Flight Procedure Tracking Form	Action: FLIGHT CHECK	Task Type: IAP	Date Open: 01/30/2012	Task #: 2012013027206501001	Request #: 20120130272065
Procedure: RNAV (GPS) RWY 15 ORIG		Airport ID: KGHW	Airport: GLENWOOD MUNI		Reimbursable #:
City: GLENWOOD	ST: MN	GPS #:		Estimated Chart Date: 05/02/2013	FICO #:
Fac ID:	Fac. Type: LPV	Specialist: AUSTIN GOTCHER			

LPV

Procedure Review

	Rec'd	Rel'd	Full Name	Comments
Lead:	09/19/2012	12/17/2012	JEFF RAWDON	
QA:	12/17/2012	12/19/2012	CASIMIR TABAKA	
Liaison:	12/19/2012		Spurlin	

pg 1 of 2

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

GLENWOOD, MN GLENWOOD MUNI (KGHW) RNAV (GPS) RWY 15, ORIG (LPV) ENROUTE-NO FC: 3.19.13 PUB: 5.2.13

ATTACHED FORMS: 8260-3; 8260-10; 8260-9; 8260-2(S): HUVGO, ORIG; ITVOY, REV 1; WIVTA, ORIG; ZALGU, ORIG.
FLCK NOTE: REQUEST 4D ACCURACY VERIFICATION OF 1747 MSL TOWER 27-001985, 455053.00N/0953013.00W.

CONTACT: JILL OLSON/STEVE BARNETT -AVJ-353 LEADS, 405.954.4014 / 405.954.9307.

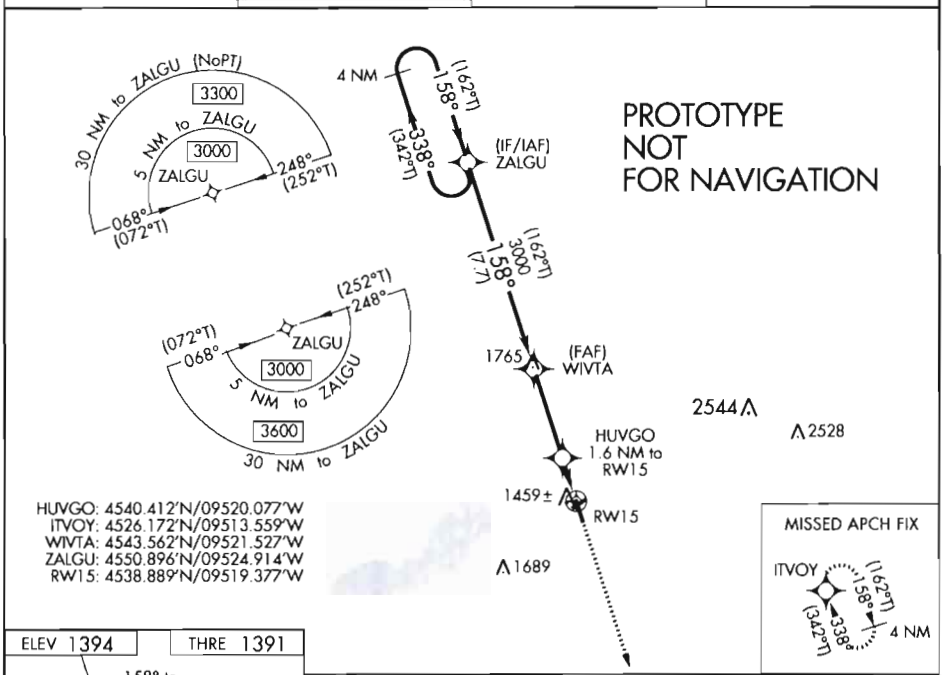
WAAS	APP CRS	Rwy ldg	4500
CH 70333	158°	THRE	1391
W15A		Apt Elev	1394

RNAV (GPS) RWY 15
GLENWOOD MUNI (GHW)

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 setting not received, use Alexandria altimeter setting and increase all DA 36 feet and all MDA 40 feet, increase LPV all Cats and LNAV/VNAV all Cats visibilities ⅛ mile. Baro-VNAV and VDP NA when using Alexanderea altimeter setting. Circling NA to Rwys 5/23.

