

AERONAUTICAL CHARTING FORUM
Charting Group
Meeting 09-02 - October 28-29, 2009

RECOMMENDATION DOCUMENT

FAA Control # 09-02-225

Subject: Charting Special Authorization (SA) CAT I and SA CAT II Approach Procedures

Background/Discussion: Order 8400.13D contains the criteria for Special Authorization CAT I (SA CAT I) (to a RA DH as low as 150 ft and visibility as low as RVR 1400) and Special Authorization CAT II (SA CAT II) (formerly known as CAT II on Type I – CAT II to runways with at least a MALSRL but without touchdown zone (TDZ) and/or runway centerline lights (RCL)). 8400.13D has been revised in part to address growing concern about the potential for confusion with the introduction of new minima. We have attempted to address these concerns via chart notes, so the pilot can easily see any equipment requirements relevant to the landing minimum.

We chose the name “Special Authorization CAT I(II)” to help simplify the terminology. The previous “CAT II on Type I” terminology caused a lot of unnecessary confusion, when the only information relevant to the pilot is:

1. Determining if the approach is a standard CAT II or a SA CAT II (or standard CAT I vs SA CAT I), and if they are authorized to fly those approaches.
2. Determining any equipment requirements or restrictions associated with that approach.

The introduction of new SA CAT I criteria has the potential to create a confusing charting solution. 8400.13D requires that the SA CAT I line be charted on the standard CAT I plate, with a new line of RA minima published beneath a “Special Aircraft and Aircrew Certification Required” header (similar to the previous method of charting non-standard 1800 RVR mins). This means that most SA CAT I procedures will have a minimum of 4 lines of minima (ILS, LOC, Circling, and SA CAT I), with an SAACR heading above the SA CAT I minimum also causing congestion in the minima block. Additional lines of minima, such as additional LOC and Circling created by a stepdown fix inside the FAF, or a sidestep minimum, would create ILS Z and ILS Y charts at several airports. We can likely disregard additional mins with an alternate altimeter setting. Because SA CAT I requires a control tower, the odds of additional altimeter setting lines are slim.

When SA CAT I is charted in this manner, there is great potential for confusion. In many cases, the 1800 RVR chart note will be required in reference to the RVR 2400 minimum, and the SA CAT I chart note will also be required (Requires specific OpSpec, MSPEC, or

LOA approval and use of HUD to DH). Also, the addition of charted CAT II style RA mins in both the minima line and the profile view potentially adds to the confusion.

Recommendations: To help simplify all CAT I ILS minimums, and avoid additional lines or additional ILS Z and ILS Y charts, we are proposing a new charting standard for SA CAT I. This chart would be similar to the CAT II/III charts, with a few minor changes:

1. “ILS RWY 27R (CAT II)” is changed to “ILS RWY 27R (SA CAT I)” in the title at the top and bottom.
2. “CATEGORY II ILS – SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED” is changed to “SPECIAL AIRCREW & AIRCRAFT CERTIFICATION REQUIRED”
3. Add the chart note “Requires specific OpSpec, MSpec, or LOA approval and use of HUD to DH.” It does not need to be referenced to a specific line of minima since SA CAT I would be the only minimum on the chart.

We also proposed a similar change be applied to SA CAT II approaches to help pilots differentiate between SA CAT II and standard CAT II. 8400.13D requires a change to the chart note, which adds the equipment requirement and eliminates the ICAO reference, creating a shorter chart note. The proposed SA CAT II plate would contain the new chart note, and change the chart title from “(CAT II)” to “(SA CAT II)”.

Attached to this recommendation document are sample NACO and Jeppesen approach charts showing:

1. A combined CAT I / SA CAT I approach chart
2. A unique SA CAT I approach chart
3. A unique SA CAT II approach chart

Comments: This recommendation affects all current SA CAT II approach procedures (BOS 33L; SEA 34R, 34C, 34L; BOI 10R; PIE 17L; PHL 27R; PIT 28R), and possibly some SA CAT II procedures in development. To date, no SA CAT I approaches have been developed.

