

### GEN 2.3 CHART SYMBOLS

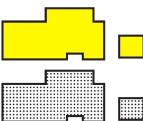
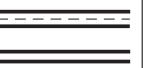
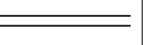
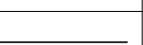
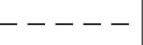
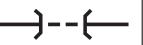
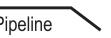
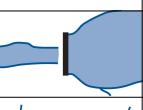
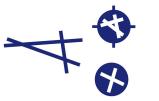
#### TOPOGRAPHY

1	Contours		8	Gravel		12	Highest elevation on chart	<b>17456</b>
2	Approximate contours		9	Levee or esker		13	Spot elevation	.17456 .6397 .8975
3	Relief shown by hachures		10	Unusual land features appropriately labelled		14	Spot elevation (of doubtful accuracy)	.6370 <sup>±</sup>
4	Bluff, cliff or escarpment		11	Active volcano		15	Coniferous trees	
5	Lava flow		12	Mountain pass		16	Other trees	
6	Sand dunes		13			17	Palms	
7	Sand area							

18 Areas not surveyed for contour information or relief data incomplete Caution

#### HYDROGRAPHY

19	Shore line(reliable)		30	Abandoned canal Note. Dry canal having landmark value		38	Reservoir	
20	Shore line(unreliable)		31	Lakes (perennial)		39	Dry lake bed	
21	Tidal flats		32	Lakes (non-perennial)		40	Wash	
22	Coral reefs and ledges		33	Salt lake		41	Shoals	
23	Large river(perennial)		34	Salt pans(evaporator)		42	Glaciers and ice caps	
24	Small river(perennial)		35	Swamp		43	Danger line (2 m or one fathom line)	
25	Rivers and streams (non-perennial)		36	Rice field		44	Charted isolated rock	+
26	Rivers and streams (unsurveyed)		37	Spring, well or water hole		45	Rock awash	
27	Rapids					46	Unusual water features appropriately labelled	
28	Falls							
29	Canal							

CULTURE			
BUILT-UP AREAS			
47	City or large town		
48	Town	○	
49	Village	○	
50	Buildings		
HIGHWAYS AND ROADS			
57	Dual highway		
58	Primary road		
59	Secondary road		
60	Trail		
61	Road bridge		
62	Road Tunnel		
MISCELLANEOUS (Cont.)			
69	Pipeline		
70	Oil or gas field		
71	Tank farms		
72	Nuclear power station		
73	Coast guard station		
74	Lookout tower		
75	Mine		
76	Forest ranger station		
77	Race track stadium		
78	Ruins		
79	Fort		
80	Church		
81	Mosque		
82	Pagoda		
83	Temple		
RAILROADS			
51	Railroad (single track)		
52	Railroad (two or more tracks)		
53	Railroad (under construction)		
54	Railroad bridge		
55	Railroad tunnel		
56	Railroad station		
MISCELLANEOUS			
63	Boundaries (international)		
64	Outer boundary		
65	Fence		
66	Telegraph or telephone line (when a landmark)		
67	Dam		
68	Ferry		
AERODROMES			
84	Civil	Land	
85	Civil	Water	
86	Military	Land	
87	Military	Water	
88	Joint Civil and military	Land	
89	Joint Civil and military	Water	
90	Emergency aerodrome or aerodrome with no facilities		
91	Abandoned or closed aerodrome		
92	Sheltered anchorage		
93	Aerodrome for use on charts on which aerodrome classification is not required <i>e.g. Enroute Charts</i>		
94	Heliport <i>Note. Aerodrome for the exclusive use of helicopters</i>		
95	<b>Note.</b> Where required by the function of the chart, the runway pattern of the aerodrome may be shown in lieu of the aerodrome symbol, for example :		

Change : Amended phrase(hiways → highways).

AERODROMES (Cont.)

