

US DEPARTMENT of TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION  
**STANDARD TERMINAL ARRIVAL (STAR)**

Bearings, headings, courses, tracks and radials are magnetic. Elevations and altitudes are in feet. MSL. Altitudes are minimum altitudes unless otherwise indicated.  
 Distances are in nautical miles (NM). Graphic depiction attached.

Arrival Name TRTLL RNAV	Number FOUR	STAR Computer Code TRTLL.TRTLL4	Superseded Number THREE	Dated 15 OCT 2015	Effective Date 15 SEP 2016				
TRANSITION ROUTES:									
Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Mag Course	Distance	MEA	MOCA	MAA	Crossing Altitudes / Fixes
BYLAW	BYLAW.TRTLL4	BYLAW	BYLAW						BETWEEN FL190 AND FL220
			TRTLL	082.77	31.18	5000	3100		AT 11000
CASHN	CASHN.TRTLL4	CASHN	CASHN						
			VINCA	043.74	30.64	5000	2000		AT/BELOW FL340
			MAROC	044.02	31.19	5000	2400		BETWEEN FL240 AND FL270
			TRICH	045.11	38.30	5000	2400		BETWEEN 13000 AND 15000
			TRTLL	045.46	13.11	5000	2200		AT 11000
FORISTELL	FTZ.TRTLL4	FTZ VORTAC	FTZ VORTAC						
			GROOV	025.92	48.01	5000	2200		
			CASHN	027.29	34.73	5000	2200		
			VINCA	043.74	30.64	5000	2000		AT/BELOW FL340
			MAROC	044.02	31.19	5000	2400		BETWEEN FL240 AND FL270
			TRICH	045.11	38.30	5000	2400		BETWEEN 13000 AND 15000
			TRTLL	045.46	13.11	5000	2200		AT 11000
MAROC	MAROC.TRTLL4	MAROC	MAROC						BETWEEN FL240 AND FL270
			TRICH	045.11	38.30	5000	2400		BETWEEN 13000 AND 15000
			TRTLL	045.46	13.11	5000	2200		AT 11000
PONTIAC	PNT.TRTLL4	PNT VOR/DME	PNT VOR/DME						
			TRICH	354.80	23.52	5000	2200		BETWEEN 13000 AND 15000
			TRTLL	045.46	13.11	5000	2200		AT 11000
ST LOUIS	STL.TRTLL4	STL VORTAC	STL VORTAC						
			GROOV	356.28	34.44	5000	2200		
			CASHN	027.29	34.73	5000	2200		
			VINCA	043.74	30.64	5000	2000		AT/BELOW FL340
			MAROC	044.02	31.19	5000	2400		BETWEEN FL240 AND FL270
			TRICH	045.11	38.30	5000	2400		BETWEEN 13000 AND 15000
			TRTLL	045.46	13.11	5000	2200		AT 11000
WELTS	WELTS.TRTLL4	WELTS	WELTS						

QUALITY  
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Arrival Name TRTLL RNAV		Number FOUR	STAR Computer Code TRTLL.TRLL4		Superseded Number THREE			Dated 15 OCT 2015	Effective Date 15 SEP 2016
Transition Name	Transition Computer Codes	From FIX/NAVAID	To FIX/NAVAID	Mag Course	Distance	MEA	MOCA	MAA	Crossing Altitudes / Fixes
			MCDEE	053.43	51.61	5000	2300		
			CASHN	053.99	38.96	5000	2200		
			VINCA	043.74	30.64	5000	2000		AT/BELOW FL340
			MAROC	044.02	31.19	5000	2400		BETWEEN FL240 AND FL270
			TRICH	045.11	38.30	5000	2400		BETWEEN 13000 AND 15000
			TRTLL	045.46	13.11	5000	2200		AT 11000

ARRIVAL ROUTE DESCRIPTION:

FROM TRTLL ON TRACK 044.75/19.69 TO HIHRY (MEA 5000/MOCA 2100), THEN ON TRACK 044.71/15.30 TO RINNO (MEA 5000/MOCA 2200).

