

Est. AATD Time – 1.0 Hour

## Objectives

- Calculate aircraft performance to determine compliance with departure procedure.
- Determine route based on aircraft performance and airspace restrictions.
- Determine alternate requirements.
- Obtain clearance from ATC.
- Fly two instrument approach procedures.
- Perform missed approach.
- Perform standard holds.

## Briefing

Arrive to briefing with planning completed using weather and information contained in the Pilot Briefing Packet. Assume the aircraft is full fuel and loaded to max gross weight. Everything is operational unless indicated by instructor. The Mission Table can be used as a guide to review regulatory and advisory source material. The briefing will cover your questions that arose during the planning process as well as quizzing by the instructor to ensure a working knowledge of the IFR system.

## LOFT

Line-Oriented Flight Training (LOFT) is designed to focus on critical thinking and decision making skills rather than procedures. It is assumed that you can meet Instrument-Airplane ACS though the LOFT can be used to address areas of deficiency.

To maximize the training impact approach the simulator as if you were really conducting your planned flight single-pilot IFR. Complete all checklists, procedures and communications as if you are in the airplane. Minor difference will exist between the simulator and airplane (ie alt static source) so verbalize what you are doing when such instances occur. The instructor will act as ATC throughout the flight so treat him/her as such. He/She will provide any assistance you could expect from ATC, provided you ask.

The simulator will not fly exactly like the airplane. The performance characteristics are very close but the controls will seem more sensitive than the airplane. This is normal and you must scan your instruments at a higher rate than normally required to maintain the desired flight attitude. While sometimes frustrating it forces you to increase your instrument scan proficiency so that flying the airplane seems easy in comparison.

Use the automation as appropriate to reduce cockpit workload and increase situational awareness. If you think using the autopilot is cheating – that couldn't be more untrue. The autopilot may someday save your life but you must understand its capabilities and limitations.

## Completion Standards

- Correctly determines the aircraft can comply with departure procedure performance requirements.
- Completes flight plan with appropriate alternate airport.
- Uses ATC assistance to reduce workload and increase situational awareness.
- Fly two approach procedures to instrument ACS standards.
- Executes missed approach procedures
- Correctly executes standard holding pattern

LOFT 1 - Mission Table			
Activity	Task	Reference	Notes
<b>Flight Planning</b>	Preflight Requirements	FAR 91.103, 91.167, AIM 5-1-1	
	NOTAMs	AIM 5-1-3	
	Aircraft Airworthiness	FAR 91.205	
	VOR/GPS Currency	FAR 91.171	
	Route Selection / Flight Plan	AIM 5-1-4	
	Weather Considerations		
	W&B / Performance	POH	
<b>Departure</b>	Instrument Cockpit Check		
	Takeoff Minimums	AIM 5-2-8	
	Obstacle Departure Procedure	AIM 5-2-8	
	Standard Instrument Dept	AIM 5-2-8	
	Runway Selection		
	Departure Clearances	AIM 5-2-1, 5-2-6	
<b>Enroute</b>	MEA, MOCA, OROCA	AIM 4-4-9	
	GPS Direct	AIM 4-4-9	
	IFR Communications	FAR 91.183, 91.187, AIM 5-3-3	
	Descent Planning		
	Standard Terminal Arrivals	AIM 5-4-1	
<b>Approach</b>	Approach Selection	AIM 5-4-4	
	Transition: Vectors / Feeders	AIM 5-4-5	
	ILS	AIM 1-1-9, 5-4-5	
	Localizer	AIM 1-1-9, 5-4-5	
	GPS: LNAV/VNAV/LPV	AIM 1-1-19,5-1-16	
	VOR	AIM 1-1-3, 5-4-5	
	NDB	AIM 1-1-2, 5-4-5	
	ASR / PAR	AIM 5-4-3, 5-4-11	
	Visual / Contact	AIM 5-4-23 AIM 5-4-25	
	Circling	AIM 5-4-20	
	Visual Descent Point	AIM 5-4-5	
	Transition to VMC	FAR 91.175	
	Missed Approach	AIM 5-4-21	
	<b>Holding</b>	Standard / Non-Standard	AIM 5-3-7
Fuel Planning			
Communication Requirements		AIM 4-4-3	
<b>Emergency</b>	Lost Communications	FAR 91.185	
	Vacuum System	POH	
	Pitot-Static System	POH	
	Electrical	POH	
	Instrument	POH	
	AHRS, ADC, Display	POH	
<b>SRM</b>	Task Management		
	Automation Management		
	Aeronautical Decision Making		
	Situational Awareness		
	Controlled Flight into Terrain		

## Pilot Briefing Packet

**This briefing packet contains a standard DUATS weather briefing for the route/area described for the LOFT. Some information such as NOTAMS are been omitted and can be assumed not applicable for this flight.**

\*\*\*\*\* Departure Closest Terminal Weather \*\*\*\*\*

METAR KHIO 052053Z 20011KT 10SM BKN023 OVC041 14/08 A2994 RMK  
AO2 SLP138 T01390078 50000

TAF KHIO 051737Z 0518/0618 18010KT P6SM -SHRA BKN025 BKN035 OVC060  
FM052000 19011KT P6SM -SHRA SCT025 OVC045  
FM060000 18009KT P6SM -RA BKN025 OVC040 TEMPO 0600/0604 4SM  
RA BR BKN018 OVC025  
FM060800 17012KT P6SM -RA BKN035 OVC050  
FM061400 20010KT P6SM -SHRA SCT025 BKN045

No Notams available for HIO

\*\*\*\*\* Destination Closest Terminal Weather \*\*\*\*\*

METAR KRNT 052053Z 18009G14KT 10SM BKN023 BKN039 BKN055 14/09 A2988  
RMK AO2 SLP121 T01440089 51001

TAF KBF1 051726Z 0518/0618 19011G19KT P6SM BKN013 BKN050 BKN200  
TEMPO 0518/0521 -SHRA BKN014 OVC050  
FM052100 20010KT P6SM SCT025 BKN050 BKN200  
FM060300 15008KT P6SM -RA OVC025  
FM061000 18012G20KT P6SM -SHRA BKN025 OVC045  
FM061700 19012G18KT P6SM BKN050

!RNT 03/006 RNT NAV NDB OTS WEF 1303201909  
!RNT 10/016 RNT APRON B ADJ TWY A WORK IN PROGRESS CONSTRUCTION WEF  
1210232317

\*\*\*\*\* FA Hazards and Flight Precautions \*\*\*\*\*

current report not available

\*\*\*\*\* FA Synopsis and VFR Clouds/Weather \*\*\*\*\*

SFOC FA 051945  
SYNOPSIS AND VFR CLDS/WX  
SYNOPSIS VALID UNTIL 061400  
CLDS/WX VALID UNTIL 060800...OTLK VALID 060800-061400  
WA OR CA AND CSTL WTRS

.  
SEE AIRMET SIERRA FOR IFR CONDS AND MTN OBSCN.  
TS IMPLY SEV OR GTR TURB SEV ICE LLWS AND IFR CONDS.  
NON MSL HGTS DENOTED BY AGL OR CIG.

