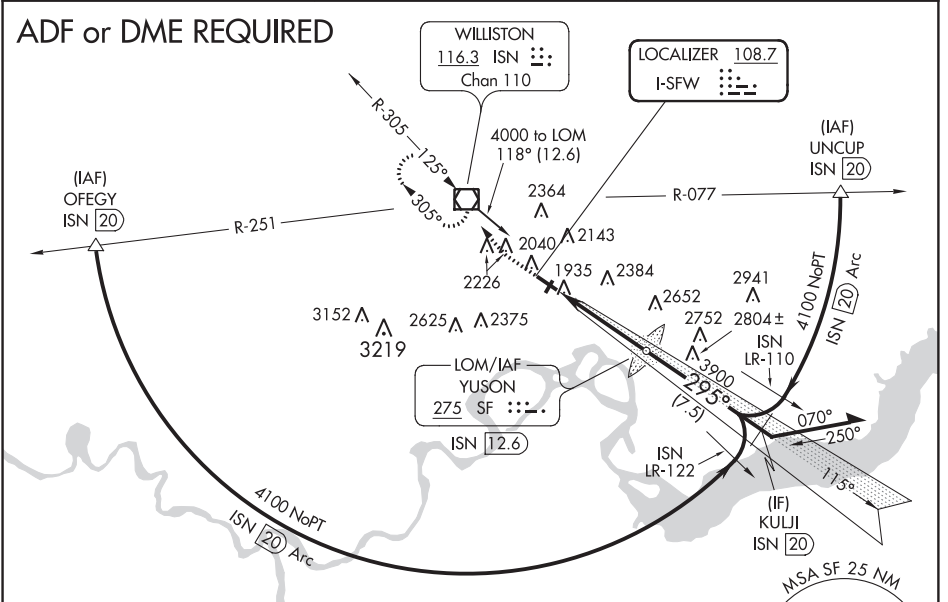
NC-1, 10 NOV 2016 to 05 JAN 2017

LOC I-SFW <b>108.7</b>	APP CRS <b>295°</b>	Rwy Idg TDZE Apt Elev	<b>6650</b> <b>1930</b> <b>1982</b>
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# ILS or LOC RWY 29

SLOULIN FIELD INTL (ISN)

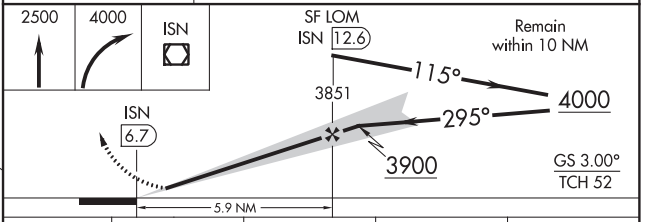
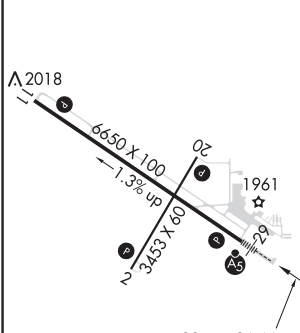
<p><b>ADF or DME REQUIRED</b></p> <p>ADF or DME required. When local altimeter setting not received, use Sidney altimeter setting and increase all DA 84 feet and all MDA 100 feet, increase S-LOC and Circling Cat C and D visibility ¼ mile. For inoperative MALSR when using Sidney altimeter setting, increase S-ILS 29 all Cats visibility ½ mile.</p>	<p><b>MALSR</b></p> <p>MISSED APPROACH: Climb to 2500 then climbing right turn to 4000 direct ISN VOR/DME and hold.</p>	
<p>ASOS <b>125.92</b></p>	<p>SALT LAKE CITY CENTER <b>126.85 305.2</b></p>	<p>UNICOM <b>122.8 (CTAF)</b></p>



ELEV 1982	<b>D</b>	TDZE 1930
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**ALTERNATE MISSED APCH FIX**

YUSON SF 275



REIL Rwy 20  
REIL Rws 2 and 11  
MRL Rws 2-20 and 11-29

FAF to MAP 5.9 NM

Knots	60	90	120	150	180
Min:Sec	5:54	3:56	2:57	2:22	1:58

CATEGORY	A	B	C	D
S-ILS 29	2130-½ 200 (200-½)			
S-LOC 29	2420-½ 490 (500-½)	2420-¾ 490 (500-¾)	2420-1 490 (500-1)	2420-1 490 (500-1)
CIRCLING	2560-1 578 (600-1)	2580-1 598 (600-1)	2600-1¾ 618 (700-1¾)	2620-2 638 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

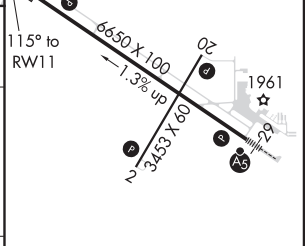
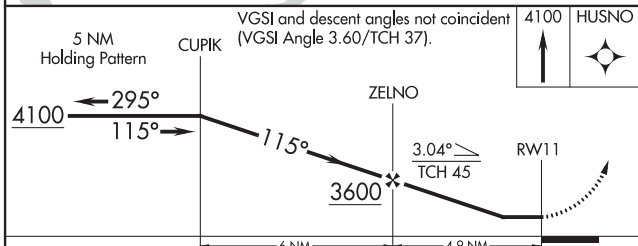
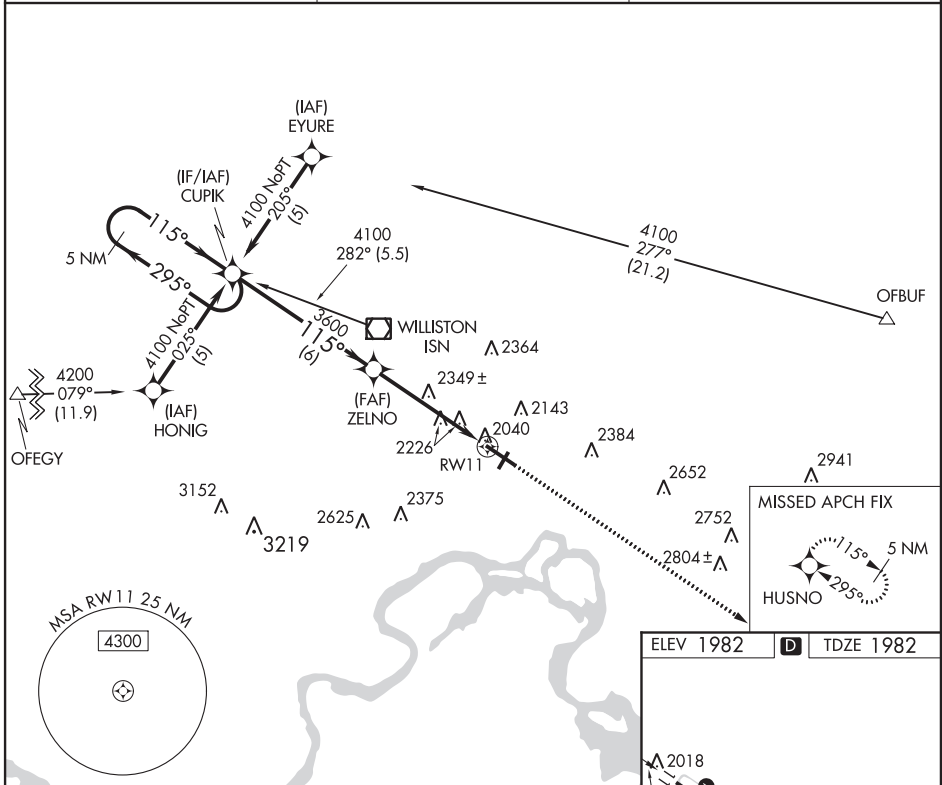
NC-1, 10 NOV 2016 to 05 JAN 2017

APP CRS <b>115°</b>	Rwy Idg <b>6650</b>
	TDZE <b>1982</b>
	Apt Elev <b>1982</b>

# RNAV (GPS) RWY 11

SLOULIN FIELD INTL (ISN)

<p><b>▽</b> DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Sidney altimeter setting and increase all MDA 100 feet and all Cat C and Cat D visibilities ¼ mile.</p>		<p>MISSED APPROACH: Climb to 4100 direct HUSNO and hold.</p>
<p><b>ASOS</b> <b>125.92</b></p>	<p>SALT LAKE CITY CENTER <b>126.85 305.2</b></p>	<p>UNICOM <b>122.8 (CTAF) 0</b></p>



CATEGORY	A	B	C	D
LNVA MDA	2600-1	618 (700-1)	2600-1¼ 618 (700-1¾)	2600-2 618 (700-2)
CIRCLING	2600-1	618 (700-1)	2600-1¼ 618 (700-1¾)	2620-2 638 (700-2)

REIL Rwy 20  
REIL Rwy 2 and 11  
MIRL Rwy 2-20 and 11-29

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>73017</b> <b>W29A</b>	APP CRS <b>295°</b>	Rwy Idg TDZE Apt Elev	<b>6650</b> <b>1930</b> <b>1982</b>
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# RNAV (GPS) RWY 29

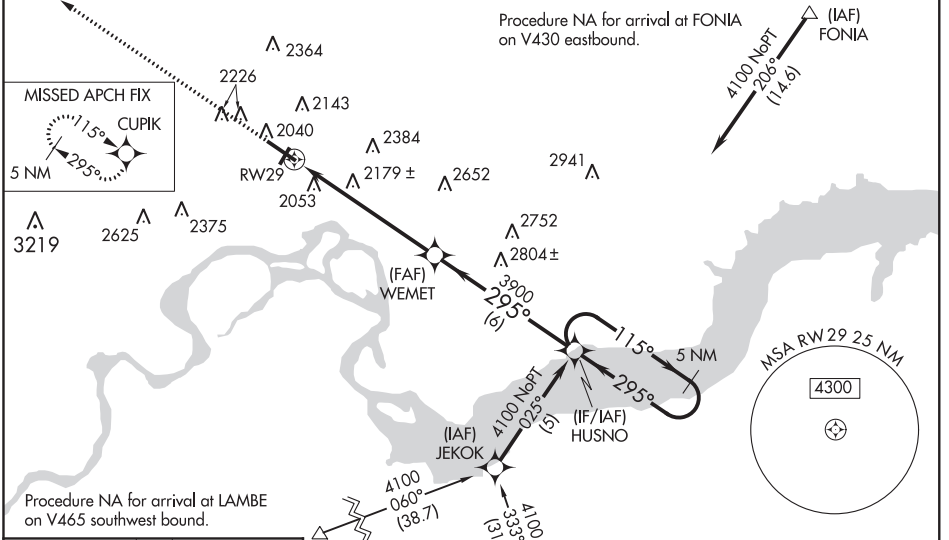
SLOULIN FIELD INTL (ISN)

**Baro-VNAV NA** when using Sidney altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 45°C (113°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use Sidney altimeter setting and increase all DA 84 feet and all MDA 100 feet, increase LNAV Cat C visibility ¼ mile and LNAV Cat D visibility ½ mile, increase LNAV/VNAV all Cats visibility ½ mile, and Circling Cat C and D visibility ¼ mile. VDP NA with Sidney altimeter setting. For inop MALSR when using Sidney altimeter setting, increase LPV all Cats visibility ½ mile.

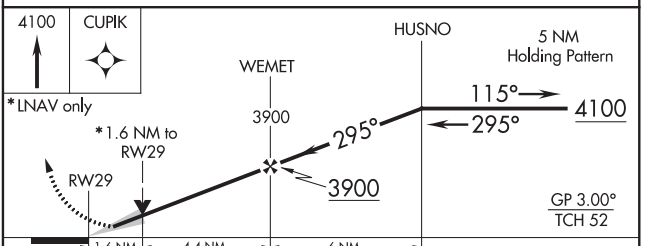
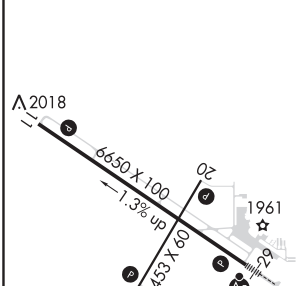


**MISSED APPROACH:**  
Climb to 4100 direct CUIPK and hold.

ASOS <b>125.92</b>	SALT LAKE CITY CENTER <b>126.85 305.2</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1982	<b>D</b>	TDZE 1930
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CATEGORY	A	B	C	D
LPV DA	2130-½		200 (200-½)	
LNAV/VNAV DA	2352-1		422 (400-1)	
LNAV MDA	2440-½	510 (500-½)	2440-1	510 (500-1)
CIRCLING	2560-1	2580-1	2600-1¾	2620-2
	578 (600-1)	598 (600-1)	618 (700-1¾)	638 (700-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



VOR/DME ISN <b>116.3</b> Chan <b>110</b>	APP CRS <b>125°</b>	Rwy Idg TDZE <b>1982</b> Apt Elev <b>1982</b>
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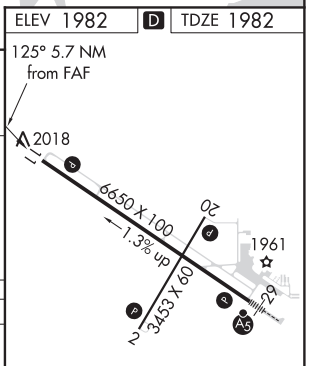
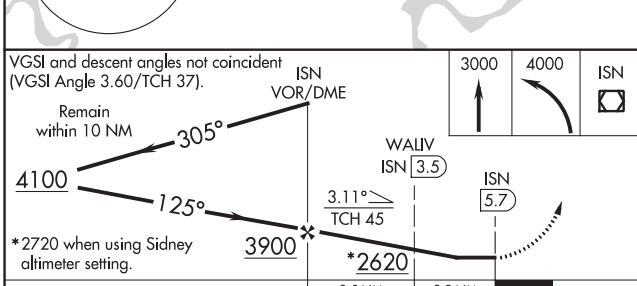
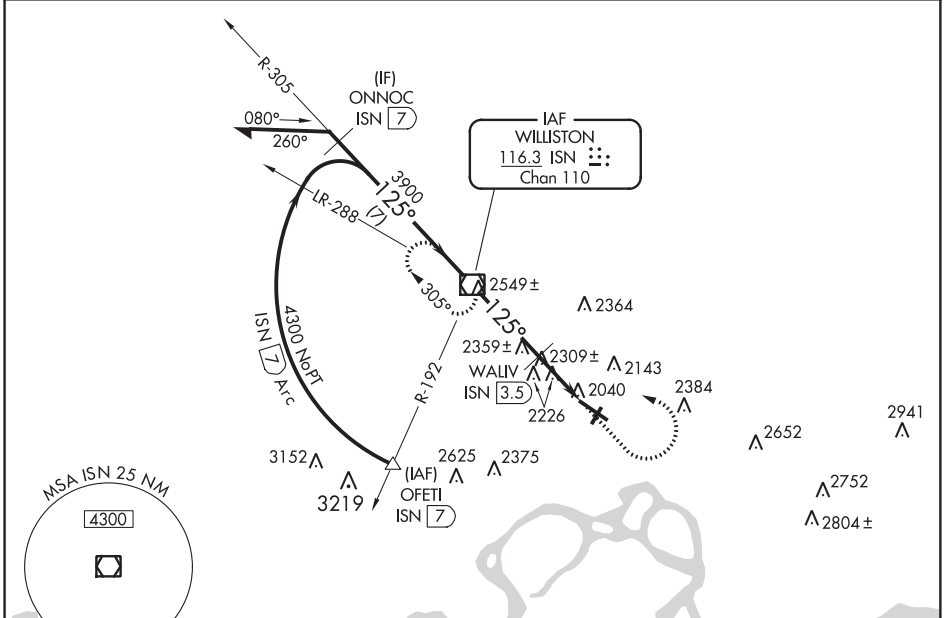
# VOR RWY 11

SLOULIN FIELD INTL (ISN)

**⚠** Visibility reduction by helicopters NA. When local altimeter setting not received, use Sidney altimeter setting and increase all MDA 100 feet, increase S-11 and Circling Cats C and D visibility ¼ mile, increase WALIV fix minimums S-11 Cats C and D visibility ½ mile and Circling Cats C and D visibility ¼ mile.

