AVIATION FORECASTS

Aviation demand forecasts for the years 1980, 1985, and 1995 have been developed to identify the role of the airport in those years. Factors analyzed were population and economic growth, aviation technology and trends, air traffic activity, and the effect upon the airport of adjacent airport development. The effects of new technology have the least impact because of the type and numbers of aircraft now in the system and the relatively long life of present types.

The boundary of the service area, Figure 5, page 10, indicates that there is little correlation between the location of aircraft owners and the airports they use. No study, or survey, has yet determined the reasons why aircraft owners in the Portland area often choose to use airports that are not the nearest airport to their home or business.

The Portland-Clackamas Airport Study (PCAS), recently completed by the Port of Portland, identifies the Aurora State Airport to be part of a regional airport system in the Greater Portland metropolitan area. The Aurora State Airport, along with other airports draws from the entire region to generate traffic activity. Therefore requirements and the timing of requirements for Aurora State Airport will be influenced by developments at the other airports or at new airports in the Portland region.

The forecasting methodology has been limited by the base data which was available as regards historical aviation statistics and socio-economic data and forecasts. The method used was first, to identify the airport service area and its history, and second, to correlate the airport service area with the area's socio-economic characteristics. Mixed socio-economic projections, mostly population and growth trends, were assembled together with historical air traffic data.

Then, because this airport is inseparable from the "Portland Regional Airport System," it was necessary to examine forecasts on the national, state, and local level. The most up-to-date and comprehensive of the other forecasts is that of the Portland-Clackamas Airport Study. Other source material included miscellaneous FAA material, but primarily FAA's The Northwest Region Aviation System, Ten-Year Plan 1975-1985, and The Oregon Aviation System Plan (OASP) from the Oregon Department of Transportation.

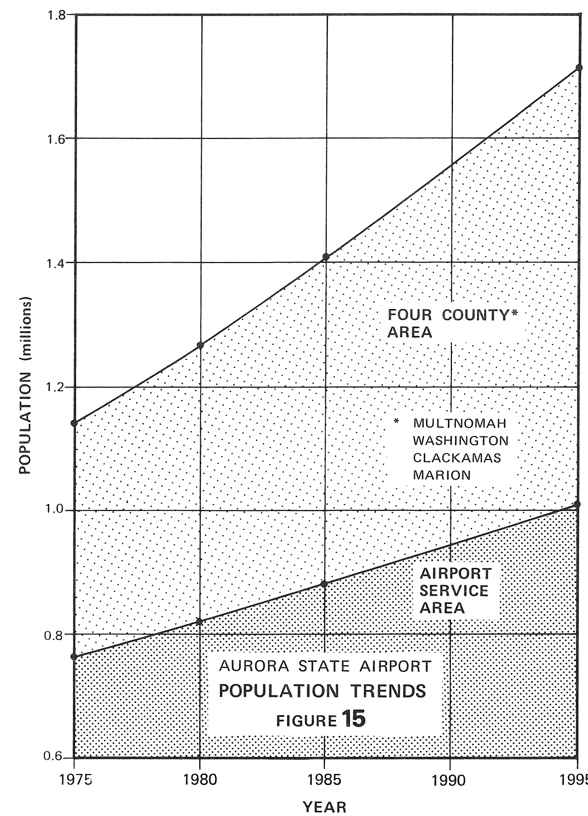
The possible range of forecasting methods was limited for the Aurora State Airport because the service area lies only partially in the Portland SMSA. Much of the base data available for SMSA's is not available for other parts of the Aurora State Airport's service area. Insofar as possible, the Aurora forecasts have correlated based aircraft to population and socio-economic trends.

The aircraft operations forecasts have been correlated to known general aviation activity trends at Control Tower airports with specific on-airport traffic counts. The results were then adjusted to reflect the trends of other recent forecasts just mentioned. Because historical information did not check closely with actual surveys, the comparison of the Aurora State Airport forecast to other studies necessitated considerable adjustments. Comparisons are shown in the appendix.

Figure 15, Population Trends, indicates the predicted 4-county region growth rate from Marion County Comprehensive Plan and data from the Comprehensive Health Planning Association's projections. The service area, as defined earlier predicts a slower growth rate than the SMSA. On this basis, the growth rate at the Aurora State Airport may be expected to be somewhat slower than the growth rate at some of the other airports in the Portland metropolitan area.

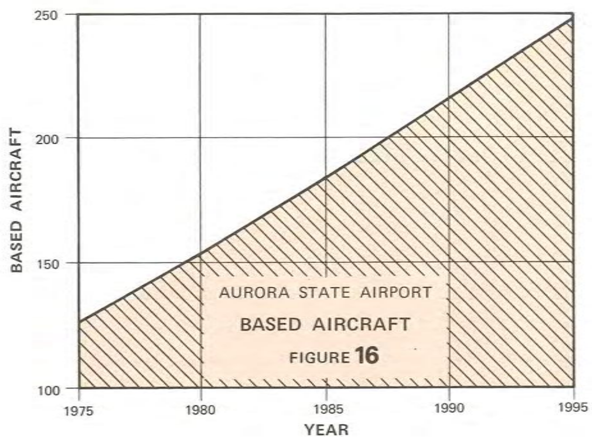
Population forecasts from the above projections for the year 1995, indicate an anticipated population of 1,011,000 in the service area, up from 710,000 in 1970. This represents a 42 percent increase, whereas the four-county increase is projected at 82 percent.

Figure 16 shows the forecast based aircraft at the Aurora State Airport. Other studies' projections are compared in the appendix. The projections used for this study have assumed no new airport in the southeast Portland area. The appendix contains graphs that indicate either possibility, but the effects were determined not to be critical to this master plan.



AURORA STATE AIRPORT
POPULATION TRENDS
FIGURE 15

The forecast for Aurora State Airport developed in this study uses fewer based aircraft than projections made by other studies. This is because recent surveys seem to indicate inaccuracies in earlier counts of based aircraft. Perhaps the previous counts were taken at periods of peak fluctuations.



AURORA STATE AIRPORT
BASED AIRCRAFT
FIGURE 16

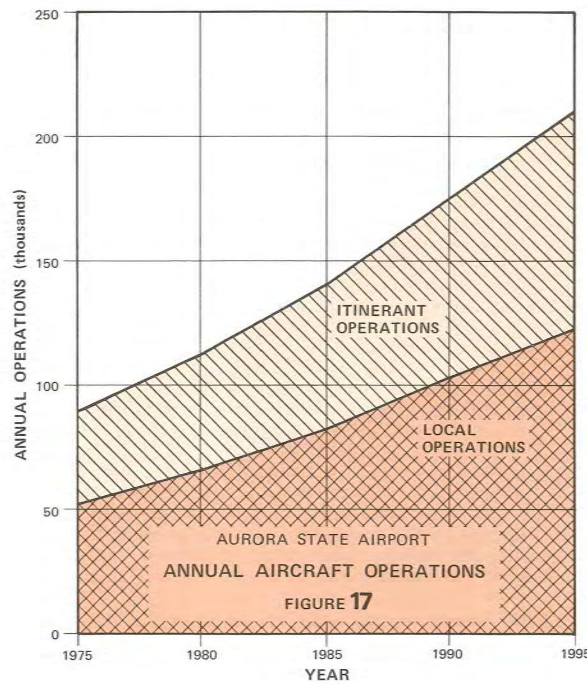
The forecast annual aircraft operations for the Aurora State Airport are shown on Figure 17. These have been projected using the best historical data available, that taken from actual surveys and projected in correlation with FAA counts and projections at Portland-Hillsboro and Portland-Troutdale airports. A verification check was made by using the methods of Report No. FAA-RD-74-178, Estimating Operations at Non-Towered Airports Using the Non-Survey Method.

The operations per based aircraft are predicted to increase from 709 in FY 1975 to 843 in 1995. This is a projected increase of 18.9 percent, which is consistent with other state and national trends.

Consistent with the other mentioned studies and national trends, projections were made for the mix of aircraft types. Figure 18 shows forecast aircraft population for the 5, 10, and 20 year periods.

The present and forecast roles of the Aurora State Airport were carefully examined. At the present time, the airport is a General Utility airport (GU), which by definition is an airport whose operational role is to serve all types of piston-powered aircraft of maximum gross weights of 12,500 lbs. or less.

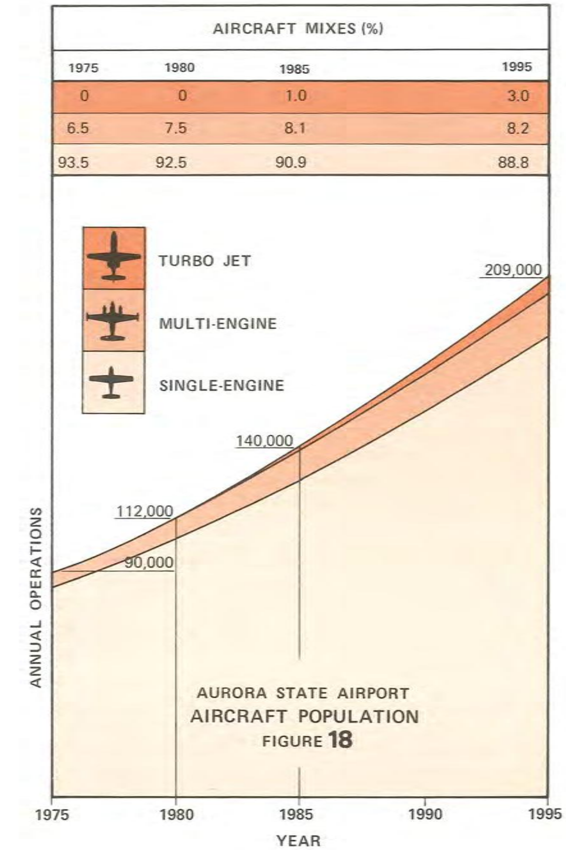
According to the forecasts developed the airport will sustain sufficient numbers of basic transport type general aviation aircraft to change the operational role to Basic Transport (BT). This would occur between 1985 and 1990. A basic transport type is: either any turbojet aircraft, or a propeller aircraft with a maximum gross weight of from 12,500 pounds to 60,000 pounds.