Submitted by: Bryant Welch / Mark Fox

Organization: FAA / AFS-410

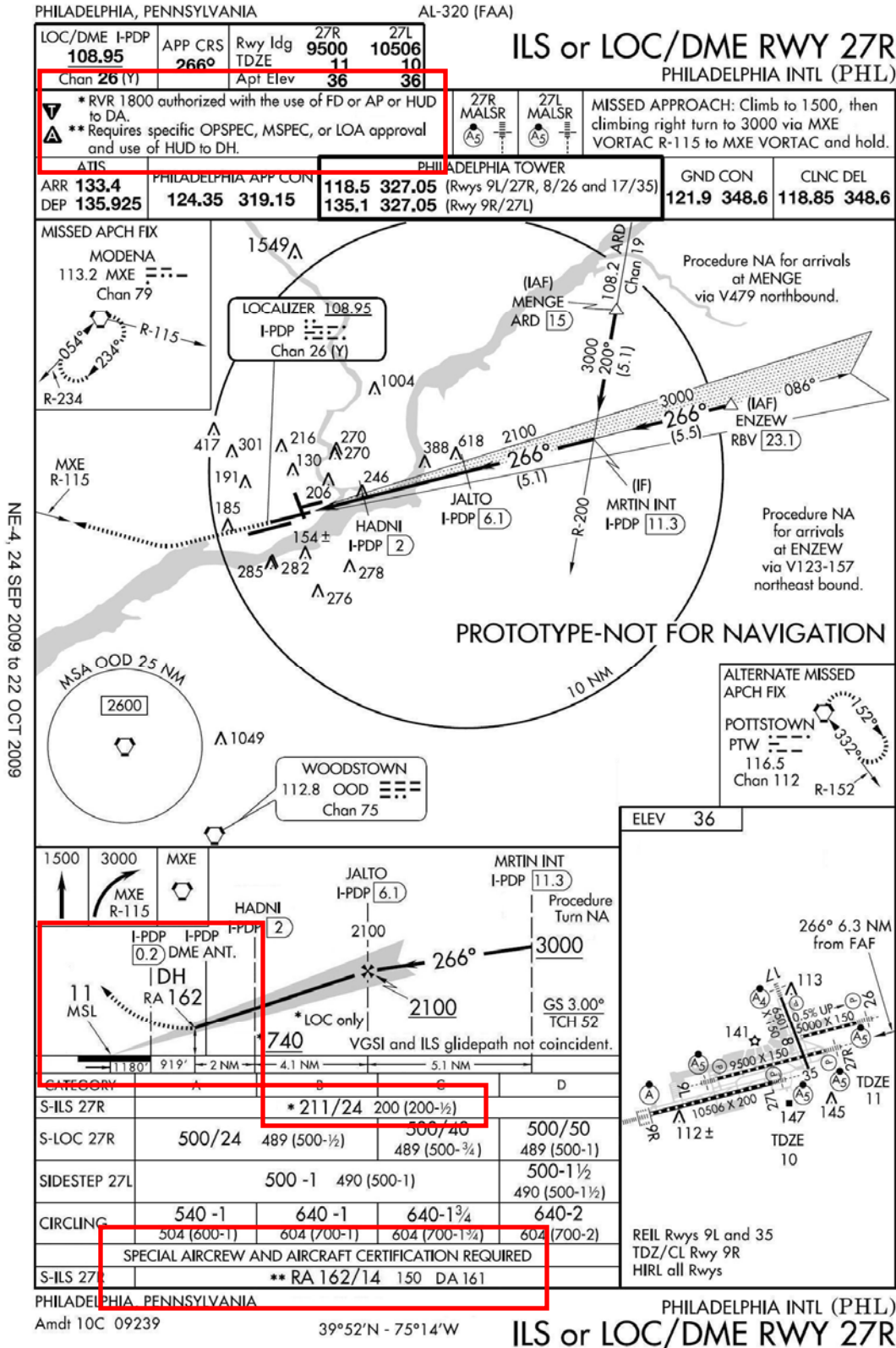
