

OBSTRUCTION DATA SHEET

**ODS 791
BERLIN MUNICIPAL AIRPORT
BERLIN, NEW HAMPSHIRE**

DIGITIZED FROM

**OC 791
SURVEYED SEPTEMBER 1989
2ND EDITION**



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OBSTRUCTION DATA SHEET

The Obstruction Data Sheet (ODS) provides digital obstruction and runway data for use in aircraft arrival and departure planning. This information has been obtained using field survey and photogrammetric methods by the Photogrammetry Branch of the National Ocean Service in accordance with Federal Aviation Regulations Part 77 (FAR-77), "Objects Affecting Navigable Airspace" and FAA Nr. 405, "Specifications - Airport Obstruction Chart and Related Products."

The ODS is a derivative of the Airport Obstruction Chart (OC). The source OC is indicated on the ODS cover. All objects, both obstructing and nonobstructing, that carry an elevation on the OC are listed in the ODS. The ODS (and OC) depict a representation of objects that existed at the time of the OC field survey.

ODS information is arranged as follows:

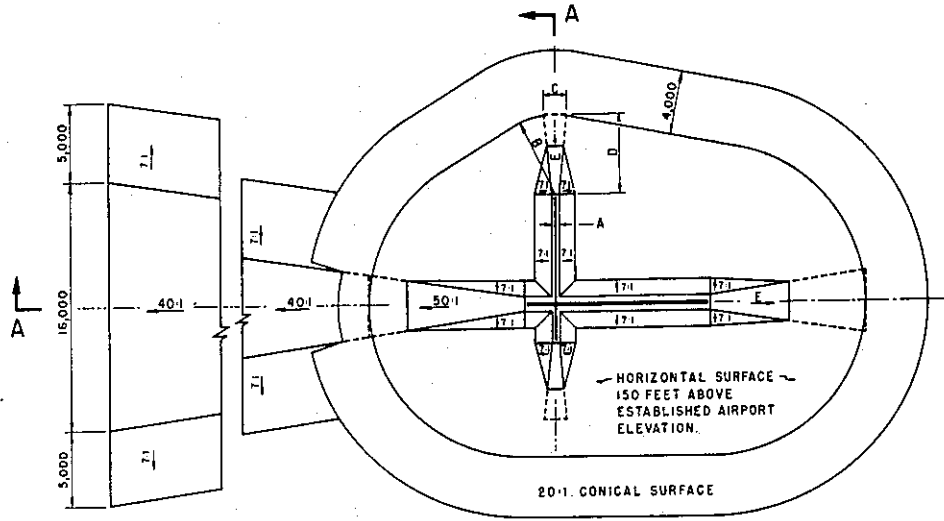
1. Objects located in FAR-77 approach (including supplemental approaches if present) or primary areas are listed with the associated runway (reference runway). For example, all objects in the Runway 9R approach or primary are listed with Runway 9R. Distances to these objects are computed from both the physical end and threshold of Runway 9R. Objects in the Runway 27L approach or primary are listed with Runway 27L. (Objects in the common 9R/27L primary area are listed with both runways.)
2. All objects not included in "1" above are listed with the Airport Reference Point (ARP).
3. Runway configuration and runway lengths, widths, and elevations are presented on the ODS last page.

The FAR-77 imaginary approach surfaces for which the obstruction surveys were performed are coded in the ODS as follows (see footnote 2 on page 3):

A(V) Utility runway - visual approach only
 A(NP) Utility runway - nonprecision instrument approach
 B(V) Nonutility runway - visual approach only
 C Nonutility runway - nonprecision instrument approach with
 visibility minimums greater than 3/4 mile
 D Nonutility runway - nonprecision instrument approach with
 visibility minimums as low as 3/4 mile
 PIR Precision instrument runway
 SUPLC ... Supplemental C underlying a B(V)