AURORA STATE AIRPORT
ANNUAL AIRCRAFT OPERATIONS
FIGURE 17

The functional role of the airport, defined by service level, is a high density feeder system airport, designated F-1. This is based upon a level of annual operations exceeding 100,000.

The forecast demands for the Aurora State Airport as used in this Master Plan are shown in Table 6. New developments or management policies may change these forecasts. Also since Aurora is part of the Portland regional system, its competitive position in the system strongly influences the distribution of regional aviation demands.



AURORA STATE AIRPORT
AIRCRAFT POPULATION
FIGURE 18

If the facilities at the Aurora State Airport should in the future be considerably upgraded without significant changes at other regional airports, then the competitive position of this airport may significantly increase the aviation demand at Aurora State. For this reason, projections should be periodically checked and revised.

Exhibit 5
Page 32 of 70

TABLE 6 MASTER PLAN FORECASTS FOR AURORA STATE AIRPORT	ACTUAL (1975-76)	1980	1985	1995
BASED AIRCRAFT	127	154	184	248
ANNUAL OPERATIONS	90,000	112,000	140,000	209,000
BUSY HOUR OPERATIONS	50	60	78	115
OPERATIONS PER BASED AIRCARFT	709	727	761	843

DEMAND VERSUS CAPACITY ANALYSIS

This analysis determines during which years forecast aviation demands upon the airport will exceed facility capacities. Determinations are included for the short, intermediate, and long range periods (1980, 1985, 1995).

Both the airside and the groundside have been analyzed. The airside includes the runway and taxiway system, as well as the airspace. The groundside includes the terminal area, with aprons, hangars, buildings, utilities, development area, and entrance and access roads.

The forecast aviation demands shown in Table 6 are the basis for this section. Capacity determinations were made using FAA Advisory Circular 150/5060-1A, Airport Capacity Criteria Used In Preparing the National Airport Plan. Capacities for the groundside activities were determined from FAA and other airport engineering standards. It was assumed that instrument operations will be conducted utilizing traffic procedures that will not restrict airspace. Also, it was assumed in studying runway capacity, that an adequate taxiway system would be developed to minimize runway congestion.

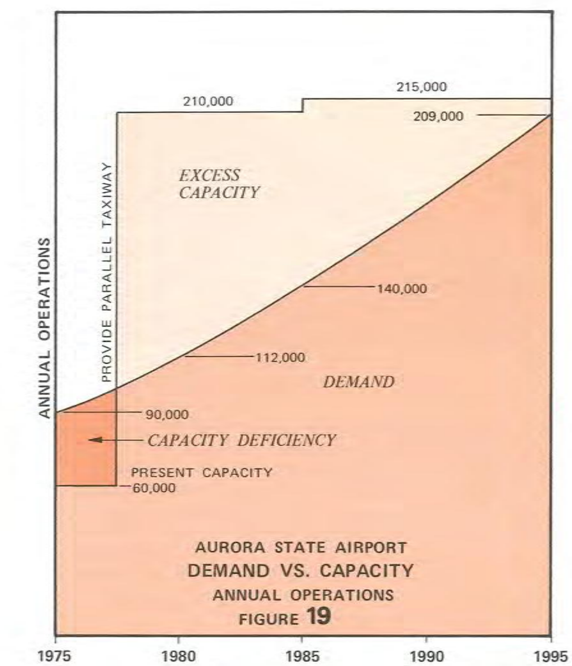
Another factor affecting capacity is the aircraft mix. For this study, it was assumed that the percentage of small general utility type aircraft will exceed 90 percent through the 20-year long range period as indicated on Figure 18, page 22. This assumption conforms to national trends for similar situations.

Direction of runway operation does not restrict capacity at Aurora, where the direction of operation is slightly over 50 percent for the north operation and slightly under 50 percent for the south operation, and where there are no close-in airspace constraints. In the absence of data on IFR conditions at the Aurora State Airport, conditions for the Portland-Hillsboro Airport were used, where records show 92.8 percent VFR and 7.2 percent IFR. The FAA long range capacity method, used as a check, assumes an annual condition of 90 percent VFR and 10 percent IFR.

In the airside analysis, no restriction on capacity was determined to exist in the airspace around the Aurora State Airport. However, as traffic increases, it must be assumed that increased demands for IFR operations can and will be met by improvements to FAA's traffic control system and airway facilities. No procedural problems are anticipated in the vicinity of the airport, such as for noise abatement.

A parallel taxiway is required before runway capacity will be adequate. See Figure 19 regarding present deficiencies. With a parallel taxiway capacity would be acceptable throughout the long range period, provided the taxiway system is adequately upgraded. Runway demands in 1995 are for 209,000 annual operations (without a new southeast Portland airport); whereas a single runway with adequate taxiways has a practical annual capacity of 215,000 operations.

Practical hourly runway capacity based on the FAA method is 53 for IFR and 120 for VFR. No peak hour activity data is available for the Aurora State Airport, but it is estimated that 115 operations may occur during the peak hour during VFR by the end of the 20-year long range period. Figure 20 shows demand versus capacity through the 20-year period. Peak hour activity could vary somewhat, depending upon the daily peaking factor (the amount of daily activity occurring during the consecutive two busy hours). Capacity would not be exceeded if departure delays during the peak hour of the week do not exceed 2 minutes, which is the delay normally accepted by FAA and industry criteria.

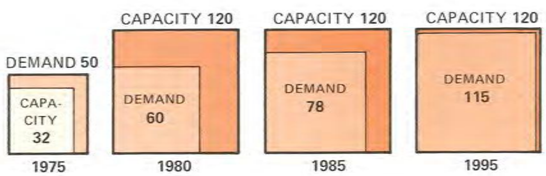


AURORA STATE AIRPORT
DEMAND VS. CAPACITY
ANNUAL OPERATIONS
FIGURE 19

The most critical capacity deficiency facing the airport is the complete lack of controlled ground space outside of the runway area. There are and will continue to be constraints in the terminal area including aprons and buildings and automobile routes until sufficient land is controlled by the airport owner. All of the groundside analyses in this study assume that the airport owner will be able to develop capacities to meet demands through adequate control of airport development land.

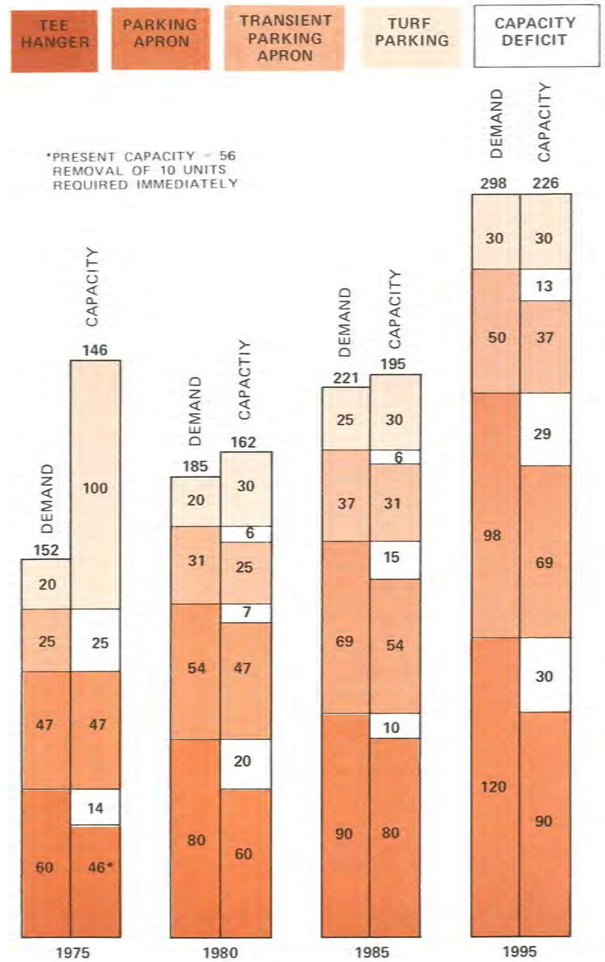
If a single runway at Aurora State Airport is to be satisfactory for the 20-year forecast period, plans must be made to insure that the runway system functions properly. This requires developing a parallel taxiway system including adequate exit taxiways so that runway occupancy time can be reduced to a minimum. This is required for safety as well as for improved capacity.

Parking apron space is the major groundside deficiency and demands will continue to be significant. The requirements for aircraft parking capacities to meet demands are shown on Figure 21. Although many airports provide all parking on pavement, it has been assumed in this case that it will be adequate to park 90 percent of the based aircraft on paved aprons or in hangars. Hangar capacity is presently 56 aircraft. Forecasts show that by the end of the long range period, there will be requirements for 120 tee-hangar bays.



