

RADIO FIX AND HOLDING DATA RECORD

NAME: ELWHA LOM

STATE: WA

COUNTRY: US

ICAO REGION CODE: K1

LATITUDE/LONGITUDE: 480855.11N/1234015.06W

TYPE: WP

AIRSPACE DOCKET:

FIX TYPE OF ACTION: NO CHANGE

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	FAC FEET	MRA	MAA
1	ELWHA	CL	LOM	MH						2500	17500

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

REMARKS:

COORDINATES REFLECT LOCATION ON LOC/AZ CENTERLINE ABEAM THE ELWHA LOM.
ACTUAL FACILITY LOCATION IS 480900.72N/1234012.90W.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	WATTR	1		KCLM	PORT ANGELES	WA (US)
EN ROUTE	T263					(US)
IAP	ILS OR LOC RWY 9	1		KCLM	PORT ANGELES	WA (US)

REQUIRED CHARTING: DP, IAP, CONTROLLER, EN ROUTE LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 5

DATE OF REVISION: 01/25/2024

REASON FOR REVISION:

1. UPDATED FIX USE FROM ILS OR LOC RWY 8 TO ILS OR LOC RWY 9.

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A432

NAME: CASEY HILL

APPROVED BY:

DATE: 09/08/2022

OFFICE: AJV-A430

NAME: LONNIE EVERHART

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: SEATTLE VORTAC **STATE:** WA **COUNTRY:** US **ICAO REGION CODE:** K1
LATITUDE/LONGITUDE: 472607.34N/1221834.62W **TYPE:**
AIRSPACE DOCKET: 23-AWP-47 **FIX TYPE OF ACTION:** MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	MRA	MAA
1	SEATTLE	SEA	VORTAC	VH						45000

FIX RESTRICTIONS:

MCA V4 6200 EASTBOUND
 MCA V298 4300 EASTBOUND
 MCA V2 4300 EASTBOUND
 MCA V120 6300 EASTBOUND
 MCA V495 4700 SOUTHBOUND

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	E	SEA	VORTAC	110.00	290.00	L	1		3000	18000	4	16
2	SE	SEA	VORTAC	130.00	310.00	L	1		3000	18000	4	16

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	AAO	472357.00N/1220809.00W	765	4E
1	310	AAO	471854.00N/1215815.00W	1368	4E
2	200	AAO	472712.00N/1221709.00W	725	4E
2	310	AAO	470754.00N/1221003.00W	1073	4E

REASON FOR NONSTANDARD HOLDING:

PAT 1 ATC REQUEST.
 PAT 2 ATC REQUEST.

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERN(S)

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	TAKEOFF MINIMUMS	KRNT	RENTON	WA (US)
1	RENTN	KRNT	RENTON	WA (US)
2	TAKEOFF MINIMUMS	KSEA	SEATTLE	WA (US)

REMARKS:

PRECIPITOUS TERRAIN EVALUATION COMPLETED.
 ASSIGNED FACILITY MAG VAR E19/2000.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
DP	PORTLAND			KPDJ	PORTLAND	OR (US)
DP	PAINE			KPAE	EVERETT	WA (US)
DP	YELM			KOLM	OLYMPIA	WA (US)
DP	TAKEOFF MINIMUMS			KPLU	PUYALLUP	WA (US)
DP	RENTN		1	KRNT	RENTON	WA (US)
DP	TAKEOFF MINIMUMS		1	KRNT	RENTON	WA (US)
DP	KENT			KBFI	SEATTLE	WA (US)
DP	NEEDLE			KBFI	SEATTLE	WA (US)
DP	TAKEOFF MINIMUMS AND OBSTACLE DP			KBFI	SEATTLE	WA (US)
DP	BANGR (RNAV)			KSEA	SEATTLE	WA (US)
DP	ELMAA			KSEA	SEATTLE	WA (US)
DP	HAROB (RNAV)			KSEA	SEATTLE	WA (US)
DP	MOUNTAIN			KSEA	SEATTLE	WA (US)
DP	SEATTLE			KSEA	SEATTLE	WA (US)
DP	SUMMA			KSEA	SEATTLE	WA (US)
DP	TAKEOFF MINIMUMS		2	KSEA	SEATTLE	WA (US)
DP	NARROWS			KTIW	TACOMA	WA (US)
DP	TAKEOFF MINIMUMS			KTIW	TACOMA	WA (US)
DP	NACHES			KYKM	YAKIMA	WA (US)
EN ROUTE	J1					(US)
EN ROUTE	J12					(US)
EN ROUTE	J189					(US)
EN ROUTE	J20					(US)
EN ROUTE	J5					(US)
EN ROUTE	J502					(US)
EN ROUTE	J503					(US)
EN ROUTE	J505					(US)