**MISSED APPROACH:** Climb to 3000 then climbing left turn to 4000 direct ISN VOR/DME and hold.

ASOS <b>125.92</b>	SALT LAKE CITY CENTER <b>126.85 305.2</b>	UNICOM <b>122.8 (CTAF) 1</b>
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CATEGORY	A	B	C	D
S-11	2620-1	638 (700-1)	2620-1¾ 638 (700-1¾)	2620-2 638 (700-2)
CIRCLING	2620-1	638 (700-1)	2620-1¾ 638 (700-1¾)	2620-2 638 (700-2)
WALIV FIX MINIMUMS				
S-11	2560-1	578 (600-1)	2560-1½ 578 (600-1½)	2560-1¾ 578 (600-1¾)
CIRCLING	2560-1 578 (600-1)	2580-1 598 (600-1)	2600-1¾ 618 (700-1¾)	2620-2 638 (700-2)

REIL Rwy 20

REIL Rws 2 and 11 1

MIRL Rws 2-20 and 11-29 1

FAF to MAP 5.7 NM

Knots	60	90	120	150	180
Min:Sec	5:42	3:48	2:51	2:17	1:54

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# AIRPORT DIAGRAM

AL-5173 (FAA)

SLOULIN FIELD INTL (ISN)  
WILLISTON, NORTH DAKOTA

ASOS  
125.92  
CTAF/UNICOM  
122.800

FIELD  
ELEV  
1982

103°39'W

103°38'W

2040

JANUARY 2015  
ANNUAL RATE OF CHANGE  
0.1°W

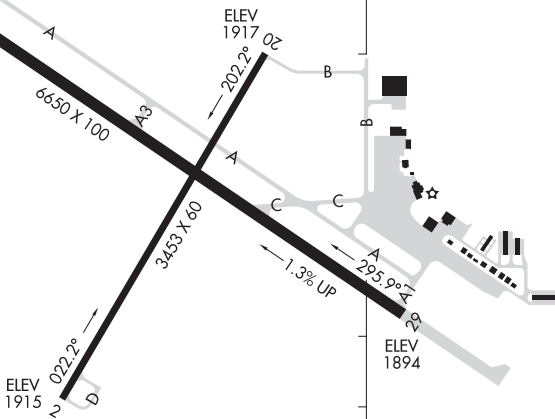
ELEV  
1982

113.2°

48°11'N

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



RWY 02-20  
PCN 14 F/D/Z/U  
S-13  
RWY 11-29  
PCN 8 F/C/X/T  
S-16, D-25

48°10'N

# AIRPORT DIAGRAM

15064

WILLISTON, NORTH DAKOTA  
SLOULIN FIELD INTL (ISN)

# WILLISTON ONE DEPARTURE

SL-5173 (FAA)

STOULIN FIELD INTL (ISN)  
WILLISTON, NORTH DAKOTA

ASOS  
125.92  
SALT LAKE CENTER  
126.85 305.2  
CTAF  
122.8

OFEGY  
N48°12.66'  
W104°14.71'  
L-13

WILLISTON  
116.3 ISN  
Chan 110  
N48°15.21'-W103°45.04'

**TOP ALTITUDE:  
ASSIGNED BY ATC**

NOTE: DME Required.

### TAKEOFF MINIMUMS

Rwys 2, 11, 20: Standard.

Rwy 29: 300-2 or standard with  
minimum climb of 359  
feet per NM to 2400.

### TAKEOFF OBSTACLE NOTES

Rwy 2: Poles beginning 973' from DER, 258' left of centerline,  
up to 40' AGL/1953' MSL.

Rwy 20: Building 1811' from DER, 371' right of centerline, 65' AGL/1980' MSL.

Pole 1346' from DER, 69' right of centerline, 44' AGL/1954' MSL.

Rwy 29: Rising terrain 639' from DER, 301' left of centerline, up to 2001' MSL.

Rising terrain 645' from DER, 305' right of centerline, up to 2000' MSL.

Fences beginning 966' from DER, 250' left of centerline, up to 7' AGL/2029' MSL.

NAVAID 999' from DER, on centerline, 14' AGL/2104' MSL.

Buildings beginning 1000' from DER, 270' right of centerline, up to 27' AGL/2040' MSL.

Fence 1341' from DER, 210' right of centerline, 21' AGL/2021' MSL

Rising terrain beginning 1965' from DER, 459' right of centerline, up to 2071' MSL.

Building 2345' from DER, 519' left of centerline, 5' AGL/2066' MSL.

Rising terrain beginning 2531' from DER, 733' left of centerline, up to 2092' MSL.

Rising terrain and T-L tower beginning 3479' from DER, 248' right of centerline,  
up to 77' AGL/2137' MSL.

Rising terrain and T-L tower beginning 3693' from DER, 179' left of centerline,  
up to 82' AGL/2150' MSL.

T-L towers and tree beginning 5861' from DER, 35' right of centerline, up to 74' AGL/2226' MSL.

NOTE: Chart not to scale.

### DEPARTURE ROUTE DESCRIPTION

**TAKEOFF RUNWAY 2:** Climbing left turn heading 260° to intercept ISN VOR/DME R-124 to ISN VOR/DME. Thence. . .

**TAKEOFF RUNWAY 11:** Climb heading 115° to 2400, then climbing left turn heading 260° to intercept ISN VOR/DME R-124 to ISN VOR/DME. Thence. . .

**TAKEOFF RUNWAY 20:** Climbing right turn heading 350° to intercept ISN VOR/DME R-124 to ISN VOR/DME. Thence. . .

**TAKEOFF RUNWAY 29:** Climbing right turn to intercept ISN VOR/DME R-124 to ISN VOR/DME. Thence. . .

. . . on (transition). Maintain assigned altitude. Expect filed altitude 10 minutes after departure.

**FONIA TRANSITION (ISN1.FONIA):** From over ISN VOR/DME on ISN R-077 to FONIA.

**FORBI TRANSITION (ISN1.FORBI):** From over ISN VOR/DME on ISN R-112 to FORBI.

**GINBE TRANSITION (ISN1.GINBE):** From over ISN VOR/DME on ISN R-192 to GINBE.

**HASOS TRANSITION (ISN1.HASOS):** From over ISN VOR/DME on ISN R-142 and DIK R-321 to HASOS.

**OFEGY TRANSITION (ISN1.OFEGY):** From over ISN VOR/DME on ISN R-251 to OFEGY.

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

# WILLISTON ONE DEPARTURE

(ISN1.ISN) 20AUG15

WILLISTON, NORTH DAKOTA  
STOULIN FIELD INTL (ISN)

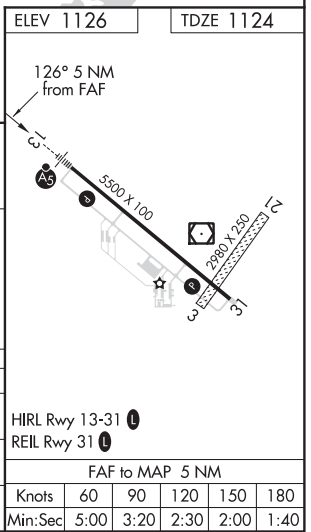
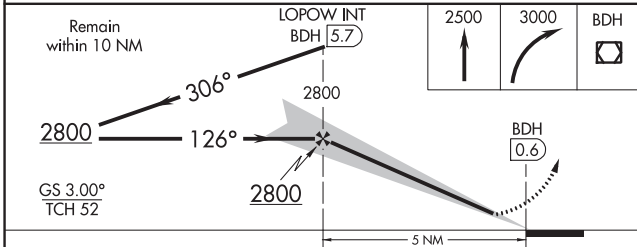
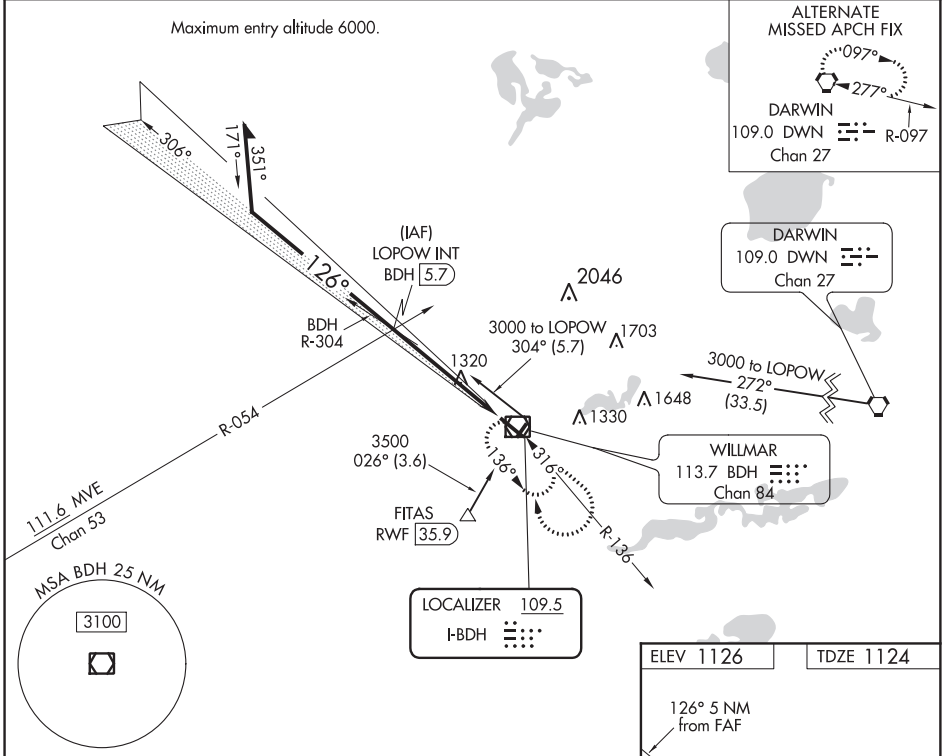
LOC I-BDH <b>109.5</b>	APP CRS <b>126°</b>	Rwy Idg <b>5500</b>
		TDZE <b>1124</b>
		Apt Elev <b>1126</b>

**ILS or LOC RWY 13**  
WILLMAR MUNI-JOHN L RICE FIELD (BDH)

**NA** If local altimeter setting not received, use Olivia Rgnl altimeter setting and increase all DAs 55 feet and all MDAs 60 feet.

**MALSR**  MISSED APPROACH: Climb to 2500 then climbing right turn to 3000 direct BDH VOR/DME and hold.

AWOS-3 <b>113.7</b>	MINNEAPOLIS CENTER <b>125.5 323.1</b>	UNICOM <b>122.8 (CTAF)</b> 
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CATEGORY	A	B	C	D
S-ILS 13		1324- <sup>3</sup> / <sub>4</sub>	200 (200- <sup>3</sup> / <sub>4</sub> )	
S-LOC 13	1620-1	496 (500-1)	1620-1 <sup>1</sup> / <sub>4</sub> 496 (500-1 <sup>1</sup> / <sub>4</sub> )	1620-1 <sup>1</sup> / <sub>2</sub> 496 (500-1 <sup>1</sup> / <sub>2</sub> )
CIRCLING	1620-1	494 (500-1)	1620-1 <sup>1</sup> / <sub>2</sub> 494 (500-1 <sup>1</sup> / <sub>2</sub> )	1680-2 554 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

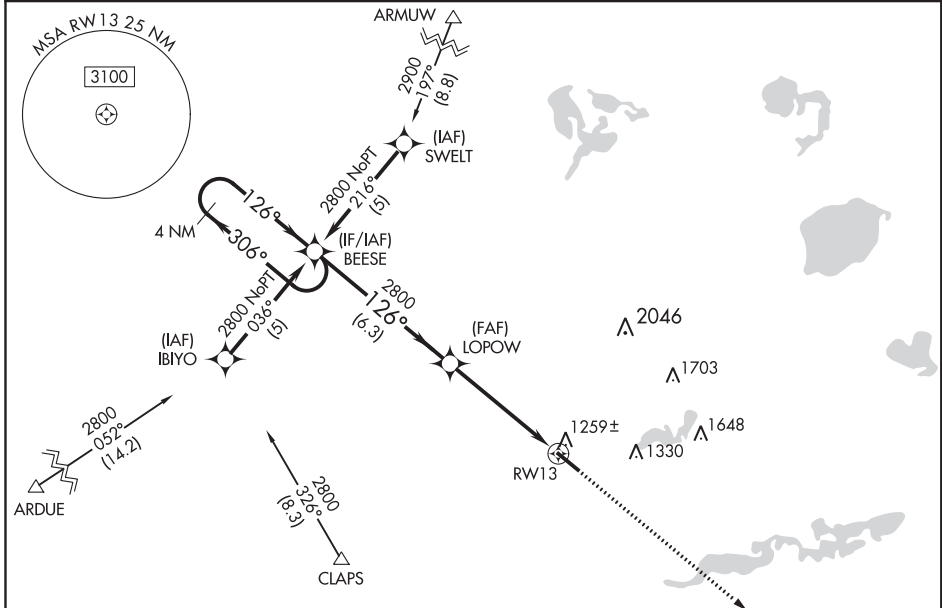
NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>93902</b> <b>W13A</b>	APP CRS <b>126°</b>	Rwy Idg <b>5500</b> TDZE <b>1124</b> Apt Elev <b>1126</b>
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**RNAV (GPS) RWY 13**  
WILLMAR MUNI-JOHN L RICE FIELD (BDH)

<p><b>⚠</b> If local altimeter setting not received, use Olivia Rgnl altimeter setting and increase all DAs/MDAs 60 feet. DME/DME RNP -0.3 NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 46°C (116°F). Baro-VNAV and VDP NA when using Olivia Rgnl altimeter setting.</p>	<p>MALSR</p>	<p>MISSED APPROACH: Climb to 2800 direct HEPIV and hold.</p>
	<p><b>⚠</b></p>	

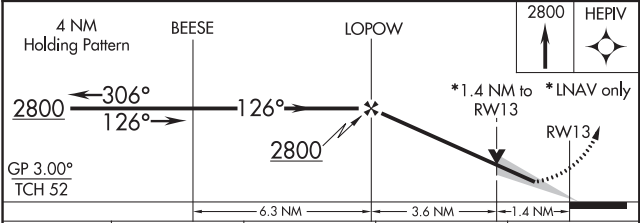
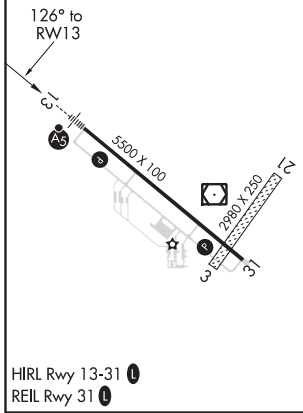
AWOS-3 <b>113.7</b>	MINNEAPOLIS CENTER <b>125.5 323.1</b>	UNICOM <b>122.8 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1126	TDZE 1124
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CATEGORY	A	B	C	D
LPV DA	1387-1 263 (300-1)			
LNAV/VNAV DA	1480-1¼ 356 (400-1¼)			
LNAV MDA	1620-1	496 (500-1)	1620-1¼ 496 (500-1¼)	1620-1½ 496 (500-1½)
CIRCLING	1620-1	494 (500-1)	1620-1½ 494 (500-1½)	1680-2 554 (600-2)