AURORA STATE AIRPORT
DEMAND VS. CAPACITY
PEAK HOUR OPERATIONS
FIGURE 20

Also, there is a requirement for one central entrance road connecting the other roads used by the individual operators on the airport. Additional automobile parking will be required, along with more public terminal building space as traffic demands increase. Specific requirements are discussed in the next section.



DEMAND VS. CAPACITY
AIRCRAFT PARKING
IN NUMBERS OF AIRCRAFT
FIGURE 21

FACILITIES REQUIREMENTS

The requirements in this section for airport facilities are based upon FAA criteria for Utility and Transport airports. Existing deficiencies and undesirable conditions are identified in the INVENTORY The DEMAND/CAPACITY ANALYSIS shows capacity deficiencies and when expansion is required.

In the long range period, around 1985, the airport category will change from General Utility to Basic Transport. This will require a runway lengthening of about 1900 feet in two stages by 1995. Other than additional costs, this requirement poses no serious space problem because airfield size is presently adequate to accommodate a Basic Transport runway.

However, the absolute lack of airport property to either side of the runway area makes land acquisition a prerequisite to any other airport development. Table 7 shows ultimate facilities requirements and indicates many needed improvements that cannot be placed on present airport property. The table also recommends 1140 acres to be zoned as a buffer zone overlay for land use protection against airport encroachment.

A single runway system is adequate for future needs through the 1995 period studied. Neither capacity constraints, nor constraints posed by crosswind coverage require a second runway, and the effect of constructing or not constructing a new southeast Portland airport will not change this adequacy during the Master Plan study period.

Current runway length, 4100 feet, is slightly more than the General Utility requirement, which is 3600 feet. A Basic Transport length accommodating about 60 percent of the fleet with a 60 percent load would be 4700 feet. One hundred percent of the BT fleet at 60 percent load requires 5300 feet. This Master Plan recommends lengthening to 5000 feet shortly before 1985 and retaining the present 30,000 pounds single gear pavement strength. In the 1985 to 1995 period the runway should be increased to about 6,000 feet and single gear pavement strength increased to 60,000 pounds. Sixty percent of the BT fleet at 90 percent load requires 6300 feet.

The present width, 150 feet, should be retained to provide a somewhat better level of safety, particularly during periods of strong winds. When a MLS or equivalent system is installed, a wide runway will be desirable particularly for turbojet aircraft operating at relatively high approach speeds. Depending upon the development of MLS runway standards this recommendation is subject to change. Retaining the present width of pavement will also minimize construction problems associated with future runway edge lighting.

The taxiway system is very critical to airport safety and capacity. A parallel taxiway, the entire length of the runway, is required immediately with adequate exits from the runway. New stub taxiways from the parallel taxiway to all apron areas are also required. The stub and exit taxiways should be lighted with medium intensity lights and should be marked. Taxiway reflectors are suitable for the parallel taxiway.

Paved aircraft parking aprons are required immediately. Virtually all aircraft are currently parked on turf, which causes stability problems during wet weather. No apron facilities are provided for transient parking. A centrally located public parking apron will solve this major deficiency.

The frequency of instrument weather conditions and long winter hours of darkness dictate an upgrading of the lighting and navigational systems. Medium intensity runway edge lighting should be installed, including visual approach slope indicators (VASI) on both ends. An on-airport or near-airport nonprecision approach aid should be added to provide better minimums and higher IFR capacity. Eventually an MLS is recommended. This should be supplemented by an approach light system such as MALSF.

As the trend for ownership of more expensive airplanes and more multi-engine airplanes increases, the shortage of tee-hangars will become even more critical. As airport services increase additional conventional hangars will be required. Aircraft security needs will increase as more aircraft are based at the airport and as ground traffic increases. Better fencing and more lighting around aircraft parking areas will be required.

TABLE 7

ULTIMATE FACILITIES REQUIREMENTS

DESCRIPTION	EXISTING (1975) FACILITIES	1995 REQUIREMENT	RECOMMENDED DEVELOPMENT
LAND FOR AIRPORT DEVELOPMENT	113 acres	229 acres	116 acres
LAND FOR AIR EASEMENTS	223 acres	241 acres	18 acres
LAND TO BE ZONED AIRPORT BUFFER	None	1,140 acres	1,140 acres
OBSTRUCTION REMOVAL	Trees	1.5 acres	1.5 acres
RUNWAY, NON-PRECISION INSTRUMENT	4,100' x 150'	6,000' x 150'	1,900' x 150'
STRENGTH	30,000#	60,000#	30,000#
TAXIWAYS: PARALLEL	None	6,000' x 40'	6,000' x 40'
EXITS	3(1)	6	6 (40' wide)
STUBS	3(1)	4	4 (40' wide)
HOLDING APRONS	1(1)	4	4 (50' x 100')
PAVED PARKING APRON:			(50,000 SY)
BASED AIRCRAFT	None	98 Aircraft	98 Aircraft
TRANSIENT AIRCRAFT	Negligible	50 Aircraft	50 Aircraft
TURF PARKING AREA	100(2)	30 Aircraft	20 Aircraft
LIGHTING			
MEDIUM INTENSITY, RUNWAY	4,100 LF (Low Intensity)	6,000 LF	6,000 LF
MEDIUM INTENSITY, TAXIWAY	None	7,200 LF	7,200 LF
TAXIWAY REFLECTORS	None	6,000 LF	6,000 LF
AIRPORT BEACON	Substandard	1	1
LIGHTED WIND INDICATORS	1(1)	3	3
VASI	None	2 ends	2
MALSF	None	1	1
APRON LIGHTING	None	1,800 LF	1,800 LF
SEGMENTED CIRCLE	None	1	1
NAVIGATIONAL APPROACH AIDS	Newberg VOR TAC	MLS or Equivalent	NDB and MLS
FENCING: SECURITY	None	7,000 LF	7,000 LF
PERIMETER	11,000 LF(1)	13,500 LF	13,500 LF
AUTOMOBILE PARKING	80 cars	280 cars	200 cars
AIRPORT ROADS	Substandard(1)	7,300 LF	7,300 LF
TERMINAL/ADMINISTRATION BUILDING	None	5,000 SF	5,000 SF
AIR TRAFFIC CONTROL TOWER	None	1	1(3)
CRASH, FIRE, RESCUE STATION	None	1	1
TEE-HANGARS	56(4)	120	74(5)
CONVENTIONAL HANGARS	3	6 to 8	3(5)
HELIPORT	None	1	1 (120' x 160')

(1) Replace Existing (4) Remove 10 Existing
(2) Abandon 80 Existing (5) By Private Development
(3) By FAA

Eventually, greater activity on the groundside of the airport will necessitate more terminal and operations building space together with a centrally located administration building. There should be only one prominent entrance road to the airport and an internal road system that connects the entrance road to the various services and operators and apron areas. As more people use the airport, it will be necessary to upgrade the sanitary waste systems, and possibly centralize waste treatment facilities on the airport or in a municipal system.

The needs for development will create a need for capital for investment. Therefore it will be necessary to stimulate revenue producing activities by generally encouraging airport related commercial activities that will provide financial support to the airport.

ENVIRONMENTAL REQUIREMENTS

The principal environmental effects of airport development include: noise, air and water pollution, ecological impacts, social impacts, and effects of construction and operation. The development of many of the improvement projects needed for the airport will affect the environment, sometimes noticeably and sometimes imperceptibly.

The primary environmental consideration at the Aurora State Airpot is to have compatible land use in the airport vicinity. Exposure to aircraft noise mostly determines compatibility. Other considerations are aircraft accident potential, air pollution, and effects of vehicular traffic patterns.

Aircraft noise exposure often has adverse behavioral and subjective effects on people. Behavior effects involve interference with on-going activities such as speech, learning, and sleeping. Subjective effects are described by terms like "annoyance" and "nuisance." The magnitude of the problem depends on the volume, frequency, and time of day of aircraft operations; the number of turbojet aircraft operations; and the character of land use exposed. Table 8 describes typical noise impacts on land use.

The aircraft noise generated at a general aviation airport like Aurora State is ordinarily minimal because there is no appreciable number of turbo-jet or night operations and because the surrounding development has a relatively low population density. Critical noise contours for existing conditions do not fall outside the airport. See Figure 8, Existing Noise Exposure, page 13.

The FAA, with assistance from EPA, is responsible for regulating aircraft noise. To date no specific regulations or standards for acceptable aircraft noise exposure limits on land use have been established. Instead, general guidelines regarding land use compatibility and noise exposure are used. A technical forecast of noise exposure levels is included in the AIRPORT PLANS section.

