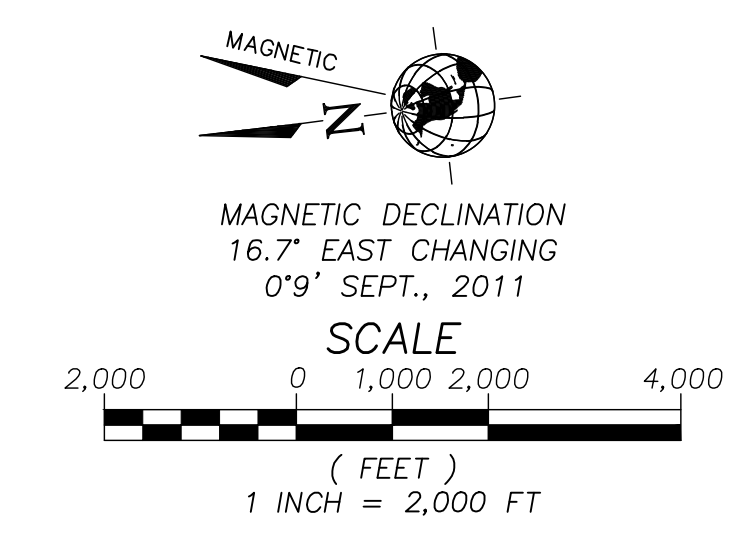
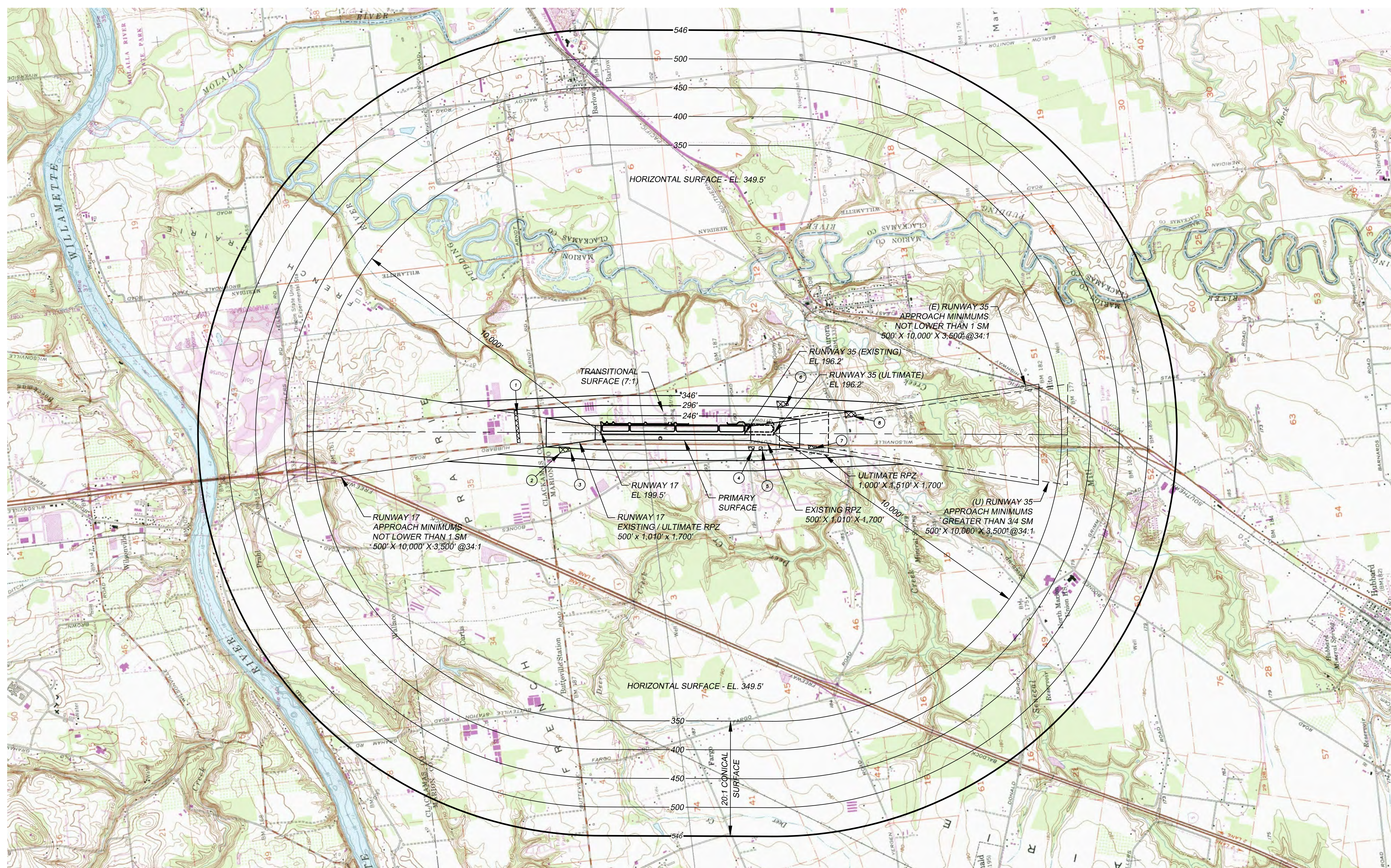


XREF INDEX:



DATE: 1/3/2013 10:08 AM [AUTHOR: ---] [PLOTTER: DWG To PDF.pc3] [STYLE: WHP-Standard.ctb] [LAYOUT: Layout1]
 PATH: P:\Oregon Department of Aviation\Drawings\Civil\034317-AIRP-AA01.dwg

NO	ITEM	PART 77 SURFACE	FUTURE PART 77 SURFACE	ELEV	OFFSET FROM RWY CL	DISTANCE FROM RWY END	ESTIMATED AMOUNT OF PENETRATION	AIRPORT PROPERTY	DISPOSITION
1	TREE GROUP	APPROACH (RWY 17)	SAME	269'	0 R	3028'	(-2)	NO	CLEAR TREES
2	W. END TREE LINE	NONE	APPROACH (RWY 17)	303'	491' R	1590'	67'	NO	CLEAR TREES
3	E. END TREE LINE	NONE	APPROACH (RWY 17)	294'	491' R	715'	80'	NO	CLEAR TREES
4	TREE GROUP	TRANSITIONAL (RWY 35)	APPROACH (RWY 35)	248'	453' L	270'	51'	NO	CLEAR TREES
5	TREE GROUP	TRANSITIONAL (RWY 35)	APPROACH (RWY 35)	268'	460' L	435'	68'	NO	CLEAR TREES
6	TREE GROUP	TRANSITIONAL (RWY 35)	TRANSITIONAL (RWY 35)	276'	940' R	2060'	30'	NO	CLEAR TREES
7	TREE GROUP	TRANSITIONAL (RWY 17)	APPROACH (RWY 35)	282'	423' L	2540'	20'	NO	CLEAR TREES
8	TREE GROUP	APPROACH (RWY 35)	APPROACH (RWY 35)	286'	557' R	3760'	(-2')	NO	CLEAR TREES

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SHEET INFO

DESIGNED	SML
DRAWN	RAI
CHECKED	REA
APPROVED	---
LAST EDIT	03/23/12
PLOT DATE	1/3/2013
SUBMITTAL	

REVISIONS

NO.	BY	DATE	REMARKS

AIRPORT AIRSPACE DRAWING

OREGON DEPARTMENT OF AVIATION
 AURORA STATE AIRPORT ~ MASTER PLAN UPDATE

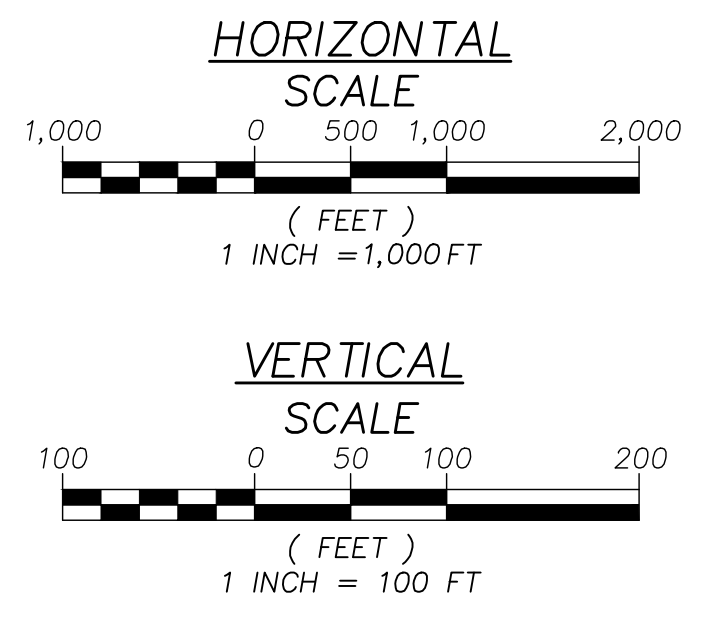
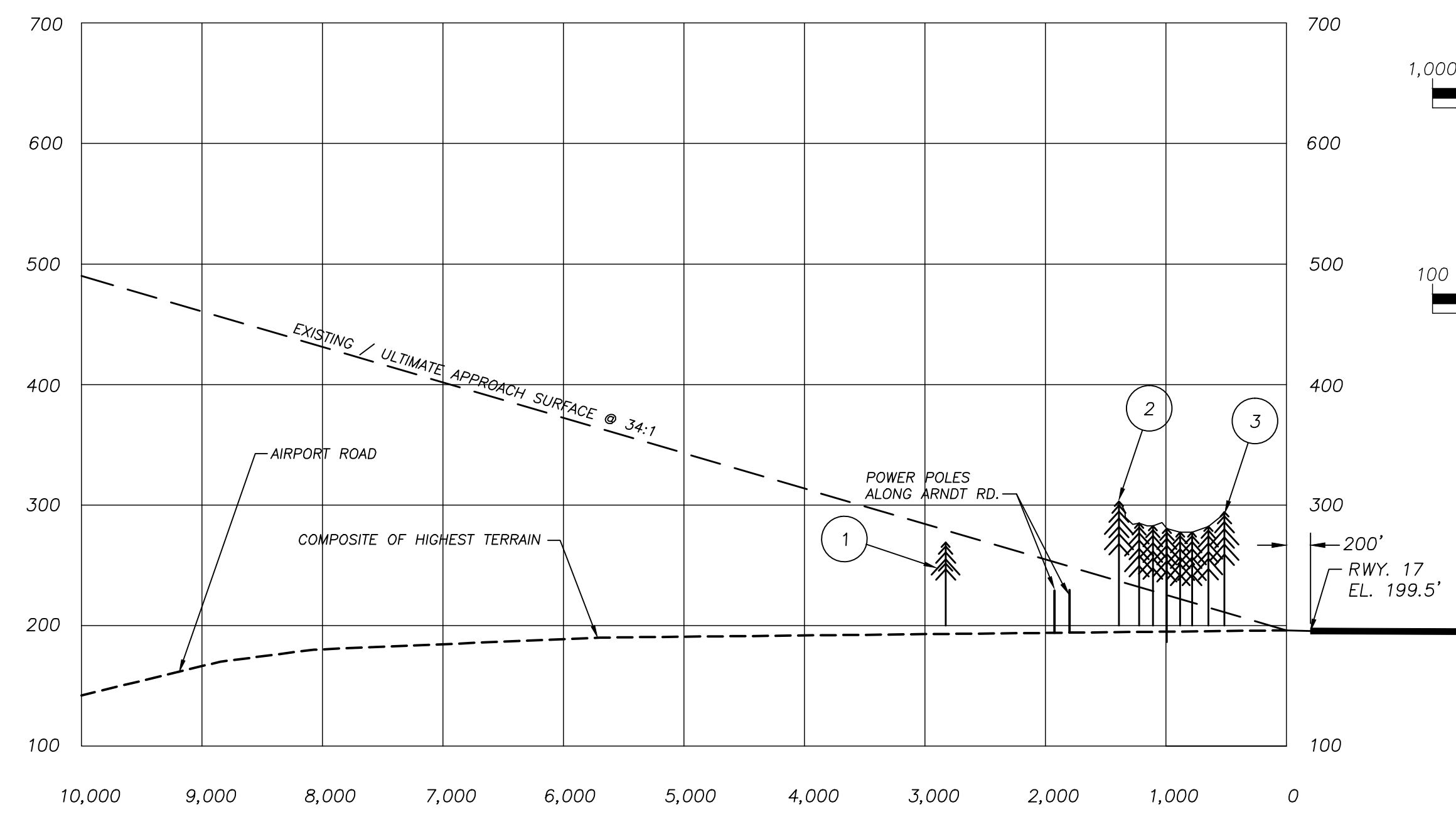
PROJECT NUMBER 034317	DRAWING FILE NAME 034317-AIRP-AA01	SCALE 1"=2,000'
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SHEET NUMBER
2

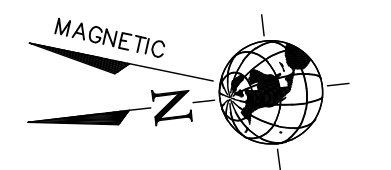
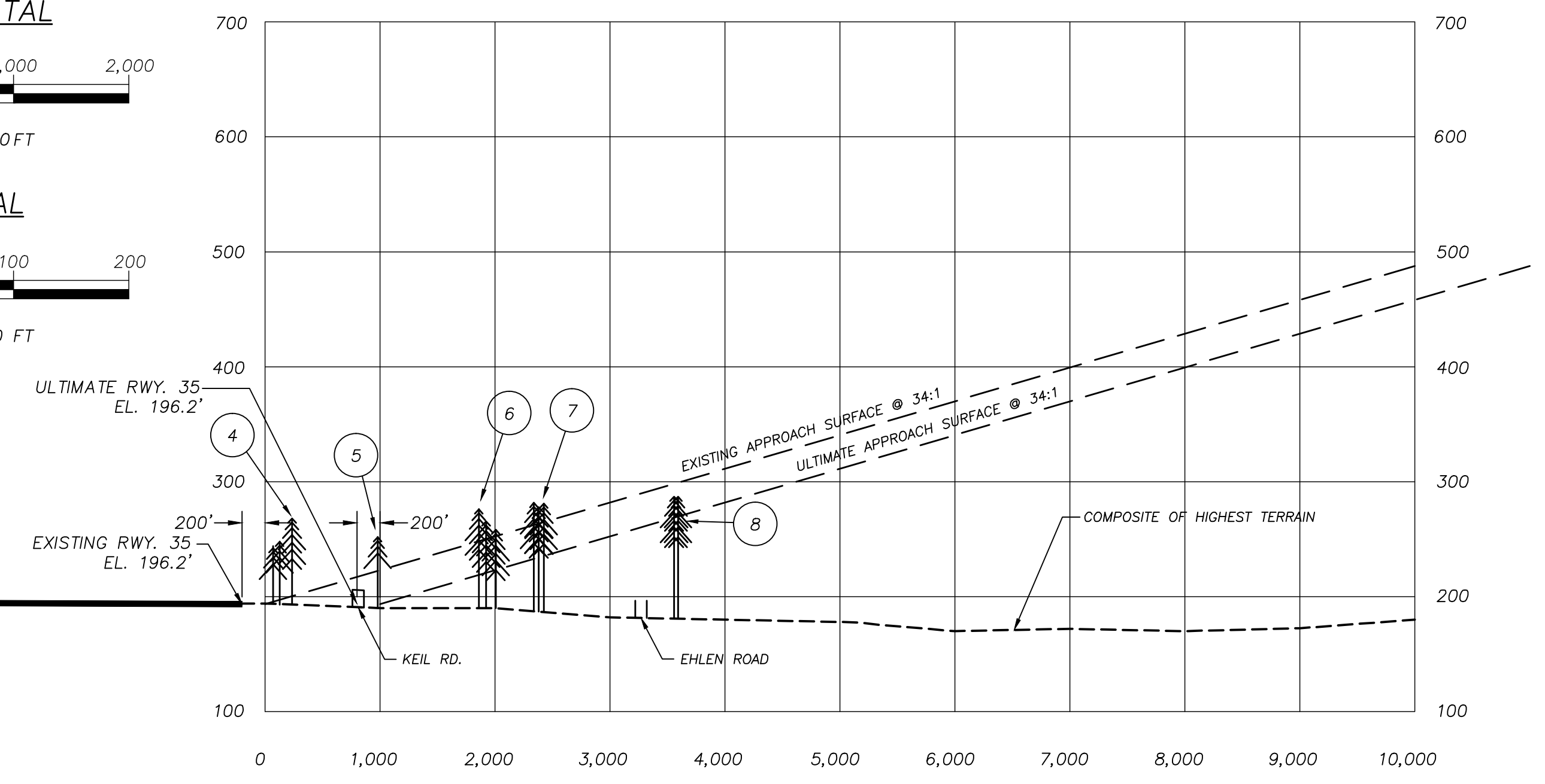
3 of 10

XREF INDEX:

RUNWAY 17



RUNWAY 35



MAGNETIC DECLINATION
16.7' EAST CHANGING
0'9' W/YEAR

NO.	ITEM	PART 77 SURFACE	FUTURE PART 77 SURFACE	ELEV	OFFSET FROM RWY CL	DISTANCE FROM RWY END	ESTIMATED AMOUNT OF PENETRATION	AIRPORT PROPERTY	DISPOSITION
1	TREE GROUP	APPROACH (RWY 17)	SAME	269'	0' R	3028'	(-2)	NO	CLEAR TREES
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6	TREE GROUP	TRANSITIONAL (RWY 35)	TRANSITIONAL (RWY 35)	276'	449' R	2060'	30'	NO	CLEAR TREES
7	TREE GROUP	TRANSITIONAL (RWY 17)	APPROACH (RWY 35)	282'	423' L	2540'	20'	NO	CLEAR TREES
8	TREE GROUP	APPROACH (RWY 35)	APPROACH (RWY 35)	286'	557' R	3760'	(-2)	NO	CLEAR TREES

DATE: 1/3/2013 10:13 AM [AUTHOR: ----] [PLOTTER: DWG To PDF.pc3] [STYLE: WHP-Standard.ctb] [LAYOUT: Layout12]
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SHEET INFO	
DESIGNED	SML
DRAWN	RAI
CHECKED	REA
APPROVED	---
LAST EDIT	1/3/2013
PLOT DATE	1/3/2013
SUBMITTAL	

REVISIONS			
NO.	BY	DATE	REMARKS

AIRPORT APPROACH SURFACES DRAWING

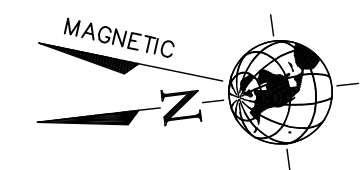
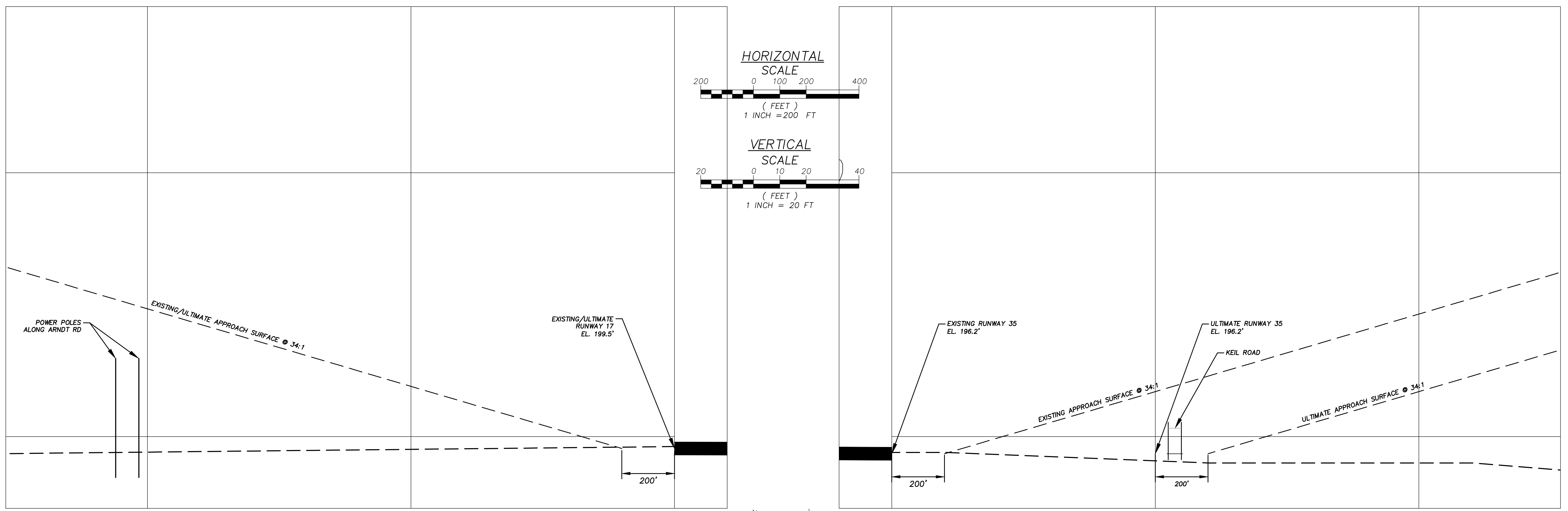
OREGON DEPARTMENT OF AVIATION
AURORA STATE AIRPORT ~ MASTER PLAN UPDATE

PROJECT NUMBER 034317	DRAWING FILE NAME 034317-AIRP-AA01	SCALE 1"=1,000"
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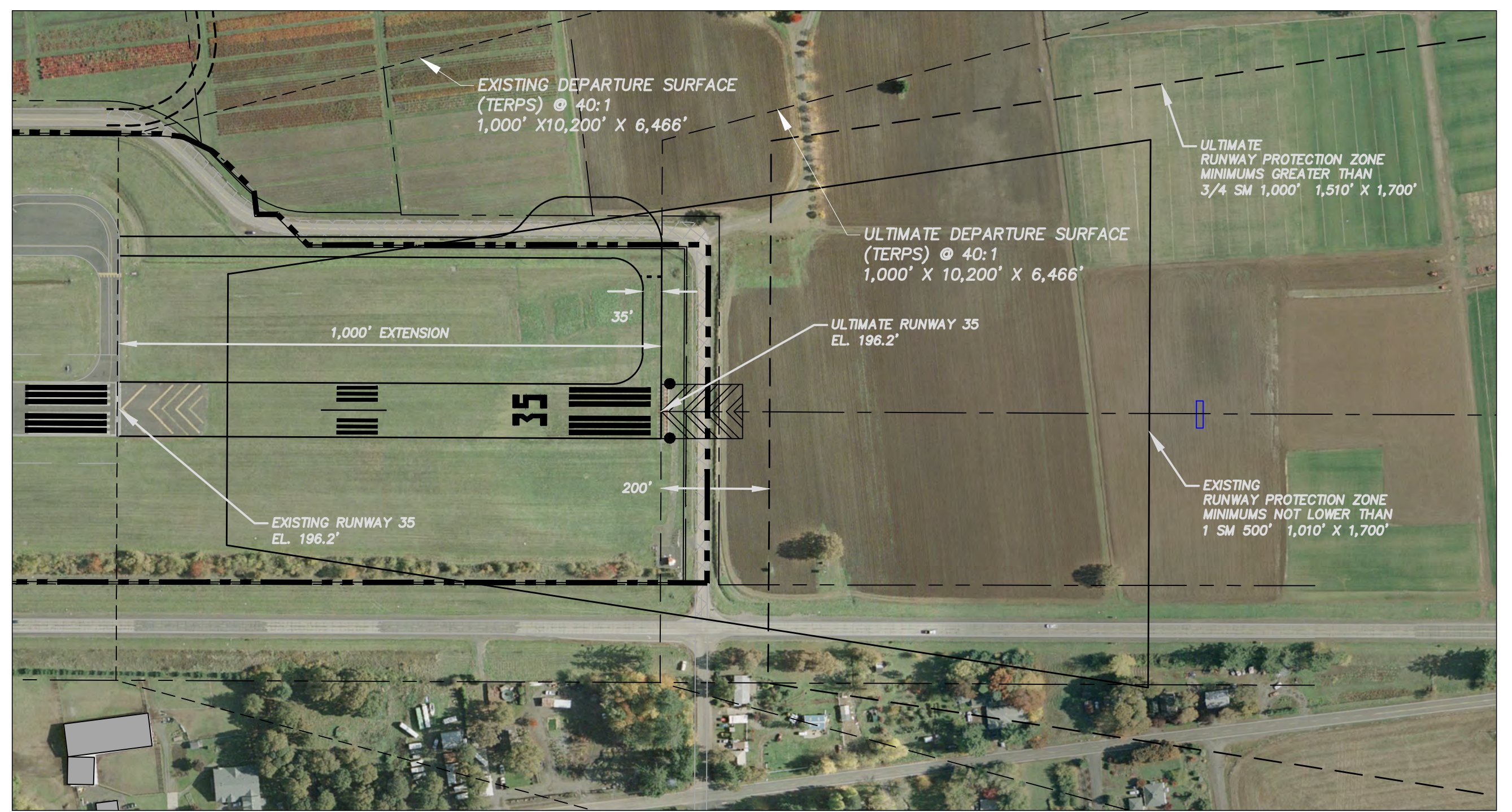
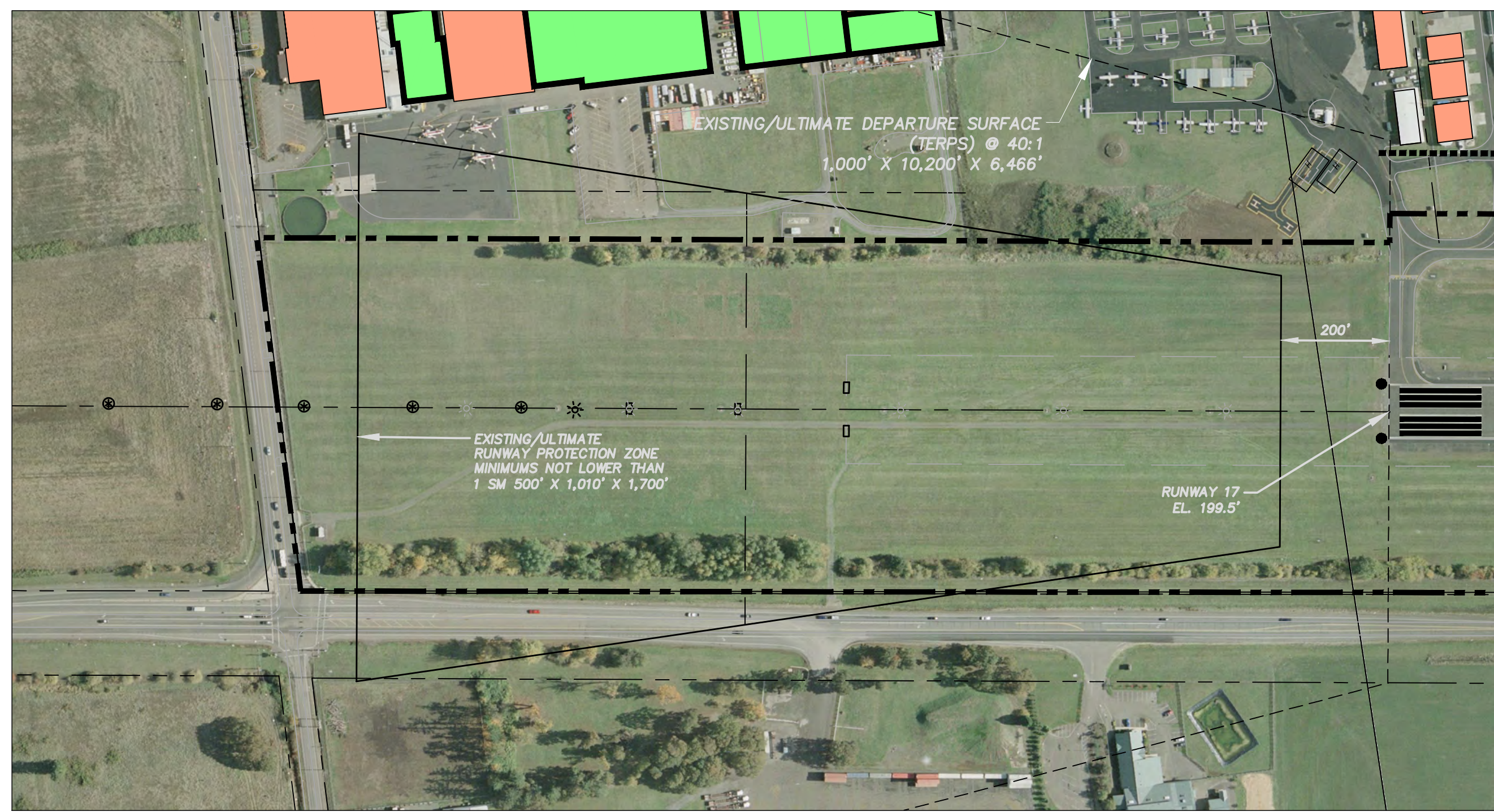
SHEET NUMBER
3

4 of 10

XREF INDEX:



MAGNETIC DECLINATION
16.7° EAST CHANGING
0'9" W/YEAR
SEPT., 2011



DATE: 1/3/2013 10:17 AM [AUTHOR: -----] [PLOTTER: DWG To PDF.pc3] [STYLE: WHP-Standard.ctb] [LAYOUT: Layout1]
PATH: P:\Oregon Department of Aviation\Drawings\Civil\034317-AIRP-AS01.dwg

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SHEET INFO	
DESIGNED	SML
DRAWN	RAI
CHECKED	REA
APPROVED	----
LAST EDIT	3/23/2012
PLOT DATE	1/3/2013
SUBMITTAL	

REVISIONS			
NO.	BY	DATE	REMARKS

**INNER PORTION OF THE
APPROACH SURFACES DRAWING**
OREGON DEPARTMENT OF AVIATION
AURORA STATE AIRPORT ~ MASTER PLAN UPDATE

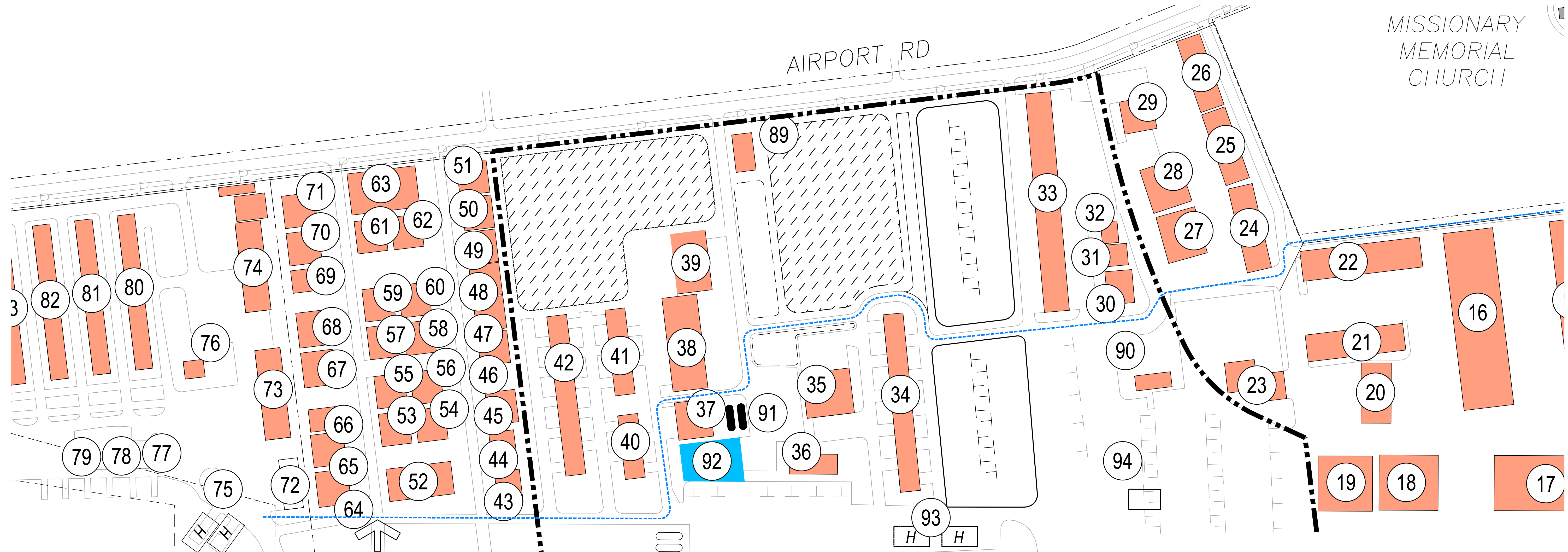
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SHEET NUMBER
4
5 of 10

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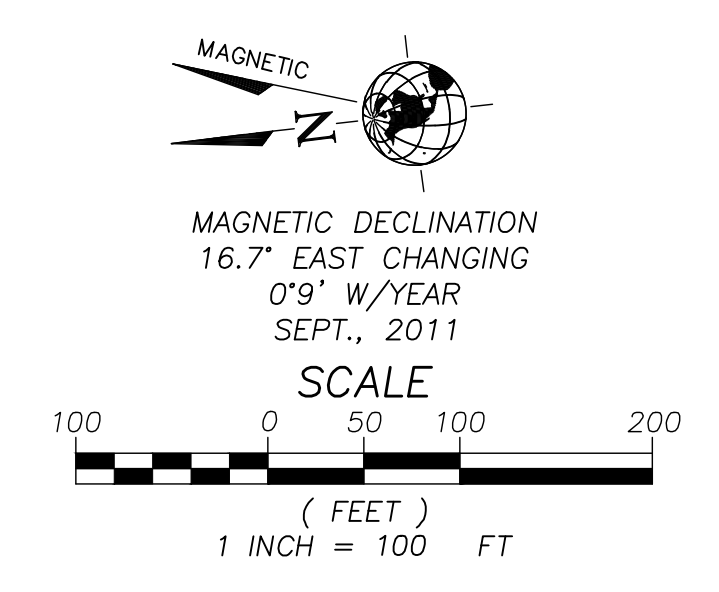
MISSIONARY
MEMORIAL
CHURCH

AIRPORT RD



Airport Facilities and Buildings Legend				
Building No.	Name / Owner	Use	Estimated Top Elevation (AGL)	
16-17	Airport Aviation Condo Association	Aircraft Storage	32'	
18	Airport Aviation Condo Association	Aircraft Storage	32'	
19	Aurora Aviation	Maintenance	26'	
20-22	Airport Aviation Condo Association	Aircraft Storage	25'	
23	Columbia Aviation Association	Clubhouse	21'	
24-26	Meridian Condos	Business	23'	
27-29	Pacific Coast Aviation	Business	26'	
30-33	Oregon Dept. of Aviation	Aircraft Storage	25'	
34	Leased by Aurora Jet Center	Aircraft Storage	22'	
35	Columbia Helicopters	Maintenance	28'	
36	Aurora Aviation	Fixed Base Operator	16'	
37	Pitts Hangar	Aircraft Storage	26'	
38-42	Oregon Dept. of Aviation	Aircraft Storage	25'	
43-71	Wylee Condo Association	Aircraft Storage	27'	
72	Civil Air Patrol Building	Aircraft Storage	26'	
73	Sunset Helicopters	Business	26'	
74	Aerometal	Business	27'	
75	Willamette Aviation	Aircraft Fueling	7'	
76	Willamette Aviation	Fixed Base Operator	12'	
77-82	Willamette Aviation	Aircraft Storage	16'	
89	Fire Suppression Tanks	Fire Suppression	12'	
90	Aurora Rural Fire Protection District	Emergency Response	TBD	
91	Aurora Aviation	Aircraft Fueling	16'	
92	Oregon Dept. of Aviation	Cargo Apron	N/A	
93	Oregon Dept. of Aviation	Helicopter Parking	N/A	
94	Oregon Dept. of Aviation	Air Traffic Control Tower	90'	

A Residential Through The Fence (RTTF) access exists at hangar #64 at the Wylee Condominium Association. The tenant is the resident caretaker for the airport.