.  
SYNOPSIS...ALF...WK SHRTWV RDG EXTDS FM NRN CA TO WRN WA AND WL  
CONT MOVG EWD. MOD SHRTWV TROF IS WELL OFF THE PAC NW CST ARND  
135W. TROF WL APCH THE PAC NW CST AND VRISL BY 12Z. INCRG WLY  
FLOW ALG THE POLAR JTST WL MOV EWD INTO NRN CA-SRN OR AND NW NV  
AFT 03Z.  
SFC...WK RDG EXTDS FM THE CNTRL CA CSTL WTRS INTO OR AND NV. RDG  
WL BUILD EWD INTO UT WY AND SRN ID THRU 12Z. CDFNT OFF THE PAC NW  
CST NR 130W WL MOV EWD TO EXTD FM SW BC-CNTRL OR-NW CA CSTL WTRS  
BY 12Z.

.  
WA CASCDS WWD  
PAC CSTL SXNS...BKN015-025 OVC050 TOPS 100. ISOL -SHRA. BECMG  
0003 BKN010-020 OVC080 LYRD FL180. OCNL VIS 3-5SM -RA BR.  
OTLK...MVFR CIG SHRA.  
PUGET SOUND/INTR VLY...BKN030-040 TOPS 100. ISOL -SHRA. BECMG  
0205 BKN020-030 OVC080 LYRD FL180. OCNL VIS 4-5SM -RA BR.  
OTLK...MVFR CIG SHRA.  
CASCDS...BKN-OVC070-090 TOPS 120. WDLY SCT -SHRA. BECMG 0306  
BKN060-070 OVC120 LYRD FL220. OCNL VIS 3-5SM -RA BR. OTLK...IFR  
CIG SHRASN BR.

.  
WA E OF CASCDS  
CNTRL WA...SCT-BKN100 TOPS 140 BKN CI. 05Z BKN130 TOPS FL200 BKN  
CI. OTLK...VFR SHRA.  
ERN WA...BKN080 TOPS 140. ISOL -SHRA. 00Z SCT080 SCT CI. 05Z  
BKN100 TOPS FL180 BKN CI. OTLK...MVFR CIG SHRA.

.  
OR CASCDS WWD  
CSTL SXNS...BKN015-025 BKN100 TOPS FL180. WDLY SCT -SHRA. BECMG  
0003 BKN010-020 OVC070. OCNL VIS 3-5SM -RA BR. OTLK...MVFR CIG  
SHRA.  
WILLAMETTE VLY/SWRN INTR...BKN030-040 TOPS 100. ISOL TO WDLY SCT  
-SHRA. BECMG 0205 BKN020-030 OVC080 LYRD FL200. OCNL VIS 3-5SM  
-RA BR. OTLK...MVFR CIG SHRA.  
CASCDS...BKN-OVC070-090 TOPS 130. ISOL TO WDLY SCT -SHRA. 05Z  
OVC060-080 LYRD FL220. OCNL VIS 3-5SM -RA BR. OTLK...MVFR CIG  
SHRASN.

.  
OR E OF CASCDS  
SCT-BKN080-100 TOPS 120. 02Z SCT-BKN090 OVC130 TOPS FL200. BECMG  
0507 BKN090 OVC130. SCT -SHRA. OTLK...VFR SHRA.

.  
CSTL WTRS  
WA/OR/NRN CA...BKN015-025 BKN100 TOPS FL180. SCT -SHRA. 01Z  
BKN010-020 OVC080. OCNL VIS 3-5SM -RA BR. OTLK...MVFR CIG SHRA.  
CNTRL CA...BKN030 TOPS 050. 05Z BKN015-025. OTLK...MVFR CIG.  
SRN CA...BKN010-015 TOPS 025. 03Z OVC010-015. OTLK...IFR CIG.

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\*\*\*\*\* FA Turbulence \*\*\*\*\*  
current report not available

\*\*\*\*\* Severe Weather Warnings \*\*\*\*\*  
current report not available

\*\*\*\*\* SIGMETs \*\*\*\*\*  
current report not available

\*\*\*\*\* Convective SIGMET \*\*\*\*\*  
MKCW WST 052055  
CONVECTIVE SIGMET...NONE

\*\*\*\*\* Center Weather Advisory \*\*\*\*\*  
current report not available

## LOFT 4 – KHIO to KRNT

## STUDENT GUIDE

\*\*\*\*\* AIRMETs \*\*\*\*\*

SFOS WA 052045

AIRMET SIERRA UPDT 4 FOR IFR AND MTN OBSCN VALID UNTIL 060300

.  
NO SGFNT IFR EXP OUTSIDE OF CNVTV ACT.

.  
AIRMET MTN OBSCN...WA ID MT

FROM 80E YDC TO 50WSW YXC TO 40SW YQL TO 60SE FCA TO LKT TO

50SSW GEG TO 80E YDC

MTNS OBSC BY CLDS/PCPN. CONDS CONTG BYD 03Z THRU 09Z.

.  
AIRMET MTN OBSCN...WA OR CA

FROM YDC TO 20ESE DSD TO 40E RBL TO ENI TO FOT TO ONP TO 20NW

TOU TO 20N HUH TO YDC

MTNS OBSC BY CLDS/PCPN/BR. CONDS CONTG BYD 03Z THRU 09Z.

.  
OTLK VALID 0300-0900Z

AREA 1...MTN OBSCN CA

BOUNDED BY 30S ENI-SAC-30WSW CZQ-40SSW SNS-40SSW OAK-30S ENI

MTNS OBSC BY CLDS. CONDS DVLPG 03-06Z. CONDS CONTG THRU 09Z.

.  
AREA 2...MTN OBSCN CA

BOUNDED BY 40NNE LAX-30SW HEC-60S TRM-20S MZB-LAX-40NNE LAX

MTNS OBSC BY CLDS. CONDS DVLPG 03-06Z. CONDS CONTG THRU 09Z.