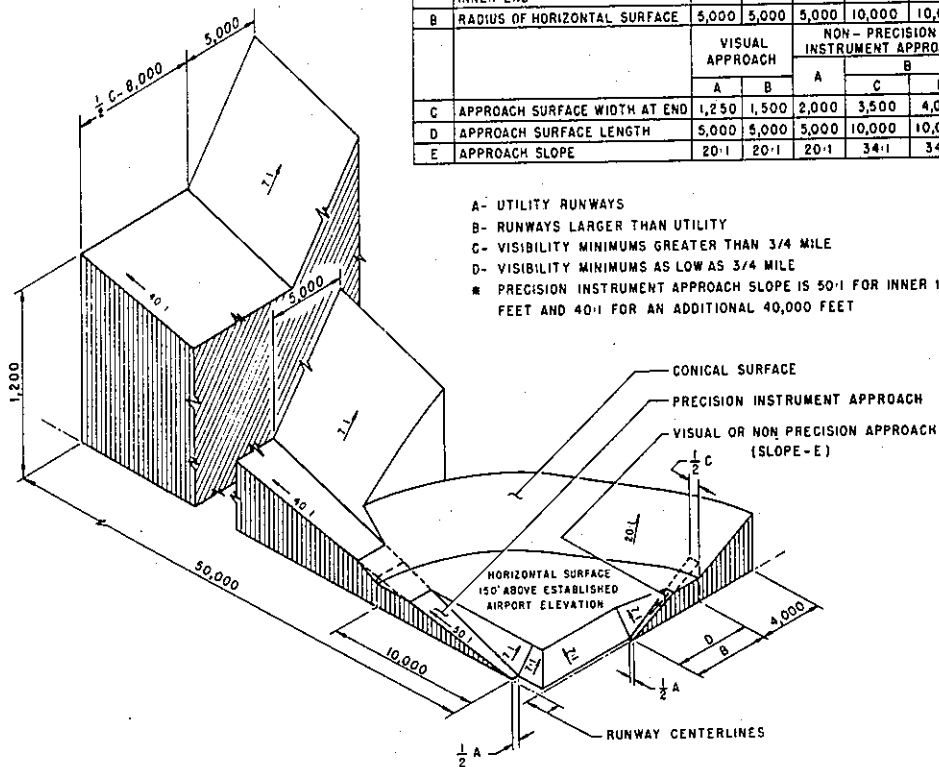
FAR-77 imaginary surface dimensions are defined on page 2 of this report.

Primary surface width is determined by the widest approach at the two approach/primary interfaces for that runway.



DIM	ITEM	DIMENSIONAL STANDARDS (FEET)					
		VISUAL RUNWAY		NON-PRECISION INSTRUMENT RUNWAY			PRECISION INSTRUMENT RUNWAY
		A	B	A	C	D	
A	WIDTH OF PRIMARY SURFACE AND APPROACH SURFACE WIDTH AT INNER END	250	500	500	500	1,000	1,000
B	RADIUS OF HORIZONTAL SURFACE	5,000	5,000	5,000	10,000	10,000	10,000
		VISUAL APPROACH		NON-PRECISION INSTRUMENT APPROACH			PRECISION INSTRUMENT APPROACH
		A	B	A	C	D	
C	APPROACH SURFACE WIDTH AT END	1,250	1,500	2,000	3,500	4,000	16,000
D	APPROACH SURFACE LENGTH	5,000	5,000	5,000	10,000	10,000	*
E	APPROACH SLOPE	20:1	20:1	20:1	34:1	34:1	*

- A- UTILITY RUNWAYS
- B- RUNWAYS LARGER THAN UTILITY
- C- VISIBILITY MINIMUMS GREATER THAN 3/4 MILE
- D- VISIBILITY MINIMUMS AS LOW AS 3/4 MILE
- * PRECISION INSTRUMENT APPROACH SLOPE IS 50:1 FOR INNER 10,000 FEET AND 40:1 FOR AN ADDITIONAL 40,000 FEET



