

# Harmonizing Terminal Procedure Publication (TPP) Comparable Values of RVR and Visibility Table with 8260.3C (TERPS)

Presented to: Aeronautical Charting Forum (ACF)

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Date: TBD



**Federal Aviation  
Administration**



# April 27, 2017...

## 8260.3C Harmonization begins with the new Inoperative Components Table

# 8260.3B

### INOOPERATIVE COMPONENTS OR VISUAL AIDS TABLE

Landing minimums published on instrument approach procedure charts are based upon full operation of all components and visual aids associated with the particular instrument approach chart being used. Higher minimums are required with inoperative components or visual aids as indicated below. If more than one component is inoperative, each minimum is raised to the highest minimum required by any single component that is inoperative. ILS glide slope inoperative minimums are published on the instrument approach charts as localizer minimums. This table may be amended by notes on the approach chart. Such notes apply only to the particular approach category(ies) as stated. See legend page for description of components indicated below.

(1) ILS, PAR, RNAV (LPV line of minima) and GLS

Inoperative Component or Aid	Approach Category	Increase Visibility
ALSF 1 & 2, MALSR, & SSALR	ABCD	1/4 mile

(2) ILS with visibility minimum of 1,800 RVR

Inoperative Component or Aid	Approach Category	Increase Visibility
ALSF 1 & 2, MALSR, & SSALR	ABCD	To 4000 RVR
TDZL RCLS	ABCD	To 2400 RVR*
RVR	ABCD	To 1/2 mile

\*1800 RVR authorized with the use of FD or AP or HUD to DA.

(3) VOR, VOR/DME, TACAN, LOC, LOC/DME, LDA, LDA/DME, SDF, SDF/DME, GPS, ASR, RNAV (LNAV/VNAV, LP, LNAV lines of minima) and RNP

Inoperative Visual Aid	Approach Category	Increase Visibility
ALSF 1 & 2, MALSR, & SSALR	ABCD	1/2 mile
SSALS, MALS, & ODALS	ABC	1/4 mile

(4) NDB

Inoperative Component or Aid	Approach Category	Increase Visibility
ALSF 1 & 2, MALSR, & SSALR	C	1/2 mile
MALS, SSALS, ODALS	ABD	1/4 mile
	ABC	1/4 mile

# 8260.3C

### INOOPERATIVE COMPONENTS OR VISUAL AIDS TABLE (For Civil Use Only)

Straight-in and Sidestep landing minimums published on instrument approach procedure charts are based on full operation of all components and visual aids associated with the particular approach chart being used. Higher minimums are required with inoperative components or visual aids as indicated below. If more than one component is inoperative, each minimum is raised to the highest minimum required by any single component that is inoperative. ILS glide slope inoperative minimums are published on the instrument approach charts as localizer minimums. This table applies to approach categories A thru D and is to be used unless amended by notes on the approach chart. Such notes apply only to the particular approach category(ies) as stated. Category E inoperative notes will be specified when published on civil charts. The inoperative table does not apply to Circling minimums. See legend page for description of components indicated below.

(1) ILS, PAR, LPV, GLS minima

Inoperative Component or Visual Aid	Increase Visibility
All ALS types (except ODALS)	1/4 mile

(2) ILS, LPV, GLS with visibility minima of RVR 1800†/2000\*/2200\*

Inoperative Component or Visual Aid	Increase Visibility
ALSF 1 & 2, MALSR, SSALR	To RVR 4000† To RVR 4500*
TDZL or RCLS	To RVR 2400#
RVR	To 1/2 mile

†For ILS procedures with a 200 foot HAT, RVR 1800 authorized with use of FD or AP or HUD to DA.