....  
SFOT WA 052045

AIRMET TANGO UPDT 3 FOR TURB AND STG SFC WNDZ VALID UNTIL 060300

.  
OTLK VALID 0300-0900Z

AREA 1...TURB OR CA ID NV AND CSTL WTRS

BOUNDED BY 20N BKE-60WSW ELY-CZQ-120SW PYE-140WSW FOT-150W ONP-  
20N BKE

MOD TURB BTN FL240 AND FL370. CONDS CONTG THRU 09Z.

.  
AREA 2...TURB WA OR CA AND CSTL WTRS

BOUNDED BY 20SW YDC-100S LKV-30SSW FOT-40WNW TOU-20SW YDC

MOD TURB BLW 120. CONDS DVLPG 03-06Z. CONDS CONTG THRU 09Z.

.  
AREA 3...STG SFC WNDZ WA OR CA AND CSTL WTRS

BOUNDED BY TOU-60N FOT-140W FOT-140W TOU-TOU

SUSTAINED SURFACE WINDS GTR THAN 30KT EXP. CONDS DVLPG 03-06Z.

CONDS CONTG THRU 09Z.

....  
SFOZ WA 052045

AIRMET ZULU UPDT 3 FOR ICE AND FRZLVL VALID UNTIL 060300

.  
AIRMET ICE...WA OR CA AND CSTL WTRS

FROM 30SSE YDC TO 40SE LKV TO 30WSW FMG TO 130WSW SNS TO 140WSW

FOT TO 140W TOU TO 30SSE YDC

MOD ICE BTN 080 AND FL180. CONDS CONTG BYD 03Z THRU 09Z.

.  
OTLK VALID 0300-0900Z...ICE WA OR CA ID MT NV AND CSTL WTRS

BOUNDED BY YDC-50WSW YXC-50ESE YXC-40NW LKT-70SW BAM-40SSW

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# STUDENT GUIDE

FMG-130WSW SNS-140WSW FOT-140W TOU-YDC  
MOD ICE BTN 080 AND FL180. CONDS CONTG THRU 09Z.

FRZLVL...RANGING FROM 050-135 ACRS AREA  
080 ALG 140WSW ENI-20NNW PYE-30NNE SAC-50SW REO-40ENE REO  
120 ALG 160SW RZS-120SSW RZS-50SW LAX-20WNW HEC-50S LAS

## \*\*\*\*\* Surface Observations \*\*\*\*\*

METAR KMMV 052053Z AUTO 20008G18KT 10SM OVC020 14/09 A2996 RMK AO2  
SLP144 60000 T01390089 50003  
METAR KUAO 052053Z AUTO 21007KT 10SM BKN028 BKN036 OVC047 14/09  
A2997 RMK AO2 SLP147 60003 T01390089 50001  
METAR KHIO 052053Z 20011KT 10SM BKN027 BKN033 OVC041 14/08 A2994 RMK  
AO2 SLP138 T01390078 50000  
METAR KTTD 052053Z 24013G18KT 10SM BKN029 BKN037 OVC075 15/09 A2994  
RMK AO2 SLP140 60001 T01500089 50000  
METAR KPDX 052053Z 20018G22KT 10SM BKN017 16/07 A2995  
RMK AO2 RAB1956E10 SLP140 P0000 60000 T01560072 56001  
METAR KVUO 052053Z AUTO 21005KT 10SM BKN041 15/08 A2994 RMK AO2  
RAE21 SLP139 P0000 60002 T01500078 50000  
METAR KSPB 052053Z AUTO 19008KT 150V230 10SM BKN017 BKN048 14/07  
A2992 RMK AO2 RAB1956E06 SLP133 P0000 60000 T01440072 50000  
METAR KKLS 052055Z AUTO 10SM FEW047 BKN015 OVC020 14/08 A2992 RMK  
AO1 54000  
METAR KKLS 052115Z AUTO 10SM BKN015 OVC025 14/07 A2992 RMK AO1  
no reports available for TDO  
METAR KCLS 052055Z AUTO 23008KT 10SM BKN015 OVC047 13/09 A2991 RMK  
AO2  
METAR KCLS 052115Z AUTO 23007KT 8SM BKN014 BKN041 BKN047 14/09  
A2991 RMK AO2  
METAR KCLS 052135Z AUTO 20008KT 10SM BKN019 FEW046 SCT065 14/09  
A2991 RMK AO2  
METAR KOLM 052054Z 21009KT 9SM BKN011 OVC038 12/09 A2990 RMK  
AO2 SLP123 60000 T01220094 53001  
METAR KGRF 052058Z AUTO 21010G16KT 10SM SCT010 BKN013 BKN021 OVC028  
12/11 A2988 RMK AO2 RAB2004E2022DZB1959E2004B2022E2026  
SLP122 P0003 60005 T01250111 58002  
SPECI KGRF 052102Z AUTO 21008G16KT 9SM FEW003 SCT010 BKN014 BKN021  
OVC028 12/11 A2988 RMK AO2  
SPECI KGRF 052104Z AUTO 20009G16KT 8SM -DZ FEW003 SCT010 BKN014 BKN021  
OVC028 12/11 A2988 RMK AO2  
SPECI KGRF 052114Z AUTO 19011G17KT 9SM -RA FEW010 SCT015 BKN027 BKN033  
OVC050 12/10 A2989 RMK AO2 CIG 012V027  
SPECI KGRF 052119Z AUTO 20009G17KT 9SM -RA SCT010 SCT020 BKN032 BKN055  
12/10 A2989 RMK AO2 DZB2104  
SPECI KGRF 052122Z AUTO 20009G17KT 10SM FEW010 SCT020 BKN030 BKN046  
BKN210 12/11 A2989 RMK AO2 RAB2113DZB2104E2113  
METAR KPLU 052055Z AUTO 27009G16KT 10SM FEW023 BKN031 BKN037 14/12  
A2989 RMK AO2  
METAR KPLU 052115Z AUTO 24012G15KT 200V260 10SM BKN034 BKN043 13/10  
A2989 RMK AO2  
METAR KPLU 052135Z AUTO 22004KT 1 1/4SM RA SCT001 BKN012 OVC028  
12/11 A2990 RMK AO2 P0010  
METAR KTCM 052058Z AUTO 23014KT 8SM -RA FEW010 BKN024 BKN040  
BKN047 BKN055 14/12 A2988 RMK AO2 RAE2001B2017E2038B2054  
SLP122 P0002 60007 T01370120 58003 \$