EN ROUTE	J523			(US)
EN ROUTE	J65			(US)
EN ROUTE	J70			(US)
EN ROUTE	J90			(US)
EN ROUTE	Q902			(US)
EN ROUTE	T487			(US)
EN ROUTE	V120			(US)
EN ROUTE	V2			(US)
EN ROUTE	V23			(US)
EN ROUTE	V27			(US)
EN ROUTE	V298			(US)
EN ROUTE	V4			(US)
EN ROUTE	V495			(US)
IAP	ILS OR LOC RWY 20	KPWT	BREMERTON	WA (US)
IAP	RNAV (GPS) RWY 34L	KPAE	EVERETT	WA (US)
IAP	ILS OR LOC RWY 15	KGRF	FORT LEWIS	WA (US)
IAP	RNAV (GPS) RWY 15	KGRF	FORT LEWIS	WA (US)
IAP	HI TACAN Z RWY 14	KNUW	OAK HARBOR	WA (US)
IAP	HI TACAN Z RWY 25	KNUW	OAK HARBOR	WA (US)
IAP	HI TACAN Z RWY 32	KNUW	OAK HARBOR	WA (US)
IAP	HI TACAN Z RWY 7	KNUW	OAK HARBOR	WA (US)
IAP	ILS OR LOC RWY 17	KOLM	OLYMPIA	WA (US)
IAP	RNAV (GPS) RWY 17	KOLM	OLYMPIA	WA (US)
IAP	ILS OR LOC RWY 8	KCLM	PORT ANGELES	WA (US)
IAP	HARBOR VISUAL RWY 14R	KBFI	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 14R	KBFI	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 32L	KBFI	SEATTLE	WA (US)
IAP	BAY VISUAL RWY 16 R/C/L	KSEA	SEATTLE	WA (US)
IAP	HUSKY VISUAL RWY 16 R/C/L	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 16C	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 16L	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 16R	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 34C	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 34L	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 34R	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16C (CAT II - III)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16C (SA CAT I)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16L (CAT II - III)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16L (SA CAT I)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16R (CAT II - III)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 16R (SA CAT I)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 34C (SA CAT I - II)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 34L (SA CAT I - II)	KSEA	SEATTLE	WA (US)
IAP	ILS RWY 34R (SA CAT I - II)	KSEA	SEATTLE	WA (US)
IAP	MALL VISUAL RWY 34 R/C/L	KSEA	SEATTLE	WA (US)
IAP	ILS OR LOC RWY 17	KTIW	TACOMA	WA (US)
STAR	HELNS	KUAO	AURORA	OR (US)
STAR	HELNS	KHIO	PORTLAND	OR (US)
STAR	HELNS	KPDJ	PORTLAND	OR (US)
STAR	KRATR (RNAV)	KPDJ	PORTLAND	OR (US)
STAR	HELNS	KTTD	PORTLAND	OR (US)
STAR	CHINS	KPAE	EVERETT	WA (US)
STAR	OLYMPIA	KPAE	EVERETT	WA (US)
STAR	CHINS	KRNT	RENTON	WA (US)
STAR	GLASR	KRNT	RENTON	WA (US)
STAR	OLYMPIA	KRNT	RENTON	WA (US)
STAR	SKYKO	KRNT	RENTON	WA (US)
STAR	CHINS	KBFI	SEATTLE	WA (US)
STAR	GLASR	KBFI	SEATTLE	WA (US)
STAR	JAWBN	KBFI	SEATTLE	WA (US)
STAR	OLYMPIA	KBFI	SEATTLE	WA (US)
STAR	SKYKO	KBFI	SEATTLE	WA (US)
STAR	CHINS	KSEA	SEATTLE	WA (US)
STAR	GLASR	KSEA	SEATTLE	WA (US)
STAR	JAWBN	KSEA	SEATTLE	WA (US)
STAR	OLYMPIA	KSEA	SEATTLE	WA (US)
STAR	SKYKO	KSEA	SEATTLE	WA (US)
STAR	ARRIE	KTCM	TACOMA	WA (US)
STAR	GLASR	KTCM	TACOMA	WA (US)
STAR	JAWBN	KTCM	TACOMA	WA (US)
STAR	WHYTE	KTCM	TACOMA	WA (US)