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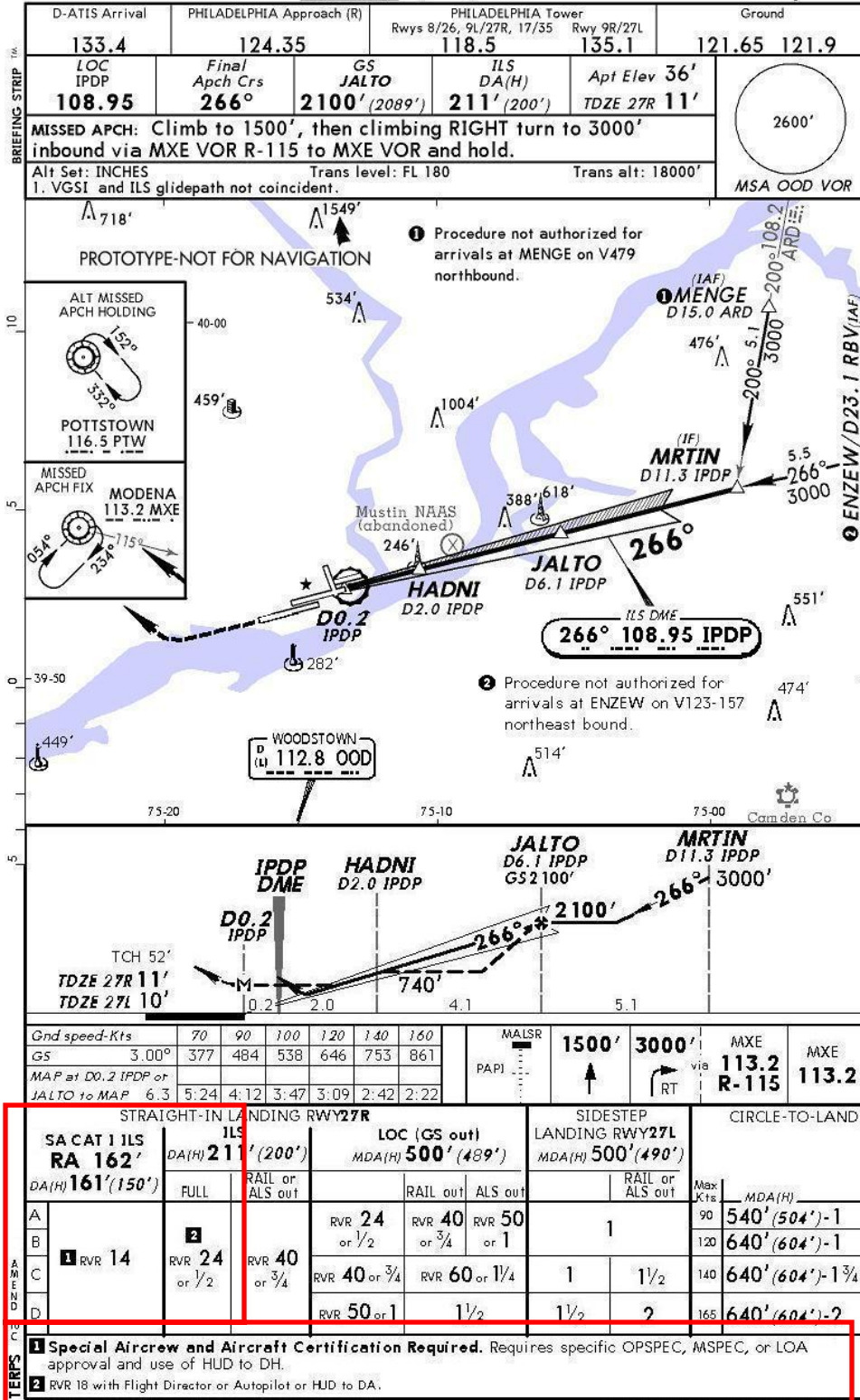
Date: October 26, 2009