SPECI KTCM 052103Z AUTO 24015KT 8SM -RA FEW010 BKN015 BKN022 BKN028  
 BKN055 13/12 A2988 RMK AO2 CIG 022V047 BKN022 V SCT \$  
 SPECI KTCM 052108Z AUTO 24013KT 10SM -RA FEW010 BKN017 BKN026 BKN085  
 13/11 A2988 RMK AO2 CIG 015V042 BKN017 V SCT CIG 010 RWY34 \$  
 SPECI KTCM 052113Z AUTO 24013KT 10SM -RA FEW010 BKN016 BKN023 BKN029  
 BKN046 OVC085 13/11 A2988 RMK AO2 CIG 015V025 \$  
 SPECI KTCM 052118Z AUTO 24013KT 10SM FEW010 BKN017 BKN028 BKN034 OVC045  
 13/11 A2989 RMK AO2 CIG 016V028  
 SPECI KTCM 052120Z AUTO 23014G20KT 9SM -RA FEW010 BKN017 BKN028 BKN043  
 13/11 A2989 RMK AO2 RAE2118 CIG 016V028 CIG 019 RWY34 \$  
 SPECI KTCM 052125Z AUTO 22015G21KT 5SM RA BR FEW007 BKN018 BKN039  
 OVC046 12/11 A2989 RMK AO2 CIG 019 RWY34 \$  
 METAR KTIW 052053Z 22009KT 10SM -RA BKN018 BKN040 BKN080 13/09 A2988  
 RMK AO2 RAB52 SLP120 P0000 60001 T01280089 51000  
 METAR KPWT 052055Z AUTO 21017G23KT 10SM BKN013 BKN029 13/08  
 A2989 RMK AO1 57003  
 METAR KPWT 052115Z AUTO 20018G27KT 10SM BKN013 OVC027 12/08  
 A2989 RMK AO1  
 METAR KSEA 052053Z 22009KT 10SM FEW013 BKN021 OVC039 13/08 A2988 RMK  
 AO2 RAE01 SLP125 P0000 60000 T01280083 50000  
 METAR KRNT 052053Z 18009G14KT 10SM FEW023 BKN039 BKN055 14/09 A2988  
 RMK AO2 SLP121 T01440089 51001  
 METAR KBFI 052053Z 20007KT 10SM SCT022 SCT033 BKN042 13/08 A2987 RMK  
 AO2 SLP116 T01330083 50001  
 SPECI KBFI 052118Z 20005KT 10SM BKN026 OVC032 13/08 A2987 RMK AO2  
 METAR KPAE 052053Z 20024G33KT 10SM FEW025 14/07 A2985 RMK AO2 PK WND  
 21034/2006 SLP107 T01390067 51007

\*\*\*\*\* Pilot Reports \*\*\*\*\*

KLS UA /OV KLS /TM 2023 /FL025 /TP C150 /WX FV30SM /TB NEG

PAE UA /OV PAE070020/TM 2109/FL120/TP AC50/TA MO4/IC MOD RIME  
 125-080/RM DURD ..ZSE

\*\*\*\*\* Radar Summaries \*\*\*\*\*

RTX 2035 AREA 4RW++ 354/97 189/99 164W MT 570 307/103 C2325  
 AUTO  
 ^JO1 KJ1 KN231 LJ1112322 MJ1112432 NJ111 NN241 OJ11 OM122 PL122 QM1

PDT 2035 PPINA AUTO

ATX 2035 CELL TRWX 165/56 D3  
 AREA 4RW++ 348/108 158/104 147W  
 AUTO  
 ^IL1 JL11 KK1 KM12 LK1 LN22 MK1 MM2221 NL12221 OK2 OM322 PL2511 QL111

OTX 2035 AREA 3RW+ 13/61 145/109 87W  
 AUTO  
 ^KO11 LN2 MM3321 NO1 OO11 PO12 QP1

\*\*\*\*\* Terminal Forecasts \*\*\*\*\*

TAF KHIO 051737Z 0518/0618 18010KT P6SM -SHRA BKN025 BKN035 OVC060  
 FM052000 19011KT P6SM -SHRA SCT025 OVC045  
 FM060000 18009KT P6SM -RA BKN025 OVC040 TEMPO 0600/0604 4SM  
 RA BR BKN018 OVC025  
 FM060800 17012KT P6SM -RA BKN035 OVC050  
 FM061400 20010KT P6SM -SHRA SCT025 BKN045

TAF KTTD 051737Z 0518/0618 20010G15KT P6SM -SHRA SCT025 BKN045  
OVC060  
FM052200 15014KT P6SM -RA SCT030 OVC050  
FM060200 16012KT P6SM RA BKN025 OVC040  
FM061000 13016KT P6SM -RA BKN035 OVC050  
FM061500 17014KT P6SM -SHRA SCT025 BKN045

TAF KPDX 051737Z 0518/0618 19009KT P6SM VCSH SCT012 BKN025 BKN040  
FM052000 17014KT P6SM -SHRA SCT025 BKN035 OVC045  
FM060000 18010KT P6SM -RA BKN025 OVC040 TEMPO 0600/0604 4SM  
RA BR BKN018 OVC025  
FM060800 17013KT P6SM -RA BKN035 OVC050  
FM061400 20012KT P6SM -SHRA SCT025 BKN045

TAF KOLM 051726Z 0518/0618 21010KT P6SM SCT015 OVC035 TEMPO  
0518/0522 -SHRA BKN015 OVC025  
FM052200 20010KT P6SM SCT020 BKN040 OVC200  
FM060300 16008KT 5SM -RA BR OVC018  
FM061000 20013G22KT 6SM -SHRA BR BKN020 OVC045  
FM061600 21010KT P6SM SCT025 BKN045

TAF KGRF 0521/0703 20010G15KT 9000 -SHRA FEW010 BKN014 BKN020 OVC040  
610604 QNH2988INS  
TEMPO 0521/0604 BKN015  
BECMG 0603/0604 18012G18KT 9000 -RA BR BKN010 OVC020  
620604 510003 QNH2985INS  
BECMG 0608/0609 20025G35KT 9000 -SHRA FEW030 SCT040 BKN050  
OVC060 610505 530005 QNH2983INS  
BECMG 0614/0615 22015G20KT 9000 -SHRA FEW010 SCT020 BKN030  
OVC050 610406 510003 QNH2989INS T14/0521Z T07/0614Z

TAF KTCM 0521/0703 20010G15KT 9000 -SHRA FEW008 SCT015 BKN020 OVC040  
610604 QNH2988INS  
BECMG 0603/0604 18012G18KT 9000 -RA BR BKN015 OVC030  
620604 510003 QNH2985INS  
BECMG 0608/0609 20025G35KT 9000 -SHRA FEW030 SCT040 BKN050  
OVC060 610505 530005 QNH2983INS  
BECMG 0614/0615 22015G20KT 9000 -SHRA FEW010 SCT020 BKN030  
OVC050 610406 510003 QNH2989INS T14/0521Z T07/0614Z