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

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 32

DATE OF REVISION: 12/26/2024

REASON FOR REVISION:

UPDATED DOCKET NUMBER TO 23-AWP-47.
FIX USE: ADDED T487 NEW AW/RT

INITIATED BY:

DATE:

ORGANIZATION:

NAME:

OFFICE OF PRIMARY RESPONSIBILITY:

AJV-A423

NAME: RICHARD CAMPBELL

APPROVED BY:

DATE: 12/26/2024

OFFICE: AJV-A423

NAME: ALLAN WILL

SIGNATURE:

RADIO FIX AND HOLDING DATA RECORD

NAME: WATTR

STATE: WA

COUNTRY: US

ICAO REGION CODE: K1

LATITUDE/LONGITUDE: 480821.35N/1225627.97W

TYPE: WP, INT, DME

AIRSPACE DOCKET: 23-AWP-47

FIX TYPE OF ACTION: MODIFY

FIX MAKE-UP FACILITIES:

FAC	NAME	IDENT	TYPE	CLASS	MAG BRG	TRUE BRG	DME	DIST FROM FAC NM	MRA	MAA
1	SEATTLE	SEA	VORTAC	VH	310.08	329.08	49.38	49.38	5400	17500
2	ELWHA	CL	LOM	MH	075.01	091.01		29.31	5400	17500
3	PENN COVE	CVV	VOR/DME	VL	215.04	234.04	10.76	10.76	5400	17500
4	FRIDAY HARBOR	FHR	NDB	MH	154.55	171.55		22.63	5400	17500

EXPANDED SERVICE VOLUME (ESV):

FAC IDENT	FAC TYPE	RADIAL/BEARING	DISTANCE	MIN ALTITUDE	MAX ALTITUDE
SEA	VORTAC	R-310	50	5400	14900
CL	LOM	R-075	30	5400	10000

HOLDING:

HOLDING TYPE OF ACTION: NO CHANGE

PATTERNS:

PAT	DIR	IDENT	TYPE	RAD/CRS/BRG	CRS INBOUND	TURN (L OR R)	LEG LENGTH TIME	DME	HOLDING ALTITUDES MIN	MAX	TEMPLATES MIN	MAX
1	NW	SEA	VORTAC	310.08	130.08	R		6	5400	10000	7	17
2	NW		WP	307.08	127.08	R		5	5400	10000	6	16
3	NW		WP	313.08	133.08	R		5	5400	10000	6	16

CONTROLLING OBSTRUCTIONS:

PAT	AIRSPEED	OBSTRUCTION	COORDINATES	ELEVATION	ACCURACY CODE
1	200	TOWER (53-020390)	480058.67N/1225539.05W	2337	1A
1	310	AAO	475539.00N/1230051.00W	4236	4E
2	200	TOWER (53-020390)	480058.67N/1225539.05W	2337	1A
2	310	AAO	475742.00N/1230400.00W	3626	4E
3	200	TOWER (53-020390)	480058.67N/1225539.05W	2337	1A
3	310	AAO	475742.00N/1230400.00W	3626	4E

HOLDING RESTRICTIONS:

HOLDING LIMITED TO ESTABLISHED PATTERNS.