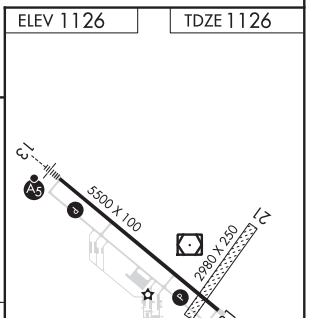
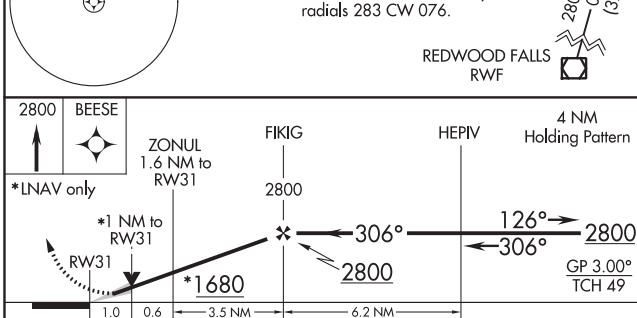
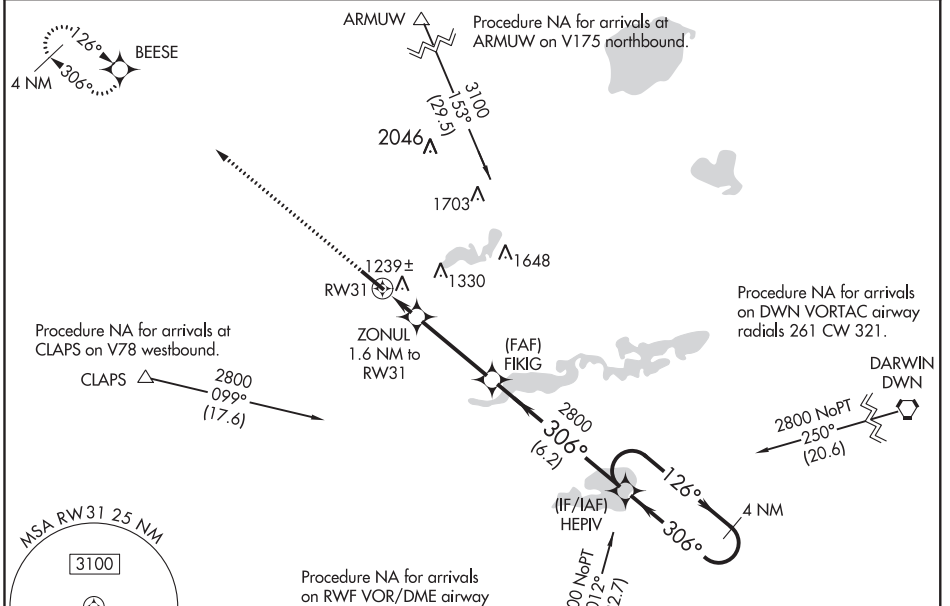
WAAS CH 72632 W31A	APP CRS 306°	Rwy Idg TDZE Apt Elev	5500 1126 1126
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**RNAV (GPS) RWY 31**  
WILLMAR MUNI-JOHN L RICE FIELD (BDH)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17° (2°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received use Olivia altimeter setting and increase all DA 55 feet and all MDA 60 feet and increase LNAV/VNAV all Cats visibility 1/8 mile and LNAV Cats C and D visibility 1/4 mile. Baro-VNAV and VDP NA with Olivia altimeter setting.

**MISSED APPROACH:** Climb to 2800 direct BEESE and hold.

AWOS-3 <b>113.7</b>	MINNEAPOLIS CENTER <b>125.5 323.1</b>	UNICOM <b>122.8 (CTAF)</b> <b>0</b>
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CATEGORY	A	B	C	D
LPV DA		1326-3/4	200 (200-3/4)	
LNAV/VNAV DA		1527-13/8	401 (500-13/8)	
LNAV MDA		1500-1	374 (400-1)	
CIRCLING	1620-1	494 (500-1)	1620-1 1/2 494 (500-1 1/2)	1680-2 554 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME BDH <b>113.7</b> Chan <b>84</b>	APP CRS <b>316°</b>	Rwy Idg <b>5500</b> TDZE <b>1126</b> Apt Elev <b>1126</b>
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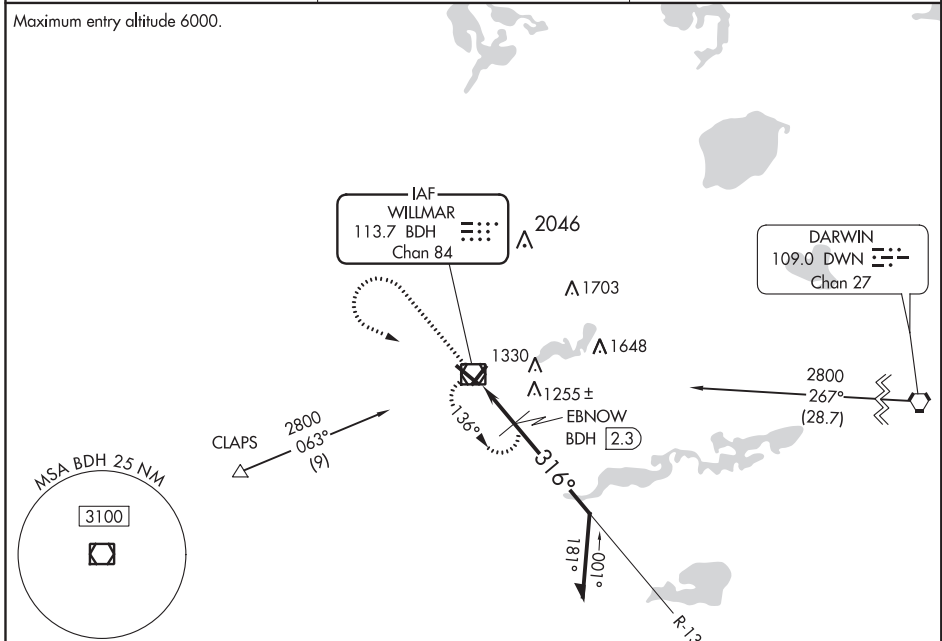
# VOR RWY 31

WILLMAR MUNI-JOHN L RICE FIELD (BDH)

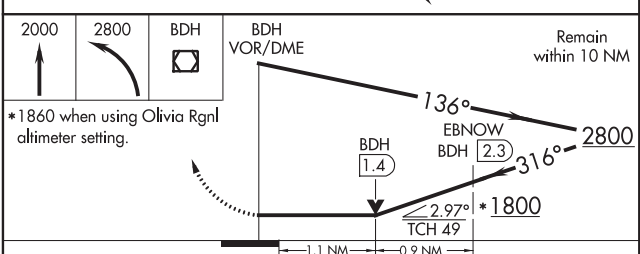
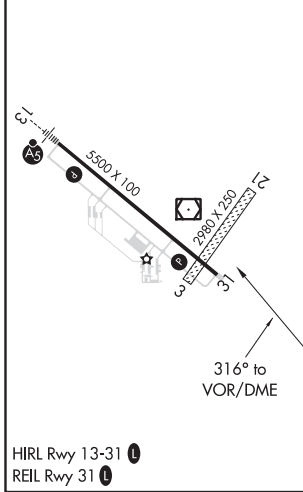
**⚠** If local altimeter setting not received, use Olivia Rgnl altimeter setting and increase all MDAs 60 feet.  
**⚠** VDP NA with Olivia Rgnl altimeter setting.

MISSED APPROACH: Climb to 2000, then climbing left turn to 2800 direct BDH VOR/DME and hold.

AWOS-3 <b>113.7</b>	MINNEAPOLIS CENTER <b>125.5 323.1</b>	UNICOM <b>122.8</b> (CTAF) <b>Ⓛ</b>
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ELEV 1126	TDZE 1126
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CATEGORY	A	B	C	D
S-31	1800-1	674 (700-1)	1800-2 674 (700-2)	1800-2¼ 674 (700-2¼)
CIRCLING	1800-1	674 (700-1)	1800-2 674 (700-2)	1800-2¼ 674 (700-2¼)
EBNOW FIX MINIMUMS				
S-31	1520-1 394 (400-1)		1520-1¼ 394 (400-1¼)	
CIRCLING	1620-1	494 (500-1)	1620-1½ 494 (500-1½)	1680-2 554 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

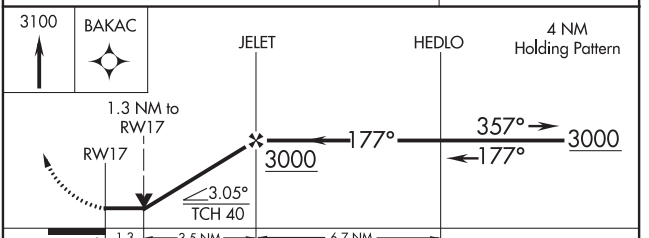
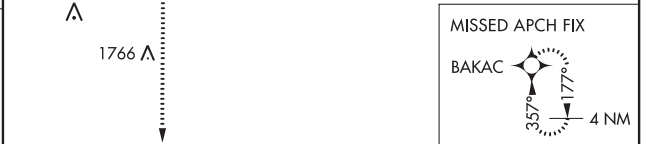
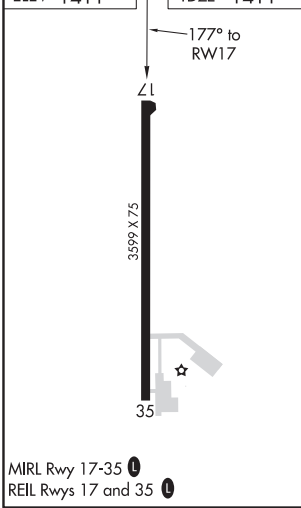
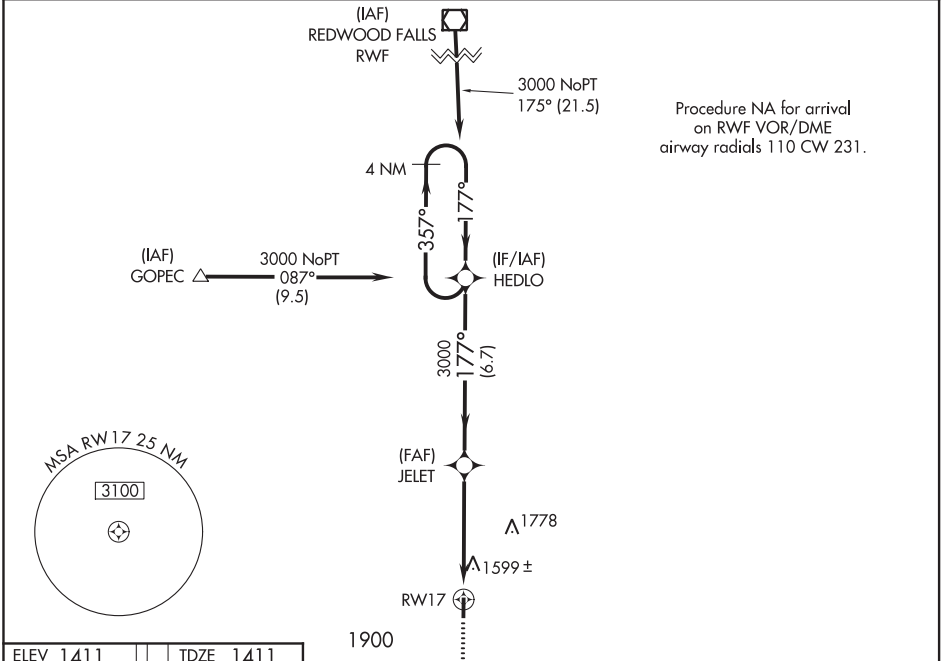
APP CRS <b>177°</b>	Rwy Idg TDZE Apt Elev	<b>3599</b> <b>1411</b> <b>1411</b>
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# RNAV (GPS) RWY 17

WINDOM MUNI (MWM)

<b>NA</b>	DME/DME RNP-0.3 NA.	MISSED APPROACH: Climb to 3100 direct BAKAC and hold.
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AWOS-3 <b>118.525</b>	MINNEAPOLIS CENTER <b>127.1 290.2</b>	CTAF <b>122.9</b>
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CATEGORY	A	B	C	D
LNAV MDA	1860-1	449 (500-1)	1860-1¼ 449 (500-1¼)	NA
CIRCLING	1900-1	489 (500-1)	1900-1½ 489 (500-1½)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017





WAAS CH <b>61212</b> <b>W13A</b>	APP CRS <b>129°</b>	Rwy Idg TDZE Apt Elev	<b>5501</b> <b>2020</b> <b>2033</b>
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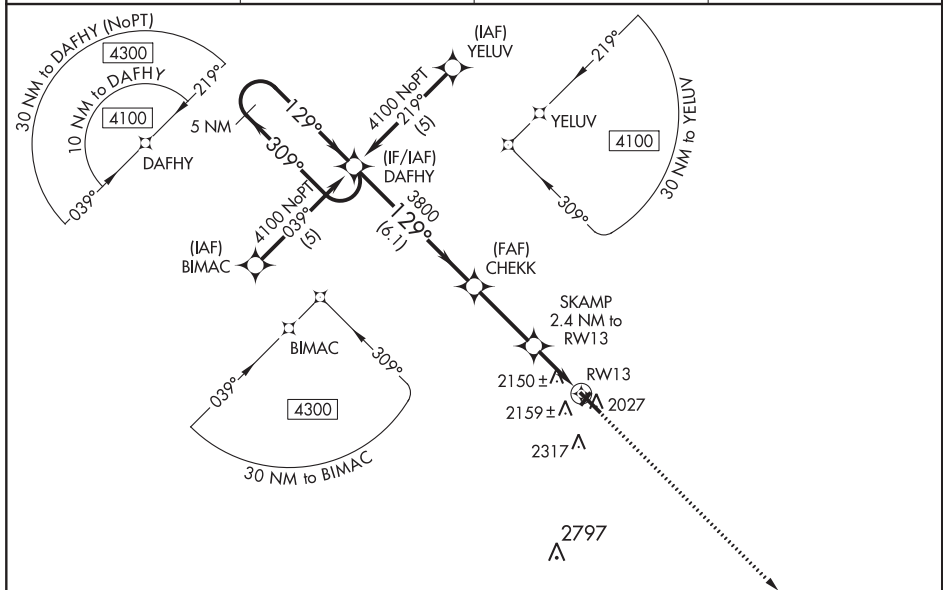
# RNAV (GPS) RWY 13

WINNER RGNL (ICR)

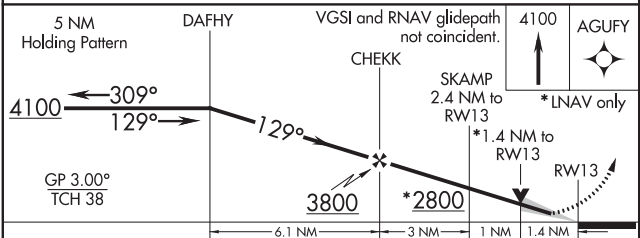
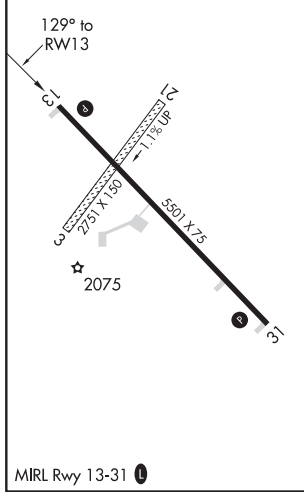
**⚠** DME/DME RNP-0.3 NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C (-2°F) or above 54°C (130°F). Baro-VNAV and VDP NA when using Valentine altimeter setting. When local altimeter setting not received, use Valentine, NE altimeter setting and increase all DA/MDA 240 feet; increase LPV all Cats visibility ¾ mile, LNAV/VNAV all Cats visibility 1 mile, LNAV Cat C visibility ¾ mile, Circling Cat B visibility ¾ mile and Cat C visibility 1 mile. Circling NA to Rwy 3 and 21.