	EXISTING	ULTIMATE
AIRPORT PROPERTY LINE	---	---
FEE ACQUISITION		SAME
AVIGATION EASEMENT ACQUISITION		SAME
ON-AIRPORT BUILDING	■	■
OFF-AIRPORT BUILDING	■	■
FENCE	---	---
AIRPORT REFERENCE POINT	⊙	⊙
BUILDING RESTRICTION LINE (35' AGL) (BRL)	---	---
RUNWAY SAFETY AREA (RSA)	---	---
RUNWAY OBJECT FREE AREA (ROFA)	---	---
RUNWAY PROTECTION ZONE (RPZ)	---	---
EXTENDED RUNWAY CENTERLINE	---	SAME
DISPLACED THRESHOLD	N/A	→
RUNWAY HOLDLINE	---	SAME
TAXIWAY SAFETY AREA (TSA)	---	---
TAXIWAY OBJECT FREE AREA (TOFA)	---	---
SERVICE ROAD	N/A	---
HANGAR DEVELOPMENT AREA	■	SAME
APRON / TIEDOWN AREA	TTTTT	TTTTT
WINDCONE & SEGMENTED CIRCLE	⊙	SAME
VASI	⊙	SAME
PAPI	N/A	⊙
REIL	•••	SAME
ODAL	*	•
LOCALIZER	---	---
LOCALIZER CRITICAL AREA	---	SAME
CARGO APRON	N/A	■
PAVEMENT	---	---
PAVEMENT REMOVAL	XXXXX	SAME
FUEL TANKS	■	■
HELICOPTER PARKING	■	■
RESIDENTIAL THROUGH THE FENCE ACCESS (RTTF)	↔	SAME

DATE: 1/3/2013 10:52 AM [AUTHOR: ---] [PLOTTER: DWG To PDF.pc3] [STYLE: WHP-Standard.ctb] [PATH: P:\Oregon Department of Aviation\Drawings\Civil\034317-AIRP-TA01.dwg] [LAYOUT: Layout1]

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SHEET INFO	
DESIGNED	SML
DRAWN	RAI
CHECKED	REA
APPROVED	---
LAST EDIT	8/10/2012
PLOT DATE	1/3/2013
SUBMITTAL	

REVISIONS			
NO.	BY	DATE	REMARKS

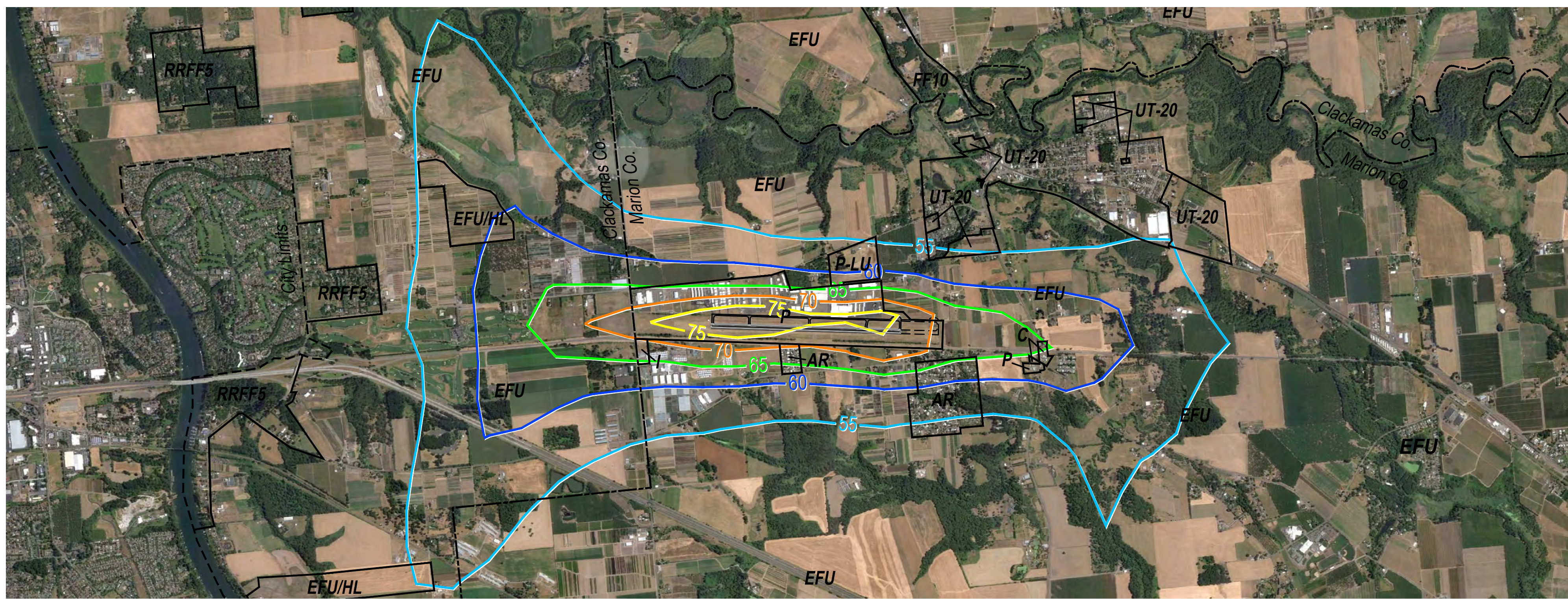
TERMINAL AREA DRAWING

OREGON DEPARTMENT OF AVIATION
 AURORA STATE AIRPORT ~ MASTER PLAN UPDATE

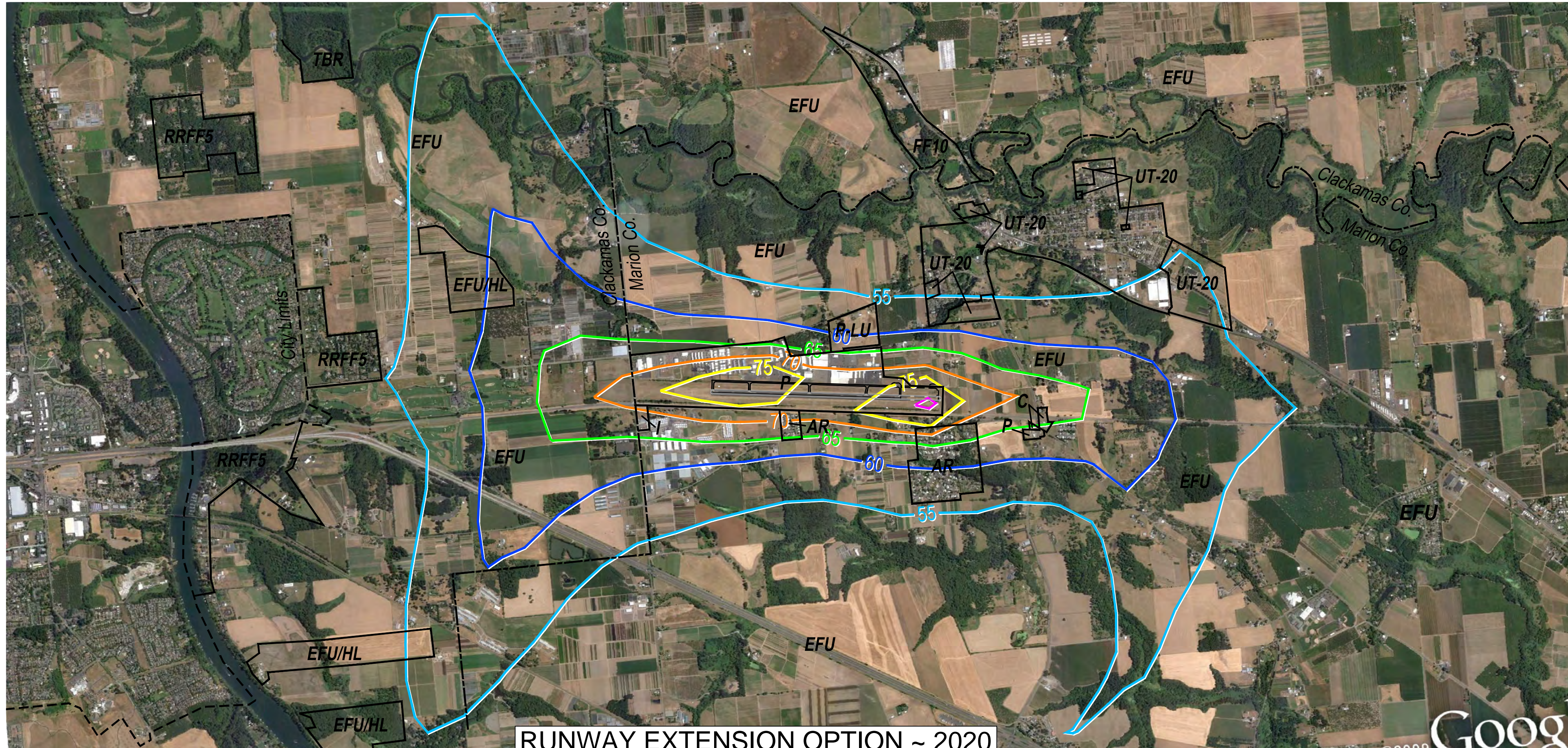
PROJECT NUMBER 034317	DRAWING FILE NAME 034317-AIRP-TA01	SCALE 1"=100'
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SHEET NUMBER
5
6 of 10

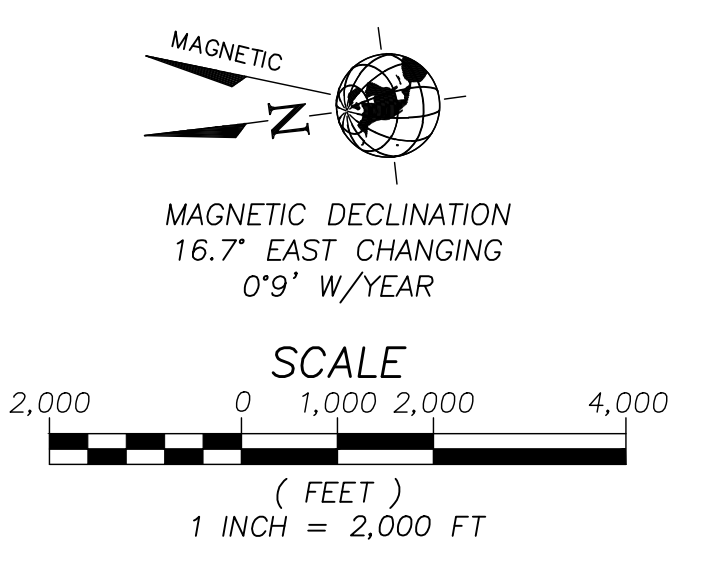
XREF INDEX:



EXISTING CONDITIONS ~ 2010



RUNWAY EXTENSION OPTION ~ 2020



MARION COUNTY, OR

- ZONING**
- AR ACREAGE RESIDENTIAL
 - C COMMERCIAL
 - EFU EXCLUSIVE FARM USE
 - I INDUSTRIAL
 - P PUBLIC
 - UT-20 URBAN TRANSITION

CLACKAMAS COUNTY, OR

- ZONING**
- EFU EXCLUSIVE FARM USE
 - EFU/HL EXCLUSIVE FARM USE/HISTORIC LANDMARK
 - FF-10 FARM-FOREST 10 ACRE
 - RRFF5 RURAL RES/FARM/FOREST 5 ACRE
 - TBR TIMBER DISTRICT

LEGEND

- 55 NOISE CONTOUR
- ZONE LINE
- COUNTY LINE
- CITY LIMIT

NOTE:
NOISE CONTOURS DEVELOPED IN ACCORDANCE WITH FAA REGULATIONS USING THE INTEGRATED NOISE MODEL (INM) VERSION 7.0. INM IS AN AVERAGE VALUE MODEL AND IS DESIGNED TO ESTIMATE LONG-TERM EFFECTS USING AVERAGE ANNUAL INPUT CONDITIONS. OPERATIONS DATA TAKEN FROM FAA-APPROVED FORECASTS PRESENTED IN CHAPTER 3 OF THE 2011 MASTER PLAN UPDATE. PLEASE REFER TO CHAPTER 5 FOR MORE INFORMATION REGARDING THE NOISE CONTOUR PREPARATION.

DATE: 1/3/2013 10:22 AM [AUTHOR: ---] [PLOTTER: DWG To PDF.pc3] [STYLE: WHP-Standard.ctb] [LAYOUT: Layout1]
PATH: P:\Oregon Department of Aviation\034317\Drawings\Civil\034317-AIRP-LU01.dwg

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SHEET INFO	
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DRAWN	RAI
CHECKED	REA
APPROVED	---
LAST EDIT	3/23/2012
PLOT DATE	1/3/2013
SUBMITTAL	

REVISIONS			
NO.	BY	DATE	REMARKS

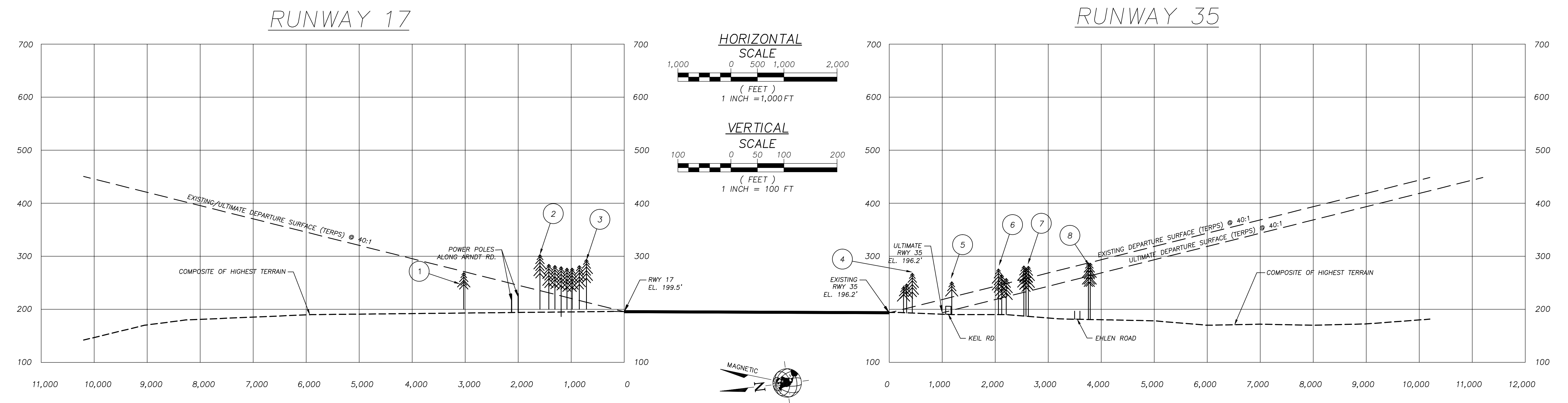
LAND USE PLAN & 2010/2020 NOISE CONTOURS

OREGON DEPARTMENT OF AVIATION
AURORA STATE AIRPORT ~ MASTER PLAN UPDATE

PROJECT NUMBER 034317	DRAWING FILE NAME 034317-AIRP-LU01	SCALE 1"=2,000'
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SHEET NUMBER
6
7 of 10

XREF INDEX:



NO. (C)	ITEM	PART 77 SURFACE	FUTURE PART 77 SURFACE	ELEV	OFFSET FROM RWY CL	DISTANCE FROM RWY END	ESTIMATED AMOUNT OF PENETRATION	AIRPORT PROPERTY	DISPOSITION
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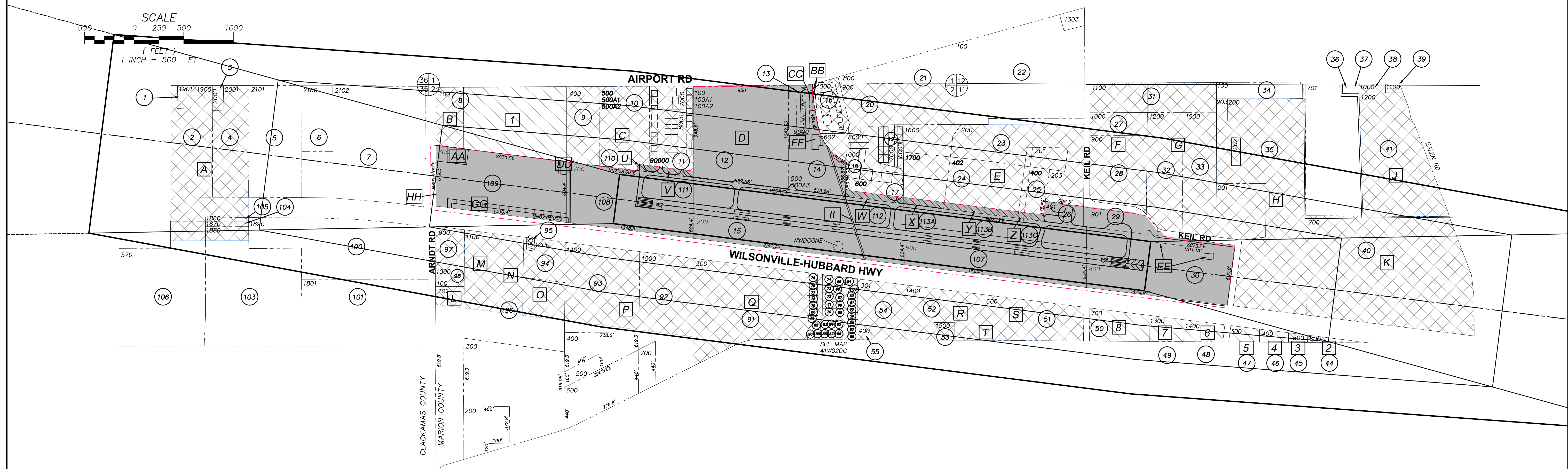
NOTE: NO OBSTRUCTIONS EXIST WITHIN THE AIRPORT'S TERPS SURFACES.

DATE: 1/3/2013 10:28 AM [AUTHOR: rivasaki] [PLOTTER: DWG To PDF.pc3] [STYLE: WHP-Standard.ctb] [LAYOUT: Layout1]
 PATH: P:\Oregon Department of Aviation\034317\Design\Drawings\Civil\034317-AIRP-DS01.dwg

 9765 SW Barnes Rd, Suite 300 Portland, OR 97225 503-626-0455 Fax 503-526-0775 www.whpacific.com		THE PREPARATION OF THIS DOCUMENT MAY HAVE BEEN SUPPORTED, IN PART, THROUGH THE AIRPORT IMPROVEMENT PROGRAM FINANCIAL ASSISTANCE FROM THE FEDERAL AVIATION ADMINISTRATION (PROJECT NUMBER 3-41-0004-015) AS PROVIDED UNDER TITLE 49, UNITED STATES CODE, SECTION 47104. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THIS REPORT BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED THEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.	SHEET INFO DESIGNED SML DRAWN RAI CHECKED REA APPROVED --- LAST EDIT 1/3/2013 PLOT DATE 1/3/2013 SUBMITTAL	REVISIONS NO. BY DATE REMARKS	RUNWAY DEPARTURE SURFACES DRAWING OREGON DEPARTMENT OF AVIATION AURORA STATE AIRPORT ~ MASTER PLAN UPDATE	SHEET NUMBER 7 8 of 10
		PROJECT NUMBER 034317	DRAWING FILE NAME 034317-AIRP-DS01	SCALE 1"=1,000'		

MAGNETIC
MAGNETIC DECLINATION
16.7' EAST CHANGING
0'9" W/YEAR
SEPT., 2011

SCALE
0 250 500 1000
(FEET)
1 INCH = 500 FT



PROPERTY ACQUIRED UNDER FEDERAL AID PROJECTS						
AREA	DATE	RECORDING INFORMATION	INTEREST ACQUIRED	EASEMENT TYPE	PREVIOUS OWNER	LAND ACQUISITION
A	03-20-43	4715A, BOOK 312 PAGE 697	EASEMENT	AVIGATION	CHARLES & LILA WALTER	ADAP 3-41-0056-01
B	12-30-42	3221B, BOOK 279, PAGE 49	EASEMENT	AVIGATION	LEWIS & BERTHA KEIL	ADAP 3-41-0056-01
C	04-19-43	3222B, BOOK 282 PAGE 662	EASEMENT	AVIGATION	WILLIAM & MANDY JESKY	ADAP 3-41-0056-01
D	1-18-43	BOOK 279, PAGE 530	FEE	OWNERSHIP	OTTO & MATILDA KNORR	ADAP 3-41-0056-01
E	12-31-42	3216B, BOOK 279, PAGE 84	EASEMENT	AVIGATION	MILDRED STEINHOFF	ADAP 3-41-0056-01
F	01-30-43	10619A, BOOK 280, PAGE 26	EASEMENT	AVIGATION	KENNETH & BERTHA BROWN	ADAP 3-41-0056-01
G	01-19-43	10620A, BOOK 279, PAGE 365	EASEMENT	AVIGATION	IRVIN & MARLEA LEFFLER	ADAP 3-41-0056-01
H	12-30-42	3213B, BOOK 279, PAGE 43	EASEMENT	AVIGATION	IRVIN & MARLEA LEFFLER	ADAP 3-41-0056-01
J	12-31-42	10644, BOOK 279, PAGE 88	EASEMENT	AVIGATION	IRVIN & MARLEA LEFFLER	ADAP 3-41-0056-01
K	12-30-42	3212A, BOOK 279, PAGE 46	EASEMENT	AVIGATION	IRVIN & MARLEA LEFFLER	ADAP 3-41-0056-01
L	12-30-42	3221B, BOOK 279, PAGE 49	EASEMENT	AVIGATION	LEWIS & BERTHA KEIL	ADAP 3-41-0056-01
M	01-09-43	3219B, BOOK 279, PAGE 359	EASEMENT	AVIGATION	DAVID KEIL	ADAP 3-41-0056-01
N	01-09-43	3220B, BOOK 279, PAGE 362	EASEMENT	AVIGATION	HENRY & SOFIA KEIL	ADAP 3-41-0056-01

PROPERTY ACQUIRED UNDER FEDERAL AID PROJECTS						
AREA	DATE	RECORDING INFORMATION	INTEREST ACQUIRED	EASEMENT TYPE	PREVIOUS OWNER	LAND ACQUISITION
O	04-02-43	3218B, BOOK 282, PAGE 121	EASEMENT	AVIGATION	WILLIAM & EDNA KEIL	ADAP 3-41-0056-01
P	04-19-43	3222B, BOOK 282, PAGE 662	EASEMENT	AVIGATION	WILLIAM & MANDY JESKY	ADAP 3-41-0056-01
Q	12-31-42	3217B, BOOK 279, PAGE 91	EASEMENT	AVIGATION	OTTO & MATILDA KNORR	ADAP 3-41-0056-01
R	03-01-43	10734, BOOK 1089, PAGE 188	EASEMENT	AVIGATION	IRVIN & MARLEA LEFFLER	ADAP 3-41-0056-01
S	12-05-42	10735, BOOK 1184, PAGE 694	EASEMENT	AVIGATION	IRVIN & MARLEA LEFFLER	ADAP 3-41-0056-01
T	12-31-42	3216B, BOOK 279, PAGE 84	EASEMENT	AVIGATION	MILDRED STEINHOFF	ADAP 3-41-0056-01
U (110)	08-14-07	REEL 2857, PAGE 98	FEE	OWNERSHIP	TRI-PROP LLC	A.I.P. 3-41-0004-12
V (111)	08-13-07	REEL 2857, PAGE 77	FEE	OWNERSHIP	LLOYD B JANZEN/ JOHN WESSMAN	A.I.P. 3-41-0004-12
W (112)	08-13-07	REEL 2857, PAGE 416	FEE	OWNERSHIP	VERA L BENNETT	A.I.P. 3-41-0004-12
X (113A)	08-27-07	REEL 2859, PAGE 302	FEE	OWNERSHIP	TLM HOLDINGS, LLC	A.I.P. 3-41-0004-12
Y (113B)	08-27-07	REEL 2859, PAGE 302	FEE	OWNERSHIP	TLM HOLDINGS, LLC	A.I.P. 3-41-0004-12
Z (113C)	08-27-07	REEL 2859, PAGE 302	FEE	OWNERSHIP	TLM HOLDINGS, LLC	A.I.P. 3-41-0004-12
26	1993		FEE	OWNERSHIP	STATE OF OREGON DOT	A.I.P. 3-41-0004-003
29	1993		FEE	OWNERSHIP	STATE OF OREGON DOT	A.I.P. 3-41-0004-003
14	1985		FEE	OWNERSHIP	STATE OF OREGON DOT	A.I.P. 3-41-0004-001

EASEMENTS TO BE ACQUIRED		
AREA	CURRENT OWNERSHIP	APPROXIMATE AREA
1	COLUMBIA HELICOPTERS, INC. P.O. BOX 3500 PORTLAND, OR 97208	16.32 A
2	THOMA AND JO ETTA SCHOMUS 21810 BOONES FERRY RD, NE AURORA, OR 97002	0.60 A
3	DAN AND JANET ANDERSON 15260 SE MINERVA MILWAUKIE, OR 97267	0.52 A
4	GARY AND KATHRYN HAMLET 21860 BOONES FERRY RD, NE AURORA, OR 97002	1.00 A
5	GENE AND DIANA BRUNO P.O. BOX 8 AURORA, OR 97002	1.05 A
6	HERMAN AND GRACE MCCUNE TIMOTHY AND EVELYN HOWLAND 22050 BOONES FERRY RD, NE AURORA, OR 97002	1.92 A
7	NORMAN AND BETTY MENNICK 22090 BOONES FERRY RD, NE AURORA, OR 97002	2.00 A
8	LYLE AND VICKI HAWORTH 22190 BOONES FERRY RD, NE AURORA, OR 97002	5.03 A

DESCRIPTION	LEGEND
	EXISTING
EXISTING FEE OWNERSHIP	X
EXISTING AVIGATION EASEMENT	A
EASEMENT TO BE ACQUIRED	1
PROPERTY ACQUIRED UNDER AIP 12	72
PARCEL OWNERSHIP IDENTIFICATION NUMBER	1800
TAX LOT NUMBER	1800
EXISTING STATE OF OREGON DEPARTMENT OF TRANSPORTATION, DIVISION OF AERONAUTICS PROPERTY OWNERSHIP LINE	---
PARCEL BOUNDARY	---
RUNWAY PROTECTION ZONE	---

*INFORMATION FROM DEVCO ENGINEERING FUNDED BY A.I.P. NO. 3-41-004-03 AND APPROVED 5/11/1996

a GRANT PARCEL A b GRANT PARCEL B c GRANT PARCEL C

DATE: 1/3/2013 10:30 AM [AUTHOR: ---] [PLOTTER: DWG To PDF.pc3] [STYLE: WHP-Standard.ctb] [PATH: P:\Oregon Department of Aviation\034317\Design\Drawings\Civil\32690-airp-ExhibitA.dwg] [LA YOUT: Exhibit A]

9755 SW Barnes Rd, Suite 300
Portland, OR 97225
503-626-0455 Fax 503-526-0775
www.whpacific.com

THE PREPARATION OF THIS DOCUMENT MAY HAVE BEEN SUPPORTED, IN PART, THROUGH THE AIRPORT IMPROVEMENT PROGRAM FINANCIAL ASSISTANCE FROM THE FEDERAL AVIATION ADMINISTRATION (PROJECT NUMBER 3-41-0004-015) AS PROVIDED UNDER TITLE 49, UNITED STATES CODE, SECTION 47104. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THIS REPORT BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED THEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.

SHEET INFO	
DESIGNED	SML
DRAWN	RAI
CHECKED	REA
APPROVED	---
LAST EDIT	3/23/2012
PLOT DATE	1/3/2013
SUBMITTAL	

REVISIONS			
NO.	BY	DATE	REMARKS

EXHIBIT 'A' ~ PROPERTY MAP			SHEET NUMBER
OREGON DEPARTMENT OF AVIATION AURORA STATE AIRPORT ~ MASTER PLAN UPDATE			8
PROJECT NUMBER 034317	DRAWING FILE NAME 32690-AIRP-EXHIBITA	SCALE CUSTOM	9 of 10

PARCEL OWNERSHIP DATA					
PARCEL NO.	ACRES	OWNER	RECORDING INFORMATION	COUNTY	MAP AND TAX LOT NUMBERS
1	1.01 A	KEITH G. & DORIS A. BORDEN 23971 NE AIRPORT RD. AURORA, OR 97002	BK. 76, PG. 34755	CLACKAMAS	MAP 3-1W-45 T.L. #1901
2	9.52 A	STANLEY V. & BRADLEY C. SHEPARD 23150 NE BOONES FERRY RD. AURORA, OR 97002	BK. 88, PG. 00802	CLACKAMAS	MAP 3-1W-35 T.L. #1900
3	0.64 A	ROGER K. INCALLS 23901 AIRPORT RD. AURORA, OR 97002	BK. 84 PG. 13047	CLACKAMAS	MAP 3-1W-35 T.L. #2000
4	9.52 A	BRADLEY C. & STANLEY V. SHEPARD 23150 NE BOONES FERRY RD. AURORA, OR 97002	BK. 87, PG. 43761	CLACKAMAS	MAP 3-1W-35 T.L. #2001
5	13.2 A	BRADLEY C. & STANLEY V. SHEPARD 23150 NE BOONES FERRY RD. AURORA, OR 97002	BK. 87, PG. 43761	CLACKAMAS	MAP 3-1W-351 T.L. #2101
6	8.62 A	EDSAL A. & ARLENE G. WOOD 10505 SW HAWTHORNE LN. PORTLAND, OR 97225	BK. 94, PG. 78194	CLACKAMAS	MAP 3-1W-35 T.L. #2100
7	23.96 A	BRADLEY C. & STANLEY V. SHEPARD 23150 NE BOONES FERRY RD. AURORA, OR 97002	BK. 87, PG. 43761	CLACKAMAS	MAP 3-1W-35 T.L. #2102
8	19.24 A	COLUMBIA HELICOPTERS, INC. P.O. BOX 3500 PORTLAND, OR 97208	BK. 957, PG. 269	MARION	MAP 4-1W-02D T.L. #100
9	6.47 A	MARLOWE C. TREIT 23123 AIRPORT RD, NE AURORA, OR 97002	BK. 717, PG. 31	MARION	MAP 4-1W-02D T.L. #400
10	9.94 A	MARLOWE C. TREIT 23123 AIRPORT RD, NE AURORA, OR 97002	BK. 717, PG. 31	MARION	MAP 4-1W-02D T.L. #500
11	9.03 A	JOHN D. WESSMAN & LLOYD B. JANZEN DBA LEASON ENTERPRISES 1555 S. PALM CANYON DR., #G-106 DALLAM SPRINGS, GA. 92282	BK. 1159, PG. 387	MARION	MAP 4-1W-02D T.L. #600
12	21.42 A	OREGON DEPARTMENT OF TRANSPORTATION AERONAUTICS DIVISION, FAPS-41-004-01 3040 25TH ST. SE SALEM, OR 97310	BK. 112, PG. 1040	MARION	MAP 4-1W-02D T.L. #100
13	N/A	SEE DETAILED LIST	VARIES - SEE DETAILED LIST	MARION	MAP 4-1W-02D T.L. #9000 TO #90021
14	10.00 A	OREGON DEPARTMENT OF TRANSPORTATION AERONAUTICS DIVISION, FAPS-41-004-01 3040 25TH ST. SE SALEM, OR 97310	BK. 458, PG. 411	MARION	MAP 4-1W-02D T.L. #500
15	29.49 A	OREGON DEPARTMENT OF TRANSPORTATION AERONAUTICS DIVISION 3040 25TH ST. SE SALEM, OR 97310	BK. 747, PG. 568	MARION	MAP 4-1W-02D T.L. #200
16	1.00 A	ROGER M. STENBOCK P.O. BOX 356 AURORA, OR 97002	BK. 1048, PG. 496	MARION	MAP 4-1W-02D SUPP. MAP 1 T.L. #601
17	7.22 A	VERA L. BENNETT 15111 NE MULTNOMAH PORTLAND, OR 97230	BK. 1041, PG. 278	MARION	MAP 4-1W-02D SUPP. MAP 1 T.L. #600
18	1.90 A	VERA L. BENNETT 15111 NE MULTNOMAH PORTLAND, OR 97230	BK. 1041, PG. 278	MARION	MAP 4-1W-02D SUPP. MAP 1 T.L. #1000
19	5.00 A	VERA L. BENNETT 15111 NE MULTNOMAH PORTLAND, OR 97230	BK. 1041, PG. 278	MARION	MAP 4-1W-02D T.L. #1100
20	5.12 A	BEYONE THE REED THEOLOGICAL CENTER RALPH JONES 9231 2ND AVE. NW SEATTLE, WA 98107	BK. 89, PG. 345	MARION	MAP 4-1W-02D T.L. #900
21	11.42 A	BEYONE THE REED THEOLOGICAL CENTER RALPH JONES 9231 2ND AVE. NW SEATTLE, WA 98107	BK. 89, PG. 345	MARION	MAP 4-1W-02D T.L. #800
22	12.62 A	GERALD W. & KATHRYN L. JESKEY FLORENCE SEXTON, SEXTON/NETIER 1054 NW 6TH WAY	BK. 273, PG. 1172	MARION	MAP 4-1W-11A T.L. #100
23	25.94 A	NORTHWEST AIRMOTIVE P.O. BOX 23926 TIGARD, OR 97281	BK. 1076, PG. 26	MARION	MAP 4-1W-11A T.L. #200
24	4.64 A	GEORGE JACOBSEN 845 NE COLUMBIA BLVD. PORTLAND, OR 97211	BK. 1003 PG. 354	MARION	MAP 4-1W-11A T.L. #300
25	6.63 A	GEORGE JACOBSEN 845 NE COLUMBIA BLVD. PORTLAND, OR 97211	BK. E0568, PG. 298	MARION	MAP 4-1W-11A T.L. #400
26	1.82 A	STATE OF OR D.O.T. AERONAUTICS DIVISION 417 TRANSPORTATION BLDG. SALEM, OR 97310	BK. 868, PG. 298	MARION	MAP 4-1W-11A T.L. #401
27	3.07 A	SMALL BUSINESS ADMINISTRATION AUDREY L. SKINNER P.O. BOX 421 AURORA, OR 97002	BK. 94C3, PG. 45200CJ	MARION	MAP 4-1W-11A T.L. #1000
28	12.09 A	DWAYNE & LORAIN DONNELLY TRUST P.O. BOX 389 AURORA, OR 97002	BK. E1193, PG. 750	MARION	MAP 4-1W-11A T.L. #900
29	X.XX A	STATE OF OR D.O.T. AERONAUTICS DIVISION 417 TRANSPORTATION BLDG. SALEM, OR 97310	BK. 1193, PG. 750	MARION	MAP 4-1W-11A T.L. #901
30	17.79 A	STATE OF OR D.O.T. AERONAUTICS DIVISION 417 TRANSPORTATION BLDG. SALEM, OR 97310	BK. 747, PG. 568	MARION	MAP 4-1W-11A1 T.L. #800
31	8.86 A	OTTO HORVATH P.O. BOX 98 AURORA, OR 97002	BK. 108, PG. 1251	MARION	MAP 4-1W-11A T.L. #1100
32	9.86 A	DWAYNE & LORAIN DONNELLY TRUST P.O. BOX 389 AURORA, OR 97002	BK. 1126, PG. 200	MARION	MAP 4-1W-11A T.L. #1200
33	9.91 A	DWAYNE & LORAIN DONNELLY TRUST P.O. BOX 389 AURORA, OR 97002	BK. 1126, PG. 200	MARION	MAP 4-1W-11A T.L. #1600
34	3.01 A	VERNON & VETA M. SCOTT 21900 COLE AVE, NE AURORA, OR 97002	BK. 1168, PG. 270	MARION	MAP 4-1W-11D T.L. #100
35	40.13 A	RICHARD P. & JOCELYN B. JENKS 14188 KEIL RD, NE AURORA, OR 97002	BK. 0001, PG. 918	MARION	MAP 4-1W-11D T.L. #200
36	0.16 A	HAROLD J. & MARY E. WHITTLE 21851 COLE LANE, NE AURORA, OR 97002	BK. 449, PG. 488	MARION	MAP 4-1W-11D T.L. #800