Sample NACO SA CAT I Chart with standard CAT I, 1800 RVR, and SA CAT I mins

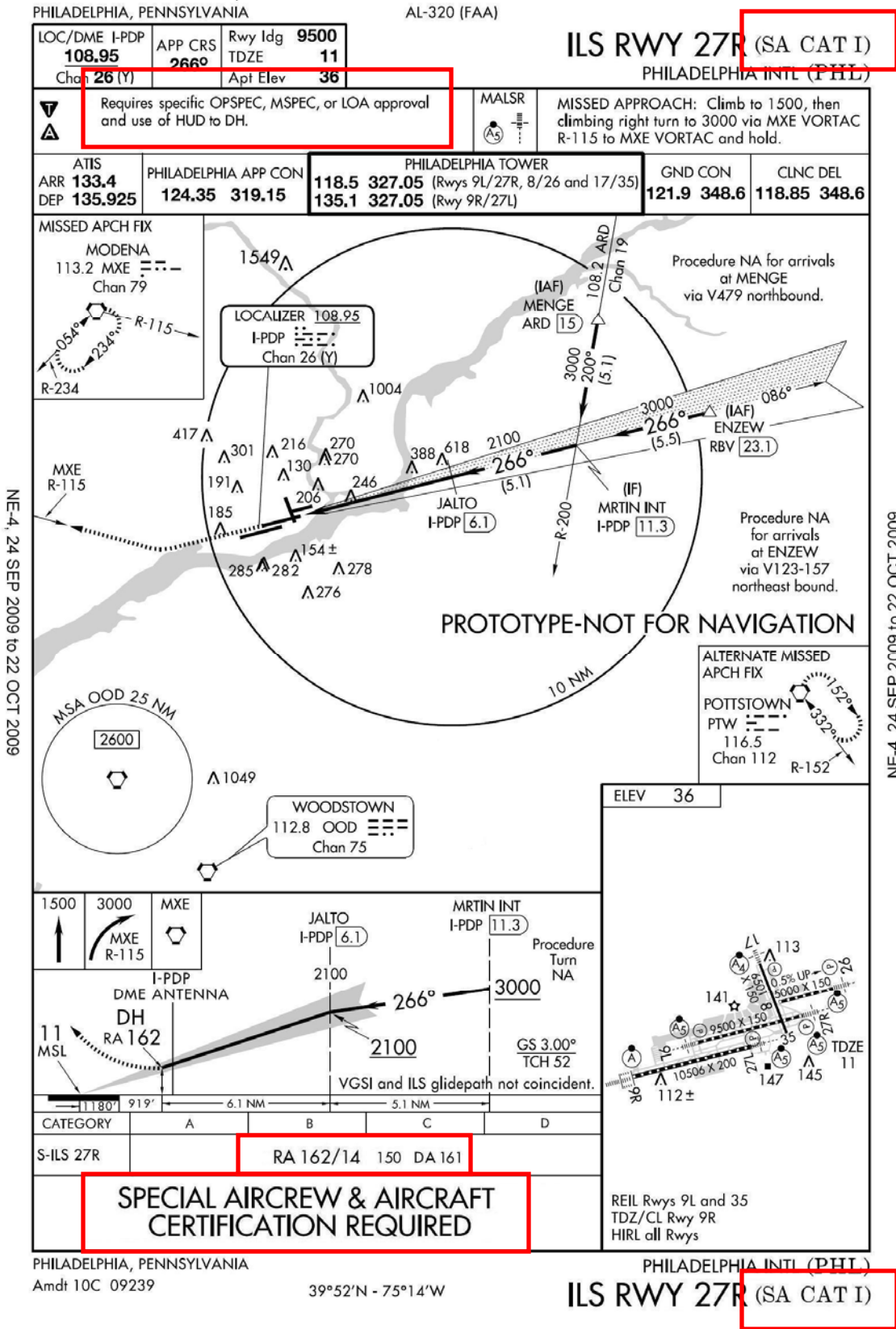


Sample Jeppesen SA CAT I Chart with standard CAT I, 1800 RVR, and SA CAT I mins

KPHL/PHL PHILADELPHIA INTL **JEPPESEN** **PHILADELPHIA, PA**
 1 MAY 09 **11-10** ILS or LOC DME Rwy 27R
 Eff 7 May



Sample proposed NACO SA CAT I Chart with only SA CAT I minimum



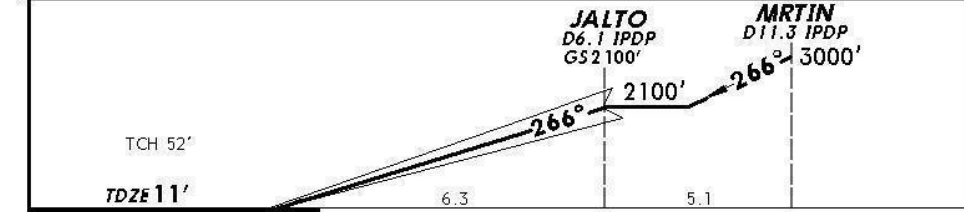
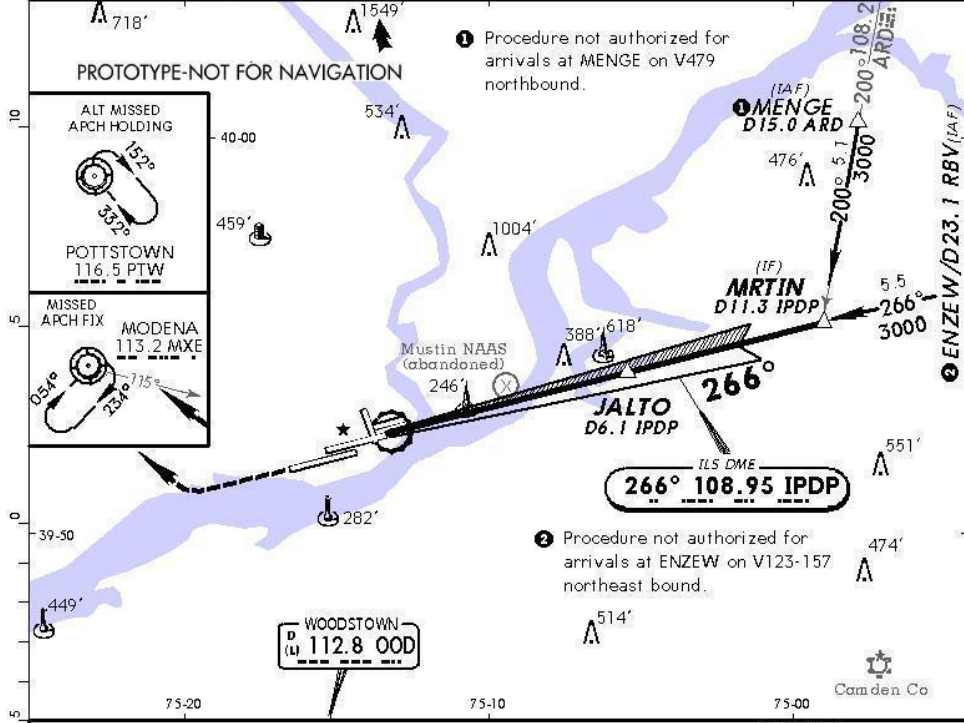
Sample proposed Jeppesen SA CAT I Chart with only SA CAT I minimum

KPHL/PHL
PHILADELPHIA INTL

JEPPESEN
1 MAY 09
Eff 7 May (11-10A)

PHILADELPHIA, PA
ILS Rwy 27R SA CAT I

D-ATIS Arrival	PHILADELPHIA Approach (R)	PHILADELPHIA Tower	Ground
133.4	124.35	Rwys 8/26, 9L/27R, 17/35 116.3	Rwy 9R/27L 135.1
LOC IPDP 108.95	Final Apch Crs 266°	GS JALTO 2100' (2089')	SA CAT I ILS RA 162' DA(H) 161' (150') Apt Elev 36' TDZE 11'
MISSED APCH: Climb to 1500', then climbing RIGHT turn to 3000' inbound via MXE VOR R-115 to MXE VOR and hold.			2600'
Alt Set: INCHES		Trans Level: FL 180	Trans alt: 18000'
1. Special Aircrew and Aircraft Certification Required.			MSA OOD VOR
2. VGSI and ILS glidepath not coincident.			