(3) All Approach Types and all lines of minima other than (1) & (2) above

Inoperative Component or Visual Aid	Increase Visibility
ALSF 1 & 2, MALSR, SSALR	1/2 mile
MALSF, MALS, SSALF, SSALS, SALS, SALS	1/4 mile

(4) Sidestep minima (CAT C-D)

Inoperative Component or Visual Aid to Sidestep Runway	Increase Visibility
ALSF 1 & 2, MALSR, SSALR	1/2 mile

(5) All Approach Types, All lines of minima

Inoperative Component or Visual Aid	Increase Visibility
ODALS (CAT A-B)	1/4 mile
ODALS (CAT C-D)	1/8 mile



# Next Up?

## Comparable Values of RVR and Visibility

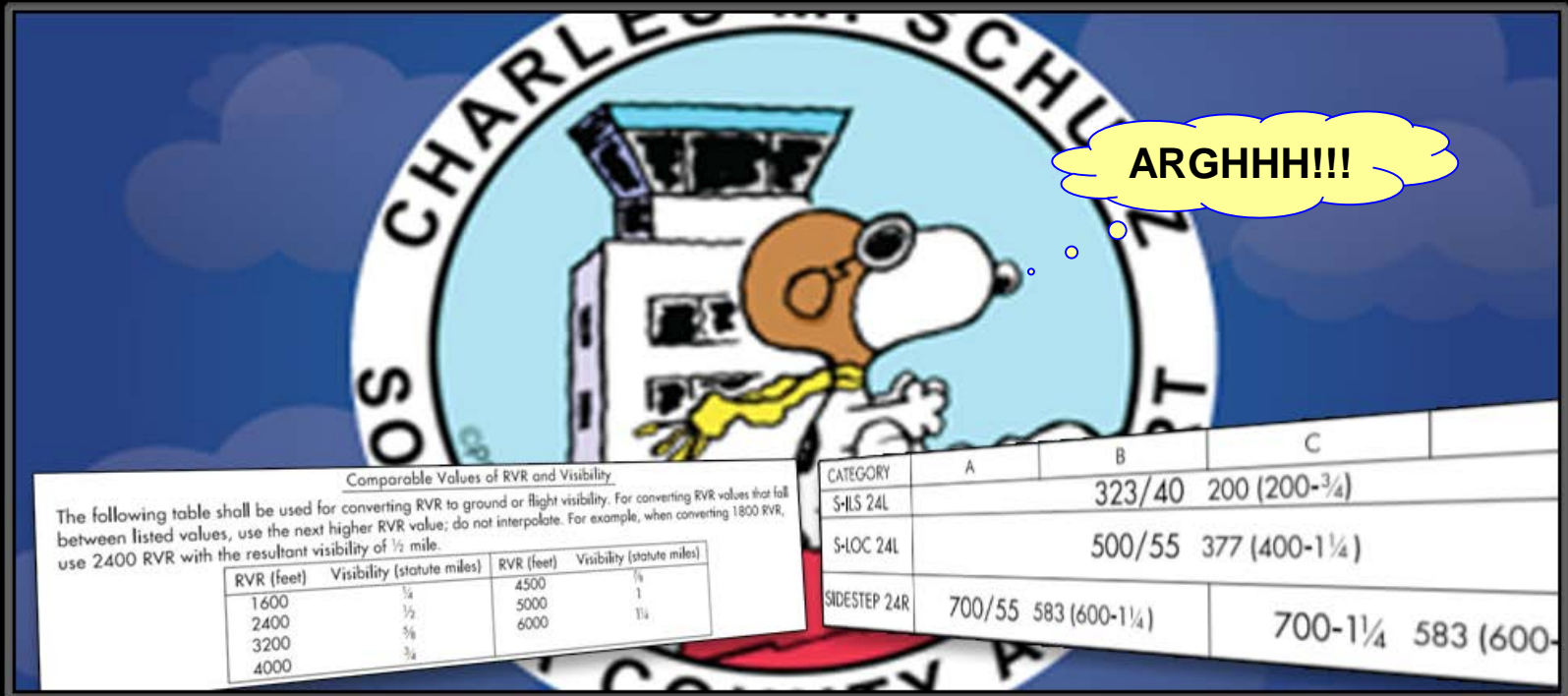
The following table shall be used for converting RVR to ground or flight visibility. For converting RVR values that fall between listed values, use the next higher RVR value; do not interpolate. For example, when converting 1800 RVR, use 2400 RVR with the resultant visibility of  $\frac{1}{2}$  mile.

