

**FEDERAL AVIATION ADMINISTRATION
FLIGHT STANDARDS SERVICE
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.
Ceilings are in feet above airport elevation. Distances are in nautical miles. Visibilities are in statute miles or feet RVR unless otherwise indicated.

<u>Arrival Name</u>	<u>Number</u>	<u>STAR Computer Code</u>	<u>Superseded Number</u>	<u>Dated</u>	<u>Effective Date</u>
MURAH RNAV	THREE	MURAH.MURAH3	TWO	11/10/2016	07 DEC 2017

TRANSITION ROUTES:

Transition Name	Transition Computer Code	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	MAA	Crossing Altitude/Fixes
AWLIV	AWLIV.MURAH3	AWLIV	AWLIV						AT/BELOW FL220
			MURAH	256.32	16.85	7000	2500		BETWEEN 11000 AND 17000
BELMN	BELMN.MURAH3	BELMN	BELMN						AT/ABOVE FL240
			MIICK	174.99	17.01	8000	2600		BETWEEN FL190 AND FL280
			MURAH	175.00	27.00	7000	3100		BETWEEN 11000 AND 17000
BMART	BMART.MURAH3	BMART	BMART						AT/ABOVE FL240
			JSTCE	256.60	15.50	8000	2400		BETWEEN FL190 AND FL280
			MURAH	256.43	27.00	7000	2500		BETWEEN 11000 AND 17000
DRLER	DRLER.MURAH3	DRLER	DRLER						
			BMART	256.89	24.35	9000	3300		AT/ABOVE FL240
			JSTCE	256.60	15.50	8000	2400		BETWEEN FL190 AND FL280
			MURAH	256.43	27.00	7000	2500		BETWEEN 11000 AND 17000
JTUNE	JTUNE.MURAH3	JTUNE	JTUNE						AT/ABOVE FL240
			FEDRL	243.19	33.51	7000	2500		AT/BELOW FL220

QUALITY
4
CHECKED

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MURAH RNAV				THREE	MURAH.MURAH3		TWO		11/10/2016	07 DEC 2017
				MURAH	206.33	08.99	7000	2500	BETWEEN 11000 AND 17000	
LFRED	LFRED.MURAH3	LFRED	LFRED							
				PAAUL	227.55	40.11	9000	2700	AT/ABOVE FL240	
				MOMMY	227.20	15.50	8000	2400	BETWEEN FL190 AND FL280	
				FEDRL	227.04	18.01	7000	2500	AT/BLOW FL220	
				MURAH	206.33	08.99	7000	2500	BETWEEN 11000 AND 17000	
MPYRE	MPYRE.MURAH3	MPYRE	MPYRE							
				JTUNE	243.47	26.05	9000	2300	AT/ABOVE FL240	
				KNEWT	243.20	15.50	8000	2400	BETWEEN FL190 AND FL280	
				FEDRL	243.01	18.01	7000	2500	AT/BELOW FL220	
				MURAH	206.33	08.99	7000	2500	BETWEEN 11000 AND 17000	
PAAUL	PAAUL.MURAH3	PAAUL	PAAUL	AT/ABOVE FL240						
				FEDRL	227.20	33.51	7000	2500	AT/BELOW FL220	
				MURAH	206.33	08.99	7000	2500	BETWEEN 11000 AND 17000	

ARRIVAL ROUTE DESCRIPTION:

FROM MURAH ON TRACK 217.95/13.18 TO CROSS JASKA AT OR ABOVE 9000 AND AT 250 KIAS .

LANDING RWY 17L: FROM JASKA ON TRACK 217.86/9.57 TO CROSS BECTA AT OR ABOVE 6000 , THEN ON TRACK 208.60/12.13 TO CROSS GOLFS AT OR ABOVE 4000 AND AT 210 KIAS. EXPECT RNAV (RNP) APPROACH.

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MURAH RNAV	THREE	MURAH.MURAH3	TWO	11/10/2016	07 DEC 2017

LANDING RWY 17R: FROM JASKA ON TRACK 217.86/9.57 TO CROSS BECTA AT OR ABOVE 6000 , THEN ON TRACK 211.89/12.55 TO CROSS ROHAA AT OR ABOVE 4000 AND AT 210 KIAS. EXPECT RNAV RNP APPROACH.

LANDING RWY 35L/R: FROM JASKA ON TRACK 192.94/10.57 TO CROSS BOSHY AT OR ABOVE 9000, THEN ON TRACK 192.74/5.03 TO CROSS HEDIK AT OR ABOVE 8000, THEN ON TRACK 192.84/6.26 TO CROSS MOVIE AT OR ABOVE 7000 AND AT 220 KIAS, THEN ON TRACK 192.85/5.50 TO CROSS IMAGE AT 6000 AND AT 210 KIAS, THEN ON TRACK 175.96/5.00 TO HALTO, THEN ON TRACK 175.96. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

PROCEDURAL DATA NOTES:

NOTE: RADAR REQUIRED

NOTE: RNAV 1

NOTE: DME/DME/IRU OR GPS REQUIRED

NOTE: TURBOJET AIRCRAFT ONLY

NOTE: CROSS MIICK AT 280 KIAS. CROSS MURAH AT 280 KIAS. CROSS JSTCE AT 280 KIAS. CROSS AWLV AT 280 KIAS. CROSS MOMMY AT 280 KIAS. CROSS FEDRL AT 280 KIAS. CROSS KNEWT AT 280 KIAS.