Gnd speed-Kts	70	90	100	120	140	160	MALS R	1500'	3000'	MXE	MXE
GS	3.00°	377	484	538	646	753	PAPI	↑	RT	113.2 R-115	113.2

STRAIGHT-IN LANDING RWY 27R

SA CAT I ILS
RA 162'
DA(H) 161' (150')

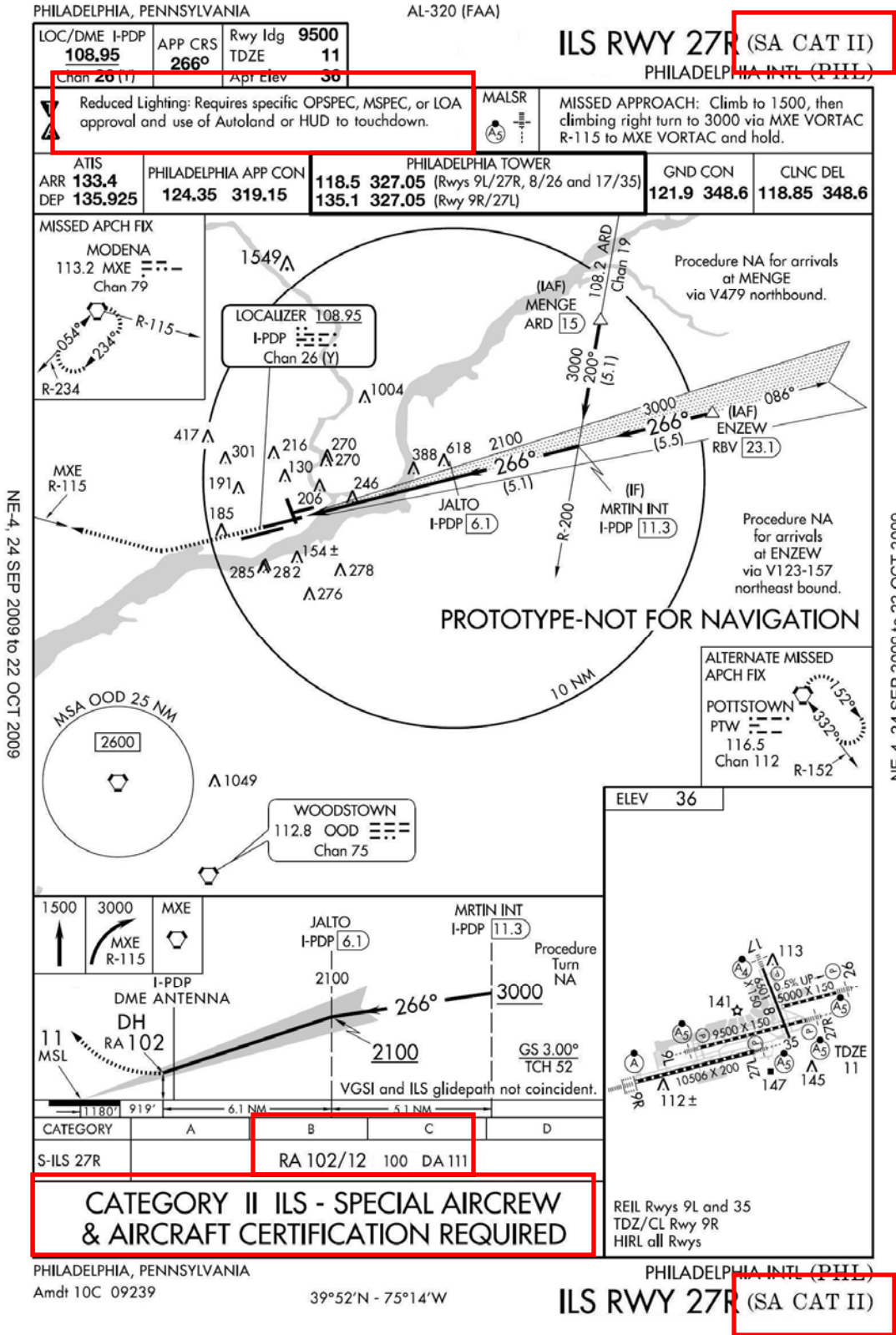
RVR 14

Requires specific OPSPEC, MSPEC, or LOA approval and use of HUD to DH.

CHANGES: New procedure.