AERODROME DATA IN ABBREVIATED FORM WHICH MAY BE  
IN ASSOCIATION WITH AERODROME SYMBOLS

96	<p>Elevation given in the units of measurement (metres or feet) selected for use on the chart</p> <p>Minimum lighting – obstacles, boundary or runway lights and lighted wind indicator or landing direction indicator</p> <p><i>Note.— A dash (-) is to be inserted where L or H do not apply.</i></p>	<p>Name of aerodrome LIVINGSTONE 357 L H 95</p> <p>Length of longest runway in hundreds of metres or feet (whichever unit is selected for use on the chart)</p> <p>Runway hard surfaced, normally all weather</p>
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AERODROME SYMBOLS FOR APPROACH CHARTS

97	<p>Aerodromes affecting the traffic pattern on the aerodrome on which the procedure is based</p>		98	<p>The aerodrome on which the procedure is based</p>	
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RADIO NAVIGATION AIDS\*

99	<p>Basic radio navigation aid symbol</p> <p><i>Note. This symbol may be used with or without a box to enclose the data.</i></p>			
100	<p>Non-directional radio beacon</p> <p>NDB</p>			
101	<p>VHF omnidirectional radio range</p> <p>VOR</p>			
102	<p>Distance measuring equipment</p> <p>DME</p>			
103	<p>Collocated VOR and DME radio navigation aids</p> <p>VOR/DME</p>			
104	<p>DME distance</p>	<p>Distance in kilometres (nautical miles) to DME → 15 km</p> <p>Identification of radio navigation aid → KAV</p>		
105	<p>VOR radial</p>	<p>Radial bearing from, and identification of, VOR → R 090 KAV</p>		
106	<p>UHF tactical air navigation aid</p>	<p>TACAN</p>		
107	<p>Collocated VOR and TACAN radio navigation aids</p>			
108	<p>Instrument landing system</p> <p>ILS</p>		<p>PLAN VIEW</p> <p>Electronic</p> <p>FRONT COURSE</p> <p>BACK COURSE</p> <p>PROFILE</p> <p>Electronic</p> <p>GLIDE PATH</p>	
109	<p>Radio marker beacon</p>		<p>Elliptical</p> <p>Bone Shape</p>	

*Note. Marker beacon may be shown by outline, or stipple, or both.*

110	<p>Compass rose</p> <p>To be orientated on the chart in accordance with the alignment of the station (normally Magnetic North)</p>		<p>Compass rose to be used as appropriate in combination with the following symbols:</p>	
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\* Note. Guidance material on the presentation of radio navigation aid data is given in the Aeronautical Chart Manual(Doc 8697).

AIR TRAFFIC SERVICES

111	Flight information region	FIR					
112	Aerodrome traffic zone	ATZ					
113	Control area Airway Controlled route	CTA AWY	Alternative	    			
114	Uncontrolled route						
115	Advisory airspace	ADA					
116	Controlled zone	CTR					
117	Air defence identification zone	ADIZ			ADIZ		
118	Advisory route	ADR	Alternative	  	ADR		
119	Visual flight path			compulsory with radio communication requirement compulsory, without radio communication requirement recommended			
120	Scale-break (on ATS route)		Alternative				

Significant Point Functionality							
			Significant point depiction for conventional navigation		Significant point depiction for area navigation		
REPORTING FLY-BY/FLY-OVER			On request (N/A)	Compulsory (N/A)	On request fly-by	Compulsory fly-by	On request flyover
121	Basic symbols with functionality	VFR reporting point					
		Intersection INT					
		VORTAC					
		TACAN					
		VOR					
		VOR/DME					
		NDB					
		Waypoint WPT	Not used	Not used			

122	Change-over point To be superimposed on the appropriate route symbol at right angles to the route	COP	26 36	123	AIS/MET reporting point MRP	Compulsory	124	Final approach fix FAF	
						On request			

Change : Amended phrase(requirement recommended → recommended) and table.

AIR TRAFFIC SERVICES (cont.)

125	Altitudes/flight levels	Altitude/flight level "window"	<u>17 000</u>	FL 220
		"At or above" altitude/flight level	<u>7 000</u>	FL 070
		"At or below" altitude/flight level	<u>5 000</u>	FL 050
		"At" altitude/flight level	<u>3 000</u>	FL 030
		"Recommended" altitude/flight level	5 000	FL 050
		"Expected" altitude/flight level	Expect 5 000	Expect FL 050



AIRSPACE CLASSIFICATIONS

126	Airspace classifications	A	Aeronautical data in abbreviated form to be used in association with airspace classification symbols :			
		B	Type	TMA DONLON	119.1	
		C	Name or call sign	200m	AGL - FL 245	
		D	Radio frequency(ies)	Airspace classification	Vertical limits	
		E				
		F				
		G				