RVR (feet)	Visibility (statute miles)	RVR (feet)	Visibility (statute miles)
1600	$\frac{1}{4}$	4500	$\frac{7}{8}$
2400	$\frac{1}{2}$	5000	1
3200	$\frac{5}{8}$	6000	$1\frac{1}{4}$
4000	$\frac{3}{4}$		

**Existing table supported 8260.3B Change 19 and earlier**



# Why update?



OS CHARLES DE GAULLE SCHULZ

ARGHHH!!!

Comparable Values of RVR and Visibility

The following table shall be used for converting RVR to ground or flight visibility. For converting RVR values that fall between listed values, use the next higher RVR value; do not interpolate. For example, when converting 1800 RVR, use 2400 RVR with the resultant visibility of 1/2 mile.

RVR (feet)	Visibility (statute miles)	RVR (feet)	Visibility (statute miles)
1600	1/4	4500	1/2
2400	1/2	5000	1
3200	3/4	6000	1 1/4
4000	1		

CATEGORY	A	B	C
S-ILS 24L		323/40	200 (200-3/4)
S-LOC 24L		500/55	377 (400-1 1/4)
SIDESTEP 24R	700/55	583 (600-1 1/4)	700-1 1/4 583 (600-

## MINIMUMS

The Red Baron doesn't like them to be unnecessarily high...



# Deficiencies...

## Table does not support 8260.3C

### Comparable Values of RVR and Visibility

The following table shall be used for converting RVR to ground or flight visibility. For converting RVR values that fall between listed values, use the next higher RVR value; do not interpolate. For example, when converting 1800 RVR, use 2400 RVR with the resultant visibility of ½ mile.

RVR (feet)	Visibility (statute miles)	RVR (feet)	Visibility (statute miles)
1600	¼	4500	¾
2400	½	5000	1
3200	5/8	6000	1¼
4000	¾		

No support for RVR 2600 or 3000

RVR 3200 no longer a publishable value

No support for RVR 3500

No support for RVR 5500

Value not supported by 8260.3C

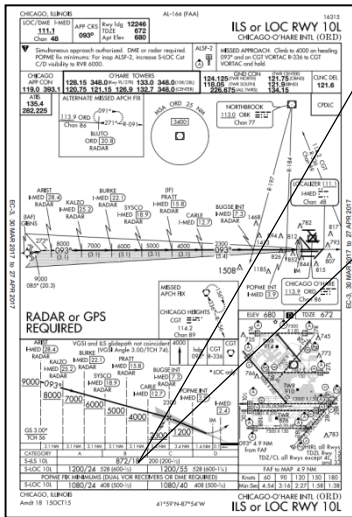
Excerpt from 8260.3C table 3-3-1

321	-	340	2600	1/2	800	4000	3/4	1200	4500	7/8	1300	5000	1	1500
341	-	360	3000	5/8	900	4000	3/4	1200	4500	7/8	1400	5500	1	1600
361	-	380	3500	5/8	1000	4000	3/4	1300	5000	1	1500	5500	1	1700





# Problem...(RVR or ALS out)



CATEGORY	A	B	C	D
S-ILS 10L		872/18	200 (200- $\frac{1}{4}$ )	
S-LOC 10L	1200/24	528 (600- $\frac{1}{2}$ )	1200/55	528 (600- $\frac{1}{4}$ )
POPME FIX MINIMUMS (DUAL VOR RECEIVERS OR DME REQUIRED)				
S-LOC 10L	1080/24	408 (500- $\frac{1}{2}$ )	1080/40	408 (500- $\frac{3}{4}$ )

## Comparable Values of RVR and Visibility

RVR (feet)	Visibility (statute miles)	RVR (feet)	Visibility (statute miles)
1600	$\frac{1}{4}$	4500	$\frac{7}{8}$
2400	$\frac{1}{2}$	5000	1
3200	$\frac{5}{8}$	6000	$1\frac{1}{4}$
4000	$\frac{3}{4}$		

Do Not Interpolate

If RVR is Out...

