CITY OF AERVILLE
USA

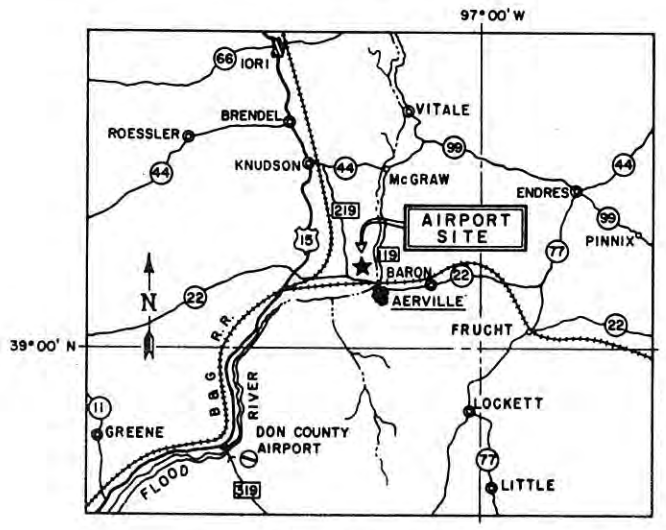
CONSTRUCTION PLANS FOR AERVILLE MUNICIPAL AIRPORT

JANUARY 1, 1969

FAAP PROJECT NO.
SPONSOR - CITY OF AERVILLE
GENERAL DESCRIPTION OF PROJECT:
SITE CLEARING, GRUBBING, GRADING, DRAINAGE AND PAVING OF RUNWAY, TAXIWAYS, APRON AND ACCESS ROAD; AIRPORT LIGHTING SYSTEM.

SUMMARY OF QUANTITIES

F.A.A. ITEM NO.	DESCRIPTION	UNIT	QUANTITIES Estimated	As-Built
P-151	CLEARING	ACRE		
P-151	GRUBBING	ACRE		
P-152	GRADING - UNCLASSIFIED EXCAVATION	CU. YARD		
D-701	DRAINAGE - PIPE 18"	LIN. FT		
	PAVING - RUNWAY, TAXIWAYS & APRON			
P-154	SUBBASE COURSE	CU. YARD		
P-208	BASE COURSE	CU. YARD		
P-602	PRIME COAT	GAL		
P-401	BITUMINOUS SURFACE COURSE	TON		
P-401	ASPHALT CEMENT	GAL	(TO	
	LIGHTING, MEDIUM INTENSITY		BE	
L-802	RUNWAY LIGHTS	EACH		
L-802	THRESHOLD LIGHTS, GREEN	EACH	COMPLETED	
L-822	TAXIWAY LIGHTS, BLUE	EACH		
L-829	TAXIWAY SIGNS	EACH	BY ENGINEER	
L-107	LIGHTED WIND CONE	EACH		
L-109	POWER & CONTROL EQUIPMENT	LUMP SUM		
L-824B	CABLE	LIN. FT.	FOR	
L-108	TRENCH	LIN. FT.		
L-108	DUCT	LIN. FT.	SPECIFIC	
L-824B	COUNTERPOISE WIRE	LIN. FT.		
*	SEGMENTED CIRCLE MARKER	LUMP SUM	PROJECT	
L-801	BEACON	EACH		
*	BEACON TOWER	EACH	UNDER	
T-901	SEEDING	ACRE		
T-908	MULCHING	ACRE	DESIGN	
	PAVING - ACCESS ROAD			
P-154	SUBBASE COURSE	CU. YARD		
P-208	BASE COURSE	CU. YARD		
P-602	PRIME COAT	GAL		
P-401	BITUMINOUS SURFACE COURSE	TON		
P-401	ASPHALT CEMENT	GAL		
F-151	FENCING PERIMETER	LIN. FT.		
F-162	FENCING - SECURITY	LIN. FT.		
P-620	MARKING OF RUNWAY & TAXIWAY	SQ. FT.		
*	SEE SPECIAL SPECIFICATION			



LOCATION MAP

0 4 8 16 24
SCALE IN MILES

INDEX

SHEET NO.	TITLE
1	COVER SHEET
2	PROJECT LAYOUT PLAN
3	CONSTRUCTION PLOT PLAN & FENCING
4	CLEARING & GRUBBING
5	GRADING PLAN
6	PROFILES RUNWAY, TAXIWAY & APRON
7	PAVING SECTIONS & TIEDOWNS
8	DRAINAGE & TURFING
9	SOIL BORING PLAN & LOG
10	LIGHTING LAYOUT, DIAGRAM & DETAILS
11	MARKING AND MISCELLANEOUS DETAILS

NO	REVISION	BY	APP	DATE

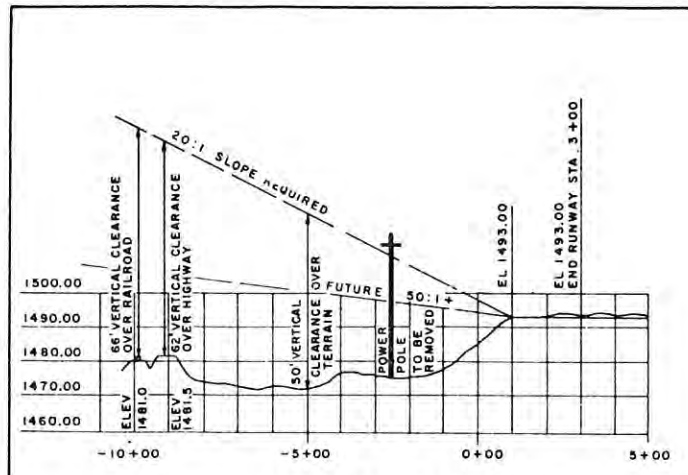
CITY of AERVILLE
AERVILLE, U.S.A.

AERVILLE MUNICIPAL AIRPORT
COVER SHEET

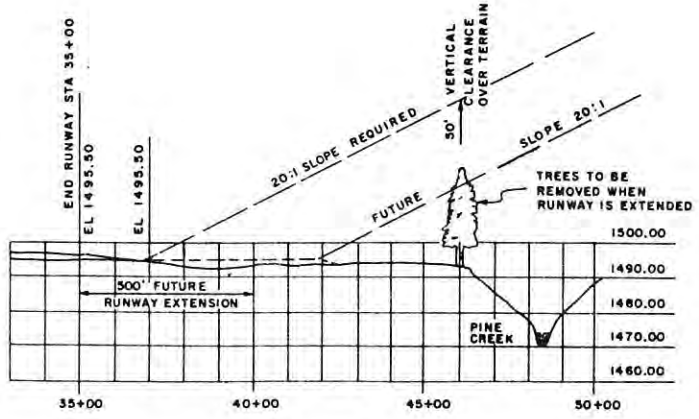
(CONSULTING FIRM)

SPACE RESERVED FOR NECESSARY APPROVALS

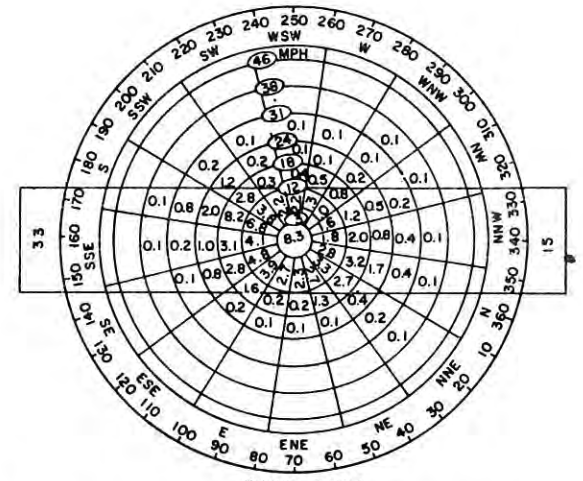
DRAWN BY | CHECKED BY
SCALE | DATE | SHEET 1 OF 11



℄ OF SOUTH APPROACH

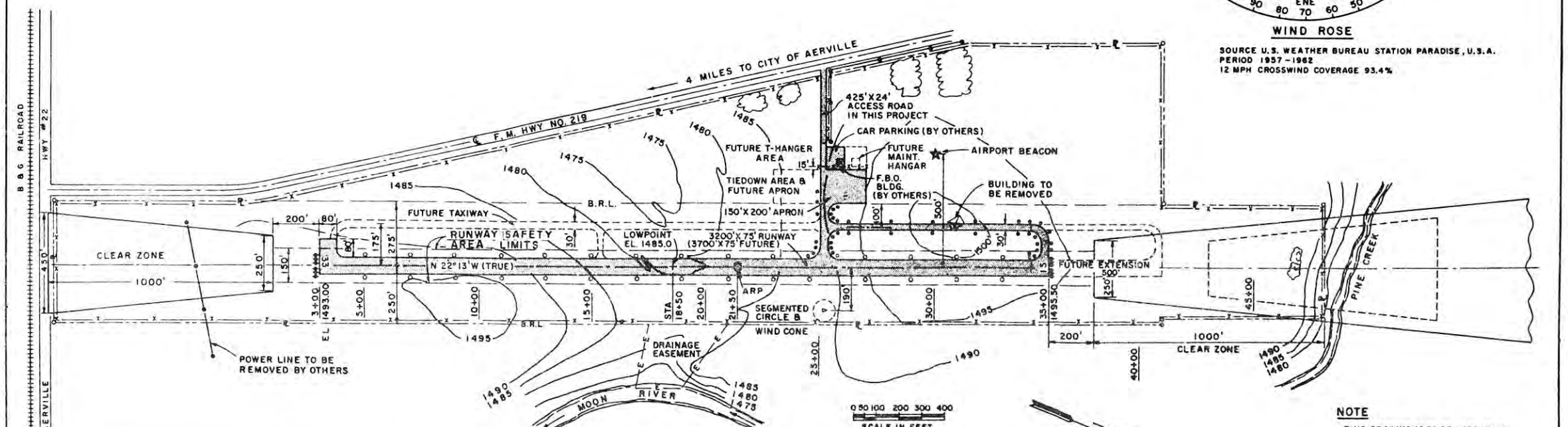


℄ OF NORTH APPROACH



WIND ROSE

SOURCE U.S. WEATHER BUREAU STATION PARADISE, U.S.A.
PERIOD 1957 - 1962
12 MPH CROSSWIND COVERAGE 93.4%



NOTE

THIS DRAWING IS TO BE USED ONLY FOR THIS PROJECT AND NOT AS THE APPROVED AIRPORT LAYOUT PLAN

RUNWAY DATA		
	EXIST.	FUTURE
NAVIGATIONAL AIDS	NONE	VOR
MARKING	BASIC	INST
LIGHTING	M.I.	M.I.
PAVEMENT DESIGN STRENGTH (GROSS)	12,500	12,500
NORTH APPROACH SLOPE (REQ'D)	20:1	20:1
SOUTH APPROACH SLOPE (REQ'D)	20:1	20:1
RUNWAY WIDTH	75'	75'
EFFECTIVE RUNWAY GRADIENT (%)	0.33%	0.28%
RUNWAY LENGTH	3200'	3700'
AIRPORT ELEVATION	1496.0	1496.0

LEGEND	
SYMBOL	DESCRIPTION
☆	AIRPORT BEACON
♦ ♦ ♦	THRESHOLD LIGHTS
○ ○	RUNWAY LIGHTS
• •	TAXIWAY LIGHTS
⊕	SEGMENTED CIRCLE AND WIND CONE
—•—	POWER LINE
—℄—	EXISTING PROPERTY
	WOODED AREA
	EXISTING CONTOURS
x—x	FENCING
-B.R.L-	BUILDING RESTRICTION LINE
	PAVING - FUTURE
	PAVING - PROPOSED THIS PROJECT
	BUILDINGS - PROPOSED
	BUILDINGS - FUTURE

AIRPORT DATA		
ITEM	EXIST.	FUTURE
COORDINATES OF AIRPORT (LAT)	39°05' 32"N	
REFERENCE POINT (ARP) (LONG)	97°07' 14"W	
NORMAL MAX. TEMP. HOTTEST MONTH	90°F	90°F
SUBGRADE CLASS	F-5	F-5
AIRPORT CATEGORY	B.U. III	B.U. III

NO	REVISION	BY	APP	DATE

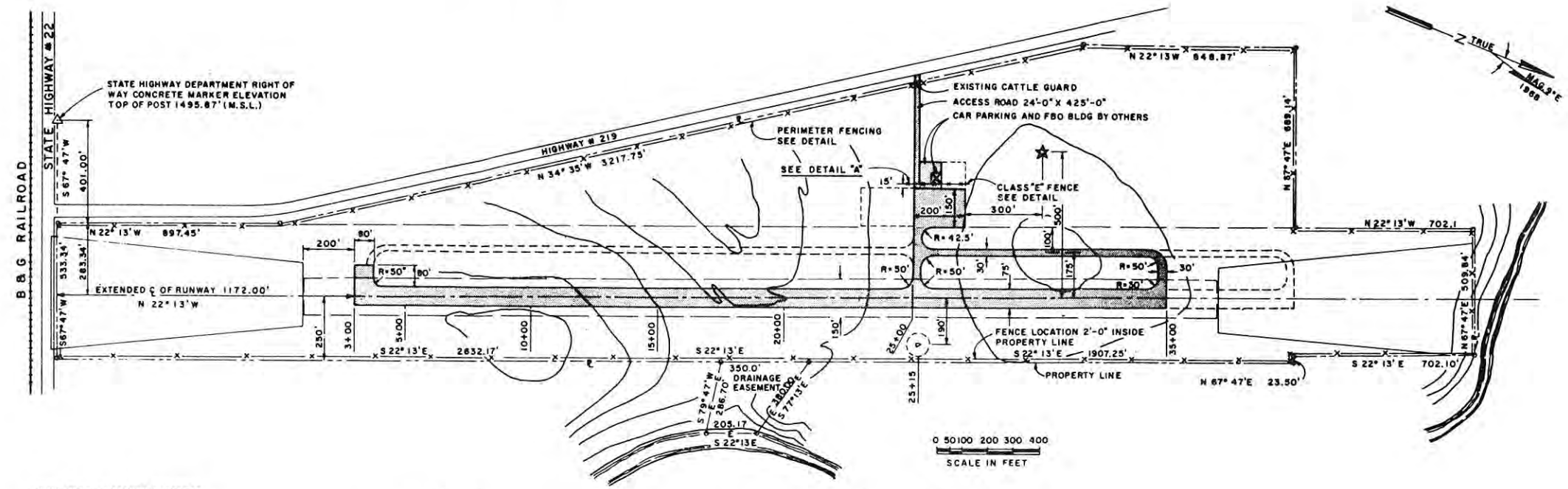
CITY of AERVILLE
AERVILLE, U.S.A.

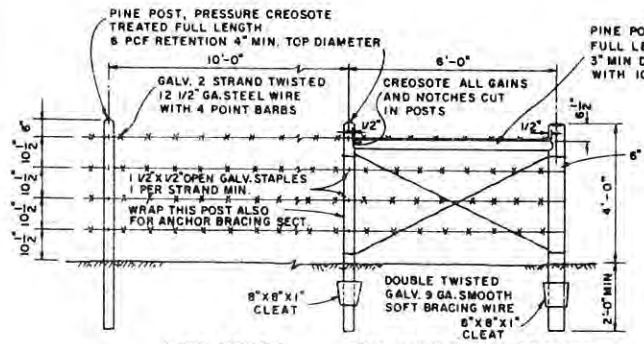
AERVILLE MUNICIPAL AIRPORT
PROJECT LAYOUT PLAN

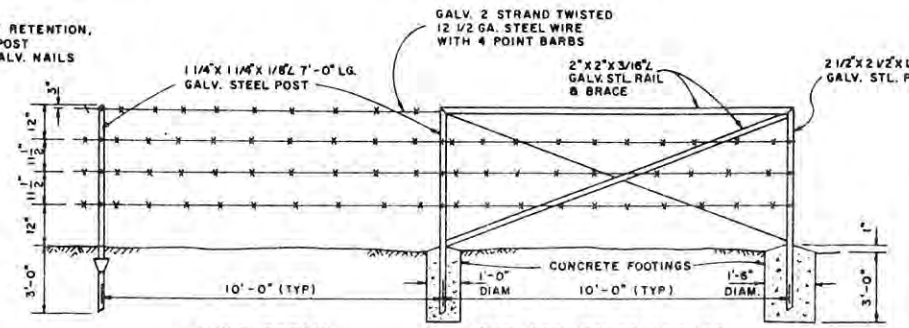
(CONSULTING FIRM)

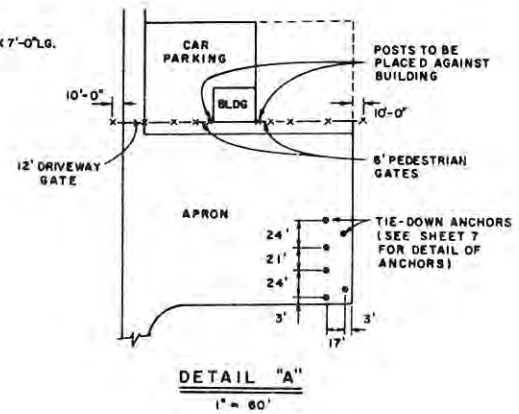
SPACE RESERVED FOR NECESSARY APPROVALS	DRAWN BY	CHECKED BY
	SCALE	DATE

SHEET 2 OF 11

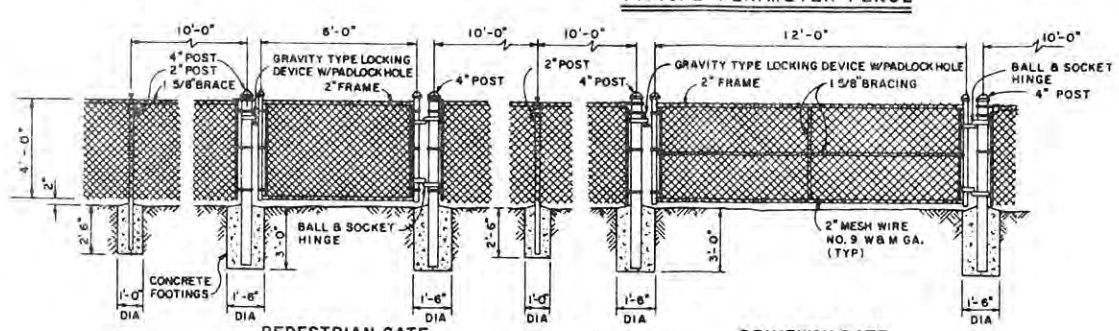








TYPICAL PERIMETER FENCE



GENERAL NOTES

1. ALL BEARINGS SHOWN REFER TO TRUE NORTH.
2. FOUR FEET OF 1" IRON PIPE SET IN CONCRETE AT PROPERTY CORNERS.
3. MAXIMUM INTERVAL BETWEEN ANCHOR POSTS IS 500'.
4. ALL CORNER AND ANCHOR POSTS SHALL BE BRACED TO BOTH ADJACENT POSTS.

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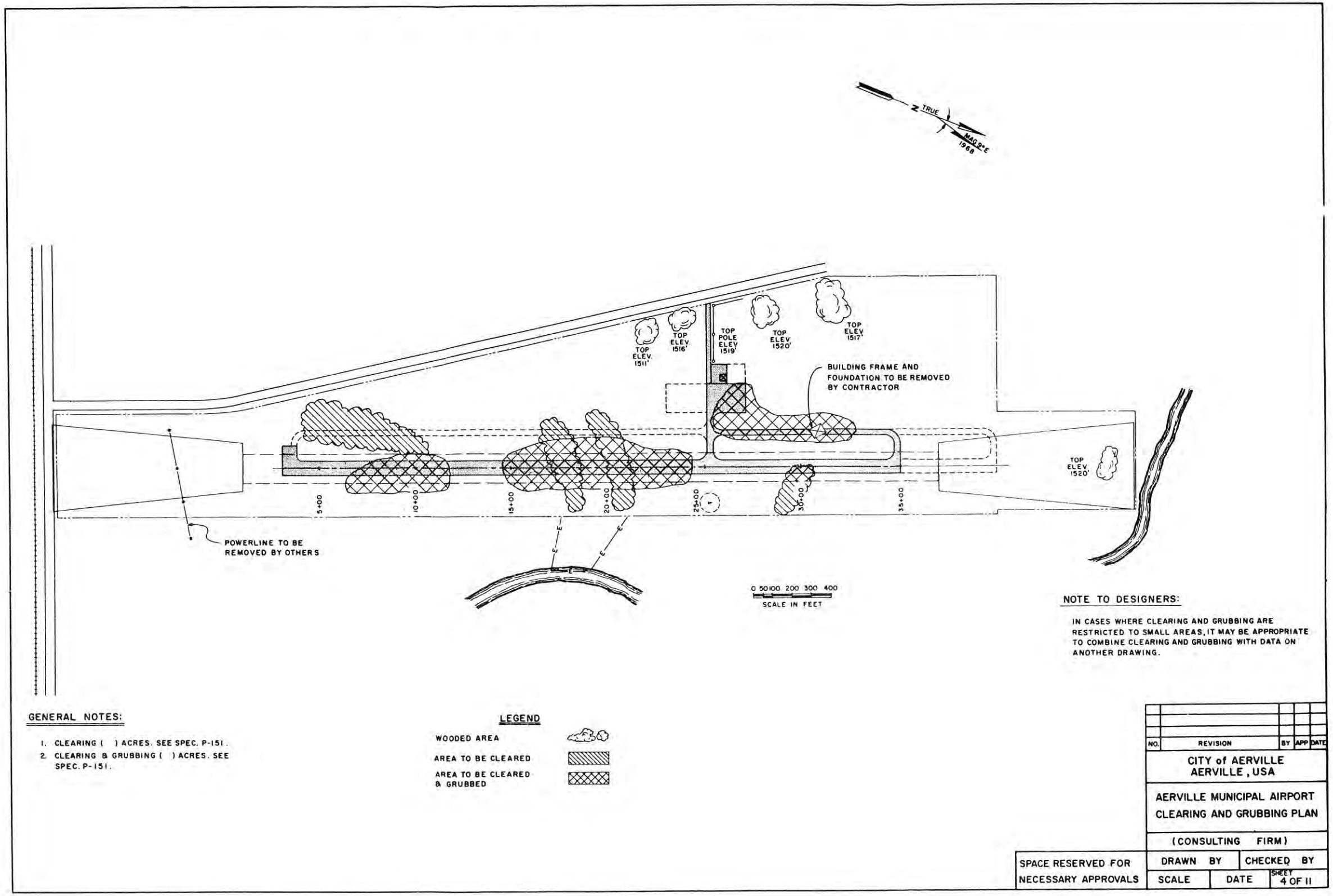
CITY of AERVILLE
AERVILLE, U.S.A.