MISSED APPROACH: Climb to 3000 direct ITVOY and hold.

AWOS-3	MINNEAPOLIS CENTER	GCO	CTAF
346	126.1 269.2	121.725	122.9



ELEV 1394 THRE 1391

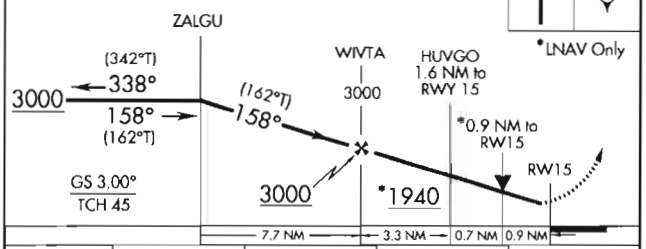
158° to RW15

4 NM Holding Pattern

VGSI and RNAV glidepath not coincident (VGSI Angle 3.00/TCH 33).

3000 ITVOY

*LNAV Only



CATEGORY	A	B	C	D
LPV DA	1641-¾ 250 (300-1)			NA
LNAV/VNAV DA	1641-¾ 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

MIRL Rwy 15-33

US DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

RNAV - STANDARD
INSTRUMENT APPROACH PROCEDURE
TITLE 14 CFR PART 97.33

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above airport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

TERMINAL ROUTES

FROM	TO	COURSE AND DISTANCE	ALTITUDE
ZALGU (IF/IAF)	WIVTA (FB)	158.07 / 7.71	3000
WIVTA (FAF)	HUVGO/1.60 NM TO RW15 (FB)	158.11 / 3.31	
HUVGO/1.60 NM TO RW15	RW15 (MAP) (FO)	158.11 / 1.60	
RW15 (MAP)	1641 MSL	158.11	
1641 MSL	ITVOY (FO)		3000

MISSED APPROACH

LPV: DA
LNAV/VNAV: DA
LNAV: RW15

CLIMB TO 3000 DIRECT ITVOY AND HOLD.

1. PT ____ SIDE OF COURSE ____ OUTBOUND ____ FT WITHIN ____ MILES OF ____ (IAF)
2. HOLD N ZALGU, RT, 158.07 INBOUND, 3000 FT. IN LIEU OF PT (IAF)
3. FAC: 158.11 FAF: WIVTA DIST FAF TO MAP: 4.91 THLD: 4.91
4. MIN. ALT: ZALGU 3000, WIVTA 3000, HUVGO/1.60 NM TO RW15 1940*
5. DIST TO THLD FROM OM: ____ MM: ____ IM: ____ 150 HAT: ____ 100 HAT: ____ GS ANT: ____
6. MIN GS INCPT: 3000 GS ALT AT: WIVTA 3000 OM: ____ MM: ____ IM: ____
7. GS ANGLE: 3.00 TCH: 45.0 34:1 IS NOT CLEAR
8. MSA FROM:

ADDITIONAL FLIGHT DATA:
HOLD S, RT, 338.22 INBOUND.
CHART FAS OBST: 1459 TREE 453850N/0951952W
CHART: 1765 TOWER 454338N/0952136W
DISTANCE TO THLD FROM 250 HATH: 0.64 NM.
CHART VDP AT 0.93 MILES TO RW15*
*LNAV ONLY.
WAAS CHANNEL # 70333
REFERENCE PATH ID: W15A
LTP HAE: 397.9 M

MAG VAR: 4E EPOCH YEAR: 2000

MINIMUMS

TAKEOFF: SEE FAA FORM 8260-15A FOR THIS AIRPORT ALTERNATE: N A STANDARD @

CATEGORY =====>	A			B			C			D			E		
	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA	DH/MDA	VIS	HAT/HAA
LPV DA	1641	3/4	250	1641	3/4	250	1641	3/4	250		NA				
LNAV/VNAV DA	1641	3/4	250	1641	3/4	250	1641	3/4	250		NA				
LNAV MDA	1720	1	329	1720	1	329	1720	1	329		NA				
CIRCLING	1840	1	446	1860	1	466	1860	1 1/2	466		NA				

NOTES:
CHART NOTE: FOR UNCOMPENSATED BARO-VNAV SYSTEMS, LNAV/VNAV NA BELOW -17C (2F) OR ABOVE 54C (130F).
CHART NOTE: DME/DME RNP-0.3 NA.
CHART PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT.
CHART NOTE: HELICOPTER VISIBILITY REDUCTION BELOW 3/4 SM NOT AUTHORIZED.
(SEE FORM 8260-10)

@ NA WHEN LOCAL WEATHER NOT AVAILABLE.