Land use compatibility guidelines are based on the relative noise sensitivity of different activities. The most sensitive uses are those involving conversation

TABLE 8

NOISE IMPACTS ON LAND USE

LAND USE	NOISE EXPOSURE FORECAST (NEF)		
	< 30 LOW NOISE IMPACT	30-40 MODERATE NOISE IMPACT	> 40 HIGH NOISE IMPACT
RESIDENTIAL, LOW DENSITY	NO CONFLICT	MODERATE CONFLICT	SERIOUS CONFLICT
RESIDENTIAL MEDIUM DENSITY	NO CONFLICT	MODERATE CONFLICT	SERIOUS CONFLICT
RESIDENTIAL, HIGH DENSITY	NO CONFLICT	MODERATE CONFLICT	SERIOUS CONFLICT
SCHOOLS, HOSPITALS	NO CONFLICT	SERIOUS CONFLICT	SERIOUS CONFLICT
OFFICE	NO CONFLICT	LOW CONFLICT	MODERATE CONFLICT
COMMERCIAL	NO CONFLICT	LOW CONFLICT	MODERATE CONFLICT
INDUSTRIAL	NO CONFLICT	LOW CONFLICT	MODERATE CONFLICT
AGRICULTURAL	NO CONFLICT	NO CONFLICT	LOW CONFLICT
RECREATION	NO CONFLICT	LOW CONFLICT	MODERATE CONFLICT

LEGEND

NO CONFLICT — LOW CONFLICT — MODERATE CONFLICT — SERIOUS CONFLICT

and sleeping. Typically, auditoriums, arenas, schools, hospitals, and housing are the least compatible and open space uses like farming are the most compatible. Consequently, preservation of the existing agricultural land use pattern around the Aurora State Airport is the key to compatible land use regardless of the noise exposure levels.

Reducing aircraft accident potential may require regulating the height of objects under established flight paths and prohibiting light and smoke emissions that adversely effect the pilot's vision. Because the greatest probability of aircraft accidents is either on or immediately adjacent to the runway. It is important that the airport itself meets adequate design standards. It is also adviseable to discourage large concentrations of people or hazardous materials within the approach and departure paths. This is a matter for local agencies to regulate in cooperation with the airport owner.

The air quality aspects of airport development are regulated by the Oregon Department of Environmental Quality (DEQ). DEQ is responsible for assuring compliance with State and Federal air quality standards. The Aurora State Airport is subject to the indirect source rules as set out in OAR 340. Under these rules, the potential impacts of airport operations on air quality need to be evaluated only when a modification to the airport is proposed that will increase annual operations by 25,000 or more within 10 years after completion of the improvement. This impact evaluation is called for just prior to the time of making the improvement.

The vehicular circulation aspects of airport development need to be considered in the context of congestion on existing highways. Based operations at the airport currently have individual access points. Consideration must be given to linking all ground operations with a continuous system on the site in order to minimize confusion, congestion and accident hazards on the bordering highways.

At this time, it appears that there are no significant ecological or social impacts upon the airport environs. It is important that future development programs minimize the possibility for dislocating persons or businesses.

This Master Plan does not require that an Environmental Impact Assessment Report be performed. Later at the time of construction major capital improvements at the airport will require a full disclosure of environmental effects expected to result. This will be disclosed in an Environmental Impact Statement as required under the National Environmental Policy Act of 1969.

SITE SUFFICIENCY

The existing site of the Aurora State Airport was evaluated as to its adequacy to meet forecast requirements and according to possible environmental conflicts. Alternative airport sites shown on Figure 22 were identified, examined and compared to the existing airport. The full report is included in the appendix. It concluded that the existing site is adequate and should be retained. This choice gives the most public benefit for the least financial cost and adverse impacts.

AURORA STATE AIRPORT SITE COMPARISON MATRIX

	EXISTING AIRPORT SITE	ALTERNATIVE AIRPORT SITES		
		FREEWAY	CLACKAMAS	HUBBARD
ACCESS/CONVENIENCE TO USERS	EXCELLENT	SUPERIOR	FAIR	EXCELLENT
SAFE AND ROUTINE FLIGHT OPERATIONS	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT
LACK OF OBSTRUCTIONS	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT
LAND AVAILABILITY	GOOD	POOR	POOR	POOR
EXPANSION CAPABILITY	EXCELLENT	SUPERIOR	SUPERIOR	SUPERIOR
EASE OF CONSTRUCTION	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT
LAND USE COMPATIBILITY	EXCELLENT	EXCELLENT	EXCELLENT	EXCELLENT
ENVIRONMENTAL COMPATIBILITY	EXCELLENT	EXCELLENT	SUPERIOR	EXCELLENT
CITIZEN ACCEPTANCE	EXCELLENT	POOR	POOR	POOR
DEVELOPMENT COST–APPROXIMATE	$1,450,000	$2,690,000	$2,690,000	$2,690,000
OVERALL SUITABILITY	EXCELLENT	FAIR	POOR	FAIR

AURORA STATE AIRPORT
ALTERNATIVE AIRPORT SITES
FIGURE 22
CH2M HILL

AIRPORT PLANS

AIRPORT PLANS

AIRPORT PLANS

CONCEPT

Conceptual considerations were based on Master Plan Forecasts, Table 6, page 24, and Ultimate Facilities Requirements, Table 7 page 26. In the 20-year study period requirements are for a single runway general aviation airport of high quality and having a large terminal area and ample off-airport protection from encroachment.

The effective use of space is the critical ingredient to developing or improving the airport system. Space for airport expansion is impacted on three sides by highways which would be relatively difficult to relocate, and on the fourth side by privately owned and controlled property.

Previous study determined that the best course of action is to develop the present airport. The full report regarding site sufficiency is found in the APPENDIX. Because the airport is a use of land predominately compatible with existing uses in the area, the present runway position has been retained. Expansion will occur into the space east of present airport property. This is shown on Figure 23, Airport Layout Plan.

Other alternatives were considered and discarded for reasons of costs, adverse impacts, public acceptability and other practical considerations. One alternative considered was to aquire land to the south of the runway. All expansion would then be toward the south. Although for the reasons above this concept was rejected, it will be reconsidered in the future and used if warranted.

AIRPORT LAYOUT PLAN

The Airport Layout Plan graphically illustrates the proposed development for the existing airport through the 20-year forecast. The plan provides dimensions of proposed facilities and several tables of data explaining the plan. Details of the development staging are covered later in the Master Plan.

Key points for the 20-year period include:

- In order that there can be an implementable Master Plan the Airport Layout Plan prescribes acquiring 116 acres of land in fee on the east side of the airport. Without this space for airport development it will be impossible to implement a complete and productive airport development program.

  Also 18 acres of land is to be acquired in easement for obstruction removal and for airspace protection north of the airport.

- The existing airport is to be retained with a few criteria surpassing usual maximums. The existing runway remains at its current length, slightly longer than GU requirements, (4100 versus 3600 feet), and will remain 150 feet wide instead of the usual 100 feet.

  The parallel taxiway will be placed at 225 feet instead of 200 feet because of existing drainage conditions, and the building restriction line will remain at 500 feet as established several years ago.

  Pavement strength will remain at 30,000 pounds S.G. except where lighter strength aprons are to be permanently used for lighter aircraft only.

- The runway will be improved from the existing 4100 feet and 30,000 pounds S.G. strength ultimately to 6,000 feet and to 60,000 pounds D.G. strength.

- A parallel taxiway will be constructed with several 90 degree exits and stub taxiways to provide direct access to the parking aprons.

- Paved aircraft parking aprons for 98 based aircraft and 50 transient aircraft will be developed, and turf parking for 30 aircraft will be improved.

- Lighting improvements will be extensive. Medium intensity runway and taxiway lights will be added together with taxiway reflectors on the parallel taxiway, a new beacon, VASI's for both runway ends, MALSF and apron lighting.

- New navigational aids (NDB and MLS or equivalent) are specified in addition to an air traffic control tower.

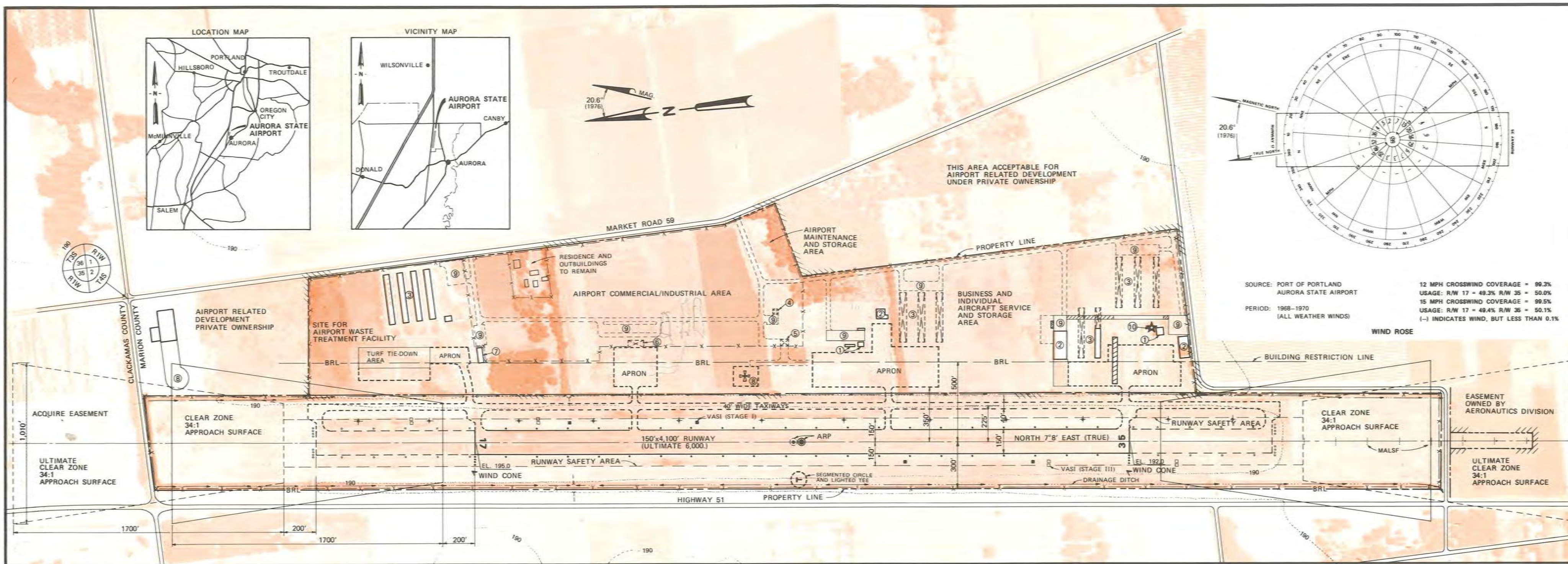
- Airport entrance and internal road systems will be considerably modified on the land which is to be acquired and new automobile parking areas will be provided.