AERVILLE MUNICIPAL AIRPORT
CONSTRUCTION PLOT PLAN & FENCING

(CONSULTING FIRM)

SPACE RESERVED FOR NECESSARY APPROVALS	DRAWN BY	CHECKED BY	
	SCALE	DATE	SHEET 3 OF 11



NOTE TO DESIGNERS:

IN CASES WHERE CLEARING AND GRUBBING ARE RESTRICTED TO SMALL AREAS, IT MAY BE APPROPRIATE TO COMBINE CLEARING AND GRUBBING WITH DATA ON ANOTHER DRAWING.

GENERAL NOTES:

1. CLEARING ( ) ACRES. SEE SPEC. P-151.
2. CLEARING & GRUBBING ( ) ACRES. SEE SPEC. P-151.

LEGEND

WOODED AREA

AREA TO BE CLEARED

AREA TO BE CLEARED & GRUBBED

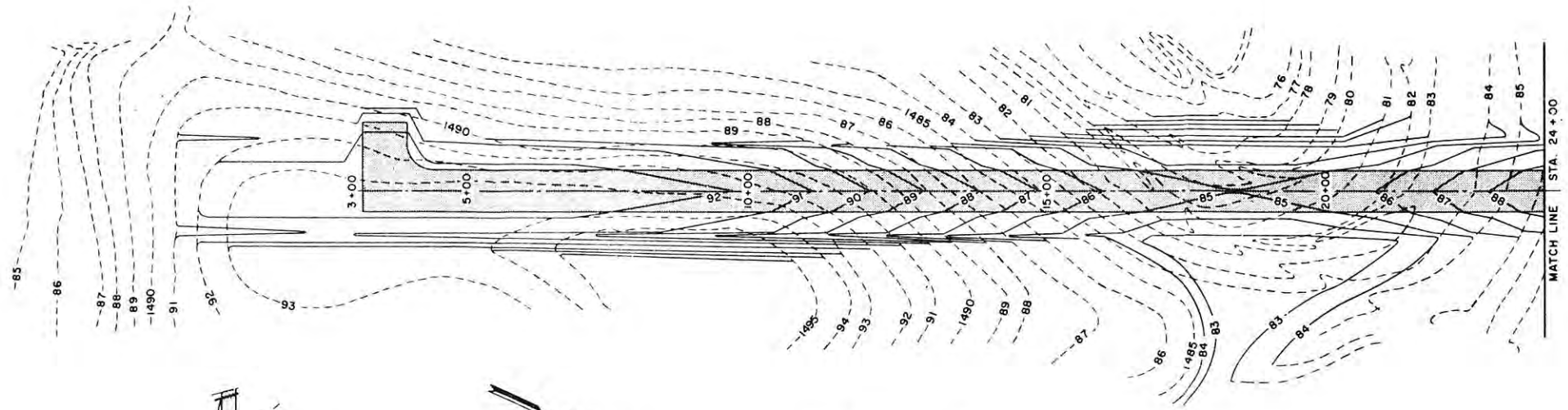
NO.	REVISION	BY	APP	DATE

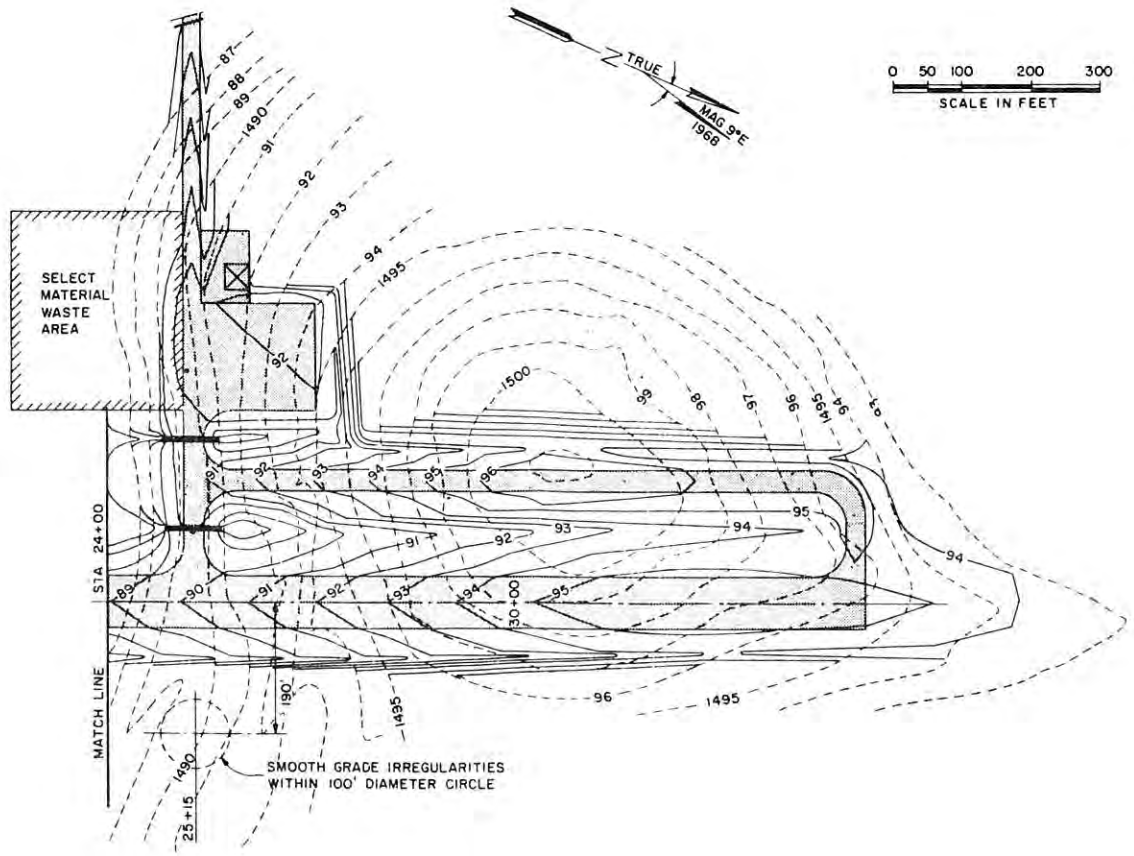
CITY of AERVILLE
AERVILLE, USA

AERVILLE MUNICIPAL AIRPORT
CLEARING AND GRUBBING PLAN

(CONSULTING FIRM)

SPACE RESERVED FOR NECESSARY APPROVALS	DRAWN BY	CHECKED BY
	SCALE	DATE	SHEET 4 OF 11





0 50 100 200 300
SCALE IN FEET

GENERAL NOTE

A SET OF CROSS SECTION DRAWINGS IS AVAILABLE IN THE ENGINEER'S OFFICE.

NOTES

1.	EXCAVATION (CUT) =	CY
2.	EMBANKMENT (FILL) =	CY
3.	SHRINKAGE FACTOR =	%
4	WASTE =	CY

LEGEND

- EXISTING CONTOURS
- FINISHED GRADE CONTOURS
- PAVEMENT
- WASTE AREA

NO.	REVISION	BY	APP	DATE

CITY of AERVILLE
AERVILLE, U.S.A.

AERVILLE MUNICIPAL AIRPORT
GRADING PLAN

(CONSULTING FIRM)

SPACE RESERVED FOR NECESSARY APPROVALS	DRAWN BY	CHECKED BY
	SCALE / DATE	SHEET 5 OF 11

NO	REVISION	BY	APP	DATE

CITY of AERVILLE
AERVILLE, U.S.A.

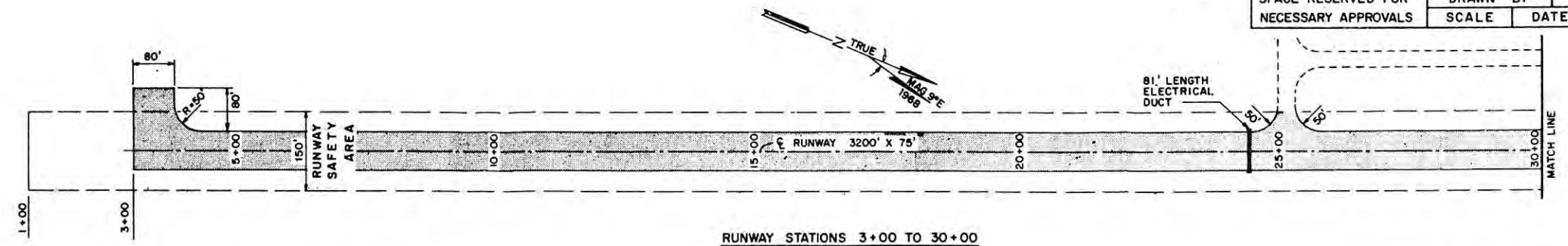
AERVILLE MUNICIPAL AIRPORT
PROFILES

(CONSULTING FIRM)

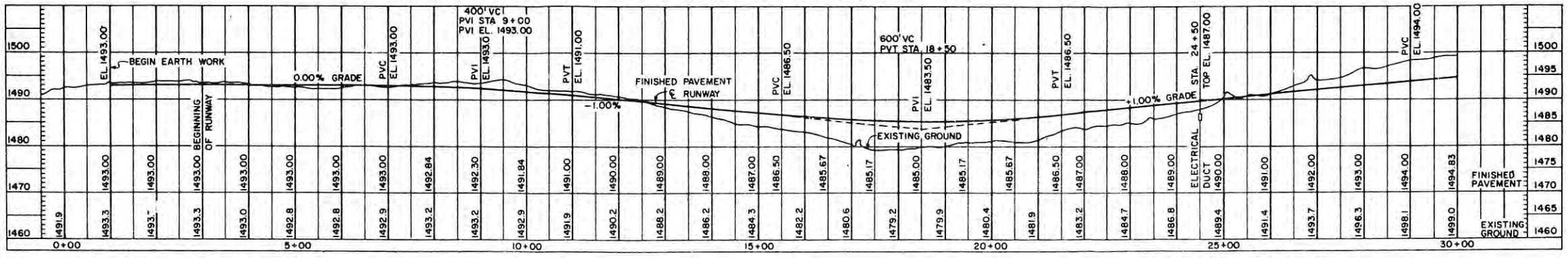
SPACE RESERVED FOR NECESSARY APPROVALS

DRAWN BY | CHECKED BY

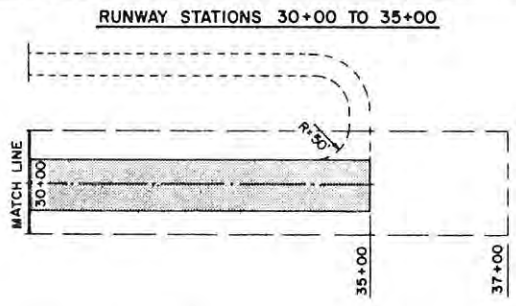
SCALE | DATE | SHEET 6 OF 11



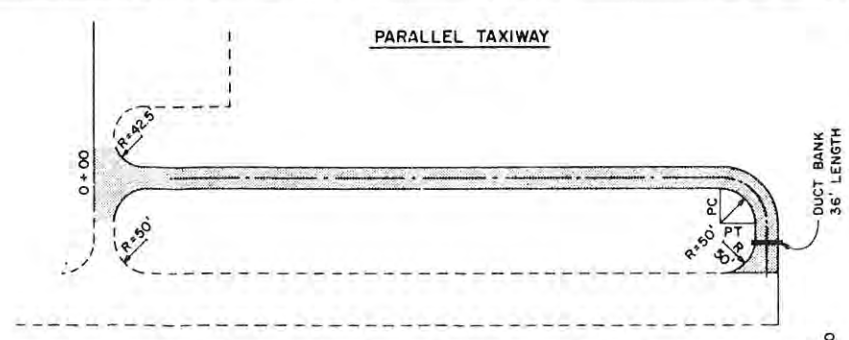
RUNWAY STATIONS 3+00 TO 30+00
SCALE: 1" = 100' HORIZONTAL
1" = 10' VERTICAL



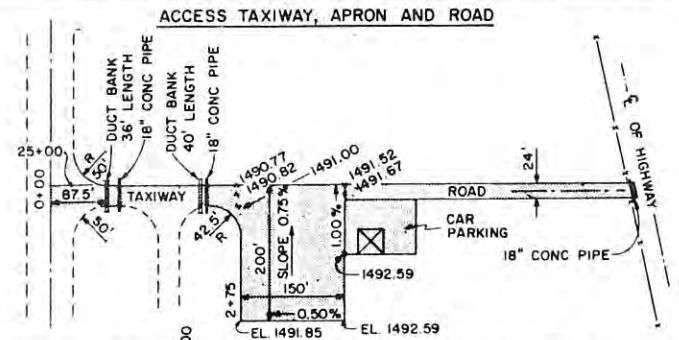
RUNWAY STATIONS 30+00 TO 35+00

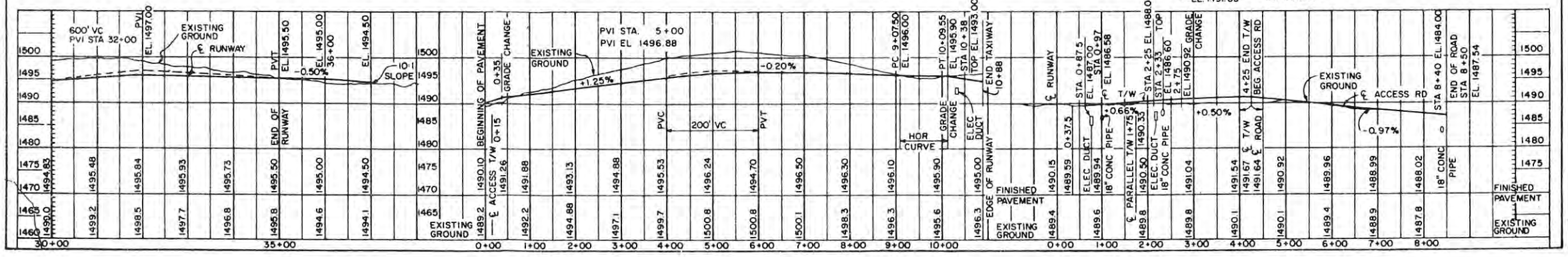


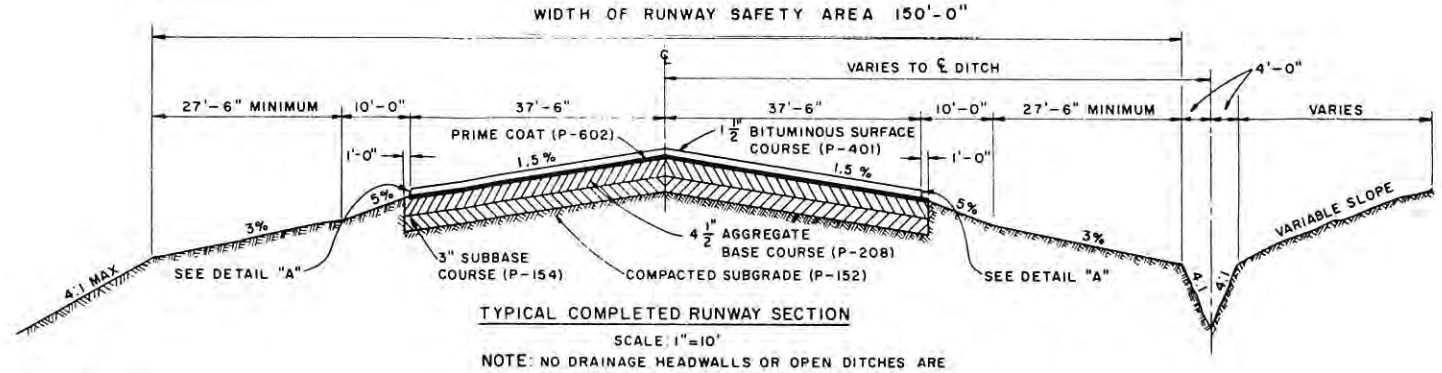
PARALLEL TAXIWAY



ACCESS TAXIWAY, APRON AND ROAD



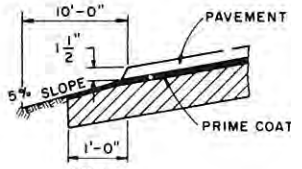




TYPICAL COMPLETED RUNWAY SECTION

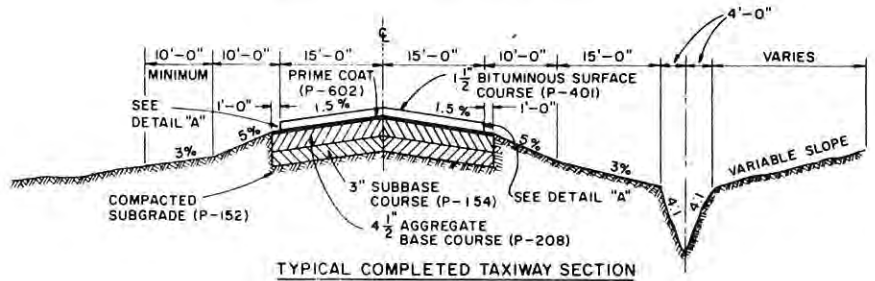
SCALE: 1"=10'

NOTE: NO DRAINAGE HEADWALLS OR OPEN DITCHES ARE ALLOWED WITHIN THE LANDING STRIP AREA.



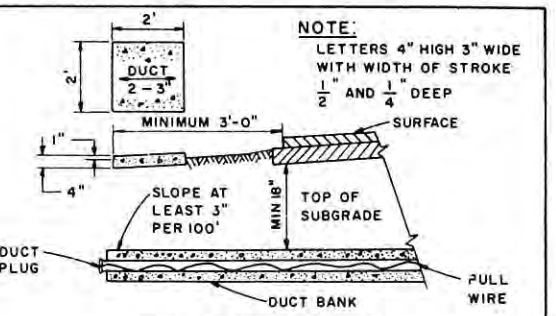
DETAIL "A"

SCALE: NO SCALE



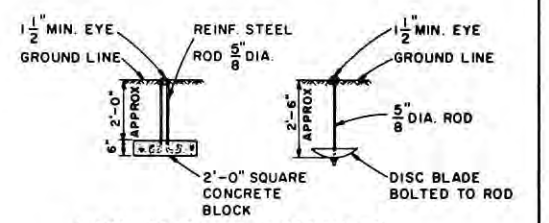
TYPICAL COMPLETED TAXIWAY SECTION

SCALE: 1"=10'

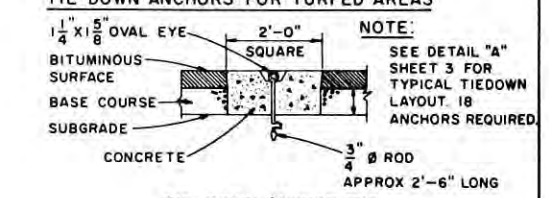


DUCT MARKER DETAILS

SCALE: NO SCALE

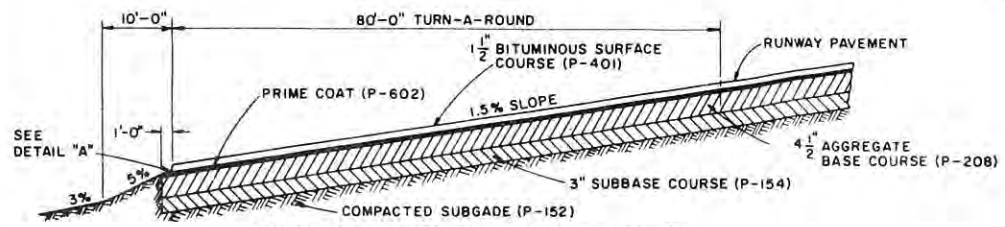


TIE DOWN ANCHORS FOR TURFED AREAS



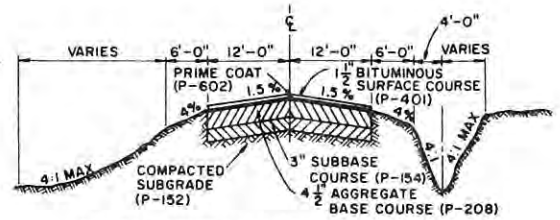
TIE-DOWN ANCHOR FOR BITUMINOUS PAVED AREAS

SCALE: NO SCALE



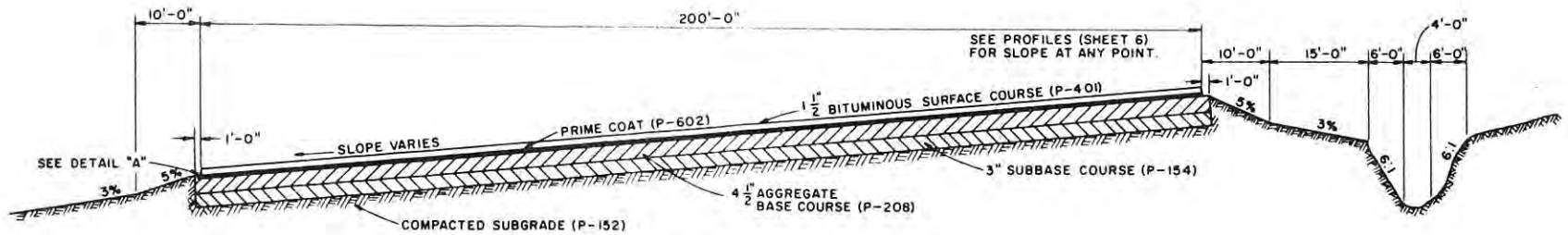
TYPICAL COMPLETED TURN-A-ROUND SECTION

SCALE: 1"=10'



TYPICAL COMPLETED ACCESS RD. SECTION

SCALE: 1"=10'



TYPICAL COMPLETED APRON SECTION

SCALE: NO SCALE

NOTE TO DESIGNERS:

THE CRITERIA SHOWN ON THIS DRAWING ARE INTENDED ONLY TO ILLUSTRATE ONE POSSIBLE CASE. FOR A SPECIFIC AIRPORT, DESIGN CRITERIA MUST BE SELECTED AS DESCRIBED IN THE BEGINNING CHAPTERS OF THIS ADVISORY CIRCULAR.