PARCEL OWNERSHIP DATA					
PARCEL NO.	ACRES	OWNER	RECORDING INFORMATION	COUNTY	MAP AND TAX LOT NUMBERS
37	7.98 SQ. FT.	JOSHUA B. & JAIME M. THORESON 21841 NE COLE LN AURORA, OR 97002	BK. 1206, PG. 416	MARION	MAP 4-1W-11D T.L. #900
38	1470 SQ. FT.	HANS A. HENDGEN 5243 S. COUNTRYSIDE DR. AURORA, OR 97002	BK. 1207, PG. 515	MARION	MAP 4-1W-11D T.L. #1000
39	0.28 A	ROBERT E. & MARY LOU RIGDON 21811 COLE LN, NE AURORA, OR 97002	BK. E0671, PG. 207	MARION	MAP 4-1W-11D T.L. #1100
40	57.98 A	HEDWIG PARDEY 20186 GRIM RD NE AURORA, OR 97002	BK. 747, PG. 568	MARION	MAP 4-1W-11D T.L. #700
41	19.41 A	PHIL GOLDSMITH 1100 SW 6TH AVE. #1212 PORTLAND, OR 97204	BK. 1099, PG. 236	MARION	MAP 4-1W-11D T.L. #1200
44	0.60 A	THOMAS C. & JOETTA P. SCHOMUS 21810 BOONES FERRY RD. NE AURORA, OR 97002	BK. 1085, PG. 180	MARION	MAP 4-1W-11D T.L. #600
45	0.52 A	DAN E. & JANET K. ANDERSON 15260 SE MNERVA MILWAUKIE, OR 97267	BK. 419, PG. 83	MARION	MAP 4-1W-11D T.L. #500
46	1.00 A	GARY J. & KATHRYN K. HAMLET 21860 BOONES FERRY RD. NE AURORA, OR 97002	BK. 473, PG. 173	MARION	MAP 4-1W-11D T.L. #400
47	1.05 A	GENE C. & DIANA BRUNO P.O. BOX 8 AURORA, OR 97002	BK. 762, PG. 96	MARION	MAP 4-1W-11D T.L. #300
48	1.92 A	HERMAN W. & GRACE J. MCCLUNE TIMOTHY & EVELYN HOWLAND 22050 BOONES FERRY RD. NE AURORA, OR 97002	BK. 572, PG. 137	MARION	MAP 4-1W-11A T.L. #1400
49	2.00 A	NORMAN & BETTY MENWICK 22090 BOONES FERRY RD. SE AURORA, OR 97002	BK. 423, PG. 361	MARION	MAP 4-1W-11A T.L. #1300
50	5.03 A	LYLE G. & VICKI L. HAWORTH 22190 BOONES FERRY RD. NE AURORA, OR 97002	BK. 921, PG. 218	MARION	MAP 4-1W-11A T.L. #700
51	10.02 A	ELIZABETH KEIL TRUST 22430 BOONES FERRY RD, NE AURORA, OR 97002	BK. 1184, PG. 694	MARION	MAP 4-1W-1A T.L. #600
52	9.50 A	ROBER H. KEIL P.O. BOX 5 AURORA, OR 97002	BK. 1089, PG. 188	MARION	MAP 4-1W-02D T.L. #1400
53	1.00 A	S. DUANE & CHERYL J. KENNEY 22510 BOONES FERRY RD, NE AURORA, OR 97002	BK. 0001, PG. 1625	MARION	MAP 4-1W-02D SUPP. MAP T.L. #90011
54	5.95 A	FRED R. & EVELYN R. KAHLE 22730 BOONES FERRY RD, NE AURORA, OR 97002	BK. E0024, PG. 782	MARION	MAP 4-1W-02D T.L. #301
55	0.59 A	JOSHEPH J. NEUVILLE 10955 SE 25TH AVE MILWAUKIE, OR 97222	BK. 352, PG. 1782	MARION	MAP 4-1W-02D T.L. #400
56	SOUTH HAVEN LT.1 BK.1 SOUTH	SHIRLEE KOWASH 14010 CESSNA ST, NE AURORA, OR 97002	BK. 648, PG. 113	MARION	MAP 4-1W-02DC T.L. #3600
57	SOUTH HAVEN LT.1 BK.1 SOUTH	ROBERT R. & JOANNE M. CAPP 14020 CESSNA ST, NE AURORA, OR 97002	BK. 347, PG. 70	MARION	MAP 4-1W-02DC T.L. #3500
58	SOUTH HAVEN LT.3 BK.1 SOUTH	VINCENT L. & DINA C. SPRINGER 14030 CESSNA ST, NE AURORA, OR 97002	BK. 210, PG. 908	MARION	MAP 4-1W-02DC T.L. #2000
59	SOUTH HAVEN LT.4 BK.1 SOUTH	VERLYN R. & GERALDINE PIGMAN 14050 CESSNA ST, NE AURORA, OR 97002	BK. 817, PG. 296	MARION	MAP 4-1W-02DC T.L. #3300
60	SOUTH HAVEN LT.5 BK.1 SOUTH	ELIAS & PERAL DUTTON 14070 CESSNA ST, NE AURORA, OR 97002	BK. 1052, PG. 486	MARION	MAP 4-1W-02DC T.L. #3200
61	SOUTH HAVEN LT.6 BK.1 SOUTH	STEVEN M. REED 14080 CESSNA ST, NE AURORA, OR 97002	BK. 975 PG. 268	MARION	MAP 4-1W-02DC T.L. #3100
62	SOUTH HAVEN LT.7 BK.1 SOUTH	DELORES S. JONES 14090 CESSNA ST, NE AURORA, OR 97002	BK. 336, PG. 759	MARION	MAP 4-1W-02DC T.L. #3000
63	SOUTH HAVEN LT.8 BK.1 SOUTH	DAVID A. & MARJORIE GARVIN 14100 CESSNA ST, NE AURORA, OR 97002	BK. 205, PG. 477	MARION	MAP 4-1W-02DC T.L. #2900
64	SOUTH HAVEN LT.9 BK.1 SOUTH	CLARA HELMER 14110 CESSNA ST, NE AURORA, OR 97002	BK. 31, PG. 960	MARION	MAP 4-1W-02DC T.L. #2800
65	SOUTH HAVEN LT.10 BK.1 SOUTH	DORETTA WALKER 14111 CESSNA ST, NE AURORA, OR 97002	BK. 542, PG. 15	MARION	MAP 4-1W-02DC T.L. #2700
66	SOUTH HAVEN LT.11 BK.1 SOUTH	LEONA I. WEICKER 14101 CESSNA ST, NE AURORA, OR 97002	BK. 79, PG. 392	MARION	MAP 4-1W-02DC T.L. #2600
67	SOUTH HAVEN LT.12 BK.1 SOUTH	GAYLE L. & MARLENE S. KIRKPATRICK 14091 CESSNA ST, NE AURORA, OR 97002	BK. 319, PG. 1006	MARION	MAP 4-1W-02DC T.L. #2200
68	SOUTH HAVEN LT.13 BK.1 SOUTH	CARL ANDERSON, VINCENT ROBERTS, ET. AL 14081 CESSNA ST, NE AURORA, OR 97002	BK. 688, PG. 1025	MARION	MAP 4-1W-02DC T.L. #2100
69	SOUTH HAVEN LT.14 BK.1 SOUTH	MARVIN K. & MERRY JANE BOYLAN AURORA, OR 97002	BK. 144, PG. 1025	MARION	MAP 4-1W-02DC T.L. #1800
70	SOUTH HAVEN LT.15 BK.1 SOUTH	VERNE C. & EDNA F. POWELL 14072 PIPER ST, NE AURORA, OR 97002	BK. 396, PG. 440	MARION	MAP 4-1W-02DC T.L. #1700
71	SOUTH HAVEN LT.16 BK.1 SOUTH	FIRST INTERSTATE BANK OF OR P.O. BOX 2971 PORTLAND, OR 97028	BK. 578, PG. 311	MARION	MAP 4-1W-02DC T.L. #2000
72	SOUTH HAVEN LT.17 BK.1 SOUTH	ROBER STRAUGHAN IV GARY A. & PATRICK L. HIGGINS 14092 PIPER ST, NE AURORA, OR 97002	BK. 857, PG. 227	MARION	MAP 4-1W-02DC T.L. #2100
73	SOUTH HAVEN LT.18 BK.1 SOUTH	WALTER C. & BERNICE C. BECKNER AURORA, OR 97002	BK. 824, PG. 488	MARION	MAP 4-1W-02DC T.L. #2500
74	SOUTH HAVEN LT.19 BK.1 SOUTH	LELAN B. & VIOLET H. GEORGE 14112 PIPER ST, NE AURORA, OR 97002	BK. 778, PG. 58	MARION	MAP 4-1W-02DC T.L. #2600

PARCEL OWNERSHIP DATA					
PARCEL NO.	ACRES	OWNER	RECORDING INFORMATION	COUNTY	MAP AND TAX LOT NUMBERS
75	SOUTH HAVEN LT.12 BK.2 SOUTH	SANDO M. SCAUTO ET. AL, 14113 NE PIPER AVE AURORA, OR 97002	BK. 1194, PG. 194	MARION	MAP 4-1W-02DC T.L. #100
76	SOUTH HAVEN LT.15 BK.2 SOUTH	MELVEN M. & LOIS A. NICHOLS AURORA, OR 97002	BK. 1135, PG. 455	MARION	MAP 4-1W-02DC T.L. #1200
77	SOUTH HAVEN LT.14 BK.2 SOUTH	KENNETH A. & JOSEPHINE TUCKER 14093 PIPER ST, NE AURORA, OR 97002	BK. 678, PG. 276	MARION	MAP 4-1W-02DC T.L. #300
78	SOUTH HAVEN LT.13 BK.2 SOUTH	WILLIAM C. & LUCILE M. JOHNSON 14083 PIPER ST, NE AURORA, OR 97002	BK. 597, PG. 73	MARION	MAP 4-1W-02DC T.L. #400
79	SOUTH HAVEN LT.12 BK.2 SOUTH	BETTY R. & DON P. DIONISIO 14073 PIPER ST, NE AURORA, OR 97002	BK. 572, PG. 191	MARION	MAP 4-1W-02DC T.L. #500
80	SOUTH HAVEN LT.11 BK.2 SOUTH	RUSSELL R. & JUDITH A. KING 14063 PIPER ST, NE AURORA, OR 97002	BK. 306, PG. 853	MARION	MAP 4-1W-02DC T.L. #600
81	SOUTH HAVEN LT.10 BK.2 SOUTH	GREGORY A. BACON 10990 SW WILSONVILLE RD 86 WILSONVILLE, OR 97070	BK. 1199, PG. 199	MARION	MAP 4-1W-02DC T.L. #700
82	SOUTH HAVEN LT.9 BK.2 SOUTH	ROBERT & JDANN CAPP 22740 MOONEY AVE, NE AURORA, OR 97002	BK. 735, PG. 67	MARION	MAP 4-1W-02DC T.L. #800
83	SOUTH HAVEN LT.8 BK.2 SOUTH	LYLE & MARCELLA MOIR 22730 MOONEY ST, NE AURORA, OR 97002	BK. 111, PG. 968	MARION	MAP 4-1W-02DC T.L. #1600
84	SOUTH HAVEN LT.7 BK.2 SOUTH	DAVID & SHANNON E. GIBB 7187 S. SEVEN OAKS LN CANBY, OR 97013	BK. 1003 PG. 354	MARION	MAP 4-1W-02DC T.L. #1500
85	SOUTH HAVEN LT.6 BK.2 SOUTH	KENNETH J. & FLORENCE G. INMAN 14021 CESSNA ST, NE AURORA, OR 97002	BK. 692, PG. 801	MARION	MAP 4-1W-02D T.L. #1400
86	SOUTH HAVEN LT.5 BK.2 SOUTH	GORDON & DOROTHY LINDQUIST 14011 CESSNA ST, NE AURORA, OR 97002	BK. 797, PG. 224	MARION	MAP 4-1W-02D T.L. #1300
87	SOUTH HAVEN LT.4 BK.2 SOUTH	RONALD W. ROBINSON 22720 NE BOONES FERRY RD AURORA, OR 97002	BK. 280, PG. 158	MARION	MAP 4-1W-02DC T.L. #1200
88	SOUTH HAVEN LT.3 BK.2 SOUTH	FRED & EVELYN KAHLE 22730 BOONES FERRY RD AURORA, OR 97002	BK. 786, PG. 485	MARION	MAP 4-1W-02DC T.L. #1100
89	SOUTH HAVEN LT.2 BK.2 SOUTH	JOHN J. & ELVA C. MORRISON 22740 BOONES FERRY RD AURORA, OR 97002	BK. 703, PG. 263	MARION	MAP 4-1W-02DC T.L. #1000
90	SOUTH HAVEN LT.1 BK.2 SOUTH	REGINA W. MUTER 22750 BOONES FERRY RD, NE AURORA, OR 97002	BK. 1019, PG. 142	MARION	MAP 4-1W-02DC T.L. #900
91	22.33 A	FREDERICK & ROYLYNN KAHLE 22910 BOONES FERRY RD, NE AURORA, OR 97002	BK. 801, PG. 230	MARION	MAP 4-1W-02D T.L. #300
92	15.12 A	ELMER JESKEY, BRADLEY C. SHEPARD 23150 NE BOONES FERRY RD AURORA, OR 97002	BK. 347, PG. 272	CLACKAMAS	MAP 4-1W-02A T.L. #1500
93	15.00 A	FREEMAN LAND & CATTLE 2034 NW 27TH AVE PORTLAND, OR 97210	BK. 971, PG. 348	CLACKAMAS	MAP 4-1W-02A T.L. #1400
94	3.77 A	ANDERSON HAY & GRAIN CO., INC. P.O. BOX 99 ELLENSBURG, WA 98926	BK. 1212, PG. 41	CLACKAMAS	MAP 4-1W-02A T.L. #1200
95	0.23 A	ANDERSON HAY & GRAIN CO., INC. P.O. BOX 99 ELLENSBURG, WA 98926	BK. 1212, PG. 41	CLACKAMAS	MAP 4-1W-02A T.L. #1300
96	22.20 A	ANDERSON HAY & GRAIN CO., INC. P.O. BOX 99 ELLENSBURG, WA 98926	BK. 122, PG. 41	CLACKAMAS	MAP 4-1W-02A T.L. #1100
97	2.72 A	DELBERT C. HEWITT P.O. BOX 675 WILSONVILLE, OR 97070	BK. 108 PG. 1568	CLACKAMAS	MAP 4-1W-02D T.L. #900
98	0.89 A	DELBERT C. HEWITT 13793 EHLEN RD, NE AURORA, OR 97002	BK. 424 PG. 477	CLACKAMAS	MAP 4-1W-02D T.L. #1000
100	23.40 A	EARL & MARLYN R. STOLLER, TRUSTEES 23546 NE STOLLER PL AURORA, OR 97002	BK. 92 PG. 71175	CLACKAMAS	MAP 3-1W-35 T.L. #1890
103	25.0 A	EARL STOLLER CO., INC. EARL & MARLYN STOLLER TRUSTEES 23546 NE STOLLER PL AURORA, OR 97002	BK. 92 PG. 71176	CLACKAMAS	MAP 3-1W-35 T.L. #1880
104	0.52 A	EARL STOLLER CO., INC. EARL & MARLYN STOLLER TRUSTEES 23546 NE STOLLER PL AURORA, OR 97002	BK. 92 PG. 71176	CLACKAMAS	MAP 3-1W-35 T.L. #1870
105	0.51 A	MARLYN R. STOLLER EARL STOLLER CO., INC. 23546 NE STOLLER PL AURORA, OR 97002	BK. 79 PG. 23243	CLACKAMAS	MAP 3-1W-35 T.L. #1860
106	22.0 A	EARL H. & MARLYN R. STOLLER, TRUSTEES 23546 NE STOLLER PL AURORA, OR 97002	BK. 92 PG. 71175	CLACKAMAS	MAP 3-1W-35 T.L. #570
107	25.11 A	STATE OF OREGON DEPT. OF TRANS. OR STATE BOARD OF AERONAUTICS SALEM, OR	BK. 482 PG. 653		

Chapter Seven: CAPITAL IMPROVEMENT PLAN

Airport Master Plan Update

Aurora State Airport

Through the evaluation of the facility requirements, identification of the Preferred Alternative, and the development of the Airport Layout Plan, the improvements needed at the Aurora State Airport over the next 20-year period have been determined. The Capital Improvement Plan (CIP) provides the basis for planning the funding of these improvements. The planned phases of development are in the 5-, 10- and 20-year time frames.

Additionally, this chapter presents a financial implementation analysis for Aurora State Airport and examines various facets of the financial operating condition of the Airport.

CAPITAL IMPROVEMENT PROJECTS

The CIP develops the timeline for airport improvements and estimated costs for those improvements. The plan is divided into three phases: Phase I (2012 - 2016), Phase II (2017 - 2021), and Phase III (2022 - 2031).

Below is the anticipated plan for the Airport to meet projected demand. Funding for these projects has not yet been committed and the actual costs may vary depending upon final construction costs. The date of implementation may also vary due to funding availability.

Phase I (2012-2016)

Phase I is the first five years of the planning period, through 2016. Phase I development projects are further broken down into specific years. Projects in this phase include:

Construct Air Traffic Control Tower (2012). The ATCT project has been funded through the *ConnectOregon* III Grant Program. The purpose of the project is to increase safety by providing aircraft separation and sequencing at the Airport. The ATCT will also assist with the Airport's noise abatement

efforts, by directing traffic away from noise sensitive areas during approach, departure, and while in the pattern. The location of the tower is shown on the ALP drawing.

Construct Service Road (2012). In order for ground vehicles to operate safely, a service road will be constructed to separate vehicles from taxiing aircraft. The service road is shown in blue on the ALP.

Pavement Maintenance Program (PMP) Repairs (2013). ODA's share for pavement maintenance through this program is 75% of the total repair cost. Actual work items will be identified in the year prior to maintenance actions.

Construct Helicopter Parking Locations (2014). A safety deficiency identified in the planning process was the lack of helicopter parking locations on state property. As such, two such pads have been included on the ALP for future construction.

Reconstruct State-Leased Ramp (2014). The state-leased apron in front of Aurora Aviation has failed and is in need of reconstruction. This item is programmed for 2014, to be constructed in conjunction with the helicopter parking pad project.

Taxilane Development for Hangar Access (2014). This item includes prep work for hangar development in the following construction season.

Hangar Development (2015). An area for hangar development was identified on the ALP. The CIP breaks the development of the hangar area into three phases, as development will likely occur over a span of many years to react to demand. Each phase represents development of approximately 10 hangars, or 44,000 square feet of hangar space.

Carryover Entitlements (2015). ODA currently receives funding for the Airport through the Non-Primary Entitlement Program, funded by the Federal Aviation Administration (FAA). These funds can be accrued and carried over for up to four years, so that the airport sponsor can bank the funds in anticipation for upcoming projects. It is recommended ODA carryover the entitlement funds in 2015 in preparation for the upcoming runway improvement project (to be further discussed below).

Conduct Environmental Assessment for Runway Improvements (2016). The runway improvement project will require review under the National Environmental Policy Act (NEPA). At this time it is anticipated the appropriate environmental review will be an Environmental Assessment (EA).

PMP Repairs (2016). The PMP operates on a three-year cycle. Specific pavement maintenance items will not be identified until 2015.

Phase II (2017-2021)

Phase II is the second five years of the planning period, 2017-2021. Projects during this phase include:

Aurora Rural Fire Protection District (RFPD) Response Facility (2017). The Aurora RFPD has requested an area on the Airport be reserved for a future response facility, which is reflected on the ALP. It is anticipated the facility will be constructed during Phase II of the CIP.

Carryover Entitlements (2017). It is recommended that ODA complete the EA in 2017 and carryover any entitlement funds for the upcoming runway improvement project.

Displace Runway 17 Threshold (2018-2020). As stated in Chapter Six, the Oregon Aviation Board has requested a modification to standards for application of declared distances at the Airport. If approved, it is anticipated the work associated with displacing the threshold will occur over a multi-year period. Specific items related to the Runway 17 displaced threshold are:

- Property acquisition for the extended runway and taxiway pavements (2018) - approximately 2.2 acres.
- Avigation easement acquisition for the Runway 17 runway protection zone (2018) - approximately 2.6 acres.
- Carryover entitlements (2019).
- Extend runway and taxiway pavement and displace the Runway 17 threshold by 800 feet (2020).
- Install precision approach path indicators to Runway 17 and Runway 35 (2020).
- Construct Runway 17 run-up area (2020).

Extend Runway 35 (2018-2020). If the FAA does not approve the Runway 17 displaced threshold, a 1,000-foot extension to Runway 35 will be pursued. The extension would occur over a multi-year period, which would include:

- Property acquisition for the Runway 35 runway protection zone (2018) - approximately 44.5 acres.
- Relocation of Keil Road, as shown on the ALP (2019).
- Extension of Runway 35 by 1,000 feet (2020).
- Installation of precision approach path indicators (2020).

The runway extension pavement would remain within the current Airport boundary. Additional land acquisition is needed to secure the runway safety area and runway protection zone, to maintain compatible land uses within these areas. Farm use is a compatible land use in these areas, with a few exceptions.

PMP Repairs (2019). Specific pavement maintenance items will not be identified until 2018.

Taxilane Development for Hangar Access (2019). This item includes preparation for hangar development in the 2021 construction season.

Runway 17/35 Strengthening Overlay (2020). In conjunction with one of the above-stated runway improvement projects, the runway would be overlaid to increase the pavement strength to 60,000 lbs dual wheel gear by constructing a ½" grind and 3" overlay along with 2.5" transitions to connector taxiways.

Hangar Development (2021). An area for hangar development was identified on the ALP. The CIP breaks the development of the hangar area into three phases, as development will likely occur over a span of many years to react to demand. This would be the second phase of development.

Update Master Plan (2021). Master Plans are typically updated every eight to ten years. It is recommended this plan be updated after completion of the runway improvement project.

Phase III (2022-2031)

Phase III is the last ten years of the planning period, 2022-2031. Specific years for these projects were not identified, except for PMP, as any projection would be speculative. Projects falling within this timeframe include:

PMP Repairs (2022, 2025, 2028, 2031). Specific pavement maintenance items will not be identified until the year prior to the program cycle.

Apron Development. Additional tiedown apron parking is identified in the ALP and should be constructed when demand necessitates.

Taxilane Development for Hangar Access. This item includes preparation for hangar development in the following construction season.

Hangar Development. An area for hangar development was identified on the ALP. The CIP breaks the development of the hangar area into three phases, as development will likely occur over a span of many years to react to demand. This would be the final phase of development.

Cargo Apron. In accordance with the Oregon Aviation Plan recommendation, an area for cargo loading/unloading has been identified for construction.

Relocate Fuel Tanks. The Aurora Aviation fuel tanks are in an area that could be better used for other purposes. Once the tanks reach their useful life, they should be replaced elsewhere on the Airport (a location is identified on the ALP).

Construct Runway 17 Run-Up Area. Once the fuel tanks have been relocated, the area where they are currently located should be reconfigured to serve as a run-up area for Runway 17. (This assumes the displaced threshold project was not approved, and therefore the run-up area was not constructed as per the work items for the displaced threshold project).

PROJECT COSTS

A list of improvements and costs over the next 20 years are in **Table 7A**. All costs are estimated in 2011 dollars. Total project costs include construction, temporary flagging and signing, construction staking, testing, engineering, administration, and contingency, as applicable. Power utilities are included in all new hangar projects. No water service cost was added for the hangar developments. Project estimates are included in **Appendix L** for more detailed cost information.

Table 7A. Aurora State Airport Proposed Capital Improvement Plan with Costs

Aurora State Airport CIP 2012 – 2031							
#	Year	Description	Total Cost	ODA share	FAA Share	Private Share	Other Funding
Phase I (2012-2016)							
1	2012	Construct ATCT ¹	3,369,000	423,800	250,000	-	2,695,200
2	2012	Service Road	1,017,000	50,850	966,150	-	-
3	2013	PMP (2013) ²	27,000	20,250	6,750	-	-
4	2014	Helicopter Landing Pads	11,000	550	10,450	-	-
5	2014	Ramp Reconstruction - State Leased	988,000	49,400	938,600	-	-
6	2014	Taxilane Development (Hangar Access)	43,000	-	-	43,000	-
7	2015	Hangar Development	2,088,000	-	-	2,088,000	-
8	2015	Carryover Entitlements	-	-	-	-	-
9	2016	Environmental Assessment (Runway Improvements)	350,000	17,500	332,500	-	-
10	2016	PMP (2016)	27,000	20,250	6,750	-	-
<i>Phase I Subtotal</i>			<i>\$7,920,000</i>	<i>\$582,600</i>	<i>\$2,511,200</i>	<i>\$2,131,000</i>	<i>\$2,695,200</i>
Phase II (2017-2021)³							
11	2017	Aurora RFPD Response Facility	570,000	-	-	570,000	-
12	2017	Carryover Entitlements	-	-	-	-	-
Displace Threshold	13	Property Acquisition (R17 Displaced Threshold)	102,000	5,100	96,900	-	-
	14	Avigation Easement Acquisition (R17 RPZ)	44,000	2,200	41,800	-	-
	15	Carryover Entitlements	-	-	-	-	-
	16	Displaced Threshold (R17 - 800')	1,980,000	99,000	1,881,000	-	-
	17	Install Runway 17-35 PAPIs	129,000	6,450	122,550	-	-
	18	R17 Run-Up Area	355,000	17,750	337,250	-	-
1,000' Ext.	19	Property Acquisition (R35 RPZ)	2,561,000	128,050	2,432,950	-	-
	20	Keil Road Relocation	1,427,000	71,350	1,355,650	-	-
	21	Runway Extension (R35 - 1000')	3,035,000	151,750	2,883,250	-	-
	22	Install Runway 17 PAPIs	65,000	3,250	61,750	-	-
	23	PMP (2019)	27,000	20,250	6,750	-	-
	24	Taxilane Development (Hangar Access)	43,000	-	-	43,000	-
	25	R17/35 Strengthening Overlay	2,052,000	102,600	1,949,400	-	-
	26	Hangar Development	2,088,000	-	-	2,088,000	-
	27	Master Plan Update	200,000	10,000	190,000	-	-
<i>Phase II Displaced Threshold Subtotal</i>			<i>\$7,590,000</i>	<i>\$263,350</i>	<i>\$4,625,650</i>	<i>\$2,701,000</i>	<i>\$ -</i>
<i>Phase II Runway Extension Subtotal</i>			<i>\$12,068,000</i>	<i>\$487,250</i>	<i>\$ 8,879,750</i>	<i>\$2,701,000</i>	<i>\$ -</i>

Aurora State Airport CIP 2012 – 2031							
#	Year	Description	Total Cost	ODA share	FAA Share	Private Share	Other Funding
Phase III (2022-2031)							
28	-	PMP (2022, 2025, 2028, 2031)	108,000	81,000	27,000	-	-
29	-	Apron Development	1,638,000	81,900	1,556,100	-	-
30	-	Taxilane Development (Hangar Access)	43,000	-	-	43,000	-
31	-	Hangar Development	2,088,000	-	-	2,088,000	-
32	-	Cargo Apron	198,000	9,900	188,100	-	-
33	-	Relocate Fuel Tanks	89,000	4,450	84,550	-	-
34	-	R17 Run-Up Area ⁴	355,000	17,750	337,250	-	-
<i>Phase III Subtotal</i>			<i>\$ 4,519,000</i>	<i>\$ 195,000</i>	<i>\$ 2,193,000</i>	<i>\$ 2,131,000</i>	<i>\$ -</i>
Total Capital Costs with Displaced Threshold Option			\$20,029,000	\$1,040,950	\$9,329,850	\$6,963,000	\$2,695,200
Total Capital Costs with Runway Extension Option			\$24,507,000	\$1,264,850	\$13,583,950	\$6,963,000	\$2,695,200

¹ Other Funding is Connect Oregon III Grant

² ODA share for PMP is 75% of total cost

³ Items 13-18 or Items 19-22 to be implemented, pending FAA determination

⁴ If no displaced threshold project; construct R17 run-up at same time as fuel tank relocation project.

FINANCIAL PLAN

This section presents the financial implementation analysis for Aurora State Airport and will examine various facets of the financial operating condition of the Airport. In addition, this chapter examines the Airport’s historic operating revenues and expenses, and provides projections for future financial results. The projections of Airport revenues and expenses focus on incremental periods similar to the planning periods of this Master Plan’s CIP: Phase I (Short Term, 2012-2016), Phase II (Intermediate Term, 2017-2021), and Phase III (Long Term, 2022-2031). These planning periods are used to identify the ability of the Airport to contribute to the local share of anticipated project costs, as required. It should be noted that Aurora State’s Master Plan CIP is used as a guideline, and that capital projects should be undertaken when demand warrants and funding becomes available.

Financial Implementation Analysis Approach

The overall approach for the development of the financial implementation analysis included the following elements:

- Gathered and reviewed key airport documents related to historical financial results, capital improvement plans, operating budgets, regulatory requirements, and airport policies
- Evaluated Airport rates/charges and compared them with other airports
- Analyzed the existing operating and financial environment, as well as the overall financial management philosophy

- Reviewed the Master Plan CIP, cost estimates, and development schedule anticipated for the planning period in order to project the overall financial requirements for the program
- Determined and analyzed the sources and timing of capital funding available to meet the financial requirements for funding the CIP
- Analyzed historical operating revenues, developed operating revenue assumptions, and projected future operating revenues for the planning period
- Analyzed historical operating expenses, developed operations and maintenance expense assumptions, and projected future operating costs for the planning period
- Completed results of the analysis and evaluation in a Financial Plan Summary that provides conclusions regarding the financial practicality of the CIP

Airport Rates Comparison

Airport revenues are typically generated through user fees charged for the facilities and services that are provided. These fees are normally based on market conditions in the area and vary airport-to-airport. The airports pricing strategy should be to charge “market” rents for land and improvements (as is mandated by the FAA). Although limited data on existing rates for Aurora and other Oregon airports was provided for this study, a discussion on a broad range of typical airport rates and charges is provided below. Some of the typical rates highlighted within this section were produced by the *AAAE Rates and Charges Survey* conducted by the American Association of Airport Executives. These rates were determined from a small representative sample of airports throughout country and should be considered for comparison purposes only. Rates set by the ODA at Aurora State Airport should be determined through close coordination with airport and ODA management and based on the unique condition, amenities, location and demand for facilities.

Ground (Land) Lease

Nationally, most airport tenants lease land from an airport on which they have constructed hangars and other aviation-related facilities. Generally, the lease rate should be adjusted every three years to keep pace with changes in the general price levels as reflected in the U.S. Department of Labor’s Bureau of Labor Statistics Consumer Price Index (CPI).

Table 7B contains the results of a 2008 ODA ground lease rate survey which compares the lease rates of Aurora State Airport to several other general aviation airports throughout Oregon. Land lease rates range from \$0.08 to \$0.25 per square foot annually. Due to its location and demand, ground lease rates at Aurora are higher than all other airports surveyed throughout the state. The average ground lease rate of those surveyed is \$0.105 per square foot.

Table 7B. Oregon Airport Ground Lease Rates

Airport	Annual Rate (sq. ft.)	Airport	Annual Rate (sq. ft.)
Alkali Lake	\$ 0.08	Nehalem Bay	\$ 0.08
Aurora	\$ 0.25	Oakridge	\$ 0.08
Bandon	\$ 0.18	Owyhee Reservoir	\$ 0.08
Cape Blanco	\$ 0.10	Pacific City	\$ 0.08
Cascade Locks	\$ 0.08	Pinehurst	\$ 0.08
Chiloquin	\$ 0.09	Prospect	\$ 0.08
Condon	\$ 0.08	Rome	\$ 0.08
Cottage Grove	\$ 0.15	Siletz Bay	\$ 0.13
Independence	\$ 0.18	Toketee	\$ 0.08
Joseph	\$ 0.11	Toledo	\$ 0.08
Lebanon	\$ 0.16	Wakonda	\$ 0.08
McDermitt	\$ 0.08	Wasco	\$ 0.08
McKenzie Bridge	\$ 0.08		

Source: Ground lease surveys commissioned by ODA, January 2008

Based on a national survey of 38 similar airports, the average airport receives \$0.24 per square foot for unimproved ground leases. Based on this and the high degree of rate fluctuation between airports, the ground lease rate at Aurora State Airport appears to be consistent with its attributes and industry standards. For ground leases with improved features including smooth/flat grading, utilities nearby, and convenient/established access, on average, airports collect \$0.33 or more per square foot each year.

Landing Fees

Less than 30 percent of airports throughout the country collect landing fees. Of those, less than half are collected by the Fixed Base Operator (FBO) on the airport and the fees are generally waived if fuel is purchased. The methodology used for determining landing fees varies widely and is as different as each airport. The following is a brief list of some of the landing fee methodologies applied at various airports;

- Only Aircraft over 50,000 lbs.
- \$0.60 per 1,000 lbs. of max. gross take-off weight
- \$0.08 per 1,000 lbs. for each aircraft
- \$1.00 per 1,000 lbs. of max. landing weight over 12,500 lbs.
- \$0.35 per 1,000 lbs. max. gross landing weight
- \$1.50 per 1,000 lbs. max. gross take-off weight over 12,500 lbs.
- \$1.00 per 1,000 lbs. max. gross landing weight for non-based aircraft with empty weights over 30,000 lbs.
- \$0.07 per 1,000 lbs. for aircraft over 35,000 lbs.

These rates are provided for informational purposes. To remain competitive, it is not suggested that Aurora State Airport introduce/adjust a landing fee.

Tie Down Fees

A majority of airports charge a monthly tie-down fee for single engine aircraft. Based on a national survey, the average tie down fee is about \$45.00 per month, although this varies greatly between

airports based on location and demand. Some airports collect a separate fee for multi-engine aircraft since they are larger and take up more room. These aircraft, however, typically use hangar storage due to their higher value. The average monthly tie down fee for multi-engine aircraft is \$52.00. Many airports charge a daily tie-down fee. Though, like landing fees, many FBOs may waive this fee with the purchase of fuel.

T-Hangar/Conventional Hangar Rates

T-hangars provide individual hangars within a larger contiguous building. T-hangars are the most basic and affordable form of aircraft hangar infrastructure available to aircraft owners. Generally, they are built to hangar a single engine to a small multi-engine aircraft. Aircraft larger than these will require conventional hangar space. T-Hangar facilities provide an area of approximately 1,300 square feet per individual storage unit.

The AAAE Rates and Charges Survey determined monthly hangar fees at an average of \$306.00 per month. However, the survey did not differentiate if the hangars were large or small. There are numerous factors that influence the price airports set for hangar fees, some of these being airport location, hangar amenities, demand, etc. At those airports which responded to the survey, fees ranged greatly from \$78.00 to \$1,200 per hangar per month.

Many airports throughout the country are choosing to lease land to an FBO or developer to construct T-hangars or conventional hangars and lease the individual units to aircraft owners. This trend is growing in popularity because it frees the airport from the burden of leasing and maintaining the space as well as collecting rent from multiple tenants.

Community Hangar Rates

Normally, community hangars are not owned or operated by the airport and are designed to accommodate numerous aircraft ranging in size from single engine aircraft up to large jets. This allows the aircraft owner the ability to have a larger space than a T-hangar while lowering costs by sharing space with other tenants. The average fee per month for community hangar space to accommodate a small multi-engine aircraft was \$345.00. As with many of the other rates and charges discussed in this section, the rates in community hangars vary greatly based upon location, amenities, demand, etc.

Fuel Flowage Fee

In addition to charging FBOs land and/or facilities rent, some airports charge a fuel flowage fee to allow the service provider the right to sell fuel at the airport. In a national survey of 88 airports, 29 airports charged a fuel flowage fee to anyone selling fuel. The fee averaged \$0.07 per gallon which is typically passed along to the customer purchasing fuel. Fuel flowage fees had a broad range, with the lowest being \$0.03 and the highest being \$0.20 per gallon. ODA charges fuel flowage fees at the Aurora State Airport.

There are many other rates and charges common to airports throughout the country. Those described above are some of the most common.

Capital Funding Sources

The development of the Aurora State Airport's Master Plan CIP is anticipated to be funded from several sources. These sources include federal grants, state grants, net operating revenues/cash reserves, and other unidentified funding sources, including private funding. Each of these sources of funds is described in the following sections.

Federal Aviation Administration (FAA) Funding

To promote the development of airports to meet the nation's needs, the Federal Government embarked on a Grants-In-Aid Program to units of state and local government after the end of World War II. Following multiple earlier versions of federal funding programs, the Airport Improvement Program (AIP) was established through the Airport and Airway Improvement Act of 1982. The initial AIP provided funding legislation through fiscal year 1992, but since then, it has been authorized and appropriated on a yearly or even quarterly basis. Funding for the AIP is generated through taxes on airline tickets, freight way bills, international departure fees, general aviation fuel, and jet fuel.

AIP grants include entitlement grants, which are allocated among airports by a formula that is driven by passenger enplanements, and by discretionary grants that are awarded in accordance with specific guidelines. Generally, primary airports receive entitlements based on the number of enplaning passengers and landed cargo weights, while non-primary airports, which include general aviation airports, likewise receive some entitlements and may also be eligible for federal state apportionment funding. The total amount of state apportionment funding is based on an area/population formula for the state, while the amount of non-primary entitlements is computed from the needs list for the particular airport in the published National Plan of Integrated Airport Systems (NPIAS). Federal Airport Improvement Funds must be spent on FAA-eligible projects as defined in FAA Order 5100.38C "*Airport Improvement Program (AIP) Handbook*." The handbook and the latest authorization state that:

- An airport must be included in the current version of the NPIAS;
- Non-primary entitlement funds of \$150,000 per year can be accumulated for up to four years;
- The federal portion of AIP grants increases to 95% for all general aviation airports; and
- If an airport has no airside improvement needs, entitlement funds can be used for certain landside projects.

General aviation and commercial service airports also compete for federal discretionary funds. These funds are awarded based on priority ratings given to each potential project by the FAA. The prioritization process makes certain that the most important and beneficial projects (as viewed by the FAA) are the first to be completed, given the availability of adequate discretionary funds. Federal funding is limited to development that is justified to meet aviation demand according to FAA guidelines. Each NPIAS airport development project is subject to eligibility and justification requirements as part of the normal AIP funding process.

As of the writing of this document, the AIP program is due for reauthorization and will likely see changes. The future of the AIP program may include changes to federal share amounts, non-primary entitlements, set-asides, and/or passenger facility charges (PFCs).

However, under the current reauthorization legislation and based on its inclusion in the NPIAS, the Aurora State Airport is currently eligible to receive entitlements of \$150,000 per year from 2010 through 2030. Additional funding could be realized through state apportionment funding and AIP discretionary funding, based on the aforementioned project eligibility ranking methodology. For the Aurora State Airport CIP, this financial plan assumes total AIP grant awards (entitlement/discretionary) funding of \$370,000 for the Phase I period, \$11.4 million during Phase II, and \$3.1 million for Phase III.

Oregon Department of Aviation (ODA)

Airports that are owned by local municipalities or governments are typically responsible for capital improvement project costs remaining from funding not eligible through FAA grants mentioned above. As a state owned airport, the CIP for Aurora State Airport is managed by ODA. Improvements at Aurora State, along with the needs of over 30 state airports, are balanced as funds are available. Demand for funding far exceeds the annual funding; the result is that many projects are deferred over extended periods until funding can be obtained. The state also looks to local communities to support the funding of capital improvement projects.

ODA administers several programs for funding airport planning, construction and maintenance projects. As mentioned before, Aurora State Airport must compete with other airports in the state through these funding programs. The following is a description of each funding program:

Pavement Maintenance Program (PMP).

The pavement maintenance program provides a resource for airfield pavement maintenance projects. The program funds pavement maintenance and associated improvements (crack filling, repair, sealcoats, etc.), which have not traditionally been eligible for FAA funding. The PMP may also be expanded to include pavement overlays, which could potentially be used for Runway 17/35, where FAA funding is not available.