TAF AMD KSEA 052101Z 0521/0624 22009KT P6SM FEW013 SCT021 OVC040  
TEMPO 0521/0523 SCT013 BKN021 OVC040  
FM060300 17008KT P6SM -RA OVC025  
FM061000 20013G23KT P6SM -SHRA BKN025 OVC045  
FM061700 20012G20KT P6SM BKN045

TAF KBFI 051726Z 0518/0618 19011G19KT P6SM SCT013 BKN050 BKN200  
TEMPO 0518/0521 -SHRA BKN014 OVC050  
FM052100 20010KT P6SM SCT025 BKN050 BKN200  
FM060300 15008KT P6SM -RA OVC025  
FM061000 18012G20KT P6SM -SHRA BKN025 OVC045  
FM061700 19012G18KT P6SM BKN050

TAF KPAE 051726Z 0518/0618 21015G25KT P6SM OVC009 TEMPO 0518/0520  
-SHRA SCT009 OVC060  
FM052000 20014G22KT P6SM SCT015 BKN050 BKN200 TEMPO  
0520/0522 -SHRA BKN015 OVC050  
FM060300 17014G22KT P6SM -RA OVC025  
FM061000 18017G27KT P6SM -SHRA BKN025 OVC045  
FM061700 19014G23KT P6SM BKN045



# LOFT 4 – KHIO to KRNT

# STUDENT GUIDE

\*\*\*\*\* FD Winds Aloft Forecast \*\*\*\*\*

DATA BASED ON 051800Z REQUESTED  
VALID 060000Z FOR USE 2000-0300Z. TEMPS NEG ABV 24000 ALTITUDE  
FT 3000 6000 9000 12000 18000 24000 30000 34000 39000 6000  
RDM 2317+03 2231-04 2226-10 2342-20 2444-31 255548 256658 266062 2317+03  
PDX 2128 2335-01 2237-05 2233-11 2347-21 2344-32 235648 246258 255360 2335-01  
AST 2233 2237-01 2142-06 2238-11 2335-21 2242-33 235549 235857 255258 2237-01  
YKM 2321 2527+02 2528-04 2324-11 2435-22 2440-33 245249 256759 274558 2527+02  
SEA 2023 2331-01 2230-05 2131-11 2234-22 2234-33 235049 246259 263958 2331-01

\*\*\*\*\* NOTAMs \*\*\*\*\*

\*\*\*\*\* Runway NOTAMs \*\*\*\*\*

!MMV 09/048 MMV RWY 4 1000 FT DISTANCE REMAINING SIGN OTS  
!MMV 09/047 MMV RWY 22 4000 FT DISTANCE REMAINING SIGN OTS  
!PDX 03/009 PDX RWY 10R/28L CLSD 2130-2230 TUE WEF  
1303122130-1304092230  
!PDX 03/010 PDX RWY 10L/28R CLSD 1500-1600 WED WEF  
1303131500-1304101600  
!PDX 04/004 PDX RWY 21 REIL OTS WEF 1304011340-1305012359  
!SEA 03/220 2W3 RWY 34 REIL OTS  
!PLU 07/009 PLU RWY 16 REIL OTS  
!SEA 12/070 S36 RWY 15/33 RWY LGTS E SIDE S 1000 OTS

\*\*\*\*\* Aerodrome NOTAMs \*\*\*\*\*

!SEA 09/309 8W9 AD CLSD EXC PPR 360-747-7079  
!RNT 02/007 W36 AD SHALLOW WATER AROUND DOCKS AND LAUNCH RAMP

\*\*\*\*\* Obstruction NOTAMs \*\*\*\*\*

!MMV 04/006 7S9 OBST TOWER 736 (213 AGL) 10.70 S LGTS OTS  
(ASR 1224570) WEF 1304030550-1304180550  
!TTD 06/005 TTD OBST CRANE UNKN (180 AGL) .3 S RWY 25 THR FLAGGED  
AND  
LGTD  
!TTD 02/003 TTD OBST CRANE UNKN MSL(200 AGL) .3 S RWY 25 THR FLAGGED  
AND LGTD  
!PDX 03/031 PDX OBST TOWER 180 (110 AGL) 1.5 SW LGTS OTS (ASR  
1061622) WEF 1303260737-1304100737  
!PDX 04/002 PDX OBST TOWER 97 (75 AGL) 0.54 SW (453453N1223621W)  
FLAGGED/LGTD WEF 1304011327-1310192330  
!PDX 02/019 PDX OBST POWER LINES UNKN (542 AGL) 6 W LGTS OTS  
!VUO 07/003 VUO OBST CRANE 225 (200 AGL) 2800 WEST AER RWY 8  
!VUO 03/005 VUO OBST TOWER 196 (66 AGL) 0.6 NE LGTS OTS (ASR 1254901)  
TIL 1304132049  
!VUO 07/005 VUO OBST UNMARKED TRANSMISSION LINE OVER RIVER 398 (360  
AGL) 5.5 WSW (453657N1224708W)  
!SPB 04/001 SPB OBST TOWER 219 (169 AGL) 1.5 SSW LGTS OTS  
(ASR 1226739) WEF 1304050601-1304200601  
!SEA 03/237 W27 OBST TOWER 983 (210 AGL) 1.3 ENE LGTS OTS (ASR  
1035586) TIL 1304132253  
!KLS 04/002 KLS OBST TOWER 1302 (162 AGL) 4.23 SSW LGTS OTS  
(ASR UNKN) WEF 1304021106-1304171106  
!KLS 04/001 KLS OBST TOWER 1561 (285 AGL) 3.3 NE LGTS OTS (ASR  
1263097) WEF 1304020707-1304170707  
!SEA 04/022 8W9 OBST WIND TURBINE 2276 (263 AGL) 12.1 WSW LGTS OTS  
WEF 1304030704-1304180704  
!YKM 04/004 YKM OBST TOWER 3396 (165 AGL) 14.7 NNE LGTS OTS (ASR