GENERAL NOTE:

1. COMPACTION OF SUBGRADE UNDER ALL PAVEMENTS IS TO BE 95% MINIMUM. SEE SPECIFICATION P-152.
2. QUALITY CONTROL TEST REQUIREMENTS SHALL BE FOR PAVEMENT DESIGNED FOR AIRCRAFT OF LESS THAN 30,000 LBS. GROSS WEIGHT.

NO.		BY	APP	DATE

CITY OF AERVILLE
AERVILLE U.S.A.

AERVILLE MINICIPAL AIRPORT
PAVING SECTIONS & TIEDOWNS

(CONSULTING FIRM)

SPACE RESERVED FOR NECESSARY APPROVALS	DRAWN BY	CHECKED BY
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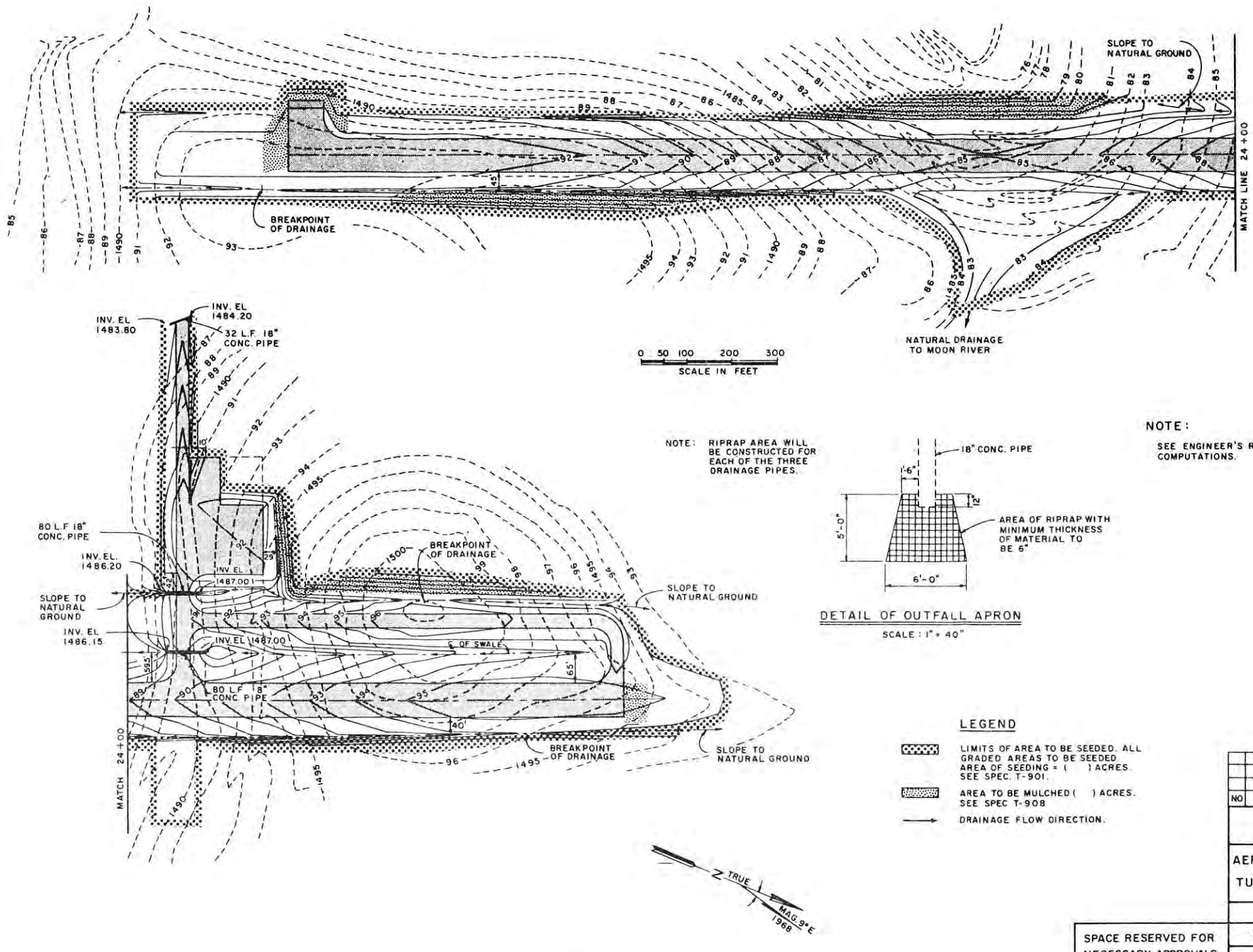
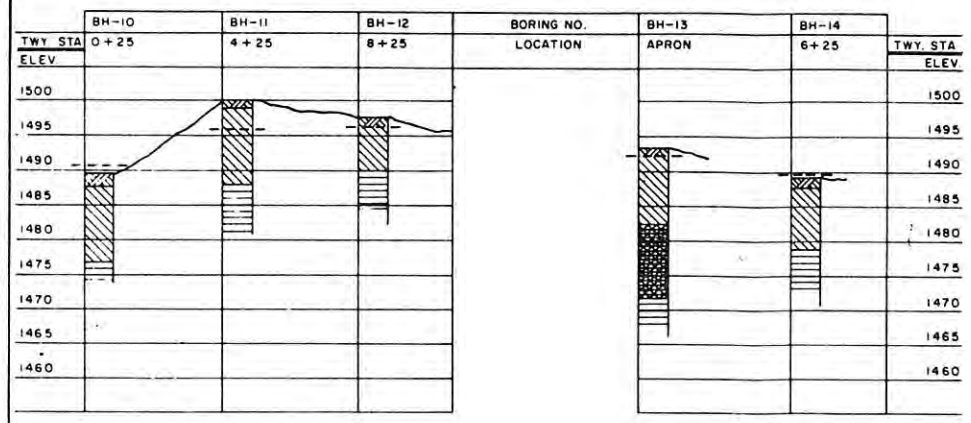

SLOPE TO NATURAL GROUND
BREAKPOINT OF DRAINAGE
MATCH LINE 24+00
NATURAL DRAINAGE TO MOON RIVER
0 50 100 200 300
SCALE IN FEET
INV. EL 1484.20
32 L.F. 18" CONC. PIPE
INV. EL 1483.80
80 L.F 18" CONC. PIPE
INV. EL. 1486.20
INV. EL 1487.00
SLOPE TO NATURAL GROUND
INV. EL 1486.15
INV EL 1487.00
℄ OF SWALE
80 L.F 8" CONC PIPE
BREAKPOINT OF DRAINAGE
SLOPE TO NATURAL GROUND
BREAKPOINT OF DRAINAGE
SLOPE TO NATURAL GROUND
MATCH 24+00
NOTE: RIPRAP AREA WILL BE CONSTRUCTED FOR EACH OF THE THREE DRAINAGE PIPES.
18" CONC. PIPE
1'-6"
AREA OF RIPRAP WITH MINIMUM THICKNESS OF MATERIAL TO BE 6"
5'-0"
6'-0"
DETAIL OF OUTFALL APRON
SCALE : 1" = 40"
NOTE:
SEE ENGINEER'S REPORT FOR DRAINAGE COMPUTATIONS.
LEGEND
LIMITS OF AREA TO BE SEEDED. ALL GRADED AREAS TO BE SEEDED. AREA OF SEEDING = ( ) ACRES. SEE SPEC. T-901.
AREA TO BE MULCHED ( ) ACRES. SEE SPEC T-908
DRAINAGE FLOW DIRECTION.
TRUE
MAG 9°E 1968
NO REVISION BY APP DATE
CITY of AERVILLE
AERVILLE, USA
AERVILLE MUNICIPAL AIRPORT
TURFING AND DRAINAGE
(CONSULTING FIRM)
SPACE RESERVED FOR NECESSARY APPROVALS
DRAWN BY
CHECKED BY
SCALE
DATE
SHEET 8 OF 11

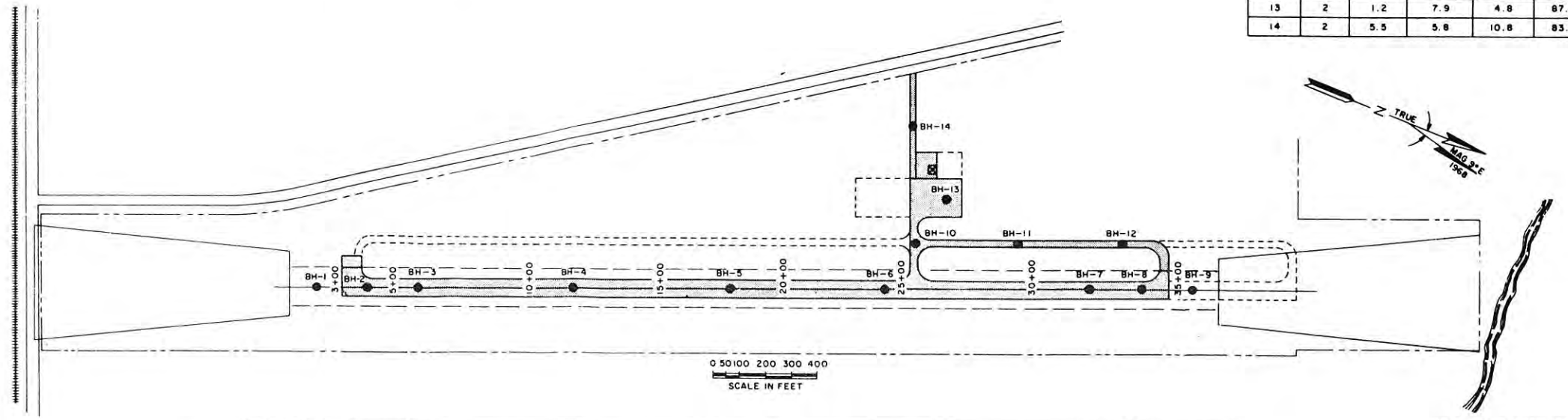


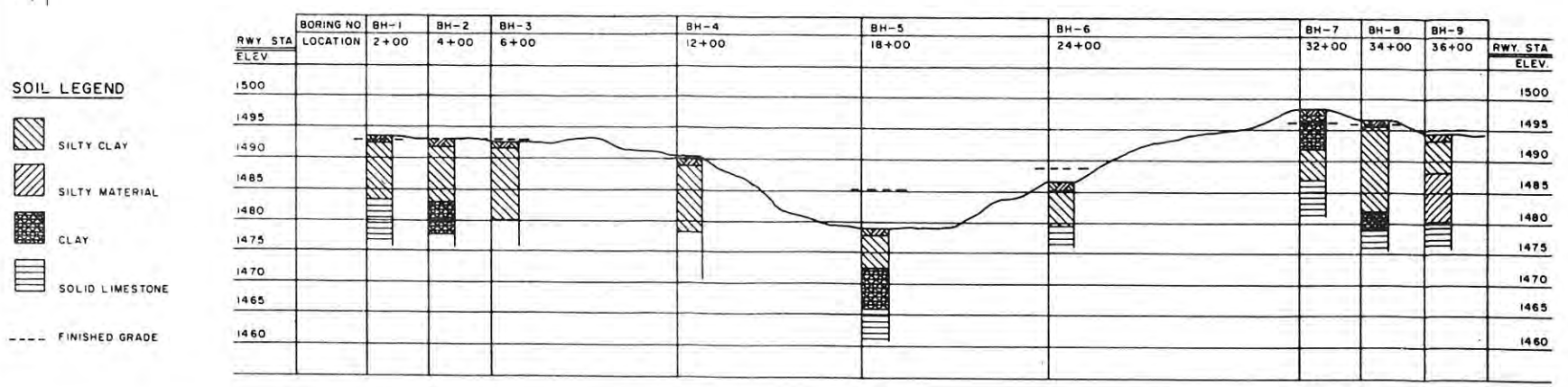
GENERAL NOTES:

1. WATER TABLE AT 1465 MSL ON JAN. 1, 1968.
2. DEPTH OF FROST PENETRATION IS 6 INCHES
3. BORINGS TAKEN ON JAN. 1, 1968
4. RUNWAY, TAXIWAY AND APRON PAVEMENT DESIGNED FOR E-7 SOIL, F-5 SUBGRADE AND 12,500 LB GROSS WEIGHT.

AERVILLE MUNICIPAL AIRPORT
MECHANICAL ANALYSIS AND
CLASSIFICATION OF REPRESENTATIVE EXAMPLES

BORING NO.	SOIL LAYER	MECHANICAL ANALYSIS				LIQUID LIMIT	PLASTICITY INDEX	FAA CLASS
			MATERIAL PASSING NO. SIEVE					
		% RETAINED ON #10 SIEVE	COARSE SAND % PASS #10 RET'D #40	FINE SAND % PASS #40 RET'D #200	COMBINED SILT & CLAY % PASS #200			
1	2	3.2	3.3	7.8	88.9	32.4	2.7	E-6
2	2	8.5	15.1	10.2	74.7	36.1	12.7	E-7
3	2	0.7	7.3	10.6	82.1	33.5	10.0	E-7
4	2	6.7	17.6	10.2	72.2	47.0	25.2	E-7
5	2	4.2	13.7	9.8	76.5	33.0	12.8	E-7
6	2	2.7	8.4	8.9	82.7	34.2	5.9	E-6
7	2	3.1	17.0	21.5	61.5	35.1	14.9	E-7
8	2	21.1	14.0	7.0	79.0	37.1	32.4	E-8
9	2	0.5	5.5	7.0	87.5	62.0	25.6	E-10
10	2	1.5	12.0	10.3	77.7	39.7	6.3	E-6
11	2	0.8	2.4	1.9	95.7	36.8	12.4	E-7
12	2	2.1	11.6	6.8	81.6	33.0	9.4	E-6
13	2	1.2	7.9	4.8	87.3	30.8	4.1	E-6
14	2	5.5	5.8	10.8	83.4	56.0	25.4	E-8





SOIL LEGEND

- SILTY CLAY
- SILTY MATERIAL
- CLAY
- SOLID LIMESTONE
- ---- FINISHED GRADE

LOG OF AUGER BORINGS

NOTE TO DESIGNERS:

THESE BORINGS ARE SHOWN AS AN EXAMPLE. THE SPECIFIC NUMBER OF BORINGS NEEDED FOR ANY GIVEN PROJECT WILL DEPEND ON LOCAL CONDITIONS.

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CITY OF AERVILLE
AERVILLE, USA.

AERVILLE MUNICIPAL AIRPORT
SOIL BORING PLAN
AND LOG

(CONSULTING FIRM)

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	SCALE	DATE

SHEET 9 OF 11

DETAIL "A"
SCALE: 1" = 50'

DETAIL "B"
SCALE: 1" = 50'

DETAIL "C"
SCALE: 1" = 50'

4 WAY DUCT DETAIL

2 WAY DUCT DETAIL

TRENCH DETAIL AND CABLE PLACEMENT
NOTE: SEE SHEET 7 FOR DUCT MARKER DETAILS

TYPICAL STAKE MOUNTED FIXTURE DETAIL

RUNWAY AND TAXIWAY LIGHTING LAYOUT
SCALE: 1" = 100'

NOTES TO THE DESIGNER

1. THE DESIGN SHOWN IS PREDICATED UPON THE FUTURE EXTENSION OF THE TAXIWAY LIGHTING SYSTEM FOR A PARALLEL TAXIWAY THE LENGTH OF THE RUNWAY.
2. IN THE EVENT NO TAXIWAY LIGHTING IS NEEDED, THE SYSTEM CAN BE SIMPLIFIED BY USE OF THE L-811 REGULATOR. SEE ADVISORY CIRCULAR 150/5340-18B FOR DETAILS.
3. INSTALLATION OF THE COUNTERPOISE SYSTEM IS JUSTIFIED ONLY IN AREAS HAVING FREQUENT ELECTRICAL STORMS.
4. THE CONCRETE ANCHOR FOR THE LIGHTING FIXTURES MAY BE ELIMINATED WHERE SOIL CONDITIONS ARE STABLE.
5. AC150/5340-18A (ENTRANCE EXIT SIGNING)

LEGEND

- RUNWAY LIGHTS
- TAXIWAY LIGHTS
- THRESHOLD LIGHTS
- CABLE
- TAXIWAY EXIT SIGN TWO FACE
- TAXIWAY EXIT SIGN ONE FACE
- VASI-2 UNIT
- VASI-2 ADAPTER UNIT

120 VOLT AC DIRECT CONTROL FOR L-811 REGULATOR

SERIES TAXIWAY CIRCUIT

MULTIPLE CONNECTION OF VASI-2

WIRING DIAGRAM FOR RUNWAY, TAXIWAY, VASI-2 BEACON AND WIND CO

TAXIWAY EXIT SIGN

L-801 BEACON WIRING DIAGRAM

PLATFORM PLAN

DOUBLE POLE MOUNTING DETAIL FOR L-801 BEACON

NO.	REVISION	BY	APP	DATE
1	ADDED VASI-2	G.B.	G.C.	8-79

CITY OF AERVILLE
AERVILLE, U.S.A.

AERVILLE MUNICIPAL AIRPORT
LIGHTING LAYOUT, DIAGRAM & DETAILS

(CONSULTING FIRM)

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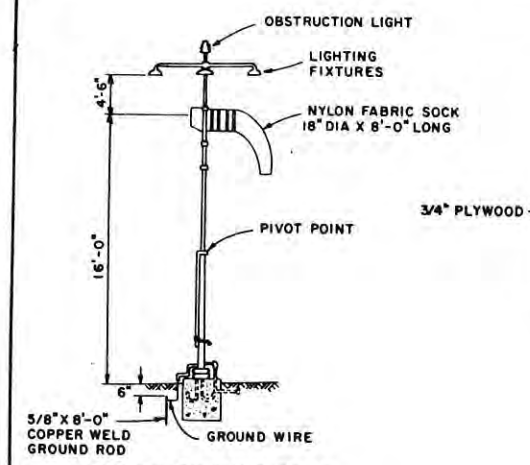
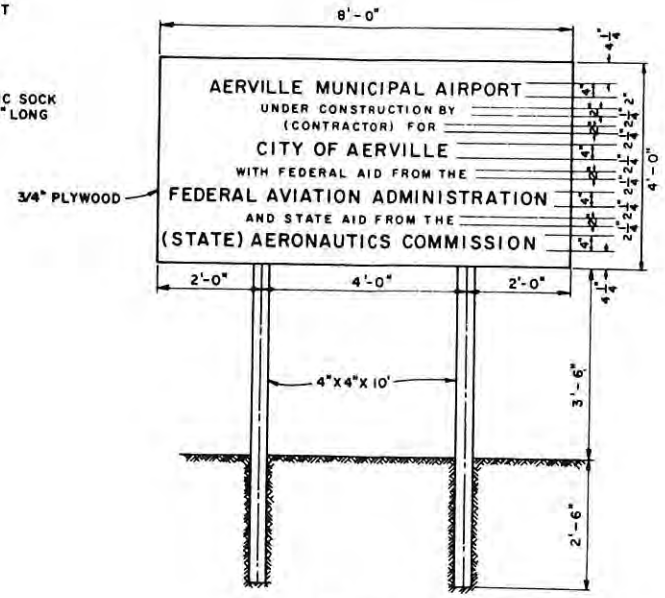
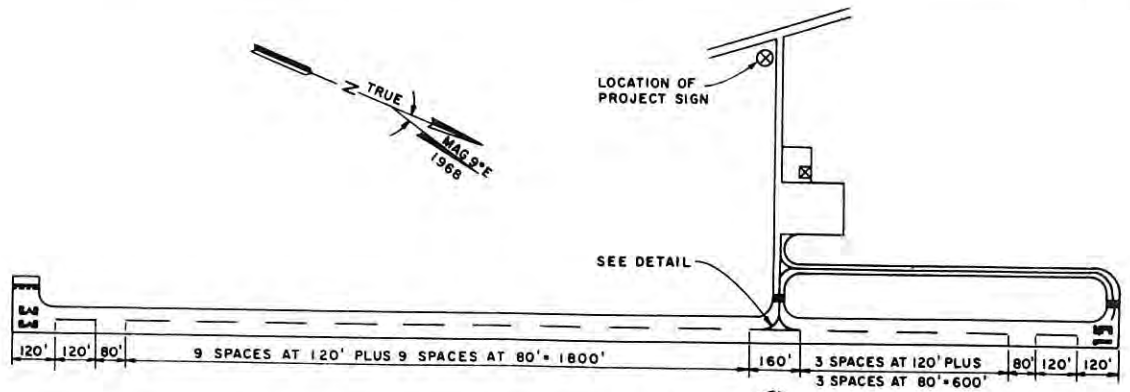


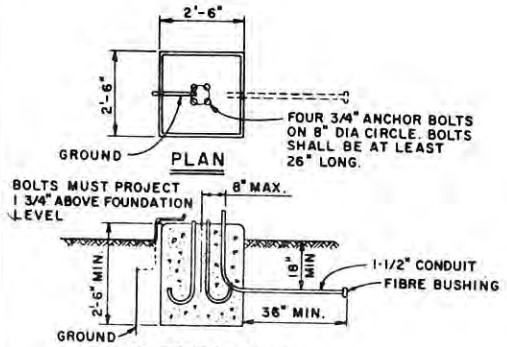
EIGHT FOOT WIND CONE
FAA SPEC. L-807



PROJECT SIGN DETAIL
SCALE: 3/4"=1'-0"



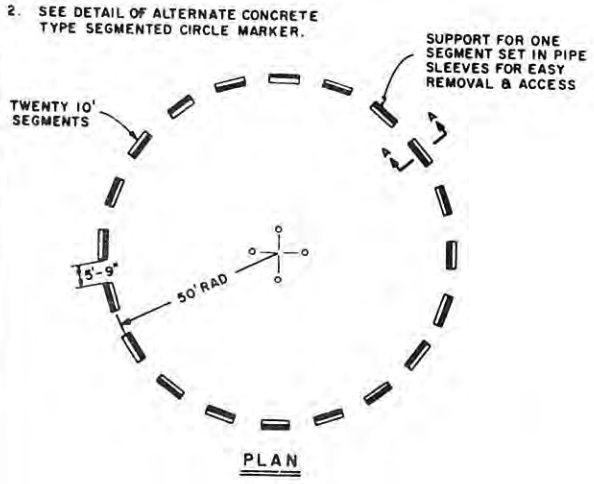
MARKING PLAN
SCALE 1"= 200'

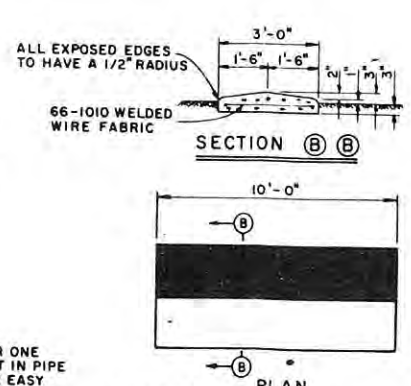


WIND CONE BASE DETAIL

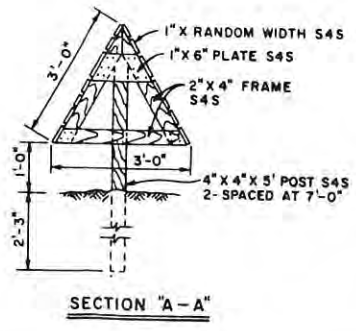
NOTES:

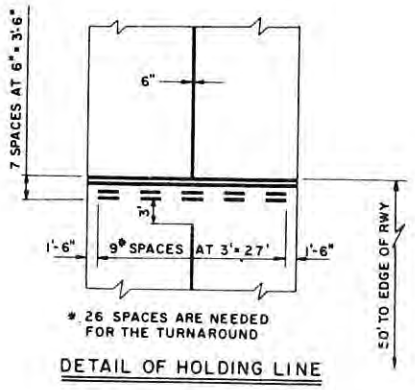
1. WHITE / INTERNATIONAL ORANGE
2. SEE DETAIL OF ALTERNATE CONCRETE TYPE SEGMENTED CIRCLE MARKER.