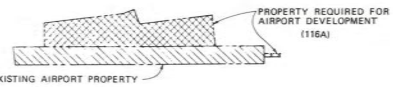
- The airport will be divided into areas of different uses which will be kept segregated. The aircraft areas will be separated from public and commercial areas by security fences. Perimeter fences will enclose the entire airport.

- Ultimately a terminal/administration building and a crash/fire/rescue station will be constructed. More hangars are prescribed.

- A heliport is specified for the ultimate airport.

The Airport Layout Plan has been approved and will remain the official guide for airport development until revised.





ULTIMATE AIRPORT PROPERTY

300 0 300 600
SCALE IN FEET

FACILITIES	
NO.	
1	F.B.O. OFFICE
2	F.B.O. HANGAR
3	TEE-HANGAR
4	CONTROL TOWER
5	CRASH, FIRE, RESCUE BLDG.
6	ADMIN./TERMINAL BUILDING
7	AVIONICS SHOP
8	HELIPORT
9	AUTOMOBILE PARKING
10	AIRPORT BEACON

NOTES:

1. FOR ADDITIONAL INFORMATION CONCERNING THE TERMINAL AREA SEE TERMINAL AREA PLAN.
2. FOR ADDITIONAL INFORMATION CONCERNING APPROACH SLOPES, CLEAR ZONES AND OBSTRUCTION SURFACES SEE ULTIMATE AIRPORT IMAGINARY SURFACES PLAN.
3. AFTER MLS STANDARDS HAVE BEEN ESTABLISHED, THE DIMENSIONS FOR RUNWAY WIDTH AND FOR APPROACH SURFACES MAY BE REVISED.
4. THE LOCATION OF THE MALSF IS SUBJECT TO CHANGE DEPENDING ON AN IFR WIND ANALYSIS.

BASIC DATA TABLE

RUNWAY DATA

	EXISTING (1975)	STAGE I (1975-1980)	STAGE II (1980-1985)	STAGE III (1985-1995)
RUNWAY LENGTH	4,100' 1,250m	4,100' 1,250m	5,000' 1,524m	6,000' 1,829m
RUNWAY WIDTH	150' 46m	150' 46m	150' 46m	150' 46m
EFFECTIVE GRADIENT (%)	0.07	0.07	0.07	0.06
PERCENT WIND COVERAGE	99.5	99.5	99.5	99.5
INSTRUMENT RUNWAY	None	None	None	None
PAVEMENT STRENGTH*	30S	30S	30S	60D
FAR PART 77 CATEGORY	B/C	B/C	B/C	B/C
FAR PART 77 APPROACH SLOPES	34:1	34:1	34:1	34:1
ACTUAL CLEAR APPROACH SLOPES	N26:1 S36:1	34:1	34:1	34:1
LIGHTING	L. Intensity	M. Intensity	M. Intensity	M. Intensity
MARKING	Basic	Non-Precision	Non-Precision	Non-Precision
NAVIGATIONAL AIDS	None	VASI	MALSF	MLS
OPERATIONAL ROLE	GU	GU	BT	BT
*Values given are the gross weight in 1,000 lbs. for single (S) and dual (D) gear aircraft.				

BASIC DATA TABLE

AIRPORT DATA

	EXISTING	ULTIMATE
AIRPORT ELEVATION (MSL)	195'	195'
AIRPORT REFERENCE POINT (ARP) LAT.	45° 14' 43"	45° 14' 44"
LNG.	122° 46' 07"	122° 46' 07"
NAVIGATIONAL AIDS	NONE	MLS
NORMAL MAX. TEMP. HOTTEST MONTH	84°F (29°C)	84°F (29°C)
FUNCTIONAL ROLE	S3	S2
MISCELLANEOUS FACILITIES: TAXIWAY MARKING AND LIGHTING	NONE	BASIC

KEY TO ABBREVIATIONS

- B/C Non-precision Instrument Runway Larger Than Utility
- GU General Utility
- BT Basic Transport
- S3 Low Density Secondary System
- S2 Medium Density Secondary System

LEGEND

EXISTING	ULTIMATE	
---190---		GROUND CONTOURS
		PROPERTY LINE
	+	STORM DRAIN INLET
		RUNWAY LIGHTS
••••	•••• ••••	THRESHOLD LIGHTS
		FACILITIES
		AIRPORT REFERENCE POINT
		BUILDING RESTRICTION LINE (BRL)
		BUILDINGS
		FACILITIES TO BE REMOVED
		DRAINAGE COURSE
		DRAINAGE CULVERT
x—x—x	x— —x— —x	FENCE

FEDERAL AVIATION ADMINISTRATION APPROVAL

Approval Date 11 JUNE 1976

See Approval Letter 11 JUNE 1976
Date

GEORGE L. BULEY
Chief, Airports Planning Branch

AERONAUTICS DIVISION APPROVAL

ROY M. RAASINA 13 MAY 1976
Manager Airport Branch

PAUL E. BURKET 13 MAY 1976
Administrator

CH2M HILL

Drawn CRS
Check RDL
Appr. MRM

FIGURE 23

No.	Revision	By	Appr.	Date

AURORA STATE AIRPORT
AURORA, OREGON

AIRPORT LAYOUT PLAN

OREGON STATE AERONAUTICS DIVISION
SALEM, OREGON

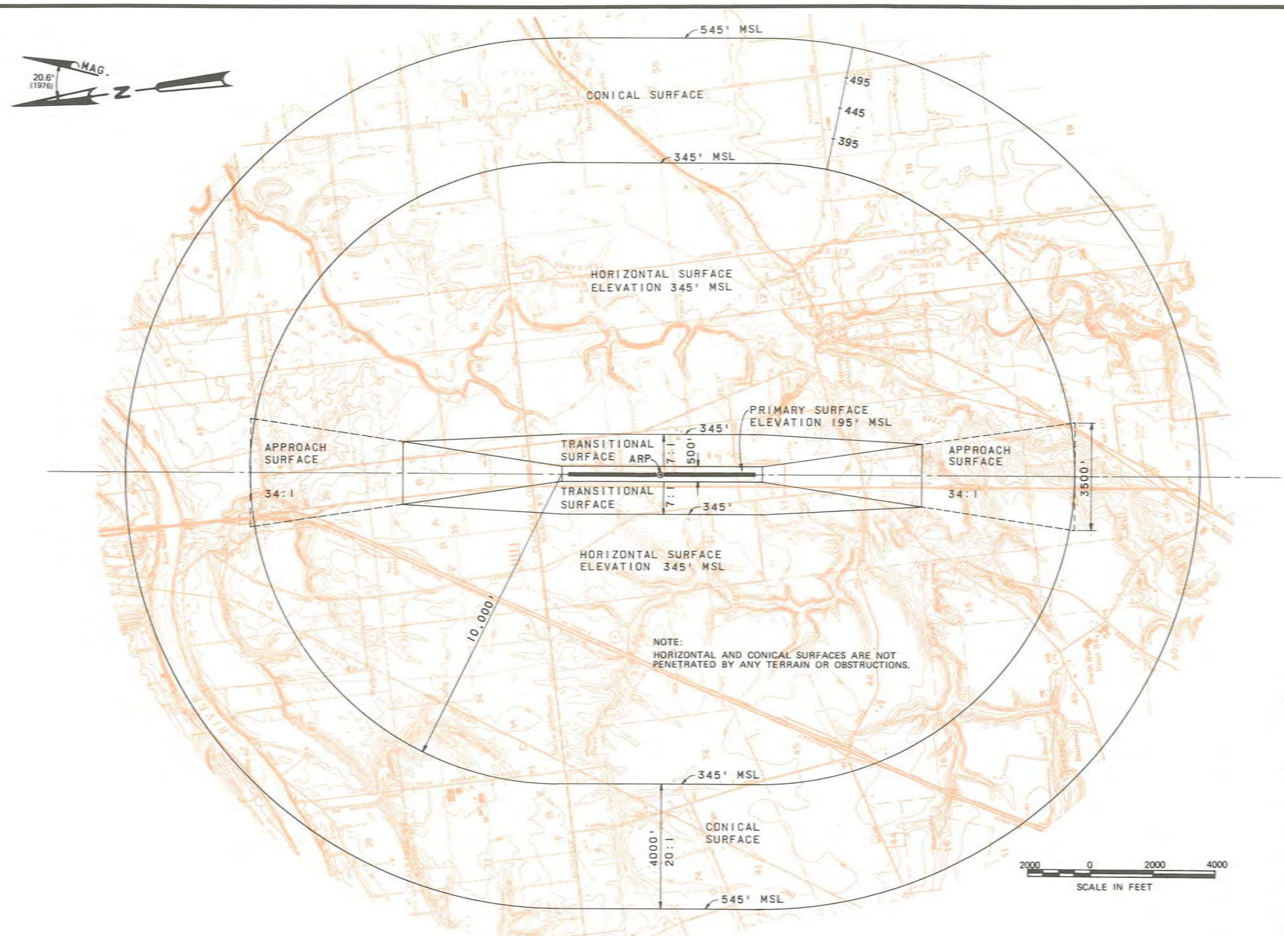
Township 4s Range 1w Scale as Shown Dwg. No. B-71 MP
Section 2,11 County MARION Date 13 MAY 76 Sheet 1 of 3