MISSED APPROACH: Climb to 4100 direct AGUFY and hold.

ASOS <b>126.775</b>	HURON RADIO <b>122.1R</b>	GCO <b>121.725</b>	UNICOM <b>122.8</b> (CTAF) <b>📻</b>
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ELEV 2033	TDZE 2020
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CATEGORY	A	B	C	D
LPV DA		2270-1	250 (300-1)	NA
LNAV/VNAV DA		2456-1½	436 (500-1½)	NA
LNAV MDA	2480-1	460 (500-1)	2480-1¼ 460 (500-1¼)	NA
CIRCLING	2580-1 547 (600-1)	2680-1 647 (700-1)	2680-1¾ 647 (700-1¾)	NA

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>97612</b> <b>W31A</b>	APP CRS <b>309°</b>	Rwy ldg TDZE Apt Elev	<b>5501</b> <b>2025</b> <b>2032</b>
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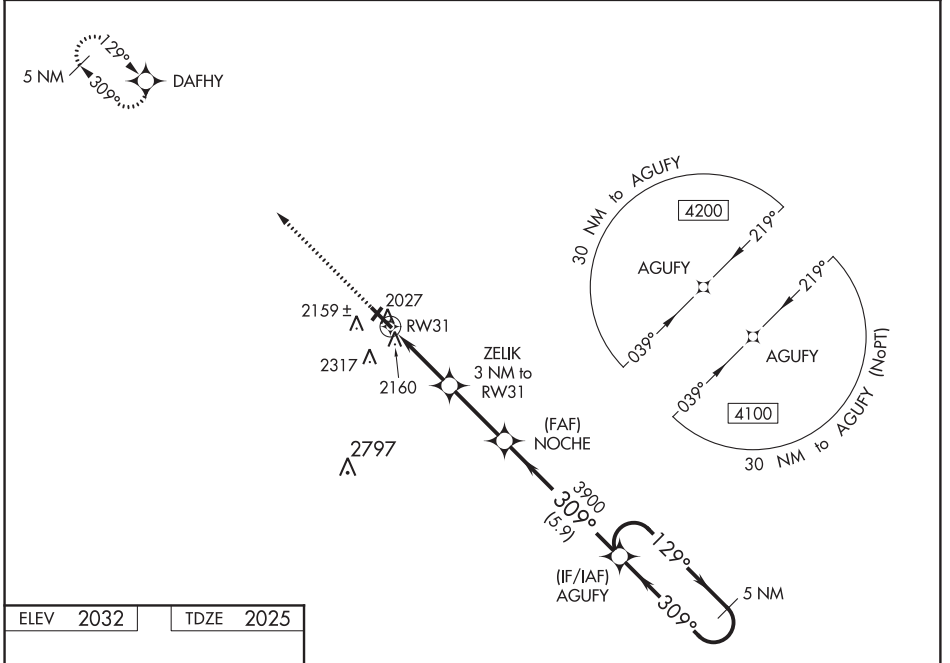
# RNAV (GPS) RWY 31

WINNER RGNL (ICR)

**⚠** Circling NA to Rwys 3 and 21. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -24° C (-11°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. Baro-VNAV and VDP NA when using Valentine altimeter setting. When local altimeter setting not received, use Valentine, NE altimeter setting and increase LPV DA to 2514, LNAV/VNAV DA to 2549 and all visibilities 7/8 mile, increase all MDA 240 feet; increase Cat B visibility 1/4 mile and Cat C 1 mile.

**⚠** MISSED APPROACH: Climb to 4100 direct DAFHY and hold.

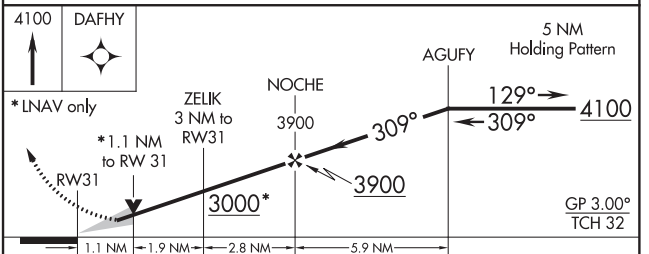
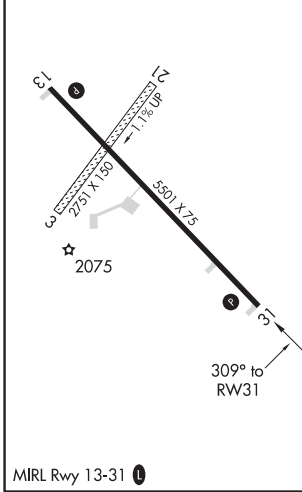
ASOS <b>126.775</b>	HURON RADIO <b>122.1R</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF) 0</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 2032	TDZE 2025
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CATEGORY	A	B	C	D
LPV DA	2275-1		250 (300-1)	NA
LNAV/VNAV DA	2310-1		285 (300-1)	NA
LNAV MDA	2420-1	395 (400-1)	2420-1 1/8 395 (400-1 1/8)	NA
<b>C</b> CIRCLING	2580-1 548 (600-1)	2680-1 648 (700-1)	2680-1 3/4 648 (700-1 3/4)	NA

WINNER, SOUTH DAKOTA

AL-5105 (FAA)

16259

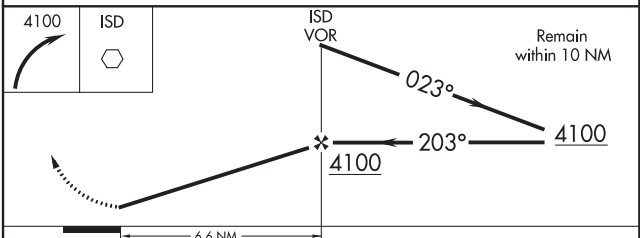
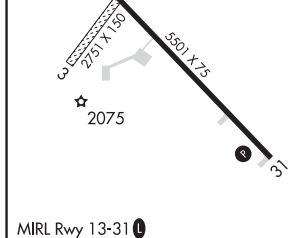
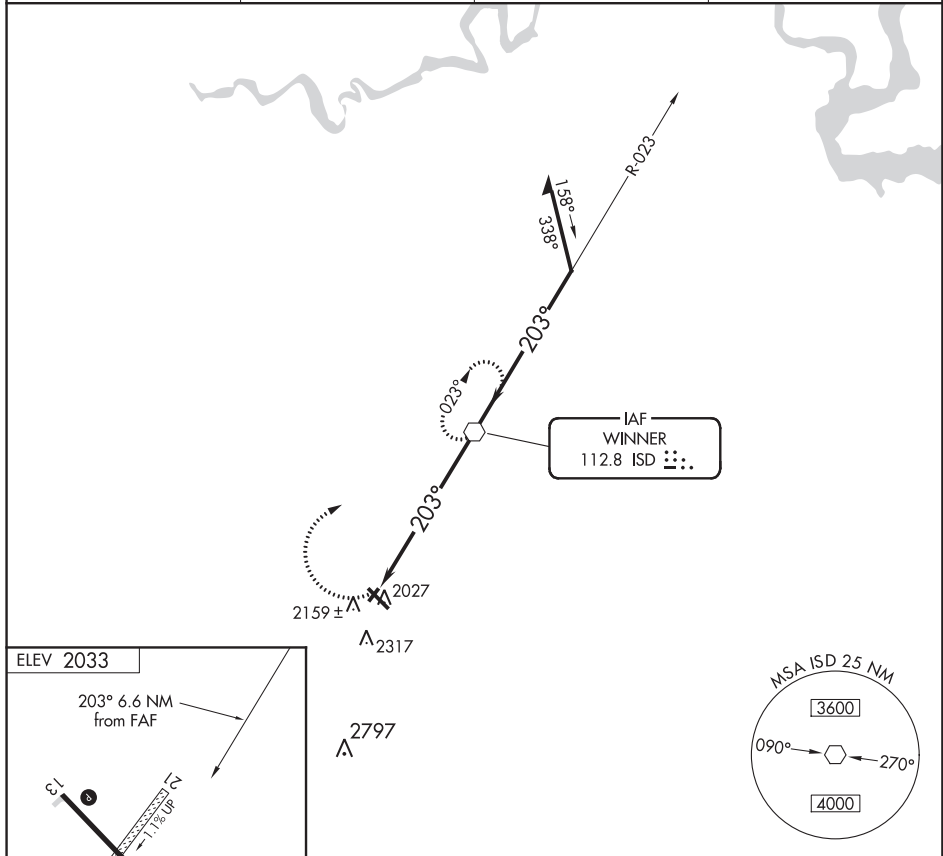
VOR ISD <b>112.8</b>	APP CRS <b>203°</b>	Rwy Idg TDZE Apt Elev	<b>N/A</b> <b>N/A</b> <b>2033</b>
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**VOR-A**  
WINNER RGNL (ICR)

**⚠** When local altimeter setting not received, use Valentine, NE altimeter setting and increase all MDA 240 feet and visibility Cat B ¼ mile, Cats C and D 1 mile. Circling NA to Rwys 3 and 21.

**MISSED APPROACH:** Climbing right turn to 4100 direct ISDVOR and hold.

ASOS <b>126.775</b>	HURON RADIO <b>122.1R</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b> <b>📻</b>
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FAF to MAP 6.6 NM					
Knots	60	90	120	150	180
Min:Sec	6:36	4:24	3:18	2:38	2:12
CATEGORY	A	B	C	D	
CIRCLING	2580-1 547 (600-1)	2680-1 647 (700-1)	2680-1¾ 647 (700-1¾)	NA	

WINNER, SOUTH DAKOTA  
Amdt 7B 15SEP16

43°23'N-99°51'W

WINNER RGNL (ICR)  
**VOR-A**

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-ONA <b>109.35</b> Chan 30(Y)	APP CRS <b>300°</b>	Rwy Idg TDZE <b>656</b> Apt Elev <b>656</b>	<b>5199</b> <b>656</b> <b>656</b>
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# ILS Y or LOC/DME Y RWY 30

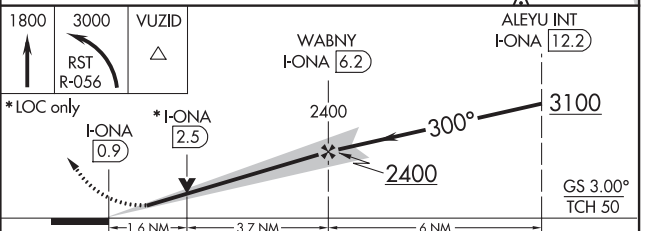
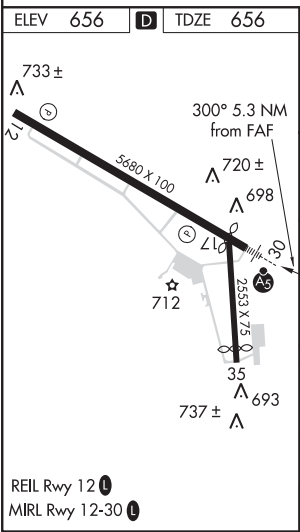
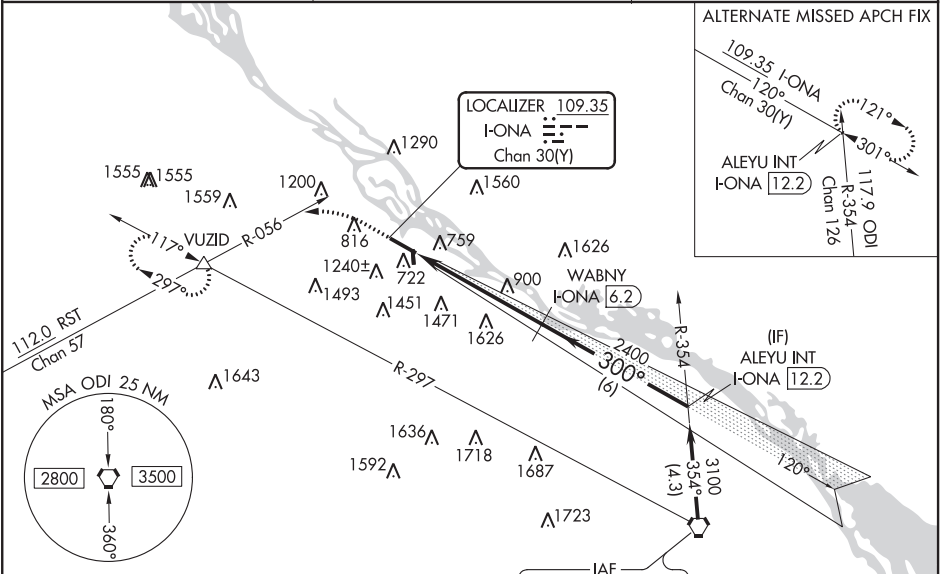
WINONA MUNI-MAX CONRAD FIELD (ONA)

**⚠** VDP NA with La Crosse altimeter setting. When local altimeter setting not received, use La Crosse altimeter setting and increase S-ILS 30 DA to 1127 and all visibilities 1/2 mile, increase all MDA 60 feet, and visibility S-LOC 30 Cat C/D 1/2 mile, and Circling Cat B 1/4 mile. For inop MALSRL, increase S-ILS 30 all Cats visibility to 1 1/2 mile, increase S-LOC 30 Cats C/D visibility to 1 1/2 mile. For inop MALSRL when using La Crosse altimeter setting, increase S-ILS 30 all Cats visibility to 1 1/2 mile, increase S-LOC 30 Cats C/D visibility to 1 1/4 mile. Night Landing: Rwy 17, 35 NA.