ISOMETRIC VIEW OF SECTION A-A

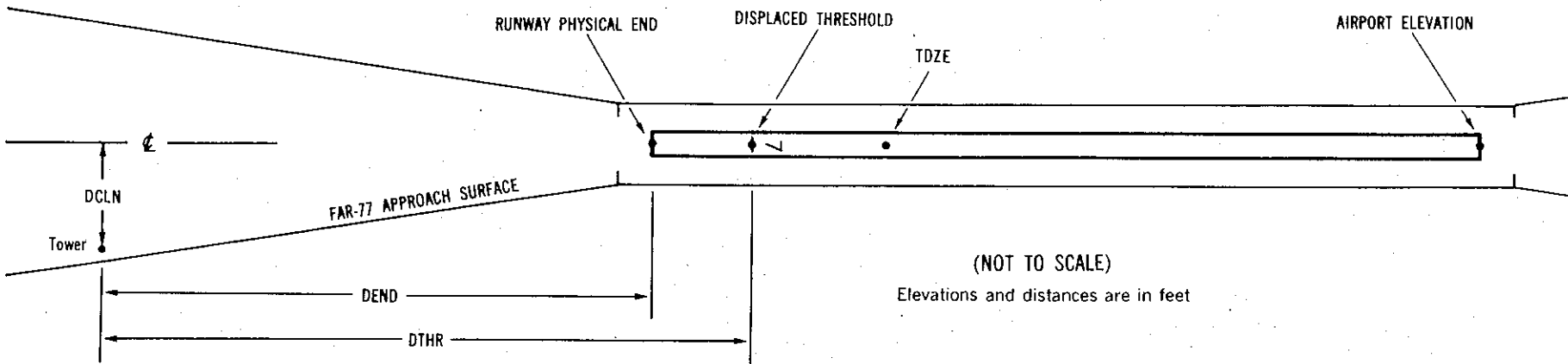
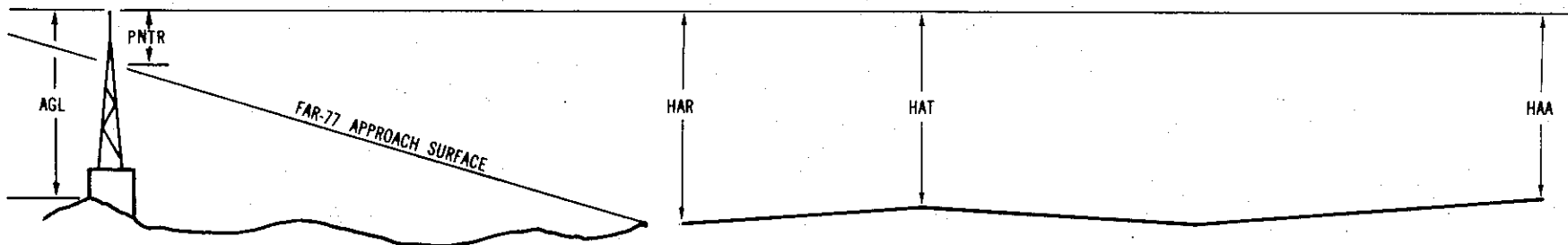
FAR-77 CIVIL AIRPORT
IMAGINARY SURFACES

ANNOTATION OF ODS DATA FORMAT

OC XXXX

AIRPORT ELEVATION XXXX

X ¹	X ²	XXXX/XXXX ³	XXXXXX.XXX ⁴	XXXXXXX.XXX ⁴	XXXXXXX ⁵	XXXX/XXXX ⁶	XXXXXX.XXX ⁷	XXXXXXX.XXX ⁷				
OBJECT	LAT	LONG	A ⁸	ELEV ⁹	AGL ¹⁰	HAR ¹¹	HAT ¹¹	HAA ¹¹	DEND ¹²	DTHR ¹²	DCLN ¹²	PNTR ¹³
XXXXXXXXXXXX	XXXXXX.XXX	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX
XXXXXXXXXXXX	XXXXXX.XXX	XXXXXXXX.XXX	XX	XXXX	XXXX	XXX	XXX	XXX	XXXXX	XXXXX	XXXX	XXXX