LANDING RWY 10L/C/R, 09R/L, 22R/L, 04R/L, 27L, 15, 28L/C/R: FROM RINNO ON TRACK 047.72/6.68 TO JORJO (MEA 4000/MOCA 2200), THEN ON TRACK 093.00/8.37 TO MONKZ (MEA 4000/MOCA 2200), THEN ON TRACK 093.05/13.94 TO TONIE (MEA 4000/MOCA 3400), THEN ON TRACK 093.05. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

LANDING RWY 27R: FROM RINNO ON TRACK 012.76/17.43 TO KURKK (MEA 4000/MOCA 2600), THEN ON TRACK 092.95/10.41 TO VULCN (MEA 4000/MOCA 2100), THEN ON TRACK 093.09/12.75 TO HIMGO (MEA 4000/MOCA 2000), THEN ON TRACK 093.09. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

PROCEDURAL DATA NOTES:

NOTE: RADAR REQUIRED.

NOTE: RNAV 1.

NOTE: DME/DME/IRU OR GPS REQUIRED.

NOTE: STL TRANSITION: ATC ASSIGNED ONLY.

FIXES AND/OR HOLDING PATTERNS:

CHART HOLDING AT MAROC: HOLD SW, LT, 044.02 INBOUND, 10 NM LEGS.

CHART HOLDING AT TRTLL: HOLD SW, LT, 045.46 INBOUND, 10 NM LEGS.

CHART HOLDING AT GROOV: HOLD S, RT, 356.28 INBOUND, 10 NM LEGS.

CHART HOLDING AT MCDEE: HOLD SW, LT, 053.43 INBOUND, 20 NM LEGS.

CHART HOLDING AT CASHN: HOLD SW, LT, 053.99 INBOUND, 15 NM LEGS.

CHART LENDR AS STAND ALONE WAYPOINT.

COMMUNICATIONS:

ORD ATIS, CHICAGO APP CON.

AIRPORTS SERVED:

CHICAGO O'HARE INTL, CHICAGO, IL

LOST COMMUNICATIONS PROCEDURE:REMARKS:

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Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
<b>TRTLL RNAV</b>	<b>FOUR</b>	<b>TRTLL.TRTLL4</b>	<b>THREE</b>	<b>15 OCT 2015</b>	<b>15 SEP 2016</b>

ADDITIONAL FLIGHT DATA:

DME/DME ASSESSMENT: SAT (RNP 2.0).

REFERENCE MAGNETIC VARIATION = KORD 03W/2010

CHANGES:

CHANGE RWY 14R TO RWY 15

REASONS:

RUNWAY BEING RENUMBERED.

QUALITY  
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## US DEPARTMENT of TRANSPORTATION - FEDERAL AVIATION ADMINISTRATION

## STAR (DATA RECORD)

Arrival Name TRTLL RNAV		Number FOUR		STAR Computer Code TRTLL.TRTLL4			Superseded Number THREE		Dated 15 OCT 2015		Effective Date 15 SEP 2016	
FIX/NAVAID		LAT/LONG		C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS	
En Route Transition												
BYLAW		411648.90N / 0891727.51W		Y		IF			FL190BFL220		BYLAW.TRTLL4	
TRTLL		412214.03N / 0883641.80W		Y	FB	TF	079.77	31.18	AT 11000			
En Route Transition												
CASHN		395732.00N / 0901534.00W		Y		IF					CASHN.TRTLL4	
VINCA		402043.25N / 0894924.67W		Y	FB	TF	040.74	30.64	AT/BELOW FL340			
MAROC		404413.24N / 0892228.69W		Y	FB	TF	041.02	31.19	FL240BFL270			
TRICH		411233.94N / 0884827.19W		Y	FB	TF	042.11	38.30	13000B15000			
TRTLL		412214.03N / 0883641.80W		Y	FB	TF	042.46	13.11	AT 11000			
En Route Transition												
FTZ VORTAC		384139.58N / 0905816.17W		Y		IF					FTZ.TRTLL4	
GROOV		392552.71N / 0903408.70W		Y	FB	TF	022.92	48.01				
CASHN		395732.00N / 0901534.00W		Y	FB	TF	024.29	34.73				
VINCA		402043.25N / 0894924.67W		Y	FB	TF	040.74	30.64	AT/BELOW FL340			
MAROC		404413.24N / 0892228.69W		Y	FB	TF	041.02	31.19	FL240BFL270			
TRICH		411233.94N / 0884827.19W		Y	FB	TF	042.11	38.30	13000B15000			
TRTLL		412214.03N / 0883641.80W		Y	FB	TF	042.46	13.11	AT 11000			
En Route Transition												
MAROC		404413.24N / 0892228.69W		Y		IF			FL240BFL270		MAROC.TRTLL4	
TRICH		411233.94N / 0884827.19W		Y	FB	TF	042.11	38.30	13000B15000			
TRTLL		412214.03N / 0883641.80W		Y	FB	TF	042.46	13.11	AT 11000			
En Route Transition												
PNT VOR/DME		404916.32N / 0884400.63W		Y		IF					PNT.TRTLL4	
TRICH		411233.94N / 0884827.19W		Y	FB	TF	351.80	23.52	13000B15000			
TRTLL		412214.03N / 0883641.80W		Y	FB	TF	042.46	13.11	AT 11000			