**MALSRL**

**MISSED APPROACH:**  
Climb to 1800 then climbing left turn to 3000 on RST VOR/DME R-056 to VUZID INT and hold.

AWOS-3 <b>111.4</b>	MINNEAPOLIS CENTER <b>128.6 363.0</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
S-ILS 30	1074-1 1/8 418 (500-1 1/8)			
S-LOC 30	1220-1/2 564 (600-1/2)	1220-1/4 564 (600-1/4)		
<b>C</b> CIRCLING	1560-1/4 904 (1000-1/4)	1600-1/4 944 (1000-1/4)	1780-3 1124 (1200-3)	1980-3 1324 (1400-3)

NC-1, 10 NOV 2016 to 05 JAN 2017



NC-1, 10 NOV 2016 to 05 JAN 2017

LOC/DME I-ONA <b>109.35</b> Chan 30(Y)	APP CRS <b>300°</b>	Rwy Idg <b>5199</b> TDZE <b>656</b> Apt Elev <b>656</b>
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# ILS Z or LOC/DME Z RWY 30

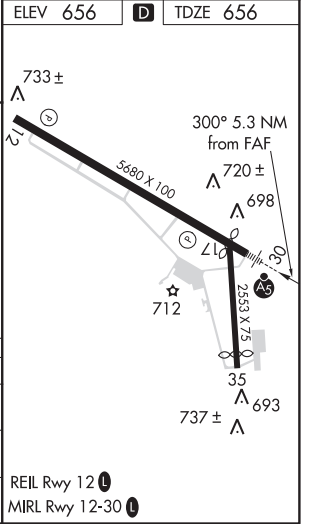
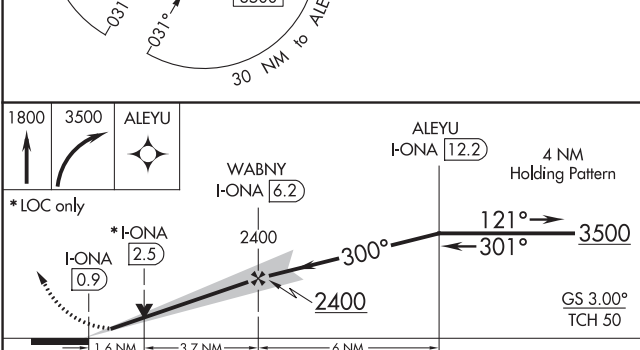
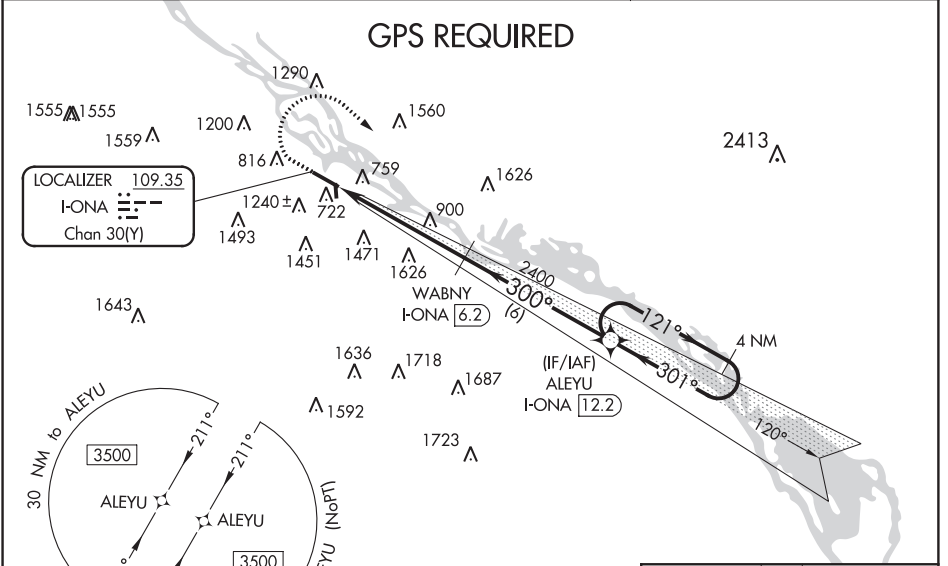
WINONA MUNI-MAX CONRAD FIELD (ONA)

**⚠** Night landing: Rwy 17, 35 NA. GPS required. VDP NA with La Crosse altimeter setting. When local altimeter setting not received, use La Crosse altimeter setting and increase S-ILS 30 DA to 1064 and all visibilities 1/8 mile, increase all MDA 60 feet, and visibility S-LOC 30 Cat C/D 1/8 mile and Circling Cat B visibility 1/4 mile. For inop MALSRL, increase S-ILS 30 all Cats visibility to 1 1/8 mile, and S-LOC 30 Cats C/D visibility to 1 3/8 mile. For inop MALSRL when using La Crosse altimeter setting, increase S-ILS 30 all Cats visibility to 1 3/8 mile, and increase S-LOC 30 Cats C/D visibility to 1 3/8 mile.

**MALSRL**  



**MISSED APPROACH:**  
Climb to 1800 then climbing right turn to 3500 direct ALEYU and hold.

AWOS-3 <b>111.4</b>	MINNEAPOLIS CENTER <b>128.6 363.0</b>	UNICOM <b>122.8 (CTAF)</b>
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CATEGORY	A	B	C	D
S-ILS 30	1011-3/4		355 (400-3/4)	
S-LOC 30	1220-1/2	564 (600-1/2)	1220-1 1/4	564 (600-1 1/4)
<b>C</b> CIRCLING	1560-1 1/4 904 (1000-1 1/4)	1600-1 1/4 944 (1000-1 1/4)	1780-3 1124 (1200-3)	1980-3 1324 (1400-3)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>40329</b> <b>W30A</b>	APP CRS <b>300°</b>	Rwy Idg TDZE Apt Elev	<b>5199</b> <b>656</b> <b>656</b>
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# RNAV (GPS) RWY 30

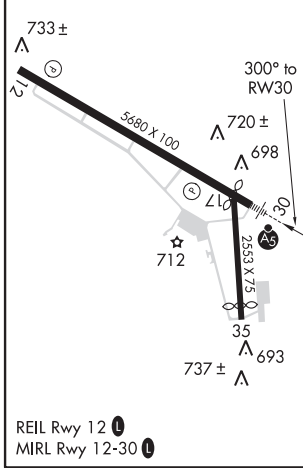
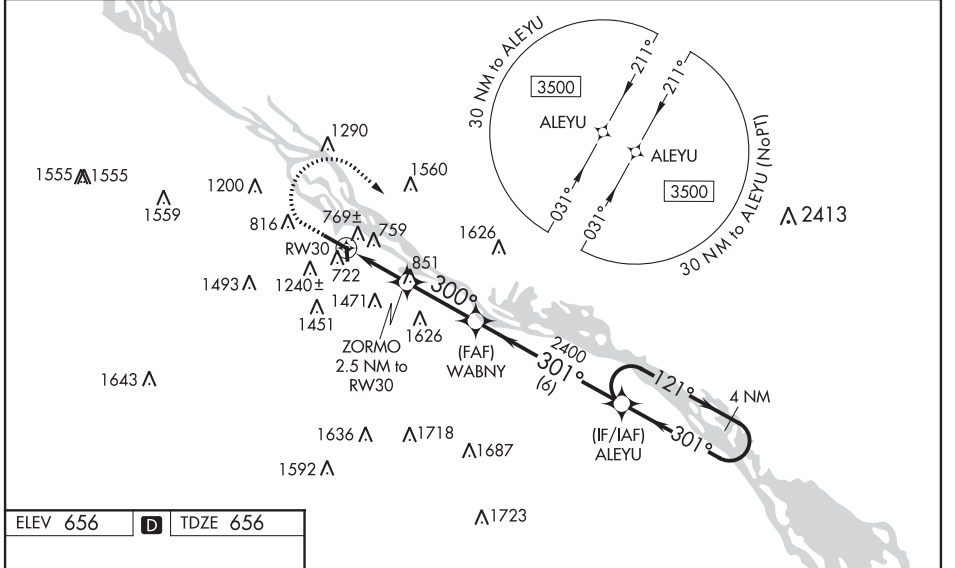
WINONA MUNI-MAX CONRAD FIELD (O.N.A)

**⚠** For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -16°C (4°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. When local altimeter setting not received, use La Crosse altimeter setting and increase all LPV DA to 1064 feet and visibility 1/8 mile all Cats, all LNAV/VNAV DA to 1193 and visibility 1/8 mile all Cats, and all MDA 60 feet, increase LNAV Cat C/D and Circling Cat B visibility 1/4 mile. For inop MALS, increase LPV all Cats visibility to 1 1/8 mile. For inop MALS when using La Crosse altimeter setting, increase LPV all Cats visibility to 1 1/8 mile, and LNAV Cats C/D visibility to 2 mile. Night landing: Rwy 17, 35 NA. Baro-VNAV and VDP NA when using La Crosse altimeter setting.

**MALS**

**MISSED APPROACH:**  
Climb to 1800 then climbing right turn to 3500 to ALEYU and hold.

AWOS-3 <b>111.4</b>	MINNEAPOLIS CENTER <b>128.6 363.0</b>	UNICOM <b>122.8 (CTAF) 1</b>
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ELEV 656	<b>D</b>	TDZE 656		
1800	3500	ALEYU		
*LNAV only				
ZORMO 2.5 NM to RW30	WABNY	ALEYU 4 NM Holding Pattern		
*1.9 NM to RW30	2400	3500		
1500*	301°	301°		
1.9 NM	0.6 NM	2.8 NM		
6 NM	GP 3.00°			
TCH 50				
CATEGORY	A	B	C	D
LPV DA	1011-3/4		355 (400-3/4)	
LNAV/VNAV DA	1140-1 1/8		484 (500-1 1/8)	
LNAV MDA	1280-1/2	624 (700-1/2)	1280-1 3/8	624 (700-1 3/8)
<b>C</b> CIRCLING	1560-1 1/4 904 (1000-1 1/4)	1600-1 1/4 944 (1000-1 1/4)	1780-3 1124 (1200-3)	1980-3 1324 (1400-3)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC I-OTG <b>111.7</b>	APP CRS <b>293°</b>	Rwy Idg TDZE Apt Elev	<b>5500</b> <b>1570</b> <b>1574</b>
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# ILS or LOC RWY 29

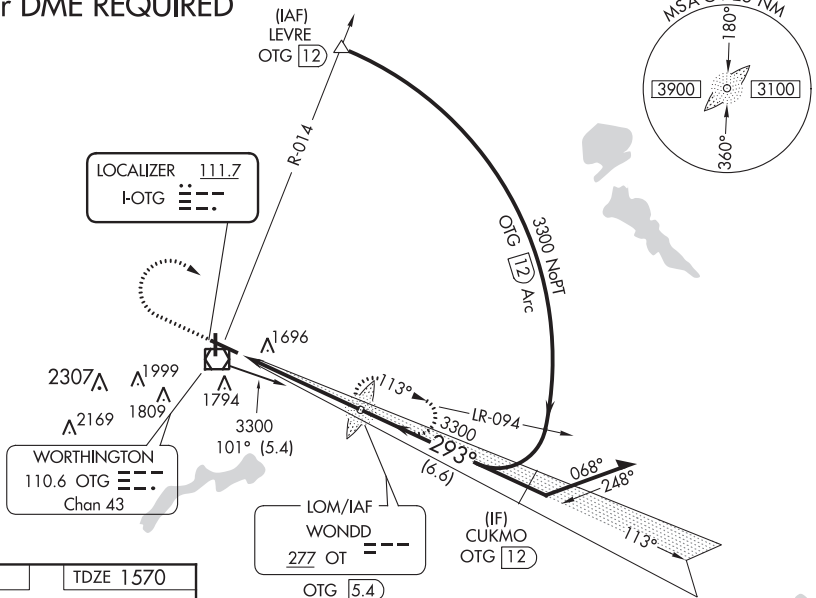
WORTHINGTON MUNI (OTG)

**NA** ADF or DME required. Autopilot coupled approach NA below 1770. When local altimeter setting not received, use Jackson altimeter setting and increase all DA 78 feet, all MDA 80 feet, increase S-LOC 29 Cat C and D and Circling Cat C visibility ¼ mile. For inoperative MALSR, when using Jackson altimeter setting, increase S-ILS 29 all Cats visibility to ¾ mile.

**MALSR** MISSED APPROACH: Climb to 2500 then climbing right turn to 3300 direct WONDD LOM/OTG 5.4 DME and hold.

AWOS-3PT <b>110.6</b>	MINNEAPOLIS CENTER <b>132.05 317.4</b>	UNICOM <b>122.8 (CTAF)</b>
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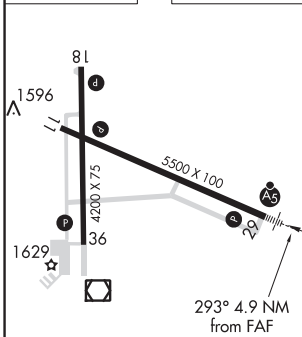
## ADF or DME REQUIRED



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1574	TDZE 1570
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MIRL Rwy 18-36  
HIRL Rwy 11-29  
REIL Rwys 11, 18, and 36

FAF to MAP 4.9 NM

Knots	60	90	120	150	180
Min:Sec	4:54	3:16	2:27	1:58	1:38

2500 3300 OT VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 43)	Remain within 10 NM			
	3205 113° 293° 3300 GS 3.00° TCH 53 4.9 NM			
OT LOM OTG 5.4	A	B	C	D
S-ILS 29	1770-½		200 (200-½)	
S-LOC 29	2000-½	430 (500-½)	2000-¾	430 (500-¾)
CIRCLING	2100-1	526 (600-1)	2100-1½	2140-2 566 (600-2)



WAAS CH <b>58230</b> <b>W11A</b>	APP CRS <b>113°</b>	Rwy Idg TDZE <b>1574</b> Apt Elev <b>1574</b>	<b>5500</b>
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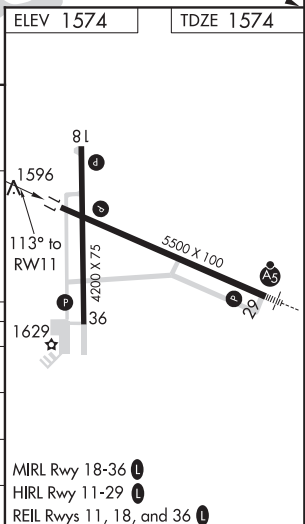
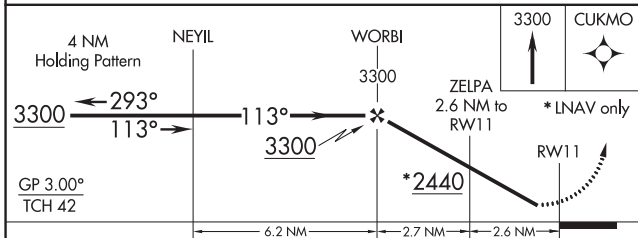
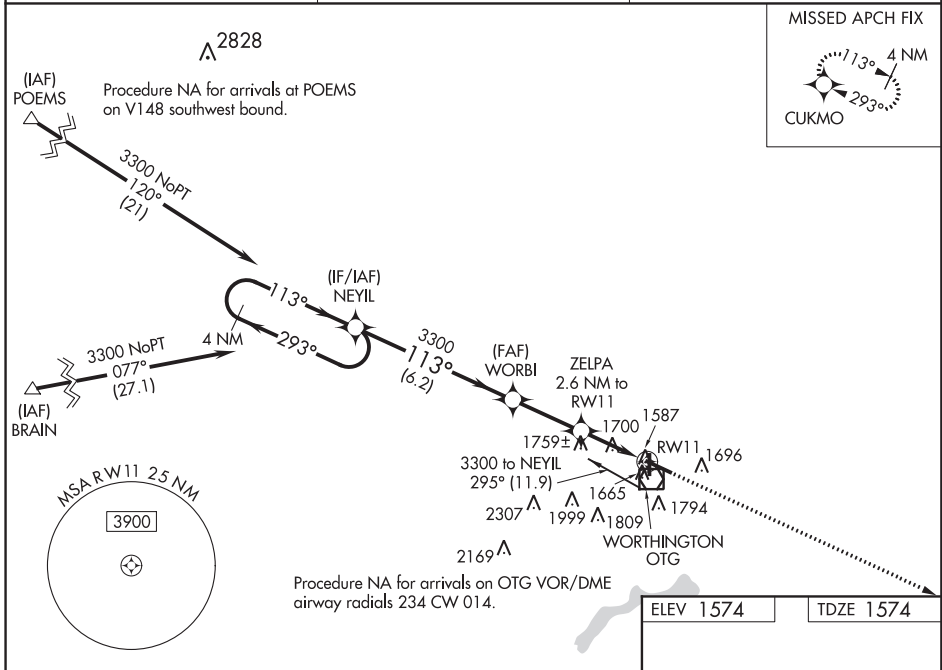
# RNAV (GPS) RWY 11

WORTHINGTON MUNI (OTG)

**⚠** Baro-VNAV NA when using Jackson altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). When VGSi inop, Straight-in/Circling Rwy 11 procedure NA at night. DME/DME RNP-0.3 NA. Visibility reduction by helicopters NA. When local altimeter setting not received, use Jackson altimeter setting and increase all DA 78 feet, all MDA 80 feet, increase LPV and LNAV/VNAV all Cats and LNAV Cats C/D visibility 1/8 mile and Circling Cat C visibility 1/4 mile.