Funding for the PMP is generated through collection of aviation fuel taxes. ODA manages the PMP through an annual consultant services contract and work is programmed on a 3-year regional rotation. The program includes a regular schedule of inspection and subsequent field work. Benefits from the PMP include:

- Economy of scale in bidding contracts
- Federal/State/Local partnerships that maximize airport improvement funds
- PMP is not a grant program and local match is on a sliding scale (50% - 5% required)

The PMP includes the following features:

- Review prior year's Pavement Condition Index (PCI) reports
- Only consider PCIs above 70
- Apply budget
- Limit work to patching, crack sealing, fog sealing, slurry sealing
- Add allowance for striping
- Program to include approximately 20 airports per year, depending on funding levels

Financial Assistance to Municipalities (FAM) Grant Program

ODA also provides limited funding assistance through the FAM Grant Program to foster a statewide system of airports by providing the discretionary award of financial assistance for airport planning, development and capital improvement projects. Program funding depends upon the dedicated FAM Grant Program amount in the ODA's biennial budget, as approved by the Oregon Legislature; and ODA policies and priorities.

The FAM details include the following:

- Maximum possible annual grant amount per airport is \$25,000
- The local match requirement parallels the PMP that links the match amount to the airport category as designated in the Oregon Aviation Plan
- The match structure progresses from 5% to 50% based on airport category
- Eligible airport capital improvement projects and planning projects are to be selected on a priority basis
- FAM Grants may also be used as sponsor match for Federal Aviation Administration AIP grants

For the Aurora State Airport CIP, this financial plan assumes state apportionment of \$720,000 in Phase I, \$620,000 in Phase II, and \$270,000 in Phase III.

Other Capital Funding

The traditional funding sources described in previous paragraphs are often insufficient to finance the full range of projects programmed for development during a CIP. Due to the lack of traditional funding, other non-traditional funding sources will be needed to implement non-eligible AIP projects. Alternative sources of funds will require about \$6.8 million in Phase I, \$1.2 million in Phase II, and \$1.2 million in Phase III. The sources of these other funding needs have been identified in broad terms and will likely be needed to supplement the total capital shortfall of almost \$10 million through the 20-year planning period. If these funding sources cannot be ultimately obtained in the time frames needed, the associated projects will have to be delayed until such time as appropriate funding can be identified.

Note that non-traditional funding sources for airport development may include the following sources:

- *ConnectOregon* III
- General Fund Revenues
- Bond Issues
- Private Funding

Of these, general fund revenues and general obligation bonds are by far the most common funding sources. Revenue bonds supported by airport generated revenues are seldom used at general aviation airports because most general aviation airports do not generate enough money to pay operating expenses and the debt service of capital funding requirements.

ConnectOregon III

The 2009 Oregon Legislature approved \$95 million in lottery-backed bonds for the *ConnectOregon* III program and \$5 million for rural airports as part of HB 2001, the Jobs and Transportation Act. Building

on the success of the first two authorizations in 2005 and 2007, ConnectOregon III will continue to improve the connections between the various modes of transportation throughout the state.

General Fund Revenues

Capital development expenditures from general fund revenues have been somewhat difficult to obtain in recent years. One reason for this difficulty is the shortfall in local general fund revenues. Budgetary problems have created an environment where local funding is uncertain. The amount of general fund support for airport improvement projects varies by airport and is generally based upon the local tax base, priority of the development project, historical funding trends, and local attitudes concerning the importance of aviation.

Bond Funds

Airport authorities can issue bonds without approval from the city or county. However, they must use their own revenue to repay the bonds. Airport revenue is typically used to repay these bonds. For an airport operated by a state, like Aurora, bond issues funding the state share of airport development projects would likely compete with bond issues for other types of state improvements. As with the general fund apportionment, bond issues supporting airport development depend greatly on the priority assigned to such projects by the state and local community.

Private Funds

Items such as storage and maintenance hangars, fuel systems, and pay parking lots are not typically eligible for federal or other grant funding assistance at public airports because they generate income for the airport. Airport operators sometimes work with FBOs or other local businesses to fund these types of improvements.

With respect to Aurora State Airport, each of these options would need to be weighed independently to determine the appropriateness of their potential application for eligible projects.

Financial Analysis and Implementation Plan

This section evaluates the financial reasonableness of implementing the Master Plan CIP during the planning period (2012 through 2031).

Estimated Project Costs and Development Schedule

A listing of capital improvement projects has been assembled based on the preferred development alternative for the Aurora State Airport established in earlier sections of this Master Plan. This project list has been coordinated with the Airport Layout Plan (ALP) drawing set and the CIP, both of which should be continuously updated by airport management, as required. Generally, the CIP itself has three primary purposes:

1. Identify improvement projects that will be required at an airport over a specific period of time;
2. Estimate the order of implementation of the projects included in the plan; and
3. Estimate the total costs and funding sources of the projects.

It is important to note that as the CIP progresses from project planning in the current year to projects planned in future years, the plan becomes less detailed and more flexible. Additionally, the CIP is typically modified on an annual basis as new projects are identified, projects change, and financial environments evolve.

For Aurora State Airport, each proposed capital improvement project over the 20-year planning horizon has been assigned to one of three specific planning periods: Phase I, short term (2012-2016); Phase II, intermediate term (2017-2021); and Phase III, long term (2022-2031) as shown in the above Table 7A. This table also includes estimates of the funding source eligibility for each project. Note that the estimates contained in this table were derived from analyzing similar projects, but should be re-evaluated at the time of initiation.

Phase I contains approximately \$7.9 million in capital projects including air traffic control tower construction, service road construction, apron repair, hangar and associated taxiway construction, helipad development and an environmental assessment for runway enhancements to take place later in the planning period. It is estimated that the sponsor (ODA) share of Phase I capital costs will be approximately \$582,600 and the federal share will be about \$2,511,200 with the balance (approximately \$4.8 million) coming from other sources.

Phase II contains approximately \$12.0 million in total capital projects. Most projects in this phase are related to Runway 17/35 improvements and include runway paving, possible road relocation as well as property acquisitions for runway protection zones (RPZ), aviation easements and runway improvements. Other projects in this phase are for hangar and associated taxiway construction and airfield support systems. The ODA share of the proposed development plan in Phase II is approximately \$500,000 while most of the funding is coming from the FAA. The emergency response facility, hangar and taxiway development is funded from private sources.

It is important to note, either project items 13-18 or items 19-22 may be implemented, depending on FAA determination. This being the case, total project costs associated with this phase are listed by the most costly alternative (runway extension) to plan conservatively in the financial analysis.

Phase III contains \$4.5 million in total capital projects, including apron development as well as fuel tank relocation and Runway 17 run-up area development. As with all other phases, this phase also includes hangar and associated taxiway development to keep pace with expected demand. In addition, like all other phases, this phase includes on-going PMP projects to maintain the Airport's runway and taxiway system. About \$200,000 are expected to be funded by ODA in this phase. The FAA share is approximately \$2.1 million, with the remainder coming from private sources.

Airport Revenues and Expenses

For Aurora State Airport, operating revenues are realized from the following primary sources:

- Licenses and Fees
- Rents and Royalties
- Miscellaneous Revenues

Landside facility development and levels of aviation activity are typically the primary factors affecting airport operating revenues. Note that as additional airport development occurs, the number of based aircraft and aircraft operations will normally increase and new/updated leases will be enacted, typically resulting in airport operating revenues increasing in a corresponding fashion.

Airport operating revenues are offset by airport operating expenses, typically referred to as Operation and Maintenance (O&M) costs. Airport operating expenses are comprised of the day-to-day costs incurred by operating the airport. Primary components of O&M costs at Aurora State Airport include Salaries and Wages as well as Services and Supplies and are made up of the following:

- Personnel Services – Includes full-time salaries, overtime pay, accrued personal leave, payroll taxes, health insurance, pension and retirement benefits, unemployment insurance and workers’ compensation expense.
- Fixed Costs – Includes building rentals, insurance (building, vehicle, liability, etc.), phones (cell/land), utilities (power, natural gas, trash, etc.), irrigation assessments, etc.
- Administrative Costs – Includes office supplies, postage, printing, computer software, personnel equipment, operations supplies, advertising, marketing, training, dues, small equipment, etc.
- Operations Expenses – Includes repair/maintenance of buildings (hangars, terminal), ground maintenance (asphalt, pests, snow, weeds, lawns), vehicles (repair, maintenance, fuel), repair/maintenance of equipment (fuel island, beacon, windsock, NAVAIDS, taxiway/runway lights), security (fences, gates, cameras), etc.
- Contractual Services – Includes large maintenance projects, background checks, lot surveys, consultant services, merchant fees, etc.

The ODA oversees two funds as a part of the operation at Aurora State Airport: the Public Transportation Fund and Capital Projects Fund.

Public Transportation Fund

Revenues of this fund are generated through the collection of Airport fees, licenses, rents, royalties and other sources. The Public Transportation Fund expenses are used to maintain the day-to-day operations of the Airport as well as to pay for some professional services required by the Airport. A large share of revenue in the Fund is from federal sources, other grants and fund transfers. Similarly, a substantial expense to this fund is through professional service expenses incurred by the Airport for projects. These items are not considered part of the Airport’s daily operating budget and will not be included in the analysis of operating income.

Capital Projects Fund

Typically, capital costs associated with infrastructure development comes the Capital Projects Fund budget. The primary source of revenue for the Capital Projects Fund is from the FAA through AIP eligible project grants. Additional funds may come from other sources as well.

The historic revenues and expenses for these two funds, as they are related to Aurora State Airport, over fiscal years 2007 to 2010 are presented in **Table 7C**.

Table 7C. Aurora State Airport Funds

	FY2007	FY2008	FY2009	FY2010
Public Transportation Fund				
Licenses and Fees	\$ 869.94	\$ 116,748.35	\$ 122,970.60	\$ 128,357.96
Rents and Royalties	149,205.80	55,342.11	44,461.20	63,428.09
Other Misc. Revenues	11,833.85	1,807.35	11,649.62	12,309.91
<i>Revenues</i>	\$ 161,909.59	\$ 173,897.81	\$ 179,081.42	\$ 204,095.96
Salaries and Wages	19,288.20	19,234.37	19,263.29	14,426.09
Services, Supplies, Other	65,793.70	56,666.85	38,435.26	81,609.40
<i>Expenses</i>	\$ 85,081.90	\$ 75,901.22	\$ 57,698.55	\$ 96,035.49
Operating Income	\$ 76,827.69	\$ 97,996.59	\$ 121,382.87	\$ 108,060.47
Capital Projects Fund				
Revenues	\$ 207,856.00	\$ 2,905,882.60	\$ 1,857,084.51	\$ 13,198.01
Expenses	155,561.62	3,524,431.15	1,005,192.61	0.01
Capital Projects Fund Total	\$ 52,294.38	\$ (618,548.55)	\$ 851,891.90	\$ 13,198.00

* Public Transportation Fund balances above do not reflect federal or other grant contributions as well as professional service fee expenses (which may be eligible for grant reimbursement)

Projected Airport Operating Revenues and Expenses

The continued growth of Aurora State Airport, in terms of activity, tenants, new leases and facility development, will impact the Airport’s operating revenues and expenses over the planning period. Actual future financial outcomes will be determined by a variety of factors, many of which are impossible to identify at the current time. However, the projections for airport operating revenues and expenses are based on recent financial results, year-to-date revenues and expenses for 2011, and activity and tenant growth trends identified in Chapter Three.

Projections of future airport operating revenues and expenses at Aurora State Airport for the periods 2015 through 2030 are presented in **Table 7D**. The following information for operating revenues was established through close consideration of historical trends, as well as proposed airport development initiatives and how they might impact those future revenues. In most cases, revenue projections resulted from normal growth factors refined to more closely reflect the circumstances of Aurora State Airport. The table below projects the Public Transportation Fund only, since Capital Project funds are determined almost solely on project eligibility and grant availability which fluctuates greatly from year-to-year. Further, it is important to note that federal revenue and contributions from other funds as well as professional service expenses to the Public Transportation Fund are not included in this projection as they have varied significantly from year-to-year and do not reflect true operating income.

Table 7D. Projected Aurora State Airport Operating Revenues and Expenses

	Current FY2011	FY2015	FY2020	FY2025	FY2030
Public Transportation Fund					
Licenses and Fees	\$ 128,357.96	\$ 145,000	\$ 176,000	\$ 224,000	\$ 300,000
Rents and Royalties	63,428.09	71,000	87,000	111,000	148,000
Other Misc. Revenues	12,309.91	14,000	17,000	22,000	29,000
<i>Revenues</i>	<i>\$ 204,095.96</i>	<i>\$ 230,000</i>	<i>\$ 280,000</i>	<i>\$ 357,000</i>	<i>\$ 477,000</i>
Salaries and Wages	14,336.84	16,000	19,000	24,000	33,000
Services, Supplies, Other	96,035.49	108,000	128,000	164,000	219,000
<i>Expenses</i>	<i>\$ 110,372.33</i>	<i>\$ 124,000</i>	<i>\$ 147,000</i>	<i>\$ 188,000</i>	<i>\$ 252,000</i>
<i>Operating Income</i>	<i>\$ 93,723.63</i>	<i>\$ 106,000</i>	<i>\$ 133,000</i>	<i>\$ 169,000</i>	<i>\$ 225,000</i>

**Does not include federal or other grant revenues or professional service expenses*

Revenues were projected to increase at standard rates (starting at 3% annually) that will increase beyond FY2015 to account for increased tenants and the resulting volume of activity. In operating expenses, increases in salaries, as well as overall operational activities are based on accepted inflationary growth rates (primarily a 3% annual growth), with slightly higher growth factors for fuel costs in order to account for some volatility in the supply market, as well as for the overall personnel costs.

Based on anticipated CIP project costs and the projected operating income shown above, annual income from the Airport’s operation will be sufficient to cover the ODA share of CIP project related costs in Phase I. The ODA share of CIP Phase I costs amounts to \$582,600. When projected income is interpolated from the table above for each year FY2011 through FY2016, it is estimated that the Airport could expect about \$610,000 in operating income over the 6-year period to go toward CIP projects. Additionally, ODA’s projected income during CIP Phases II and III is expected to cover the agency’s project share.

Financial Plan Summary

The primary goal is for the Airport to evolve into a facility that will best serve the air transportation needs of the region while simultaneously developing into a self-sustaining economic generator. This Master Plan Update can best be described as being the road map to helping the Airport achieve these goals. But it should be recognized that planning is a continuous process that does not end with the completion of the Master Plan in that the fundamental basic issues that have driven this Master Plan will remain valid for many years. Therefore, the ability to continuously monitor the existing and forecast status of airport activity will be a key ingredient in maintaining the applicability and relevance of this study.

In order to realize those goals through the successful implementation of airport development projects, sound and measured decisions by the ODA must be made. Two of the most important factors in influencing the decision to move forward with a specific improvement are airport activity and funding timing. Both factors must be considered in the implementation of this Master Plan in that while airport

activity levels provide the “what” and the “why” in the establishment of airport improvements, the timing of funding provides the “how.” Through the course of this Master Plan effort, the “what” and the “why” have been discussed in detail in previous sections. This chapter has addressed the “how” by providing an overview of the sources of potential funding and the practical financial realities required to implement this overall airport development program. However, although every effort has been made in this chapter to conservatively estimate when facility development may be required, aviation demand and the availability of financial resources for capital projects will ultimately dictate when facility improvements need to be implemented, accelerated or delayed.

Previous sections of this analysis provided a practical approach for scheduling capital expenditures to match the availability of capital financing. It is important to note, however, that ODA does not allocate any indirect revenues or expenses to any of their 28 airports. All the expenses and revenues on the statements provided are those that are specific to Aurora State Airport. As such, any additional ODA revenues would not be allocated to Aurora State Airport until the project costs are incurred and revenues are transferred. Based on ODA acceptance of CIP projects and the understanding that funding for the state’s obligation will be met at the time of project implementation, the Master Plan CIP is financially possible.

Key assumptions supporting the financial plan relate to the availability and timeliness of the funding sources that have been indicated. Continuation of the AIP entitlement program at authorized funding levels is essential. Receiving state apportionment and AIP grants of approximately \$1.1 million during Phase I, almost \$12 million during Phase II, and \$3.4 million during Phase III as indicated are critical to the financial feasibility of implementing these projects.

Appendix A: GLOSSARY OF TERMS AND ACRONYMS

Airport Master Plan Update

Aurora State Airport

Appendix A

GLOSSARY OF TERMS

Master Plan Update
Aurora State Airport

DEFINITIONS

ACCELERATE – STOP DISTANCE AVAILABLE (ASDA). See declared distances.

AIR CARRIER. An operator, which: (1) performs at least five round trips per week between two or more points and publishes flight schedules which specifies the times, days of the week, and places between which such flights are performed; or (2) transport mail by air pursuant to a current contract with the U.S. Postal Service. Certified in accordance with Federal Aviation Regulation (FAR) Parts 121 and 127.

AIR ROUTE TRAFFIC CONTROL CENTER (ARTCC). A facility established to provide air traffic control service to an aircraft operating on an IFR flight plan within controlled airspace and principally during the enroute phase of flight.

AIR TAXI. An air carrier certificated in accordance with FAR Part 135 and authorized to provide, on demand, public transportation of persons and property by aircraft. Generally operates small aircraft for hire for specific trips.

AIRCRAFT. An aircraft is a device that is used or intended to be used for flight in the air.

AIRCRAFT APPROACH CATEGORY. A grouping of aircraft based on 1.3 times the stall speed in their maximum certificated landing weight. The categories are as follows:

- Category A: Speed less than 91 knots.
- Category B: Speed 91 knots or more, but less than 121 knots.
- Category C: Speed 121 knots or more, but less than 141 knots.
- Category D: Speed 141 knots or more, but less that 166 knots.
- Category E: Speed greater than 166 knots.

AIRPLANE. Means an engine-driven fixed-wing aircraft heavier than air that is supported in flight by the dynamic reaction of the air against its wings.

AIRPLANE DESIGN GROUP (ADG). A grouping of aircraft based upon relative wingspan or tail height (whichever is most demanding). The groups are as follows:

Group	Tail Height (ft)	Wingspan (ft)
I	<20	<49
II	20 - <30	49 - <79
III	30 - <45	79 - <118
IV	45 - <60	118 - <171
V	60 - <66	171 - <214
VI	66 - <80	214 - <262

AIRPORT. An airport is an area of land or water that is used or intended to be used for the landing and takeoff of aircraft, and includes its buildings and facilities, if any.

AIRPORT ELEVATION. The highest point on an airport's usable runway expressed in feet above mean sea level (MSL).

AIRPORT LAYOUT DRAWING (ALD). The drawing of the airport showing the layout of existing and proposed airport facilities.

AIRPORT REFERENCE CODE (ARC). A coding system used to relate airport design criteria to the operational (Aircraft Approach Category) to the physical characteristics (Airplane Design Group) of the airplanes intended to operate at the airport.

AIRPORT REFERENCE POINT (ARP). The latitude and longitude of the approximate center of the airport.

AIRPORT TRAFFIC CONTROL TOWER (ATCT). A central operations facility in the terminal air traffic control system, consisting of a tower, including an associated instrument flight rule (IFR) room if radar equipped, using air/ground communications and/or radar, visual signaling, and other devices to provide safe and expeditious movement of terminal air traffic.

ALERT AREA. See special-use airspace.

ANNUAL INSTRUMENT APPROACH (AIA). An approach to an airport with the intent to land by an aircraft in accordance with an IFR flight plan when visibility is less than three miles and/or when the ceiling is at or below the minimum initial approach altitude.

APPROACH LIGHTING SYSTEM (ALS). An airport lighting facility, which provides visual guidance to landing aircraft by radiating light beams by which the pilot aligns the aircraft with the extended centerline of the runway on his/her final approach and landing.

APPROACH MINIMUMS. The altitude below which an aircraft may not descend while on an IFR approach unless the pilot has the runway in sight.

AUTOMATIC DIRECTION FINDER (ADF). An aircraft radio navigation system, which senses and indicates the direction to a non-directional radio beacon (NDB) ground transmitter.

AUTOMATED WEATHER OBSERVATION STATION (AWOS). Equipment used to automatically record weather conditions (i.e. cloud height, visibility, wind speed and direction, temperature, dew-point, etc.).

AUTOMATED TERMINAL INFORMATION SERVICE (ATIS). The continuous broadcast of recorded non-control information at towered airports. Information typically includes wind speed, direction and active runway.

AZIMUTH. Horizontal direction expressed as the angular distance between true north and the direction of a fixed point (as the observer's heading).

BASE LEG. A flight path at right angles to the landing runway off its approach end. The base leg normally extends from the downwind leg to the intersection of the extended runway centerline. See Traffic Pattern.

BEARING. The horizontal direction to or from any point, usually measured clockwise from true north or magnetic north.

BLAST FENCE. A barrier used to divert or dissipate jet blast or propeller wash.

BUILDING RESTRICTION LINE (BRL). A line that identifies suitable building area locations on the airport.

CIRCLING APPROACH. A maneuver initiated by the pilot to align the aircraft with the runway for landing when flying a predetermined circling instrument approach under IFR.

CLASS A AIRSPACE. See Controlled Airspace.

CLASS B AIRSPACE. See Controlled Airspace.

CLASS C AIRSPACE. See Controlled Airspace.

CLASS D AIRSPACE. See Controlled Airspace.

CLASS E AIRSPACE. See Controlled Airspace.

CLASS G AIRSPACE. See Controlled Airspace.

COMPASS LOCATOR (LOM). A low power, low/medium frequency radio-beacon installed in conjunction with the instrument landing system at one or two or the marker sites.

CONTROLLED AIRSPACE. Airspace of defined dimensions within which air traffic control services are provided to instrument flight rules (IFR) and visual flight rules (VFR) flights in accordance with the airspace classification. Controlled airspace in the United States is designated as follows.

CLASS A. The airspace from 18,000 feet mean sea level (MSL) up to but not including 60,000 MSL (flight level FL600).

CLASS B. Generally, the airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports. The configuration of Class B airspace is unique to each airport, but typically consists of two or more layers of airspace and is designed to contain all published instrument approach procedures to the

airport. An air traffic control clearance is required for all aircraft to operate in the area.

CLASS C. Generally, the airspace from the surface to 4,000 feet above the airport elevation (charted as MSL) surrounding those airports that have an operational control tower and radar approach and are served by a qualifying number of IFR operations or passenger enplanements. Although individually tailored for each airport, Class C airspace typically consists of a surface area with a five nautical miles (nm) radius and an outer area with a 10 nm radius that extends from 1,200 feet to 4,000 feet above the airport elevation. Two-way radio communication is required for all aircraft.

CLASS D. Generally, that airspace from the surface to 2,500 feet above the airport elevation (charted as MSL) surrounding those airports that have an operational control tower. Class D airspace is individually tailored and configured to encompass published instrument approach procedures. Unless otherwise authorized, all persons must establish two-way radio communications.

CLASS E. Generally, controlled airspace not classified as Class A, B, C or D. Class E airspace extends upward from either the surface or a designated altitude to the overlying or adjacent controlled airspace. When designated as a surface area, the airspace will be configured to contain all instrument procedures. Class E airspace encompasses all Victor Airways. Only aircraft following instrument flight rules are required to establish two-way radio communications with air traffic control.

CLASS G. Generally, that airspace not classified as Class A, B, C, D or E. Class G airspace extends from the surface to the overlying Class E airspace

CONTROLLED FIRING AREA. See special-use airspace.

CROSSWIND. Wind flow that is not parallel to the runway of the flight of an aircraft.

CROSSWIND LEG. A flight path at right angles to the landing runway off its upwind end. See Traffic Pattern.

DECLARED DISTANCES. The distances declared available for the airplane's takeoff run, takeoff distance, accelerate-stop distance and landing distance requirements. The distances are:

TAKEOFF RUN AVAILABLE (TORA). The runway length declared available and suitable for the ground run of an airplane taking off.

TAKEOFF DISTANCE AVAILABLE (TODA). The TORA plus the length of any remaining runway and/or clearway beyond the far end of the TORA.

ACCELERATE – STOP DISTANCE AVAILABLE (ASDA). The runway plus stopway length declared available for the acceleration and deceleration of an aircraft aborting a takeoff.

LANDING DISTANCE AVAILABLE (LDA). The runway length declared available and suitable for landing.

DISPLACED THRESHOLD. A threshold that is located at a point on the runway other than the designated beginning of the runway.

DISTANCE MEASURING EQUIPMENT (DME). Equipment (airborne and ground) used to measure, in nautical miles, the slant range distance of an aircraft from the DME navigational aid.

DNL. The 24-hour average sound level, in A-weighted decibels, obtained after the addition of ten decibels to sound levels for the periods between 10 pm and 7 am as averaged over a span of one year. It is the FAA standard metric for determining the cumulative exposure of individuals to noise.

DOWNWIND LEG. A flight path parallel to the landing runway in the direction opposite to landing. The downwind leg normally extends between the crosswind leg and the base leg. Also see Traffic Pattern.

EASEMENT. The legal right of one party to use a portion of the total rights in real estate owned by another party. This may include the right of passage over, on or below property; certain air rights above property, including view rights; and the rights to any specified form of development or activity, as well as any other legal rights in the property that may be specified in the easement document.

ENPLANED PASSENGERS. The total number of revenue passengers boarding aircraft, including originating, stop-over, and transfer passengers, in scheduled and non-scheduled services.

FINAL APPROACH. A flight path in the direction of landing along the extended runway centerline. The final approach normally extends from the base leg to the runway. See Traffic Pattern

FIXED BASE OPERATOR (FBO). An FBO typically offers the following services (or a combination thereof): aircraft charter operation, aircraft rental, aircraft storage, flight training, aircraft sales/leasing, aircraft component maintenance, aircraft parts sales, and aircraft maintenance.

FRANGIBLE NAVAID. A navigational aid which retains its structural integrity and stiffness up to a designated maximum load, but on impact from a greater load, breaks, distorts, or yields in such a manner as to present the minimum hazard to aircraft.

GENERAL AVIATION. That portion of civil aviation that encompasses all facets of aviation except air carriers holding a certificate of convenience and necessity, and large aircraft commercial operators.

GLIDE SLOPE (GS). Provides vertical guidance for aircraft during approach and landing. The glide slope consists of 1) electronic components emitting signals which provide vertical guidance by reference to airborne instruments during instrument approaches such as ILS; or 2) visual ground aids, such as VASI, which provide vertical guidance for VFR approach or for the visual portion of an instrument approach and landing.

GLOBAL POSITIONING SYSTEM (GPS). A system of 24 satellites used as reference points to enable navigators equipped with GPS receivers to determine their latitude, longitude and altitude.

HELIPAD. A designated area for the takeoff, landing and parking of helicopters.

HIGH-SPEED EXIT TAXIWAY. A long radius taxiway designed to expedite aircraft turning off the runway after land (at speeds up to 60 knots), thus reducing runway occupancy time.

INSTRUMENT APPROACH. A series of predetermined maneuvers for the orderly transfer of an aircraft under instrument flight conditions from the beginning of the initial approach to a landing or to a point from which a landing may be made visually.

INSTRUMENT FLIGHT RULES (IFR). Rules governing the procedures for conducting instrument flight. Also a term used by pilots and controllers to indicate type of flight plan.

INSTRUMENT LANDING SYSTEM (ILS). A precision instrument approach system, which normally consists of the following electronic components and visual aids: 1) localizer, 2) glide slope, 3) outer marker, 4) middle marker and 5) approach lights.

LANDING DISTANCE AVAILABLE (LDA). See declared distances.

LOCAL TRAFFIC. Aircraft operating in the traffic pattern or within site of the tower, or aircraft known to be departing or arriving from the local practice areas, or aircraft executing practice instrument approach procedures. Typically, this includes touch-and-go training operations.

LOCALIZER. The component of an ILS, which provides course guidance to the runway.

LOCALIZER TYPE DIRECTIONAL AID (LDA). A facility of comparable utility and accuracy to a localizer, but is not part of a complete ILS and is not aligned with the runway.

LORAN. Long range navigation, an electronic navigational aid which determines aircraft position and speed by measuring the difference in the time of reception of synchronized pulse signals from two fixed transmitters. Loran is used for enroute navigation.

MICROWAVE LANDING SYSTEM (MLS). An instrument approach and landing system that provides precision guidance in azimuth, elevation, and distance measurement.

MILITARY OPERATIONS AREA (MOA). See special-use airspace.

MISSED APPROACH COURSE (MAC). The flight route to be followed if, after an instrument approach, a landing is not effected, and occurring normally when the aircraft has descended to the decision height and has not established visual contact or when directed by air traffic control to pull up or to go around again.

MOVEMENT AREA. The runways, taxiways, and other areas of an airport which are utilized for taxiing/hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading ramps and parking areas. At those airports with a tower, air traffic control clearance is required for entry onto the movement area.

NAVAID. A term used to describe any electrical or visual air navigational aid, light, sign, and associated supporting equipment.

NOISE CONTOUR. A continuous line on a map of the airport vicinity connecting all points of the same noise exposure level.

NONDIRECTIONAL BEACON (NDB). A beacon transmitting nondirectional signals whereby the pilot of an aircraft equipped with direction finding equipment can determine his/her bearing to and from the radio beacon and home on, or track to, the station. When the radio beacon is installed in conjunction with the Instrument Landing System marker, it is normally called a compass locator.

NONPRECISION APPROACH PROCEDURE. A standard instrument approach procedure in which no electronic glide slope is provided, such as VOR, TACAN, NDB or LOC.

OBJECT FREE AREA (OFA). An area on the ground centered on a runway, taxiway or taxilane centerline provided to enhance the safety of aircraft operations by having the area free of objects, except for objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes.

OBSTACLE FREE ZONE (OFZ). The airspace below 150 feet above the established airport elevation and along the runway and extended runway centerline that is required to be kept clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function, in order to provide clearance for aircraft landing or taking off from the runway, and for missed approaches.

OPERATION. A takeoff or landing.

OUTER MARKER (OM). An ILS navigation facility in the terminal area navigation system located four to seven miles from the runway edge on the extended centerline indicating to the pilot that he/she is passing over the facility and can begin final approach.

PRECISION APPROACH. A standard instrument approach procedure, which provides runway alignment and glide slope (descent) information. It is categorized as follows:

CATEGORY I. A precision approach which provides for approaches with a decision height of not less than 200 feet and visibility not less than ½ mile or Runway Visual Range (RVR) 2400 with operative touchdown zone and runway centerline lights.

CATEGORY II. A precision approach, which provides for approaches with a decision height of not less than 100 feet and visibility not less than 1200 feet RVR.

CATEGORY III. A precision approach, which provides for approaches with minima less than Category II.

PRECISION APPROACH PATH INDICATOR (PAPI). A lighting system providing visual approach slope guidance to aircraft during a landing approach. It is similar to a Visual Approach Slope Indicator (VASI) but provides a sharper transition between the colored indicator lights.

PRECISION OBJECT FREE ZONE (POFZ). An area centered on the extended runway centerline, beginning at the runway threshold and extending behind the runway threshold that is 200 feet long by 800 feet wide. The POFZ is a clearing standard, which requires the POFZ to be kept clear of above ground objects protruding above the runway safety area edge elevation (except for NAVAIDs). The POFZ applies to all new authorized instrument approach procedures with less than ¾ mile visibility.

PROHIBITED AREA. See special-use airspace.

REMOTE TRANSMITTER / RECEIVER (RTR). See remote communications outlet. RTRs serve ARTCCs.

RELIEVER AIRPORT. An airport to serve general aviation aircraft, which might otherwise use a congested air-carrier served airport.

RESTRICTED AREA. See special-use airspace.

RNAV. Area Navigation – airborne equipment, which permits flights over determined tracks within prescribed accuracy tolerances without the need to overfly ground-based navigation facilities. Used enroute and for approaches to an airport.

RUNWAY. A defined rectangular area on an airport prepared for an aircraft landing and taking off. Runways are normally numbered in relation to their magnetic direction, rounded off to the nearest 10 degrees. The runway heading on the opposite end of the runway is 180 degrees from that runway end. Aircraft can takeoff or land from either end of a runway, depending upon wind direction.

RUNWAY BLAST PAD. A surface adjacent to the ends of runways provided to reduce the erosive effect of jet blast and propeller wash.

RUNWAY END IDENTIFIER LIGHTS (REIL). Two synchronized flashing lights, one on each side of the runway threshold, which provide rapid and positive identification of the approach end of a particular runway.

RUNWAY GRADIENT. The average slope, measured in percent, between the two ends of a runway.

RUNWAY PROTECTION ZONE (RPZ). An area off the runway end to enhance the protection of people and property on the ground. The RPZ is trapezoidal in shape. Its dimensions are determined by the aircraft approach speed and runway approach type/minima.

RUNWAY SAFETY AREA (RSA). A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot or excursion from the runway.

RUNWAY VISUAL RANGE (RVR). An instrumentally derived value, in feet, representing the horizontal distance a pilot can see down the runway from the runway end.

RUNWAY VISIBILITY ZONE (RVZ). An area on the airport to be kept clear of permanent objects so that there is an unobstructed line-of-sight from any point five feet above the runway centerline to any point five feet above an intersecting runway centerline.

SEGMENTED CIRCLE. A system of visual indicators designed to provide traffic pattern information at airports without operating control towers.

SHOULDER. An area adjacent to the edge of paved runways, taxiways or aprons providing a transition between the pavement and the adjacent surface; support for aircraft running off the pavement; enhanced drainage; and blast protection. The shoulder does not necessarily need to be paved.

SLANT-RANGE DISTANCE. The straight line distance between an aircraft and a point on the ground.

SPECIAL USE AIRSPACE. Airspace of defined dimensions identified by a surface area wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon aircraft operations that are not a part of those activities. Special-use airspace classifications include:

ALERT AREA. Airspace that may contain a high volume of pilot training activities or an unusual type of aerial activity, neither of which is hazardous to aircraft.

CONTROLLED FIRING AREA. Airspace wherein activities are conducted under conditions so controlled as to eliminate hazards to nonparticipating aircraft and to ensure the safety of persons or property on the ground.

MILITARY OPERATIONS AREA (MOA). Designated airspace with defined vertical and lateral dimensions established outside Class A airspace to separate/segregate certain military activities from instrument flight rule (IFR) traffic and to identify for visual flight rule (VFR) traffic where these activities are conducted.

PROHIBITED AREA. Designated airspace within which the flight of aircraft is prohibited.

RESTRICTED AREA. Airspace designated under FAR 73, within which the flight of aircraft, while not wholly prohibited, is subject to restriction. Most restricted areas are designated joint use. When not in use by the using agency, IFR/VFR operations can be authorized by the controlling air traffic control facility.

WARNING AREA. Airspace, which may contain hazards to nonparticipating aircraft.

STANDARD INSTRUMENT DEPARTURE (SID). A preplanned coded air traffic control IFR departure routing, preprinted for pilot use in graphic and textual form only.

STANDARD TERMINAL ARRIVAL (STAR). A preplanned coded air traffic control IFR arrival routing, preprinted for pilot use in graphic and textual or textual form only.

STOP-AND-GO. A procedure wherein an aircraft will land, make a complete stop of the runway, and then commence a takeoff from that point. A stop-and-go is recorded as two operations: one operations for the landing and one operations for the takeoff.

STOPWAY. An area beyond the takeoff runway, no less wide than the runway and centered on the extended centerline of the runway, able to support an airplane during an aborted takeoff, without causing structural damage to the airplane, and designated for use in decelerating the airplane during an aborted takeoff.

STRAIGHT-IN LANDING / APPROACH. A landing made on a runway aligned within 30 degrees of the final approach course following completion of an instrument approach.

TACTICAL AIR NAVIGATION (TACAN). An ultra-high frequency electronic air navigation system, which provides suitably-equipped aircraft a continuous indication of bearing and distance to the TACAN station.

TAKEOFF DISTANCE AVAILABLE (TODA). See declared distances.

TAKEOFF RUN AVAILABLE (TORA). See declared distances.

TAXILANE. The portion of the aircraft parking area used for access between taxiways and aircraft parking positions.

TAXIWAY. A defined path established for the taxiing of aircraft from one part of an airport to another.

TAXIWAY SAFETY AREA (TSA). A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway.

TETRAHEDRON. A device used as a landing indicator. The small end of the tetrahedron points in the direction of landing.

THRESHOLD. The beginning of that portion of the runway available for landing. In some instances the landing threshold may be displaced.

TOUCH-AND-GO. An operation by an aircraft that lands and departs on a runway without stopping or exiting the runway. A touch-and-go is recorded as two operations: one operation for the landing and one operation for the takeoff.

TOUCHDOWN ZONE (TDZ). The first 3,000 feet of the runway beginning at the threshold.

TOUCHDOWN ZONE ELEVATION (TDZE). The highest elevation in the touchdown zone.

TOUCHDOWN ZONE (TDZ) LIGHTING. Two rows of transverse light bars located symmetrically about the runway centerline normally at 100-foot intervals. The basic system extends 3,000 feet along the runway.

TRAFFIC PATTERN. The traffic flow that is prescribed for an aircraft landing or taking off from an airport. The components of a typical traffic pattern are the upwind leg, crosswind leg, downwind leg, and final approach.

UNICOM. A nongovernmental communication facility, which may provide airport information at certain airports. Locations and frequencies of UNICOMs are shown on aeronautical charts and publications.