QUALITY CHECKED

CITY AND STATE	ELEVATION: 1394 THRE: 1391	FACILITY IDENTIFIER:	PROCEDURE NO./AMDT NO./EFFECTIVE DATE:	SUP:
GLENWOOD, MN	AIRPORT NAME: GLENWOOD MUNI	RNAV	RNAV (GPS) RWY 15, ORIG	AMDT: NONE
				DATED

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
[ ] YES [X] NO		**ROUTINE**

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
[ ]	[ ]	[X]	[ ]	[X]	[X]	[X] **ZMP, AMGR**

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME: **JILL OLSON (AUSTIN GOTCHER)**	FIFO **AJV-353**	DATE: **10/15/2012**
APPROVED BY		
NAME: **LARRY H STROUT**	FIFO **AJV-353**	DATE:

CHANGES:

ORIGINAL

REASONS:

FPT REQUEST

QUALITY CHECKED

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NOTES, (CONT.):
CHART NOTE: WHEN LOCAL ALTIMETER SETTING NOT RECEIVED, USE ALEXANDRIA ALTIMETER SETTING AND INCREASE ALL DA 36 FT AND ALL MDA 40 FT, INCREASE LPV ALL CATS AND LNAV/VNAV ALL CATS VISIBILITIES 1/8 MILE.
BARO-VNAV AND VDP NA WHEN USING ALEXANDRIA ALTIMETER SETTING.
CHART NOTE: CIRCLING NA TO RWYS 5/23.

TAA

	FROM	TO	ALT
1.	068/30 CW 248/30 (NOPT)	068/5 CW 248/5	3300
2.	068/5 CW 248/5	ZALGU (IF/IAF) (FB)	3000
3.	248/30 CW 068/30	248/5 CW 068/5	3600
4.	248/5 CW 068/5	ZALGU (IF/IAF) (FO)	3000

QUALITY CHECKED 6

CITY AND STATE	ELEVATION: 1394 THRE: 1391	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP:
GLENWOOD, MN	AIRPORT NAME: GLENWOOD MUNI	RNAV	RNAV (GPS) RWY 15, ORIG	AMDT: NONE
				DATED:

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA	AAT	ALPA	APA	AOPA	NBAA	OTHER (specify)
☐	☐	☐	☐	☐	☐	☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	FIFO	DATE:
APPROVED BY		
NAME:	FIFO	DATE:

CHANGES:

REASONS:

Bearings, headings, courses, and radials are magnetic. Elevations and altitudes are in feet, MSL, except HAT, HAA, TCH, and RA. Altitudes are minimum altitudes unless otherwise indicated. Ceilings are in feet above aiport elevation. Distances are in nautical miles unless otherwise indicated, except visibilities which are in statute miles or in feet RVR.

FAS DATA BLOCK INFORMATION

DATA FIELD	DATA
OPERATION TYPE	0
SBAS SERVICE PROVIDER IDENTIFIER	0
AIRPORT IDENTIFIER	KGHW
RUNWAY	RW15
APPROACH PERFORMANCE DESIGNATOR	0
ROUTE INDICATOR	
REFERENCE PATH DATA SELECTOR	0
REFERENCE PATH IDENTIFIER (APPROACH ID)	W15A
LTP/FTP LATITUDE	453853.3385N
LTP/FTP LONGITUDE	0951922.5960W
LTP/FTP ELLIPSOIDAL HEIGHT	+03979
FPAP LATITUDE	453728.5500N
FPAP LONGITUDE	0951843.6600W
THRESHOLD CROSSING HEIGHT (TCH)	00045.0
TCH UNITS SELECTOR (METERS OR FEET USED)	F
GLIDEPATH ANGLE (GPA)	03.00
COURSE WIDTH AT THRESHOLD	106.75
LENGTH OFFSET	1376
HORIZONTAL ALERT LIMIT (HAL)	40.0
VERTICAL ALERT LIMIT (VAL)	50.0
CRC REMAINDER	381DE994