MISSED APPROACH: Climb to 3300 direct CUKMO and hold.

AWOS-3PT <b>110.6</b>	MINNEAPOLIS CENTER <b>132.05 317.4</b>	UNICOM <b>122.8 (CTAF)</b> <b>Ⓛ</b>
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CATEGORY	A	B	C	D
LPV DA		1824-1	250 (300-1)	
LNAV/VNAV DA		1826-1	252 (300-1)	
LNAV MDA	2020-1 446 (500-1)		2020-1 3/8 446 (500-1 3/8)	
CIRCLING	2100-1 526 (600-1)		2100-1 1/2 526 (600-1 1/2)	2140-2 566 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>93830</b> <b>W18A</b>	APP CRS <b>178°</b>	Rwy Idg TDZE Apt Elev	<b>4200</b> <b>1574</b> <b>1574</b>
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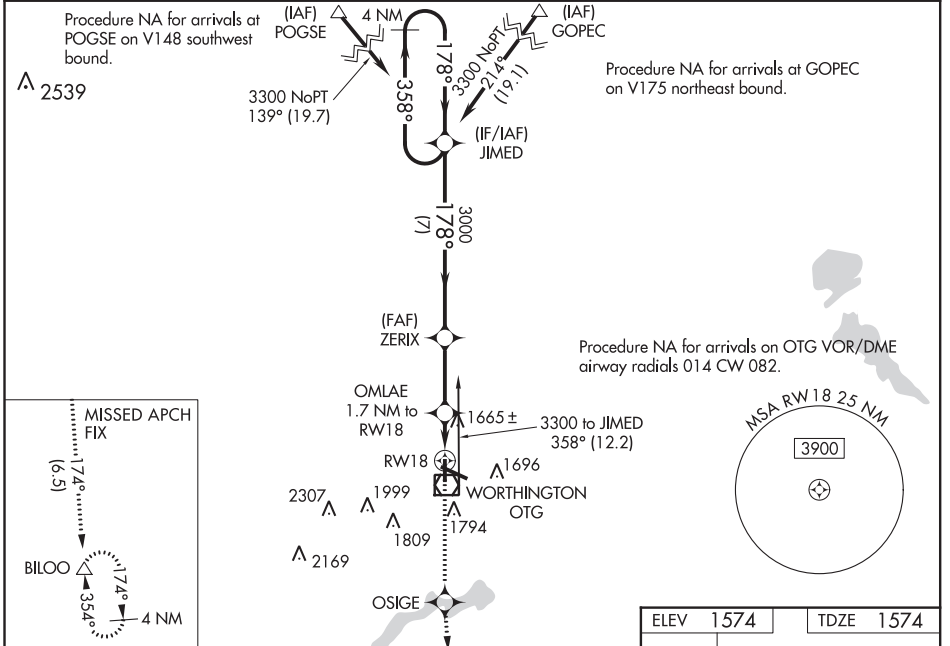
# RNAV (GPS) RWY 18

WORTHINGTON MUNI (OTG)

**⚠** Baro-VNAV NA when using Jackson altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). DME/DME RNP-0.3 NA. VDP NA with Jackson altimeter setting. When local altimeter setting not received, use Jackson altimeter setting and increase all DA 78 feet and all MDA 80 feet, increase LPV and LNAV/VNAV all Cats, LNAV Cat C/D, and Circling Cat C visibility ¼ mile.

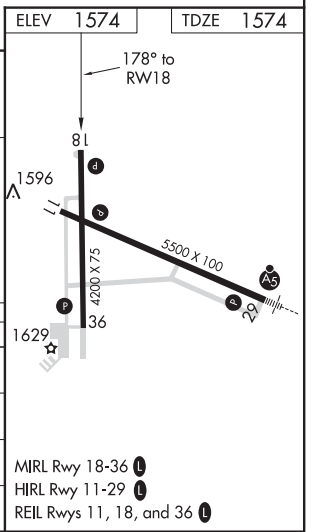
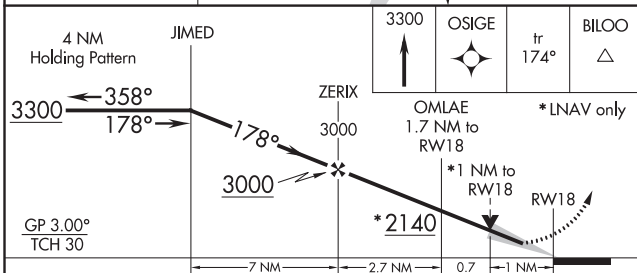
MISSED APPROACH: Climb to 3300 direct OSIGE and on track 174° to BILOO and hold.

AWOS-3PT <b>110.6</b>	MINNEAPOLIS CENTER <b>132.05 317.4</b>	UNICOM <b>122.8 (CTAF) 1</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017



CATEGORY	A	B	C	D
LPV DA		1774-1	200 (200-1)	
LNAV/VNAV DA		1824-1	250 (300-1)	
LNAV MDA		1920-1	346 (400-1)	
CIRCLING	2100-1	526 (600-1)	2100-1½ 526 (600-1½)	2140-2 566 (600-2)

WAAS CH <b>45930</b> <b>W29A</b>	APP CRS <b>293°</b>	Rwy Idg TDZE Apt Elev	<b>5500</b> <b>1570</b> <b>1574</b>
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# RNAV (GPS) RWY 29

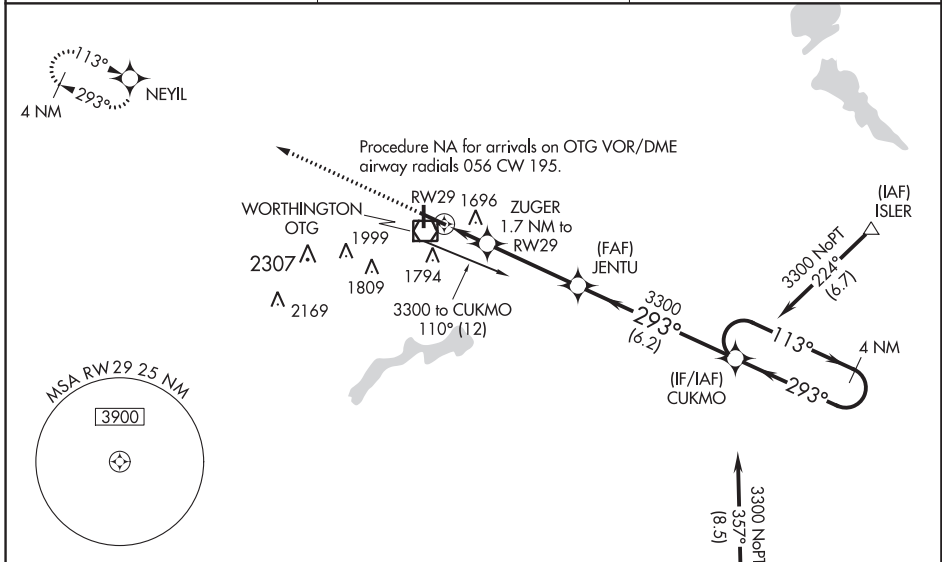
WORTHINGTON MUNI (OTG)

**▼** Baro-VNAV NA when using Jackson altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). DME/DME RNP-0,3 NA. VDP NA with Jackson altimeter setting. When local altimeter setting not received, use Jackson altimeter setting and increase all DA 78 feet and all MDA 80 feet: increase LNAV/VNAV all Cats visibility ¼ mile, LNAV Cats C/D visibility ⅓ mile, and Circling Cat C visibility ¼ mile. For inoperative MALSR, when using Jackson altimeter setting, increase LPV all Cats visibility to ⅓ mile.

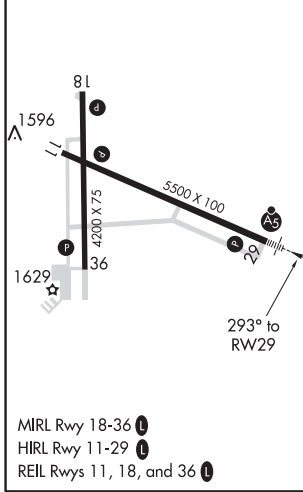
**MALSR**  
A5

**MISSED APPROACH:**  
Climb to 3300 direct NEYIL and hold.

AWOS-3PT <b>110.6</b>	MINNEAPOLIS CENTER <b>132.05 317.4</b>	UNICOM <b>122.8 (CTAF) 0</b>
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ELEV 1574	TDZE 1570
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CATEGORY	A	B	C	D
LPV DA		1770-½	200 (200-½)	
LNAV/VNAV DA		1992-1	422 (500-1)	
LNAV MDA	1960-½	390 (400-½)	1960-⅝	390 (400-⅝)
CIRCLING	2100-1	526 (600-1)	2100-1½ 526 (600-1½)	2140-2 566 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WORTHINGTON, MINNESOTA

AL-5209 (FAA)

16203

WAAS CH <b>99329</b> <b>W36A</b>	APP CRS <b>358°</b>	Rwy Idg TDZE Apt Elev	<b>4200</b> <b>1574</b> <b>1574</b>
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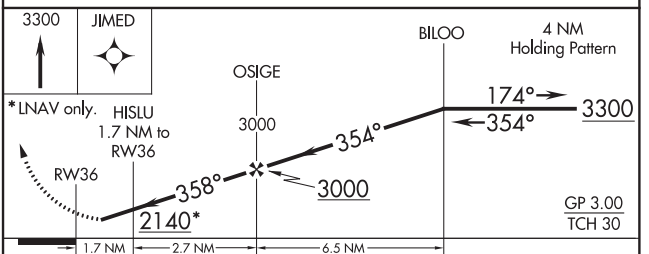
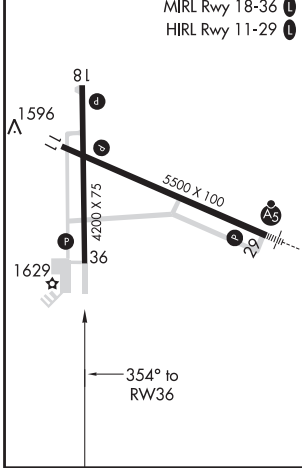
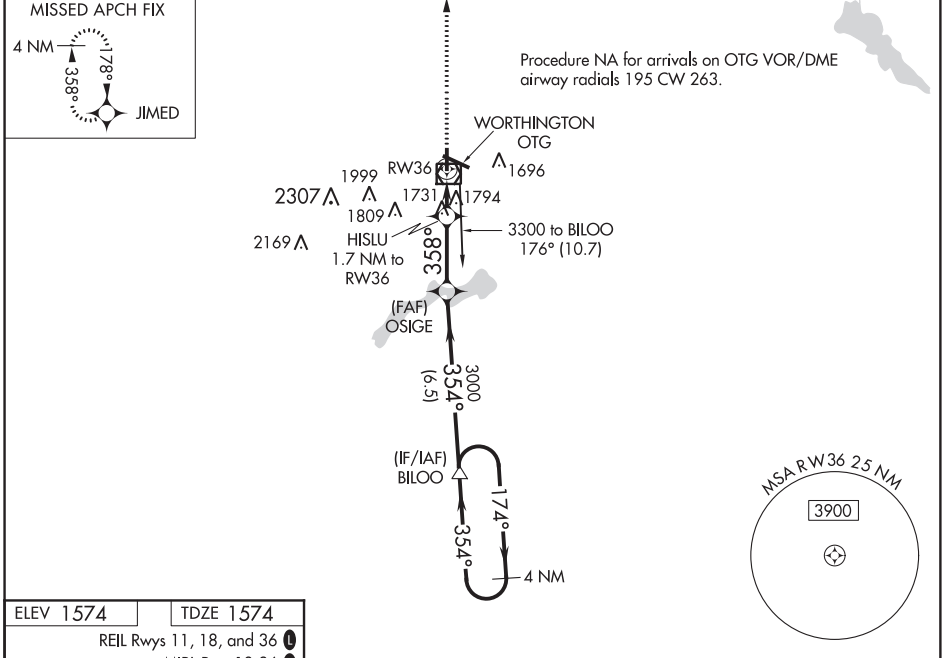
# RNAV (GPS) RWY 36

WORTHINGTON MUNI (OTG)

**⚠** Baro-VNAV NA when using Jackson altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -18°C (0°F) or above 54°C (130°F). DME/DME RNP-0.3 NA.  
**⚠** Helicopter visibility reduction below ¼ SM NA. When local altimeter setting not received, use Jackson altimeter setting and increase all DA 78 feet and MDA 80 feet, increase LPV all Cats, LNAV Cat C/D and Circling Cat C visibility ¼ mile and LNAV/VNAV all Cats visibility ⅓ mile.

MISSED APPROACH: Climb to 3300 direct JIMED and hold.

AWOS-3PT <b>110.6</b>	MINNEAPOLIS CENTER <b>132.05 317.4</b>	UNICOM <b>122.8 (CTAF) 0</b>
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CATEGORY	A	B	C	D
LPV DA	1824-1 250 (300-1)			
LNAV/VNAV DA	2095-1 7/8 521 (600-1 1/2)			
LNAV MDA	2060-1	486 (500-1)	2060-1 3/8	486 (500-1 3/8)
CIRCLING	2100-1	526 (600-1)	2100-1 1/2 526 (600-1 1/2)	2140-2 566 (600-2)

WORTHINGTON, MINNESOTA  
 Orig-A 21JUL16

43°39'N-95°35'W

# WORTHINGTON MUNI (OTG) RNAV (GPS) RWY 36

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

VOR/DME OTG <b>110.6</b> Chan <b>43</b>	APP CRS <b>134°</b>	Rwy Idg <b>5500</b> TDZE <b>1574</b> Apt Elev <b>1574</b>
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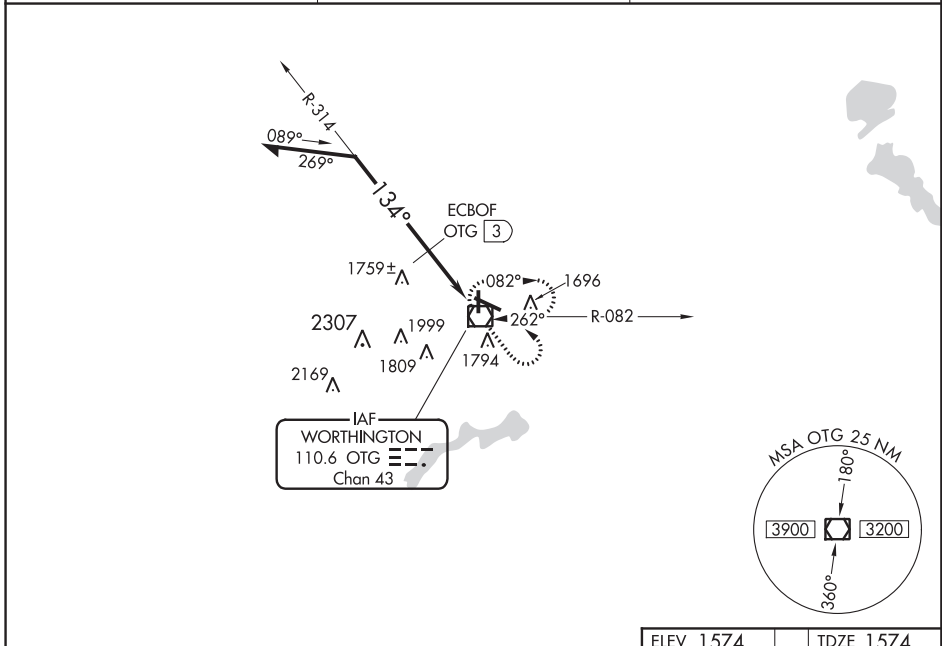
# VOR RWY 11

WORTHINGTON MUNI (OTG)

**⚠** When local altimeter setting not received, use Jackson altimeter setting and increase all MDA 80 feet, Circling Cat A and D visibility ¼ mile, increase ECBOF fix minimums S-11 Cat C/D visibility ⅓ mile and Circling Cat C visibility ¼ mile. When VGSI inop, Straight-in/Circling Rwy 11 procedure NA at night. Visibility reduction by helicopters NA.