PROCEDURES REQUIRING CLIMB-IN-HOLD:

PAT	PROCEDURE TITLE	AIRPORT IDENT	CITY	STATE
1	ILS OR LOC RWY 9	KCLM	PORT ANGELES	WA (US)
2	RNAV (GPS) RWY 9	KCLM	PORT ANGELES	WA (US)
3	RNAV (GPS)-A	OS9	PORT TOWNSEND	WA (US)

REMARKS:

SEATTLE (FAC 1) AND PENN COVE (FAC 3) USED TO ESTABLISH FIX COORDINATES.
HOLDING PAT 1 OBSTACLE LOCATED 1.08 NM INTO SECONDARY AREA, PRIMARY EQUIVALENT 1589 MSL.
C-I-H PAT 1 OBSTACLE LOCATED 1.97 NM INTO SECONDARY AREA, PRIMARY EQUIVALENT 3243 MSL.
HOLDING PAT 2/3 OBSTACLE LOCATED 1.46 NM INTO SECONDARY AREA, PRIMARY EQUIVALENT 1473 MSL.
C-I-H PAT 2/3 OBSTACLE LOCATED 1.26 NM INTO SECONDARY AREA, PRIMARY EQUIVALENT 2811 MSL.
PRECIPITOUS TERRAIN EVALUATION COMPLETED.

FIX USE:

USE TYPE	USE TITLE	FAC	PAT	AIRPORT IDENT	CITY	STATE
SPECIAL DP	LAAML (RNAV)			26WA	PORT ANGELES	WA (US)
SPECIAL DP	ROSFE (RNAV)			7WA2	PORT TOWNSEND	WA (US)
SPECIAL IAP	COPTER RNAV (GPS) 26			26WA	PORT ANGELES	WA (US)
SPECIAL IAP	COPTER RNAV (GPS) 17			7WA2	PORT TOWNSEND	WA (US)
DP	WATTR	1, 2		KCLM	PORT ANGELES	WA (US)
EN ROUTE	T268					(US)
EN ROUTE	T487					(US)
EN ROUTE	V495	1, 2, 3				(US)
IAP	NDB RWY 34	4		KFHR	FRIDAY HARBOR	WA (US)
IAP	RNAV (GPS) RWY 34			KFHR	FRIDAY HARBOR	WA (US)
IAP	RNAV (GPS) RWY 7			KOKH	OAK HARBOR	WA (US)
IAP	ILS OR LOC RWY 9 (ALT MA)	1, 2	1	KCLM	PORT ANGELES	WA (US)
IAP	RNAV (GPS) RWY 27			KCLM	PORT ANGELES	WA (US)
IAP	RNAV (GPS) RWY 9		2	KCLM	PORT ANGELES	WA (US)
IAP	RNAV (GPS)-A		3	OS9	PORT TOWNSEND	WA (US)
OTHER	ZK547 (SPECIAL ROUTE)					(US)

REQUIRED CHARTING: DP, IAP, EN ROUTE LOW, SPECIAL IAP, SPECIAL DP, CONTROLLER LOW

COMPULSORY REPORTING POINT: NO

RECORD REVISION NUMBER: 19

DATE OF REVISION: 12/26/2024

REASON FOR REVISION:
UPDATED DOCKET NUMBER TO 23-AWP-47.
FIX USE: ADDED T487 NEW AW/RT

INITIATED BY:	DATE:	ORGANIZATION:	NAME:
OFFICE OF PRIMARY RESPONSIBILITY:		AJV-A423	NAME: RICHARD CAMPBELL
APPROVED BY:	DATE: 12/26/2024	OFFICE: AJV-A423	NAME: ALLAN WILL
	SIGNATURE:		