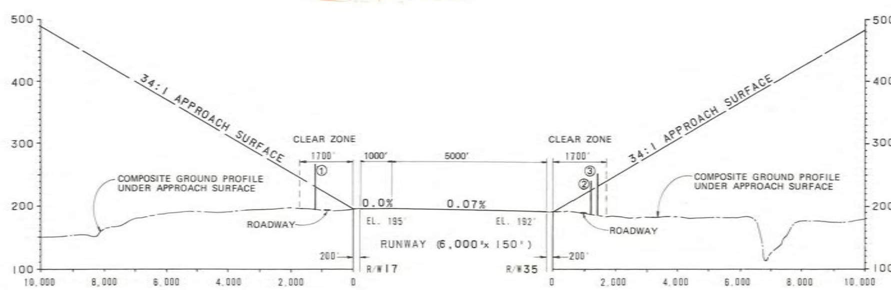
APPROACHES, OBSTRUCTIONS, EASEMENTS

Figure 24 shows the ultimate airport imaginary surfaces and is a part of the Airport Layout Plan. These surfaces are according to Federal Aviation Regulations Part 77 and are much like the existing surfaces.

The existing surfaces as of June 1976 remain as illustrated on Figure 11, page 19. This plan was prepared in 1972 by the Aeronautics Division.

After existing obstructions are removed few future problems are anticipated. Existing air easements are to be retained and one new area north of the airport is to be acquired. The figure depicts Part 77 standards for a nonprecision instrument runway.





OBSTRUCTION REMOVAL SCHEDULE TO MEET FAR PART 77 CRITERIA

NUMBER	OBSTRUCTION	ACTION	PHASE
①	TREES	TO BE REMOVED	PHASE I
②	TREES	TO BE REMOVED	PHASE II
③	TREES	TO BE REMOVED	PHASE II
④	MISC. TREES TRANSITION SURFACES (Not shown. see Fig. 11)	TO BE REMOVED	PHASE I & II

DEFINITIONS

1. PRIMARY SURFACE - THE SURFACE LONGITUDINALLY CENTERED ON THE RUNWAY CENTERLINE AND EXTENDING 200 FEET BEYOND EACH END OF A SPECIALLY PREPARED HARD SURFACED RUNWAY. THE WIDTH OF THE PRIMARY SURFACE IS EQUAL TO THE WIDTH OF THE BEGINNING OF THE RUNWAY'S MOST PRECISE APPROACH SURFACE.
2. TRANSITIONAL SURFACE - THE SURFACE THAT EXTENDS UPWARD AND OUTWARD AT RIGHT ANGLES TO THE RUNWAY CENTERLINE EXTENDED AT A SLOPE OF 7:1 FROM THE SIDES OF THE PRIMARY SURFACE AND FROM THE SIDES OF THE APPROACH SURFACES TO THE HORIZONTAL AND CONICAL SURFACES.
3. HORIZONTAL SURFACE - THE HORIZONTAL PLANE 150 FEET ABOVE THE ESTABLISHED AIRPORT ELEVATION BEGINNING AT ITS INTERSECTION WITH THE TRANSITIONAL SURFACE AND EXTENDING TO THE BEGINNING OF THE CONICAL SURFACE.
4. CONICAL SURFACE - THE SURFACE EXTENDING UPWARD AND OUTWARD FROM THE PERIPHERY OF THE HORIZONTAL SURFACE AT A SLOPE OF 20:1 FOR A HORIZONTAL DISTANCE OF 4000 FEET.
5. APPROACH SURFACES - THE SURFACE LONGITUDINALLY CENTERED ON THE EXTENDED RUNWAY CENTERLINE AND EXTENDING UPWARD AND OUTWARD FROM EACH END OF THE PRIMARY SURFACE.
6. AIRPORT REFERENCE POINT (ARP) - THE POINT ESTABLISHED AS APPROXIMATE GEOGRAPHICAL CENTER OF THE AIRPORT LANDING AREA.
7. AIRPORT ELEVATION - THE HIGHEST POINT ON THE USEABLE LANDING AREA, WHICH ELEVATION IS DATUM TO ESTABLISH THE ELEVATION OF THE HORIZONTAL SURFACE.

FEDERAL AVIATION ADMINISTRATION APPROVAL
Approval Date 11 JUNE 1976
See Approval Letter 11 JUNE 1976 Date
GEORGE L. BULEY
Chief, Airports Planning Branch

AERONAUTICS DIVISION APPROVAL
ROY M. RAASINA 13 MAY 1976
Manager Airport Branch
PAUL E. BURKET 13 MAY 1976
Administrator

No.	Revision	By	Appr.	Date

AURORA STATE AIRPORT
AURORA, OREGON

ULTIMATE AIRPORT IMAGINARY SURFACES PLAN

OREGON STATE AERONAUTICS DIVISION
SALEM, OREGON

CH2M HILL | Drawn CRS | Check RDL | Appr. MRM | **FIGURE 24**

Township 4S | Range 1W | Scale as Shown | Dwg. No.
Section 2,11 | County MARION | Date 13 MAY 76 | Sheet 3 of 3

TERMINAL AREA PLAN

This plan is a part of the Airport Layout Plan, and shows an area which needs significant development. In order to provide assurance that runway and terminal areas can be developed in harmony, it will be necessary first to acquire the land for the terminal area. This will enable the existing flight strip type of airport to become a complete airport, particularly as regards adequate public service areas.

By providing a parallel taxiway with stubs to various apron areas the airport users will have all weather parking and have easy access to tee-hangar parking. Figure 25 shows the Terminal Area Plan.

The terminal area is separated into three general areas. The first is the south portion of the terminal area where 2 fixed base operations with several tee-hangars will be located. There will be ample room for individuals and businesses to lease space and provide their own hangars and individual service facilities.

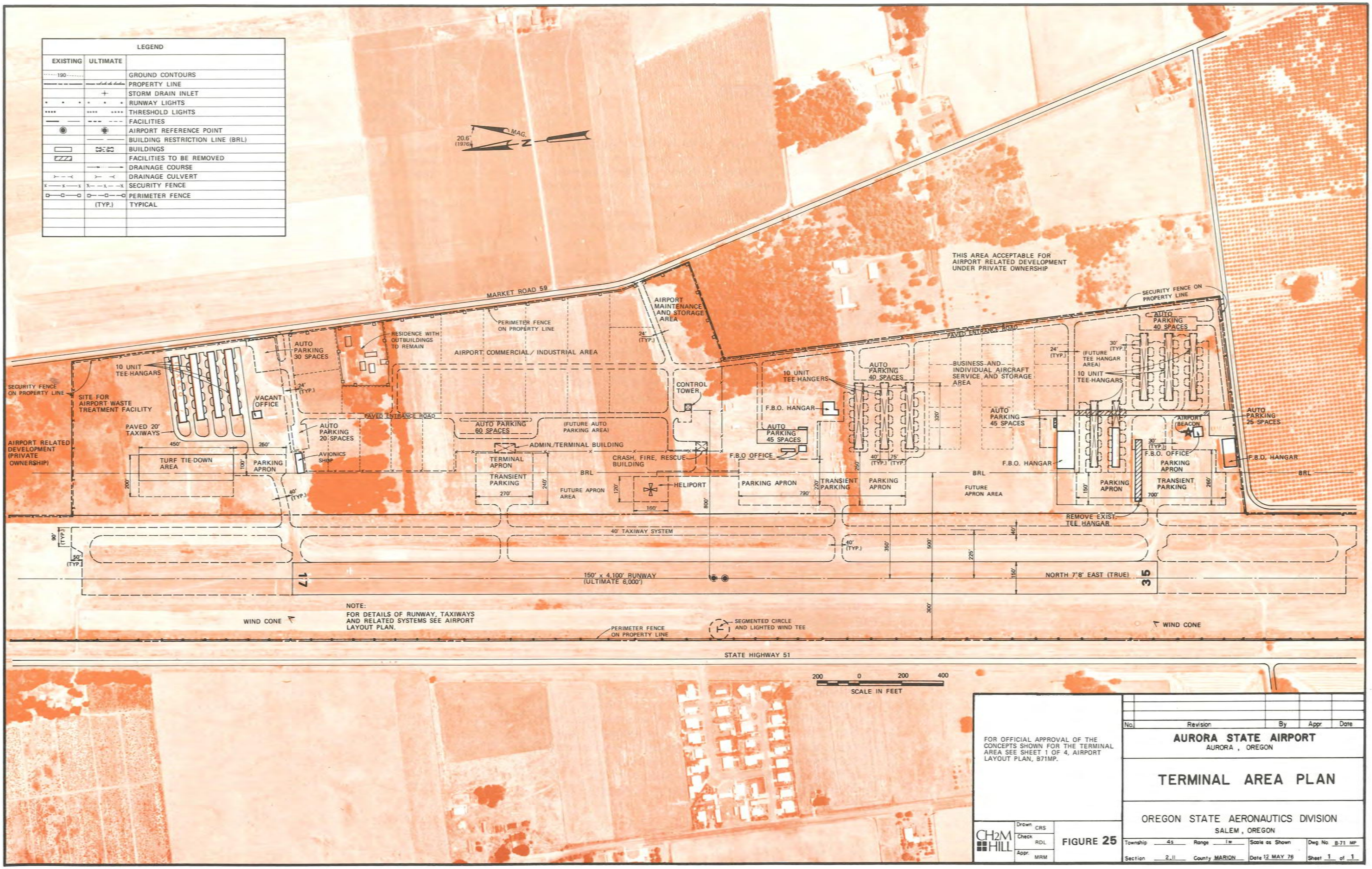
In the center of the airport will be space for general public oriented activity. Next to the runway will be a central public apron with terminal building and space for airport maintenance and management personnel. This area will contain in the center of the airport the FAA air traffic control tower, the crash/fire/rescue station and a heliport.