ADDITIONAL PATH POINT RECORD INFORMATION

ICAO CODE	K3
LTP ORTHOMETRIC HEIGHT	+04239
FPAP ORTHOMETRIC HEIGHT	+04239

QUALITY CHECKED 6

CITY AND STATE	ELEVATION: 1394 THRE: 1391	FACILITY IDENTIFIER:	PROCEDURE NO./ AMDT NO./EFFECTIVE DATE:	SUP:
GLENWOOD, MN	AIRPORT NAME: GLENWOOD MUNI	RNAV	RNAV (GPS) RWY 15, ORIG	AMDT: NONE
				DATED:

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	FIFO	DATE:
APPROVED BY		
NAME:	FIFO	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.33**

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ARINC PACKET - 424-18 - RNAV (GPS)

```
                 1         2         3         4         5         6         7         8         9         0         1         2         3
WP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAEAENRT   HUVGO K30    W     N45402469W095200459                      E0023     NAR           HUVGO
        SUSAEAENRT   ITVOY K30    W     N45261030W095133356                      E0022     NAR           ITVOY
        SUSAEAENRT   WIVTA K30    W     N45433374W095213161                      E0023     NAR           WIVTA
        SUSAEAENRT   ZALGU K30    W     N45505376W095245482                      E0023     NAR           ZALGU

                 1         2         3         4         5         6         7         8         9         0         1         2         3
AIRPORT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KGHWK3AGHW     0     045YHN45383779W095191362E004001394         1800018000C    MNAR    GLENWOOD MUNI

                 1         2         3         4         5         6         7         8         9         0         1         2         3
SEGMENT 123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KGHWK3FR15   AZALGU 010ZALGUK3EA0EE AR   HF                      15810040    + 03000     18000                A JS
        SUSAP KGHWK3FR15   R      010ZALGUK3EA0E  I    IF                                  + 03000     18000                A JS
        SUSAP KGHWK3FR15   R      020WIVTAK3EA1E  F 051TF                      15810077    + 03000                          A JS
        SUSAP KGHWK3FR15   R      020WIVTAK3EA2WALPV       ALNAV/VNAV ALNAV                                                  JS
        SUSAP KGHWK3FR15   R      021HUVGOK3EA0E S  031TF                      15810033    V 0194001945        -300         A JS
        SUSAP KGHWK3FR15   R      030RW15 K3PG0GY M 031TF                      15810016      01436             -300         A JS
        SUSAP KGHWK3FR15   R      040          0  M     CA                     1581        + 01641                          A JS
        SUSAP KGHWK3FR15   R      050ITVOYK3EA0EY      DF                                  + 03000                          A JS
        SUSAP KGHWK3FR15   R      060ITVOYK3EA0EE  R   HM                      33820040    + 03000                          A JS

                 1         2         3         4         5         6         7         8         9         0         1         2         3
RUNWAY  123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KGHWK3GRW15    0045001581 N45385334W095192260-0300    +0397901391000045075R

                 1         2         3         4         5         6         7         8         9         0         1         2         3
PP      123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012
        ------------------------------------------------------------------------------------------------------------------------------------
        SUSAP KGHWK3PR15   RW15 001 0000W15A0N4538533385W09519225960+039790300N4537285500W09518436600106751376000450F400500381DE994
        SUSAP KGHWK3PR15   RW15 002E      +04239+04239LPV       70333
```

QUALITY CHECKED

CITY AND STATE	ELEVATION: 1394 THRE: 1391	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
GLENWOOD, MN	AIRPORT NAME: **GLENWOOD MUNI**	**RNAV**	**RNAV (GPS) RWY 15, ORIG**	AMDT: **NONE**
				DATED:

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

U.S. DEPARTMENT OF TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

RNAV (GPS) STANDARD INSTRUMENT APPROACH PROCEDURE

FLIGHT STANDARDS SERVICES - **FAR PART 97.33**

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ARINC SUMMARY - 424-18 - RNAV (GPS)