NOTE: FOR NON-GPS EQUIPPED AIRCRAFT, IFI DME MUST BE OPERATIONAL.

FIXES AND/OR HOLDING PATTERNS:

COMMUNICATIONS:

ZKC ARTCC, OKC ATIS, OKC APP CON

AIRPORTS SERVED:

AIRPORT NAME

CITY

STATE

WILL ROGERS WORLD

OKLAHOMA CITY

OK

LOST COMMUNICATIONS PREFERENCES:

REMARKS:

ABBREVIATED AMENDMENT DOES NOT QUALIFY AS A PERIODIC REVIEW.

ADDITIONAL FLIGHT DATA:

REFERENCE MAGNETIC VARIATION = KOKC 04E/2020



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<u>Arrival Name</u>	<u>Number</u>	<u>STAR Computer Code</u>	<u>Superseded Number</u>	<u>Dated</u>	<u>Effective Date</u>
MURAH RNAV	THREE	MURAH.MURAH3	TWO	11/10/2016	07 DEC 2017

FLIGHT INSPECTED BY:

FLIGHT INSPECTION NOT REQUIRED, MANAGER ROBER STUCKERT

ORGANIZATION:

AJW-331

DATE:

11/17/2016

Flight Inspected Signature:

*Digitally signed by***BEV L BORDY**

Jul 25, 2017

DEVELOPED BY:

LIAM DONAHUE

AJV-5431

06/30/2017

Developed By Signature:

*Digitally signed by***LIAM DONAHUE**

Jun 30, 2017

APPROVED BY:

PATRICK MULQUEEN

AJV-5430

Approved By Signature:

*Digitally signed by***BEV L BORDY**

Jul 25, 2017

CHANGES:

1. CHANGED FORM FROM FAA FORM 7100-4 TO FAA FORM 8260-17.1/17.2.
2. CHANGED REFERENCE MAGNETIC VARIATION FROM 05E/2010 TO 04E/2020 IN ADDITIONAL FLIGHT DATA.
3. UPDATED ALL COURSES TO REFLECT NEW REFERENCE MAGNETIC VARIATION.

REASONS:

1. FAAO 8260.19G, 4-5-1B(32).
- 2, 3. AIRPORT MAGNETIC VARIATION UPDATED TO EPOCH YEAR 2020.



**FEDERAL AVIATION ADMINISTRATION
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STAR (DATA RECORD)**

Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
MURAH RNAV	THREE	MURAH.MURAH3	TWO	11/10/2016	07 DEC 2017

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
EN ROUTE TRANSITION									
AWLIV	360335.49N / 0964810.57W	Y		IF			AT/BELOW FL220	AT 280K	AWLIV.MURAH3
MURAH	360043.53N / 0970839.26W	Y	FB	TF	260.32	16.85	11000B17000	AT 280K	
EN ROUTE TRANSITION									
BELMN	364447.51N / 0970936.55W	Y		IF			AT/ABOVE FL240		BELMN.MURAH3
MIICK	362745.57N / 0970914.28W	Y	FB	TF	178.99	17.01	FL190BFL280	AT 280K	
MURAH	360043.53N / 0970839.26W	Y	FB	TF	179.00	27.00	11000B17000	AT 280K	
EN ROUTE TRANSITION									
BMART	360751.25N / 0961658.16W	Y		IF			AT/ABOVE FL240		BMART.MURAH3
JSTCE	360517.66N / 0963550.19W	Y	FB	TF	260.60	15.50	FL190BFL280	AT 280K	
MURAH	360043.53N / 0970839.26W	Y	FB	TF	260.43	27.00	11000B17000	AT 280K	
EN ROUTE TRANSITION									
DRLER	361146.53N / 0954717.10W	Y		IF					DRLER.MURAH3
BMART	360751.25N / 0961658.16W	Y	FB	TF	260.89	24.35	AT/ABOVE FL240		
JSTCE	360517.66N / 0963550.19W	Y	FB	TF	260.60	15.50	FL190BFL280	AT 280K	