UPWIND LEG. A flight path parallel to the landing runway in the direction of landing. See traffic pattern.

VECTOR. A heading issued to an aircraft to provide navigational guidance by radar.

VERY HIGH FREQUENCY / OMNIDIRECTIONAL RANGE STATION (VOR). A ground-based electronic navigation aid transmitting very high frequency navigation signals, 360 degrees in azimuth, oriented from magnetic north. Used as the basis for navigation in the national airspace system. The VOR periodically identifies itself by Morse code and may have an additional voice identification feature.

VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE STATION / TACTICAL AIR NAVIGATION (VORTAC). A navigation aid providing VOR azimuth, TACAN azimuth and TACAN distance-measuring equipment (DME) at one site.

VICTOR AIRWAY. A control area or portion thereof established in the form of a corridor, the centerline of which is defined by radio navigational aids.

VISUAL APPROACH. An approach wherein an aircraft on an IFR flight plan, operating in VFR conditions under the control on an air traffic control facility and having an air traffic control authorization, may proceed to the airport of destination in VFR conditions.

VISUAL APPROACH SLOPE INDICATOR (VASI). An airport lighting facility providing vertical visual approach slope guidance to aircraft during approach to landing by radiating a directional pattern of high-intensity red and white focused light beams, which indicate to the pilot whether or he or she is on path. Some airports serving large aircraft have three-bar VASIs that provide two visual guide paths to the same runway.

VISUAL FLIGHT RULES (VFR). Rules that govern the procedures for conducting flight under visual conditions. The term VFR is also used in the United States to indicate weather conditions that are equal to or greater than minimum VFR requirement. In addition, it is used by pilots and controllers to indicate type of flight plan.

WIDE AREA AUGMENTATION SYSTEM (WAAS). The Wide Area Augmentation System (WAAS) uses a system of ground stations to provide necessary augmentations to the GPS Standard Positioning Service (SPS) navigation signal. A network of precisely surveyed ground reference stations is strategically positioned across the country to collect GPS satellite data. Using this information, a message is developed to correct any signal errors.

WARNING AREA. See special-use airspace.

ACRONYMS / ABBREVIATIONS

AC. Advisory circular

ADF. Automatic direction finder

ADG. Airplane design group

AFSS. Automated flight service station

AGL. Above ground level

AIA. Annual instrument approach

AIP. Airport improvement program

ALS. Approach lighting system

ALSF-1. Standard 2,400-foot high-intensity approach lighting system with sequenced flashers (Cat I configuration)

ALSF-2. Standard 2,400-foot high-intensity approach lighting system with sequenced flashers (Cat II configuration)

APV. Instrument approach procedure with vertical guidance

ARC. Airport reference code

ARFF. Aircraft rescue and firefighting

ARP. Airport reference point

ARTCC. Air route traffic control center

ASDA. Accelerate-stop distance available

ASR. Airport surveillance radar

ASOS. Automated surface observation station

ATCT. Air traffic control tower

ATIS. Automated terminal information service

AVGAS. Aviation gasoline (typically 100 low lead (LL))

AWOS. Automated weather observation station

BRL. Building restriction line

CFR. Code of Federal Regulations

CIP. Capital improvement program

CPO. Community Planning Organization

DME. Distance measuring equipment

DNL. Day-night noise level

DWL. Runway weight bearing capacity for aircraft with dual wheels per strut

DTWL. Runway weight bearing capacity for aircraft with dual-tandem type landing gear

EAA. Experimental Aircraft Association

FAA. Federal Aviation Administration

FAM. Financial Aid to Municipalities

FAR. Federal Aviation Regulation

FBO. Fixed base operator

FY. Fiscal year

GA. General Aviation

GPS. Global positioning system

GS. Glide slope

HIRL. High-intensity runway edge lighting

IFR. Instrument flight rules

ILS. Instrument landing system

IM. Inner marker

LDA. Landing distance available

LIRL. Low-intensity runway edge lighting

LMM. Compass locator at middle marker

LOC. ILS localizer

LOM. Compass locator at ILS outer marker

LORAN. Long range navigation

MALS. Medium-intensity approach lighting system

MALSR. Medium-intensity approach lighting system with runway alignment indicator lights

MIRL. Medium-intensity runway edge lighting

MITL. Medium-intensity taxiway edge lighting

MLS. Microwave landing system

MM. Middle marker

MOA. Military operations area

MSL. Mean sea level

NAVAID. Navigational aid

NDB. Nondirectional radio beacon

NM. Nautical mile (6,076.1 feet)

NOTAM. Notice to airmen

NPIAS. National plan of integrated airport systems

NPRM. Notice of proposed rulemaking

ODA. Oregon Department of Aviation

ODALS. Omnidirectional approach lighting system

OFA. Object free area

OFZ. Object free zone

OM. Outer marker

OPA. Oregon Pilots Association

PAC. Project Advisory Committee

PAPI. Precision approach path indicator

PFC. Passenger facility charge

PCL. Pilot-controlled lighting

PLASI. Pulsating visual approach slope indicator

PMP. Pavement Maintenance Program

POFA. Precision object free area

PVASI. Pulsating/steady visual approach slope indicator

RCO. Remote communications outlet

REIL. Runway end identifier lights

RNAV. Area navigation

RPZ. Runway protection zone

RTR. Remote transmitter/receiver

RVR. Runway visibility range

RVZ. Runway visibility zone

SALS. Short approach lighting system

SASP. State Aviation System Plan

SEL. Sound exposure level

SID. Standard instrument departure

SM. Statute mile (5,280 feet)

SRE. Snow removal equipment

SSALF. Simplified short approach lighting system with sequenced flashers

SSALR. Simplified short approach lighting system with runway alignment indicator lights

STAR. Standard terminal arrival route

SWL. Runway weight bearing capacity for aircraft with single-wheel type landing gear

STWL. Runway weight bearing capacity for aircraft with single-wheel tandem type landing gear

TACAN. Tactical air navigation

TDZ. Touchdown zone

TDZE. Touchdown zone elevation

TAF. Terminal Area Forecast

TODA. Takeoff distance available

TORA. Takeoff run available

TRACON. Terminal radar approach control

VASI. Visual approach slope indicator

VFR. Visual flight rules

VHF. Very high frequency

VOR. Very high frequency omnidirectional range

VORTAC. VOR and TACAN collocated

WAAS. Wide Area Augmentation System

Appendix B: FAA CORRESPONDENCE

Airport Master Plan Update

Aurora State Airport



U.S. Department
of Transportation
**Federal Aviation
Administration**

Northwest Mountain Region
Seattle Airports District Office
1601 Lind Avenue S.W., Suite 250
Renton, Washington 98057-3356

October 19, 2012

Mr. Mitch Swecker, Director
Oregon Dept. of Aviation
3040 25th Street, SE
Salem, OR 97302

Dear Mr. Swecker,

The Aurora State Airport Layout Plan (ALP) dated March, 2012 and submitted by WH Pacific, Inc., is hereby approved. A signed copy of the ALP is enclosed.

This approval considers only the safety, utility, and efficiency of the Aurora State Airport, and is conditioned on acknowledgment that any development on airport property requiring federal environmental approval must receive such written approval from the Federal Aviation Administration (FAA) prior to commencement of the subject development. This ALP approval is also conditioned on acceptance of the plan under local land use laws. We encourage appropriate agencies to adopt land use and height restrictive zoning based on the plan since action toward this end is a prerequisite of the Airport Improvement Program (AIP). Grant Assurance 21, Compatible Land Use, requires airport sponsors to take appropriate action, including the adoption of zoning laws to restrict the use of land adjacent to, or in the immediate vicinity of the airport, to activities and purposes compatible with normal airport operations including the arrival and departure of aircraft. The FAA recognizes residential development adjacent to the airport property as an incompatible land use.

Approval of the plan does not indicate that the United States will participate in the cost of any development proposed. When airport construction, alteration, or deactivation is undertaken, such action requires notification and review in accordance with the provisions of Part 77 and Part 157 of the Federal Aviation Regulations.

Please attach this letter to the approved Airport Layout Plan and retain it in the airport files for future use under the Airport Improvement Program.

Sincerely,

A handwritten signature in blue ink that reads "Carol A. Suomi".

Carol A. Suomi
Manager, Seattle Airports District Office

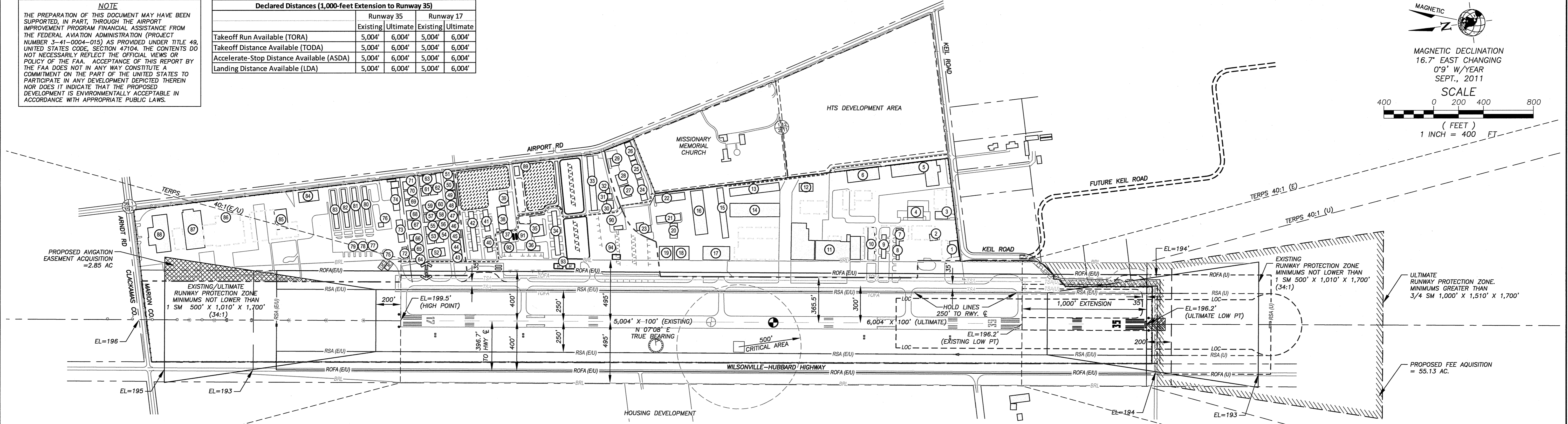
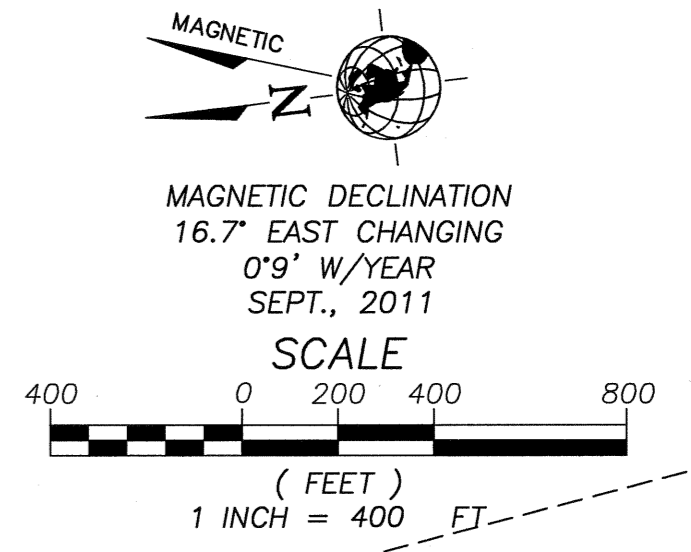
Encl: Aurora ALP dtd Mar 2012

cc:

Ms. Heather Peck, ODA
Mr. Rainse Anderson, WHP

NOTE
THE PREPARATION OF THIS DOCUMENT MAY HAVE BEEN SUPPORTED, IN PART, THROUGH THE AIRPORT IMPROVEMENT PROGRAM FINANCIAL ASSISTANCE FROM THE FEDERAL AVIATION ADMINISTRATION (PROJECT NUMBER 3-41-0004-015) AS PROVIDED UNDER TITLE 49, UNITED STATES CODE, SECTION 47104. THE CONTENTS DO NOT NECESSARILY REFLECT THE OFFICIAL VIEWS OR POLICY OF THE FAA. ACCEPTANCE OF THIS REPORT BY THE FAA DOES NOT IN ANY WAY CONSTITUTE A COMMITMENT ON THE PART OF THE UNITED STATES TO PARTICIPATE IN ANY DEVELOPMENT DEPICTED THEREIN NOR DOES IT INDICATE THAT THE PROPOSED DEVELOPMENT IS ENVIRONMENTALLY ACCEPTABLE IN ACCORDANCE WITH APPROPRIATE PUBLIC LAWS.

	Declared Distances (1,000-foot Extension to Runway 35)			
	Runway 35		Runway 17	
	Existing	Ultimate	Existing	Ultimate
Takeoff Run Available (TORA)	5,004'	6,004'	5,004'	6,004'
Takeoff Distance Available (TODA)	5,004'	6,004'	5,004'	6,004'
Accelerate-Stop Distance Available (ASDA)	5,004'	6,004'	5,004'	6,004'
Landing Distance Available (LDA)	5,004'	6,004'	5,004'	6,004'



	EXISTING	ULTIMATE
AIRPORT PROPERTY LINE	---	---
FEE ACQUISITION	---	SAME
AVIATION EASEMENT ACQUISITION	---	SAME
ON-AIRPORT BUILDING	□	□
OFF-AIRPORT BUILDING	□	□
FENCE	---	SAME
AIRPORT REFERENCE POINT	⊕	⊕
BUILDING RESTRICTION LINE (35' AGL) (BRL)	---	SAME
RUNWAY SAFETY AREA (RSA)	---	---
RUNWAY OBJECT FREE AREA (ROFA)	---	---
RUNWAY PROTECTION ZONE (RPZ)	---	---
EXTENDED RUNWAY CENTERLINE	---	SAME
DISPLACED THRESHOLD	N/A	---
RUNWAY HOLDLINE	---	SAME
TAXIWAY SAFETY AREA (TSA)	---	---
TAXIWAY OBJECT FREE AREA (TOFA)	---	---
SERVICE ROAD	N/A	---
HANGAR DEVELOPMENT AREA	---	SAME
APRON / TIEDOWN AREA	---	---
WINDCONE & SEGMENTED CIRCLE	---	SAME
VASI	---	SAME
PAPI	N/A	---
REIL	---	SAME
ODAL	---	---
LOCALIZER	---	---
LOCALIZER CRITICAL AREA	---	SAME
CARGO APRON	N/A	---
PAVEMENT	---	---
PAVEMENT REMOVAL	---	SAME
FUEL TANKS	---	---
HELICOPTER PARKING	---	---
RESIDENTIAL THROUGH THE FENCE ACCESS (RTTF)	---	SAME

Runway 17/35 Data		
	Existing	Ultimate
Percent Effective Gradient	0.06%	Same
Percent Wind Coverage (10.5 kts)	98.93%	Same
Maximum Elevation Above MSL	199.5'	Same
Runway Length	5,004'	6,004'
Runway Width	100'	Same
Runway Surface Type	Asphalt	Same
Runway Strength (Dual Wheel Gear)	45,000 lbs	60,000 lbs
FAR Part 77 Approach Category		
Runway 17	C (NP)	Same
Runway 35	C (NP)	D (NP)
Approach Type	Nonprecision	Same
Runway 17	Not lower than 1 sm	Same
Runway 35	Not lower than 1 sm	Not lower than 3/4 sm
Approach Slope (Required / Clear)	34:1 / 34:1	Same
Runway Lighting	MIRL	Same
Runway Marking	Precision	Same
Taxiway Lighting	MITL / Reflectors	Same
Taxiway Marking	Standard	Same
Navigation Aids	LOC/DME, NDB	Same
Visual Aids	ODALS, VASI, REIL	ODALS, PAPI, REIL
Runway Safety Area Dimension	500' x 1,000' beyond rwy end	Same
Runway Object Free Area Dimension	800' x 1,000' beyond rwy end	Same
Runway Obstacle Free Zone (OFZ)	No OFZ Penetrations	Same
Runway End Coordinates		
Runway 17	Latitude 45°15'14.166"N Longitude 122°46'07.828"W	Same
Runway 35	Latitude 45°14'25.148"N Longitude 122°46'18.251"W	45°14'15.350"N 122°46'18.251"W

Airport Data		
	Existing	Ultimate
Airport Elevation (MSL)	199.5'	Same
Airport Reference Point (ARP)		
Latitude	45°14'54.085"N	45°14'44.758"N
Longitude	122°46'11.405"W	122°46'13.040"W
Mean Maximum Temperature	84°	Same
Airport Reference Code (ARC)	C-II	C-II
Airport Service Level	General Aviation	Same
Design Aircraft	IAI Astra 1125	Cessna Citation X

Notes
Horizontal datum is NAD 1983, vertical datum is NAVD88.
The Airport is flat. Elevations / ground contours vary by less than 5 feet and are not shown. Drainage features are typically 2-3 feet lower than adjacent land.
Building restriction line is based on a 35-foot building located 495 feet from the runway centerline not penetrating FAR Part 77 surfaces for the Airport.
A Residential Through The Fence (RTTF) access exists at hangar #64 at the Wylee Condominium Association. The tenant is the resident caretaker for the airport.

Modifications to Standards		
Standard Being Modified	Proposed Action	
1	Advisory Circular (AC) 150/5300-13, para 307 (Runway Object Free Area)	The standard runway object free area (OFA) for Airport Reference Code C-II airports is 800 feet. Highway 551 runs north/south parallel to Runway 17/35; the approximate distance from the Runway 17/35 centerline to the Highway 551 centerline is 400 feet. As the airport geometry is not changing from the current condition, the Oregon Department of Aviation (ODA) requests a modification of the OFA design standard to allow the runway and highway to remain in their current positions.
2	AC 150/5300-13, Appendix 14 (Declared Distances)	The ODA requests the existing threshold for Runway 17 be referenced in determining FAR Part 77 surfaces and design standard surfaces referenced in AC 150/5300-13 (i.e., RSA, RPZ, OFA, OFZ).

Airport Facilities and Buildings Legend				
Building No.	Name / Owner	Use	Estimated Top Elevation (AGL)	
Existing	Ultimate		Existing	Ultimate
1	Leased by Aurora Jet Center	Maintenance, Aircraft Storage	27'	
2	Aurora Jet Center	Fixed Base Operator	22'	
3	Private Southend Hangar	Aircraft Storage	19'	
4	BPS Associates	Aircraft Storage	23'	
5	Van's Aircraft	Business	30'	
6	Artex	Business	26'	
7, 8	Foxtrot Hangars / Southend Airpark	Aircraft Storage	21'	
9	Hangar Row G / Southend Airpark	Aircraft Storage	13'	
10	Hangar Row H / Southend Airpark	Business, Aircraft Storage	21'	
11	Hangar India, Juliet & Kilo / Southend Airpark	Business, Aircraft Storage	38'	
12	Winco	Business	29'	
13	Hangar November / Southend Airpark	Business, Aircraft Storage	29'	
14	Hangar Mike / Southend Airpark	Business, Aircraft Storage	31'	
15-17	Airport Aviation Condo Association	Aircraft Storage	32'	
18	Airport Aviation Condo Association	Aircraft Storage	32'	
19	Aurora Aviation	Maintenance	26'	
20-22	Airport Aviation Condo Association	Aircraft Storage	25'	
23	Columbia Aviation Association	Clubhouse	21'	

Airport Facilities and Buildings Legend				
Building No.	Name / Owner	Use	Estimated Top Elevation (AGL)	
Existing	Ultimate		Existing	Ultimate
24-26	Meridian Condos	Business	23'	
27-29	Pacific Coast Aviation	Business	26'	
30-33	Oregon Dept. of Aviation	Aircraft Storage	25'	
34	Columbia Helicopters	Aircraft Storage	22'	
35	Columbia Helicopters	Maintenance	28'	
36	Aurora Aviation	Fixed Base Operator	16'	
37	Pitts Hangar	Aircraft Storage	26'	
38-42	Aurora Business Park	Aircraft Storage	25'	
43-71	Wylee Condo Association	Aircraft Storage	27'	
72	Civil Air Patrol Building	Aircraft Storage	26'	
73	Sunset Helicopters	Business	26'	
74	Aerometal	Business	27'	
75	Willamette Aviation	Aircraft Fueling	7'	
76	Willamette Aviation	Fixed Base Operator	12'	
77-83	Willamette Aviation	Aircraft Storage	16'	
84	Marlow Treit	Aircraft Storage	22'	
85-88	Columbia Helicopters	Business	30'	
89	Fire Suppression Tanks	Fire Suppression	12'	
90	Aurora Rural Fire Protection District	Emergency Response	TBD	
91	Aurora Aviation	Aircraft Fueling	16'	
92	Oregon Dept. of Aviation	Cargo Apron	N/A	
93	Oregon Dept. of Aviation	Helicopter Parking	N/A	
94	Oregon Dept. of Aviation	Air Traffic Control Tower	90'	

DATE: 10/17/2012 9:23 AM [AUTHOR: rivosaki] [PLOTTER: C:\Program Files\Autodesk\AutoCAD 2011\Plot\Plotter.ctb] [STYLE: WHP-Standard.ctb] [PLOT: P:\Oregon Department of Aviation\034317\Design\Drawings\Xrefs\034317-XREF-MSTR-ALP.dwg] [LAYOUT: Layout1]

WHPacific
9755 SW Barnes Rd, Suite 300
Portland, OR 97225
503-626-0455 Fax 503-526-0775
www.whpacific.com

OREGON DEPARTMENT OF AVIATION

APPROVAL BLOCK
OREGON DEPARTMENT OF AVIATION
SIGNATURE: *Markus Buel*
TITLE: *Director* DATE: 10/17/2012
FEDERAL AVIATION ADMINISTRATION
SIGNATURE: *Carol Suomi*
TITLE: *Manager, Seattle, ADD* DATE: 10/18/12
APPROVAL LETTER DATED: *Seattle dated 10/19/12*

SHEET INFO		REVISIONS	
DESIGNED	SML	NO.	BY DATE REMARKS
CHECKED	REA		
APPROVED	---		
LAST EDIT	10/17/2012		
PLOT DATE	6/28/2012		
SUBMITTAL			

AIRPORT LAYOUT PLAN DRAWING
OREGON DEPARTMENT OF AVIATION
AURORA STATE AIRPORT ~ MASTER PLAN UPDATE
PROJECT NUMBER: 034317
DRAWING FILE NAME: 034317-XREF-MSTR-ALP
SCALE: 1"=400'

SHEET NUMBER
1
2 of 10



U.S. Department
of Transportation

**Federal Aviation
Administration**

Seattle Airports District Office
1601 Lind Avenue, S. W., Ste 250
Renton, Washington 98057-4056

June 7, 2011

Mr. Rainse Anderson
Director of Aviation
WH Pacific, Inc.
9755 SW Barnes Road, Suite 300
Portland, OR 97225

Dear Mr. Anderson:

This letter is in response to your e-mail of May 15, 2011, in which you requested clarification of the application of declared distances at the Aurora State Airport in Oregon. It is our understanding that although the current Master Plan study indicates that there are constrained operations that justify a runway extension, it recommends using declared distances as a way to gain limited operational use of new pavement because pursuing an extension would not be feasible due to the negative environmental and/or business related impacts.

The purpose of declared distances is described in Federal Aviation Administration Advisory Circular 150/5300-15 (Airport Design) Appendix 14, which states:

"The purpose of declared distances in airport design is to provide an equivalent runway safety area (RSA), runway object free area (ROFA), or runway protection zone (RPZ) in accordance with the design standards in Chapters 2 and 3 at existing constrained airports where it is otherwise impracticable to meet standards by other means. Declared distances are also employed when there are obstructions in the runway approaches and/or departure surface that are beyond the ability of the airport owner to remove and result in a displaced runway threshold or change in the departure end of the runway."

The Master Plan's Chapter 5 (Scenarios 1 & 2), proposes an alternative that adds pavement before newly displaced thresholds (thereby necessitating the application of declared distances) to meet the constrained operations of aircraft; however, it does not consider this additional pavement as a runway extension. Upon careful review of these proposals, our determination is that these pavement extensions are in fact limited use runway extensions despite the application of declared distances. A rule of thumb is that; ***anything that increases the takeoff run available from the existing total runway length is a runway extension.***

In summary, we would not participate in funding proposals that would provide only partial and/or limited use of a runway extension.

If you have any other questions, please contact Bruce Fisher at 425.227.2649 or me at: 425.227.2657.

Sincerely,

A handwritten signature in blue ink that reads "Carolyn T. Read".

Carolyn T. Read
Acting Manager, Seattle Airport District Office

Cc: Mr. Mitch Swecker, Oregon Dept of Aviation

Lucas, Sarah

Subject: Aurora State Airport-Master Plan
Attachments: Aurora Scenario #1.pdf; Aurora Scenario #2.pdf

From: Anderson, Rainse
Sent: Friday, May 13, 2011 1:33 PM
To: Bruce.Fisher@faa.gov; Stan.Allison@faa.gov
Cc: Mark Gardiner; SWECKER Mitch T * ODA; chris.corich@portofportland.com; LARSEN Sandra * ODA; Lucas, Sarah; Anderson, Rainse; WILSON John P * ODA
Subject: Aurora State Airport-Master Plan

Bruce/Stan,

The Aurora State Airport Preferred Alternative public comments were gathered until April 21, and were then discussed by the Oregon Aviation Board on April 28. As you will recall, a runway extension was shown to be justified in prior chapters of the Master Plan Update. However, a runway extension was not included in the proposed Preferred Alternative for several reasons. As a result of the comments given (available [here](#)), we have developed two additional scenarios that utilize displaced thresholds to gain takeoff length available in an attempt to “meet in the middle” of the airport user safety needs and community concerns. The scenarios are as such (drawings attached):

Scenario #1

Add 600-foot displaced threshold to Runway 35 and 200-foot displaced threshold to Runway 17 to acquire the following declared distances.

Scenario #1 Declared Distances		
	R35	R17
Takeoff Run Available (TORA)	5,604'	5,204'
Takeoff Distance Available (TODA)	5,604'	5,204'
Accelerate-Stop Distance Available (ASDA)	5,804'	5,804'
Landing Distance Available (LDA)	5,004'	5,004'

Scenario #2

Add 800-foot displaced threshold to Runway 17 to achieve the following declared distances.

Scenario #2 Declared Distances		
	R35	R17
Takeoff Run Available (TORA)	5,004'	5,804'
Takeoff Distance Available (TODA)	5,004'	5,804'
Accelerate-Stop Distance Available (ASDA)	5,804'	5,804'
Landing Distance Available (LDA)	5,004'	5,004'

As we have discussed the scenarios internally, and with ODA, we recognize there are (at least) two separate issues from FAA’s perspective. The first issue relates to the technical application of the declared distances and the second is in regards to funding such projects. At this time we are concerned with the technical issues and wish to defer the funding issue to a later time, if needed.

Specifically, the technical concerns we have relate to the TERPS and Part 77 surfaces and how they would be applied at the Airport. Per our understanding of the RSA, OFA, and RPZ we believe these surfaces will be located in relation to the threshold (not end of pavement).

As for the departure/TERPS surface, AC 150/5300-13 Appendix 2, Figure A2-3, states "Surface (TERPS) starts at end of clear way if one is in place." Would the pavement behind the threshold be considered a "clearway" at Aurora? If we do not have to designate the pavement as a clearway to leave the departure surface in its current location this would be desirable. Moving the surface would create impacts to Columbia Helicopters' future expansion plans.

As for Part 77 surfaces, we read AC 150/5300-13 Appendix 14, Para 1.b, that states "Where declared distances differ, the primary surface extends 200 feet beyond each end of the runway or the far end of each TODA, whichever is further, to protect departures to the extent of the 14 CFR Part 77 approach surface for that runway end." So it is our interpretation that the primary surface would be relative to the paved surface, rather than the threshold, even if that portion of the pavement were only available for takeoff and not landing (*i.e.*, approach surface). Correct?

Additionally, while running the AFTIL simulation labs last week, a 1,000' extension to the south was modeled – as you know. This was done to preserve the ability to extend the runway in the future. While an extension of pavement to the north was not modeled, given the topography and building layout at the Airport, it is not anticipated there would be any issues with tower cab visibility.

The use of declared distances at Aurora, while perhaps unconventional, is an attempt on our behalf to provide a viable airport that meets user needs and still be neighborly. Controversy over any true runway extension would likely thwart the environmental process, and we have good reason to believe it would be challenged on a legal basis for violation of Oregon's Statewide Planning Goals (farmland protection). From responses given by operators, it is clear a longer runway is justified at Aurora. While the declared distances would not fully utilize the runway in all directions, it is a compromise that adds substantial operational value and safety for the constrained business jets while not impacting the existing businesses development plans by changing approach and departure surfaces. The Oregon Aviation Board views this option favorably as an agreeable solution to the challenges presented.

In closing, we look forward to FAA's official position on the application of declared distances at the Aurora State Airport and clarification of the technical issues associated with them. Mitch Swecker, ODA, will be at your office on May 18-19. It is my hope that you will be able to discuss this letter with your colleagues prior to that date and to arrange an in-person meeting May 18.

Please contact me if you have any questions.

Regards,
Rainse

Rainse Anderson
Director of Aviation



9755 SW Barnes Rd, Ste 300 | Portland, OR 97225
D 503.372.3521 | M 971.235.3818 | F 503.526.0775

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U.S. Department
of Transportation
**Federal Aviation
Administration**

Seattle Airports District Office
1601 Lind Avenue, S. W., Ste 250
Renton, Washington 98055-4056

29 September, 2010

RECEIVED
OCT 04 2010
WHPACIFIC

Mr. Doug Hedlund
Director, Oregon Department of Aviation
3040 25th Street, SE
Salem, OR 97302

Dear Mr. Hedlund:

Airport Improvement Program (AIP) Project Number 3-41-0004-015
Approval of Activity Forecasts – Aurora State Airport Master Plan Update

I have reviewed Chapter 3 of the Airport Master Plan Update submitted by Mr. Rainse Anderson of WH Pacific, Inc.

I find adequate justification exists for the figures cited in the Forecasts of Aviation Activity and hereby approve the Forecast Summary. This chapter appears to be well-done and I believe that you and your Consultant(s) are off to a good start.

If you have any questions, please feel free to contact me at: 425.227.2649 or by e-mail at: bruce.fisher@faa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Bruce C. Fisher".

Bruce C. Fisher
Airport Planner, Oregon / Idaho

cc: Mr. Rainse Anderson

Appendix C: AIRPORT USER SURVEY

Airport Master Plan Update

Aurora State Airport

Aurora State Airport User Survey

Survey Summary

July 2010

Background

In the fall of 2009, The Oregon Department of Aviation began the process of updating the 2000 Aurora State Airport Master Plan. The Airport Master Plan is ten years old and needs to be updated to reflect new facilities, current projections of airport activity, new environmental and other regulatory constraints, and to plan for future use of the airport.

To support this process, the Oregon Department of Aviation conducted a survey as part of the project kick-off in October 2009. The survey asked airport users and interested parties about their aircraft and airport use and suggestions for improvements. The following is a summary of their responses. An appendix of all responses is also available.

In total, 61 people responded to the survey. 31 of these respondents completed the survey online and 30 mailed or faxed in hard copies to the project team.

Aircraft Use and Landings

Aircraft Use

The survey asked respondents to indicate whether they own or fly an aircraft. 49 respondents indicated that they do own or fly an aircraft and 12 respondents indicated that they do not.

(All participants answered this question)

The responses below are classified by Aircraft Reference Code (ARC). The ARC is commonly used to group similar aircraft, and is represented by a letter designation and Roman numeral. The letter designation (A, B, C, etc.) is the aircraft approach category, which is representative of the aircraft's approach speed. The Roman numeral (I, II, III, etc.) represents the airplane design group and is determined by physical characteristics of the airplane (either wingspan or tail height, whichever is most demanding). Below is a table showing the number of responses by ARC, along with aircraft representative of each ARC.

ARC	Approach Speed (Aircraft Approach Category)	Airplane Design Group (Wingspan / Tail Height)	Representative Aircraft	Number of Responses
A-I	< 91 knots	< 49' / < 20'	Cessna 172	54
A-II	< 91 knots	49'-79' / 20'-30'	Pilatus PC-12	3
B-I	91-121 knots	< 49' / < 20'	Lear Jet 45	3
B-II	91-121 knots	49-79' / 20'-30'	Beechcraft King Air 200	10
-	-	-	Helicopter	10
-	-	-	Aircraft with Unknown ARCs	6
			Total	86

The appendix has a full listing of aircraft types reported by respondents.

Annual Landings

Respondents estimated their annual number of landings, including touch and go landings.
(51 participants answered this question.)

The table below summarizes their responses:

Range of estimated annual landings	Number of responses
None	4 responses
17-50	7 responses
55-80	9 responses
100-190	9 responses
200-300	14 responses
350-450	3 responses
500-600	2 responses
2000	2 responses

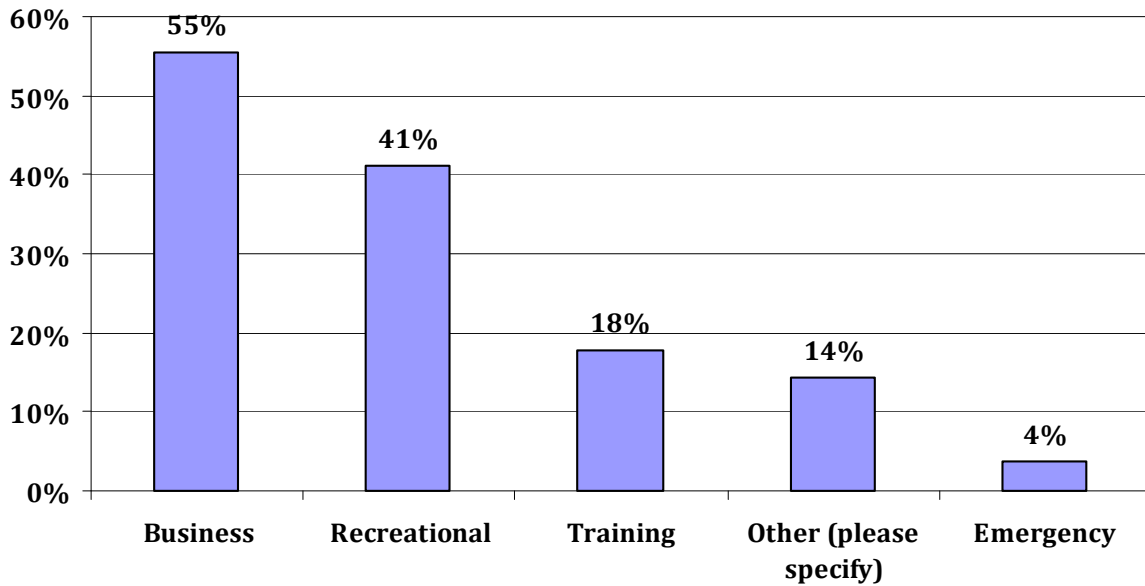
Respondents estimated the percentage of annual landings made at Aurora State Airport. *(53 participants answered this question.)*

Estimated percentage of annual landings at Aurora State Airport	Number of responses (total)	Number of responses (for participants who answered that their aircraft is based at Aurora State Airport)	Number of responses (for participants who answered that their aircraft is NOT based at Aurora State Airport or do not own an aircraft)
0%	4	0	4
2-5%	5	0	5
10%	1	1	0
20-29%	4	0	4
30-45%	10	9	1
50%	10	7	2
60-75%	10	8	3
80-90%	4	4	0
100%	2	1	1

Primary use of Aurora State Airport

Respondents indicated how they primarily use the airport. Over 55% of participants use the airport for business purposes. *56 participants responded to this question.*

How do you primarily use the Aurora State Airport?



Eight respondents indicated that they have an “other” primary use for the airport. The following other uses were listed:

- Personal transportation/personal travel (*4 responses*)
- I live by the airport but I do not fly (*2 responses*)
- Telephone/ Broadband utility company (*1 response*)
- Volunteer (*1 response*)

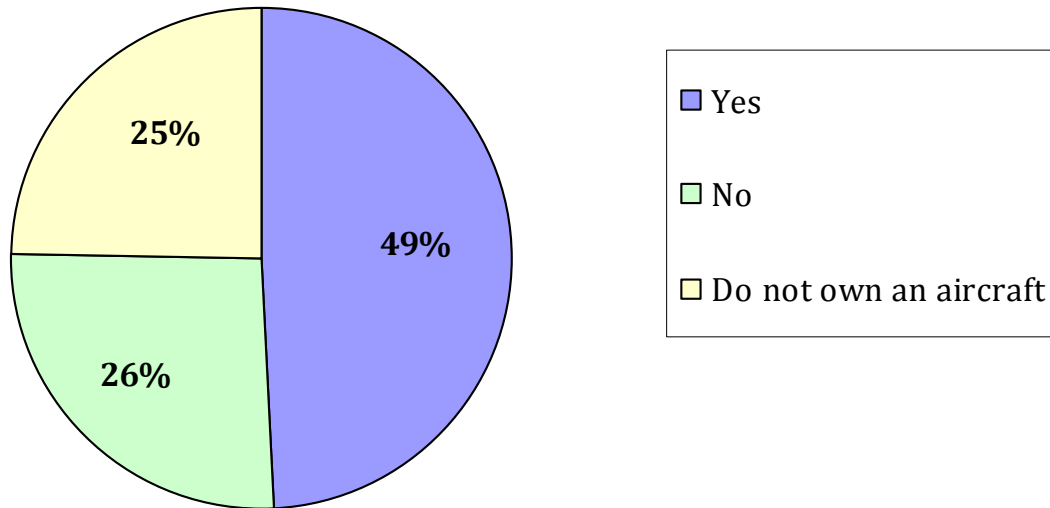
Aircraft Base and Leasing

Aircraft Base

Respondents indicated whether their aircraft is based at Aurora State Airport. 49% indicated that their aircraft is based at Aurora State Airport, 26% said no, and 25% indicated that they do not own an aircraft.