Just east of the central terminal area is a large area designated as a commercial/industrial park to accommodate aviation directly related or other carefully selected compatible light industrial facilities. By being located on airport property such commercial facilities can provide better services to the flying public and also provide income to broaden the financial base of the airport.

An area on the north part of the future airport property has been designated for a central airport waste treatment facility. Depending upon actual needs and State regulations a forced main to a municipal facility might be considered. This is a subject for study as the Master Plan is implemented.

Another smaller developable area suitable for further expansion as a third FBO operation lies at the north end of the terminal area property.

The internal road system is designed to provide convenient access to all parts of the airport. It will separate different kinds of airport users. Aircraft areas are to be separated from the general public and from commercial/industrial areas. Apron lighting and security fencing are prescribed for the aircraft parking area.


LEGEND
EXISTING
ULTIMATE
GROUND CONTOURS
PROPERTY LINE
STORM DRAIN INLET
RUNWAY LIGHTS
THRESHOLD LIGHTS
FACILITIES
AIRPORT REFERENCE POINT
BUILDING RESTRICTION LINE (BRL)
BUILDINGS
FACILITIES TO BE REMOVED
DRAINAGE COURSE
DRAINAGE CULVERT
SECURITY FENCE
PERIMETER FENCE
(TYP.) TYPICAL
MAG.
20.6° (1976)
N
MARKET ROAD 59
THIS AREA ACCEPTABLE FOR AIRPORT RELATED DEVELOPMENT UNDER PRIVATE OWNERSHIP
AIRPORT MAINTENANCE AND STORAGE AREA
PERIMETER FENCE ON PROPERTY LINE
RESIDENCE WITH OUTBUILDINGS TO REMAIN
AIRPORT COMMERCIAL / INDUSTRIAL AREA
PAVED ENTRANCE ROAD
SECURITY FENCE ON PROPERTY LINE
10 UNIT TEE HANGARS
AUTO PARKING 30 SPACES
VACANT OFFICE
SITE FOR AIRPORT WASTE TREATMENT FACILITY
PAVED 20' TAXIWAYS
AIRPORT RELATED DEVELOPMENT (PRIVATE OWNERSHIP)
TURF TIE-DOWN AREA
PARKING APRON
AUTO PARKING 20 SPACES
AVIONICS SHOP
AUTO PARKING 60 SPACES
(FUTURE AUTO PARKING AREA)
ADMIN./TERMINAL BUILDING
TERMINAL APRON
TRANSIENT PARKING
FUTURE APRON AREA
CONTROL TOWER
CRASH, FIRE, RESCUE BUILDING
HELIPORT
BRL
10 UNIT TEE HANGERS
F.B.O. HANGAR
AUTO PARKING 45 SPACES
F.B.O. OFFICE
PARKING APRON
AUTO PARKING 40 SPACES
BUSINESS AND INDIVIDUAL AIRCRAFT SERVICE AND STORAGE AREA
AUTO PARKING 45 SPACES
FUTURE APRON AREA
(FUTURE TEE HANGAR AREA)
10 UNIT TEE HANGARS
AUTO PARKING 40 SPACES
AIRPORT BEACON
AUTO PARKING 25 SPACES
F.B.O. HANGAR
REMOVE EXIST. TEE HANGAR
40' TAXIWAY SYSTEM
150' x 4,100' RUNWAY (ULTIMATE 6,000')
NORTH 7°8' EAST (TRUE)
17
35
NOTE: FOR DETAILS OF RUNWAY, TAXIWAYS AND RELATED SYSTEMS SEE AIRPORT LAYOUT PLAN.
WIND CONE
SEGMENTED CIRCLE AND LIGHTED WIND TEE
PERIMETER FENCE ON PROPERTY LINE
STATE HIGHWAY 51
200 0 200 400
SCALE IN FEET
FOR OFFICIAL APPROVAL OF THE CONCEPTS SHOWN FOR THE TERMINAL AREA SEE SHEET 1 OF 4, AIRPORT LAYOUT PLAN, B71MP.
No. Revision By Appr Date
AURORA STATE AIRPORT
AURORA, OREGON
TERMINAL AREA PLAN
OREGON STATE AERONAUTICS DIVISION
SALEM, OREGON
CH2M HILL
Drawn CRS
Check RDL
Appr. MRM
FIGURE 25
Township 4S Range 1W Scale as Shown Dwg. No. B-71 MP
Section 2,11 County MARION Date 12 MAY 76 Sheet 1 of 1

SURFACE ACCESS

Although surface access to the airport has been carefully studied, it is beyond the scope of an implementation program to develop improvements to the access system. Therefore only recommended solutions have been prepared and are shown on Figure 26, Recommended Airport Access Plan. These recommendations are advisory for other agencies having jurisdiction.

The Recommended Airport Access Plan relies on the strong points of the existing surface transportation systems and reinforces its deficiencies. The basic concept is to provide convenient access from the service area to the main airport entrance.

The Recommended Airport Access Plan makes maximum use of existing facilities with minimum capital expenditures to obtain an efficient airport access system, one that is well suited to the future expansion of the airport. The system may not significantly reduce the travel time of the airport users, but it will substantially improve convenience and safety.

It should retain the present access that Aurora residents have to the airport. However, the major flow of traffic to the airport should be diverted around Aurora allowing the city to remain unaffected by future airport generated traffic, which would aid in attempts to maintain the historical significance of Aurora.

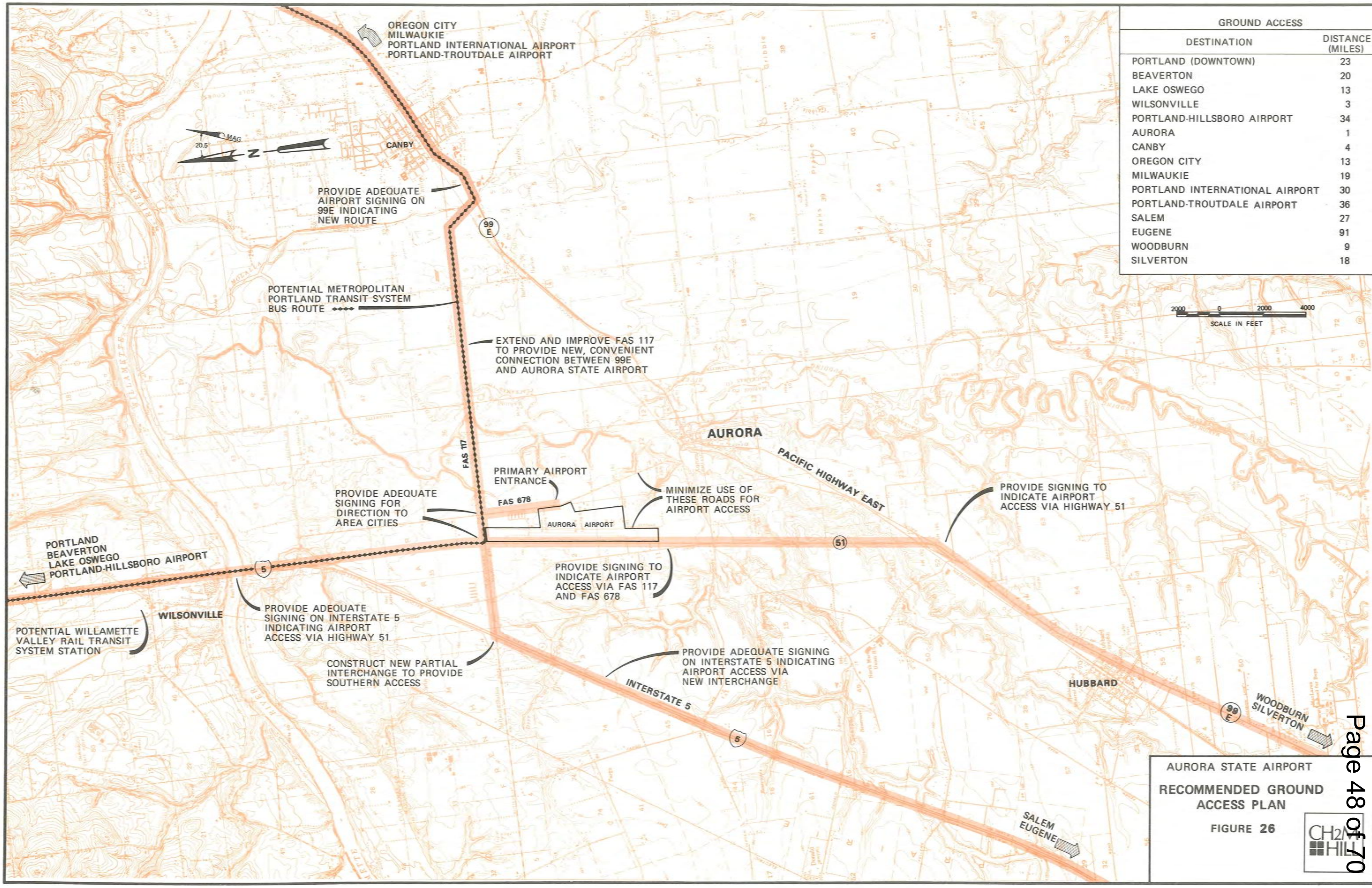
If other highway criteria permit, it is important to provide access south via the freeway which is not presently available. This would be accomplished by a partial interchange as shown. This also could aid in preserving the quiet nature of Aurora.