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FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
MURAH	360043.53N / 0970839.26W	Y	FB	TF	260.43	27.00	11000B17000	AT 280K	
EN ROUTE TRANSITION									
JTUNE	362136.67N / 0962455.35W	Y		IF			AT/ABOVE FL240		JTUNE.MURAH3
FEDRL	360830.00N / 0970303.42W	Y	FB	TF	247.19	33.51	AT/BELOW FL220	AT 280K	
MURAH	360043.53N / 0970839.26W	Y	FB	TF	210.33	08.99	11000B17000	AT 280K	
EN ROUTE TRANSITION									
LFRED	365440.93N / 0955151.78W	Y		IF					LFRED.MURAH3
PAAUL	362936.05N / 0963048.97W	Y	FB	TF	231.55	40.11	AT/ABOVE FL240		
MOMMY	361951.59N / 0964546.00W	Y	FB	TF	231.20	15.50	FL190BFL280	AT 280K	
FEDRL	360830.00N / 0970303.42W	Y	FB	TF	231.04	18.01	AT/BELOW FL220	AT 280K	
MURAH	360043.53N / 0970839.26W	Y	FB	TF	210.33	08.99	11000B17000	AT 280K	
EN ROUTE TRANSITION									
MPYRE	363140.29N / 0955507.61W	Y		IF					MPYRE.MURAH3
JTUNE	362136.67N / 0962455.35W	Y	FB	TF	247.47	26.05	AT/ABOVE FL240		
KNEWT	361534.44N / 0964235.42W	Y	FB	TF	247.20	15.50	FL190BFL280	AT 280K	

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FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
FEDRL	360830.00N / 0970303.42W	Y	FB	TF	247.01	18.01	AT/BELOW FL220	AT 280K	
MURAH	360043.53N / 0970839.26W	Y	FB	TF	210.33	08.99	11000B17000	AT 280K	
EN ROUTE TRANSITION									
PAAUL	362936.05N / 0963048.97W	Y		IF			AT/ABOVE FL240		PAAUL.MURAH3
FEDRL	360830.00N / 0970303.42W	Y	FB	TF	231.20	33.51	AT/BELOW FL220	AT 280K	
MURAH	360043.53N / 0970839.26W	Y	FB	TF	210.33	08.99	11000B17000	AT 280K	
COMMON ROUTE									
MURAH	360043.53N / 0970839.26W	Y		IF			11000B17000	AT 280K	MURAH.MURAH3
JASKA	355054.07N / 0971929.43W	Y	FB	TF	221.95	13.18	AT/ABOVE 9000	AT 250K	
RUNWAY TRANSITION									
JASKA	355054.07N / 0971929.43W	Y		IF			AT/ABOVE 9000	AT 250K	
BECTA	354345.42N / 0972720.11W	Y	FB	TF	221.86	09.57	AT/ABOVE6000		
GOLFS	353331.21N / 0973520.67W	Y	FB	TF	212.60	12.13	AT/ABOVE 4000	AT 210K	
KOKC:RWY 17L									
RUNWAY TRANSITION									



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FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
JASTA	355054.07N / 0971929.43W	Y		IF			AT/ABOVE 9000	AT 250K	
BECTA	354345.42N / 0972720.11W	Y	FB	TF	221.86	09.57	AT/ABOVE 6000		
ROHAA	353334.27N / 0973621.08W	Y	FB	TF	215.89	12.55	AT/ABOVE 4000	AT 210K	
KOKC:RWY 17R									
RUNWAY TRANSITION									
JASTA	355054.07N / 0971929.43W	Y		IF			AT/ABOVE 9000	AT 250K	
BOSHY	354046.47N / 0972316.21W	Y	FB	TF	196.94	10.57	AT/ABOVE 9000		
HEDIK	353557.07N / 0972502.81W	Y	FB	TF	196.74	05.03	AT/ABOVE 8000		
MOVIE	352957.19N / 0972716.02W	Y	FB	TF	196.84	06.26	AT/ABOVE 7000	AT 220K	
IMAGE	352440.86N / 0972913.03W	Y	FB	TF	196.85	05.50	AT 6000	AT 210K	
HALTO	351940.37N / 0972912.75W		FO	TF	179.96	05.00			
KOKC:RWY 35L				FM	179.96				RECOMMENDED NAVAID: PGO VORTAC
RUNWAY TRANSITION									
JASTA	355054.07N / 0971929.43W	Y		IF			AT/ABOVE 9000	AT 250K	
BOSHY	354046.47N / 0972316.21W	Y	FB	TF	196.94	10.57	AT/ABOVE 9000		

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FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
HEDIK	353557.07N / 0972502.81W	Y	FB	TF	196.74	05.03	AT/ABOVE 8000		
MOVIE	352957.19N / 0972716.02W	Y	FB	TF	196.84	06.26	AT/ABOVE 7000	AT 220K	
IMAGE	352440.86N / 0972913.03W	Y	FB	TF	196.85	05.50	AT 6000	AT 210K	
HALTO	351940.37N / 0972912.75W		FO	TF	179.96	05.00			
KOKC:RWY 35R				FM	179.96				RECOMMENDED NAVAID: PGO VORTAC