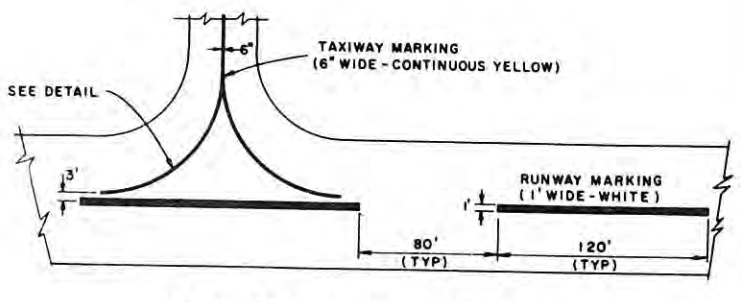


CONCRETE SEGMENTED CIRCLE DET.
ALTERNATE MARKER





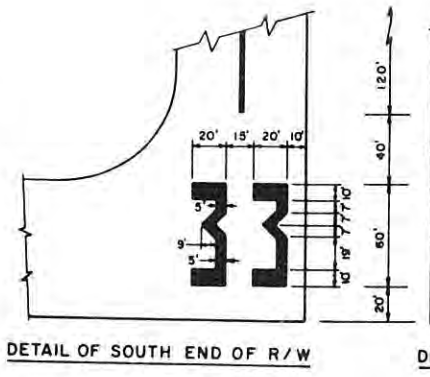
DETAIL OF HOLDING LINE



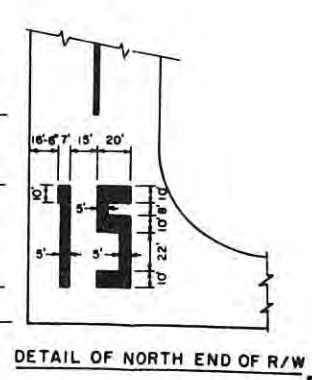
DETAIL OF MARKING INTERSECTION

NOTES:

1. RUNWAY CENTERLINE MARKING AND NUMERALS TO BE AVIATION WHITE.
2. TAXIWAY CENTERLINE AND HOLDING LINE TO BE AVIATION YELLOW.



DETAIL OF SOUTH END OF R/W



DETAIL OF NORTH END OF R/W

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AERVILLE, USA

AERVILLE MUNICIPAL AIRPORT
MARKING AND MISC. DETAILS

(CONSULTING FIRM)

SPACE RESERVED FOR NECESSARY APPROVALS

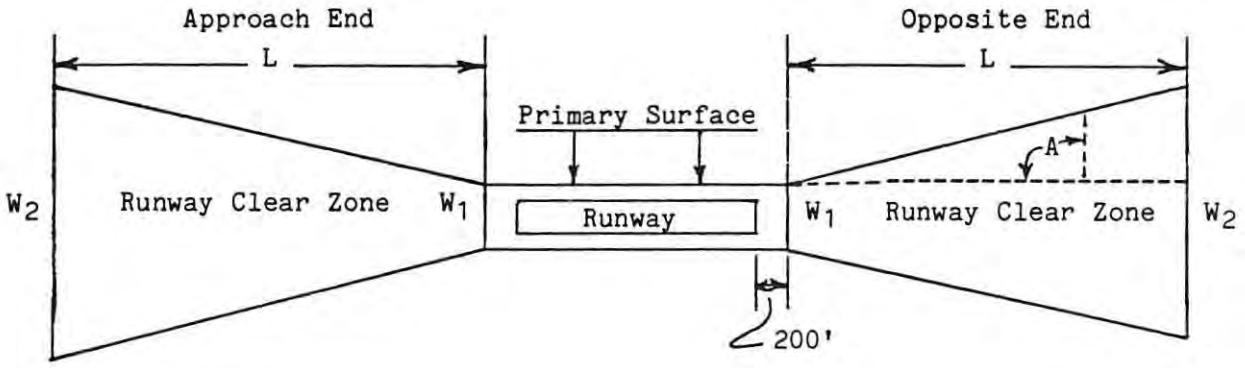
DRAWN BY	CHECKED BY
SCALE	DATE

SHEET 11 OF 11

APPENDIX 5. BIBLIOGRAPHY

Withdrawn - Change 3 (2 pages)

APPENDIX 6. RUNWAY CLEAR ZONE DIMENSIONS



Facilities Expected To Serve	Set No.	Runway End		Dimensions				
		Approach End	Opposite End	Length L (feet)	Inner Width W_1 (feet)	Outer Width W_2 (feet)	Runway Clear Zones (acres)	Flare Ratio A (rise/run)
Only Small Airplanes	1	V		1,000	250	450	8.035	.1:1
			V	1,000	250	450	8.035	.1:1
	2	V		1,000	500	650	13.200	.075:1
			NP	1,000	500	800	14.922	.15:1
	3	NP		1,000	500	800	14.922	.15:1
			NP	1,000	500	800	14.922	.15:1
Large Airplanes	4	V		1,000	500	700	13.770	.1:1
			V	1,000	500	700	13.770	.1:1
	5	V		1,000	500	700	13.770	.1:1
			NP 3/4 +	1,700	500	1,010	29.465	.15:1
	6	V		1,000	1,000	1,100	24.105	.05:1
			NP 3/4	1,700	1,000	1,510	48.978	.15:1
	7	V		1,000	1,000	1,100	24.105	.05:1
			P	2,500	1,000	1,750	78.914	.15:1
	8	NP 3/4 +		1,700	500	1,010	29.465	.15:1
			NP 3/4 +	1,700	500	1,010	29.465	.15:1
	9	NP 3/4 +		1,700	1,000	1,425	47.320	.125:1
			NP 3/4	1,700	1,000	1,510	48.978	.15:1
	10	NP 3/4 +		1,700	1,000	1,425	47.320	.125:1
			P	2,500	1,000	1,750	78.914	.15:1
	11	NP 3/4		1,700	1,000	1,510	48.978	.15:1
			NP 3/4	1,700	1,000	1,510	48.978	.15:1
	12	NP 3/4		1,700	1,000	1,510	48.978	.15:1
			P	2,500	1,000	1,750	78.914	.15:1
	13	P		2,500	1,000	1,750	78.914	.15:1
			P	2,500	1,000	1,750	78.914	.15:1

V = Visual approach
NP = Nonprecision approach
P = Precision instrument approach

NP 3/4 + = Visibility minimums more than 3/4-statute mile
NP 3/4 = Visibility minimums as low as 3/4-statute mile *

APPENDIX 7. AIRPORT REFERENCE POINT (ARP)

*1. DISCUSSION.

a. The airport reference point is used to geographically locate the airport. It is used for horizontal control only and no elevation is established for the ARP. The location of this point is computed and no weight is given to runway width, thickness, or composition. (A unity runway width is used.)

b. To be a meaningful airport reference point, the point must be computed to acknowledge the ultimate runway lengths proposed for development. Closed or abandoned areas should not be included in the computation. The ultimate development is customarily shown on the currently approved airport layout plan. If there is no approved airport layout plan, the areas to be considered are those existing plus those which have been granted airspace approval less those which are to be abandoned.

c. The ARP is computed or recomputed as infrequently as possible. The only time that a recomputation is needed is when the proposed ultimate development is changed.

2. SAMPLE COMPUTATION. The following procedure may be used to determine the location of the airport reference point.

a. Establish two base lines perpendicular to each other as shown in Figure 1. Let the northerly base line be known as B and the westerly as A.

b. Establish the midpoint of each runway.

c. Determine the perpendicular distance from the base lines to the midpoints.

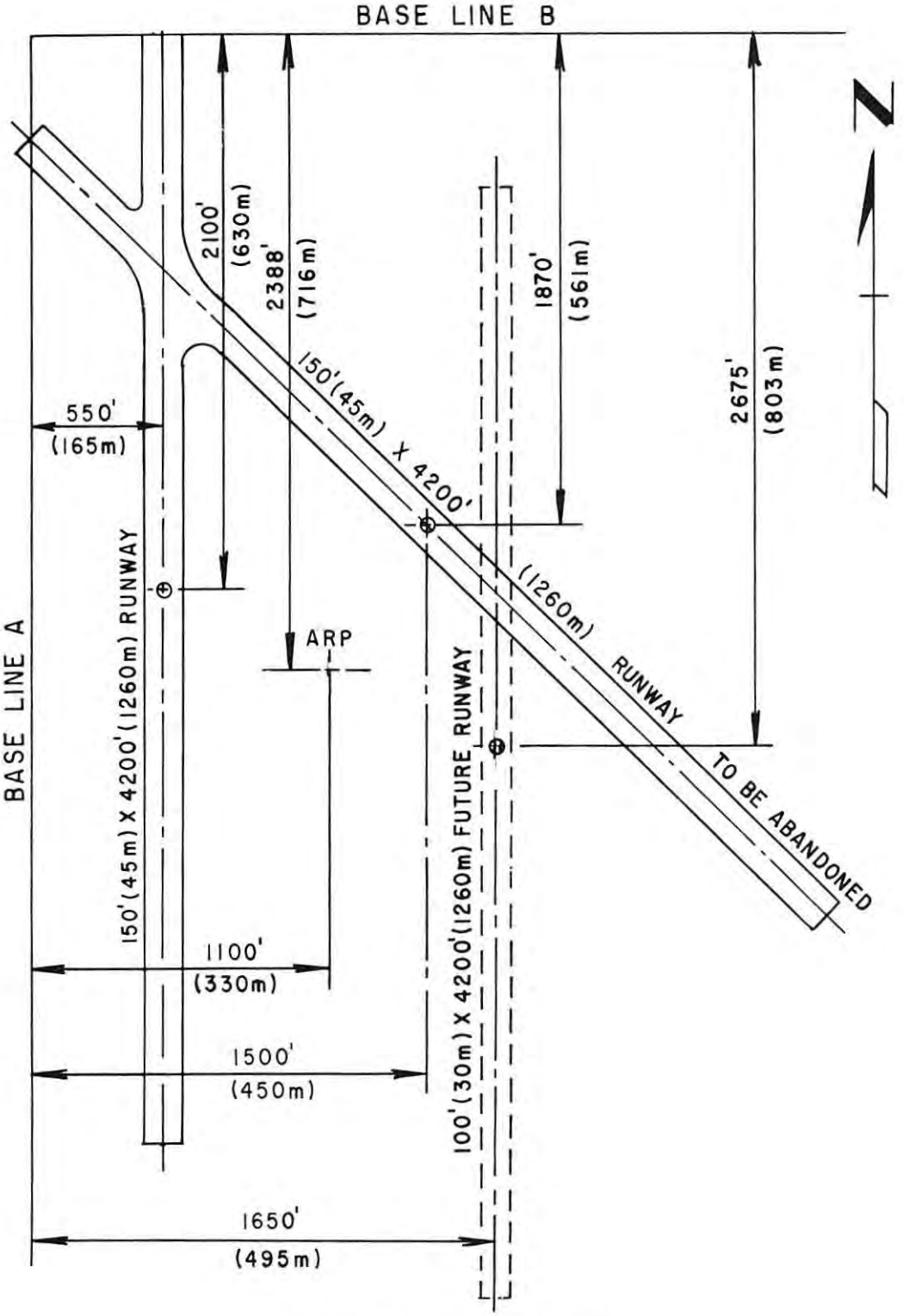
d. Calculate the moment of areas for each base line as shown in Figure 2.

e. Divide each moment of areas by the sum of areas to determine distance of the ARP from each base line.

f. The location should then be converted into latitude and longitude.

3. ACCURACY. The latitude and longitude should be computed to the nearest second. Coordinates to the nearest tenth of a second may be needed where navigational aids exist or are proposed for installation. Coordination with the appropriate FAA Airway Facilities field office should be made to ascertain the need for accuracy closer than the nearest second. *

*



*

FIGURE 1. SAMPLE LAYOUT

* BASE LINE A:

4,200	x	550	=	2,310,000
4,200	x	1,650	=	6,930,000
8,400				9,240,000

$$= \frac{9,240,000}{8,400} = 1,100'$$

BASE LINE B:

4,200	x	2,100	=	8,820,000
4,200	x	2,675	=	11,235,000
8,400				20,055,000

$$= \frac{20,055,000}{8,400} = 2,388'$$

BASE LINE A:

1 260	x	165	=	207 900
1 260	x	495	=	623 700
2 520				831 600

$$= \frac{831\ 600}{2\ 520} = 330 \text{ m}$$

BASE LINE B:

1 260	x	630	=	793 800
1 260	x	803	=	1 011 780
2 520				1 805 580

$$= \frac{1\ 805\ 580}{2\ 520} = 716 \text{ m}$$

FIGURE 2. SAMPLE COMPUTATION - AIRPORT REFERENCE POINT *

APPENDIX 8. COMPASS CALIBRATION PAD

*1. PURPOSE. This appendix provides guidelines for the design, location on the airport, and construction of a compass calibration pad and basic information concerning its use in determining the deviation error in an aircraft magnetic compass.

2. BACKGROUND.

a. An aircraft magnetic compass is a navigation instrument with certain inherent errors resulting from the nature of its construction. All types of magnetic compasses are designed to indicate direction with respect to the earth's magnetic field. This is true even for the gyro-stabilized and/or fluxgate compasses. Aircraft navigation is based on applying the appropriate angular corrections to the magnetic reading in order to obtain the true heading.

b. The aircraft magnetic compass should be checked following pertinent aircraft modifications and on a frequent, routine schedule. One method of calibrating the compass is to use a compass calibration pad to align the aircraft on known magnetic headings and make adjustments to the compass and/or placard markings to indicate the required corrections. There are other methods available for calibrating a magnetic compass, but for small aircraft the method outlined herein is normally used.

3. APPLICATION.

a. The process of aligning an aircraft on known magnetic headings for the purpose of determining the degree of error in the magnetic compass is commonly referred to as "swinging the compass." The technique which should be used is as follows:

(1) Place the aircraft on a compass calibration pad.

(2) Place the aircraft in level flying position.

(3) Remove compensating magnets from chambers or reset the fixed compensating magnets to neutral position, whichever is applicable, before swinging.

(4) Check indicator for fluid level and cleanliness. If fluid is required, the compass is defective.

(5) Check the pivot friction of the indicator by deflecting the card with a small magnet. The card should rotate freely in a horizontal plane.

(6) If radio is used in the aircraft, there should be corrections noted for "radio on" and "radio off" conditions. *

* (7) Align the aircraft with the north magnetic heading and make the indicated reading correspond to the actual magnetic reading by use of the compensating magnets. Repeat for the east magnetic heading. Then place on south and west magnetic headings and remove half of indicated error by adjusting compensators. Engine(s) should be running.

(8) Turn the aircraft on successive 30-degree headings through 360 degrees. Placards should be marked to indicate correction at each 30-degree heading showing "radio on" and "radio off" corrections.

b. Calibration and adjustment of remote indicating gyro compasses, polar path compasses, and other systems of this type should be accomplished by a qualified instrument technician.

4. DESIGN OF COMPASS CALIBRATION PAD. The design details shown in this appendix should be considered as guidance only and variations of these designs are acceptable provided the general requirements are met.

a. The compass calibration pad provides a series of 12 radials, either painted on with nonmetallic paint or inlaid in the surface of the calibration pad, extending toward predetermined magnetic directions every 30 degrees beginning with magnetic north. Each radial should be marked with three separate magnetic headings; one at the end of the radial indicating the direction along which each line lies; and one on each side of the line which indicates the magnetic heading of the aircraft when it is oriented at 90 degrees to the radial. Markings facing the pilot must correspond to the airplane's heading when traveling in that direction. The markings must be large enough to be easily read from the aircraft cockpit as the radial is being approached. The last zero may be dropped from the heading designation. A layout of markings to be used is shown in Figure 1.

b. Suggested types of calibration pads are depicted in Figures 2 and 3. Type I, as shown in Figure 2, can be constructed using either rigid or flexible pavement. Type II, as shown in Figure 3, is applicable only to rigid pavements. The pavement thickness of either type shall be as required to support the user aircraft in a critical area in accordance with AC 150/5320-6. With concrete pavements the joint type and spacing shall conform to standard practices, except that no magnetic materials are to be used and, therefore, dowels (where required) shall be of aluminum, brass, or bronze, rather than steel.

c. Make the size of the calibration pad compatible with the requirements of the user aircraft. For small airplanes make the radius of the pad 50 feet (15 m); for basic transports make the radius *

* 60 feet (18 m); for large two- and three-engine jets, other than basic transports, and all large propeller driven airplanes make the radius 80 feet (24 m); and for large four-engine jets, other than basic transports, make the radius 110 feet (33 m). For aircraft over 300,000 pounds (136 000 kg), an analysis of the turning area required for the aircraft will be necessary to determine adaptability to the dimensions specified herein.

d. The Type II compass calibration pad shown in Figure 3 provides wheel slots to assist in true alignment of aircraft normal to each radial. It may be desirable to construct a special device for use in obtaining true alignment when the calibration pad shown in Figure 2 is constructed. One method which may be used is to establish control points consisting of hollow shell non-magnetic inserts along each radial. A wooden block with aluminum or bronze bolts to fit into the center hold of the brass insert can then be used to provide an accurate alignment of the aircraft wheels. Design details of this system are shown in Figure 1.

e. There are many satisfactory ways of providing a device to wheel-block an aircraft to obtain the required alignment, and the exact method is left to the discretion of the design engineer. The method detailed in Figure 1 is one suggestion. One alternative which comes to mind is the possibility of forming holes in the concrete with some form of removable dowel, rather than constructing the specially built brass inserts.

5. LOCATION OF COMPASS CALIBRATION PAD. The requirements specified herein have been determined through consultation with instrument calibration specialists, fixed base operators, and persons in the Geological Survey with considerable experience in performing surveys of compass calibration pads.

a. Locate the site at least 300 feet (90 m) from power and communication cables (both above and below ground) or from other aircraft. Locate the site at least 600 feet (180 m) from large magnetic objects such as buildings, railroad tracks, high voltage electrical transmission lines, or cables carrying direct current (either above or below ground). In order to prevent interference with electronic navigational aid facilities located on the airport, make sure that the required clearances are maintained as specified in AC 150/5300-2. Control cables, runway and taxiway light bases or sign fixtures, pipelines, ducts, grates for drainage, distance remaining signs, and aircraft arresting gear should be avoided when they contain ferrous materials.

b. The compass calibration pad must be located off the side of a taxiway or runway a sufficient distance to satisfy the runway and taxiway clearances applicable to the airport on which it is located. *

c. After tentative selection of a site through visual application of appropriate criteria contained herein, make a thorough magnetic survey of the site. Many sites which meet all visually applied criteria regarding distances from structures, etc., still are unsatisfactory because of locally generated or natural magnetic anomalies. At locations near heavy industrial areas, intermittent magnetic variations may be experienced and sufficient surveys at various periods of time are necessary to ascertain if this situation exists.

d. The difference between magnetic and true north must be uniform in the vicinity of the site. Make sufficient surveys to determine that the angular difference between true and magnetic north measured at any point does not differ from the angular difference measured at any other point by more than one-half degree within a space between 2 and 10 feet (0.6 and 3 m) above the surface of the base and extending over an area within a 250-foot (75 m) radius from the center.