(All participants responded to this question.)

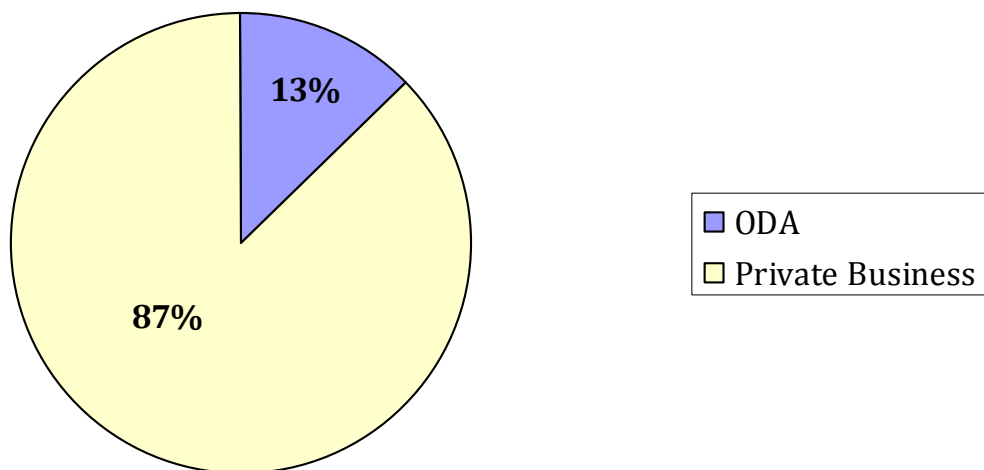
Is your aircraft based at Aurora State Airport?



Aircraft Storage and Tie-down

Those participants that do keep an aircraft at the Aurora State Airport indicated whether they lease or rent aircraft storage or tie-down from the Oregon Department of Aviation or from a private business. 87% indicated that they lease or rent from a private business. (31 participants answered this question.)

Do you lease or rent aircraft storage or tiedown from the Oregon Department of Aviation or from a private business?



Aircraft based at other Airports

Those participants who do not keep an aircraft at the Aurora State Airport indicated where they base their aircraft.

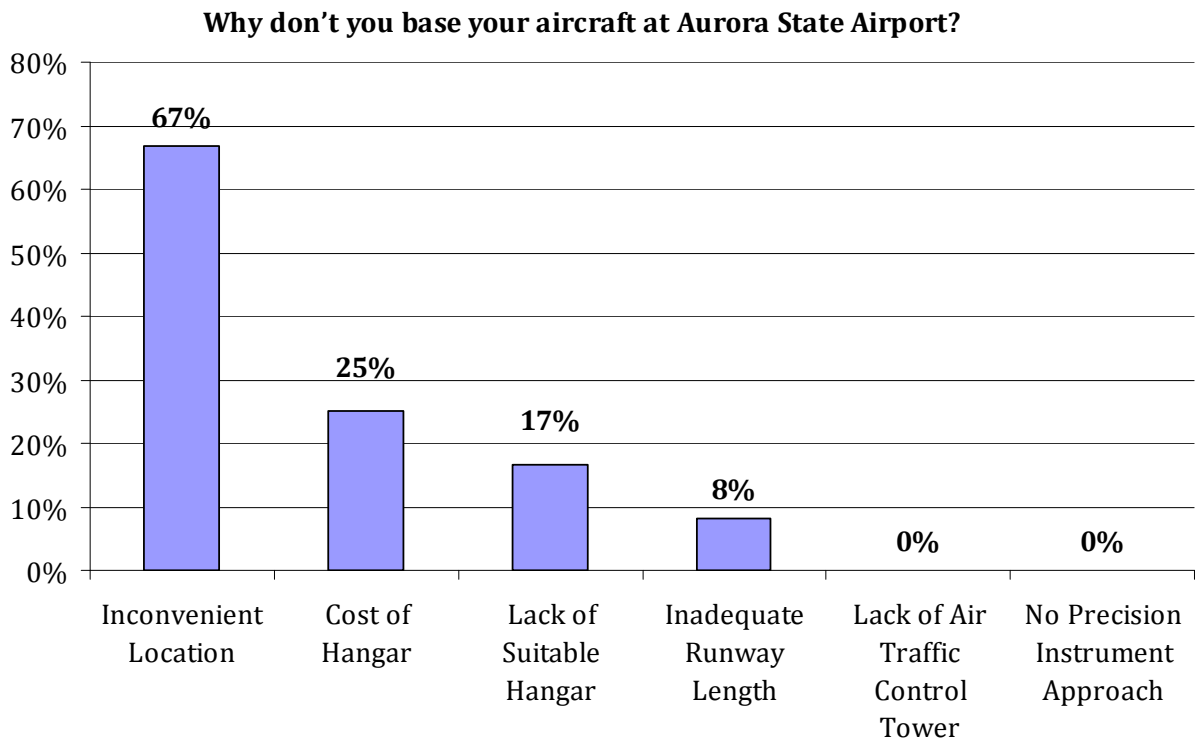
(14 participants answered this question.)

The following airport codes were listed:

- Corvallis, OR (CVO) (2 respondents)
- Hubbard, OR (Lenhardt Airpark) (7S9) (2 respondents)
- Troutdale, OR (TTD) (2 respondents)
- Medford, OR (MFR)
- La Grande, OR (LGD)
- Newburg, OR (Sportsman Airpark) (2S6)
- Sunset Airpark
- Hillsboro, OR (Stark's Twin Oak) (7S3)
- Scappoose, OR (SPB)
- San Jose, CA (SJC)
- Eugene, OR (EUG)
- Salem, OR (SLE)

Those participants who do not keep an aircraft at the Aurora State Airport indicated why they do not base their aircraft there. Most cited inconvenient location.

(12 participants answered this question.)



Four participants left other responses:

- In the process of building a 135,000 square foot hangar in property adjacent to airport
- Aircraft are conveniently based at my home airport (2 responses)
- Based in Eugene (BIZ)

Airport Improvements

Respondents were asked to provide suggestions for improving Aurora State Airport. *(50 participants responded to this question.)*

The most commonly suggested improvements were the following:

- Build a control tower. (25 comments)
 - 25 respondents commented that a control tower is the most needed improvement. Six of these noted that a control tower is needed for safety and three thought that it would help with noise abatement. One person added that a control tower could reduce conflicts in IFR/VFR traffic.
- Lengthen runway. (14 comments)
 - 14 respondents suggested lengthening the runway. Two suggested adding 1,000 ft to the existing length, and two suggested a 6,000-foot length.
- Add precision instrument ILS approach. (10 comments)

- Ten participants suggested a precision instrument ILS approach. One noted that this would help with the problem of fog, and another added that an ILS approach could reduce the chance of accidents.
- Change calm wind runway back to R17. (9 comments)
 - Nine participants suggested changing the calm wind runway back to R17. Two noted that the current calm wind designation of R35 creates a safety conflict.
- Improve airport roads and address traffic issues. (8 comments)
 - Eight respondents suggested various improvements to the airport internal roads and traffic issues. Three suggested general airport road improvements for safety. One said that traffic issues on Airport Road are a concern. One said there is too much hangar construction at Southend airpark. One suggested relocating Keil, as it is a dangerous road. One suggested changing Ehlen Road and Highway 515.
- Provide public sewer and water facilities. (6 comments)
 - Six participants suggested connecting the airport to City of Aurora sewer and water facilities.
- Add a restaurant or café. (4 comments)
 - Four respondents suggested adding a restaurant or café. One suggested using Nampa, ID or Caldwell, ID as an example.
- Lower approach minimums. (3 comments)
 - Three participants suggested lowering minimums. One suggested clearing obstacles to meet TERPS requirement for lower RNAV (GPS) approach minimums.
- Do not build a control tower. (3 comments)
 - Three people commented that a control tower should not be built. One noted that a control tower would not be cost effective.
- Consider the neighborhood in planning. (3 comments)
 - One person who lives near the Aurora State Airport commented that large jet planes make too much noise, and would like to see only smaller aircraft at the airport. One asked that local neighbors be informed of this process and results. A third suggested using design and building standards in the planning process that enhance the neighborhood.
- Get radar coverage/radar approach in the area. (2 comments)
- Improve lighting and install approach path lighting on Runway 35. (2 comments)

The following lists some other suggestions made by respondents. A full list of comments can be found in the appendix.

- Add run-up areas for safety.
- Add commercial service.
- Begin the master planning project by developing a vision statement.
- Allow for more developable land inside of Keil Road, Airport Way, Hwy 515, and Arndt Road.

- Get controlled airspace.
- Support ancillary airport and flight business.
- Provide better non-aircraft access.
- Increase hangar lease locations for new construction.
- Have an area for grass landings.
- Glideslope.
- Add mufflers and reduce noise.
- Provide lower cost hangars.
- The bigger taxiways were a great addition.
- Acquire land surrounding airport for future growth.
- The single runway is close to the maximum traffic possible. Lengthening a single runway or adding a tower will not solve this problem.
- Change nothing at all; the airport has all I need.
- May acquire large aircraft, would like to see increased weight restriction on runway (65,000 lb) to match taxiway.
- Need jet maintenance.
- Provide better control of entry of helicopter traffic.

Aurora State Airport User Survey

Appendix of All Responses

July 2010

This appendix includes all questions asked on the Aurora State Airport User Survey and all responses received.

Question# 1: What zip code do you live in?

61 total responses:

- 97225
- 97008
- 97002
- 97002
- 97035
- 97013
- 97002
- 97002
- 97202
- 97045
- 97140
- 97002
- 97062
- 97002
- 97333
- 97013
- 97055
- 97035
- 97223
- 970710
- 97068
- 97032
- 97219
- 97070
- 97034
- 97002
- 97002
- 97002
- 97224
- 97002
- 97124
- 97080
- 97035
- 97007
- 97070
- 97229
- 97013
- 95110
- 97002
- 97212
- 97002
- 97002
- 97013
- 98662
- 97402
- 97013
- 97070
- 97032
- 97013
- 97392
- 98607
- 97013
- 97224
- 97002
- 97002
- 97062
- 97002
- 97034
- 97140
- 97002
- 98664

Question# 2: Do you own or fly an aircraft? If so, list model/type of aircraft.

61 total responses:

- No 12 responses
- Yes 49 responses

The 49 respondents that answered “yes” provided the following model/type of aircraft:

- Beechcraft King Air (BE-200)
- Cessna P210 Centurion
- Piper J3, Cessna 180, Cessna T210, Cessna 310, Aero Commander 680V
- Cessna 172
- Beechcraft Bonanza F33A
- Single engine
- Beechcraft P-35 Bonanza
- Large Sikorsky and Bell Type I Helicopters
- Piper Arrow
- PA-30 Piper Twin Comanche
- Cessna 172
- Aviat Husky
- Piper Aztec
- Piper PA-32-300
- Globe Swift
- Cessna 182RG
- Cessna 205, J-4a Cub, 415d Ercoupe, N3N-3 navy
- Cessna TR182
- Piper Comanche
- Van's RV-4, Van's RV-10, Van's RV-12
- Van's Aircraft RV-6, 7, 7A, 8, 8A, 9A, 10, 12; Own RV-7A
- Van's RV-6
- RV-9A
- V35-B Bonanza
- PA45 Piper Malibu and XLZ Liberty
- Cessna 172 SP
- Astra 1125/G100
- Cessna 205, J-4a CUB, N3N-3 Navy, Cessna 414
- Mooney M20F
- EC-135 Helicopter, AS350 B3 Helicopter
- Cessna 140 and Cessna 182
- Cessna Citation 560XL
- Single engine and multi-land
- IA 1125 Astra, SR-22 Cirrus
- Cessna Citation XL
- Pilatus PC-12/47E
- Cessna 18L
- Cessna 400TT
- Cessna 550, PAY2, Beechcraft King Air (BE-200)
- Lear Jet 45
- 6X Helo MD500E, King Air C90GTi, King Air B350
- Pilatus PC-12
- DeHavilland Beaver N56TM, DeHavilland Tiger Moth N82TM, Cessna 185 N84TM, J3-Cub N3TM
- Cessna Citation
- RV-8
- Beechcraft King Air (BE-200)
- Beech Debonair
- Beechcraft King Air (BE-200), Cessna 172, Cessna 152
- Falcon F-900
- Pilatus PC-12

Question# 3: Estimate your number of annual landings. (Include Touch & Go)

51 total responses:

- | | | |
|-------|--------|---------------------------|
| • 500 | • None | • 30 |
| • 0 | • 300 | • 25 to 30 local landings |
| • 0 | • 120 | • 100 |
| • 0 | • 200 | • 200 |
| • 17 | • 100 | |

- | | | |
|-----------|------------|--------|
| • 30 | • 300 | • 350 |
| • 75 | • 30-35 | • 250 |
| • 20 | • 190 | • 5000 |
| • 150 | • 80 | • 175 |
| • 75 | • 2000 | • 250 |
| • 100 | • 60 | • 150 |
| • 120 | • 250 | • 80 |
| • 75 | • hundreds | • 60 |
| • 450 | • 500-600 | • 350 |
| • 200-250 | • 200 | • 300 |
| • 300 | • 200 | • 55 |
| • 50 | • 75 | |
| • 200 | • 250 | |

Question# 4: What percent of your annual landings are at Aurora State Airport?

53 total responses:

- | | | |
|------------------------------|---------|-------|
| • 2 | • 50% | • 100 |
| • 0 | • 75 | • 25 |
| • 0 | • 50 | • 30 |
| • 0 | • 60 | • 50 |
| • 02/03/2010 | • 25 | • 80 |
| • None | • 150 | • 75 |
| • 80 | • 35-40 | • 5 |
| • 90 | • 5 | • 30 |
| • 70% | • 25 | • 10 |
| • 60 | • 50 | • 35 |
| • OR | • 5 | • 75 |
| • 100% of the local landings | • 40 | • 50 |
| • 50 | • 26 | • 60 |
| • 40% | • 50 | • 50 |
| • 65 | • 2 | • 60 |
| • 50 | • 30 | • 30 |
| • 50 | • 70 | • 80 |
| • 40% | • 45 | |

Question# 5: How do you primarily use the Aurora State Airport?

56 total responses:

- Business 31 responses
- Recreational 23 responses
- Training 10 responses
- Other (please specify) 8 responses
- Emergency 2 responses

Those that responded “Other” specified the following:

- I live by the airport I do not fly
- Telephone/ Broadband utility company
- Volunteer
- Personal transportation
- transportation
- don't I live in the neighborhood
- Personal transportation
- Personal travel

Question# 6: Is your aircraft based at Aurora State Airport?

61 total responses

- Yes 30 responses
- No 16 responses
- Do not own an aircraft 15 responses

Question# 7: Do you lease or rent aircraft storage or tiedown from the Oregon Department of Aviation or from a private business?

31 total responses:

- ODA 4 responses
- Private Businesses 27 responses

Question# 8: Where is your aircraft based? (List Airport ID)

14 total responses:

- Corvallis, OR (CVO) (2 respondents)
- Hubbard, OR (Lenhardt Airpark) (7S9) (2 respondents)
- Troutdale, OR (TTD) (2 respondents)
- Medford, OR (MFR)
- La Grande, OR (LGD)
- Newburg, OR (Sportsman Airpark) (2S6)
- Sunset Airpark
- Hillsboro, OR (Stark's Twin Oak) (7S3)
- Scappoose, OR (SPB)
- San Jose, CA (SJC)
- Eugene, OR (EUG)
- Salem, OR (SLE)

Question# 9: Why don't you base your aircraft at Aurora State Airport? (Select all that apply.)

12 total responses:

- | | |
|-------------------------------------|-------------|
| • Inconvenient Location | 8 responses |
| • Cost of Hangar | 3 responses |
| • Lack of Suitable Hangar | 2 responses |
| • Inadequate Runway Length | 1 responses |
| • Lack of Air Traffic Control Tower | 0 responses |
| • No Precision Instrument Approach | 0 responses |
| • Other (please specify) | 4 responses |

Those that answered "other" specified the following:

- In the process of building a 135,000 square foot hangar in property adjacent to airport
- Aircraft are conveniently based at my airport home
- TTD is closer to home
- Based in Eugene (BIZ)

Question# 10: What suggestions do you have for improving Aurora State Airport?

50 total responses:

- Add commercial service

- I have lived here since 1976. I am NOT for any growth in the Aurora airport. The larger jet planes make too much noise on take off and landing as they pass over my home. I would like to see the larger jets minimized. The smaller aircraft are not an issue with me. Only the noisy larger jets.
- Traffic issues on Airport Road are a concern.
- Begin the master planning project by developing a vision statement. Connect to City of Aurora utilities. Get a restaurant. Allow for more developable land inside of Keil road, airport way, HWY 51, and Arndt Rd. Get controlled Airspace, get radar coverage in the area. Give John Wilson a raise.
- Support ancillary airport and flight business
- Control Tower for safety and noise abatement, better non-aircraft access
- tower and run-up areas for safety
- We need a restaurant at the airport and the associated infrastructure (sewer, etc) to support it.
- Increase hangar lease locations for new construction.
- 1. Install a new aircraft central tower to control landing. 2. Provide city water and sewer facilities
- First on my list is the need for a control tower.
- Run-up area runway 17. Clear obstacles to meet TERPS requirement for lower RNAV (GPS) approach minimums. Install approach path lighting on runway 35.
- Control tower as soon as you can get it.
- Needs Control tower
- Have a area for grass landings
- Glideslope and control tower
- Mufflers, noise reduction. Also, please inform the local neighbors or let them know what is going on.
- Go back to calm runway 17. the current 35 creates a safety conflict with actual IFR breakouts into VFR and ditto for training IFR in VFR conditions
- Open a tower.
- Utilize better planning methods for building and site development. Have design and building standards that enhance the neighborhood.
- Cafe/restaurant on field. Lower cost hangars.
- Do NOT add a control tower. The bigger taxiways were a great addition. At this time acquire land surrounding airport for future growth. Add a cafe (many people work here). Use Nampa, ID or Caldwell, ID as example.
- Nothing at all, has all I need.
- Do not put in tower - not cost effective. Calm wind runway should be 17. Run up area at 17 (should not have been put at 35).
- Precision instrument approach because of all the fog.
- Look forward to the new tower.
- Should increase runway length.
- For safety - change calm wind runway back to 17 (immediately). Provide for a proper 17 run-up area. Take into future planning consideration the fact that we have only a single runway which under normal economic conditions is close to the

maximum traffic possible now. A tower will not improve this restriction on growth, nor will the lengthening of the single runway solve the problem.

- Precision approach
- Add control tower to deconflict IFR/UFR traffic or eliminate/change instrument approaches to 17.
- Do not put a tower here. Change calm wind runway back to one seven.
- Put run-up area at one seven.
- Control tower. Lengthen runway, add 1000 feet. Precision ILS approach.
- Lengthen runway by 1,000 ft for one longer size. Private jets, Gulfstream, for training and business which would increase weight capacity. The need for a tower for safety.
- Increased runway length, ILS approach. We are limited by runway length at full fuel (24, 650 ft). May acquire large a/c, would like to see increased weight restriction on runway (65,000 ft) to match taxiway.
- A longer runway would be nice.
- There is too much hangar construction at Southend airpark with too limited taxi space.
- precision app, tower
- Tower, tower, tower. ILS
- Runway length increase, ILS
- Need longer runway and tower. Need jet maintenance.
- Get the tower built and operating ASAP
- Lengthen runway. Control tower.
- Need a control tower for safety and noise abatement. 6,000 foot runway. Lower minimums. Airport road improvements for safety. Public sewer and water.
- Control tower for safety and noise abatement. 6,000 foot runway. Lower minimums. Airport road improvements for safety. Public Sewer and water.
- Install tower
- Control Tower/radar approach. Relocate dangerous road on south end (Keil). Better control of entry of helicopter traffic. New ground transportation access. Changing Ehlen Rd and 515.
- With the increasing mix of GA and Jet aircraft, the probability of a mishap or accident is increasing accordingly. A tower and ILS approach could help.
- Lengthen and strengthen runway. Improve lighting, ILS, tower, interior road, public water and sewer systems
- Runway should be longer, tower, ILS system
- Control tower NEEDED. Longer runway (for safety).

Aurora State Airport User Survey	
Aircraft and Airport Use Information	
1. What zip code do you live in? <input type="text"/>	
2. Do you own or fly an aircraft?	
<input type="radio"/> No	
<input type="radio"/> Yes (if so, list model/type of aircraft) <input type="text"/>	
3. Estimate your number of annual landings. (Include Touch & Go) <input type="text"/>	
4. What percent of your annual landings are at Aurora State Airport? <input type="text"/>	
5. How do you primarily use the Aurora State Airport?	
<input type="checkbox"/> Business	
<input type="checkbox"/> Training	
<input type="checkbox"/> Recreational	
<input type="checkbox"/> Emergency	
<input type="checkbox"/> Other (please specify) <input type="text"/>	
* 6. Is your aircraft based at Aurora State Airport?	
<input type="radio"/> Yes	
<input type="radio"/> No	
<input type="radio"/> Do not own an aircraft	
Aircraft and Airport Use Information	
* 7. Do you lease or rent aircraft storage or tiedown from the Oregon Department of Aviation or from a private business?	
<input type="radio"/> ODA	
<input type="radio"/> Private Business	
Aircraft and Airport Use Information	
<input type="text"/>	

Aurora State Airport User Survey

8. Where is your aircraft based? (List Airport ID)

9. Why don't you base your aircraft at Aurora State Airport? (Select all that apply.)

- Inadequate Runway Length
- Lack of Suitable Hangar
- Cost of Hangar
- Lack of Air Traffic Control Tower
- No Precision Instrument Approach
- Inconvenient Location

Other (please specify)

Improvements to Aurora State Airport

10. What suggestions do you have for improving Aurora State Airport?

Contact Information

Providing contact information is optional.

If you provide your name, address, phone number, and email address, we will notify you of public meetings about the master plan and may contact you for more information related to the master plan update.

11. Contact Information

Name:

Mailing Address:

City:

State:

ZIP/Postal Code:

Email Address:

Phone Number:

Appendix D: INSTRUMENT APPROACH PROCEDURES

Airport Master Plan Update

Aurora State Airport

PORTLAND APP CON
124.35 299.2
PORTLAND INTL ATIS
128.35 269.9
PORTLAND-HILLSBORO ATIS
127.65

SEATTLE
116.8 SEA
Chan 115
N47°26.12'-W122°18.58'
L-1, H-1

BATTLE GROUND
116.6 BTG
Chan 113
N45°44.87'-W122°35.49'

HELNS
N46°15.42'
W122°18.58'

KRATR
N46° 05.39' - W122° 24.17'

NOTE: Maintain the last assigned altitude. Upon receipt of "Descend via the HELNS4": . . .
PROP/TURBOPROP: Cross at and maintain 10,000'.
TURBOJET: Cross at and maintain 12,000' at 300 KIAS or less.

NOTE: Chart not to scale.

NOTE: DME and RADAR required.

SEATTLE TRANSITION (SEA.HELNS4): From over SEA VORTAC via SEA R-161 to HELNS DME FIX. Thence....

.... From over HELNS DME FIX via BTG R-360 to BTG VORTAC. Thence....

LANDING EAST: Depart BTG VORTAC heading 280° for vectors to final approach course.

LANDING WEST: Depart BTG VORTAC heading 110° for vectors to final approach course.

NW-1, 29 JUL 2010 to 26 AUG 2010

NW-1, 29 JUL 2010 to 26 AUG 2010



INSTRUMENT APPROACH PROCEDURE CHARTS

A IFR ALTERNATE AIRPORT MINIMUMS

Standard alternate minimums for non precision approaches are 800-2 (NDB, VOR, LOC, TACAN, LDA, VORTAC, VOR/DME, ASR or WAAS LNAV); for precision approaches 600-2 (ILS or PAR). 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 or absence of weather reporting service. Civil pilots see FAR 91. IFR Alternate Airport Minimums: Ceiling and Visibility Minimums not applicable to USA/USN/USAF. Pilots must review the IFR Alternate Airport Minimums Notes for alternate airfield suitability.

NAME ALTERNATE MINIMUMS

ALBANY, OR

ALBANY MUNI **VOR/DME or GPS-A**
NA except for operators with approved weather reporting service.

ARLINGTON, WA

ARLINGTON MUNI **NDB or GPS Rwy 34**
Category D, 800-2½.
NA when Paine Field control tower closed.

ASTORIA, OR

ASTORIA RGNL **RNAV (GPS) Rwy 26¹²**
VOR Rwy 8³

- ¹NA when local weather not available.
- ²Categories A, B, 900-2; Category C, 900-2¾; Category D, 900-3.
- ³Category C, 800-2¾; Category D, 900-3.

AURORA, OR

AURORA STATE **LOC Rwy 17¹**
RNAV (GPS) Rwy 17²³
RNAV (GPS) Rwy 35²

- ¹Category D, 800-2¼.
- ²NA when local weather not available.
- ³Categories A, B, 900-2; Category C, 900-2½; Category D, 900-2¾.

BAKER, MT

BAKER MUNI **NDB Rwy 13¹**
NDB Rwy 31²

- ¹Categories A,B, 1100-2; Categories C,D, 1100-3.
- ²Categories A,B, 1000-2; Category C, 1000-2¾; Category D, 1000-3.

BAKER CITY, OR

BAKER CITY MUNI **RNAV (GPS) Rwy 13¹²**
VOR-A¹³
VOR/DME Rwy 13²⁴

- ¹NA when local weather not available.
- ²Category D, 900-2¾.
- ³Categories A,B, 1900-2; Categories C,D, 1900-3.
- ⁴NA when control zone not in effect.

NAME ALTERNATE MINIMUMS

BELLINGHAM, WA

BELLINGHAM INTL **ILS or LOC Rwy 16**
RNAV (GPS) Rwy 16
NA when local weather not available.

BIG PINEY, WY

MILEY MEMORIAL FIELD **VOR Rwy 31**
Category D, 800-2¼.

BILLINGS, MT

BILLINGS LOGAN
INTL **NDB Rwy 10L¹**
RNAV (GPS) Rwy 10L²
RNAV (GPS) Rwy 28R³

- ¹Category D, 800-2¼.
- ²Categories A,B,C,D, 800-2¼.
- ³Categories A,B, 900-2; Categories C,D, 900-3.

BOISE, ID

BOISE AIR TERMINAL(GOWEN
FIELD) **LOC BC Rwy 28L**
RNAV (GPS) Y Rwy 10R
RNAV (GPS) Y Rwy 28L
VOR/DME or TACAN Rwy 10L
VOR/DME or TACAN Rwy 28L

Category E, 1000-3.

BOZEMAN, MT

GALLATIN FIELD **RNAV (GPS)-A¹**
VOR Rwy 12²

- ¹Categories A, B, 1900-2; Categories C, D, 1900-3.
- ²Categories A, B, 900-2; Category C, 900-2¾; Category D, 900-3.

BREMERTON, WA

BREMERTON NATIONAL .. **RNAV (GPS) Rwy 1**
RNAV (GPS) Rwy 19¹

- NA when local weather not available.
- ¹Categories A,B, 1200-2; Categories C,D, 1200-3.

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29 JUL 2010 to 26 AUG 2010





ARLINGTON, WA

ARLINGTON MUNI

TAKE-OFF MINIMUMS: **Rwy 11**, 600-2 or std. with a min. climb of 350' per NM to 700. **Rwy 34**, 500-2 or std. with a min. climb of 260' per NM to 700.

DEPARTURE PROCEDURE: **Rwy 11**, turn right.

Rwy 16, climb direct to WATON LOM. **Rwys 29, 34**, turn left. All aircraft climb direct to WATON LOM. Aircraft departing WATON LOM on bearings 150° CW 200° and bearings 260° CW 340° from WATON LOM continue climb on course. Aircraft departing WATON LOM on bearings 340° CW 150° from WATON LOM climb in holding pattern (S, left turns, 339° inbound) to 4500 then continue climb on course. Aircraft departing WATON LOM on bearings 200° CW 260° from WATON LOM climb in holding pattern (S, left turns, 339° inbound) to 1500 then continue climb on course.

ASTORIA, OR

ASTORIA RGNL

TAKE-OFF MINIMUMS: **Rwy 8**, 800-3 or std. with a min. climb of 320' per NM to 900. **Rwy 13**, 700-2 or std. with a min. climb of 350' per NM to 800.

DEPARTURE PROCEDURE: **Rwys 8, 31**, turn left.

Rwy 13, climb runway heading to 800 then climbing right turn. **Rwy 26**, turn right. Aircraft departing northwestbound climb via AST R-290 on course.

All other aircraft climb to 1500 or above via AST R-290 then left turn to AST VOR/DME and continue climbing on course.

AUBURN, WA

AUBURN MUNI

DEPARTURE PROCEDURE: Use AUBURN DEPARTURE.

AURORA, OR

AURORA STATE

DEPARTURE PROCEDURE: **Rwy 17**, turn right, thence... **Rwy 35**, turn left, thence...

...Aircraft proceeding via V23 climb on course; All others climb in UBG VOR/DME holding pattern (hold south, left turn, 003° inbound) to cross UBG VOR/DME at or above MEA/MCA for direction of flight.

NOTE: **Rwy 17**, multiple trees 31' from departure end of runway, 273' right of centerline, up to 90' AGL/270' MSL. Multiple trees beginning 979' from departure end of runway, 247' right of centerline up to 113' AGL/316' MSL. Road 254' from departure end of runway, 350' left of centerline, 16' AGL/209' MSL. **Rwy 35**, multiple trees and road beginning 31' from departure end of runway, 163' left of centerline, up to 138' AGL/329' MSL. Multiple trees beginning 973' from departure end of runway, 281' right of centerline, up to 58' AGL/253' MSL.

BAKER, MT

BAKER MUNI

NOTE: **Rwy 13**, 51' derrick 2200' from departure end of runway on centerline. 100' trees south of airport, near runway, various locations. **Rwy 31**, 146' antenna on tower 4000' from departure end of runway, 1800' left of centerline. 114' rod on OL antenna 3800' from departure end of runway on centerline.

BAKER CITY, OR

BAKER CITY MUNI

TAKE-OFF MINIMUMS: **Rwy 8**, 900-2 or std. with a min. climb of 315' per NM to 6000, (788' per min. at 150K, 1050' per min. at 200K, 1313' per min. at 250K).

Rwy 13, 1400-2 or std. with a min. climb of 310' per NM to 6000 (775' per min. at 150K, 1033' per min. at 200K, 1292' per min. at 250K). **Rwy 17**, NA. **Rwy 31**, 1300-2 or std. with a min. climb of 240' per NM to 6000 (600' per min. at 150K, 800' per min. at 200K, 1000' per min. at 250K). **Rwy 35**, CAT C, D 1000-2 or std. with a min. climb of 240' per NM to 6000 (600' per min. at 150K, 800' per min. at 200K, 1000' per min. at 250K).

DEPARTURE PROCEDURE: **Rwys 8, 13**, turn left.

Rwys 26, 31, 35, turn right. All aircraft climb direct BKE VOR/DME. Continue climb in BKE holding pattern (SE, right turns, 298° inbound) to cross BKE VOR/DME at or above MCA or MEA for route of flight.

BELLINGHAM, WA

BELLINGHAM INTL

DEPARTURE PROCEDURE: **Rwy 16**, climb heading 160° to 600, then climbing right turn direct HUH VORTAC. Do not exceed 210 KIAS until established northbound. **Rwy 34**, climb heading 340° to 600, then climbing left turn to intercept HUH R-145 to HUH VORTAC, continue climb in holding pattern (northwest, right turn, 149° inbound) to MEA as appropriate for direction of flight.

NOTE: **Rwy 16**, lighted windsock 9' from departure end of runway, 259' right of centerline, 16' AGL/181' MSL. Multiple trees beginning 747' from departure end of runway, 405' right of centerline, up to 68' AGL/213' MSL. Multiple trees beginning 1128' from departure end of runway, 57' left of centerline, up to 104' AGL/249' MSL. **Rwy 34**, lighted windsock 93' from departure end of runway, 516' right of centerline, 27' AGL/169' MSL. Multiple trees beginning 1372' from departure end of runway, 619' right of centerline, up to 134' AGL/246' MSL.

BEND, OR

BEND MUNI (BDN)

AMDT 4 09183 (FAA)

DEPARTURE PROCEDURE: Use BEND DEPARTURE.

BIG PINEY, WY

MILEY MEMORIAL FIELD

TAKE-OFF MINIMUMS: **Rwys 8, 26**, NA. DEPARTURE PROCEDURE: **Rwy 13**, climb to 8400 via BPI R-124. **Rwy 31**, climb to 10800 via BPI R-320 thence all aircraft climb on course.

29 JUL 2010 to 26 AUG 2010

29 JUL 2010 to 26 AUG 2010



AURORA, OREGON

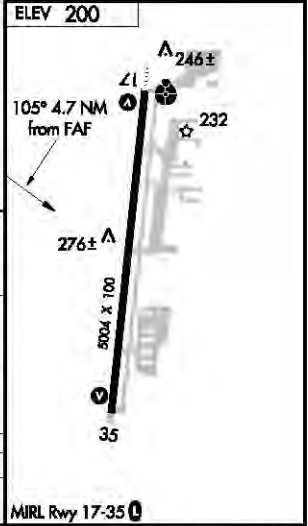
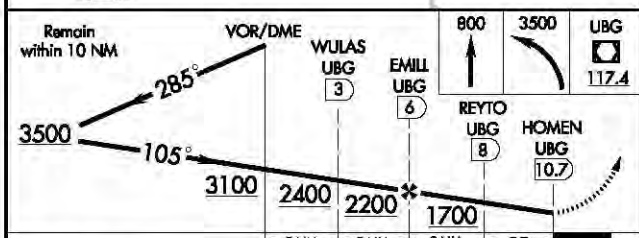
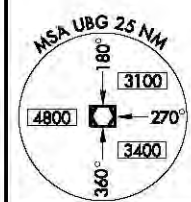
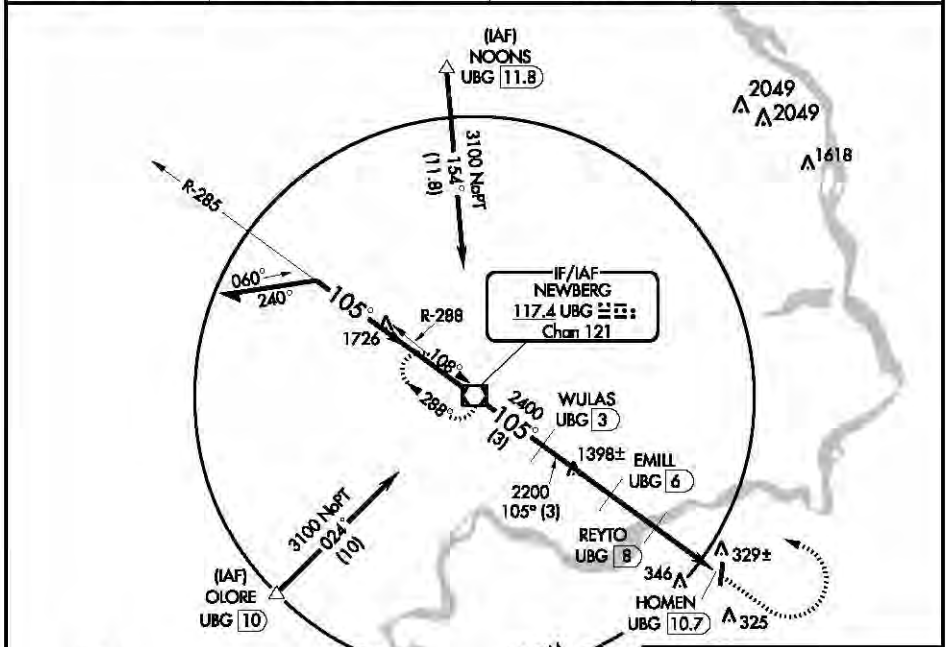
AL-5722 (FAA)

VOR/DME UBG 117.4 Chan 121	APP CRS 105°	Rwy ldg TDZE Apt Elev	N/A N/A 200
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VOR/DME-A
AURORA STATE (UAO)

MISSED APPROACH: Climb to 800 then climbing left turn to 3500 direct UBG VOR/DME and hold.