1032754) TIL 1304180040  
!SEA 04/010 W37 OBST TOWER 388 (160 AGL) 1.7 W LGTS OTS (ASR 1255231)  
TIL 1304162036  
!TIW 04/004 TIW OBST TOWER 444 (160 AGL) 1.6 WNW LGTS OTS  
(ASR 1221299) TIL 1304200626  
!SEA 04/040 S50 OBST TOWER 120 (50 AGL) 0.9 S LGTS OTS (ASR 1223484)  
TIL 1304192205  
!SEA 03/233 S36 OBST TOWER 900 (156 AGL) 9.4 SSE LGTS OTS (ASR  
1063423) TIL 1304132052  
!BFI 03/023 BFI OBST CRANE UNKN (180 AGL) .37 NW AER 31L  
WEF 1203161900  
!BFI 08/127 BFI OBST CRANE UNKN (150 AGL) .75 SW AER 13R  
!BFI 03/017 BFI OBST TOWER 161 (155 AGL) 2.8 NNW LGTS OTS (ASR  
1046356) TIL 1304100330  
!PAE 10/067 PAE OBST TOWER UNKN (300 AGL) 5.5 SE (4751N12210W) LGTS  
OTS  
!SEA 03/210 W16 OBST TOWER 880 (320 AGL) 7.4 SSW LGTS OTS (ASR  
1201694) TIL 1304102237  
!SEA 04/043 W16 OBST TOWER 821 (121 AGL) 2.6 SW LGTS OTS (ASR  
1060104) WEF 1304051351-1304201351

\*\*\*\*\* Navigation NOTAMs \*\*\*\*\*

!PDX 04/001 PDX NAV ILS RWY 28L GP OTS WEF 1304011600-1310150100  
!SEA 04/047 SEA NAV ILS RWY 16R CAT 2/3 NOT AUTH WEF  
1304081600-1304082000  
!SEA 04/045 SEA NAV ILS RWY 34C CAT 2/3 NOT AUTH WEF  
1304081600-1304082000  
!SEA 04/048 SEA NAV ILS RWY 34R CAT 2/3 NOT AUTH WEF  
1304081600-1304082000  
!SEA 04/049 SEA NAV ILS RWY 16L CAT 2/3 NOT AUTH WEF  
1304081600-1304082000  
!SEA 04/032 SEA NAV VOR RECEIVER CHECK POINT 194 AZIMUTH 27.0 DME OTS  
WEF 1304032329  
!SEA 04/046 SEA NAV ILS RWY 16C CAT 2/3 NOT AUTH WEF  
1304081600-1304082000  
!SEA 04/044 SEA NAV ILS RWY 34L CAT 2/3 NOT AUTH WEF  
1304081600-1304082000  
!RNT 03/006 RNT NAV NDB OTS WEF 1303201909

\*\*\*\*\* Communication NOTAMs \*\*\*\*\*

\*\*\*\*\* Airspace NOTAMs \*\*\*\*\*

!SUAW 04/602 ZSE AIRSPACE R6714A ACT SFC-15000FT WEF  
1304052032-1305032359  
!SUAW 04/604 ZSE AIRSPACE R6714B ACT SFC-15000FT WEF  
1304052032-1305040001  
!SUAW 04/600 ZSE AIRSPACE R6714C ACT SFC-15000FT WEF  
1304052032-1305040001  
!SUAW 04/587 ZSE AIRSPACE JUNIPER SOUTH MOA ACT 11000FT UP TO BUT NOT  
INCLUDING FL180 WEF 1304052000-1304052300  
!SUAW 04/588 ZSE AIRSPACE HART NORTH MOA ACT 11000FT UP TO BUT NOT  
INCLUDING FL180 WEF 1304052000-1304052300  
!SUAW 04/589 ZSE AIRSPACE JUNIPER LOW MOA ACT 300FT AGL-10999FT WEF  
1304052000-1304052300  
!SUAW 04/590 ZSE AIRSPACE HART SOUTH MOA ACT 11000FT UP TO BUT NOT  
INCLUDING FL180 WEF 1304052000-1304052300  
!SUAW 04/558 ZSE AIRSPACE OKANOGAN B MOA ACT 300FT AGL-8999FT WEF