(NOT TO SCALE)
Elevations and distances are in feet

EXPLANATION OF FOOTNOTES

- 1 Data block identifier. If a runway number is entered (reference runway), this data block will contain data pertinent to the reference runway and to objects in the FAR-77 approach and primary area of the reference runway. If ARP is entered, this data block will contain the ARP position and data relative to all objects not in an FAR-77 approach or primary area.
- 2 For the reference runway, the lowest FAR-77 approach surface for which an obstruction survey was performed. (More than one surface may be surveyed.)
- 3 Reference runway approach physical end elevation/touchdown zone elevation
- 4 Latitude and longitude of reference runway approach physical end
- 5 Reference runway geodetic azimuth reckoned clockwise from south
- 6 Reference runway displaced threshold elevation/touchdown zone elevation
- 7 Latitude and longitude of reference runway displaced threshold
- 8 Accuracy Code: Horizontal Vertical
 1 = 20 A = 2
 2 = 40 B = 5
 C = 20
- 9 Mean Sea Level (MSL) elevation at top of object. This value includes 15 feet added to noninterstate roads, 17 feet added to interstate roads, and 23 feet added to railroad tracks.
- 10 Height above ground level (AGL). AGLs are provided only for those objects appearing on the OC that are equal to, or greater than, 200 feet AGL. AGL accuracy is ± 10 feet.
- 11 HAA - Height above airport
 HAR - Height above reference runway approach physical end
 HAT - Height above reference runway touchdown zone elevation
- 12 DEND - Distance along reference runway centerline from point perpendicular to object to reference runway approach physical end
 DTHR - Distance along reference runway centerline from point perpendicular to object to reference runway threshold
 DCLN - Distance left (L) or right (R) of reference runway centerline as observed facing forward in a landing aircraft.
- A negative value for DEND or DTHR indicates object is in primary area on roll-out side of zero distance point.
- 13 PNTR - Penetration of indicated FAR-77 approach or primary surface (see footnote 2).

OC0791

AIRPORT ELEVATION 1158

18 C 1158/1158 443452.349N 0711046.419W 3390404

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	443404.93	0711023.87	1A	1147		-11	-11	-11	-5069		191R	17
TREE	443408.10	0711026.25	1A	1147		-11	-11	-11	-4707		237R	18
TREE	443416.36	0711030.80	1A	1165		7	7	7	-3808		246R	41
TREE	443423.35	0711034.50	1A	1156		-2	-2	-2	-3051		243R	34
TREE	443429.06	0711037.77	1A	1152		-6	-6	-6	-2426		258R	27
BUSH	443455.01	0711050.11	1A	1168		10	10	10	347		153R	6
TREE	443459.24	0711053.22	1A	1194		36	36	36	828		211R	18
TREE	443500.90	0711048.05	1A	1186		28	28	28	851		199L	9
TREE	443500.77	0711050.50	1A	1195		37	37	37	902		29L	16
TREE	443500.47	0711055.74	1A	1198		40	40	40	1009		336R	16
TREE	443503.07	0711053.97	1A	1190		32	32	32	1209		123R	2
TREE	443502.90	0711057.75	1A	1208		50	50	50	1291		384R	18
TREE	443521.00	0711053.38	1A	1249		91	91	91	2890		566L	12
TREE	443627.41	0711123.71	1A	1385		227	227	227	9956		920L	-60
TREE	443629.51	0711116.94	1A	1415		257	257	257	9979		1453L	-31