ASOS 118.525	PORTLAND APP CON 126.0 284.6	CLNC DEL 119.95	UNICOM 122.7 (CTAF) 0
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CATEGORY	A	B	C	D
CIRCLING	640-1 440 (500-1)	660-1 460 (500-1)	660-1½ 460 (500-1½)	760-2 560 (600-2)

AURORA, OREGON
Amdt 3 10042

45°15'N-122°46'W

AURORA STATE (UAO)
VOR/DME-A

NW-1, 29 JUL 2010 to 26 AUG 2010

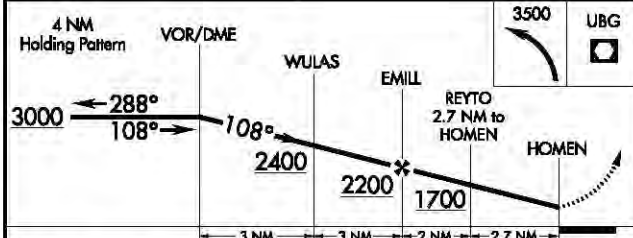
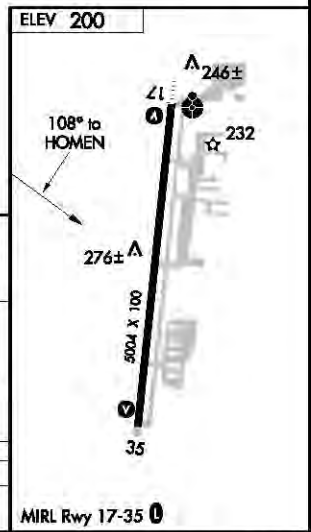
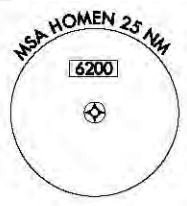
NW-1, 29 JUL 2010 to 26 AUG 2010

AURORA, OREGON

APP CRS 108°	Rwy Idg TDZE Apt Elev	N/A N/A 200
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RNAV (GPS)-B
AURORA STATE (UAO)

DME/DME RNP- 0.3 NA.		MISSED APPROACH: Climbing left turn to 3500 direct UBG VOR/DME and hold.	
ASOS 118.525	PORTLAND APP CON 126.0 284.6	CLNC DEL 119.95	UNICOM 122.7 (CTAF) 0



CATEGORY	A	B	C	D
CIRCLING	640-1 440 (500-1)	660-1 460 (500-1)	660-1½ 460 (500-1½)	760-2 560 (600-2)

AURORA, OREGON
Orig 09211

45°15'N-122°46'W

AURORA STATE (UAO)
RNAV (GPS)-B

NW-1, 29 JUL 2010 to 26 AUG 2010

NW-1, 29 JUL 2010 to 26 AUG 2010

AURORA, OREGON

AL-5722 (FAA)

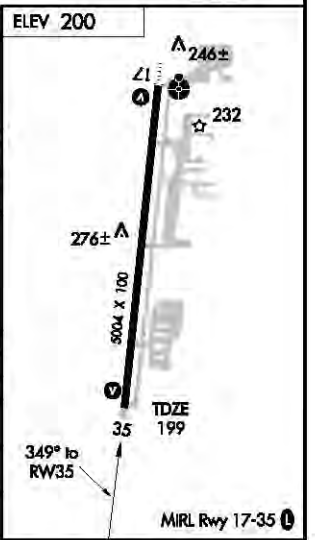
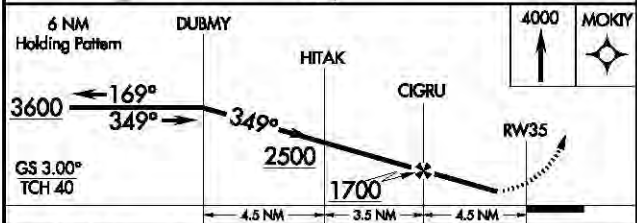
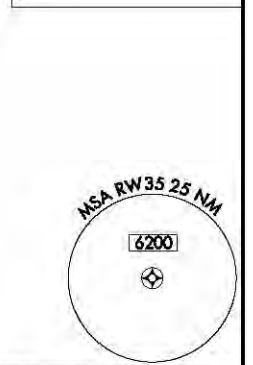
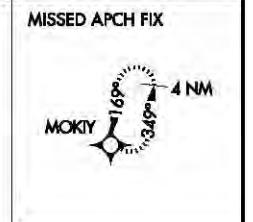
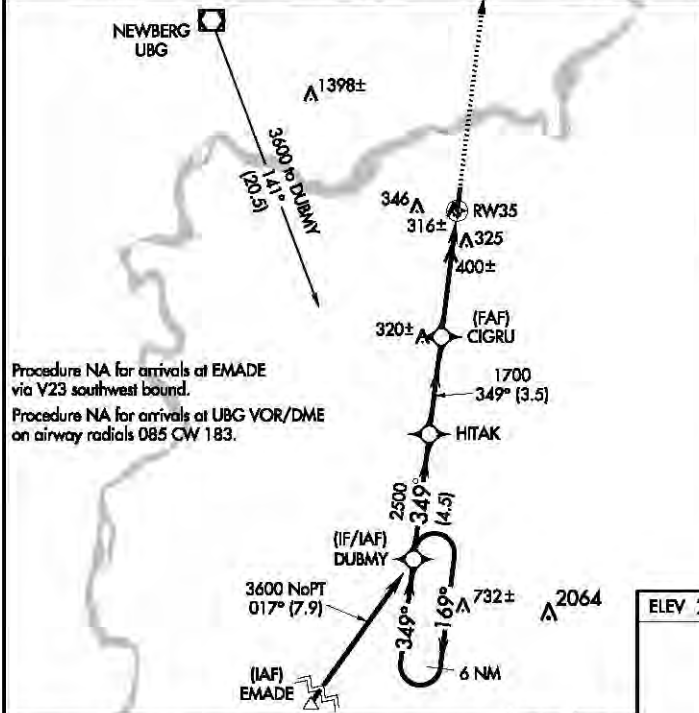
WAAS CH 77508 W35A	APP CRS 349°	Rwy Idg 5004
		TDZE 199
		Apt Elev 200

RNAV (GPS) RWY 35
AURORA STATE (UAO)

⚠ DME/DME RNP-0.3 NA. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 48°C (118°F). When local altimeter setting not received, use Mc Minnville Muni altimeter setting and increase all DA 42 feet and MDA 60 feet; increase LPV, LNAV/VNAV visibilities ¼ mile all Cats, increase LNAV Cat D visibility to 1½. Visibility reduction by helicopters NA. Baro-VNAV NA when using Mc Minnville Muni altimeter setting.

MISSED APPROACH: Climb to 4000 direct MOKIY and hold, continue climb-in-hold to 4000.

ASOS 118.525	PORTLAND APP CON 126.0 264.6	CINC DEL 119.95	UNICOM 122.7 (CTAF) 0
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CATEGORY	A	B	C	D
LPV DA		500-1	301 (300-1)	
LNAV/VNAV DA		604-1½	405 (500-1½)	
LNAV MDA	700-1	501 (500-1)	700-1½	501 (500-1½)
CIRCLING	700-1	500 (500-1)	700-1½	760-2
			500 (500-1½)	560 (600-2)

AURORA, OREGON
Orig-C 09239

45°15'N-122°46'W

RNAV (GPS) RWY 35
AURORA STATE (UAO)

NW-1, 29 JUL 2010 to 26 AUG 2010

NW-1, 29 JUL 2010 to 26 AUG 2010

AURORA, OREGON

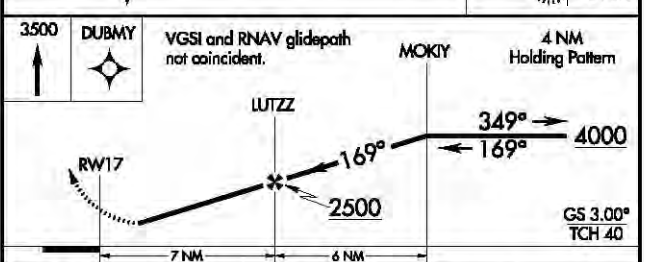
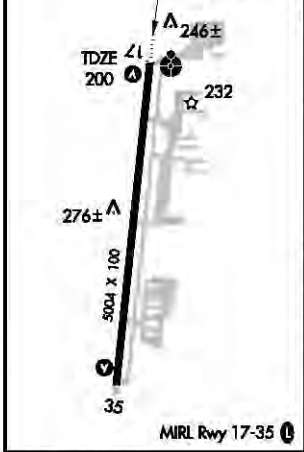
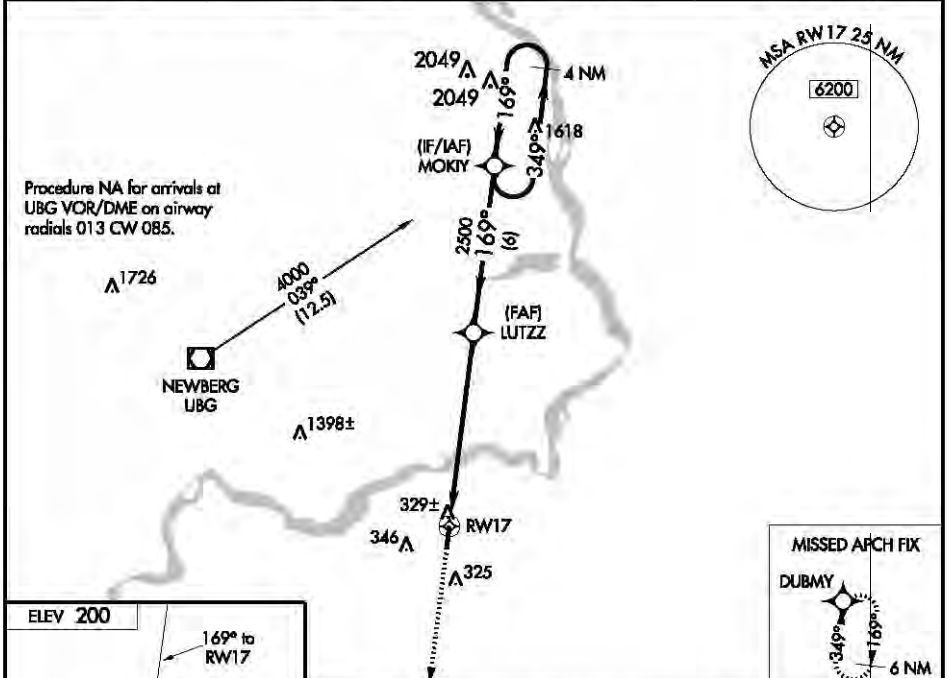
AL-5722 (FAA)

WAAS CH 70308 W17A	APP CRS 169°	Rwy Idg TDZE 200 Apt Elev 200	5004
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RNAV (GPS) RWY 17
AURORA STATE (UAO)

<p>⚠ DME/DME RNP-0.3 NA. When local altimeter setting not received, use Mc Minville Muni altimeter setting and increase all DA 42 feet and all MDA 60 feet; increase LPV, LNAV/VNAV visibilities all Cats. ¼ mile, increase LNAV visibility Cats. A/C/D ¼ mile, increase Circling visibilities Cats. A/C/D ¼ mile. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -15°C (5°F) or above 49°C (120°F). Inoperative table does not apply. Visibility reduction by helicopters NA.</p>	<p>ODALS</p>	<p>MISSED APPROACH: Climb to 3500 direct DUBMY and hold, continue climb-in-hold to 3500.</p>
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ASOS 118.525	PORTLAND APP CON 126.0 284.6	CLNC DEL 119.95	UNICOM 122.7 (CTAF) 0
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CATEGORY	A	B	C	D
LPV DA		550-1¼	350 (400-1¼)	
LNAV/VNAV DA		580-1¼	380 (400-1¼)	
LNAV MDA	1060-1 860 (900-1)	1060-1¼ 860 (900-1¼)	1060-2½ 860 (900-2½)	1060-2¾ 860 (900-2¾)
CIRCLING	1060-1 860 (900-1)	1060-1¼ 860 (900-1¼)	1060-2½ 860 (900-2½)	1060-2¾ 860 (900-2¾)

AURORA, OREGON
Orig-B 09239

45°15'N-122°46'W

AURORA STATE (UAO)
RNAV (GPS) RWY 17

NW-1, 29 JUL 2010 to 26 AUG 2010

NW-1, 29 JUL 2010 to 26 AUG 2010

AURORA, OREGON

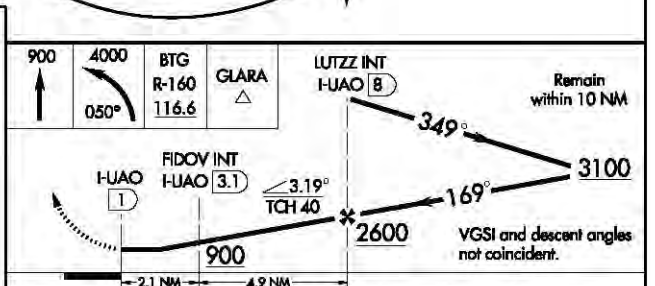
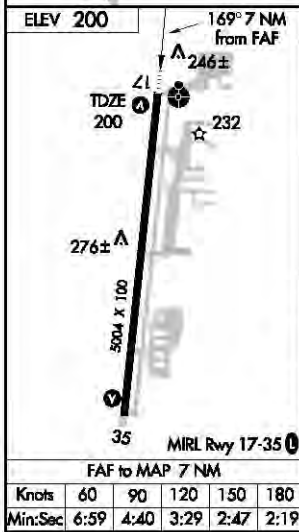
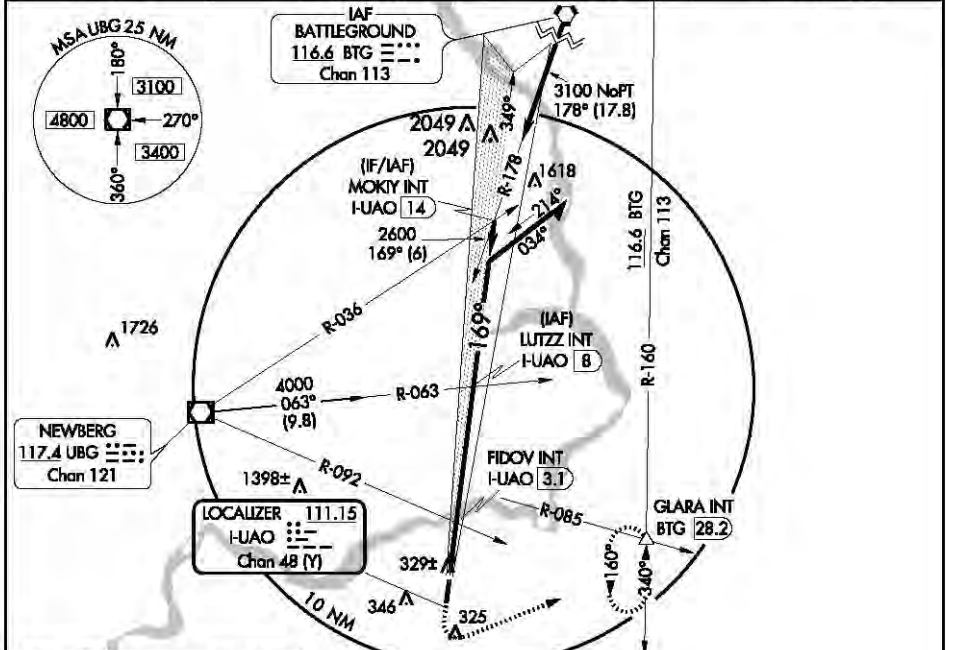
AL-5722 (FAA)

LOC/DME I- UAO 111.15 Chan 48 (Y)	APP CRS 169°	Rwy Idg TDZE Apt Elev	5004 200 200
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LOC RWY 17
AURORA STATE (UAO)

▽ △ Inoperative table does not apply.	ODALS 	MISSED APPROACH: Climb to 900 then climbing left turn to 4000 via heading 050° and BTG R-160 to GLARA Int/ BTG 28.2 DME and hold. Continue climb-in-hold to 4000.
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ASOS 118.525	PORTLAND APP CON 126.0 284.6	CINC DEL 119.95	UNICOM 122.7 (CTAF) 0
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CATEGORY	A	B	C	D
S-17	900-1	700 (700-1)	900-2 700 (700-2)	900-2½ 700 (700-2½)
CIRCLING	900-1	700 (700-1)	900-2 700 (700-2)	900-2½ 700 (700-2½)
FIDOV FIX MINIMUMS				
S-17	580-1 380 (400-1)		580-1½ 380 (400-1½)	
CIRCLING	640-1 440 (500-1)	660-1 460 (500-1)	660-1½ 460 (500-1½)	760-2 560 (600-2)

AURORA, OREGON
Amdt 1 09183

45°15'N-122°46'W

AURORA STATE (UAO)
LOC RWY 17

NW-1, 29 JUL 2010 to 26 AUG 2010

NW-1, 29 JUL 2010 to 26 AUG 2010

Appendix E: PAC MEETING SUMMARIES

Airport Master Plan Update

Aurora State Airport

Aurora State Airport Master Plan & Airport Layout Plan Update

Kick-Off Meeting Summary

November 3, 2009
Maplewood Grange Hall
6:00 – 7:30 p.m.

Attendees:

Oregon Department of Aviation: Gregg Dal Ponte, Interim Director; Mark Gardiner, State Aviation Board Chair; Christopher Cummings, Planning & Projects Manager; Mitch Swecker, State Airports Manager; and John Wilson, Airport Operations Specialist

WHPacific, Inc: Rainse Anderson, Project Manager; Sara Funk, Senior Aviation Planner; and Sarah Lucas, Aviation Planner

Members of the Public: 65 people signed in. Refer to attached sign-in sheets

Welcome and Introductions

Gregg Dal Ponte opened the meeting at 6:10 pm by welcoming everyone and thanking them for their attendance. Mr. Dal Ponte then introduced the ODA staff attending the meeting, prior to introducing the consultant team's Project Manager, Rainse Anderson.

Mr. Anderson introduced his project team: Sara Funk and Sarah Lucas. Personally, Mr. Anderson has completed numerous planning, environmental and engineering projects at the Aurora State Airport for the past 32 years. Ms. Funk and Ms. Lucas have completed numerous airport master plans and other planning studies.

The following information was presented in a PowerPoint format, which has been placed on the project website.

Purpose of the Master Plan Update

Mr. Anderson reviewed the purpose of updating the master plan, which is a document that guides the development of the Airport over a 20-year planning period. The last master plan was completed in 2000. Typically, general aviation airports, like Aurora State, have the master plan updated every seven to ten years.

The focus of the Master Plan is to update the inventory, demand forecasts, Airport Layout Plan (ALP) and capital improvement plan (CIP). Additionally, to be eligible for federal or state funding, a project must be shown on the approved ALP.

Project Components

Ms. Funk and Ms. Lucas reviewed the individual components of a master plan, which are:

- *Chapter 1 – Airport Issues and Goals*
- *Chapter 2 – Airport Inventory*
- *Chapter 3 – Aeronautical Activity Forecast*
- *Chapter 4 – Facility Requirements*
- *Chapter 5 – Airport Alternatives*
- *Chapter 6 – Airport Layout Plan and Associated Drawings*
- *Chapter 7 – Capital Improvement Plan*

Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*, and other relevant ACs, Federal Orders and Aviation Regulations will be used for project guidance.

Details of each chapter are:

- ▶ Chapter 1 – Airport Issues and Goals
 - Dissemination of surveys to better understand Airport use:
 - User Survey (available at tonight’s meeting, FBOs and project website: www.aurorastateairport.org)
 - Runway Usage Survey (to be mailed to businesses, responses will be reported in chapter)
 - Interview FBOs at nearby airports
 - Strategic Role
- ▶ Chapter 2 – Airport Inventory
 - On-site inspection of airport facilities (Airfield, Landside and Airport Support Facilities)
 - Airspace
 - Land Use Planning and Zoning
 - Environmental Inventory
 - Aviation Activity Data
 - Airport Financial Data
- ▶ Chapter 3 – Aeronautical Activity Forecast
 - Critical Aircraft
 - Based Aircraft
 - Operations Forecast
 - *To be approved by the FAA*
- ▶ Chapter 4 – Facility Requirements
 - Identify the ability of the airport facilities to meet forecasted demand and other needs
- ▶ Chapter 5 – Airport Alternatives
 - Three build alternatives, in addition to the no build alternative, will be

developed to address the needs identified in Chapter 4.

- ▶ Chapter 6 – Airport Layout Plan and Associated Drawings
 - Airport Layout Plan (ALP)
 - Airport Airspace Drawing
 - Inner Portion of the Approach Surface Drawing
 - Terminal Area Drawing
 - Land Use and Noise Contour Drawing
 - Runway Departure Surfaces Drawing
 - Airport Property Map (Exhibit A)
 - *To be approved by the FAA*
- ▶ Chapter 7 – Capital Improvement Plan
 - Will identify the cost associated with the ALP improvements and potential funding sources for the projects.

Project Schedule

Mr. Anderson relayed the project is on an 18-month schedule, which allocates review period for ODA, FAA and PAC prior to each public meeting. There will be a total of seven meetings that include a public kick-off meeting, six PAC work sessions and five open houses.

The meeting schedule is subject to change; however, tentative dates for upcoming meetings are:

- ▶ Public Kick-Off Meeting – November 3, 2009
- ▶ PAC Meeting #1 – January 2010
- ▶ PAC Meeting #2 * – April 2010
- ▶ PAC Meeting #3 * – June 2010
- ▶ PAC Meeting #4 * – September 2010
- ▶ PAC Meeting #5 * – December 2010
- ▶ PAC Meeting #6 * – January 2011

** Immediately following these PAC meetings, there will be public open houses to cover the same topics of the PAC meeting (the first open house will cover the topics of both meeting #2 and meeting #1).*

The project website www.aurorastateairport.org will have specific dates posted, as soon as they are determined.

Planning Advisory Committee (PAC) Formation; Roles and Responsibilities

Mitch Swecker discussed the Planning Advisory Committee (PAC), which is still being developed. The PAC will represent members who have varying interests in the Airport. Current members of the PAC represent Marion County, Clackamas County, City of Aurora, City of Wilsonville, Aurora Fire District, Airport Fixed Base Operators (3), Oregon Department of Aviation, Charbonneau, and Deer Creek. Four at-large representatives will be selected for the following groups: Community Representative, Airport Business, On-

Airport Tenant, and Off-Airport Tenant.

A review panel, consisting of four ODA employees, will conduct a blind review to select the at-large PAC representatives based on application responses. If interested in serving as an at-large representative, please complete the application posted at www.aurorastateairport.org. Applications for the at-large positions are due by November 17, 2009.

Mr. Anderson reminded attendees the PAC is an advisory committee to ODA and ODA has final authority over the Master Plan. If serving on the PAC, members are asked to provide input to help produce a plan that balances a wide range of airport stakeholder needs and concerns; bring forward comments and concerns of those they represent; and help disseminate accurate information about the plan.

**Discussion of Goals
and Issues for Plan**

Once the presentation was completed, attendees were able to comment and ask ODA and WHPacific specific questions about the master plan update. Below is a summary of the questions/comments and responses (*in italics*).

- There is a survey of airport users – what consideration will there be for non-airport users? *The PAC meetings and public open houses provide representation for airport neighbors.*
- Please elaborate the four at-large PAC positions. *The at-large PAC positions will be for people representing one of the following: community resident, airport business, on-airport tenant, and off-airport tenant.*
- Is there a formal tie between the Plan and agencies? *Yes, the Plan, once approved by ODA, FAA, and the State Aviation Board, will be taken to Marion County for formal adoption into the County's Comprehensive Plan.*
- The website should have a place for comments. *Yes, the website has a comment form.*
- The alternatives will have varying impacts on the surrounding community. What analysis will be done to address this? *Each alternative will have noise contours drawn, as well as an environmental review that includes factors such as social impacts, socioeconomic impacts, etc.*
- Are there records of airport operations for the last ten years? *Operations data for airports without air traffic control towers is difficult to acquire and we rely on any historical data that is available, which includes the ODA RENS acoustical counter information. The last count was completed in the 2002-2003 cycle, which reported 62,926 operations. The RENS program is no longer operational.*
- If it takes 18 months to do a count and the project timeline is 18 months, why not do a count now to ensure an accurate baseline? *Even if the RENS program were operational, the forecasts are done during the beginning stages of a master plan update so it would*

actually add 12-18 months to the project schedule.

- *Isn't federal funding and prioritization based on aircraft operations? No, federal funding is not contingent upon aircraft operations. Instead, funding for a general aviation airport like Aurora State is based on the airport's need and the demand for the project. Having a project on an approved ALP (making it eligible for federal funding) does not necessarily justify the funding. Additional justification may be required, depending on the project.*
- *What was the impetus for updating the 2000 Master Plan? To reflect current conditions and changes at an airport, most general aviation airports will have the master plan updated every seven to ten years.*
- *How does the air traffic control tower fit into the plan? The FAA will be completing an independent tower survey in March 2010. A benefit cost analysis was completed and showed a tower is justified at Aurora State. Funding for the project has not been secured at this time.*
- *The last master plan did not discuss an air traffic control tower, but it was shown in the ALP. How can that happen? Showing a project on the ALP does not justify funding, so it is possible one was shown without much discussion within the master plan. The 1976 Master Plan did show a tower.*
- *Having an air traffic control tower means more large aircraft operating at the Airport. Having an air traffic control tower at the Airport does not necessarily mean increased traffic, louder traffic, or larger aircraft. Traffic may actually lessen because smaller aircraft may displace to un-controlled airports. Additionally, new technology has created many jet engines that are quieter than propeller driven aircraft. The air traffic control tower is for safety.*
- *What type of fire protection does the Airport have? The Aurora Fire District protects the Airport. The District has a crash truck that will be used at the Airport and they are currently training volunteers (fire trucks are only required at commercial service airports). Through funding from private business partnership, a fire suppression system was recently installed at the Airport, with a mainline and fire hydrants running the full length of the Airport. The City of Aurora doesn't even have a fire suppression system.*
- *The Airport does not have a vision statement. Will one be included in the Plan? The strategic analysis and review of issues/goals will create an opportunity to develop the Airport's vision.*
- *Will there be a study on adjacent property evaluation? No, a property valuation will not be completed.*
- *Is sewer and water an issue at the Airport? Yes, currently all septic needs are met with individual septic systems and drain fields. The land could be better utilized if not needed for the drain fields. Water is currently supplied by individual well.*

-
- The Airport has many benefits such as emergency and disaster relief, tax income, job creation and tourism. Is this addressed in the Plan? *Yes, the strategic role analysis will identify these advantages. Additionally, Aurora State is outside of the 100-year floodplain unlike other I-5 airports (i.e., Chehalis).*
 - Are Marion and Clackamas County represented on the PAC? *Yes.*
 - The 2000 Master Plan is straightforward and doesn't incorporate some of the considerations other modes of transportation include. Will the goals of SB 680 be included? *The FAA provides guidance for an airport master plan and this master plan is primarily funded by the FAA. The airport master plan scope was developed to fit the FAA's criteria, while also tailoring the project to Aurora State Airport.*
 - What agency or external involvement will there be during the planning process? *Many local and state agencies will be notified about upcoming public meetings, some of which are on the PAC, and the final Plan will be taken to Marion County for adoption within the Comprehensive Plan.*

**Future Meeting
Dates and Times**

The next meeting will be a PAC meeting open to the public to discuss draft Chapters 1 and 2 (issues/goals and inventory) and it is tentatively scheduled for January 2010. Location is yet to be determined.

The meeting adjourned at 7:30 pm.

Aurora State Airport Master Plan & Airport Layout Plan Update - Kick-Off Meeting

November 3, 2009

Maplewood Grange Hall

6:00 - 7:30 p.m.

SIGN IN SHEET

NAME	REPRESENTING	MAILING ADDRESS	PHONE#	E-MAIL
LARRY AGNEW	DEER CREEK	21995 LAUREL AVENUE, AURORA	503-678-2937	DEERFLURS@GMAIL.COM
Ginny Agnew	" "	" "	" "	" "
DAN RICHES	COLUMBIA HELICOPTERS	14452 ARNDT RD NE AURORA	503-678-1222	danriches@colheli.com
Richard A. Jenks	(Self.) Prop. Owner	PO Box 67 Aurora OR 97009	503-678-1843	NA
PAVE VOLZ	Aurora Airport Hangar	22930 SW ERD PLAZA	503-652-0512	
Steve Noack		21811 Beans Ferry Rd NE Aurora	503-678-3331	
Steve Hurst	Wilsonville	89585 SW Cascade Loop	503-669-5896	hurstclan@sejzen.net
Jim McRow	City of Aurora	P.O. Box 352 Aurora OR	503-969-8179	JimMcRow@aurora.com
Patti Milne	Marion County BOC	PO Box 14500 Salem OR 97309	503-589-3268	pmilne@co.marion.or.us
Emily Kepper	Clarkamas Co	2057 Kahl Rd OC 97045	937-742-5933	emilyke@co.clackamas.or.us
FRED W. NETTER	AURORA FIRE	15082 OTTAWAY RD, AURORA 97002	503-674-5614	NETTERLAND@GMAIL.COM
JACK E. KAHLE	SELF	7545 Downs Post Rd, Wilsonville 97070	503-674-8022	JACKERKALE@YAHOO.COM
Bruce Bergman	Bergman Photo	7816 SE 13th Ave Portland, OR 97202	503-239-6010	bruce@bergmanphoto.com
Mark Pilon	Helicopter Transport Services	5866 SW Plumley St Corvallis OR 97333	541-754-2400	pilonm@htshelicopters.com
Richard Waggoner	Tri-Prop	11522 Airport Rd NE #6 Aurora	503-628-3433	
Tony Holt		7670 SW Village Greens Circle Wilsonville	503-766-5508	ajholt36@aol.com
Rod Yoder		25490 S Rhoten Rd Aurora OR	503-263-8330	ryoder@aurorafire.org
LYNDA LUNDIN		13702 Heather Ln NE Aurora, OR 97002	503-678-2420	
Jim Hansen		5916 Sunbrook Dr, Aurora Lake Oswego, 97035	503-307-3164	james.n.hansen@mac.com
Cathy Down		31526 S.W. Old Farm Rd Wilsonville OR	644-8104	
BRIAN MURPHY		22013 NE FURCO OR.		murphy to t YAHOO.COM
Robert K. B...		14490 NE ... Cir, Aurora		
JIM NORTH	WYLEG HOA CUAD	1025 NW COUCH #1114 PDX, 97209-4135	503-221-6282	james.northemorganstanley.com
Carl Wieneke	LAAD USER	1208 Independence Ct Woodburn		carlwieneke@msn.com
Tom Whitney	"	10652 SW Kable St Tigard		

Aurora State Airport Master Plan & Airport Layout Plan Update - Kick-Off Meeting

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<u>NAME</u>	<u>REPRESENTING</u>	<u>MAILING ADDRESS</u>	<u>PHONE#</u>	<u>E-MAIL</u>
Walter Palubicki	Helicopter Transport Service	5806 SW Plumasi Corvallis OR 97333	(541) 754-2400	palubicki@phtshelicopters.com
Nick Kaiser	Aurora	14655 KAROLY Aurora	503 678 1534	NK General @ Centurytel.net
Mary Lou Burke		P O Box 356 Hubbard	678-2544	jburke002@A
Jim Higgins		P.O. Box 2027 Wilsonville	97070 503-789-2332	sunnyjeema@yahoo.com
MARTIN MEKEAS	OREGON FLOWERS INC	PO BOX 311 AURORA, OR 97002	678-2580	MARTIN@OREGONFLOWERS.COM
Gerald London		13702 HEATHER LN NE AURORA	97002	
Tony Halbring	Wilson Const. Co	1190 NW 3rd Ave Canby, OR	97013	halbring@wilsonconst.com
Chanley & Cathy Bower		31526 SW OLD FARM RD WILSONVILLE OR		chanbo44@comcast.net
Susan Melbrey		27013 WE FLORAL AVE AURORA	97002 503-678-2993	NET
MARLO TROY		23123 AIRPORT RD NE AURORA	97002 (503) 678-2678	
LEN KAUFFMAN		22725 SW MIAMI DR. TUALATIN, OR	97002	LAKAVF@comcast.net
Bruce Bennett	Aurora Aviation	P.O. Box 127	503-678-1217	Bruce @ Aurora Aviation
Erich Huem	community	8301 SW Lafayette Way Wilsonville	OR 97070 503-694-6036	
JOSEPH TESHERA	DM WILLAMETTE VALLEY EQUINE	23200 HUBBARD CENTER RD NE	97002 503-678-4225	erichu@yaho.com jteshera@netcom.com
JEFF WRIGHT	WORKMAN AIRPARK	9430 S. GRIBBLE RD, CANBY OR	503 781 5130	WRIGHTJ@CANBY.COM
Mike Shrock		22050 Boones Ferry Rd. NE Aurora	OR 503-716-7608	mikesrock@yaho.com
F M BURGER		14995 N Z LAWNVIEW CIX AURORA	97002	

Aurora State Airport Master Plan & Airport Layout Plan Update - Kick-Off Meeting

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<u>NAME</u>	<u>REPRESENTING</u>	<u>MAILING ADDRESS</u>	<u>PHONE#</u>	<u>E-MAIL</u>
Susan Stevens	Charbonneau	32000 SW Charbonneau Drive ; Wilsonville		ccc@teleport.com
Vera Wise	Wear	32521 S. W. L. Ave		unany@comcast.net
Michael Lambert	SOUTHEND AIRPARK	14355 KEIL RD NE AURORA OR 97002		mlambert@southendairpark.com
TED MILLAR	SOUTHEND AIRPARK	14355 KEIL RD NE AURORA OR 97002-53797711		tmillar@southendairpark.com
Bruce Olson	Charbonneau	31570 SW Arrow Glen Loop Wilsonville	503 694 9388	abolson2@comcast.net
CHRIS MALETIS	LANGDON FARMS	1205 SW FAIRFAX PL. PORTLAND, OR 97225		c3maletis@aol.com
GRIS LEO	The Leo Company	9318 Champac Road, Aurora, OR 97002		GRIS@TheLeoCompany.com
Roy Dobbs	Deer Creek	13711 LUSTONIA DR	503-348-5469	rdobbs@conturytel.net
DOUG DAVISON	DDD FARMS	11123 STAFF ROAD Annsville, OR	503-485-2480	DDAVISON@AKSOPA.com
ROD AUGER	Ecocrete Northwest LLC	P.O. Box 5485 SALEM OR 97304	503 931-5688	rod@ecocreto.com
LORRAINE DEES	Resident	14112 PIPER ST NE AURORA ORE 97002	503 678-1959	
DON CROUCH	Resident	14112 PIPER ST. NE AURORA ORE 97002	503 678-1959	LCrouch@centurytel.net

Aurora State Airport Master Plan & Airport Layout Plan Update - Kick-Off Meeting

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6:00 - 7:30 p.m.

SIGN IN SHEET

<u>NAME</u>	<u>REPRESENTING</u>	<u>MAILING ADDRESS</u>	<u>PHONE#</u>	<u>E-MAIL</u>
BERNICE IVEY		PO Box 788 WILSONVILLE	503-678-3383	
Ken Ivey		24780 NE Prairie View Dr Aurora 97002		ken@lyco-cpa.com
Bob AUGERUS				
DAVID WAGGONER		23115 Airport Rd NE #8 Aurora, OR 97002		DAVE@WILAMETTEAIR.COM
John Farrens		21810 Boones Ferry Rd NE Aurora OR 97002		JNS Farrens@Yahoo.com
JUST ZACHCK		12217 Donald R.d Aurora OR 97002		
Richard Waggoner		23115 Airport Rd NE #6 Aurora OR 97002		Richard.Wagg@centurytel.com
STEBIAN LKSHBROOK		40 CITY HALL - WILSONVILLE	(503) 570-1560	LKSHBROOK@ci.wilsonville.or.us

Aurora State Airport Master Plan & Airport Layout Plan Update - Kick-Off Meeting

November 3, 2009

Maplewood Grange Hall

6:00 - 7:30 p.m.

SIGN IN SHEET

Amundson.krit@whpa@odot.or.us

<u>NAME</u>	<u>REPRESENTING</u>	<u>MAILING ADDRESS</u>	<u>PHONE#</u>	<u>E-MAIL</u>
<i>Keith Amundson</i>	<i>Charbonneau</i>	<i>32545 SW Juliette Dr Wilsonville</i>	<i>503 694 1065</i>	<i>Amundson.krit@whpa@odot.or.us</i>
<i>Lorraine Gonzales</i>	<i>Clackamas Co.</i>	<i>150 Beaver Creek Rd</i>	<i>742-4541</i>	<i>lorrainego@co.clackamas.or.us</i>
<i>Max Rottend</i>	<i>City of Wilsonville</i>	<i>OR City 97045</i>	<i>503 5701505</i>	<i>ottend@civillsonville.or.us</i>
<i>Mark Gardiner</i>	<i>State Aviation Board</i>	<i>3040 25th Street SE, Salem 97302</i>	<i>503-378-4880</i>	<i>gardiner@avrotec.com</i>
<i>Gregg Dal Ponte</i>	<i>ODA</i>	<i>"</i>	<i>"</i>	<i>Gregg.L.Dalpont@odot.state.or.us</i>
<i>Mitch Swecker</i>	<i>ODA</i>	<i>"</i>	<i>"</i>	<i>Mitch.T.Swecker@state.or.us</i>
<i>Chris Cummings</i>	<i>ODA</i>	<i>"</i>	<i>"</i>	<i>Christopher.Cummings@state.or.us</i>
<i>John Wilson</i>	<i>ODA</i>	<i>"</i>	<i>"</i>	<i>John.P.Wilson@state.or.us</i>
<i>Rainse Anderson</i>	<i>WHPacific</i>	<i>9755 SW Barnes, Ste 300, Portland 97225</i>	<i>503-626-0455</i>	<i>randerson@whpacific.com</i>
<i>Sara Funk</i>	<i>WHPacific</i>	<i>"</i>	<i>"</i>	<i>sfunk@whpacific.com</i>
<i>Sarah Lucas</i>	<i>WHPacific</i>	<i>"</i>	<i>"</i>	<i>slucas@whpacific.com</i>

Aurora State Airport Master Plan

Planning Advisory Committee (PAC) Meeting #1

July 22, 2010
Charbonneau Country Club

MEETING SUMMARY

Welcome and Introductions

At 6:10 the meeting commenced. Chris Cummings, Oregon Department of Aviation (ODA) Planning and Projects Manager, welcomed everyone and thanked them for attending. Mr. Cummings gave an overview of what ODA does as an agency, which includes owning and managing 28 airports in Oregon. The Aurora State Airport (Airport) is the largest and busiest Airport that ODA owns. Other ODA employees attending the meeting were introduced: Doug Hedlund, Interim Director; John Wilson, Airport Operations Specialist; Mitch Swecker, State Airports Manager; and Sandi Larsen, Planning Analyst. The Consultant, WHPacific, who is preparing the Master Plan (Plan) was then introduced. WHPacific team members were Rainse Anderson, Project Manager; Sara Funk, Senior Aviation Planner; and Sarah Lucas, Aviation Planner. Other sub-consultants on the project are (not in attendance): Bergman Photographic Services, aerial photography; Corvid Consulting, environmental services; and Jeanne Lawson and Associates, public outreach.