ROUTES	TRANSITION	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
	ZALGU	ZALGU	010	IAF	HF	R	FO		158.1(162.1T)	004.0	AA 03000	
		ZALGU	010	FACF	IF		FB				AA 03000	
		WIVTA	020	FAF	TF		FB	0.5	158.1(162.1T)	007.7	AA 03000	
		HUVGO	021	SDF	TF		FB	0.3	158.1(162.1T)	003.3	AA 01940 GS 01945	
		RW15	030	MAP	TF		FO	0.3	158.1(162.1T)	001.6	AT 01436	

MISSED APPROACH	FIX	SEQ	USE	PATH	TURN	FO/FB	RNP	MAG(TRUE)	DISTANCE	ALTITUDE	SPEED
		040		CA		FB		158.1(162.1T)		AA 01641	
	ITVOY	050		DF		FO				AA 03000	
	ITVOY	060		HM	R	FO		338.2(342.2T)	004.0	AA 03000	

POINT DATA	WAYPOINT	LAT IN SECS	LONG IN SECS	LAT IN MINS	LONG IN MINS
	HUVGO	N454024.69	W0952004.59	N4540.412	W09520.077
	ITVOY	N452610.30	W0951333.56	N4526.172	W09513.559
	WIVTA	N454333.74	W0952131.61	N4543.562	W09521.527
	ZALGU	N455053.76	W0952454.82	N4550.896	W09524.914
	RW15	N453853.34	W0951922.60	N4538.889	W09519.377

RUNWAY DATA	RWY	THRESHOLD ELEVATION	TCH
	RW15	01391	45

QUALITY CHECKED

CITY AND STATE	ELEVATION: **1394** THRE: **1391**	FACILITY IDENTIFIER:	PROCEDURE NO. / AMDT NO. / EFFECTIVE DATE:	SUP:
GLENWOOD, MN	AIRPORT NAME: **GLENWOOD MUNI**	**RNAV**	**RNAV (GPS) RWY 15, ORIG**	AMDT: **NONE**
				DATED:

ALL AFFECTED PROCEDURES REVIEWED?	COORDINATES OF FACILITIES	REQUIRED EFFECTIVE DATE
☐ YES ☐ NO		

COORDINATED WITH:

ATA ☐ AAT ☐ ALPA ☐ APA ☐ AOPA ☐ NBAA ☐ OTHER (specify) ☐ _____

FLIGHT CHECKED BY		
NAME:	FIFO	DATE:
DEVELOPED BY		
NAME:	NFPG	DATE:
APPROVED BY		
NAME:	NFPG	DATE:

CHANGES:

REASONS:

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
STRAIGHT-IN AREA	068/30 CW 248/30	068/5 CW 248/5	1. AAO	461154.00N/0952948.00W	1982 (4D)	1000		3000
			2. TERRAIN	461154.00N/0952948.00W	1782 (1800)		AS1500	3300
STRAIGHT-IN AREA	068/5 CW 248/5	ZALGU	3. TOWER (27-001161)	455555.00N/0952644.00W	1919 (2C)	1000		3000
			4. TERRAIN	455545.00N/0952815.00W	1506 (1500)		AS1500	3000
STRAIGHT-IN AREA	248/30 CW 068/30	248/5 CW 068/5	5. TOWER (27-001046)	454159.00N/0951037.00W	2544 (5D)	1000		3600
			6. TERRAIN	455106.40N/0953643.00W	1590 (1600)		AS1500	3100
STRAIGHT-IN AREA	248/5 CW 068/5	ZALGU	7. TOWER (27-001985)	455053.00N/0953013.00W	1747 (4D)	1000		2800
			8. TERRAIN	454744.60N/0952545.40W	1500 (1500)		AS1500	3000
INTERMEDIATE	ZALGU (IF/IAF)	WIVTA	9. TOWER (27-002178)	454337.95N/0952136.41W	1765 (5D)	500		2300
			8. TERRAIN	454744.60N/0952545.40W	1500 (1500)		AS1500	3000
FINAL: LPV	WIVTA	RW15	10. TREE (KGHWT0194)	453905.62N/0951930.57W	1438 (1A)	34:1		1641/250
FINAL: LNAV/VNAV	WIVTA	RW15				ASC		1641/250
FINAL: LNAV	WIVTA	HUVGO/1.60 NM TO	11. AAO	454238.83N/0952144.43W	1639 (2C)	250	RA36	1940
		RW15						
2. HOLD-IN-LIEU-OF-PT	ZALGU	P-5	3. TOWER (27-001161)	455555.00N/0952644.00W	1919 (2C)	1000		3000
			13. TERRAIN	455848.00N/0953218.00W	1510 (1500)		AS1500	3000
3. MISSED APPROACH — MAP:	DA / DA / RW15	ITVOY				ASC		3000
			14. TOWER (27-020006)	453025.97N/0951621.78W	1692 (5D)	1000		2700
ELEV:	1454/1491/1620		15. TERRAIN	452712.00N/0951400.00W	1424 (1400)		AS1500	2900

