

High Altitude Redesign (HAR) Phase I RNAV routing, pitch and catch points:

The purpose of this section of the Special High Altitude Routes is to present user routing options for flight within the initial HAR Phase I airspace. Users are able to fly user-preferred routes, referred to as non-restrictive routing, between specific fixes described by **pitch** (entry into) and **catch** (exit out of) the HAR airspace. Pitch points indicate an end of departure procedures, preferred IFR routings, or other established routing programs where a flight can begin a segment of non-restrictive routing. The catch point indicates where a flight ends a segment of non-restrictive routing and joins published arrival procedures, preferred IFR routing, or other established routing programs.

The HAR Phase I airspace is defined as that airspace at and above FL 390 (except as noted) in seven of the western Air Route Traffic Control Centers (ARTCCs). The airspace includes Minneapolis (ZMP), Chicago (ZAU), Kansas City (ZKC), Denver (ZDV), Salt Lake City (ZLC), Oakland (ZOA) and Seattle Centers (ZSE).

To develop a flight plan, select pitch and catch points based upon your desired route across the Phase I airspace. Filing requirements to pitch points, and from catch points, remain unchanged from current procedures. For the portion of the route between the pitch and catch points, non-restrictive routing is permitted.

Where pitch points for a specific airport are not identified, aircraft should file an appropriate departure procedure(DP), or any other user preferred routing prior to the NRR portion of their routing. Where catch points for a specific airport are not identified aircraft should file, after the non-restrictive routing portion of their routing, an appropriate arrival procedure or other user preferred routing to their destination.

Additionally, information concerning the location and schedule of Special Use Airspace (SUA) and Air Traffic Control Assigned Airspace (ATCAA) can be found on the Web Site:www.faa.mil/hialt. ATCAA refers to airspace in the high altitude structure supporting military and other special operations. Users are encouraged to file around these areas when they are scheduled to be active.

In conjunction with the HAR program RNAV routes have been established to provide for a systematic flow of air traffic in specific portions of the enroute flight environment. The designator for these RNAV routes begin with the letter Q, for example, Q-501. Where those routes aid in the efficient orderly management of air traffic they will be published as preferred IFR routes.

HAR Special High Altitude Pitch (entry) Points for non-restrictive routing for Airports Located Outside HAR Phase I Airspace

Westbound traffic originating outside of HAR airspace entering ZAU, ZKC, and ZMP can begin non-restrictive routing over any of the following pitch points (listed from north to south):

DLH, CESNA, GEP, BAE, MKG, GRR, PMM, GSH, CADIZ, FWA, VHP, FLM, IIU, SGF, RZC, BNA or VUZ

HAR Special High Altitude Pitch Points for Airports Located Within (below) HAR Phase I Airspace

This section lists pitch points for airports within the HAR Phase I airspace.

Chicago Terminal Area IOW, PLL275065, MZV, or BAE

Milwaukee GREAS

Denver Terminal Area PUB, DVC, DBL, RLG, EKR, LAR, MBW, CYS, BFF, HANKI, ALS, HCT, GLD, MCK or GCK

Kansas City Terminal Area	TIFTO, CATTS or KENTN
Minneapolis Terminal Area*	ONL, ABR or FAR or FSD J82 VIVID or J21 OVR
Portland, OR	PDT or TIMEE
Salt Lake City	HVE, DTA, MLF, BCE, OAL, MTU, BVL, OCS, TWF, DBS or BPI Or TCH J56 CHE Or TCH J173 EKR
St. Louis	VIH, SGF or MCM or HLV MCI
San Francisco Bay Area Oakland San Jose	GALLI, INSLO, HAROL or JSICA GALLI, INSLO, HAROL or JSICA GALLI or INSLO
Seattle	BLUIT

* MSP area departures with destinations east of 93 degrees west longitude via preferred IFR routing.

Catch Points for Airports Located Outside HAR Phase I Airspace

This section lists exit points for aircraft destined to specific destinations which are outside the HAR Phase I airspace.

Albuquerque Terminal Area	CURLY-STAR or ESPAN FRIHO-STAR
Atlanta Terminal Area	MEM RMG-STAR or PLESS BNA-STAR
Baltimore-Washington*	GIJ, GEP, FLM, IIU, BAE, VHP or WHETT
Boston*	GEP, CRL or ECK
Buffalo*	GEP or CRL
Hartford Bradley*	GEP or CRL
Canton-Akron*	GIJ, VHP or GEP
Charlotte	BNA
Cincinnati Terminal Area	North of SLC: JOT or

	Over or South of SLC: ENL or SLC or SFO Departures: ENL or JOT
Cleveland Terminal Area*	GIJ, BAE, GRB, TVC, VHP, CRL or GEP
Dallas/Ft. Worth Trmnl Area	Aircraft over or east of ALS: PNH UKW-STAR or RZC FSM BYP-STAR or Aircraft west of ALS: LVS TXO UKW-STAR
Detroit Terminal Area* Detroit City*	BAE or VHP LAN SPRTN-STAR or VHP FWA
Fort Lauderdale	Departures West of MSP: SZW
Houston Terminal Area	OKC, TUL, LBL, LIT or MQP
Indianapolis Terminal Area	BIB, CAP or JOT
Jacksonville Terminal Area	Departures West of MSP: SZW
Las Vegas	Aircraft north of J146: BETHL KSINO-STAR or Aircraft on or south of J146: PGS LYNSY-STAR
Los Angeles Terminal Area	Arrivals north of or over TBC: BLD or PGS
Louisville	ENL
Memphis Terminal Area	FAM or RZC
Miami	SZW
Nashville	FAM
Newark*	GEP, VHP, FLM or IIU or IOW GIJ J554 CRL J584 SLT FQM-STAR
New York Kennedy*	GEP, VHP, FLM or IIU or DBQ J94 PMM J70 LVZ LENDY-STAR
New York LaGuardia*	VHP, BAE, FLM, IIU, GIJ or GEP
Orlando Terminal Area	Departures West of MSP: SZW
Philadelphia Terminal Area*	VHP, GIJ, BAE, WHETT or GEP
Phoenix Terminal Area	CORKR or GUP FOSSIL-STAR or