**⚠** MISSED APPROACH: Climb to 2700 then climbing left turn to 3400 direct to OTG VOR/DME and hold.

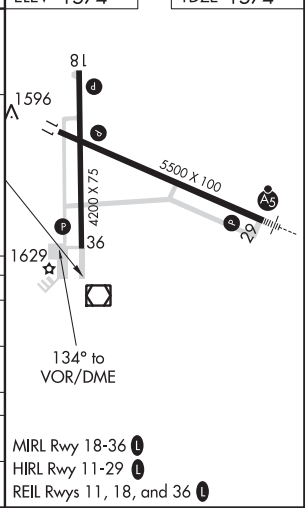
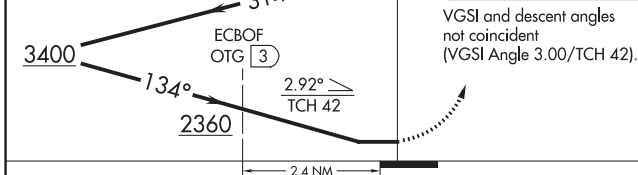
AWOS-3PT <b>110.6</b>	MINNEAPOLIS CENTER <b>132.05 317.4</b>	UNICOM <b>122.8 (CTAF)</b>
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NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1574	TDZE 1574
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CATEGORY	A	B	C	D
S-11	2360-1 786 (800-1)	2360-1¼ 786 (800-1¼)	2360-2½	786 (800-2½)
CIRCLING	2360-1 786 (800-1)	2360-1¼ 786 (800-1¼)	2360-2½	786 (800-2½)
ECBOF FIX MINIMUMS (DME REQUIRED)				
S-11	2020-1	446 (500-1)	2020-1⅓	446 (500-1⅓)
CIRCLING	2100-1	526 (600-1)	2100-1½	2140-2 566 (600-2)

WORTHINGTON, MINNESOTA

AL-5209 (FAA)

16203

VOR/DME OTG <b>110.6</b> Chan <b>43</b>	APP CRS <b>169°</b>	Rwy Idg <b>4200</b> TDZE <b>1574</b> Apt Elev <b>1574</b>
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# VOR RWY 18

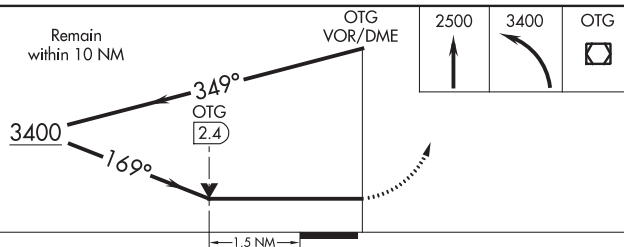
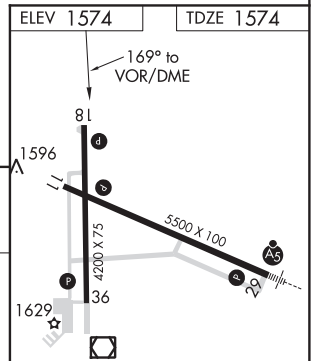
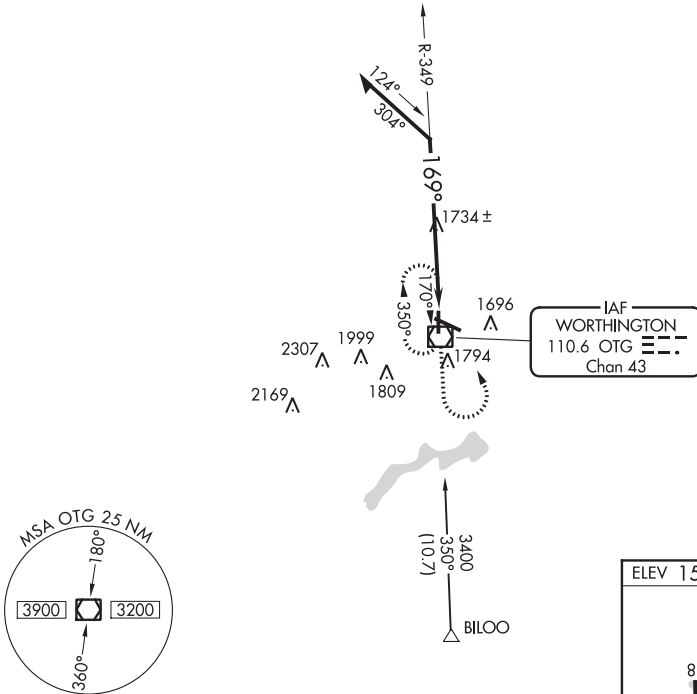
WORTHINGTON MUNI (OTG)

**▽** VDP NA with Jackson altimeter setting. When local altimeter setting not received, use Jackson altimeter setting and increase all MDA 80 feet and increase S-18 Cats C/D visibility  $\frac{3}{8}$  mile and Circling Cat C visibility  $\frac{1}{4}$  mile.

**▲** MISSED APPROACH: Climb to 2500 then climbing left turn to 3400 direct OTG VOR/DME and hold, continue climb-in-hold to 3400.

AWOS-3PT <b>110.6</b>	MINNEAPOLIS CENTER <b>132.05 317.4</b>	UNICOM <b>122.8</b> (CTAF) <b>📞</b>
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▲ 2539



CATEGORY	A	B	C	D
S-18	2080-1	506 (600-1)	2080-1 $\frac{3}{8}$	506 (600-1 $\frac{3}{8}$ )
CIRCLING	2100-1	526 (600-1)	2100-1 $\frac{1}{2}$	2140-2 566 (600-2)

WORTHINGTON, MINNESOTA  
Amdt 10A 05FEB15

43°39'N-95°35'W

# WORTHINGTON MUNI (OTG) VOR RWY 18

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

LOC I-YKN <b>109.5</b>	APP CRS <b>313°</b>	Rwy Idg TDZE Apt Elev	<b>6095</b> <b>1285</b> <b>1306</b>
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# ILS or LOC RWY 31

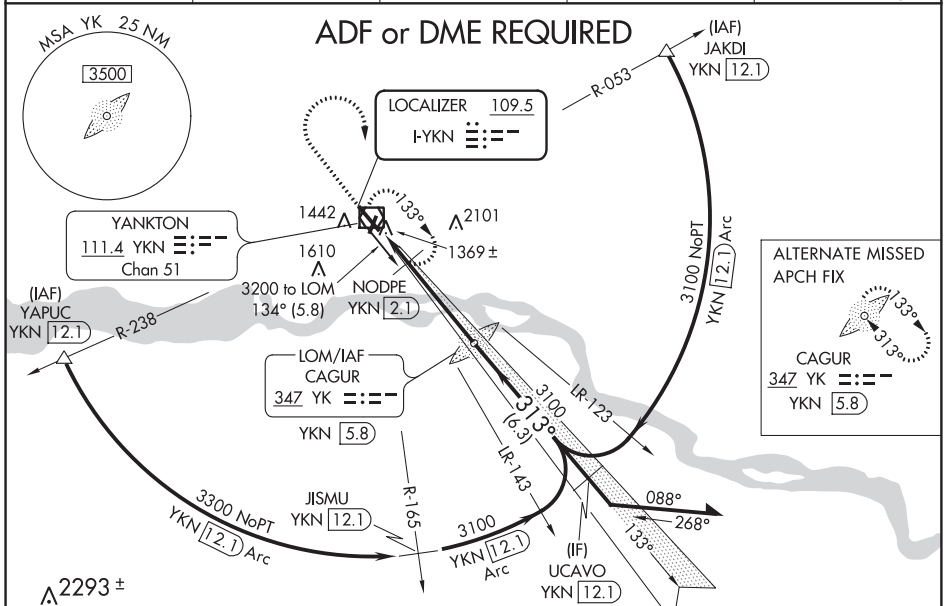
CHAN GURNEY MUNI (YKN)

**NA** When VGSI inop, Circling Rwy 19 NA at night. When local altimeter setting not received, use Sioux Falls altimeter setting and increase all DA 130 feet and all MDA 140 feet, and increase S-ILS 31 visibility all Cats ½ mile, S-LOC 31 Cats C and D ¾ mile, and Circling Cat C ¾ mile, Cat D ¼ mile. NODPE fix minimums: increase S-LOC 31 visibility Cats C and D ¾ mile, Circling Cats C and D ¼ mile. For inoperative MALSR when using Sioux Falls altimeter setting, increase S-ILS 31 all Cats visibility to 1 ½ mile.

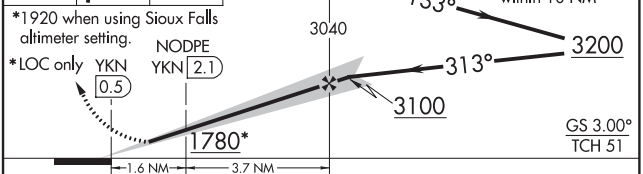
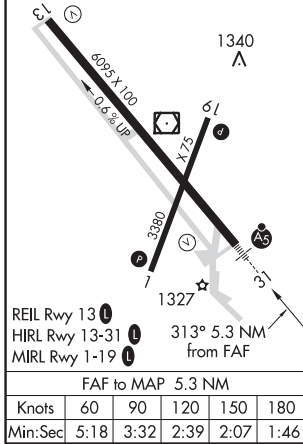
**MALSR**

**MISSED APPROACH:** Climb to 3000 then climbing right turn to 3200 direct YKN VOR/DME and hold.

AWOS-3 <b>111.4</b>	MINNEAPOLIS CENTER <b>128.0 257.95</b>	HURON RADIO <b>122.55</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b>
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ELEV 1306	TDZE 1285	3000	3200	YKN	YK LOM YKN [5.8]	VGSI and ILS glidepath not coincident (VGSI Angle 3.00/TCH 48).
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CATEGORY	A	B	C	D
S-ILS 31	1485-½ 200 (200-½)			
S-LOC 31	1780-½ 495 (500-½)	1780-1 495 (500-1)		
CIRCLING	1780-1 474 (500-1)	1780-1½ 474 (500-1½)	1860-2 554 (600-2)	
NODPE FIX MINIMUMS (DME REQUIRED)				
S-LOC 31	1620-½ 335 (400-½)	1620-5/8 335 (400-5/8)		
CIRCLING	1780-1 474 (500-1)	1780-1½ 474 (500-1½)	1860-2 554 (600-2)	

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

WAAS CH <b>50400</b> <b>W13A</b>	APP CRS <b>133°</b>	Rwy Idg TDZE <b>1306</b> Apt Elev <b>1306</b>	<b>6095</b>
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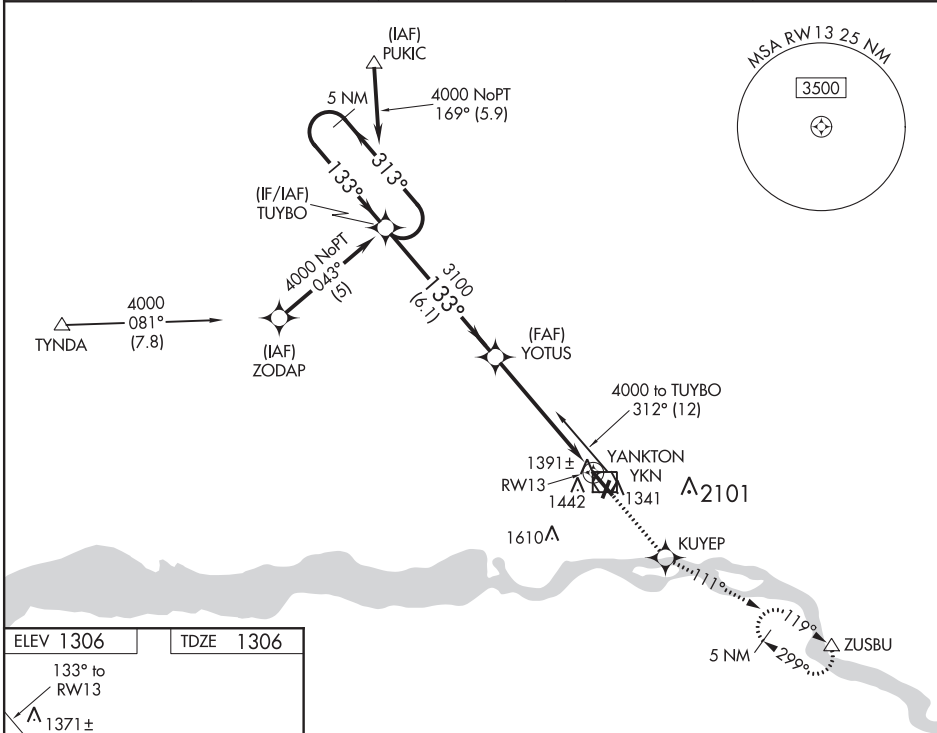
# RNAV (GPS) RWY 13

CHAN GURNEY MUNI (YKN)

**⚠** If local altimeter setting not received, use Sioux Falls altimeter setting and increase all DAs/MDAs 140 feet.  
**⚠** DME/DME RNP -0.3 NA.  
 Visibility reduction by helicopters NA.