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. ACTUAL							
CATEGORY A	1.3 NM	350	446	16. TOWER (27-000764)	453714.00N/0952011.00W	1487 (4D)	300	AC50	1840
CATEGORY B	1.5 NM	450	466	16. TOWER (27-000764)	453714.00N/0952011.00W	1487 (4D)	300	HAA	1860
CATEGORY C	1.7 NM	450	466	16. TOWER (27-000764)	453714.00N/0952011.00W	1487 (4D)	300	HAA	1860
CATEGORY D	2.3 NM	550							
CATEGORY E	4.5 NM	550							

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID:

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A

QUALITY CHECKED

CITY AND STATE	ELEVATION: 1394 / AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
GLENWOOD, MN	GLENWOOD MUNI	RNAV	RNAV (GPS) RWY 15, ORIG	AGL

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE			3. ALTIMETER SETTING
ZMP ARTCC MSP APP CON GCO FSS		N W S	OTHER: AWOS-3	SOURCE: KGHW / KAXN
		F A A		DISTANCE: 0 / 13.71
SATISFACTORY ON:		A / C		HOURS REMOTE OPERATION:
X V H F X U H F H F	LOCATION: KGHW			ADJUSTMENT: 0 / 36

4. MONITOR STATUS	PRIMARY NAVAID:	
	MONITOR POINT:	
	HRS OPTN:	CAT 1
		CAT 3
5. APPROACH & RUNWAY LIGHTING		ALS
		(S) SALS
		MALS
		HIRL
	X	MIRL 33 (PCL), 15 (PCL)
		REIL
		TDZ
		C/LINE
	X	OTHER (SPECIFY) PAPI-4L 33 (PCL), 15 (PCL)
6. RUNWAY MARKINGS	BASIC	
	ALL WEATHER	
	INSTRUMENT	NPI-P 33, 15
7. RUNWAY VISUAL RANGE	APPROACH	
	MIDFIELD	
	ROLL OUT	
8. GLIDE PATH	GP ANGLE: 3.00	ELEV RWY THRESHOLD: 1390.9
	DISTANCE FROM RWY:	ELEV GP ANTENNA:
		THRESHOLD CROSSING HEIGHT: 45.0
9. FINAL APPROACH COURSE AIMING	X	RUNWAY THRESHOLD — FT. FROM THRESHOLD
	X	ON CENTERLINE — FT. FROM CENTERLINE

10. WAIVERS: **NONE**

PART D - PREPARED BY: JILL OLSON (AUSTIN GOTCHER)	DATE: 10/15/2012
TITLE: AERONAUTICAL INFORMATION SPECIALIST	OFFICE: AJV-353

PART C - REMARKS:

TERPS PARAGRAPH 289 APPLIED TO 1765 TOWER 454338N/0952136W

50' VEGETATION USED PER FPT.

RASS: PRESSURE PATTERNS SAME KGHW 1393.9, KAXN1425.2 RA=35.9

CATS A-C ONLY DEVELOPED PER FPO.

TERPS, VOLUME 1, CHAPTER 3, "VISUAL PORTION OF FINAL" PENETRATIONS:
34:1
1438 TREE (KGHWT0194) 453905.62N/0951930.57W (13.07)
1438 TREE (KGHWT0195) 453905.68N/0951930.60W (12.88)
1435 TREE (KGHWT0193) 453905.59N/0951930.57W (10.16)
1439 TREE (KGHWT0204) 453909.29N/0951930.53W (3.69)
1438 TREE (KGHWT0202) 453909.26N/0951930.51W (2.79)
1437 TREE (KGHWT0203) 453909.27N/0951930.57W (1.72)

PERCIPITOUS TERRAIN EVAULATION COMPLETED.