6. CONSTRUCTION OF COMPASS CALIBRATION PAD. For pavement construction, the applicable portions of AC 150/5320-6 should be used. The following additional information is considered important:

a. Do not use magnetic materials, such as reinforcing steel or ferrous aggregate, in the construction of the calibration pad or of any pavement within a 300-foot (90 m) radius of the center of the site. If drainage pipe is required within 300 feet (90 m) of the center of the site, use nonmetallic or aluminum culvert.

b. Each of the radials must be oriented within one minute of the magnetic bearing indicated by its markings.

c. Mark the date of observation and any annual change in direction of magnetic north durably and legibly on the surface of the calibration pad near the magnetic north mark. It would be well to establish a permanent monument at some remote location on the true north radial for future reference.

d. The U.S. Geological Survey of the Department of Interior is available to conduct the necessary surveys to determine the difference between true and magnetic north and the uniformity of this difference. The cost for this service is that necessary to cover the expense to the U.S. Geological Survey. Request for this service should be made to * the following: Branch of Global Seismology and Geomagnetism, U.S. Geological Survey, Mail Stop 967, Box 25046, Denver Federal Center, Denver, Colorado 80225. Telephone: Area Code (303) 236-1512. There are also many other competent registered surveyors or engineers who are capable of performing these surveys. It is recommended that a *

* qualified engineer be employed to lay out the work in the field and to design the pavement for the critical aircraft that can reasonably be expected to use the pad.

e. After all construction work on the compass pad is completed, it is advisable to have the pad magnetically resurveyed to guard against the possibility of objectionable magnetic materials being introduced during the construction.

f. Magnetic surveys of existing compass calibration pads should be performed at regular intervals of 5 years or less. Additional surveys should be performed after major construction of utility lines, buildings, or any other structures within 600 feet (180 m) of the center of the pad. *

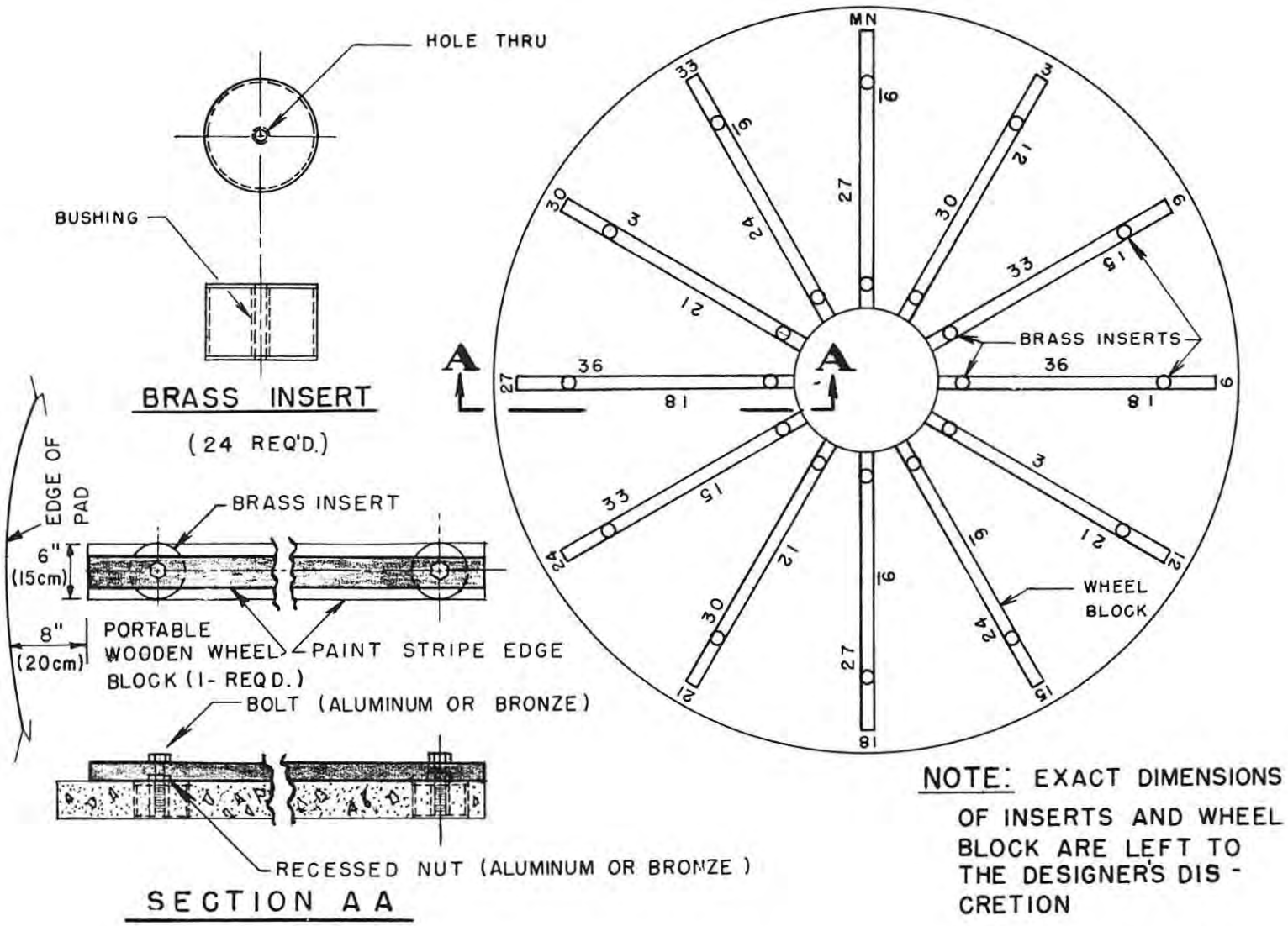


FIGURE 1. MARKING LAYOUT AND DETAILS OF WHEEL BLOCK

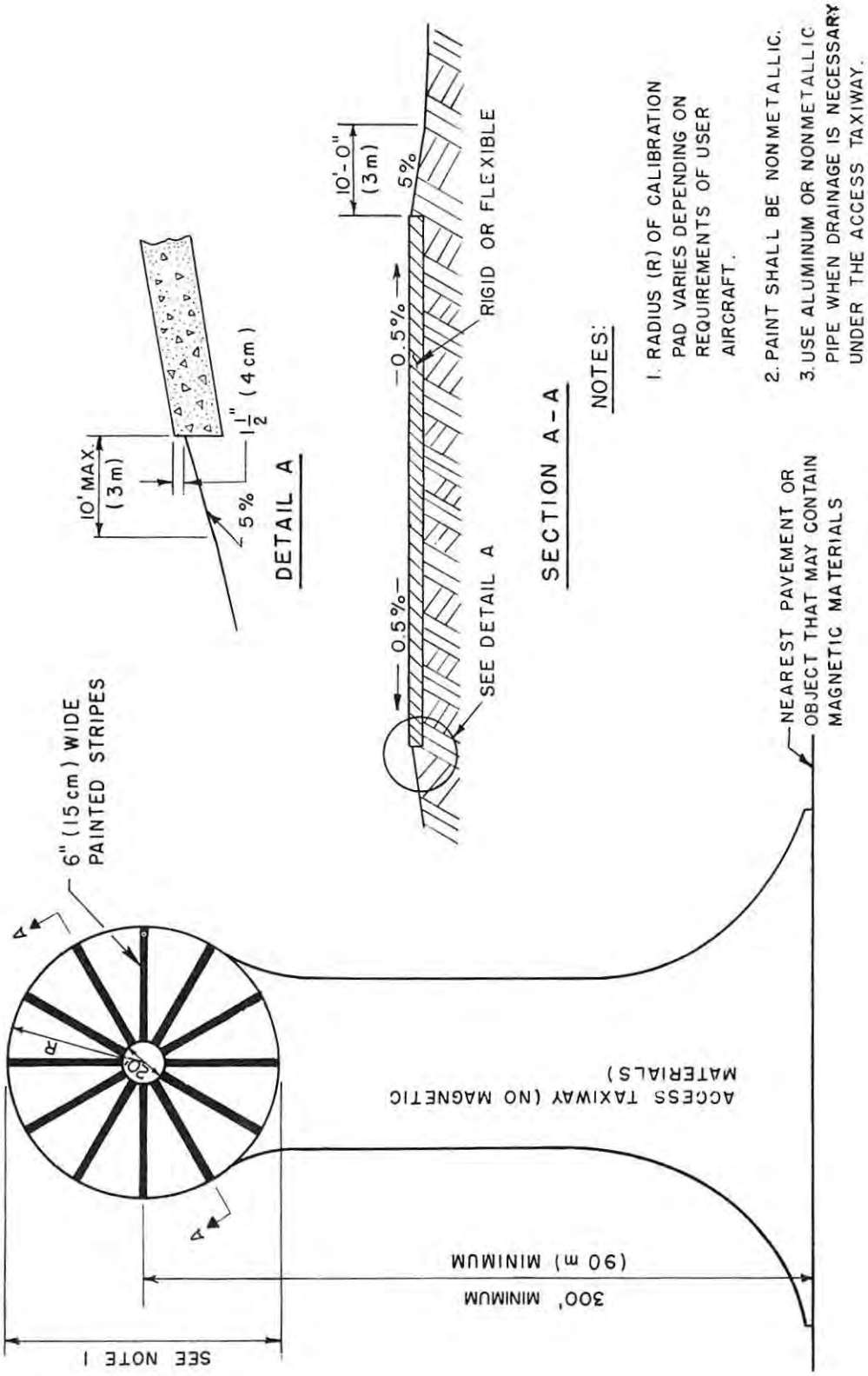
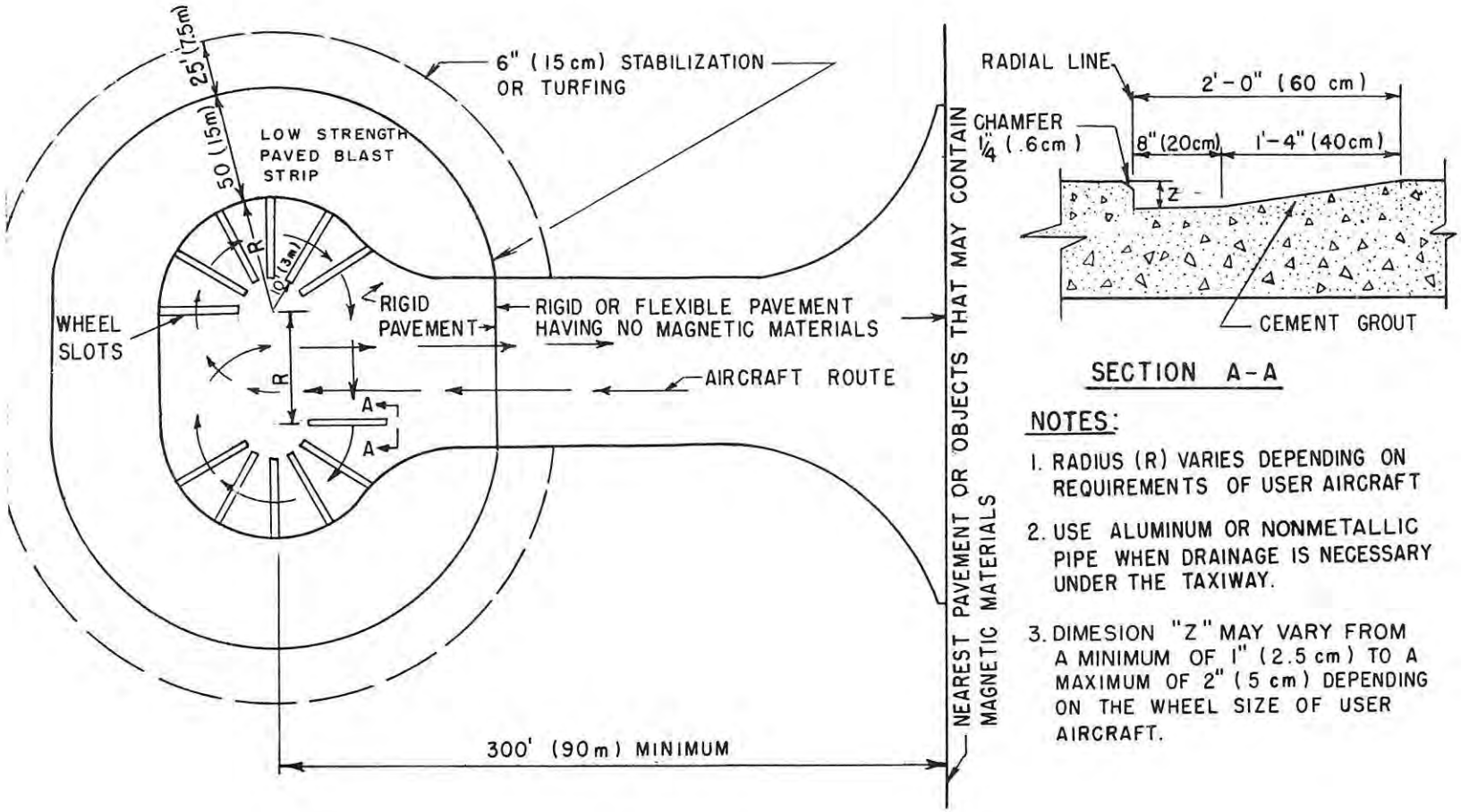


FIGURE 2. TYPE I. COMPASS CALIBRATION PAD



SECTION A-A

NOTES:

1. RADIUS (R) VARIES DEPENDING ON REQUIREMENTS OF USER AIRCRAFT
2. USE ALUMINUM OR NONMETALLIC PIPE WHEN DRAINAGE IS NECESSARY UNDER THE TAXIWAY.
3. DIMESION "Z" MAY VARY FROM A MINIMUM OF 1" (2.5 cm) TO A MAXIMUM OF 2" (5 cm) DEPENDING ON THE WHEEL SIZE OF USER AIRCRAFT.

FIGURE 3. TYPE II. COMPASS CALIBRATION PAD

APPENDIX 9. THRESHOLD SITING REQUIREMENTS

1. PURPOSE. This appendix provides the standards for locating thresholds.

2. APPLICATION.

   a. The threshold should be located at the beginning of the full strength runway pavement or runway surface. However, displacement of the threshold may be required when an object that obstructs the airspace required for landing airplanes is beyond the airport authority's power to remove, relocate, or lower. Thresholds may also be displaced or relocated for environmental considerations, such as noise abatement.

   b. When an airport hazard exists, the amount of displacement of the threshold should be based on the operational requirements of the most demanding airplanes. The standards in this appendix minimize the loss of operational use of the established runway. These standards reflect FAA policy of maximum utilization and retention of existing paved areas on airports.

   c. Displacement of a threshold reduces the length of runway available for landing airplanes. As opposed to a relocated threshold, the runway behind a displaced threshold is available for completing landing rollouts in the opposite direction and takeoff in either direction. However, takeoff toward the controlling object may be limited by aircraft performance characteristics. Runway clear zones are required by operations in either direction and, therefore, start beyond the end of the usable runway.

3. LIMITATIONS.

   a. These standards should not be interpreted as an FAA blanket endorsement of the alternative of displacing or relocating a runway approach threshold. Threshold displacement or relocation should be undertaken only after a full evaluation reveals that displacement or relocation is the only practical alternative.

   b. The standards in this appendix are not applicable for identification of objects affecting navigable airspace (FAR Part 77), zoning to limit height of objects around airports (AC 150/5190-4), or airport encrochment protection (AC 150/5320-11).

4. EVALUATION CONSIDERATIONS.

   a. If a penetration to the surfaces defined in paragraph 5 exist, the following needs to be considered:

      (1) Remove or lower the object so that it will not penetrate the applicable surface;

      (2) Displace the threshold so that the object will not penetrate the applicable surface and accept a shorter landing surface (runway); or

      (3) Apply a less demanding surface, but in no case less than that surface specified in paragraph 5a, b, or c, and accept higher instrument landing minimums.

b. Relevant factors to be evaluated include:

(1) Types of airplanes which will use the runway and their performance characteristics.

(2) Operational disadvantages associated with accepting higher landing minimums.

(3) Cost of removing, relocating, or lowering the object.

(4) Effect of the reduced available landing length when the runway is wet or icy.

(5) Cost of extending the runway if insufficient runway length would remain as a result of displacing the threshold. The environmental and public acceptance aspects of a runway extension must also be evaluated under this consideration.

(6) Cost and feasibility of relocating visual and electronic approach aids, such as threshold lights, visual approach slope indicator, runway end identification lights, localizer, glide slope (to provide a threshold crossing height of not more then 60 feet (18 m)), approach lighting system, and runway markings. *

(7) Effect of the threshold change on noise abatement.

5. LOCATING, DISPLACING, OR RELOCATING THE THRESHOLD. The standard shape, dimensions, and slope of the surface used for locating a threshold is dependent upon the type of aircraft operations currently conducted or forecast, the landing visibility minimums desired, and the types of instrumentation available or planned for that runway end.

a. For Approach End of Runways Expected to Serve Small Airplanes With Approach Speeds Less Than 50 Knots.

(1) No object should penetrate a surface that starts at the threshold and at the elevation of the runway centerline at the threshold and slopes upward from the threshold at a slope 15 (horizontal) to 1 (vertical).

(2) In the plan view, the centerline of this surface extends 3,000 feet (900 m) along the extended runway centerline. This surface extends laterally 60 feet (18 m) on each side of the centerline at the threshold and increases in width to 150 feet (45 m) on each side of the centerline at a point 500 feet (150 m) from the threshold; thereafter, it extends laterally 150 feet (45 m) on each side of the centerline. (See figures 1 and 2.)

b. For Approach End of Runways, Including STOL Runways, Expected to Serve Small Airplanes With Approach Speeds of 50 Knots or More. *

(1) No object should penetrate a surface that starts at the threshold and at the elevation of the runway centerline at the threshold and slopes upward from the threshold at a slope 20 (horizontal) to 1 (vertical).

(2) In the plan view, the centerline of this surface extends 5,000 feet (1 530 m) along the extended runway centerline. This surface extends laterally 125 feet (38 m) on each side of the centerline at the threshold and increases in width to 350 feet (110 m) on each side of the centerline at a point 2,250 feet (690 m) from the threshold; thereafter, it extends laterally 350 feet (110 m) on each side of the centerline. (See figures 1 and 2.)

* c. For Approach End of Runways, Including STOL Runways, Expected to Serve Large Airplanes. *

(1) No object should penetrate a surface that starts at the threshold and at the elevation of the runway centerline at the threshold and slopes upward from the threshold at a slope 20 (horizontal) to 1 (vertical).

(2) In the plan view, the centerline of this surface extends 10,000 feet (3 000 m) along the extended runway centerline. This surface extends laterally 200 feet (60 m) on each side of the centerline at the threshold and increases in width to 500 feet (150 m) on each side of the centerline at a point 1,500 feet (450 m) from the threshold; thereafter, it extends laterally 500 feet (150 m) on each side of the centerline. (See figures 1 and 2.)

* d. For Approach End of Runways, Except STOL Runways, Expected to Accommodate Instrument Approaches Having Visibility Minimums Lower Than 1 Mile. *

(1) No object should penetrate a surface that starts 200 feet (60 m) out from the threshold and at the elevation of the runway centerline at the threshold and slopes upward from the starting point at a slope of 20 (horizontal) to 1 (vertical).

(2) In the plan view, the centerline of this surface extends 10,000 feet (3 000 m) along the extended runway centerline. This surface extends laterally 500 feet (150 m) on each side of the centerline at the starting point and increases in width to 2,000 feet (600 m) on each side of the centerline at the far end of this surface. (See figures 1 and 2.)

(3) If the instrument approach procedure utilizes an offset localizer with an offset angle of 3 degrees or less, the above surface is centered upon the final approach course rather than the extended runway
* centerline. (See figure 3.)

e. For Approach End of Runways, Except STOL Runways, Expected to Accommodate Instrument Approaches Having Visibility Minimums Lower Than 3/4 Mile. *

(1) No object should penetrate a surface that starts 200 feet (60 m) out from the threshold and at the elevation of the runway centerline at the threshold and slopes upward from the starting point at a slope of 34 (horizontal) to 1 (vertical).

(2) In the plan view, the centerline of this surface extends 10,000 feet (3 000 m) along the extended runway centerline. This surface extends laterally 500 feet (150 m) on each side of the centerline at the starting point and increases in width to 2,000 feet (600 m) on each side of the centerline at the far end of this surface. (See figures 1 and 2.)

(3) If the instrument approach procedure utilizes an offset localizer with an offset angle of 3 degrees or less, the above surface is centered upon the final approach course rather than the extended runway centerline. (See figure 3.)

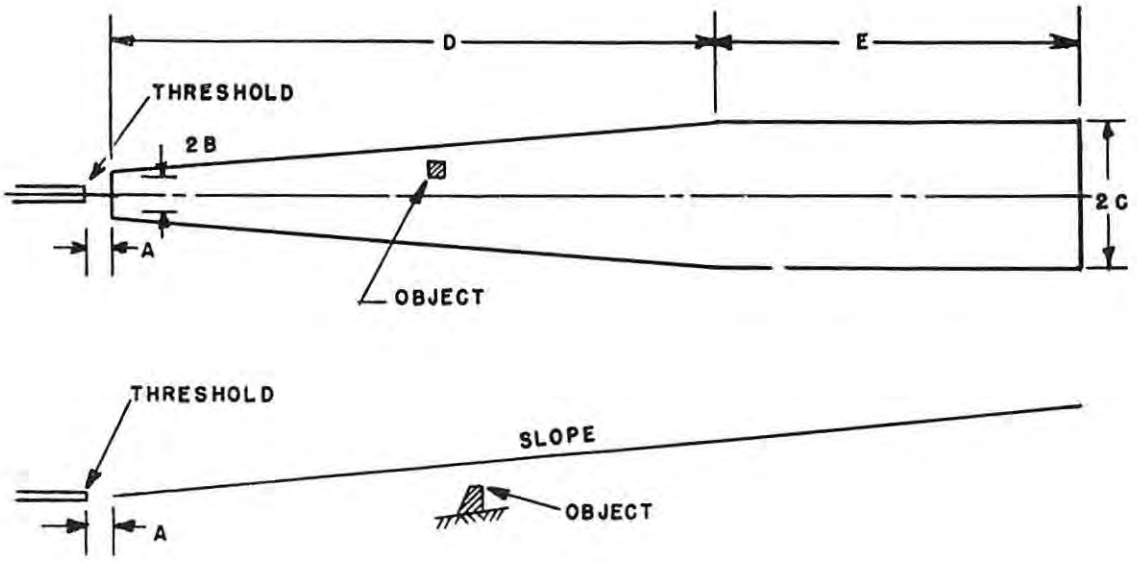
f. For Approach End of Runways Expected to Accommodate Category II Approach Minimums. Criteria are set forth in AC 120-29, Criteria for Approving Category I and Category II Landing Minima for FAR Part 121 Operators.