OC0791

AIRPORT ELEVATION 1158

36 SUPLC 1130/1130 443407.163N 0711022.242W 1590421

OBJECT	LAT	LONG	A	ELEV	AGL	HAR	HAT	HAA	DEND	DTHR	DCLN	PNTR
TREE	443429.06	0711037.77	1A	1152		22	22	-6	-2473		258L	27
TREE	443423.35	0711034.50	1A	1156		26	26	-2	-1848		243L	34
TREE	443416.36	0711030.80	1A	1165		35	35	7	-1092		246L	41
TREE	443408.10	0711026.25	1A	1147		17	17	-11	-193		237L	18
TREE	443404.93	0711023.87	1A	1147		17	17	-11	169		191L	17
TREE	443403.46	0711021.16	1A	1142		12	12	-16	378		61L	7
TREE	443402.40	0711017.20	1A	1159		29	29	1	581		169R	18
TREE	443359.63	0711016.44	1A	1163		33	33	5	863		119R	14
TREE	443400.28	0711013.06	1A	1196		66	66	38	889		372R	46
TREE	443355.94	0711016.31	1A	1191		61	61	33	1215		4L	31
TREE	443349.59	0711009.58	1A	1218		88	88	60	1990		220R	35
TREE	443345.94	0711015.00	1A	1212		82	82	54	2195		278L	23
TREE	443343.86	0711009.09	1A	1237		107	107	79	2545		46R	38
HAZARD BEACON	443323.00	0711011.39	1A	1376		246	246	218	4458		864L	121
TREE	443320.97	0711010.37	1A	1398		268	268	240	4676		868L	136
TREE	443320.28	0711007.78	1A	1408		278	278	250	4809		718L	142
TREE	443320.81	0711004.63	1A	1406		276	276	248	4840		485L	140
TREE	443322.02	0710943.71	1B	1365		235	235	207	5266		973R	86

AIRPORT ELEVATION 1158

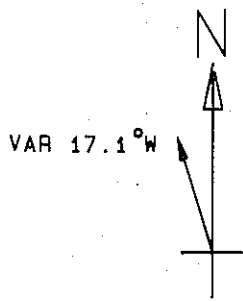
ARP 443429.756N 0711034.329W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG	BEARING	DISTANCE
TREE	443429.97	0711029.70	1A	1180		22	103	26	336
TREE	443424.74	0711038.33	1A	1172		14	226	46	585
AIRPORT BEACON	443433.09	0711042.49	1A	1165		7	316	52	681
TREE	443432.42	0711045.82	1A	1205		47	305	5	875
TREE	443422.25	0711025.15	1A	1187		29	155	55	1009
TREE	443439.78	0711034.50	1A	1177		19	16	25	1016
OL ON POLE	443426.17	0711020.04	1A	1221		63	126	27	1096
TREE	443437.19	0711045.40	1A	1189		31	330	20	1100
TREE	443434.66	0711019.92	1A	1245		87	81	38	1155
TREE	443418.31	0711032.63	1A	1187		29	191	3	1166
TREE	443418.24	0711023.65	1A	1177		19	163	34	1399
TREE	443415.13	0711034.14	1A	1192		34	196	35	1482
TREE	443444.62	0711036.68	1A	1181		23	10	39	1515
TREE	443412.43	0711033.55	1A	1201		43	195	15	1755
TREE	443445.42	0711047.94	1A	1172		14	345	16	1867
TREE	443417.52	0711013.75	1A	1232		74	146	51	1938
TREE	443410.51	0711019.61	1A	1178		20	168	26	2221
TREE	443452.17	0711042.30	1A	1172		14	2	51	2342
TREE	443406.19	0711026.76	1A	1185		27	184	10	2449
TREE	443404.80	0711030.91	1A	1230		72	191	31	2539
TREE	443451.22	0711053.56	1A	1201		43	344	28	2581
TREE	443454.75	0711054.98	1A	1212		54	346	32	2939
TREE	443500.00	0711044.98	1A	1207		49	2	58	3159
TREE	443449.11	0710952.99	1B	1399		241	73	52	3577
TREE	443500.42	0711007.50	1B	1468		310	49	7	3662
TREE	443512.18	0711019.16	1B	1509		351	31	26	4435
HAZARD BEACON	443512.35	0711015.93	1B	1516		358	34	15	4515
TREE	443345.27	0711019.50	1A	1204		46	183	42	4631
TREE	443519.59	0711030.43	1B	1456		298	20	18	5055
TREE	443520.21	0711046.94	1A	1298		140	6	58	5190
TREE	443350.08	0710937.97	1B	1369		211	151	39	5727
HAZARD BEACON	443432.88	0711201.30	1B	1382		224	289	59	6304
HAZARD BEACON	443352.46	0710920.16	1B	1445		287	142	13	6565