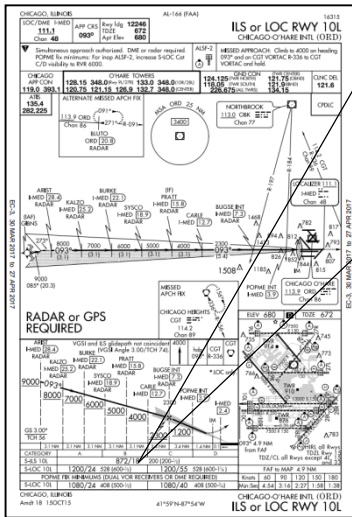
TPP table does not support 5500, and you must round up to 6000, therefore the resulting visibility is **1  $\frac{1}{4}$  SM**.

Remember TERPS was only 1 SM.

Result: Unnecessary increase can cause 'below minima' situation  
Result: Procedure WITHOUT RVR does not incur this penalty



# Problem...(RVR or ALS out)



CATEGORY	A	B	C	D
S-ILS 10L		872/18	200 (200- $\frac{1}{4}$ )	
S-LOC 10L	1200/24 528 (600- $\frac{1}{2}$ )		1200/55 528 (600- $\frac{1}{4}$ )	
POPME FIX MINIMUMS (DUAL VOR RECEIVERS OR DME REQUIRED)				
S-LOC 10L	1080/24 408 (500- $\frac{1}{2}$ )		1080/40 408 (500- $\frac{3}{4}$ )	

## Comparable Values of RVR and Visibility

RVR (feet)	Visibility (statute miles)	RVR (feet)	Visibility (statute miles)
1600	$\frac{1}{4}$	4500	$\frac{7}{8}$
2400	$\frac{1}{2}$	5000	1
3200	$\frac{5}{8}$	6000	$1\frac{1}{4}$
4000	$\frac{3}{4}$		

Do Not Interpolate

## If ALS is Out...

Inoperative Component or Visual Aid	Increase Visibility
ALSF 1 & 2, MALSR, SSALR	$\frac{1}{2}$ mile
MALSF, MALS, SSALF, SSALS, SALSF, SALS	$\frac{1}{4}$ mile

1. The published visibility (5500) is converted to SM. Since 5500 is not supported by the table, 6000 is used, and the visibility before use of the inop table is  $1\frac{1}{4}$  SM.
2. The inop table specifies an increase of  $\frac{1}{2}$  SM.
3. Resulting no light visibility is  **$1\frac{3}{4}$  SM.**

Remember TERPS was only  $1\frac{1}{2}$  SM.

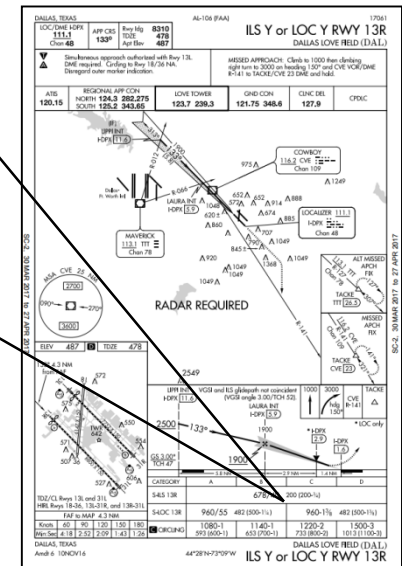
Result: Unnecessary increase can cause 'below minima' situation  
 Result: Procedure WITHOUT RVR does not incur this penalty