AVERAGE COLD TEMPERATURE DATA NOT AVAILABLE. USED STANDARD ISA VALUE.

ISA DEVIATION USED: -30C (-54F)

SERVICE A: KGHW: YES / KAXN: YES

VGSI DATA: 3.00 / 33.3

45 FT TCH USED PER FPT REQUEST.

4D ACCURACY VERFICATION REQUESTED FROM FLIGHT CHECK FOR OBSTACLE #7.

SEE ATTACHED AIRSPACE LETTER.

QUALITY 6 CHECKED

STANDARD INSTRUMENT APPROACH PROCEDURE DATA RECORD

PART - A OBSTRUCTION DATA

1. APP SEGMENT	FROM	TO	OBSTRUCTION	COORDINATES	ELEV. MSL	ROC	ALT. ADJUSTMENTS	MIN. ALT.
FINAL: LNAV STEPDOWN	HUVGO/1.60 NM TO RW15	RW15	12. TREE	453850.15N/0951952.39W	1459 (2C)	250		1720

3. MISSED APPROACH				
	MAP:			
	ELEV:			

4. CIRCLING AREA	DISTANCE	HT. ABV. ARPT. REQUIRED	HT. ABV. ARPT. ACTUAL
CATEGORY A	1.3 NM	350	
CATEGORY B	1.5 NM	450	
CATEGORY C	1.7 NM	450	
CATEGORY D	2.3 NM	550	
CATEGORY E	4.5 NM	550	

5. MINIMUM SAFE ALTITUDES — PRIMARY NAVAID:

SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A	SECTOR	OBSTRUCTION	BRG/DIST	ELEVATION (MSL)	M S A

QUALITY CHECKED 6

CITY AND STATE	ELEVATION: 1394 AIRPORT NAME:	FACILITY	PROCEDURE AND AMENDMENT NO:	REGION
GLENWOOD, MN	GLENWOOD MUNI	RNAV	RNAV (GPS) RWY 15, ORIG	AGL

PART B - SUPPLEMENTAL DATA

1. COMMUNICATIONS WITH:	2. WEATHER SERVICE			3. ALTIMETER SETTING
SATISFACTORY ON:		N W S	OTHER:	SOURCE:
		F A A		DISTANCE:
		A / C		HOURS REMOTE OPERATION:
V H F / U H F / H F	LOCATION:			ADJUSTMENT:

4. MONITOR STATUS	PRIMARY NAVAID:	
	MONITOR POINT:	
	HRS OPTN: CAT 1	
	HRS OPTN: CAT 3	
5. APPROACH & RUNWAY LIGHTING		**ALS**
		(S) SALS
		MALS
		HIRL
		MIRL
		REIL
		TDZ
		C/LINE
		OTHER (SPECIFY)
6. RUNWAY MARKINGS	BASIC	
	ALL WEATHER	
	INSTRUMENT	
7. RUNWAY VISUAL RANGE	APPROACH	
	MIDFIELD	
	ROLL OUT	
8. GLIDE PATH	GP ANGLE:	ELEV RWY THRESHOLD:
	DISTANCE FROM RWY:	ELEV GP ANTENNA:
		THRESHOLD CROSSING HEIGHT:
9. FINAL APPROACH COURSE AIMING	RUNWAY THRESHOLD	FT. FROM THRESHOLD
	ON CENTERLINE	FT. FROM CENTERLINE

10. WAIVERS:

PART D - PREPARED BY:	DATE:
TITLE:	OFFICE:

PART C - REMARKS:

RADIO FIX AND HOLDING DATA RECORD

NAME: HUVGO **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 454024.69N/0952004.59W **TYPE:** WP

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

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY15			KGHW	GLENWOOD	MN (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 05/02/2013

DEVELOPED BY: **DATE:** 10/24/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (AUSTIN GOTCHER)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER: GCO FSS

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: ITVOY **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 452610.30N/0951333.56W **TYPE:** WP

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

HOLDING: **HOLDING TYPE OF ACTION:** ESTABLISH

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	S		WP	158.22	338.22	R		4	3000	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (27-002122)	452214.00N/0950829.00W	1642	2C