127  
Alternative

TMA DONLON  
C  
FL 245  
200m AGL  
119.1

AIRSPACE RESTRICTIONS

128	Restricted airspace (prohibited, restricted or danger area)		Common boundary of two areas	
<i>Note. The angle and density of rulings may be varied according to scale and the size, shape and orientation of the area.</i>				
129	International boundary closed to passage of aircraft except through air corridor			

OBSTACLES

130	Obstacle		134	Exceptionally high obstacle (optional symbol)	
131	Lighted obstacle		135	Exceptionally high obstacle-lighted (optional symbol) <i>Note. For obstacles having a height of the order of 300 m (1 000 ft) above terrain.</i>	
132	Group obstacles		136	Elevation of top (italics) <i>52</i> (15)	Height above specified datum (upright type in parentheses)
133	Light group obstacles				

MISCELLANEOUS

137	Prominent transmission line		140	Wind Turbine - unlighted and lighted	
138	Isogonic line or isogonal				
139	Ocean station vessel (normal position)		141	Wind Turbine - minor group and group in major area, lighted	

VISUAL AIDS

142	Marine light <i>Note 2. Characteristics are to be indicated as follows :</i>		F Alt Alternating B Blue F Fixed	Note 1. Marine alternating lights are red and white unless otherwise indicated. Marine lights are white unless colours are stated. F1 Flashing      Occ Occulting      sec Second G Green      R Red      (U) Unwatched Gp Group      SEC Sector      W White		
143	Aeronautical ground light			144	Lightship	

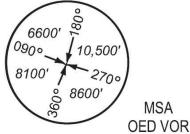
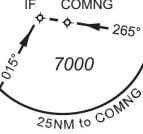
SYMBOLS FOR AERODROME/HELIPORT CHARTS

145	Hard surface runway		154	Point light	
146	Pierced steel plank or steel mesh runway				
147	Unpaved runway		155	Obstacle light	
148	Stopway SWY		156	Landing direction indicator (lighted)	
149	Taxiways and parking areas		157	Landing direction indicator (unlighted)	
150	Helicopter alighting area on an aerodrome		158	Stop bar	
151	Aerodrome reference point ARP		159	Runway-holding position Pattern A Pattern B	 
152	VOR check-point		Note. For application, see Annex 14, Volume I, 5.2.10.		
153	Runway visual range (RVR) observation site		160	Intermediate holding position Note. For application, see Annex 14, Volume I, 5.2.11.	
			161	Hot spot Note. Hot spot location to be circled.	

SYMBOLS FOR AERODROME OBSTACLE CHARTS - TYPE A, B AND C

	Plan	Profile	Plan	Profile
162	Tree or shrub	*		
163	Pole, tower, spire, antenna, etc.	○		
164	Building or large structure	■	Identification number 	
165	Railroad	—+—+—		
166	Transmission line or overhead cable	—T—T—		
167	Terrain penetrating obstacle plane			
168	Escarpment			
169	Stopway SWY			
170	Clearway CWY			