1304051545-1304052215

!SUAW 04/560 ZSE AIRSPACE OKANOGAN A MOA ACT 9000FT UP TO BUT NOT INCLUDING FL180 WEF 1304051545-1304052215

!SUAW 04/596 ZSE AIRSPACE W570 ACT 3000FT AGL-FL500 WEF

1304061845-1304062145

!SEA 03/230 ZSE AIRSPACE UNMANNED ACFT 2 NMR PDT259037.5 1400/BLW

DALGT AVOIDANCE ADZD WEF 1304011400-1304060100

!SEA 12/033 ZSE AIRSPACE UNMANNED ACFT 5 NMR 1S8 4400/BLW VFR DALGT

AVOIDANCE ADZD TIL 1410240016

!SUAW 04/603 ZSE AIRSPACE R6714F ACT SFC-15000FT WEF

1304052032-1305040001

!SUAW 04/601 ZSE AIRSPACE R6714G ACT SFC-15000FT WEF

1304052032-1305040001

!SUAW 04/559 ZSE AIRSPACE OKANOGAN C MOA ACT 300FT AGL-8999FT WEF

1304051545-1304052215

!SUAW 04/562 ZSE AIRSPACE ROOSEVELT B MOA ACT 300FT AGL-8999FT WEF

1304051600-1304052230

!SUAW 04/563 ZSE AIRSPACE ROOSEVELT A MOA ACT 9000FT UP TO BUT NOT

INCLUDING FL180 WEF 1304051600-1304052230

!SUAW 04/586 ZSE AIRSPACE JUNIPER NORTH MOA ACT 11000FT UP TO BUT NOT

INCLUDING FL180 WEF 1304052000-1304052300

\*\*\*\*\* Taxiway NOTAMs \*\*\*\*\*

!PDX 03/033 PDX TWY C BTN TWY E AND TWY J CLSD WEF

1304011430-1305312330

!PDX 03/034 PDX TWY F BTN RWY 10R/28L AND TWY C CLSD WEF

1304011430-1305312330

!PDX 03/036 PDX TWY C BTN TWY C6 AND TWY C8 CLSD WEF

1304011600-1309272330

!PDX 03/035 PDX TWY J CLSD ACFT WINGSPAN GTR THAN 94 EXC ACFT WITH

WINGSPANS LESS THAN 118 FT UNDER TOW WEF 1304011430-1305312330

!TIW 04/006 TIW TWY A BTN TWY A1 AND A2 CLSD WEF

1304051847-1304081400

!TIW 04/007 TIW TWY A BTN TWY A1 AND A3 CLSD WEF

1304081400-1304092359

!TIW 04/005 TIW TWY A2 CLSD WEF 1304081400-1304092359

\*\*\*\*\* Ramp/Apron NOTAMs \*\*\*\*\*

!RNT 10/016 RNT APRON B ADJ TWY A WORK IN PROGRESS CONSTRUCTION WEF

1210232317

\*\*\*\*\* Service NOTAMs \*\*\*\*\*

!SEA 04/042 ZSE SVC REDMOND SECONDARY SURVEILLANCE RADAR OTS/NO FLT

FLWG OR TFC ADVISORIES AOB 8000 WI 70NM DSD VOR

WEF 1304051600-1304052200

!SEA 04/034 ZSE SVC KINGSLEY APPROACH CONTROL CLSD

1500-2300 THU/FRI/MON WEF 1304041500-1304082300

!SEA 03/214 ZSE SVC RED BLUFF SECONDARY SURVEILLANCE RADAR OTS

WEF 1303271500-1304110200

!RDM 04/010 RDM SVC SEE ZSE 04/042 REDMOND SECONDARY SURVEILLANCE

RADAR OTS WEF 1304051600-1304052200

!SEA 03/071 SEA SVC ARPT SFC TFC INFO SVC BCST UNAVBL WEF 1303072323

!SEA 07/820 SEA SVC STAMPEDE PASS ASOS OTS

\*\*\*\*\* Other NOTAMs \*\*\*\*\*

!SPB 08/001 SPB (O) SURFACE BLASTING .5 NMR SPB320010 1000/BLW

AVOIDANCE ADZD

## LOFT 4 – KHIO to KRNT

## STUDENT GUIDE

\*\*\*\*\* FDC NOTAMs \*\*\*\*\*

!FDC 3/9250 ZSE WA.. FI/T ROUTE ZSE.

V4 SEATTLE (SEA) VORTAC, WA TO HUMPP, WA MEA 10000 MOCA 6200.

!FDC 3/6305 ZSE FI/T ROUTE ZSE.

V121 WHIFF, OR MCA 12000 NE.

!FDC 2/5341 ZSE WA.. FI/T ROUTE ZSE.

V536 PENDLETON (PDT) VORTAC, OR TO WALLA WALLA (ALW) VOR/DME, WA MEA 4300.

!FDC 2/0462 ZSE WA.. FI/T ROUTE ZSE.

V2-V298 SEATTLE (SEA) VORTAC, WA EASTBOUND TO VAMPS INT, WA MEA 8400. VAMPS INT, WA TO BEEZR INT, WA MEA 8400.

!FDC 3/5001 HIO FI/T IAP PORTLAND-HILLSBORO, PORTLAND, OR.

ILS OR LOC RWY 13, AMDT 9...

JIKIM FIX MINIMUMS: CIRCLING MDA 1060/ HAA 852 ALL CATS.

VISIBILITY CAT B 1 1/4, CAT C 2 1/2, CAT D 2 3/4.

TEMPORARY CRANE 700 MSL 1.03 NM EAST OF RWY 20.

!FDC 3/5000 HIO FI/T IAP PORTLAND-HILLSBORO, PORTLAND, OR.

VOR/DME C, ORIG...

NDB B, AMDT 2...

CIRCLING MDA 1060/ HAA 856 ALL CATS. VISIBILITY CAT B 1 1/4,

CAT C 2 1/2, CAT D 2 3/4.

TEMPORARY CRANE 700 MSL 1.03 NM EAST OF RWY 20.

!FDC 3/4999 HIO FI/T IAP PORTLAND-HILLSBORO, PORTLAND, OR.

RNAV (GPS) RWY 13, AMDT 1A...

RNAV (GPS) RWY 31, ORIG-A...

CIRCLING MDA 1060/ HAA 852 ALL CATS. VISIBILITY CAT B 1 1/4,

CAT C 2 1/2, CAT D 2 3/4.

TEMPORARY CRANE 700 MSL 1.03 NM EAST OF RWY 20.

!FDC 2/7075 HIO FI/T SID PORTLAND-HILLSBORO, PORTLAND, OR,

BERNI ONE DEPARTURE...

TAKEOFF MINIMUMS RWY 13: STANDARD WITH MINIMUM CLIMB OF 235

FEET PER NM TO 2400. MINIMUM ATC CLIMB OF 500 FEET PER NM TO

1200. RWY 31: 200-1 1/4 OR STANDARD WITH MINIMUM CLIMB OF 240

FEET PER NM TO 700. TAKEOFF OBSTACLE NOTES

ADD NOTE: RWY 13: MULTIPLE TREES BEGINNING 1030 FEET FROM DER, 9 FEET RIGHT OF CENTERLINE, 120 AGL/357 MSL.

ADD NOTE: RWY 31: MULTIPLE TREES BEGINNING 1663 FEET FROM DER, 623 FEET RIGHT OF CENTERLINE, UP TO 130 AGL/380 MSL.

ALL OTHER DATA REMAINS THE SAME.

!FDC 3/9997 9OR6 FI/T IAP OREGON HEALTH SCIENCES UNIVERSITY EMERG, PORTLAND, OR.

(SPECIAL)

COPTER GPS RWY 253, ORIG...

PROCEDURE NA.

!FDC 3/5033 7OR5 FI/T IAP EMANUEL HOSPITAL, PORTLAND, OR.

(SPECIAL) COPTER GPS RWY 098, ORIG...

PROCEDURE NA.

## LOFT 4 – KHIO to KRNT

## STUDENT GUIDE

!FDC 3/3023 TTD FI/T IAP PORTLAND-TROUTDALE, PORTLAND, OR.  
NDB OR GPS A, AMDT 8A...  
CAT D NA.  
MSA FROM LBH NDB 350 - 170 6100, 170 - 260 3200, 260 - 350  
4100.

!FDC 3/2868 PDX FI/T IAP PORTLAND INTL, PORTLAND, OR.  
RNAV (RNP) Y RWY 28R, ORIG...  
RNP 0.30 DA 496/ HATH 465 ALL CATS.  
TEMPORARY CRANE 185 MSL 1.08 NM SOUTHEAST OF RWY 28R.

!FDC 3/2636 PDX FI/T STAR PORTLAND INTERNATIONAL, PORTLAND, OR.  
HHOOD ONE ARRIVAL...  
(RNAV) ONLY ASSIGNABLE BY ATC

!FDC 2/1558 OLM FI/T IAP OLYMPIA RGNL, OLYMPIA, WA.  
ILS OR LOC RWY 17, AMDT 11...  
DISREGARD TCM R-230 AT HARBOR OM/INT/OLM 5.1/RADAR.

!FDC 2/2552 TCM FI/T STAR MCCHORD FIELD  
ARRIE SIX ARRIVAL,  
NA EXCEPT FOR AIRCRAFT EQUIPPED WITH SUITABLE  
RNAV SYSTEM WITH GPS, TCM R-260 UNUSABLE.

!FDC 2/2471 TIW FI/T IAP TACOMA NARROWS, TACOMA, WA.  
RNAV (GPS) RWY 17, ORIG...  
ADD PROFILE NOTE: VGSI AND RNAV GLIDEPATH NOT COINCIDENT.