The Planning Advisory Committee (PAC) then introduced themselves. Below is a list of the PAC members (all were present at the meeting), along with their affiliations.

- Bruce Bennett – Aurora Aviation
- Jim Bernard – Clackamas County Board of Commissioners
- Jim Hansen – On-Airport / Tenant
- Tony Helbling – Off-Airport / Tenant & Business (Wilson Construction Co)
- John Henri – City of Canby
- Tony Holt – Charbonneau Country Club
- Steve Hurst – City of Wilsonville
- Nick Kaiser – Community
- Roger Kaye – Friends of Marion County
- Rick Kosta – Deer Creek Estates
- James Meirow – City of Aurora
- Ted Millar – Aurora State Airport Business – Southend Airpark
- Patty Milne – Marion County Board of Commissioners
- Fred Netter – Aurora Fire District

- Dan Riches – Columbia Helicopters
- Scott Starr – Wilsonville Chamber of Commerce
- Mitch Swecker – Oregon Department of Aviation
- David Waggoner – Willamette Aviation
- Craig Wilmes – Aurora Jet Center

The PAC was formed by ODA to represent varying interests at the Airport that includes on and off-airport businesses, local government agencies, surrounding communities and four at-large positions. The at-large positions were announced as available at the November 2009 kick-off meeting and applications were submitted to ODA. ODA performed a double-blind review of the applications to select the at-large representatives.

Review of Process and Revised Schedule

The WHPacific Consulting Team then described the Master Plan's purpose, process, the PAC's involvement and the project schedule. Below is an overview of the information discussed.

Purpose of the Master Plan – A Master Plan is a document that guides the development of the Airport over a 20-year planning period. The focus of the Master Plan is to update the inventory, demand forecasts, Airport Layout Plan (ALP) and capital improvement plan (CIP). To be eligible for federal or some state funding, a project must be shown on the approved ALP.

The Master Plan Process – The Master Plan will consist of seven chapters: 1) Airport Issues and Goals, 2) Airport Inventory, 3) Aeronautical Activity Forecast, 4) Facility Requirements, 5) Airport Alternatives, 6) Airport Layout Plan and Associated Drawings, and 7) Capital Improvement Plan. The Forecast and Airport Layout Plan will require Federal Aviation Administration (FAA) approval. Once a final draft is complete, ODA will present the Plan to the State Aviation Board for approval and submittal to the FAA. ODA will request the Plan be adopted into the Marion County Comprehensive Plan.

Parameters of the Plan – An overview of what the Plan will not do was then given. The Plan will not:

- Analyze the Airport's economic impact; this information is included in the 2007 Oregon Aviation Plan
- Prepare a surface transportation plan for off-airport area; the Plan will consider local transportation system plans.
- Change land use designations; existing land use designations for the Airport and surrounding area will be identified and any deficiencies will be noted
- Develop a vision statement for the Airport; rather, it will focus on the Airport's strategic role and issues/goals.
- Commit FAA or ODA to fund improvements in the Plan; development will only be funded if justified

Several PAC members had questions about the Plan's parameters. These questions and answers were:

Q – Why will there not be a vision statement for the Airport in the Plan? How can you develop a plan without a vision?

A – We are gathering the goals and issues from all parties now, without them you can't develop a vision. As the Plan progresses, a vision of the airport may develop, but it won't be in the form of a one sentence vision statement.

Q – Who signed off on no impact to Clackamas County?

A – No one signed off on anything to that effect. The Plan will consider Clackamas County, as well as all surrounding areas. However, the Airport is located in Marion County and they will be the ones adopting the Plan into the Comprehensive Plan. The Intergovernmental Agreement (IGA) that shows an impact area is completely separate from the Plan and is not considered.

Q – Is ODA coming to the table with an agenda?

A – No. Financial self-sufficiency, however, is desired for all state-owned airports.

Q – Can a plan be set firm without surface transportation planning?

A – The plan will consider local surface transportation planning, but it is not a surface transportation plan.

Q – Is the IGA tied to the air traffic control tower?

A – No, the IGA is not tied to the tower except that Marion County will be the county that approves permit applications for construction.

At this point, WHPacific clarified the Airport's "fence." There is a difference between the state's property and the fence around the Airport environs. Accessing the Airport from private property to the state's airport property is called going "through-the-fence." The perimeter fence, which includes state and private property, is for safety and security purposes.

PAC Roles and Responsibilities – The PAC is an advisory committee to ODA; ODA has final authority over the Master Plan. Members are asked to provide input to help produce a plan that balances a wide range of airport stakeholder needs and concerns; bring forward comments and concerns of those they represent; and help disseminate accurate information about the plan.

Project Schedule – There are approximately 12 months remaining in the project. The schedule allocates review periods of all documents prior to each PAC meeting for ODA, FAA and PAC members. In total, the project includes a kick-off meeting (held November 2009), six PAC work sessions and five open houses.

The remaining meeting schedule is as follows. (Note, meeting dates and times are subject to change.)

*PAC Meeting #2 * – September 30, 2010*

- Discuss draft chapters of the issues and goals, inventory, and draft forecast (Chapters 1,2 and 3)

*PAC Meeting #3 * – December 2, 2010*

- Discuss the draft facility requirements chapter (Chapter 4) and identify possible development alternatives

*PAC Meeting #4 * – February 1, 2011*

- Evaluate the draft airport alternatives (Chapter 5)

*PAC Meeting #5 * – June 9, 2011*

- Discuss the draft ALP and CIP (Chapters 6 and 7)

*PAC Meeting #6 * – July 14, 2011*

- Present the Final Report

** All meetings will occur on Thursday nights. Immediately following these PAC meetings, there will be public open houses to cover the same topics of the PAC meeting (the first open house will cover the topics of both meeting #2 and meeting #1).*

Introduction to Master Plan Goals and Issues

The Master Plan goals will be used in the Plan as a means to create and evaluate development alternatives. They also set the tone of the report. WHPacific gave examples of what the goals may be, such as safety, operational efficiency, public acceptance and protection from incompatible land uses. Issues are identified to help direct the effort to the things that are most important to resolve in the Plan. Regarding issues, WHPacific reported on the issues heard at the kick-off meeting and what was submitted on the airport user surveys. Issues from the kick-off meeting related to runway length, calm wind runway designation, air traffic control tower, precision approach, noise, public outreach, surface transportation planning and land use planning. The major issues identified in the user survey are the following: build an air traffic control tower (25 for, 3 against), lengthen runway, add precision instrument approach, change calm wind runway back to 17, improve airport roads and address traffic issues, and provide public sewer and water facilities.

PAC Discussion of Goals and Issues

Goals for the Plan, as stated by PAC members:

- Jim Hansen – Would like to see by the end of the process (directly or parallel) a clear vision statement defining what the Airport will be like in the foreseeable future (30-50 years) that is embraced by stakeholders in terms of safety, noise, development scale and flavor. The Plan's preparers need to get really high quality, great information about actual operations at the Airport and relationship of the Airport and economic growth. Is there a way to make sure the plan is really implemented?
- Steve Hurst – Consider all areas of impact: service area definition. Goals should be established, not foregone. Proceed in good faith. Measure supply and demand equally. Just because there is demand for something, we are not required to supply it.
- Nick Kaiser – Consider livability for airport neighbors. Traffic issues and noise must be considered.

- Tony Holt – All communities need to be listened to and their points of view taken into account.
- Jim Meiorow – Property between airport and Aurora should be considered. The airport will grow and we need to know where it is going. Consider the impacts of an air traffic control tower.
- Jim Bernard – Look at what impacts the airport would have versus the cost of addressing those impacts and include Oregon Department of Transportation (ODOT) costs for roadway improvements.
- Fred Netter – Consider the additional load put on the fire district (FD) that may occur as a result of expansion. FD has very little control over what happens at the airport, but is responsible for it. Why pay (community) to subsidize what's happening at the airport? FD must have ability to cover the airport. These costs should be included in the Plan. We have heard safety is #1, as it is for the FD. However, expansion has an impact associated with it on our equipment.
- David Waggoner – Inside the fence: safety and safety only. Outside the fence: give a careful look at how the investment will play out (benefits vs. costs).
- Bruce Bennett – The Plan doesn't direct or drive the economy. Safety is first, which includes runway length. The plan needs to determine what the actual need at the Airport is for runway length. The Plan should include integration with other systems, *i.e.*, fire suppression system.
- Patty Milne – Keep issues separate and don't mix issues. Stay focused on the Plan and its process. Twenty years is a long way out, and while there are issues today, we must consider the future.
- Dan Riches – Safety first. The airport has to be responsive to the needs of airport business users.
- Mitch Swecker – Safety. Everybody should come to the table with an open mind.
- John Henri – Safety at the Airport and look at the safety of city/county streets and roads. Must look at all of the transportation infrastructure needs. Does airport expand to whatever it wants to be or should there be constraints to its growth?
- Roger Kaye – Agricultural lands are very important to the community. Worried how the increase of airport traffic will impact the farmers and farming operations. Should not forget the Salem airport needs protection, too.
- Ted Millar – As we go forward, remember the Airport is important in the National Plan of Integrated Airport Systems (NPIAS). The Airport's location on I-5 is ideal and the Airport needs to service the communities. An airport grows to provide services. The Airport is a reliever to PDX (*note, it is not an FAA designated reliever at this time*). Corporate aviation is very important for large companies. Provide future growth potential for efficient business operations.

- Jim Bernard – The Airport has impacts to air transportation, not just road traffic.

Issues at the Airport were then discussed:

- Scott Starr – First there are questions about air traffic volume, will status quo be maintained? What is the capacity of the planes? Are there going to be any airspace changes?
- Bruce Bennett – Runway length and strength limits some operations. Zoning is necessary to protect the Airport. Agriculture is a good neighbor for the Airport.
- Tony Holt – In the last Plan noise was taken out and done separately. We need to discuss noise in this Plan. Forecasting: there is absolutely no way to track operations. Starting a forecast without historic data is difficult. How will it be accomplished?
- Rick Kosta – Deer Creek was established circa 1972. At that time Aurora was a smaller airport. Noise is a concern.
- Jim Bernard – Operations volume, frequency, and traffic direction is of concern. Will growth limitations be considered, as with the IGA between ODA and other entities? Clackamas County is impacted and that isn't being addressed. There are also through-the-fence concerns.
- Steve Hurst – Reaffirming that hopefully we'll be able to collect good information to make a true plan. Measure demand accurately.
- Fred Netter – As for collecting data, we need to come up with is what has happened safety wise in the past. What has/hasn't worked at other airports and Aurora?
- Rick Kosta – Reference to the IGA. To ODA: why would ODA sign an IGA at a time when we are trying to expand participation?
- John Henri – These processes do work.
- Craig Wilmes – An air traffic control tower is for safety and involvement with all stakeholders is key for the process and economic development.

Summary and Next Steps

WHPacific will prepare drafts of the Issues and Goals (Chapter 1), Inventory (Chapter 2), and Forecasts (Chapter 3) and submit to ODA, PAC and FAA. ODA must receive FAA approval of the Forecast Chapter. The next PAC meeting will cover the first three chapters, tentatively set for September 30. The PAC meeting will be from 5:30 – 7:00 pm and the open house from 7:00 – 8:00 pm.

The Positive Aurora Airport Management (PAAM) groups meet on Thursday mornings, and it was requested the meetings be moved to another night of the week. However, for County Commissioners and City Councilors Thursday nights work best. All future meetings will be held on Thursdays.

Public Comments

The following public comments were given:

- Will the Plan consider the balloonist a safety issue?
 - No, balloonists have a right to the airspace in accordance with FAA regulations.
- Has ODOT and the Counties been invited to these meetings?
 - Yes, they have been and will continue to be invited.
- I've been through planning processes before and this is a good process. Airplanes are getting quieter.
- What is WHPacific's experience and what are they being paid?
 - Rainse Anderson has worked as an airport engineer and at the Aurora Airport since 1977. In total, he has worked on over 300 airport planning and engineering projects in the Pacific Northwest. Sara Funk has over 20 years of planning experience throughout the United States and brings a breadth of knowledge to the plan. Sarah Lucas has worked at WHPacific as a planner for four years, prior to that she was a planner for ODA and the Nebraska Aeronautics Division, and has been a commercial pilot for eight years. The fee for the Plan is \$306,149.46 (includes sub-consultant work).
- Canby should be involved in the process.
- Clackamas County has committed to keeping the area south of the Willamette River rural. Part of this was due to the cost in upgrading the infrastructure to meet industrial demands. The freeways are for freight, not commuters. What is the Airport's acreage footprint going to be set at? Charbonneau was planned in 1970 and was always planned to be the size it is today and it has never grown outside those boundaries.
- How are the forecasts going to be completed?
 - The forecasts are completed by studying existing demographic and population forecasts for the area, in addition to national forecasts. There are strong correlations between population and specific demographic statistics to indicate airport activity at general aviation airports like Aurora State.

Meeting Adjournment

The meeting adjourned at 8:40 pm.

Aurora State Airport Master Plan & Airport Layout Plan Update - Planning Advisory Committee Meeting #1

July 22, 2010
Charbonneau Country Club
6:00 - 8:45 p.m.

SIGN IN SHEET

<u>NAME</u>	<u>REPRESENTING</u>	<u>MAILING ADDRESS</u>	<u>PHONE#</u>	<u>E-MAIL</u>
Lois Weber	Myself	7330 SW Eastlake Ct.	503-694-5552	lois1orm@earthlink.net
LEN KAUFFMAN		22725 SW MIAMI DR, TUALATIN	503-885-1920	LAKAUF@COMCAST.NET
NICK KAUSER	Aurora	14685 KALIC. Aurora, OR 97002	503 678 1531	NK Gemini@CenturyTel.net
BRUCE OLSON		31570 Sw Arbor Glen Loop	503 694 8858	
Tony Helbling				
Craig Wilmes	Aurora Jet Center / M11	22255 Yellowgate Lane NE #17002	503-678-2507	Craig.Wilmes@ProTalonAircraft.com
David P Kynard		4305 SW Conroy Dr. Unit B	503-694-8082	KDE1976@comcast.net
Rince Bennett	Aurora Aviation	P.O. Box 127 Aurora OR	503-678-1217	Rince@AuroraAviation.com
Scott Starr	Wilsonville Chamber	28750 SW Cascade Loop Wilsonville	503-682-8200	Scott.Starr97070@gmail.com
Kyle Huberd	myself	2601 SW 45th Dr. Wilsonville OR		KHuberd@msn.com
Richard Waegpener	Tri-Prop, LLC	23115 Airport Rd NE #6 Aurora OR 97005		Richard.Waegpener@CenturyTel.net
TED MILLAR	Southern Airpark	14355 Keil Rd NE #11 Aurora OR 97002	503-709-7711	tmillar@southernairpark.com
Mark Ottenad	City of Wilsonville			
MIKE VERNON	Aurora Farms	15990 CEDARWOOD RD	503-849-0662	mike/vernon@CenturyTel.net
Jason Freilinger	People of Marion County	1316 Frontier St. Silverton, OR	503-873-6005	Jason.Freilinger@wavecable.com
Jim Meisner	City of Aurora			
Randy Carson		5565 E 10th Ave Canby Or 97013	503-266-5024	JRCarson@Canby.com
Frank Neitz	SLR	32544 SW Juliette Dr 97070	503,694.5602	neitz6920@comcast.net
Tony Ludstrom	Sunset helicopters	22115 Airport Rd NE #12 Aurora 97002	503-678-1813	Tony@Sunsethelicopters.com
Beth Heine	Self	6818 Whalland Pkwy Wilsonville	503-694-5513	
Darold Heine	"	"	"	"
Jason Freilinger	Candidate	P.O. Box 310, Silverton, 97381	503-851-2369	jasonfreilinger@wavecable.com

Aurora State Airport Master Plan & Airport Layout Plan Update - Planning Advisory Committee Meeting #1

July 22, 2010
Charbonneau Country Club
6:00 - 8:45 p.m.

SIGN IN SHEET

NAME	REPRESENTING	MAILING ADDRESS	PHONE#	E-MAIL
Brandon Reich	MC Planning	PO Box 14500 Salem OR 97309	503-544-1038	breich@co.marion.or.us
John Henri	City of Canby	Canby, OR.	(503)624-9422	jhenri@jjhenri.com
Patti Milne	Marion County Commissioner	PO Box 14500 Salem 97309	503 589 3268	pmilne@co.marion.or.us
Steve Hunt	Wilsonville City	28585 SW Cassady Ln 97070	503-682-0091	hunt.steve@wilsonville.or.us
JACK KATHE	SELF	7574 Downs Post Rd.	503-974-8022	jackekathe@yahoo.com
Peter Hoff	SELF	7450 SW Bunker Post Pt	503 694 5392	PJHoff434@aol.com
MARY JO CARTASEGNA	CLACK CNTY	2051 Kaen Rd OC 97045	503-655-8581	mcartasegna@co.clackamas.or.us
Charlotte Lehman	" "	↓	↓	clehan@co.clackamas.or.us
Jim Bernard	" "	↓	↓	jbernard@co.clackamas.or.us
Jim Austin	" "	↓	↓	
FRED NETTER	AURORA RURAL FIRE	15082 OTTAWAY RD. NE.	503-679-5614	NETTERLAND@a.com
TREBA NETTOR	SELF	↓	503-679-5614	↓
Vern Wise	SELF Res.	32521. SW Saluda	" 694-2124	marverv@Comcast.net
CLARK RUDY	SELF	6815 SW WHEATLAND RUN	" 694-5534	RUDY7428@Comcast.net
Rickie Nicholson	Self	7270 EAST LAKE CT	694 2824	
DAVID BUCK	Self	680 Hawthorne Ave SE #140, Salem, OR	503 585 7774	dbuck@aktcpa.com
CHRIS CORICH	STATE AVIATION BOARD	6595 SW Alden St Port OR 97223	503 866-3982	cbcorich@comcast.net
Ken Ivey	ABB Community Planning Org	24780 NE Parnie View Dr Aurora OR 97002	503 31 30478	ken@ijco-cpa.com
BERNICE IVEY	" "	" "	" "	" "
MARTIN MÉSKEIS	OREGON FLOWERS INC	PO Box 311 AURORA OR 97002	503-678-2580	MARTIN@OREGONFLOWERS.COM
Richard Kost	Deer Creek Est.	22073 Floral Rd NE 97002	503 678 3063	RICKYTKKY@HOTMAIL.COM
Fred Prashon	Self	32106 SW EASTHARVEST DR	503 694 5336	
WAYNE HUBERD	Self	14747 ALBERS WAY NE Aurora 97002		503-678-2007
Bob Carl	Self	7915 SW Fairway Dr Wilsonville, OR		503 694 5317
Susie Stevens		ccc@teleport.com (Email)		

Aurora State Airport Master Plan & Airport Layout Plan Update – Planning Advisory Committee Meeting #1

July 22, 2010
Charbonneau Country Club
6:00 – 8:45 p.m.

SIGN IN SHEET

<u>NAME</u>	<u>REPRESENTING</u>	<u>MAILING ADDRESS</u>	<u>PHONE#</u>	<u>E-MAIL</u>
Lorraine Gonzales	Clackamas County	150 Beaver Creek Rd Oregon City 97045	503 742 4541	Lorraine_gp@co.clackamas.or.us
Fleur Fisher		2145 S.W.E. LK Ct 97070	644-6453	
KAYE	FRIENDS OF MARION CITY	P.O. Box 3274 SALEM 97302	503 743 4567	KAYE2@GMAIL.COM
DAVID WAGGONER	WILLAMETTE AVIATION / TRI-GRUP	2315 Airport Rd NE #8, Aurora OR 97002	503-680-3598	David@WillametteAir.com
Marcia Kelley		396 Washington St. S Salem OR	503 581-8384	marciakelley@gmail.com
Richard P. Jenks	Land Use	PO Box 67 Aurora OR 97002	(503) 678-1209	
ANDY SWANSON	Enchanted Gardens	14438 Keil Rd Aurora OR 97007	503 701-5062	enchanted-gardens2concordst.
RON STERBA	Pilot	500 20 th St NE SALEM OR 97301	503 364-6005	SAINTESTERBA@MSN.NET
GREG LEO	City of Wilsonville	9318 Champney Road NE Aurora OR 97002	503-804-6391	GREG@TheLeoCompany.com
CARL WINANS	Self	32440 SW LAKE RD Ct Wilsonville 97070		

Aurora State Airport Master Plan

Planning Advisory Committee (PAC) Meeting #2

September 30, 2010
American Legion, Aurora, OR

MEETING SUMMARY

Attendees

Oregon Department of Aviation – Chris Cummings, Sandra Larsen, John Wilson, and Mitch Swecker (also a PAC member)

Oregon Aviation Board – Mark Gardiner

WHPacific – Rainse Anderson, Sara Funk, and Sarah Lucas

JLA Public Involvement – Adrienne DeDona and Sylvia Ciborowski

PAC – Bruce Bennett, Jim Bernard, Jim Hansen, Tony Helbling, John Henri, Susie Stevens (for Tony Holt), Steve Hurst, Nick Kaiser, Rick Kosta, James Meirow, Ted Millar, Patti Milne, Fred Netter, Dan Riches, Roger Kaye, Ray Phelps (for Scott Starr), and Dave Waggoner

Public Attendees – See attached sign-in sheets

Opening Remarks

The meeting commenced at 5:10 pm, with welcoming comments from Chris Cummings. Mark Gardiner, Oregon Aviation Board Chairman, also spoke; outlining recent policies adopted by the Board and dispelled misconceptions surrounding the Aurora State Airport (Airport) and the Master Plan process. The policies are:

Aurora State Airport Mission

Consistent with the 2000 Master Plan, the 2007 Oregon Aviation Plan (both endorsed and approved by FAA), and consistent with the direction in the current Master Planning effort, the Oregon Aviation Board re-affirms that the mission of the Aurora State Airport is and will remain a general aviation airport serving business and personal aviation.

Aurora State Airport Tower

The Oregon Aviation Board re-affirms that an air traffic control tower at Aurora State Airport is a critical aviation safety facility, as determined by the 2007 Tower study and by

FAA approvals of the tower and that, therefore the Aurora tower remains the Oregon Aviation Board's highest priority capital project. The Board further affirms that all federal, state and local regulatory processes will be followed in planning and developing the tower.

Presentation

The purpose of the PAC meeting was to review and discuss Draft Chapters 1 (*Introduction*), 2 (*Inventory*), and 3 (*Aeronautical Activity Forecasts*). The WHPacific planning team gave a presentation, which is outlined below. Comments from the PAC were taken during the presentation, while public comments were taken after the PAC working session had ended.

Schedule

Approximately 10 months are remaining. The process allocates review periods for ODA, FAA and PAC prior to each public meeting. To date, one public kick-off meeting and one PAC work session have been conducted. After tonight four PAC work sessions and four open houses remain. The next PAC meeting – with a public open house to follow – will be to discuss draft Chapter 4, *Facility Requirements*, and to identify possible airport development alternatives. It is tentatively scheduled for December 9, 2010.

Chapter 1

Chapter 1 covers the following topics: planning process goals, master plan goals, issues to be addressed within the plan, and airport role analysis.

Goals were discussed at kick-off meeting (November 2009) and the first PAC meeting (July 2010) and will guide the conduct of the ODA, ODA's consultants, and the PAC throughout the development of the master plan update. Planning process goals are:

- Be open-minded and proceed in good faith.
- Keep the focus more on the long-term future than the short-term future.
- Don't mix unrelated issues and don't be sidetracked by issues that don't relate to the master plan.
- Obtain high quality information for analysis.
- Seek consensus for solutions that are acceptable, helpful, and clear.
- Establish a clear vision statement that defines what the Airport will be like in the foreseeable future (30 to 50 years) and that is overwhelmingly embraced by all stakeholders. The vision statement should encompass safety, noise, and development scale and flavor.

Master plan goals should guide the future development of the Airport; when it is time to evaluate alternative layouts for airport development, the goals should be the evaluation criteria.

- Goal 1: Enhance safety.
- Goal 2: Meet the current and projected needs of airport users, as feasible.
- Goal 3: Consider all the off-airport impacts of Airport development; minimize negative impacts and maximize positive impacts.

Issues were a subject of the kick-off meeting and first PAC. Other sources for issue identification were ODA and an Airport user survey that was conducted in the fall of 2009. The issues are intended to be a method “checks and balances” throughout the planning process, to ensure the Plan addresses issues important to the airport users and community.

- Runway Extension
- Air Traffic Control Tower
- Impact of Airport Expansion on Surrounding Areas
- Calm Wind Runway Change
- Precision Instrument Approach
- Helicopter Operations
- Other Airport Improvements

In addition to goals and issues, Chapter 1 discusses the appropriate role of the Airport. It was determined the Aurora State Airport fits well the Oregon Aviation Plan (2007) description of an Urban General Aviation Airport.

The Airport’s role in the future should not change from its current role—a busy airport handling a full range of general aviation, including helicopters and business jets. Mulino State could be utilized if personal use and recreational aircraft want to relocate to a less busy airport where the other aircraft are smaller and slower.

Aurora State Airport is not an FAA-designated reliever airport for Portland International. The Airport could be officially designated a reliever in the short-term future, if ODA decides to pursue the designation and the FAA agrees.

Aurora State Airport should continue to fulfill its role as an Urban General Aviation Airport. The advantages and disadvantages of becoming a reliever airport should be discussed with the ODA, Port of Portland, and FAA.

Chapter 2

The inventory chapter discusses existing facilities at the Airport, including: airfield facilities, landside facilities, support facilities, land use and zoning, and environmental.

Airside facilities include:

- Runway. Runway 17/35 is 5,004 feet by 100 feet.
- Taxiways and Taxilanes. Runway 17/35 full-length parallel taxiway (Taxiway A), 35 feet wide. Five taxiways connect Taxiway A to Runway 17-35.
- Aprons and Aircraft Parking.
 - State-owned property = 46 tiedown positions.
 - Private property = 37 tiedown positions with additional aprons for large aircraft parking.
- Airfield Lighting. Medium intensity lighting system.
- Visual Approach Aids. The Airport has three forms of visual approach aids.
- Two-box Visual Approach Slope Indicator (VASI) located at each runway end

- Runway 17 has both an Omnidirectional Approach Lighting System (ODAL) and Runway End Identification Lights (REILs).
- Instrument Approach Aids. Both Runway 17 and 35 have instrument approach procedures, which can be used when the visibility and cloud ceiling are below minimums for Visual Flight Rules (VFR) conditions.

Landside facilities include:

- Land. Airport Property vs. Airport Environs. Airport Property references property owned by the State of Oregon. The term Airport Environs is used to describe both public and private lands used for aviation-related uses.
- Hangars and Other Buildings. 89 buildings (Airport Environs)
- Aviation Services. Three fixed based operators (FBOs)
- Access and Vehicle Parking. Fencing surrounds the perimeter of the Airport Environs. All access points are gated - not all are automated. Private businesses at the Airport use a colored gate system to assist in emergency response and advertisement.
- Emergency Services. The Aurora Rural Fire Protection District provides fire protection, with a recently installed 500,000-gallon fire suppression system. Clackamas County Sheriff Department and Oregon State Police provide emergency services.
- Utilities. Utilities and public services provided at the Airport include:
 - Water – Individual well system
 - Sanitary Sewer – Individual drain field / septic tank systems
 - Telephone – Local franchise companies
 - Electricity – Portland General Electric

Land use and zoning. The existing land use and zoning at and surrounding the Airport was discussed (refer to Exhibit 2F).

Environmental Inventory. Environmental constraints for airports typically fall into two general categories: human environment and natural environment.

- Human factors include existing settlements and incompatible land use, noise, social or socioeconomic conditions, light and glare, and the general controversial nature of airports.
- Natural environmental elements include various aspects of air quality, water resources, fish and wildlife, hazardous materials, energy and other resource issues.

The FAA considers public controversy to be an environmental issue. Additional study regarding noise, threatened and endangered species, cultural resources, and possibly hazardous materials should be conducted once a project is defined.

Noise contours will be produced for the Master Plan study to assess the compatibility of land uses around the Airport with current and future levels of aircraft noise.

Chapter 3

Aeronautical Activity Forecasts are 20-year projections of activity (demand) to help plan the type and sizing of airport improvements. The Aurora State Airport forecasts are unconstrained by

current facilities. ODA may elect to constrain demand when facility needs and development alternatives are considered later in the planning process.

In the last 15 years, general aviation in the U.S., in Oregon, and at the Airport grew until 2008, when decline resulted from the economic recession and high fuel prices. From the turn of the century through 2007, the Airport's based aircraft grew due mainly to the growth at Southend Airpark, movement of aircraft from other "jet capable" airports, and strong economy. Declines in fuel flowage and instrument flight plans were recorded in 2008. In 2009, instrument flight plans declined, but fuel flowage grew. Instrument flight plans are growing in 2010.

About $\frac{3}{4}$ of Airport activity is associated with Clackamas and Washington Counties (based on population, pilots, instrument operations).

Historical records show 5.3% average annual growth in based aircraft at Aurora from 1998 (233 aircraft) to 2010 (432 aircraft).

Change in market share at "jet-capable" airports in the region, 1998 – 2007:

- Aurora - 21% to 32% (share of jets from 11% to 38%)
- Hillsboro - 35% to 27% (share of jets from 69% to 47%)
- Troutdale - 16% to 15% (share of jets from 6% to 3%)
- McMinnville - 10% to 10% (share of jets from 3% to 2%)
- Salem - 18% to 16% (share of jets from 11% to 10%)

Number of based aircraft at these five airports increased from 1,119 to 1,220 (jets from 35 to 88).

Based aircraft forecast models vary from 0.4% to 3.1% annual growth. Preferred forecast is 1.36% annual growth, resulting in 566 aircraft in 2030, an increase of 134 aircraft. Preferred forecast averages regional population and employment forecast growth rates and is consistent with growth projected by Airport businesses. Some change in fleet mix is forecast over 20 years: jets grow from 5% to 9%, helicopters grow from 8% to 10%, single engine airplanes decline from 72% to 66%.

Since 1998, total annual operations (operation = takeoff or landing) have varied between 66,821 and 90,180. Average historical ratio of based aircraft to operations is 232, consistent with Airport user survey conducted in fall 2009. Operations forecast models vary from 1.1% to 3.1% annual growth. Preferred forecast is based on 232 operations per based aircraft, which equates to 1.9% average annual growth. Operational fleet mix shows higher performance aircraft (jets and turboprops) are used more often than single engine aircraft, consistent with Airport user survey results. Over 20 years, jet operations are projected to grow from 13% to 18% of total operations, and single engine airplanes to decline from 33% to 29%.

Critical aircraft is the most demanding aircraft that regularly uses the airport (at least 500 annual itinerant operations) – can be a "family" of aircraft. The critical aircraft determines Airport Reference Code (ARC), which identifies appropriate FAA airport design standards. ARC is a letter

representing aircraft approach speed and a Roman numeral representing aircraft wingspan/tail height. ARC for current and future activity at Aurora is C-II (exemplified by Israel Aircraft Industries Astra 1125 now and by Cessna Citation X in the near future).

Summary of Aeronautical Activity Forecasts

Forecast Element	2010	2015	2020	2030
Based Aircraft	432	462	494	566
Aircraft Operations	100,224	107,227	114,720	131,312
Critical Aircraft	IAI Astra 1125	Cessna Citation X	Cessna Citation X	Cessna Citation X
ARC	C-II	C-II	C-II	C-II

PAC Comments

The following comments were provided by members of the PAC during the presentation.

- Susie Stevens – Cite the sources along with information, add language about physical constraints in regards to feasibility, change “evaluate” to “involve” on Goal 3. Also wanted more information on the user surveys and pointed out the difference between random and scientific surveys.
- Jim Hansen – Remove citation of 1,500’ extension being desired by some users, as he’s not heard that number before. (Note: several PAC members raised their hands when asked if anyone knows if 1,500’ is needed by some operators.) Add extending the runway overruns. An air traffic control tower may decrease operations in the smaller planes.
- Bruce Bennett – The drainage ditch on state property needs to be filled and paved for safety. He also recommended the Airport not grow past Hwy 51, Airport Road, Keil Road, and Arndt Road; the zoning on the other side of the roads should be protected.
- John Henri – Added that adjacent lands should remain as EFU (exclusive farm use).
- Fred Netter – If adjacent lands are kept as EFU, owner must be compensated.
- Roger Kaye – The use of land, especially on through-the-fence land, should be established. Are through-the-fence areas sufficient?
- Steve Hurst – Gather information and cite the source more concretely. He also wondered how this information would be used in justifying a runway extension.
- John Henri – Also had questions on how this information would be used for justifying a runway extension.
- Fred Netter – Chapter 2 states that Aurora is within walking distance; however, the road is unsafe for walking as it has narrow shoulders. As for the calm-wind runway designation, he said more people want it kept as is. He also questioned why the Airport is designated as an “Urban General Aviation Airport” if SB 680 was designed for rural airports.
- Patti Milne – Clackamas County Sheriff provides service for emergencies of regional and statewide significance. Marion County Sheriff provides emergency services for typical emergency response, as well as Oregon State Police.

- A PAC member thought the pavement condition index was incorrect and that some taxilanes are closer to “poor” than what is designated.
- Statewide Resource Planning Goal 5 allows an entity to constrain growth to a boundary.
- UT-20 (as shown on the land use exhibit) is Urban Transitional, not Urban Transportation.
- Jim Hansen – Add discussion about new departure procedures. (Note: ODA reported they are working with FAA to finalize this and are hoping to have it completed within the next couple of months.)
- Bruce Bennett – Noise is important and bigger airplanes don’t necessarily make more noise, because of advances in turbofan technology. There are published noise reduction procedures.
- Steve Hurst – Adjacent farmland is “Foundation” farmland according to the Oregon Department of Agriculture. He also questioned discrepancies in historical operations counts.
- Nick Kaiser – Airport is 1/3 mile from Aurora city limits. He also added another point of view that some people feel the airport needs to grow within certain constraints.
- Susie Stevens – Vehicular traffic will increase with bigger airplanes.
- Fred Netter – Vehicular traffic issues should be separated from the Airport aircraft operations issues.
- Nick Kaiser – Questioned the forecast numbers, especially the validity of the historical data.
- Bruce Bennett – There has been a lot of growth in the last ten years and there is no vacant land left.
- Tony Helbling – The recent increase at the Airport is artificially high, because many operators moved from Hillsboro, for example, since there was private property available to develop.
- Susie Stevens – Asked to have the Terminal Area Forecast link out on the website. She also questioned the reasoning behind selection of the Preferred Forecast.
- Steve Hurst – We need to have reliable numbers.
- Ray Phelps – We need Washington County vehicular traffic counts.

Public Attendees Comments

- Marlow Treit submitted written testimony, which is attached. The overall sentiment of the testimony states that an air traffic control tower is not needed at the Airport.
- Regarding the air traffic control tower, it must be justified by operations and is for the purpose of safety.
- Jets at the south end of the Airport are a cause of concern.
- A Charbonneau resident was told by her real estate agent that only small airplanes operate at the Airport, and the noise is much worse than they expected.
- Early morning operations and disturbances at Charbonneau are unacceptable.
- The recent accident near the Airport has neighbors concerned. How can we guarantee something like that won’t happen again? These are adults and shouldn’t need someone in an air traffic control tower telling them where to go – a tower wouldn’t have avoided this accident.
- Touch and goes are scary for neighbors.

- Most neighbors knew about the Airport when they moved there, but growth has been greater than they expected.
- A pilot said he uses the Airport 3-4 times a year and he – like most pilots – wants to fly neighborly.

Meeting Adjournment

PAC members were asked to submit their comments on draft Chapters 1-3 within two weeks. The meeting adjourned at 7:15 pm. A public open house followed, and a summary of that event is attached. All information regarding the PAC meeting and open house – along with comment forms – is posted at www.aurorastateairport.org.

Aurora State Airport Master Plan



Open House Summary
September 30, 2010



Prepared by:
JLA Public Involvement
For WHPacific & Oregon Department of Aviation