ADDITIONAL SYMBOLS FOR USE ON PAPER AND ELECTRONIC CHARTS

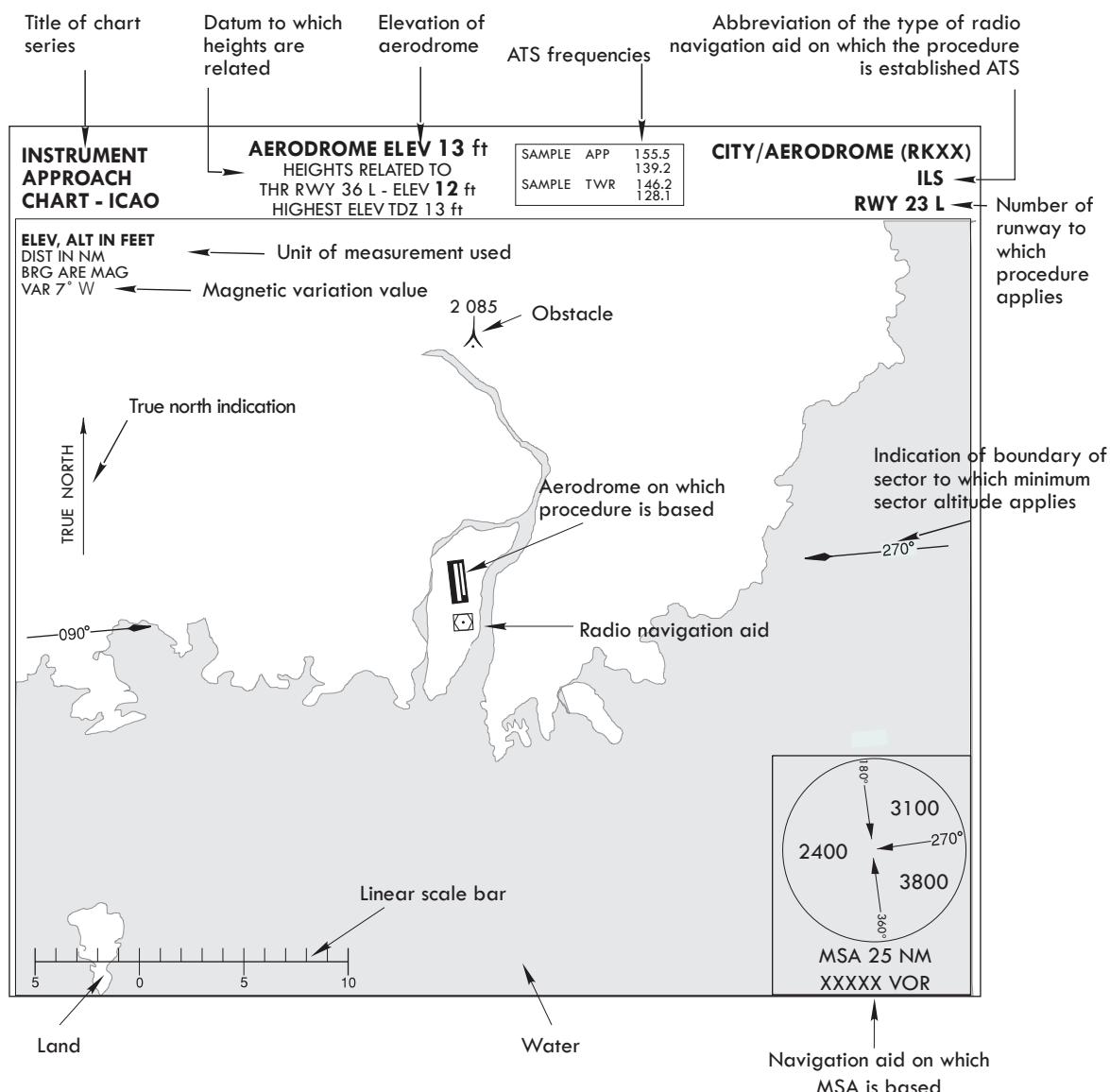
PLAN VIEW		Electronic
171	Minimum sector altitude <i>Note. This symbol may be modified to reflect particular sector shapes.</i>	MSA 
172	Terminal arrival altitude <i>Note. This symbol may be modified to reflect particular TAA shapes.</i>	TAA 
173	Holding pattern	
174	Missed approach track	

PROFILE

175	Runway	
176	Radio navigation aid (type of aid and its use in the procedure to be annotated on top of the symbol)	
177	Radio marker beacon (type of beacon to be annotated on top of the symbol)	
178	Collocated radio navigation aid and marker beacon (type of aid to be annotated on top of the symbol)	
179	DME fix (distance from DME and the fix use in the procedure to be annotated on top of the symbol)	
180	Collocated DME fix and marker beacon (distance from DME and the type of beacon to be annotated on top of the symbol)	