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Sample proposed NACO SA CAT II Chart



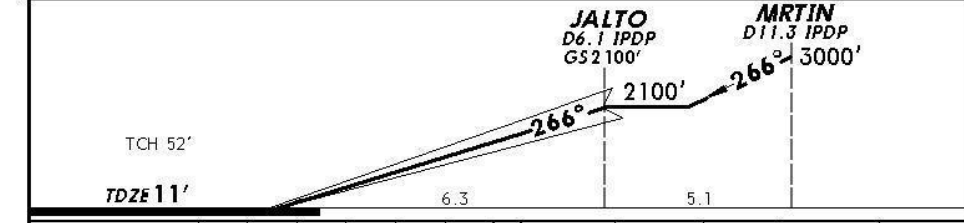
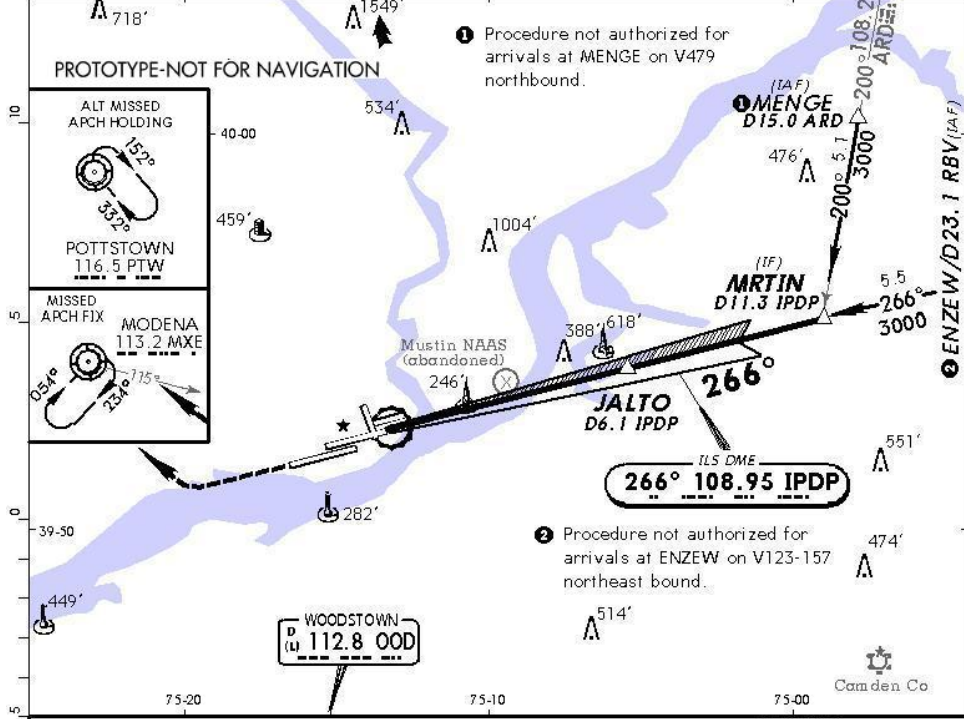
Sample proposed Jeppesen SA CAT II Chart

KPHL/PHL
PHILADELPHIA INTL

JEPPESEN
1 MAY 09
Eff 7 May (11-10A)

PHILADELPHIA, PA
ILS Rwy 27R SA CAT II

D-ATIS Arrival 133.4	PHILADELPHIA Approach (R) 124.35	PHILADELPHIA Tower Rwys 8/26, 9L/27R, 17/35 116.3	Rwy 9R/27L 135.1	Ground 121.65 121.9
LOC IPDP 108.95	Final Apch Crs 266°	GS JALTO 2100' (2089')	SA CAT II ILS RA 102' DA(H) 111' (100')	Apt Elev 36' TDZE 11'
MISSED APCH: Climb to 1500', then climbing RIGHT turn to 3000' inbound via MXE VOR R-115 to MXE VOR and hold.				2600'
Alt Set: INCHES Trans Level: FL 180 Trans alt: 18000' 1. Special Aircraft and Aircraft Certification Required. 2. VGSI and ILS glidepath not coincident.				MSA OOD VOR



Gnd speed-Kts	70	90	100	120	140	160	MALS R	1500'	3000'	MXE	MXE
GS	3.00°	377	484	538	646	753	PAPI	↑	RT	113.2	113.2
										R-115	

STRAIGHT-IN LANDING RWY 27R
SA CAT II ILS
RA 102'
 DA(H) 111' (100')

RVR 12

Reduced Lighting: Requires specific OPSPEC, MSPEC, or LOA approval and use of Autoland or HUD to touchdown.