!FDC 2/2139 TIW FI/T IAP TACOMA NARROWS, TACOMA, WA.  
ILS RWY 17, AMDT 8A...  
ADD PROFILE NOTE: VGSI AND ILS GLIDEPATH NOT COINCIDENT.

!FDC 3/7922 S50 FI/T SID AUBURN MUNI, AUBURN, WA,  
AUBURN ONE DEPARTURE...  
NA EXCEPT FOR AIRCRAFT EQUIPPED WITH SUITABLE RNAV SYSTEM WITH  
GPS.

!FDC 3/4665 SEA FI/P IAP SEATTLE-TACOMA INTL, SEATTLE, WA  
ILS OR LOC RWY 34C AMDT 3...  
ILS RWY 34C (SA CAT I) AMDT 3...  
ILS RWY 34C (SA CAT II) AMDT 3...  
DELETE CHART MAXIMUM 2000 AT COYLA.  
THIS IS ILS OR LOC RWY 34C AMDT 3A , ILS RWY 34C (SA CAT I) AMDT  
3A, ILS RWY 34C (SA CAT II) AMDT 3A

!FDC 3/4660 SEA FI/P IAP SEATTLE-TACOMA INTL, SEATTLE, WA.  
ILS OR LOC RWY 16R AMDT 2...  
ILS RWY 16R (SA CAT I) AMDT 2...  
ILS RWY 16R (CAT II) AMDT 2...  
ILS RWY 16R (CAT III) AMDT 2...  
CATEGORY III ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION  
REQUIRED. S-ILS 16R: CAT IIIA CAT A, B, C, D, RVR 700. CAT IIIB  
CAT A, B, C, D, RVR 300. CAT IIIC NA.  
THIS IS ILS OR LOC RWY 16R AMDT 2A, ILS RWY 16R (SA CAT I) AMDT  
2A, ILS RWY 16R (CAT II) AMDT 2A, ILS RWY 16R (CAT III) AMDT 2A

!FDC 3/4659 SEA FI/P IAP SEATTLE-TACOMA INTL, SEATTLE, WA.

ILS OR LOC RWY 16L AMDT 5...

ILS RWY 16L (SA CAT I) AMDT 5...

ILS RWY 16L (CAT II) AMDT 5...

ILS RWY 16L (CAT III) AMDT 5...

CATEGORY III ILS - SPECIAL AIRCREW AND AIRCRAFT CERTIFICATION

REQUIRED. S-ILS 16L: CAT IIIA CAT B, C, D, RVR 700. CAT IIIB

CAT B, C, D, RVR 300. CAT IIIC NA. CAT A NA.

THIS IS ILS OR LOC RWY 16L AMDT 5A, ILS RWY 16L (SA CAT I) AMDT

5A, ILS RWY 16L (CAT II) AMDT 5A, ILS RWY 16L (CAT III) AMDT 5A

!FDC 3/3109 SEA FI/P IAP SEATTLE-TACOMA INTL, SEATTLE, WA.

ILS OR LOC RWY 34R AMDT 2...

ILS RWY 34R (SA CAT I) AMDT 2...

ILS RWY 34R (SA CAT II) AMDT 2...

DELETE CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 34R/C.

ADD CHART NOTE: SIMULTANEOUS APPROACH AUTHORIZED WITH RWY 34L.

THIS IS ILS OR LOC RWY 34R AMDT 2A, ILS RWY 34R (SA CAT I) AMDT

2A, ILS RWY 34R (SA CAT II) AMDT 2A.

!FDC 3/3081 SEA FI/P IAP SEATTLE-TACOMA INTL, SEATTLE, WA.

RNAV (GPS) Y RWY 34L, AMDT 1...

DELETE PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT CIDUG ON V485 SOUTHBOUND.

CHART PLANVIEW NOTE: PROCEDURE NA FOR ARRIVALS AT CIDUG ON V495 SOUTHBOUND.

THIS IS RNAV (GPS) Y RWY 34L, AMDT 1A.

!FDC 3/3080 SEA FI/T IAP SEATTLE-TACOMA INTL, SEATTLE, WA.

RNAV (GPS) Y RWY 34R, AMDT 2...

PROCEDURE NA.

!FDC 3/3015 SEA FI/T IAP SEATTLE-TACOMA INTL, SEATTLE, WA.

RNAV (GPS) Y RWY 16C, AMDT 2...

TERMINAL ROUTE FROM GRIFY (IAF) WAYPOINT TO ERYKA (IAF) WAYPOINT NA.

!FDC 2/9057 RNT FI/T IAP RENTON MUNI, RENTON, WA.

NDB RWY 16, AMDT 7...

NOTE: DUAL ADF RECEIVERS REQUIRED FOR MISSED APPROACH.

DISREGARD TCM R-022 AT ZEBKU INT.

!FDC 2/9152 BFI FI/T IAP BOEING FIELD/KING COUNTY INTL, SEATTLE, WA.

LOC/DME RWY 13R, AMDT 2...

DISREGARD TCM R-035 AT BLAKO INT.

!FDC 2/9150 BFI FI/T IAP BOEING FIELD/KING COUNTY INTL, SEATTLE, WA.

ILS RWY 13R, AMDT 30...

DISREGARD TCM R-035 AT BLAKO.

!FDC 3/6639 PAE FI/T IAP SNOHOMISH COUNTY (PAINE FLD), EVERETT, WA.

RNAV (GPS) RWY 34L, AMDT 1...

LNAV MDA 1160/ HATH 582 ALL CATS, VISIBILITY CATS C/D 1 3/8.

CIRCLING MDA 1200/ HAA 594 ALL CATS, VISIBILITY CAT C 1 3/4.

DISREGARD ZEREN STEPDOWN FIX AND ALTITUDE.

VDP 1.59 NM TO RW34L.

TEMPORARY CRANE 847 MSL 0.40 NM SOUTHEAST OF RWY 34L.

## LOFT 4 – KHIO to KRNT

## STUDENT GUIDE

!FDC 3/6638 PAE FI/T IAP SNOHOMISH COUNTY (PAINE FLD), EVERETT, WA.

RNAV (GPS) Y RWY 16R, AMDT 1...

RNAV (GPS) Z RWY 16R, ORIG...

ILS OR LOC/DME Z RWY 16R, ORIG...

ILS OR LOC/DME Y RWY 16R, AMDT 22...

VOR/DME RWY 16R, ORIG-A...

VOR RWY 16R, ORIG-A...

CIRCLING MDA 1200/ HAA 594 ALL CATS, VISIBILITY CAT C 1 3/4.

TEMPORARY CRANE 847 MSL 0.79 NM SOUTHEAST OF KPAE.