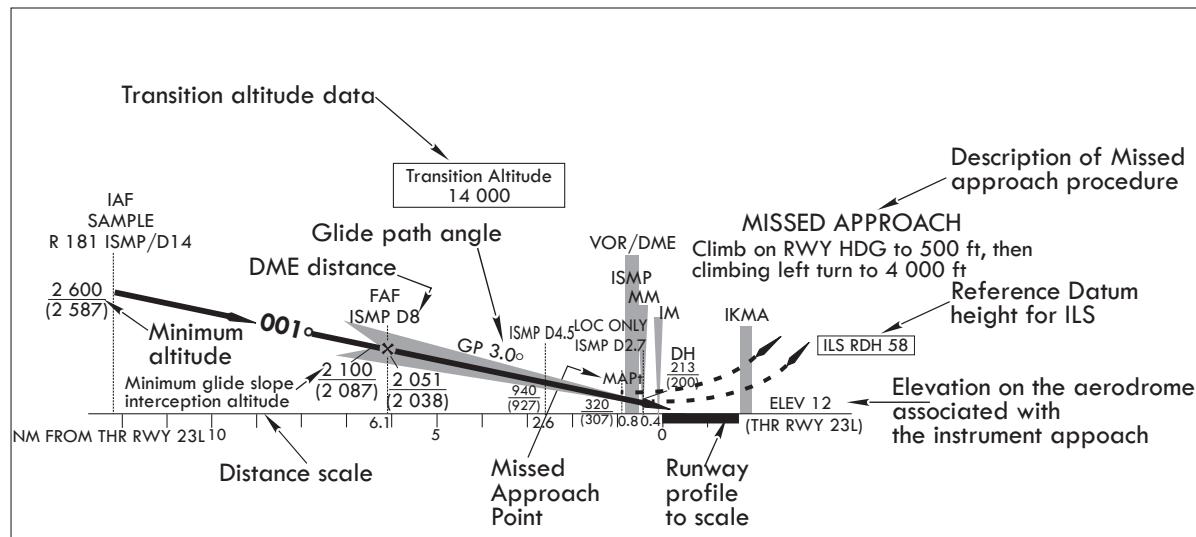
### INSTRUMENT APPROACH CHART - FORMAT

#### 1. PLAN VIEW



**INSTRUMENT APPROACH CHART - FORMAT(Cont)**

**2. PROFILE VIEW**



**3. AERODROME OPERATING MINIMA**

- MDA/MDH and, DH/DA are shown in feet.
- RVR visibility values are charted only when the value is not the same as the prevailing visibility value. When a difference occurs, the respective RVR and prevailing visibility values are prefixed with "RVR" and "VIS". When there is no difference, the minimum is shown only once and means either RVR (if RVR is reported for that runway) or visibility if measured otherwise.
  - When RVR and visibility values are the same, it is indicated as "800 m".
  - When RVR and visibility values are not the same, it is indicated as "RVR 800 m VIS 1 600 m".

**IFR LANDING MINIMA - for FAA format**

\* Aerodrome operating minima for joint civil/military aerodrome and military aerodrome is tabulated as follows:

Aircraft Category	Decision Height(DH) MSL				* Prevailing Visibility/RVR (RVR in 100s of feet)	Height of DH (using QFE) above touchdown zone(HAT)	Ceiling in feet & Prevailing Visibility in SM
	CATEGORY	A	B	C			
S-ILS 27		362 / 24	200	(200-1/2)			
S-LOC 27	440 / 24	278 (300-1/2)	440 / 40	278 (300-3/4)			
CIRCLING	520-1 350 (400-1)	620-1 1/4 450 (500-11/4)	620-1 3/4 450 (500-13/4)	720-2 1/4 550 (600-21/4)			
S-PAR 27	262 / 16	100 (100-1/4)	GS 2.50°				

Annotations pointing to the table:

- Precision Straight-in to Runway 27 points to the first row.
- Non-Precision (Localizer) Straight-in to Runway 27 points to the second row.
- Precision Approach Radar straight-in to Runway 27 points to the third row.
- Decision Height(DH) MSL and Decision Altitude(DA) MSL point to the first column.
- Aircraft Category points to the second column.
- \* Prevailing Visibility/RVR (RVR in 100s of feet) points to the third column.
- Height of DH (using QFE) above touchdown zone(HAT) points to the fourth column.
- Ceiling in feet & Prevailing Visibility in SM points to the fifth column.
- Minimum Descent Altitude (MDA) points to the second row, third column.
- Height of MDA (using QFE) above touchdown zone(HAT) points to the third row, third column.
- Glide Slope Angle points to the third row, fifth column.
- Height of MDA (using QFE) above airport (HAA) points to the third row, sixth column.