CHANGES: New procedure.

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MEETING 09-02: Mr. Bryant Welch, FAA/AFS-410, briefed the issue to the forum. To help simplify all CAT I and II ILS minimums, and avoid additional lines or additional ILS Z and ILS Y charts, they are proposing new charting designations of SA CAT I and SA CAT II. The recommendation affects all current SA CAT II approach procedures (BOS 33L; SEA 34R, 34C, 34L; BOI 10R; PIE 17L; PHL 27R; PIT 28R), and possibly some SA CAT II procedures in development. To date, no SA CAT I approaches have been developed.

Applicable information would be provided on the 8260 source document and would be charted accordingly (government and commercial approach charts).

Mr. Richard Boll, NBAA, asked if consideration had been given to use the abbreviation AR (Authorization Required) instead of SA (Special Authorization). The answer was 'Yes', but SA was intentionally chosen to avoid possible misinterpretation or unintended and incorrect connection to RNP AR procedure authorization requirements.

Mr. Brad Rush, FAA/AeroNav Services, expressed concern that the proposed use of the parenthetical (SA CAT II) as a supplement to the procedure title is contrary to accepted ICAO procedure title conventions - which the FAA itself had originally promoted and which ICAO had accepted. Mr. Rush believes that ILS SA CAT I or II procedures should be titled ILS-Z, -Y, and -X procedures.

Mr. John Moore, FAA/AeroNav Services, pointed out that Mr. Welch's recommendations do not represent charting problems. Instead, they represent procedure design criteria and application impacts. There are both 8260 and ATC implications.

ACTION: Mr. Bryant Welch agreed to take the results of the ACF discussion back to his office, brief his colleagues, and come back to the next ACF and report the results.

MEETING 10-01: Mr. Bryant Welch, FAA/AFS-410, stated there are approximately 60 to 70 SA CAT II approaches existing and expects about 300 SA CAT I approaches to be developed. He reiterated his concern that SA have special equipment and use requirements and that combining charts will cause pilot issues. They want to make sure pilots understand there is a large difference in procedures.

Mr. Ed Ward, Southwest Airlines, stated that when a pilot is cleared for the ILS there is no differentiating in the FMS between an SA or a Standard approach and how would ATC know what they were doing.

Mr. Tom Schneider, FAA/AFS-420 commented that there would be no need to differentiate between what type of approach is being flown as long as the missed approach track was the same.

Mr. Moore, FAA/AeroNav, asked if using separate charts (Z, Y, X) was the best alternative. Creating a separate chart would allow ATC and the pilot to differentiate between approaches. Adding to the title verses a new chart goes against the new FAA and ICAO naming standards.

Mr. Ted Thompson, Jeppesen, noted that if we use separate charts ARINC must code the appropriate approach as "Z, Y, X" in order to be used by the pilot.

Mr. Lev Prichard, American Airlines, stated that their current fleet of FMS's cannot handle any more data they are already at the limit. It would cause memory and FMS coding issues for them.

It was agreed that SA CAT I would not be a part of the title and would be treated the same as CAT II or CAT III for titling and coding purposes; i.e., as a parenthetical.

Consensus was the AFS-410 proposal will be accepted and the changes to the necessary 8260 Series Order will be implemented.

ACTION: Mr. Welch will report back at the next ACF

ACTION: Ms. Watson will evaluate the impact of the 8260 change on IACC Specifications and report back at the next ACF.

MEETING 10-02: Mr. Bryant Welch, FAA/AFS-410 was unable to attend. Mr. John Moore, FAA/AJV-3B summarized the issue on his behalf.

Mr. Tom Schneider, FAA/AFS-420, said the Order has been changed.

Ms. Valerie Watson, FAA/AJV-3B, said the charting spec has been signed and will be implemented.

STATUS: CLOSED