QUALITY  
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CHECKED

QUALITY  
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## STAR (DATA RECORD)

Arrival Name TRTLL RNAV	Number FOUR	STAR Computer Code TRTLL.TRLL4	Superseded Number THREE	Dated 15 OCT 2015	Effective Date 15 SEP 2016
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FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
<b>En Route Transition</b>									
STL VORTAC	385138.48N / 0902856.52W	Y		IF					STL.TRLL4
GROOV	392552.71N / 0903408.70W	Y	FB	TF	353.28	34.44			
CASHN	395732.00N / 0901534.00W	Y	FB	TF	024.29	34.73			
VINCA	402043.25N / 0894924.67W	Y	FB	TF	040.74	30.64	AT/BELOW FL340		
MAROC	404413.24N / 0892228.69W	Y	FB	TF	041.02	31.19	FL240BFL270		
TRICH	411233.94N / 0884827.19W	Y	FB	TF	042.11	38.30	13000B15000		
TRTLL	412214.03N / 0883641.80W	Y	FB	TF	042.46	13.11	AT 11000		

<b>En Route Transition</b>									
WELTS	390022.96N / 0914622.15W	Y		IF					WELTS.TRLL4
MCDEE	393306.00N / 0905456.00W	Y	FB	TF	050.43	51.61			
CASHN	395732.00N / 0901534.00W	Y	FB	TF	050.99	38.96			
VINCA	402043.25N / 0894924.67W	Y	FB	TF	040.74	30.64	AT/BELOW FL340		
MAROC	404413.24N / 0892228.69W	Y	FB	TF	041.02	31.19	FL240BFL270		
TRICH	411233.94N / 0884827.19W	Y	FB	TF	042.11	38.30	13000B15000		
TRTLL	412214.03N / 0883641.80W	Y	FB	TF	042.46	13.11	AT 11000		

<b>Common Route</b>									
TRTLL	412214.03N / 0883641.80W	Y		IF			AT 11000		TRTLL.TRLL4
HIHRY	413654.53N / 0881913.05W	Y	FB	TF	041.75	19.69			
RINNO	414819.56N / 0880536.16W	Y	FB	TF	041.71	15.30			

<b>Runway Transition</b>									
RINNO	414819.56N / 0880536.16W	Y		IF					
JORJO	415304.14N / 0875918.78W	Y	FB	TF	044.72	06.68			
MONKZ	415303.59N / 0874806.47W	Y	FB	TF	090.00	08.37			
TONIE	415301.37N / 0872926.75W	Y	FO	TF	090.05	13.94			
KORD:RWY 04L/R, 9L/R, 10L/C/R, 15, 22L/R, 27L, 28L/C/R				FM	090.05				RECOMMENDED NAVAID: MZZ VOR/DME

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Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
TRTLL RNAV	FOUR	TRTLL.TRTLL4	THREE	15 OCT 2015	15 SEP 2016

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
Runway Transition									
RINNO	414819.56N / 0880536.16W	Y		IF					
KURKK	420530.61N / 0880137.92W	Y	FB	TF	009.76	17.43			
VULCN	420530.34N / 0874739.02W	Y	FB	TF	089.95	10.41			
HIMGO	420527.84N / 0873031.89W	Y	FO	TF	090.09	12.75			
KORD:RWY 27R				FM	090.09				RECOMMENDED NAVAID: MZZ VOR/DME