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERNS.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 15		1	KGHW	GLENWOOD	MN (US)
IAP	RNAV (GPS) RWY 33		1	KGHW	GLENWOOD	MN (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 1 **DATE OF REVISION:** 05/02/2013

DEVELOPED BY: **DATE:** 10/18/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (AUSTIN GOTCHER)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER: GCO FSS

QUALITY CHECKED 6

RADIO FIX AND HOLDING DATA RECORD

NAME: WIVTA **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 454333.74N/0952131.61W **TYPE:** WP

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

REMARKS:
CREATED PFAF USING 8260.54A FORMULA 2-17B.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 15			KGHW	GLENWOOD	MN (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 05/02/2013

DEVELOPED BY: **DATE:** 10/18/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (AUSTIN GOTCHER)

APPROVED BY: **DATE:** **OFFICE:** AJV-352 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER: GCO FSS

QUALITY CHECKED

RADIO FIX AND HOLDING DATA RECORD

NAME: ZALGU **STATE:** MN **COUNTRY:** US

LATITUDE/LONGITUDE: 455053.76N/0952454.82W **TYPE:** WP

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

HOLDING: **HOLDING TYPE OF ACTION:** ESTABLISH

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	LEG LENGTH DME	HOLDING ALTITUDES MIN	HOLDING ALTITUDES MAX	TEMPLATES MIN	TEMPLATES MAX
1	N		WP	338.07	158.07	R		4	3000	6000	5	6

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (27-001161)	455555.00N/0952644.00W	1919	2C

HOLDING RESTRICTIONS:
HOLDING LIMITED TO ESTABLISHED PATTERN.

REMARKS:
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
IAP	RNAV (GPS) RWY 15		1	KGHW	GLENWOOD	MN (US)
IAP	RNAV (GPS) RWY 33		1	KGHW	GLENWOOD	MN (US)

REQUIRED CHARTING: IAP

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: ORIG **DATE OF REVISION:** 05/02/2013

DEVELOPED BY: **DATE:** 10/18/2012 **OFFICE:** AJV-353 **NAME:** JILL OLSON (AUSTIN GOTCHER)

APPROVED BY: **DATE:** **OFFICE:** AJV-353 **NAME:** LARRY STROUT

SIGNATURE:

DISTRIBUTION:
NFDC
FPO: CEN
ARTCC: ZMP
ATC FACILITY: MSP APP CON
OTHER: GCO FSS

QUALITY CHECKED

TERMINAL AIRSPACE DATA REQUIREMENTS

CITY: **GLENWOOD** STATE: **MN**

AIRPORT NAME: **GLEENWOOD MUNI** ID:KGHW

PROCEDURE: **RNAV (GPS) RWY15** AMDT: **ORIG**

DOCKET # :
(96-AXX-X/Required/Not Required)

ALL DIST TO 1/100 NM; ELEV TO NEAREST FT; COORD TO 1/100 SEC; DEG TO 1/100 DG.

1. Distance from **THLD** to 1000' point **3.34**
   (Enter THLD, FAF, ARP, FACILITY, as appropriate)
2. Width of **FINAL** segment at 1000' point **1.20**
   (Enter appropriate segment , final, intermediate, etc.)
3. True Course of **FINAL** segment containing 1000' point **162.11**
4. High Terrain in **FINAL** segment containing 1000' point **1459**
5. Distance from **THLD** to 1500' point **4.91**
   (If 1500' point in PT maneuvering area or holding pattern note in remarks)
6. Width of **FINAL** segment at 1500' point **2.13**
7. True Course of **FINAL** segment containing 1500' point **162.11**
8. High Terrain in **FINAL** segment containing 1500' point **1459**
9. Threshold Coordinates (if straight-in) ... **453853.34N** / **0951922.60W**
10. ARP Coordinates ..... **453837.79N** / **0951913.62W**
11. Runway Approach End and distance furthest from ARP.....RWY **33**
    Distance **0.46** NM
12. FAF Coordinates ..... **454333.74N** / **0952131.61W**
    (Click to Select)

REMARKS: Approach/Drawing attached. TAA 30NM RADIUS. ZALGU (IF/IAF) 455053.76N/0952454.82W