\* Slash(/) denotes RVR Values and a dash(-) denotes Prevailing Visibility.

Aerodrome Operation Minima CONVERSION CHART

<u>CEILING</u>			<u>RUNWAY VISIBILITY</u>					
PUBLISHED MINIMA FEET	REQUIRED EQUIVALENT METERS	RVR VALUES PUBLISHED IN HUNDREDS OF FEET	STATUTE MILE EQUIVALENT	NAUTICAL MILE EQUIVALENT	METERS EQUIVALENT	KILOMETERS EQUIVALENT		
100	.....	30	12	.....	1/4(Helicopter Only)	...	2/10 ..... 370 ..... .4	
200	.....	60						
300	.....	90	16	.....	1/4	.....	2/10 ..... 490 ..... .5	
400	.....	120	20	.....	3/8	.....	3/10 ..... 610 ..... .6	
500	.....	150	24	.....	1/2	.....	4/10 ..... 730 ..... .7	
600	.....	180	32	.....	5/8	.....	6/10 ..... 970 ..... 1.0	
700	.....	210	40	.....	3/4	.....	7/10 ..... 1 220 ..... 1.2	
800	.....	240	45	.....	7/8	.....	8/10 ..... 1 370 ..... 1.4	
900	.....	270	50	.....	1	.....	9/10 ..... 1 520 ..... 1.5	
1 000	.....	300	60	.....	1-1/4	.....	1-1/10 ..... 1 830 ..... 1.8	
1 100	.....	330						
1 200	.....	360						
1 300	.....	390						
1 400	.....	420						
1 500	.....	450						

PREVAILING VISIBILITY

STATUTE MILES	NAUTICAL MILES	METERS	KILOMETERS	STATUTE MILES	NAUTICAL MILES	METERS	KILOMETERS
1/8	....	1/10	....	200	....	.2	....
1/4	....	2/10	....	400	....	.4	....
3/8	....	3/10	....	600	....	.6	....
		4/10	....	700	....	.7	....
1/2				800	....	.8	....
		5/10	....	900	....	.9	....
5/8	.....			1 000	....	1.0	....
		6/10	....	1 100	....	1.1	....
3/4	.....			1 200	....	1.2	....
		7/10	....	1 300	....	1.3	....
7/8	.....			1 400	....	1.4	....
		8/10	....	1 500	....	1.5	....
1	.....			1 600	....	1.6	....
		9/10	....	1 700	....	1.7	....
1-1/8	....	1	....	1 800	....	1.8	....
1-1/4	....	1-1/10	....	2 000	....	2.0	....
1-3/8	....	1-2/10	....	2 200	....	2.2	....
1-1/2	....	1-3/10	....	2 400	....	2.4	....
1-5/8	....	1-4/10	....	2 600	....	2.6	....
					3	....	6 000 ..... 6.0

**Procedure Coding Tables - for ICAO format**

Serial Number	Path Descriptor	Waypoint/Fix Sequence Numbers	Waypoint Identifier	Fly Over	Course/Track o M( $\circ$ T)	Distance (NM)	Turn Direction	Altitude (ft)	Speed (kt)	Coordinates	VPA /TCH	Navigation specification	Remarks
001	IF	DANAN	-	-	-	-	-	+5000	-	(R 291 NCN/D12, R 305 WNG/D14)	-	RNP APCH	IAF
002	TF	RWY 15L	Y	153(144.6)	2.0	-	-	@450	-	(R 152 NCN/D1, R 359 WNG/D3)	-3.01/50	RNP APCH	
004	HM	KESAN	Y	033(025.0)	-	-	R	-5000 +4000	-	(R 222 NCN/D14, R 235 WNG/D12)	-	RNP APCH	1 min (Outbound Timing)

Magnetic Track/True Track between each successive designated significant point

Nautical mile between each successive designated significant point

Fly-Over Waypoint "Y"  
Fly-By Waypoint "-"

Speed Limit  
+ "Minimum" Speed  
- "Maximum" Speed  
@ "Mandatory" Speed  
± Speed "Window"

Required navigation performance or basis for the approval applicable to the procedure

+ "at or above" Altitude/Flight  
- "at or below" Altitude/Flight  
@ "Mandatory" Altitude/Flight  
± Altitude/Flight Level "Window"