* g. For STOL Runways. Criteria are set forth in Appendix 4, MLS STOL Procedures, of Order 8260.30, IFR Approval of Microwave Landing Systems (MLS) and the above paragraphs 5b and c. *

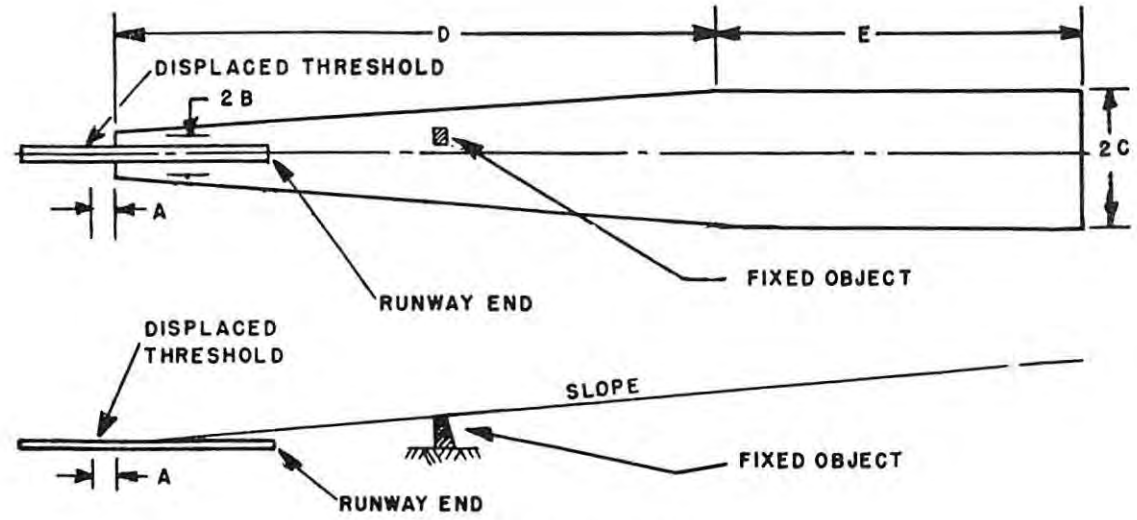
RUNWAY TYPE	DIMENSIONAL STANDARDS FEET (METERS)					
	A	B	C	D	E	SLOPE
(1) Approach end of runways expected to serve small airplanes with approach speeds less than 50 knots.	0	60 (18)	150 (45)	500 (150)	2,500 (750)	15:1
(2) Approach end of runways, including STOL runways, expected to serve small airplanes with approach speeds of 50 knots or more.	0	125 (38)	350 (110)	2,250 (690)	2,750 (840)	20:1
(3) Approach end of runways, including STOL runways, expected to serve large airplanes.	0	200 (60)	500 (150)	1,500 (450)	8,500 (2 550)	20:1
(4) Approach end of runways, except STOL runways, having visibility minimums lower than 1 mile.	200 (60)	500 (150)	2,000 (600)	10,000 (3 000)	0	20:1
(5) Approach end of runways, except STOL runways, having visibility minimums lower than 3/4 mile.	200 (60)	500 (150)	2,000 (600)	10,000 (3 000)	0	34:1
(6) Approach runway ends having Category II approach minimums.	The criteria are set forth in AC 120-29.					
(7) STOL runways.	The criteria are set forth in appendix 4 of Order 8260.30.					

The letters are keyed to those shown on figures 2 and 3.

FIGURE 1. DIMENSIONAL STANDARDS FOR LOCATING THRESHOLDS

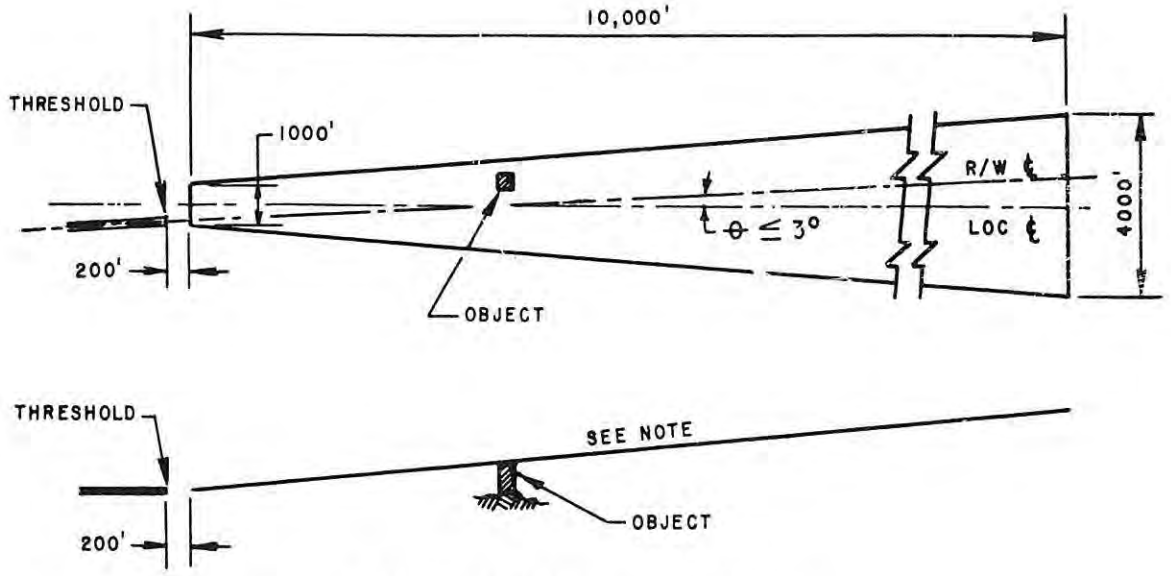


DISPLACEMENT NOT NECESSARY

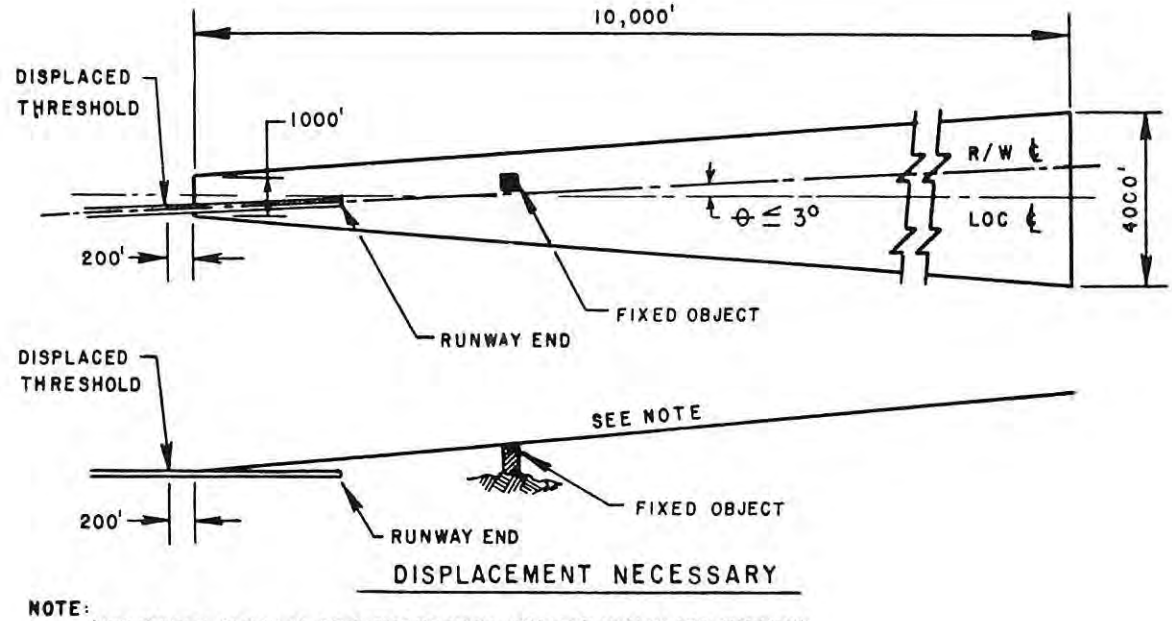


DISPLACEMENT NECESSARY

FIGURE 2. APPROACH SLOPS



DISPLACEMENT NOT NECESSARY



DISPLACEMENT NECESSARY

NOTE:
APPLICABLE SLOPE IS DEPENDENT UPON DESIRED VISIBILITY MINIMUM.

FIGURE 3. APPROACH SLOPES--OFFSET LOCALIZER

APPENDIX 10. BIBLIOGRAPHY

Withdrawn - Change 6
(3 pages)

APPENDIX 11. CURRENT AIRCRAFT ARRANGED BY AIRCRAFT MANUFACTURER, APPROACH SPEED, AND WINGSPAN

CURRENT AIRCRAFT ARRANGED BY MANUFACTURER

Aircraft	Appch Speed Knots	Wingspan Feet	Wingspan Meters	Length Feet	Length Meters	Tail Height Feet	Tail Height Meters	Maximum Takeoff Weight Lbs	Maximum Takeoff Weight Kg
A-300 Airbus	132	147.1	44.8	175.9	53.6	54.2	16.5	429,900	194,999
A-310 Airbus	125	144.0	43.9	154.9	47.2	51.9	15.8	288,000	130,635
Aeritalia G-222	109	94.5	28.8	79.2	24.1	38.5	11.7	58,422	26,500
Ahrens 404	98	66.0	20.1	52.8	16.1	17.5	5.3	17,000	7,711
AIDX-XC-2	86	81.7	24.9	65.9	20.1	25.3	7.7	25,000	11,340
Air Metal C-111	96	63.0	19.2	55.2	16.8	21.0	6.4	18,629	8,450
AJI Hustler	98	34.3	10.5	41.0	12.5	13.1	4.0	9,500	4,309
Antonov AN-10	126	124.8	38.0	121.4	37.0	32.2	9.8	121,500	55,111
Antonov AN-12	127	124.8	38.0	109.0	33.2	34.6	10.5	134,480	60,999
Antonov AN-14	52	72.1	22.0	37.5	11.4	15.2	4.6	7,935	3,599
Antonov AN-22	140*	211.3	64.4	189.6	57.8	41.2	12.6	551,160	250,002
Antonov AN-24	119	95.8	29.2	77.2	23.5	27.3	8.3	48,060	21,800
Antonov AN-26	121	95.8	29.2	78.1	23.8	28.1	8.6	52,920	24,004
Antonov AN-28	88	72.4	22.1	42.6	13.0	15.1	4.6	13,450	6,101
Antonov AN-30	112	96.4	29.4	80.1	24.4	27.3	8.3	51,040	23,151
Antonov AN-72	89*	84.8	25.8	87.1	26.5	27.0	8.2	63,935	29,000
AW-650 Argosy	123	115.0	35.1	89.8	27.4	29.3	8.9	93,000	42,184
AW-660 Argosy	113	115.0	35.1	89.1	27.2	27.0	8.2	97,000	43,998
BAC-111-200	129	88.5	27.0	93.5	28.5	24.5	7.5	79,000	35,834
BAC-111-300	128	88.5	27.0	93.5	28.5	24.5	7.5	88,500	40,143
BAC-111-400	137	88.6	27.0	93.5	28.5	24.6	7.5	88,500	40,143
BAC-111-475	135	93.5	28.5	93.5	28.5	24.5	7.5	98,500	44,679
BAC-111-500	144	93.5	28.5	107.0	32.6	24.5	7.5	104,500	47,400
Beech Baron B55	90	37.8	11.5	28.0	8.5	9.6	2.9	5,100	2,313
Beech Baron E55	88	37.8	11.5	29.9	9.1	9.1	2.8	5,300	2,404
Beech Baron 58	96	37.8	11.5	29.9	9.1	9.5	2.8	5,400	2,449
Beech Baron 58P	101	37.8	11.5	29.9	9.1	9.1	2.7	6,200	2,812
Beech Baron 58TC	101	37.8	11.5	29.9	9.1	9.1	2.7	6,200	2,812
Beech Bonanza A36	72	33.5	10.2	27.5	8.3	8.4	2.5	3,600	1,632
Beech Bonanza B36TC	75	37.8	11.5	27.5	8.3	8.4	2.5	3,850	1,723
Beech Bonanza F33A	70	33.5	10.2	26.7	8.1	8.3	2.5	3,400	1,542
Beech Bonanza V35B	70	33.5	10.2	26.4	8.0	7.6	2.3	3,400	1,542
Beech C99 Airliner	107	45.9	13.9	44.5	13.5	14.4	4.3	11,300	5,125
Beech Duchess 76	76	38.0	11.5	29.0	8.8	9.5	2.9	3,900	1,769
Beech Duke B60	98	39.3	11.9	33.8	10.3	12.3	3.7	6,775	3,073
Beech E-18	87	49.2	15.0	35.1	10.7	10.5	3.2	8,750	3,969
Beech King Air B100	111	45.9	13.9	39.9	12.1	15.4	4.6	11,800	5,352
Beech King Air C90-1	100	50.3	15.3	35.5	10.8	14.3	4.3	9,650	4,377
Beech King Air F90	108	45.9	13.9	39.8	12.1	15.1	4.6	10,950	4,966
Beech Sierra C24R	70	32.8	9.9	25.8	7.8	8.1	2.4	2,750	1,247
Beech Skipper 77	63	30.0	9.1	24.0	7.3	6.9	2.1	1,675	759
Beech Sundowner C23	68	32.8	9.9	25.8	7.8	8.3	2.5	2,450	1,111
Beech Super King Air B200	103	54.5	16.6	43.8	13.3	15.0	4.5	12,500	5,670
Beech 1900 Airliner	120*	54.5	16.6	57.8	17.6	14.9	4.5	15,245	6,915
BN-2A Trislander	65	53.0	16.2	49.3	15.0	14.2	4.3	10,000	4,536
Boeing B-52	141*	185.0	56.4	157.6	48.0	40.8	12.4	488,000	221,353

Aircraft	Appch Speed Knots	Wingspan Feet	Wingspan Meters	Length Feet	Length Meters	Tail Height Feet	Tail Height Meters	Maximum Takeoff Weight Lbs	Maximum Takeoff Weight Kg
Boeing E-3	137	145.9	44.5	153.0	46.6	42.0	12.8	325,000	147,418
Boeing E-4	152	195.7	59.6	231.8	70.7	64.7	19.7	830,000	376,482
Boeing YC-14	89	129.0	39.3	131.7	40.1	48.3	14.7	237,000	107,501
Boeing 377	105	141.3	43.1	110.3	33.6	38.3	11.7	145,800	66,134
Boeing 707-100	139	130.8	39.9	145.1	44.2	41.7	12.7	528,000	239,497
Boeing 707-200	145	130.8	39.9	145.1	44.2	41.7	12.7	258,000	117,027
Boeing 707-320	139	145.5	44.3	152.9	46.6	42.2	12.9	316,000	143,335
Boeing 707-320B	136	145.5	44.3	152.9	46.6	42.2	12.9	336,000	152,407
Boeing 707-420	132	145.5	44.3	152.9	46.6	42.2	12.9	316,000	143,335
Boeing 720	133	130.8	39.9	136.7	41.7	41.5	12.6	230,000	104,326
Boeing 720B	137	130.8	39.9	136.7	41.7	41.2	12.6	235,000	106,594
Boeing 727-100	125	107.9	32.9	133.2	40.6	34.3	10.5	170,000	77,111
Boeing 727-200	138	107.9	32.9	153.2	46.7	34.9	10.6	210,000	95,254
Boeing 737	137	93.0	28.3	94.0	28.7	37.2	11.3	116,000	52,617
Boeing 747	152	195.7	59.6	231.8	70.7	64.7	19.7	830,000	376,482
Boeing 747-SP	140	195.7	59.6	184.7	56.3	65.8	20.1	686,000	311,164
Boeing 747-SR	141	195.7	59.6	231.8	70.7	65.5	20.0	603,000	273,516
Boeing 757	135	124.5	37.9	154.6	47.1	44.5	13.6	220,000	99,790
Boeing 767	130	156.3	47.6	159.1	48.5	52.0	15.8	300,000	136,078
Boeing 777	145	155.0	47.2	181.5	55.3	44.8	13.7	380,000	172,365
Breguet FAL-10	104	42.9	13.1	45.5	13.9	15.1	4.6	18,740	8,500
Breguet FAL-20	107	53.5	16.3	56.3	17.2	17.4	5.3	28,660	13,000
Breguet FAL-50	113	61.9	18.9	60.8	18.5	22.9	7.0	38,480	17,454
Breguet 1150	130*	119.1	36.3	104.2	31.8	37.2	11.3	95,900	43,500
Breguet 200	117	104.8	31.9	134.4	41.0	37.3	11.4	154,323	70,000
Breguet 914S	59	76.7	23.4	77.9	23.7	31.7	9.7	26,500	12,020
Bristol Brittania	117	142.2	43.3	124.2	37.9	37.5	11.4	185,000	83,915
Canadair CL-44	123	142.3	43.4	136.8	41.7	38.6	11.8	210,500	95,481
Canadair CL-600	125	61.8	18.8	68.4	20.8	20.7	6.3	32,500	14,742
Casa C-207A Azor	102	91.2	27.8	68.4	20.8	25.4	7.7	36,400	16,511
Casa C-212 Aviocar	81	62.3	19.0	50.0	15.2	21.0	6.4	13,889	6,300
Cessna Citation I	108	47.1	14.4	43.5	13.3	14.3	4.4	11,850	5,375
Cessna Citation II	108	51.6	15.7	47.2	14.4	14.8	4.5	13,300	6,033
Cessna Citation III	114	50.6	15.4	51.6	15.7	17.0	5.2	17,000	7,711
Cessna-150	55	33.3	10.1	24.1	7.3	8.5	2.6	1,670	757
Cessna-177	64	35.5	10.8	27.2	8.3	8.6	2.6	2,500	1,134
Cessna-402	95	44.1	13.4	36.3	11.1	11.4	3.5	6,850	3,107
Cessna-404	92	46.3	14.1	39.5	12.0	13.3	4.1	8,450	3,833
Cessna-414	94	44.1	13.4	36.4	11.1	11.5	3.5	6,785	3,078
Cessna-421	96	41.1	12.5	36.4	11.1	12.9	3.9	7,500	3,402
Cessna-441	100	49.3	15.0	39.0	11.9	13.1	4.0	9,850	4,468
Concorde	162	83.8	25.5	203.8	62.1	40.0	12.2	408,000	185,066
Convair 240	107	91.8	28.0	74.7	22.8	26.9	8.2	41,790	18,956
Convair 340	104	105.6	32.2	79.2	24.1	28.2	8.6	47,000	21,319
Convair 440	106	105.3	32.1	79.2	24.1	28.2	8.6	49,100	22,271
Convair 580	107	105.3	32.1	81.5	24.8	29.1	8.9	54,600	24,766
Convair 880	155	120.0	36.6	129.3	39.4	36.3	11.1	193,000	87,543
Convair 990	156	120.0	36.6	139.2	42.4	39.5	12.0	253,000	114,759
DeH Comet 4C	108	114.9	35.0	118.0	36.0	29.5	9.0	162,000	73,482
DeH Dash 7	83	93.0	28.3	80.7	24.6	26.2	8.0	44,000	19,958
DeH DHC-2	50	48.0	14.6	30.3	9.2	9.0	2.7	5,100	2,313

Aircraft	Appch Speed Knots	Wingspan Feet	Wingspan Meters	Length Feet	Length Meters	Tail Height Feet	Tail Height Meters	Maximum Takeoff Weight Lbs	Maximum Takeoff Weight Kg
DeH DHC-4	77	95.6	29.1	72.6	22.1	31.8	9.7	28,500	12,927
DeH DHC-5	91	96.0	29.3	79.0	24.1	28.7	8.7	49,200	22,317
DeH DHC-6	75	65.0	19.8	51.8	15.8	19.5	5.9	12,500	5,670
DeH Dove-104	84	57.0	17.4	39.5	12.0	13.3	4.1	8,950	4,060
DeH Heron-114	85	71.5	21.8	45.5	13.9	15.6	4.8	13,500	6,123
DeH Trident 121-2	137	95.0	29.0	114.8	35.0	27.0	8.2	135,500	61,462
DeH Trident 121-2E	138	98.0	29.9	114.8	35.0	27.0	8.2	144,000	65,317
DeH Trident 121-3	143	98.0	29.9	131.2	40.0	28.3	8.6	158,000	71,668
DeH Trident 121-3B	146	98.0	29.9	131.2	40.0	28.3	8.6	158,000	71,668
Dolphin IA-50	101	64.1	19.5	48.8	14.9	19.1	5.8	16,200	7,348
Dornier DO-28	74	51.0	15.5	37.5	11.4	12.8	3.9	8,853	4,016
Dornier LTA	74*	58.4	17.8	54.4	16.6	18.2	5.5	15,100	6,849
Embraer-110	92	50.3	15.3	49.5	15.1	15.5	4.7	12,500	5,670
Embraer-121	92	47.4	14.4	40.2	12.3	15.9	4.8	12,500	5,670
Embraer-326	102	35.6	10.9	35.0	10.7	12.2	3.7	11,500	5,216
Embraer-820	74	40.7	12.4	34.6	10.5	13.0	4.0	7,000	3,175
Fairchild C-119	122	109.2	33.3	86.5	26.4	26.2	8.0	74,400	33,747
Fairchild C-123	88	110.0	33.5	75.8	23.1	34.1	10.4	60,000	27,216
Fairchild F-27	109	95.2	29.0	77.2	23.5	27.5	8.4	42,000	19,051
Fairchild FH-227	105	95.1	29.0	83.0	25.3	27.5	8.4	45,500	20,638
Fokker F-27	102	95.2	29.0	82.2	25.1	27.6	8.4	45,000	20,412
Fokker F-28-1000	119	77.4	23.6	89.9	27.4	27.8	8.5	65,000	29,484
Fokker F-28-2000	119	77.4	23.6	97.1	29.6	27.8	8.5	65,000	29,484
Fokker F-28-3000	121	82.3	25.1	89.9	27.4	27.8	8.5	71,000	32,205
Fokker F-28-4000	121	82.3	25.1	97.1	29.6	27.8	8.5	71,000	32,205
Fokker F-28-6000	113	82.3	25.1	97.1	29.6	27.8	8.5	70,800	32,114
Fokker VFW-614	111	70.5	21.5	67.5	20.6	25.6	7.8	44,000	19,958
Foxjet 600	97	31.6	9.6	31.5	9.6	10.2	3.1	4,449	2,018
GAC-100	86	70.0	21.3	67.3	20.5	24.9	7.6	28,900	13,109
Gulfstream I	113	78.5	23.9	64.0	19.5	22.8	6.9	35,100	15,921
Gulfstream II	141	68.8	21.0	79.9	24.4	24.5	7.5	65,500	29,710
Gulfstream II-TT	142	71.7	21.9	79.9	24.4	24.5	7.5	66,000	29,937
Gulfstream III	136	77.8	23.7	82.7	25.2	23.2	7.1	68,700	31,162
Hamilton Westwind	96	46.0	14.0	45.0	13.7	9.2	2.8	12,495	5,668
Hansa HAB-320	125	47.5	14.5	54.5	16.6	16.2	4.9	20,280	9,199
Hindustani-748	94	98.5	30.0	67.0	20.4	24.8	7.6	46,500	21,092
HP Herald	88	94.7	28.9	75.5	23.0	24.1	7.3	43,000	19,504
HP Jetstream	99	52.0	15.8	47.1	14.4	17.5	5.3	12,566	5,700
HS-Nimrod Mk2	125*	114.8	35.0	126.7	38.6	29.7	9.1	177,500	80,513
HS-125-1/400	124	47.0	14.3	47.4	14.4	16.5	5.0	26,500	12,020
HS-125-600	125	47.0	14.3	50.5	15.4	17.3	5.3	25,000	11,340
HS-125-700	125	47.0	14.3	50.7	15.5	17.6	5.4	25,000	11,340
HS-146	117	86.5	26.4	93.1	28.4	28.3	8.6	87,500	39,689
HS-748 Andover	94	98.5	30.0	67.0	20.4	24.8	7.6	46,500	21,092
HS-748 Andover C	100	98.2	29.9	78.0	23.8	30.1	9.2	50,000	22,680
IAI Arava-201	81	68.8	21.0	42.8	13.0	17.1	5.2	15,000	6,804
IAI-1124 Westwind	129	44.8	13.7	52.3	15.9	15.8	4.8	23,650	10,727
Ilyushin IL-12	78	104.0	31.7	70.0	21.3	30.5	9.3	38,000	17,237
Ilyushin IL-18	103	122.7	37.4	117.8	35.9	33.3	10.1	141,100	64,002
Ilyushin IL-62	152	142.0	43.3	174.3	53.1	40.7	12.4	357,000	161,932
Ilyushin IL-76	119	165.7	50.5	152.8	46.6	48.4	14.8	374,790	170,002