Travel on lower type facilities should be discouraged. By utilizing predominantly higher type roadways actual modification and maintenance in the field can be minimized. It is estimated that airport related activities will generate approximately 200 automobile trips at the peak hour in 1995. This amount is not significant in its impact on the area transportation system or on the major facilities.

The use of major facilities will eliminate most of the problems associated with the circuitous routes now serving the airport. The costs of operating and maintaining major facilities will be spread over a larger population, which is appropriate because of the regional nature of the Aurora State Airport.

An extensive signing program must complement any ultimate routing to the airport. This will alert the public, particularly the airport users, to the most expeditious route to the airport. Without this, much of the benefit of the other steps may be lost.

Finally, the potential exists for the extension of the Portland Metropolitan area transit system (Tri-Met) to include a route that would pass immediately north of the airport on Arndt Road. Routes are now established in Canby and Wilsonville. A tie-in with these would provide a transit link that would allow travel by transit from the airport to virtually anywhere in the metropolitan area.



GROUND ACCESS

DESTINATION	DISTANCE (MILES)
PORTLAND (DOWNTOWN)	23
BEAVERTON	20
LAKE OSWEGO	13
WILSONVILLE	3
PORTLAND-HILLSBORO AIRPORT	34
AURORA	1
CANBY	4
OREGON CITY	13
MILWAUKIE	19
PORTLAND INTERNATIONAL AIRPORT	30
PORTLAND-TROUTDALE AIRPORT	36
SALEM	27
EUGENE	91
WOODBURN	9
SILVERTON	18

AURORA STATE AIRPORT

RECOMMENDED GROUND ACCESS PLAN

FIGURE 26

CH2M HILL

ENVIRONMENTAL CONSIDERATIONS

Environmental assessments have been made based upon the Airport Layout Plan drawings and upon the forecast traffic. None of the physical developments proposed require an Environmental Impact Assessment Report at this time. However the runway lengthening proposed after the next five year period will require a formal environmental process prior to construction.

Adverse environmental impacts include noise effects, air and water pollution and some traffic congestion due to build-up in the area. Figure 27 shows noise exposures for 1980, 1985 and 1995. The noise contours were developed using the forecasts given earlier in Table 6, page 24, and information on aircraft population, Figure 18, page 23. Table 8, page 27, shows noise impacts on land use.

Generally when NEF contours are below 30 the noise impact is slight and requires no special noise insulation for new construction. When the NEF is between 30 to 35 new construction should be undertaken after analysis of noise reduction requirements has been made and needed noise insulation features included in the design of buildings in that area. Because of the agricultural nature of the land around the Aurora State Airport the noise exposure, even in 1995, should not effect a large number of people.

Although aircraft emit air pollutants, they are small in numbers compared with the automobile. Table 9 shows air quality impacts produced by the forecast aircraft traffic at the airport. Automobile traffic on the airport was not analyzed.

In considering how to diminish the environmental impacts produced by the Aurora State Airport alternatives were examined. The main alternatives are:

- to make no improvements
- to make the improvements according to a Master Plan
- to close the airport

TABLE 9

AIR QUALITY IMPACTS
(peak hour)

	EMISSIONS (micrograms per cubic meter)				
	PARTI-CULATES	SULFUR OXIDES	CARBON MONOXIDE	HYDRO-CARBONS	NITROGEN OXIDES
1975					
SINGLE ENGINE	0.0040	0.0020	0.0020	0.0800	0.0100
TWIN ENGINE	0.0006	0.0003	0.0003	0.0105	0.0014
TURBO JET	0	0	0	0	0
TOTALS	0.0046	0.0023	0.0023	0.0905	0.0114
1995					
SINGLE ENGINE	0.0090	0.0045	0.0045	0.1800	0.0225
TWIN ENGINE	0.0018	0.0009	0.0009	0.0315	0.0041
TURBO JET	0.0120	0.0375	0.0015	0.3465	0.1590
TOTALS	0.0228	0.0429	0.0069	0.5580	0.1856

If nothing is done to the airport the tendency for airport encroachment will become stronger and environmental incompatibility could become a serious problem in a few years. The existing runway length accommodates several turbojet aircraft now, and it is doubtful that a do-nothing alternative would reduce their environmental impact significantly. If no improvements are made to the airport, the airport would be expected to continue to support growing numbers of traffic with reduced safety standards.

Therefore it has been deemed best for the environment to develop the airport with a positive approach to minimizing adverse environmental impacts as development is accomplished.

In fact it is the policy of this Master Plan to assume that the airport owner and local public agencies will take action to inform the public and to discourage incompatible land uses. Action in this direction has already been taken by the Aeronautics Division as evidenced by the public involvement program itemized in the APPENDIX. Marion County's current action to down-zone to EFU (Exclusive Farm Use) around the airport represents another measure that will insure continued land use compatibility.

The airport is an established public facility providing a significant contribution to the Oregon Transportation System. Serious consideration to closing the airport does not appear warranted because the unfavorable environmental impacts are not severe. Closure itself would have a serious adverse impact because there would be a need to relocate several persons and businesses. Following this secondary social and economic problems would occur.

NOTE:
NOISE CONTOURS SHOWN ARE BASED ON NOISE EXPOSURE FORECAST (NEF) CRITERIA

1000 0 1000 2000
SCALE IN FEET

AURORA STATE AIRPORT
FUTURE NOISE EXPOSURE
FIGURE 27

CH2M HILL

LAND USE PLAN AND RECOMMENDED ZONING

Although the airport has been found to be providing a service to large numbers of users, it can remain in public acceptance only as long as its compatibility with the surrounding land use is preserved. This Master Plan has developed a Land Use Plan for adjacent areas, shown in Figure 28. That plan is compatible with development proposed by the Airport Layout Plan.

The Land Use Plan shows land uses recommended in the vicinity of the airport which are closely in conformance with the comprehensive plans of Marion County and Clackamas County. Unique to these comprehensive/plans would be the indicated airport buffer overlay which this Master Plan recommends for adoption by both counties. The buffer zone overlay follows the NEF 30 contour and will protect both the airport and the citizens who might otherwise move into noise impacted areas.

The airport Master Plan has been submitted to Marion County and Clackamas County for guidance in adopting new zoning in agreement with the airport. Figure 29, recommends a zoning plan and three new zones. The first zone is an Airport Development Zone, described on Figure 29. This zone is presently mostly PA, Public Amusement, for the airport and RA, Residential Agricultural, which is propsed for change to F-20, Farm-20 acres or EFU, Exclusive Farm Use.

The second zone is an Airport Buffer Overlay Zone, also shown on Figure 29. Restrictions imposed by this overlay should take precedence over any conflicting permitted uses in the zones under the overlay.

The third zone is an Airport Obstruction Surfaces Overlay Zone. It is an additional overlay superimposed over and surrounding the proposed airport. It is the same as all FAR Part 77 surfaces except the Conical Surface, which is omitted because of being over flat terrain and being very burdensome to administer. These surfaces are shown on Figure 24, Ultimate Airport Imaginary Surfaces, page 33. All surfaces are dimensioned according to FEDERAL AVIATION REGULATIONS, Part 77, Objects Affecting Navigable Airspace.

Other solutions have been considered instead of overlay zones, but they neither provide as complete and clear information nor are they as practical to administer and accomplish. Based upon experience in other parts of the nation FAA recommends overlay zones as the most practical approach after fee acquisition. Fee acquisition is time consuming and unwieldy, expensive for the the airport owner, and reduces the tax base.

As regards the land adjacent to the airport but not directly in either overlay zone the Master Plan encourages both counties to rezone that land. In the airport vicinity in Marion County EFU (Exclusive Farm Use Zone) is suggested. Marion County is currently proposing EFU in zone area number 6, which includes this area. In Clackamas County, EFU or possibly RF-F (Residential Farm-Forest Zone) is suggested.

For additional discussion refer to the letter of 20 April 1976 from CH2M HILL to Marion County regarding rezoning, which is found in the APPENDIX.