	LBL LVS ZUN BUNTR-STAR or GCK J96 CIM ZUN BUNTR-STAR
Pittsburgh Terminal Area*	VHP, GIJ, BAE or GEP
Pontiac	LFD, LAN, VHP FWA or GEP
Providence	JHW, HEMDI, CESNA, GEP, GRB, TVC, ASP or VHP
Raleigh-Durham	FLM or IIU
San Diego Terminal Area	Aircraft north of DBL: BLD or Aircraft on or south of DBL: EED
Santa Ana	HEC, PGS, BLD or HIPPI
Regional Southwest Intl	SZW
Tampa Terminal Area	Departures West of MSP: SZW
Toronto Terminal Area	ECK, SVM, SSM or GEP
Teterboro*	GEP, VHP or CRL
Tucson Terminal Area	SSO, DRK or ONM
Washington Dulles/National*	GIJ, GEP, FLM, IIU, BAE, VHP or WHETT
White Plains*	VHP, CRL, FLM, IIU or GEP
Willow Run*	LAN, LFD, VHP FWA or GEP

* *Eastbound aircraft over-flying Minneapolis center airspace:*

Entering Toronto center, direct SSM or via J63 or J522 or Q505 or Q504 or Q502 or Q501.

or

Entering Chicago or Cleveland Center airspace from north of DPR J16 MCW: GEP

or

Entering Chicago or Cleveland center airspace from or south of DPR J16 MCW: CRL.

Catch Points for Airports Located Within (below) HAR Phase I Airspace

This section lists exit points for aircraft destined to airports which are below HAR Phase I airspace.

Chicago Midway	MZV MOTIF-STAR or CAP MOTIF-STAR or PIA MOTIF-STAR or DBQ CVA MOTIF-STAR
Chicago O'Hare Terminal Area	GEP DLL MSN JVL JVL-STAR

or
TVC PMM-STAR
or
FOD DBQ JVL JVL-STAR
or
MCW JVL-STAR
or
GCK IRK BDF-STAR

Denver Terminal Area

OATHE DANDD-STAR
or
HGO QUAIL-STAR
or
ALS LARKS-STAR
or
HBU POWDR-STAR
or
EKR TOMSN-STAR
or
CHE TOMSN-STAR
or
BFF LANDR-STAR
or
LBF SAYGE-STAR
or
HCT SAYGE-STAR
or
RSK LARKS-STAR
or
LAA QUAIL-STAR
or
GCK J154 RYLIE DANDD-STAR
or
OCS J154 ALPOE RAMMS-STAR
or
YANKI J114 SNY LANDR-STAR
Or
Aircraft filed BIL or east: MBW RAMMS-STAR

Kansas City Terminal Area

LMN BQS-Star
or
PWE RBA-Star
or
EMP JHAWK-Star

Minneapolis Terminal Area

Aircraft From NORTH/WEST/SOUTH:
FAR GEP-STAR
or
RWF SKETR-STAR
or
ALO KASPR-STAR
or
BRD GEP-STAR
or
BAE EAU-STAR
or
MCW KASPR-STAR
or

	FOD KASPR-STAR
Oakland	ILA or KATTS PAMMY or Aircraft over or south of a line ILC J16 DVC south: REANA KATTS PAMMY or Aircraft from NORTH OF ILC: JOPER PAMMY OR KATTS PAMMY OR OVER OR SOUTH OF ILC: REANA KATTS PAMMY
Portland, Or Terminal Area	ARNIT BONVL-STAR or LARNO BONVL-STAR Or MOXEE MOXEE-STAR
ST. LOUIS	SGF TRAKE-STAR or BUM TRAKE-STAR or ANX TRAKE-STAR or LMN..IRK RIVRS-STAR or RBS VLA-STAR
Salt Lake City Terminal Area	JNC J12 HELPR SPANE-STAR or EKR MTU SPANE-STAR or BCE DTA-TCH or MLF DTA-TCH or BVL BVL-STAR or BYI BEARR-STAR or PIH BEARR-STAR or DBS LHO-STAR or JAC LHO-STAR or BPI LHO-STAR or

OCS LHO-STAR

San Francisco

FMG GOLDN-STAR

or

MVA MOD-STAR

or

ENI GOLDN-STAR

or

OAL MOD-STAR

or

South of a line ILC to DVC:

REANA KATTS OAL MOD-STAR

San Jose

FMG HYP HYP-STAR or OAL HYP HYP-STAR or ENI GOLDN-STAR or South of a line ILC to DVC via REANA KATTS KICHI CANDA HYP-STAR

Seattle Terminal Area

Aircraft From NORTHEAST/SOUTHEAST/SOUTH:

TEMPL GLASR-STAR

or

SUNED CHINS-STAR

or

BTG OLM-STAR