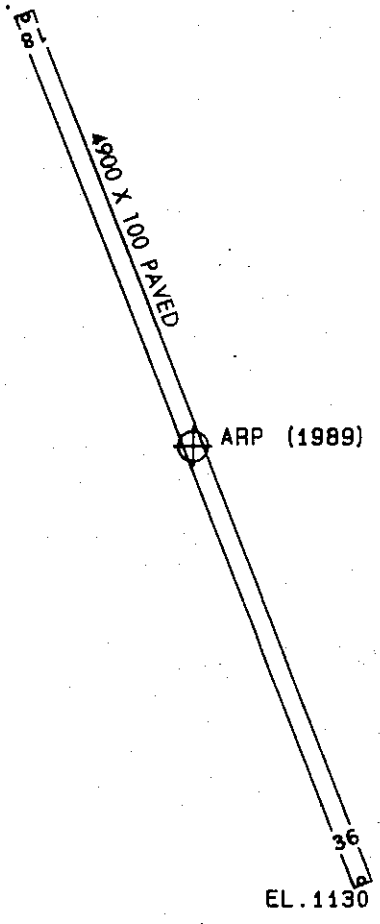
AIRPORT ELEVATION 1158

ARP 443429.756N 0711034.329W

OBJECT	LAT	LONG	A	ELEV	AGL	HAA	MAG	BEARING	DISTANCE
TREE	443442.27	0711211.00	1B	1438		280	297	23	7111
HAZARD BEACON	443440.27	0710848.36	1B	1565		407	99	11	7744
TREE	443522.53	0711156.89	1B	1382		224	328	55	8017
TREE	443311.70	0711055.41	1B	1418		260	208	2	8051
TREE	443330.73	0710919.05	1B	1586		428	154	44	8089
TREE	443524.86	0710911.13	1B	1360		202	64	16	8209
TREE	443320.90	0711138.50	1B	1432		274	230	47	8380
TREE	443348.62	0710846.32	1B	1567		409	135	8	8860
HAZARD BEACON	443325.58	0710842.58	1B	1955		797	145	52	10378
TREE	443448.31	0711258.10	1B	1611		453	297	21	10575
HAZARD BEACON	443306.17	0711210.67	1B	1634		476	236	36	10968
TREE	443306.29	0711213.88	2C	1644		486	237	34	11109
TREE	443334.73	0710818.00	1B	1955		797	136	32	11334
TREE	443615.67	0710931.44	1B	1536		378	40	5	11652
TREE	443552.07	0710841.69	2C	1366		208	61	27	11660
TREE	443251.80	0711204.60	2C	1651		493	230	29	11879
TREE	443340.41	0711308.36	2C	1509		351	262	59	12220
TREE	443422.55	0711323.04	2C	1782		624	283	42	12235
ANT & HZD BCN ON LOOKOUT	T443420.02	0711325.31	2C	1800		642	282	34	12417
TREE	443632.77	0711033.11	2C	1334		176	17	30	12458
TREE	443227.55	0710942.08	2C	1337		179	180	6	12941
TREE	443507.64	0710728.45	2C	1536		378	91	10	13990
TREE	443247.15	0710820.23	2C	1470		312	154	2	14221
TREE	443209.59	0711051.75	2C	1524		366	202	11	14251
TREE	443355.47	0710716.86	2C	1840		682	120	44	14711
SKI JUMP	443201.14	0711019.59	2C	1441		283	193	3	15088
TREE	443206.96	0711143.08	2C	1729		571	216	6	15294
TREE	443647.43	0710904.76	2C	2045		887	42	1	15376
TREE	443521.40	0711356.86	2C	1816		658	306	45	15564
TREE	443703.43	0711051.03	2C	1480		322	12	40	15610
TREE	443555.35	0711339.28	2C	1811		653	320	3	15947
TREE	443709.56	0711059.28	2C	1534		376	10	44	16283
TREE	443711.08	0711032.04	2C	1551		393	17	41	16338



ARPT ELEV. 1158 FT.



TOUCHDOWN ZONE	
RUNWAY ELEVATION	
18	1158
36	1130

BERLIN MUNICIPAL AIRPORT
BERLIN, NEW HAMPSHIRE
(NOT TO SCALE)