**MISSED APPROACH:** Climb to 4000 direct KUYEP and via 111° track to ZUSBU and hold, continue climb-in-hold to 4000.

AWOS-3 <b>111.4</b>	MINNEAPOLIS CENTER <b>128.0 257.95</b>	HURON RADIO <b>122.55</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b> <b>📶</b>
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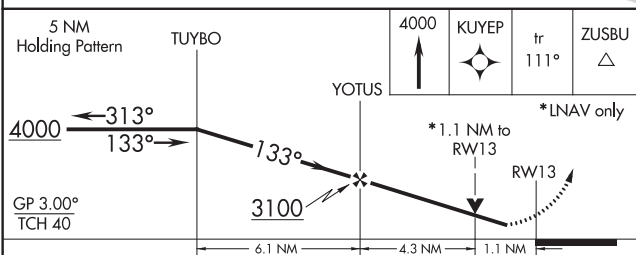


NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1306	TDZE 1306
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REIL Rwy 13 **📶**  
 HIRL Rwy 13-31 **📶**  
 MIRL Rwy 1-19 **📶**



CATEGORY	A	B	C	D
LPV DA	1556-1 250 (300-1)			
LNAV MDA	1700-1 394 (400-1)		1700-1¼ 394 (400-1¼)	
CIRCLING	1780-1 474 (500-1)		1780-1½ 474 (500-1½) 1860-2 554 (600-2)	




WAAS CH <b>50521</b> <b>W31A</b>	APP CRS <b>313°</b>	Rwy Idg TDZE Apt Elev	<b>6095</b> <b>1285</b> <b>1306</b>
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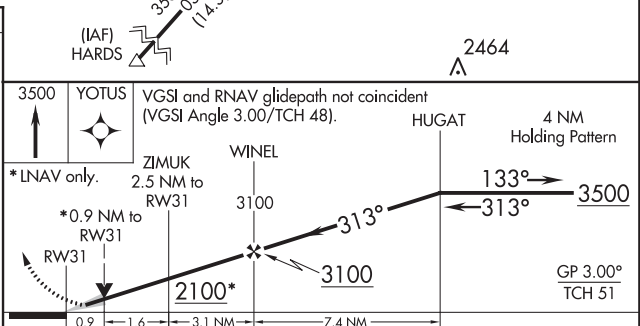
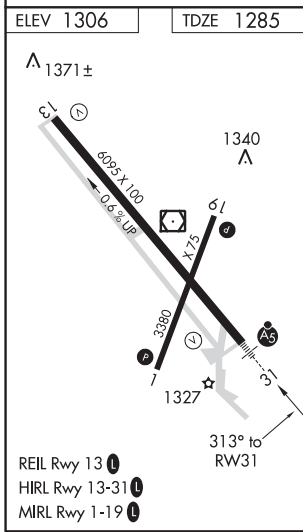
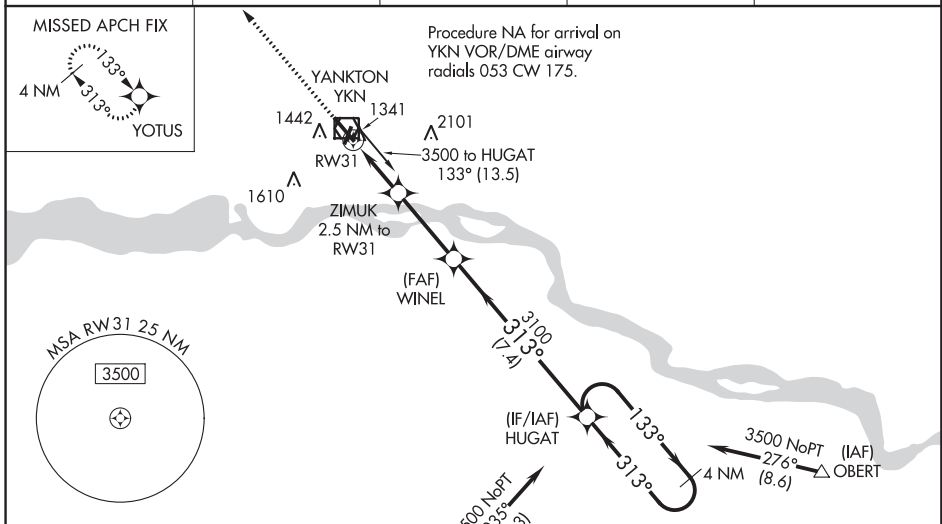
# RNAV (GPS) RWY 31

CHAN GURNEY MUNI (YKN)

**⚠** When VGSi inoperative, Circling Rwy 19 NA at night. Baro-VNAV NA when using Sioux Falls altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -17°C (2°F) or above 35°C (95°F). DME/DME RNP-0.3 NA. VDP NA with Sioux Falls altimeter setting. When local altimeter setting not received, use Sioux Falls altimeter setting and increase all DA 130 feet and all MDA 140 feet. Increase LPV all Cats visibility 1/8 mile, LNAV/VNAV all Cats visibility 1/4 mile, LNAV Cats C and D visibility 1/2 mile and Circling Cats C and D visibility 1/4 mile. For inoperative MALS R when using Sioux Falls altimeter setting increase LPV visibility to 1 1/8 all Cats, LNAV/VNAV visibility to 1 1/4 all Cats, LNAV Cats C and D to 1 1/8 and increase Circling Cats C and D 1/4 mile.

**MALS R**  MISSED APPROACH: Climb to 3500 direct YOTUS and hold, continue climb-in-hold to 3500.

AWOS-3 <b>111.4</b>	MINNEAPOLIS CENTER <b>128.0 257.95</b>	HURON RADIO <b>122.55</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF)</b> 
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CATEGORY	A	B	C	D
LPV DA		1485-1/2	200 (200-1/2)	
LNAV/VNAV DA		1535-1/2	250 (300-1/2)	
LNAV MDA		1600-1/2	315 (300-1/2)	
CIRCLING	1780-1	474 (500-1)	1780-1 1/2 474 (500-1 1/2)	1860-2 554 (600-2)

NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

YANKTON, SOUTH DAKOTA

AL-5235 (FAA)

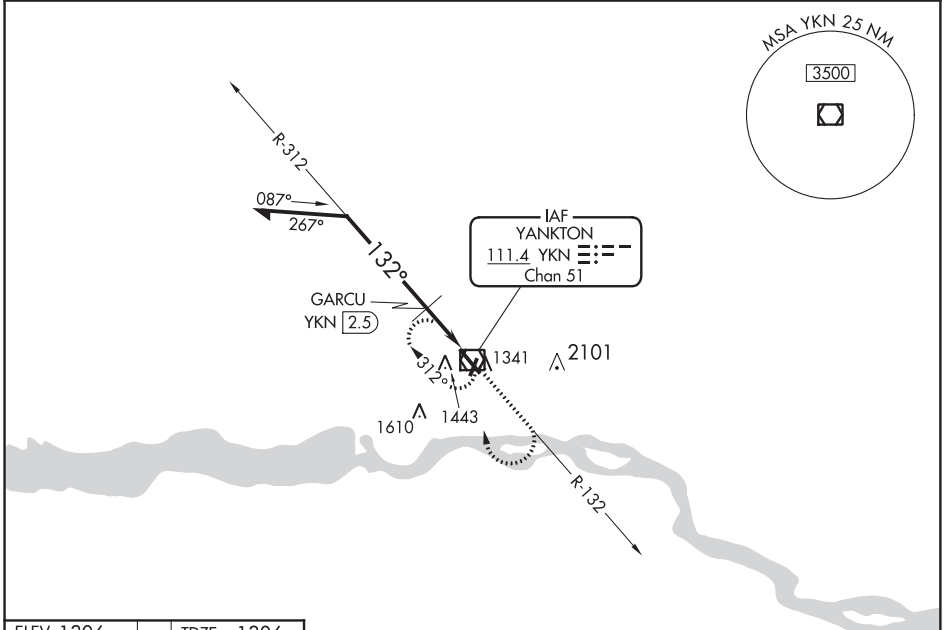
14317

VOR/DME YKN <b>111.4</b> Chan 51	APP CRS <b>132°</b>	Rwy Idg <b>6095</b> TDZE <b>1306</b> Apt Elev <b>1306</b>
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# VOR RWY 13

CHAN GURNEY MUNI (YKN)

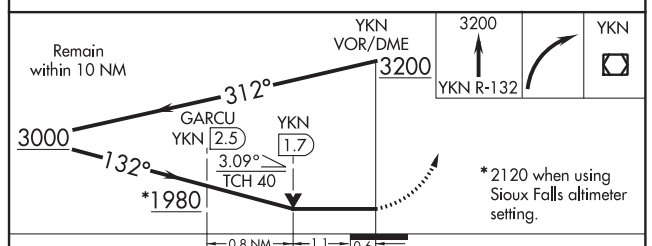
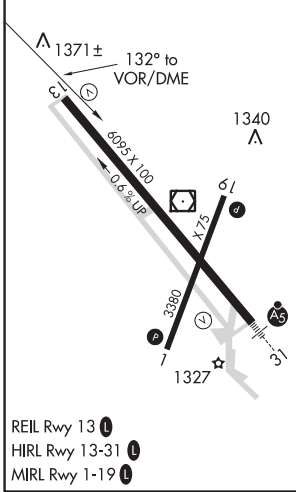
<p><b>⚠</b> If local altimeter setting not received, use Sioux Falls altimeter setting and increase all MDAs 140 feet. VDP NA when using Sioux Falls altimeter setting. Visibility reduction by helicopters NA.</p>		<p>MISSED APPROACH: Climb to 3200 via YKN VOR/DME R-132 then right turn direct YKN VOR/DME and hold.</p>		
AWOS-3 <b>111.4</b>	MINNEAPOLIS CENTER <b>128.0 257.95</b>	HURON RADIO <b>122.55</b>	GCO <b>121.725</b>	UNICOM <b>122.8 (CTAF) 0</b>



NC-1, 10 NOV 2016 to 05 JAN 2017

NC-1, 10 NOV 2016 to 05 JAN 2017

ELEV 1306	TDZE 1306
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CATEGORY	A	B	C	D
S-13	1980-1 674 (700-1)		1980-2 674 (700-2)	1980-2 1/4 674 (700-2 1/4)
CIRCLING	1980-1 674 (700-1)		1980-2 674 (700-2)	1980-2 1/4 674 (700-2 1/4)
GARCUs FIX MINIMUMS				
S-13	1700-1 394 (400-1)		1700-1 1/4 394 (400-1 1/4)	
CIRCLING	1780-1 474 (500-1)		1780-1 1/2 474 (500-1 1/2)	1860-2 554 (600-2)

YANKTON, SOUTH DAKOTA  
Amdt 3 28SEP06

42°55'N-97°23'W

CHAN GURNEY MUNI (YKN)  
**VOR RWY 13**

# CLIMB/DESCENT TABLE 10042

## INSTRUMENT TAKEOFF OR APPROACH PROCEDURE CHARTS RATE OF CLIMB/DESCENT TABLE

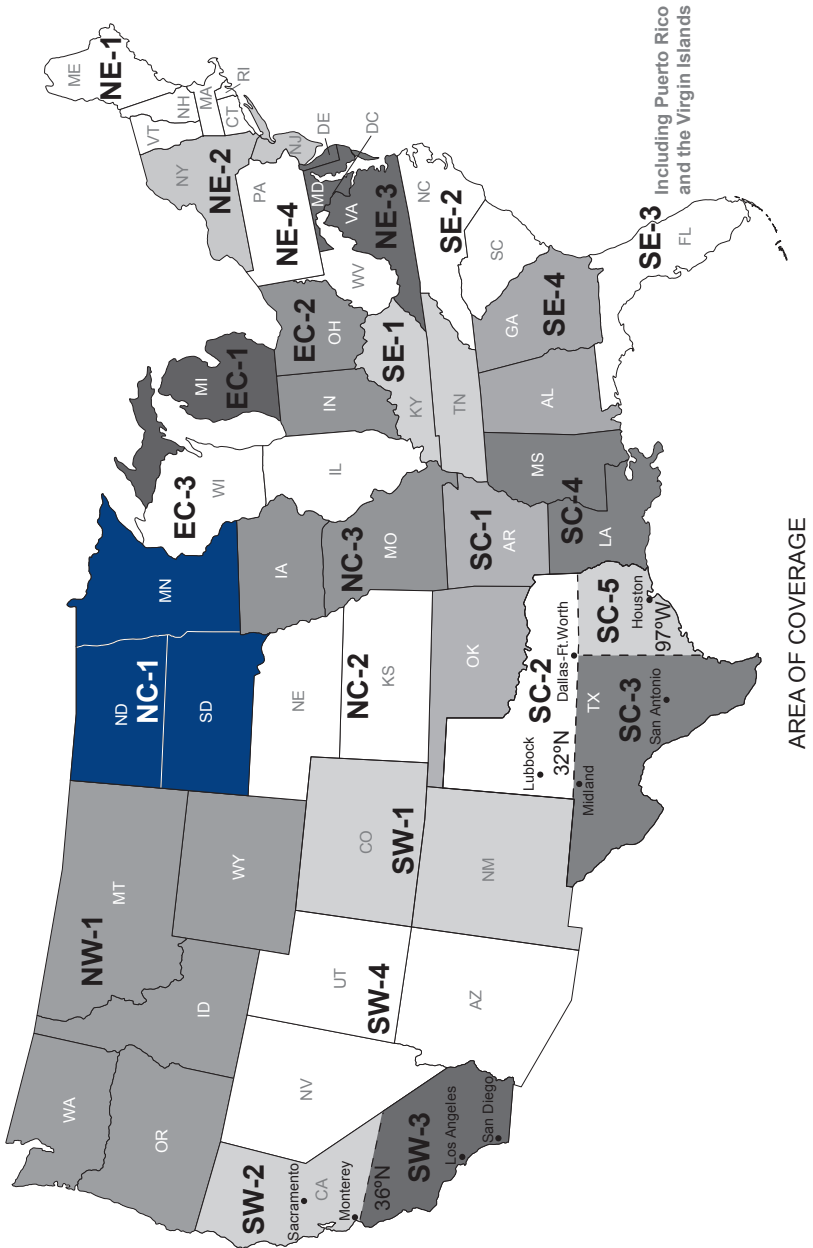
(ft. per min)

A rate of climb/descent table is provided for use in planning and executing climbs or descents under known or approximate ground speed conditions. It will be especially useful for approaches when the localizer only is used for course guidance. A best speed, power, altitude combination can be programmed which will result in a stable glide rate and altitude favorable for executing a landing if minimums exist upon breakout. Care should always be exercised so that minimum descent altitude and missed approach point are not exceeded.

CLIMB/ DESCENT ANGLE (degrees and tenths)	ft/NM	GROUND SPEED (knots)											
		60	90	120	150	180	210	240	270	300	330	360	
2.0	210	210	320	425	530	635	743	850	955	1060	1165	1275	
2.5	265	265	400	530	665	795	930	1060	1195	1325	1460	1590	
VERTICAL PATH ANGLE	2.7	287	287	430	574	717	860	1003	1147	1290	1433	1576	1720
	2.8	297	297	446	595	743	892	1041	1189	1338	1486	1635	1783
	2.9	308	308	462	616	770	924	1078	1232	1386	1539	1693	1847
	3.0	318	318	478	637	797	956	1115	1274	1433	1593	1752	1911
	3.1	329	329	494	659	823	988	1152	1317	1481	1646	1810	1975
	3.2	340	340	510	680	850	1020	1189	1359	1529	1699	1869	2039
	3.3	350	350	526	701	876	1052	1227	1402	1577	1752	1927	2103
	3.4	361	361	542	722	903	1083	1264	1444	1625	1805	1986	2166
3.5	370	370	555	745	930	1115	1300	1485	1670	1860	2045	2230	
4.0	425	425	640	850	1065	1275	1490	1700	1915	2125	2340	2550	
4.5	480	480	715	955	1195	1435	1675	1915	2150	2390	2630	2870	
5.0	530	530	795	1065	1330	1595	1860	2125	2390	2660	2925	3190	
5.5	585	585	880	1170	1465	1755	2050	2340	2635	2925	3220	3510	
6.0	640	640	960	1275	1595	1915	2235	2555	2875	3195	3510	3830	
6.5	690	690	1040	1385	1730	2075	2425	2770	3115	3460	3805	4155	
7.0	745	745	1120	1490	1865	2240	2610	2985	3355	3730	4105	4475	
7.5	800	800	1200	1600	2000	2400	2800	3200	3600	4000	4400	4800	
8.0	855	855	1280	1710	2135	2560	2990	3415	3845	4270	4695	5125	
8.5	910	910	1360	1815	2270	2725	3180	3630	4085	4540	4995	5450	
9.0	960	960	1445	1925	2405	2885	3370	3850	4330	4810	5295	5775	
9.5	1015	1015	1525	2035	2540	3050	3560	4065	4575	5085	5590	6100	
10.0	1070	1070	1605	2145	2680	3215	3750	4285	4820	5355	5890	6430	

# CLIMB/DESCENT TABLE 10042

# U.S. TERMINAL PUBLICATION VOLUMES



FAA Product ID: BTPPNC1



NSN 7641015059577

NGA REF. NO. OK-10-2859 TERMXFAABTTPPNC1



EFF. DATE 16315