Aircraft	Appch Speed Knots	Wingspan Feet	Wingspan Meters	Length Feet	Length Meters	Tail Height Feet	Tail Height Meters	Maximum Takeoff Weight Lbs	Maximum Takeoff Weight Kg
Ilyushin IL-86	141	158.6	48.3	191.9	58.5	51.5	15.7	414,470	188,000
Kawasaki C-1	118*	100.4	30.6	95.1	29.0	32.9	10.0	85,320	38,701
Lapan XT-400	75	47.9	14.6	33.5	10.2	14.1	4.3	5,555	2,520
Learfan 2100	86	39.9	12.2	38.7	11.8	11.5	3.5	7,200	3,266
Learjet 24	128	35.6	10.9	43.2	13.2	12.6	3.8	13,500	6,123
Learjet 25	137	35.6	10.9	47.6	14.5	12.6	3.8	15,000	6,804
Learjet 28/29	120	42.2	12.9	45.0	13.7	12.6	3.8	15,000	6,804
Learjet 35A/36A	143	39.6	12.1	48.6	14.8	12.6	3.8	18,000	8,165
Learjet 54-55-56	128	43.8	13.4	55.1	16.8	14.8	4.5	20,500	9,299
LET L-410	81	63.9	19.5	47.4	14.4	19.1	5.8	12,566	5,700
Lockheed C-141A	129	160.1	48.8	145.0	44.2	39.3	12.0	325,000	147,418
Lockheed C-141B	129	160.1	48.8	168.2	51.3	39.3	12.0	325,000	147,418
Lockheed C-5A	135	222.8	67.9	247.8	75.5	65.1	19.8	769,000	348,813
Lockheed P-3	134	99.7	30.4	116.8	35.6	33.7	10.3	135,000	61,235
Lockheed SR-71	180	55.6	16.9	112.4	34.3	18.5	5.6	170,000	77,111
Lockheed 100-20	137	132.6	40.4	106.1	32.3	38.4	11.7	155,800	70,670
Lockheed 100-30	129	132.6	40.4	112.7	34.4	38.4	11.7	155,000	70,307
Lockheed 1011-1	138	155.3	47.3	177.7	54.2	55.3	16.9	430,000	195,045
Lockheed 1011-100	140	155.3	47.3	177.7	54.2	55.3	16.9	466,000	211,374
Lockheed 1011-200	140	155.3	47.3	177.7	54.2	55.3	16.9	466,000	211,374
Lockheed 1011-250	144	155.3	47.3	177.7	54.2	55.3	16.9	496,000	224,982
Lockheed 1011-400	144	157.4	48.0	164.3	50.1	55.3	16.9	374,500	169,870
Lockheed 10I1-500	148	164.3	50.1	164.3	50.1	55.3	16.9	504,000	228,611
Lockheed 1011-600	140*	142.8	43.5	141.0	43.0	53.0	16.2	297,000	134,717
Lockheed 1049	113	123.0	37.5	113.3	34.5	24.8	7.6	142,100	64,455
Lockheed 1329-25	132	54.4	16.6	60.4	18.4	20.4	6.2	44,500	20,185
Lockheed 1649	89	150.0	45.7	116.2	35.4	24.8	7.6	160,000	72,575
Lockheed 188	123	99.0	30.2	104.5	31.9	32.8	10.0	116,000	52,617
Lockheed 400	121*	119.7	36.5	97.8	29.8	38.0	11.6	84,000	38,102
Lockheed 749	93	123.0	37.5	95.2	29.0	22.4	6.8	107,000	48,534
MAI-QSTOL	85	100.3	30.6	98.4	30.0	32.8	10.0	85,300	38,691
Martin-404	98	93.3	28.4	74.6	22.7	28.7	8.7	44,900	20,366
MDC-C-133	128	179.7	54.8	157.5	48.0	48.3	14.7	300,000	136,078
MDC-DC-10-10	138	155.3	47.3	182.4	55.6	58.1	17.7	455,000	206,385
MDC-DC-10-30/40	151	165.4	50.4	182.4	55.6	58.1	17.7	580,000	263,084
MDC-DC-3	72	95.0	29.0	64.5	19.7	23.5	7.2	25,200	11,431
MDC-DC-4	95	117.5	35.8	93.8	28.6	27.9	8.5	73,200	33,203
MDC-DC-6A/B	108	117.5	35.8	106.7	32.5	28.7	8.7	107,000	48,534
MDC-DC-7	110	127.5	38.9	112.3	34.2	31.8	9.7	143,000	64,864
MDC-DC-8-10/20	131	142.4	43.4	150.5	45.9	42.3	12.9	276,000	125,192
MDC-DC-8-30/40	133	142.4	43.4	150.5	45.9	42.3	12.9	315,000	142,882
MDC-DC-8-50	137	142.4	43.4	150.5	45.9	42.3	12.9	325,000	147,418
MDC-DC-8-61	142	142.4	43.4	187.4	57.1	42.3	12.9	328,000	148,778
MDC-DC-8-62	124	148.4	45.2	157.4	48.0	42.3	12.9	350,000	158,757
MDC-DC-8-63	147	148.4	45.2	187.4	57.1	42.3	12.9	355,000	161,025
MDC-DC-9-10/15	134	89.4	27.2	104.4	31.8	27.5	8.4	90,700	41,141
MDC-DC-9-20	124	93.5	28.5	104.4	31.8	27.5	8.4	98,000	44,452
MDC-DC-9-30	127	93.5	28.5	119.4	36.4	27.5	8.4	121,000	54,885
MDC-DC-9-40	129	93.5	28.5	125.7	38.3	28.6	8.7	114,000	51,710
MDC-DC-9-50	132	93.5	28.5	133.5	40.7	28.6	8.7	121,000	54,885
MDC-DC-9-80	132	107.9	32.9	147.9	45.1	30.2	9.2	140,000	63,503

Aircraft	Appch Speed Knots	Wingspan Feet	Wingspan Meters	Length Feet	Length Meters	Tail Height Feet	Tail Height Meters	Maximum Takeoff Weight Lbs	Maximum Takeoff Weight Kg
MDC-DC-9-82	135	107.9	32.9	147.9	45.1	29.6	9.0	147,000	66,678
Mitsubishi Diamond MU-300	100	43.3	13.2	48.3	14.7	13.7	4.2	13,890	6,300
Mitsubishi Marquise	88	39.1	11.9	39.4	12.0	13.6	4.1	11,575	5,250
Mitsubishi MU-2	119	39.1	11.9	39.5	12.0	13.6	4.1	10,800	4,899
Mitsubishi Solitaire	87	39.1	11.9	33.2	10.1	12.9	3.9	10,470	4,749
Nihon YS-11	98	105.0	32.0	86.3	26.3	29.5	9.0	54,010	24,499
Nomad N-22	69	54.0	16.5	41.2	12.6	18.1	5.5	8,500	3,856
Nomad N-24	73	54.0	16.5	47.1	14.4	18.1	5.5	9,400	4,264
NORD-262	96	71.9	21.9	63.3	19.3	20.4	6.2	23,800	10,795
Partenavia 68B Victor	73	39.4	12.0	30.7	9.4	11.2	3.4	4,321	1,960
Piaggio P-166 Portofino	82	48.2	14.7	39.2	11.9	16.4	5.0	9,480	4,300
Piaggio PD-808	117	43.3	13.2	42.2	12.9	15.8	4.8	18,300	8,301
Pilatus PC-6 Porter	57	49.7	15.1	37.4	11.4	10.5	3.2	4,850	2,200
Piper Aerostar	94	36.7	11.2	34.8	10.6	12.1	3.7	6,000	2,722
Piper Cheyenne	110	42.7	13.0	32.1	9.8	12.6	3.8	10,500	4,763
Piper Navajo	100	40.7	12.4	32.6	9.9	13.0	4.0	6,500	2,948
PZL-AN-2	54	59.7	18.2	40.7	12.4	13.1	4.0	12,125	5,500
PZL-AN-28	85	72.2	22.0	42.6	13.0	15.1	4.6	13,450	6,101
PZL-M-15	62	73.5	22.4	41.8	12.7	17.5	5.3	12,465	5,654
Rockwell B-1	165*	136.7	41.7	150.3	45.8	33.6	10.2	389,800	176,810
Rockwell JC1121	130	43.3	13.2	50.4	15.4	15.8	4.8	16,800	7,620
Rockwell Sabre 40	120	44.4	13.5	43.8	13.4	16.0	4.9	18,650	8,459
Rockwell Sabre 60	120	50.4	15.4	46.9	14.3	16.0	4.9	20,172	9,150
Rockwell Sabre 65	105	50.4	15.4	46.9	14.3	16.0	4.9	24,000	10,886
Rockwell Sabre 75A	137	44.7	13.6	47.2	14.4	17.2	5.2	23,000	10,433
Rockwell Sabre 80	128	50.4	15.4	47.2	14.4	17.3	5.3	24,500	11,113
Rockwell 690	97	46.5	14.2	44.3	13.5	15.0	4.6	10,250	4,649
Rockwell 840	98	52.1	15.9	42.9	13.1	14.9	4.5	10,325	4,683
Rockwell 980	121	52.1	15.9	42.9	13.1	14.9	4.5	10,325	4,683
Shorts Belfast	126	158.9	48.4	136.4	41.6	47.0	14.3	230,000	104,326
Shorts Skyvan	96	74.7	22.8	58.0	17.7	16.3	5.0	24,000	10,886
SN-600 Corvette	118	42.2	12.9	45.4	13.8	13.9	4.2	14,550	6,600
SUD-210 Caravelle	127	112.5	34.3	105.0	32.0	28.6	8.7	114,640	52,000
Swearingen Merlin	105	46.3	14.1	42.2	12.9	16.8	5.1	12,500	5,670
Swearingen Metro	112	46.3	14.1	59.4	18.1	16.8	5.1	12,500	5,670
Transall C-160	124	131.3	40.0	106.3	32.4	40.6	12.4	112,435	51,000
Tupolev TU-114	132*	167.7	51.1	189.0	57.6	50.0	15.2	376,990	171,000
Tupolev TU-124	132*	83.8	25.5	100.3	30.6	50.0	15.2	83,775	38,000
Tupolev TU-134	144	95.2	29.0	121.7	37.1	30.0	9.1	103,600	46,992
Tupolev TU-144	178	94.8	28.9	215.5	65.7	42.2	12.9	396,830	179,999
Tupolev TU-154	145	123.4	37.6	157.5	48.0	37.4	11.4	198,450	90,015
Vickers Vanguard	119	118.6	36.1	122.9	37.5	35.0	10.7	146,500	66,451
Vickers VC-10-1100	128	146.2	44.6	158.7	48.4	39.5	12.0	312,000	141,521
Vickers VC-10-1150	138	146.2	44.6	171.7	52.3	39.5	12.0	335,100	151,999
Vickers VC-2	122	94.0	28.7	85.7	26.1	26.9	8.2	72,500	32,885
Volpar Centennial	88	50.0	15.2	51.9	15.8	16.5	5.0	12,500	5,670
Volpar Turbo 18	100	46.0	14.0	37.4	11.4	9.6	2.9	10,286	4,666
Yakovlev YAK-40	128*	82.2	25.1	66.8	20.4	55.8	17.0	35,275	16,000
Yakovlev YAK-42	128*	114.8	35.0	114.8	35.0	50.0	15.2	114,640	52,000
Yu Shi-11	80*	55.7	17.0	39.4	12.0	15.1	4.6	7,150	3,243

*Approach speeds estimated.

CURRENT AIRCRAFT ARRANGED BY AIRPLANE DESIGN GROUP

Aircraft	Appch Speed Knots	Wingspan Feet	Wingspan Meters	Length Feet	Length Meters	Tail Height Feet	Tail Height Meters	Maximum Takeoff Weight Lbs	Maximum Takeoff Weight Kg
AIRCRAFT APPROACH CATEGORY A AND B SMALL AIRPLANES IN AIRPLANE DESIGN GROUP I									
Beech Skipper 77	63	30.0	9.1	24.0	7.3	6.9	2.1	1,675	759
Foxjet 600	97	31.6	9.6	31.5	9.6	10.2	3.1	4,449	2,018
Beech Sierra C24R	70	32.8	9.9	25.8	7.8	8.1	2.4	2,750	1,247
Beech Sundowner C23	68	32.8	9.9	25.8	7.8	8.3	2.5	2,450	1,111
Cessna-150	55	33.3	10.1	24.1	7.3	8.5	2.6	1,670	757
Beech Bonanza V35B	70	33.5	10.2	26.4	8.0	7.6	2.3	3,400	1,542
Beech Bonanza F33A	70	33.5	10.2	26.7	8.1	8.3	2.5	3,400	1,542
Beech Bonanza A36	72	33.5	10.2	27.5	8.3	8.4	2.5	3,600	1,632
AJI Hustler	98	34.3	10.5	41.0	12.5	13.1	4.0	9,500	4,309
Cessna-177	64	35.5	10.8	27.2	8.3	8.6	2.6	2,500	1,134
Embraer-326	102	35.6	10.9	35.0	10.7	12.2	3.7	11,500	5,216
Piper Aerostar	94	36.7	11.2	34.8	10.6	12.1	3.7	6,000	2,722
Beech Bonanza B36TC	75	37.8	11.5	27.5	8.3	8.4	2.5	3,850	1,723
Beech Baron 58P	101	37.8	11.5	29.9	9.1	9.1	2.7	6,200	2,812
Beech Baron 58TC	101	37.8	11.5	29.9	9.1	9.1	2.7	6,200	2,812
Beech Baron E55	88	37.8	11.5	29.9	9.1	9.1	2.8	5,300	2,404
Beech Baron 58	96	37.8	11.5	29.9	9.1	9.5	2.8	5,400	2,449
Beech Baron B55	90	37.8	11.5	28.0	8.5	9.6	2.9	5,100	2,313
Beech Duchess 76	76	38.0	11.5	29.0	8.8	9.5	2.9	3,900	1,769
Mitsubishi Solitaire	87	39.1	11.9	33.2	10.1	12.9	3.9	10,470	4,749
Mitsubishi Marquise	88	39.1	11.9	39.4	12.0	13.6	4.1	11,575	5,250
Mitsubishi MU-2	119	39.1	11.9	39.5	12.0	13.6	4.1	10,800	4,899
Beech Duke B60	98	39.3	11.9	33.8	10.3	12.3	3.7	6,775	3,073
Partenavia 68B Victor	73	39.4	12.0	30.7	9.4	11.2	3.4	4,321	1,960
Learfan 2100	86	39.9	12.2	38.7	11.8	11.5	3.5	7,200	3,266
Embraer-820	74	40.7	12.4	34.6	10.5	13.0	4.0	7,000	3,175
Piper Navajo	100	40.7	12.4	32.6	9.9	13.0	4.0	6,500	2,948
Cessna-421	96	41.1	12.5	36.4	11.1	12.9	3.9	7,500	3,402
Piper Cheyenne	110	42.7	13.0	32.1	9.8	12.6	3.8	10,500	4,763
Cessna-402	95	44.1	13.4	36.3	11.1	11.4	3.5	6,850	3,107
Cessna-414	94	44.1	13.4	36.4	11.1	11.5	3.5	6,785	3,078
Beech C99 Airliner	107	45.9	13.9	44.5	13.5	14.4	4.3	11,300	5,125
Beech King Air F90	108	45.9	13.9	39.8	12.1	15.1	4.6	10,950	4,966
Beech King Air B100	111	45.9	13.9	39.9	12.1	15.4	4.6	11,800	5,352
Hamilton Westwind	96	46.0	14.0	45.0	13.7	9.2	2.8	12,495	5,668
Volpar Turbo 18	100	46.0	14.0	37.4	11.4	9.6	2.9	10,286	4,666
Cessna-404	92	46.3	14.1	39.5	12.0	13.3	4.1	8,450	3,833
Swearingen Merlin	105	46.3	14.1	42.2	12.9	16.8	5.1	12,500	5,670
Swearingen Metro	112	46.3	14.1	59.4	18.1	16.8	5.1	12,500	5,670
Rockwell 690	97	46.5	14.2	44.3	13.5	15.0	4.6	10,250	4,649
Cessna Citation I	108	47.1	14.4	43.5	13.3	14.3	4.4	11,850	5,375
Embraer-121	92	47.4	14.4	40.2	12.3	15.9	4.8	12,500	5,670
Lapan XT-400	75	47.9	14.6	33.5	10.2	14.1	4.3	5,555	2,520
DeH DHC-2	50	48.0	14.6	30.3	9.2	9.0	2.7	5,100	2,313
Piaggio P-166 Portofino	82	48.2	14.7	39.2	11.9	16.4	5.0	9,480	4,300

Aircraft	Appch Speed Knots	Wingspan Feet	Wingspan Meters	Length Feet	Length Meters	Tail Height Feet	Tail Height Meters	Maximum Takeoff Weight Lbs	Maximum Takeoff Weight Kg
AIRCRAFT APPROACH CATEGORY A AND B LARGE AIRPLANES IN AIRPLANE DESIGN GROUP I									
Learjet 28/29	120	42.2	12.9	45.0	13.7	12.6	3.8	15,000	6,804
SN-600 Corvette	118	42.2	12.9	45.4	13.8	13.9	4.2	14,550	6,600
Breguet FAL-10	104	42.9	13.1	45.5	13.9	15.1	4.6	18,740	8,500
Mitsubishi Diamond MU-300	100	43.3	13.2	48.3	14.7	13.7	4.2	13,890	6,300
Piaggio PD-808	117	43.3	13.2	42.2	12.9	15.8	4.8	18,300	8,301
Rockwell Sabre 40	120	44.4	13.5	43.8	13.4	16.0	4.9	18,650	8,459
AIRCRAFT APPROACH CATEGORY C AND D AIRPLANES IN AIRPLANE DESIGN GROUP I									
Learjet 24	128	35.6	10.9	43.2	13.2	12.6	3.8	13,500	6,123
Learjet 25	137	35.6	10.9	47.6	14.5	12.6	3.8	15,000	6,804
Learjet 35A/36A	143	39.6	12.1	48.6	14.8	12.6	3.8	18,000	8,165
Rockwell JC1121	130	43.3	13.2	50.4	15.4	15.8	4.8	16,800	7,620
Learjet 54-55-56	128	43.8	13.4	55.1	16.8	14.8	4.5	20,500	9,299
Rockwell Sabre 75A	137	44.7	13.6	47.2	14.4	17.2	5.2	23,000	10,433
IAI-1124 Westwind	129	44.8	13.7	52.3	15.9	15.8	4.8	23,650	10,727
HS-125-1/400	124	47.0	14.3	47.4	14.4	16.5	5.0	26,500	12,020
HS-125-600	125	47.0	14.3	50.5	15.4	17.3	5.3	25,000	11,340
HS-125-700	125	47.0	14.3	50.7	15.5	17.6	5.4	25,000	11,340
Hansa HAB-320	125	47.5	14.5	54.5	16.6	16.2	4.9	20,280	9,199
AIRCRAFT APPROACH CATEGORY A AND B AIRPLANES IN AIRPLANE DESIGN GROUP II									
Beech E-18	87	49.2	15.0	35.1	10.7	10.5	3.2	8,750	3,969
Cessna-441	100	49.3	15.0	39.0	11.9	13.1	4.0	9,850	4,468
Pilatus PC-6 Porter	57	49.7	15.1	37.4	11.4	10.5	3.2	4,850	2,200
Volpar Centennial	88	50.0	15.2	51.9	15.8	16.5	5.0	12,500	5,670
Beech King Air C90-1	100	50.3	15.3	35.5	10.8	14.3	4.3	9,650	4,377
Embraer-110	92	50.3	15.3	49.5	15.1	15.5	4.7	12,500	5,670
Rockwell Sabre 60	120	50.4	15.4	46.9	14.3	16.0	4.9	20,172	9,150
Rockwell Sabre 65	105	50.4	15.4	46.9	14.3	16.0	4.9	24,000	10,886
Cessna Citation III	114	50.6	15.4	51.6	15.7	17.0	5.2	17,000	7,711
Dornier DO-28	74	51.0	15.5	37.5	11.4	12.8	3.9	8,853	4,016
Cessna Citation II	108	51.6	15.7	47.2	14.4	14.8	4.5	13,300	6,033
HP Jetstream	99	52.0	15.8	47.1	14.4	17.5	5.3	12,566	5,700
Rockwell 840	98	52.1	15.9	42.9	13.1	14.9	4.5	10,325	4,683
BN-2A Trislander	65	53.0	16.2	49.3	15.0	14.2	4.3	10,000	4,536
Breguet FAL-20	107	53.5	16.3	56.3	17.2	17.4	5.3	28,660	13,000
Nomad N-22	69	54.0	16.5	41.2	12.6	18.1	5.5	8,500	3,856
Nomad N-24	73	54.0	16.5	47.1	14.4	18.1	5.5	9,400	4,264
Beech 1900 Airliner	120*	54.5	16.6	57.8	17.6	14.9	4.5	15,245	6,915
Beech Super King Air B200	103	54.5	16.6	43.8	13.3	15.0	4.5	12,500	5,670
Yu Shi-11	80*	55.7	17.0	39.4	12.0	15.1	4.6	7,150	3,243
DeH Dove-104	84	57.0	17.4	39.5	12.0	13.3	4.1	8,950	4,060
Dornier LTA	74*	58.4	17.8	54.4	16.6	18.2	5.5	15,100	6,849
PZL-AN-2	54	59.7	18.2	40.7	12.4	13.1	4.0	12,125	5,500
Breguet FAL-50	113	61.9	18.9	60.8	18.5	22.9	7.0	38,480	17,454
Casa C-212 Aviocar	81	62.3	19.0	50.0	15.2	21.0	6.4	13,889	6,300