# Problem...(Circling...Not Compliant with TERPS)

CATEGORY	A	B	C	D
S-ILS 13R	678/40		200 (200-¾)	
S-LOC 13R	960/55	482 (500-1¼)	960-1⅜	482 (500-1⅜)
<b>C</b> CIRCLING	1080-1 593 (600-1)	1140-1 653 (700-1)	1220-2 733 (800-2)	1500-3 1013 (1100-3)

Per TERPS, the CAT A/B S-LOC 13R visibility is RVR 5500 (or 1 SM).

Also.....Per TERPS, Circling minimum cannot be lower than the associated straight-in minima.



But the TPP Table will inadvertently cause the straight-in minima to be higher than the circling minima (not compliant with TERPS).

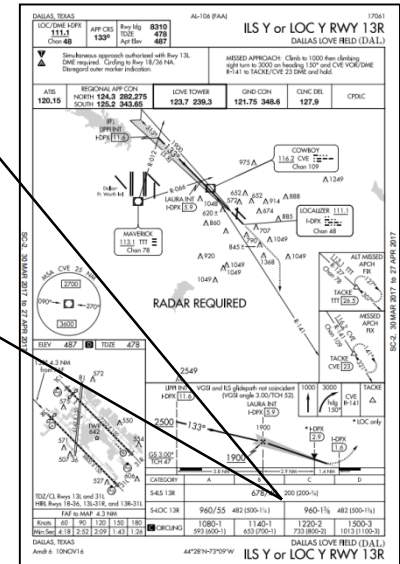


# Problem...(Circling...Not Compliant with TERPS)

CATEGORY	A	B	C	D
S-ILS 13R	678/40		200 (200-3/4)	
S-LOC 13R	960/55	482 (500-1 1/4)	960-1 3/8	482 (500-1 3/8)
<b>C</b> CIRCLING	1080-1 593 (600-1)	1140-1 653 (700-1)	1220-2 733 (800-2)	1500-3 1013 (1100-3)

RVR (feet)	Visibility (statute miles)	RVR (feet)	Visibility (statute miles)
1600	1/4	4500	7/8
2400	1/2	5000	1
3200	5/8	6000	1 1/4
4000	3/4		

**Do Not Interpolate**



**If RVR is Out...**

TPP table does not support 5500, and you must round up to 6000, therefore the resulting visibility is **1 1/4 SM**.

**Resulting visibility is higher than Circling.**

**But remember, the TERPS visibility was RVR 5500 or 1 SM...**

Result: Unnecessary increase causes non-compliance with TERPS  
 Result: Situation does not occur for procedures WITHOUT RVR

# Harmonize TPP Table

These situations (and others) would not occur if the TPP table were harmonized with TERPS.

## Comparable Values of RVR and Visibility

The following table shall be used for converting RVR to ground or flight visibility. For converting RVR values that fall between listed values, use the next higher RVR value; do not interpolate. For example, when converting 1800 RVR, use 2400 RVR with the resultant visibility of 1/2 mile.

RVR (feet)	Visibility (statute miles)	RVR (feet)	Visibility (statute miles)
1600	1/4	4000	3/4
2400	1/2	4500	7/8
<b>1</b> 2600	<b>1/2</b>	5000	1
<b>2</b> 3000	5/8	<b>5500</b>	<b>1</b> <b>4</b>
<b>3</b> 3500	<b>5/8</b>	6000	1 1/8 <b>5</b>

Changes:

1. Added RVR 2600 (1/2 SM) per 8260.3C.
2. Changed RVR 3200 to RVR 3000 per 8260.3C.
3. Added RVR 3500 (5/8 SM) per 8260.3C.
4. Added RVR 5500 (1 SM) per 8260.3C.
5. Changed RVR 6000 (1 1/4 SM) to RVR 6000 (1 1/8 SM) per 8260.3C.



# Questions?