Aircraft	Appch Speed Knots	Wingspan Feet	Wingspan Meters	Length Feet	Length Meters	Tail Height Feet	Tail Height Meters	Maximum Tafeoff Weight Lbs	Maximum Tafeoff Weight Kg
Air Metal C-111	96	63.0	19.2	55.2	16.8	21.0	6.4	18,629	8,450
LET L-410	81	63.9	19.5	47.4	14.4	19.1	5.8	12,566	5,700
Dolphin IA-50	101	64.1	19.5	48.8	14.9	19.1	5.8	16,200	7,348
DeH DHC-6	75	65.0	19.8	51.8	15.8	19.5	5.9	12,500	5,670
Ahrens 404	98	66.0	20.1	52.8	16.1	17.5	5.3	17,000	7,711
IAI Arava-201	81	68.8	21.0	42.8	13.0	17.1	5.2	15,000	6,804
GAC-100	86	70.0	21.3	67.3	20.5	24.9	7.6	28,900	13,109
Fokker VFW-614	111	70.5	21.5	67.5	20.6	25.6	7.8	44,000	19,958
DeH Heron-114	85	71.5	21.8	45.5	13.9	15.6	4.8	13,500	6,123
NORD-262	96	71.9	21.9	63.3	19.3	20.4	6.2	23,800	10,795
Antonov AN-14	52	72.1	22.0	37.5	11.4	15.2	4.6	7,935	3,599
PZL-AN-28	85	72.2	22.0	42.6	13.0	15.1	4.6	13,450	6,101
Antonov AN-28	88	72.4	22.1	42.6	13.0	15.1	4.6	13,450	6,101
PZL-M-15	62	73.5	22.4	41.8	12.7	17.5	5.3	12,465	5,654
Shorts Skyvan	96	74.7	22.8	58.0	17.7	16.3	5.0	24,000	10,886
Breguet 914S	59	76.7	23.4	77.9	23.7	31.7	9.7	26,500	12,020
Fokker F-28-1000	119	77.4	23.6	89.9	27.4	27.8	8.5	65,000	29,484
Fokker F-28-2000	119	77.4	23.6	97.1	29.6	27.8	8.5	65,000	29,484
Gulfstream I	113	78.5	23.9	64.0	19.5	22.8	6.9	35,100	15,921
AIRCRAFT APPROACH CATEGORY C AND D AIRPLANES IN AIRPLANE DESIGN GROUP II									
Rockwell Sabre 80	128	50.4	15.4	47.2	14.4	17.3	5.3	24,500	11,113
Rockwell 980	121	52.1	15.9	42.9	13.1	14.9	4.5	10,325	4,683
Lockheed 1329-25	132	54.4	16.6	60.4	18.4	20.4	6.2	44,500	20,185
Lockheed SR-71	180	55.6	16.9	112.4	34.3	18.5	5.6	170,000	77,111
Canadair CL-600	125	61.8	18.8	68.4	20.8	20.7	6.3	32,500	14,742
Gulfstream II	141	68.8	21.0	79.9	24.4	24.5	7.5	65,500	29,710
Gulfstream II-TT	142	71.7	21.9	79.9	24.4	24.5	7.5	66,000	29,937
Gulfstream III	136	77.8	23.7	82.7	25.2	23.2	7.1	68,700	31,162
AIRCRAFT APPROACH CATEGORY A AIRPLANES IN AIRPLANE DESIGN GROUP III									
AIDX-XC-2	86	81.7	24.9	65.9	20.1	25.3	7.7	25,000	11,340
Antonov AN-72	89*	84.8	25.8	87.1	26.5	27.0	8.2	63,935	29,000
DeH Dash 7	83	93.0	28.3	80.7	24.6	26.2	8.0	44,000	19,958
HP Herald	88	94.7	28.9	75.5	23.0	24.1	7.3	43,000	19,504
MDC-DC-3	72	95.0	29.0	64.5	19.7	23.5	7.2	25,200	11,431
DeH DHC-4	77	95.6	29.1	72.6	22.1	31.8	9.7	28,500	12,927
MAI-QSTOL	85	100.3	30.6	98.4	30.0	32.8	10.0	85,300	38,691
Ilyushin IL-12	78	104.0	31.7	70.0	21.3	30.5	9.3	38,000	17,237
Fairchild C-123	88	110.0	33.5	75.8	23.1	34.1	10.4	60,000	27,216

Aircraft	Appch Speed Knots	Wingspan Feet	Wingspan Meters	Length Feet	Length Meters	Tail Height Feet	Tail Height Meters	Maximum Takeoff Weight Lbs	Maximum Takeoff Weight Kg
AIRCRAFT APPROACH CATEGORY B, C, AND D AIRPLANES IN AIRPLANE DESIGN GROUP III									
Yakovlev YAK-40	128*	82.2	25.1	66.8	20.4	55.8	17.0	35,275	16,000
Fokker F-28-3000	121	82.3	25.1	89.9	27.4	27.8	8.5	71,000	32,205
Fokker F-28-4000	121	82.3	25.1	97.1	29.6	27.8	8.5	71,000	32,205
Fokker F-28-6000	113	82.3	25.1	97.1	29.6	27.8	8.5	70,800	32,114
Concorde	162	83.8	25.5	203.8	62.1	40.0	12.2	408,000	185,066
Tupolev TU-124	132*	83.8	25.5	100.3	30.6	50.0	15.2	83,775	38,000
HS-146	117	86.5	26.4	93.1	28.4	28.3	8.6	87,500	39,689
BAC-111-200	129	88.5	27.0	93.5	28.5	24.5	7.5	79,000	35,834
BAC-111-300	128	88.5	27.0	93.5	28.5	24.5	7.5	88,500	40,143
BAC-111-400	137	88.6	27.0	93.5	28.5	24.6	7.5	88,500	40,143
MDC-DC-9-10/15	134	89.4	27.2	104.4	31.8	27.5	8.4	90,700	41,141
Casa C-207A Azor	102	91.2	27.8	68.4	20.8	25.4	7.7	36,400	16,511
Convair 240	107	91.8	28.0	74.7	22.8	26.9	8.2	41,790	18,956
Boeing 737	137	93.0	28.3	94.0	28.7	37.2	11.3	116,000	52,617
Martin-404	98	93.3	28.4	74.6	22.7	28.7	8.7	44,900	20,366
BAC-111-475	135	93.5	28.5	93.5	28.5	24.5	7.5	98,500	44,679
BAC-111-500	144	93.5	28.5	107.0	32.6	24.5	7.5	104,500	47,400
MDC-DC-9-20	124	93.5	28.5	104.4	31.8	27.5	8.4	98,000	44,452
MDC-DC-9-30	127	93.5	28.5	119.4	36.4	27.5	8.4	121,000	54,885
MDC-DC-9-40	129	93.5	28.5	125.7	38.3	28.6	8.7	114,000	51,710
MDC-DC-9-50	132	93.5	28.5	133.5	40.7	28.6	8.7	121,000	54,885
Vickers VC-2	122	94.0	28.7	85.7	26.1	26.9	8.2	72,500	32,885
Aeritalia G-222	109	94.5	28.8	79.2	24.1	38.5	11.7	58,422	26,500
Tupolev TU-144	178	94.8	28.9	215.5	65.7	42.2	12.9	396,830	179,999
DeH Trident 121-2	137	95.0	29.0	114.8	35.0	27.0	8.2	135,500	61,462
Fairchild FH-227	105	95.1	29.0	83.0	25.3	27.5	8.4	45,500	20,638
Fairchild F-27	109	95.2	29.0	77.2	23.5	27.5	8.4	42,000	19,051
Fokker F-27	102	95.2	29.0	82.2	25.1	27.6	8.4	45,000	20,412
Tupolev TU-134	144	95.2	29.0	121.7	37.1	30.0	9.1	103,600	46,992
Antonov AN-24	119	95.8	29.2	77.2	23.5	27.3	8.3	48,060	21,800
Antonov AN-26	121	95.8	29.2	78.1	23.8	28.1	8.6	52,920	24,004
DeH DHC-5	91	96.0	29.3	79.0	24.1	28.7	8.7	49,200	22,317
Antonov AN-30	112	96.4	29.4	80.1	24.4	27.3	8.3	51,040	23,151
DeH Trident 121-2E	138	98.0	29.9	114.8	35.0	27.0	8.2	144,000	65,317
DeH Trident 121-3	143	98.0	29.9	131.2	40.0	28.3	8.6	158,000	71,668
DeH Trident 121-3B	146	98.0	29.9	131.2	40.0	28.3	8.6	158,000	71,668
HS-748 Andover C	100	98.2	29.9	78.0	23.8	30.1	9.2	50,000	22,680
Hindustani-748	94	98.5	30.0	67.0	20.4	24.8	7.6	46,500	21,092
HS-748 Andover	94	98.5	30.0	67.0	20.4	24.8	7.6	46,500	21,092
Lockheed 188	123	99.0	30.2	104.5	31.9	32.8	10.0	116,000	52,617
Lockheed P-3	134	99.7	30.4	116.8	35.6	33.7	10.3	135,000	61,235
Kawasaki C-1	118*	100.4	30.6	95.1	29.0	32.9	10.0	85,320	38,701
Breguet 200	117	104.8	31.9	134.4	41.0	37.3	11.4	154,323	70,000
Nihon YS-11	98	105.0	32.0	86.3	26.3	29.5	9.0	54,010	24,499
Convair 440	106	105.3	32.1	79.2	24.1	28.2	8.6	49,100	22,271
Convair 580	107	105.3	32.1	81.5	24.8	29.1	8.9	54,600	24,766
Convair 340	104	105.6	32.2	79.2	24.1	28.2	8.6	47,000	21,319
MDC-DC-9-82	135	107.9	32.9	147.9	45.1	29.6	9.0	147,000	66,678

Aircraft	Appch Speed Knots	Wingspan Feet	Wingspan Meters	Length Feet	Length Meters	Tail Height Feet	Tail Height Meters	Maximum Takeoff Weight Lbs	Maximum Takeoff Weight Kg
MDC-DC-9-80	132	107.9	32.9	147.9	45.1	30.2	9.2	140,000	63,503
Boeing 727-100	125	107.9	32.9	133.2	40.6	34.3	10.5	170,000	77,111
Boeing 727-200	138	107.9	32.9	153.2	46.7	34.9	10.6	210,000	95,254
Fairchild C-119	122	109.2	33.3	86.5	26.4	26.2	8.0	74,400	33,747
SUD-210 Caravelle	127	112.5	34.3	105.0	32.0	28.6	8.7	114,640	52,000
HS-Nimrod Mk2	125*	114.8	35.0	126.7	38.6	29.7	9.1	177,500	80,513
Yakovlev YAK-42	128*	114.8	35.0	114.8	35.0	50.0	15.2	114,640	52,000
DeH Comet 4C	108	114.9	35.0	118.0	36.0	29.5	9.0	162,000	73,482
AW-660 Argosy	113	115.0	35.1	89.1	27.2	27.0	8.2	97,000	43,998
AW-650 Argosy	123	115.0	35.1	89.8	27.4	29.3	8.9	93,000	42,184
MDC-DC-4	95	117.5	35.8	93.8	28.6	27.9	8.5	73,200	33,203
MDC-DC-6A/B	108	117.5	35.8	106.7	32.5	28.7	8.7	107,000	48,534
AIRPLANES IN AIRPLANE DESIGN GROUP IV									
Vickers Vanguard	119	118.6	36.1	122.9	37.5	35.0	10.7	146,500	66,451
Breguet 1150	130*	119.1	36.3	104.2	31.8	37.2	11.3	95,900	43,500
Lockheed 400	121*	119.7	36.5	97.8	29.8	38.0	11.6	84,000	38,102
Convair 880	155	120.0	36.6	129.3	39.4	36.3	11.1	193,000	87,543
Convair 990	156	120.0	36.6	139.2	42.4	39.5	12.0	253,000	114,759
Ilyushin IL-18	103	122.7	37.4	117.8	35.9	33.3	10.1	141,100	64,002
Lockheed 749	93	123.0	37.5	95.2	29.0	22.4	6.8	107,000	48,534
Lockheed 1049	113	123.0	37.5	113.3	34.5	24.8	7.6	142,100	64,455
Tupolev TU-154	145	123.4	37.6	157.5	48.0	37.4	11.4	198,450	90,015
Boeing 757	135	124.5	37.9	154.6	47.1	44.5	13.6	220,000	99,790
Antonov AN-10	126	124.8	38.0	121.4	37.0	32.2	9.8	121,500	55,111
Antonov AN-12	127	124.8	38.0	109.0	33.2	34.6	10.5	134,480	60,999
MDC-DC-7	110	127.5	38.9	112.3	34.2	31.8	9.7	143,000	64,864
Boeing YC-14	89	129.0	39.3	131.7	40.1	48.3	14.7	237,000	107,501
Boeing 720B	137	130.8	39.9	136.7	41.7	41.2	12.6	235,000	106,594
Boeing 720	133	130.8	39.9	136.7	41.7	41.5	12.6	230,000	104,326
Boeing 707-100	139	130.8	39.9	145.1	44.2	41.7	12.7	528,000	239,497
Boeing 707-200	145	130.8	39.9	145.1	44.2	41.7	12.7	258,000	117,027
Transall C-160	124	131.3	40.0	106.3	32.4	40.6	12.4	112,435	51,000
Lockheed 100-20	137	132.6	40.4	106.1	32.3	38.4	11.7	155,800	70,670
Lockheed 100-30	129	132.6	40.4	112.7	34.4	38.4	11.7	155,000	70,307
Rockwell B-1	165*	136.7	41.7	150.3	45.8	33.6	10.2	389,800	176,810
Boeing 377	105	141.3	43.1	110.3	33.6	38.3	11.7	145,800	66,134
Ilyushin IL-62	152	142.0	43.3	174.3	53.1	40.7	12.4	357,000	161,932
Bristol Brittania	117	142.2	43.3	124.2	37.9	37.5	11.4	185,000	83,915
Canadair CL-44	123	142.3	43.4	136.8	41.7	38.6	11.8	210,500	95,481
MDC-DC-8-10/20	131	142.4	43.4	150.5	45.9	42.3	12.9	276,000	125,192
MDC-DC-8-30/40	133	142.4	43.4	150.5	45.9	42.3	12.9	315,000	142,882
MDC-DC-8-50	137	142.4	43.4	150.5	45.9	42.3	12.9	325,000	147,418
MDC-DC-8-61	142	142.4	43.4	187.4	57.1	42.3	12.9	328,000	148,778
Lockheed 1011-600	140*	142.8	43.5	141.0	43.0	53.0	16.2	297,000	134,717
A-310 Airbus	125	144.0	43.9	154.9	47.2	51.9	15.8	288,000	130,635
Boeing 707-320	139	145.5	44.3	152.9	46.6	42.2	12.9	316,000	143,335
Boeing 707-320B	136	145.5	44.3	152.9	46.6	42.2	12.9	336,000	152,407
Boeing 707-420	132	145.5	44.3	152.9	46.6	42.2	12.9	316,000	143,335

Aircraft	Appch Speed Knots	Wingspan Feet	Wingspan Meters	Length Feet	Length Meters	Tail Height Feet	Tail Height Meters	Maximum Takeoff Weight Lbs	Maximum Takeoff Weight Kg
Boeing E-3	137	145.9	44.5	153.0	46.6	42.0	12.8	325,000	147,418
Vickers VC-10-1100	128	146.2	44.6	158.7	48.4	39.5	12.0	312,000	141,521
Vickers VC-10-1150	138	146.2	44.6	171.7	52.3	39.5	12.0	335,100	151,999
A-300 Airbus	132	147.1	44.8	175.9	53.6	54.2	16.5	429,900	194,999
MDC-DC-8-62	124	148.4	45.2	157.4	48.0	42.3	12.9	350,000	158,757
MDC-DC-8-63	147	148.4	45.2	187.4	57.1	42.3	12.9	355,000	161,025
Lockheed 1649	89	150.0	45.7	116.2	35.4	24.8	7.6	160,000	72,575
Boeing 777	145	155.0	47.2	181.5	55.3	44.8	13.7	380,000	172,365
Lockheed 1011-1	138	155.3	47.3	177.7	54.2	55.3	16.9	430,000	195,045
Lockheed 1011-100	140	155.3	47.3	177.7	54.2	55.3	16.9	466,000	211,374
Lockheed 1011-200	140	155.3	47.3	177.7	54.2	55.3	16.9	466,000	211,374
Lockheed 1011-250	144	155.3	47.3	177.7	54.2	55.3	16.9	496,000	224,982
MDC-DC-10-10	138	155.3	47.3	182.4	55.6	58.1	17.7	455,000	206,385
Boeing 767	130	156.3	47.6	159.1	48.5	52.0	15.8	300,000	136,078
Lockheed 1011-400	144	157.4	48.0	164.3	50.1	55.3	16.9	374,500	169,870
Ilyushin IL-86	141	158.6	48.3	191.9	58.5	51.5	15.7	414,470	188,000
Shorts Belfast	126	158.9	48.4	136.4	41.6	47.0	14.3	230,000	104,326
Lockheed C-141A	129	160.1	48.8	145.0	44.2	39.3	12.0	325,000	147,418
Lockheed C-141B	129	160.1	48.8	168.2	51.3	39.3	12.0	325,000	147,418
Lockheed 1011-500	148	164.3	50.1	164.3	50.1	55.3	16.9	504,000	228,611
MDC-DC-10-30/40	151	165.4	50.4	182.4	55.6	58.1	17.7	580,000	263,084
Ilyushin IL-76	119	165.7	50.5	152.8	46.6	48.4	14.8	374,790	170,002
Tupolev TU-114	132*	167.7	51.1	189.0	57.6	50.0	15.2	376,990	171,000
AIRPLANES IN AIRPLANE DESIGN GROUP V									
MDC-C-133	128	179.7	54.8	157.5	48.0	48.3	14.7	300,000	136,078
Boeing B-52	141*	185.0	56.4	157.6	48.0	40.8	12.4	488,000	221,353
Boeing E-4	152	195.7	59.6	231.8	70.7	64.7	19.7	830,000	376,482
Boeing 747	152	195.7	59.6	231.8	70.7	64.7	19.7	830,000	376,482
Boeing 747-SR	141	195.7	59.6	231.8	70.7	65.5	20.0	603,000	273,516
Boeing 747-SP	140	195.7	59.6	184.7	56.3	65.8	20.1	686,000	311,164
AIRPLANES IN AIRPLANE DESIGN GROUP VI									
Antonov AN-22	140*	211.3	64.4	189.6	57.8	41.2	12.6	551,160	250,002
Lockheed C-5A	135	222.8	67.9	247.8	75.5	65.1	19.8	769,000	348,813

*Approach speeds estimated.

APPENDIX 12. INDEX

This appendix provides an alphabetical index of key words and technical standards in the indicated edition of AC's listed below. Also included are key words in the Federal Aviation Regulations (FAR) related to the AC's listed below.

AC 00-2 Advisory Circular Checklist.

AC 00-44 Status of Federal Aviation Regulations.

AC 70-2D Airspace Utilization Considerations in the Proposed Construction, Alteration, Activation, and Deactivation of Airports.

AC 70/7460-2G Proposed Construction or Alteration of Objects that may Affect the Navigable Airspace.

AC 150/5190-4 A Model Zoning Ordinance to Limit Height of Objects Around Airports.

AC 150/5300-2D Airport Design Standards--Site Requirements for Terminal Navigational Facilities, incorporating Change 1.

AC 150/5300-4B Utility Airports--Air Access to National Transportation, incorporating Changes 1 through 7.

AC 150/5300-12 Airport Design Standards--Transport Airports.

AC 150/5320-10 Environmental Enhancement at Airports--Industrial Waste Treatment, incorporating Change 1.

AC 150/5320-11 Runway Categorization--Aeronautical Studies--Airport Owners' Responsibilities.

AC 150/5320-14 Airport Landscaping for Noise Control Purposes.

AC 150/5325-4 Runway Length Requirements for Airport Design, incorporating Changes 1 through 14.

AC 150/5325-5B Aircraft Data, incorporating Change 1.

AC 150/5335-2 Airport Aprons.

AC 150/5360-2 Airport Cargo Facilities.

AC 150/5390-1B Heliport Design Guide, incorporating Change 1.

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