

**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Superseded Number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>
FRDMM (RNAV)	FOUR	ALWYZ.FRDMM4	THREE	04/30/2015	

TRANSITION ROUTES:

Transition Name	Transition Computer Code	From FIX/NAVAID	To FIX/NAVAID	Course	Distance	MEA	MOCA	MAA	Crossing Altitude/Fixes
BUCKO	BUCKO.FRDMM4	BUCKO	BUCKO						AT FL310
			DRRON	106.74	12.41	17000	5500		AT/BELOW FL310 AT/ABOVE FL 270
			HONNR	106.91	15.19	17000	6000		AT/BELOW FL280 AT/ABOVE FL240
			BRVRY	107.19	12.79	17000	5800		AT/BELOW FL260 AT/ABOVE FL220
			COURG	108.02	11.00	17000	5300		AT/BELOW FL230 AT/ABOVE FL200
			PLDGE	108.16	17.06	13000	5100		AT/BELOW 17000 AT/ABOVE 15000
			WEWIL	118.61	12.35	12000	4900		AT/ABOVE 14000
			NEVVR	119.09	6.03	11000	3900		AT/ABOVE 12000
			FORGT	119.17	6.71	10000	4200		AT/ABOVE 11000
			SEPII	119.25	5.00	8000	4000		AT/ABOVE 10000
			ALWYZ	119.32	4.89	8000	3400		AT/BELOW 10000

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FRDMM (RNAV)	FOUR	ALWYZ.FRDMM4	THREE	04/30/2015	

ARRIVAL ROUTE DESCRIPTION:

LANDING KDCA:

RWYS 1, 4, 33: FROM ALWYZ ON TRACK 125.19/10.47 TO CROSS LETZZ AT 8000 (MEA 5000/MOCA 3400), THEN ON TRACK 130.06/7.78 TO CROSS RLLLL AT 6000 AND AT 250 KIAS (MEA 4000/MOCA 2600), THEN ON TRACK 130.89/10.39 TO VCTRY (MEA 2100), THEN ON TRACK 188.50/8.10 TRACK TO HEROO (MEA 2000/MOCA 1500), THEN ON TRACK 188.50. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

RWYS 15, 19, 22: FROM ALWYZ ON TRACK 121.66/6.88 TO CROSS FRDMM AT 8000 AND AT 240 KIAS (MEA 6000/MOCA 3400), THEN ON TRACK 077.78/9.38 TO STAND (MEA 4000/MOCA 2700), THEN ON TRACK 077.67/4.73 TO TGTHR (MEA 3000/MOCA 1800), THEN ON TRACK 147.60/4.04 TO FERGI (MEA 2100), EXPECT LDA/DME RWY 19, RNAV (RNP) RWY 19, RIVER VISUAL RWY 19, OR RADAR VECTORS TO FINAL APPROACH COURSE.

LANDING KDAA: FROM ALWYZ ON TRACK 125.19/10.47 TO CROSS LETZZ AT 8000 (MEA 5000/MOCA 3400), THEN ON TRACK 130.06/7.78 TO CROSS RLLLL AT 6000 AT AT 250 KIAS (MEA 4000/MOCA 2600), THEN ON TRACK 130.89/10.39 TO VCTRY (MEA 2100), THEN ON TRACK 188.50/8.10 TO HEROO (MEA 2000/MOCA 1500), THEN ON TRACK 188.50. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

LANDING KADW: RWYS 19R, 19L: FROM ALWYZ ON TRACK 121.66/6.88 TO CROSS FRDMM AT 8000 AND AT 240 KIAS (MEA 6000/MOCA 3400), THEN ON TRACK 077.78/9.38 TO STAND (MEA 4000/MOCA 2700), THEN ON TRACK 077.78/4.73. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

LANDING KADW: RWYS 1L, 1R: FROM ALWYZ ON TRACK 125.19/10.47 TO CROSS LETZZ AT 8000 (MEA 5000/MOCA 3400), THEN ON TRACK 130.06/7.78 TO CROSS RLLLL AT 6000 AND AT 250 KIAS (MEA 4000/MOCA 2600), THEN ON TRACK 130.89/10.39 TO VCTRY (MEA 2100), THEN ON TRACK 188.50/8.10 TO HEROO (MEA 2000/MOCA 1500), THEN ON TRACK 188.50. EXPECT RADAR VECTORS TO FINAL APPROACH COURSE.

PROCEDURAL DATA NOTES:

NOTE: RADAR REQUIRED.

NOTE: RNAV 1.

NOTE: DME/DME/IRU OR GPS REQUIRED.

NOTE: TURBOJETS ONLY, TURBOPROPS AS ASSIGNED BY ATC ONLY.

NOTE: PROHIBITED (P56) 1.5 NM NORTH OF DCA - AVOID SURFACE TO FL180.

NOTE: MAINTAIN LAST ASSIGNED ALTITUDE UNTIL CLEARED TO "DESCEND VIA" THE FRDMM4. ARTCC WILL ISSUE LANDING DIRECTION ASSIGNMENT (NORTH OR SOUTH) AND POTOMAC TRACON WILL ISSUE RUNWAY ASSIGNMENTS.

FIXES AND/OR HOLDING PATTERNS:

CHART HOLDING AT PLDGE, HOLD W, LT, 108.16 INBOUND, 10 NM LEGS, 250 KIAS; FORGT, HOLD NW, LT, 119.17 INBOUND, 10 NM LEGS, 250 KIAS; ALWYZ, HOLD NW, LT, 119.32 INBOUND, 6 NM LEGS, 210 KIAS; MGW VORTAC, HOLD NW, LT, 129.25 INBOUND, 10 NM LEGS.

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FRDMM (RNAV)	FOUR	ALWYZ.FRDMM4	THREE	04/30/2015	

COMMUNICATIONS:

POTOMAC APP CON; KDCA ATIS; KDAA ATIS; KADW ATIS.

AIRPORTS SERVED:

<u>AIRPORT NAME</u>	<u>CITY</u>	<u>STATE</u>
RONALD REAGAN WASHINGTON NATIONAL	WASHINGTON	DC
DAVISON AAF	FORT BELVOIR	VA
JOINT BASE ANDREWS	CAMP SPRINGS	MD

LOST COMMUNICATIONS PREFERENCES:

REMARKS:

ABBREVIATED AMENDMENT, DOES NOT SATISFY PERIODIC REVIEW REQUIREMENTS.

ADDITIONAL FLIGHT DATA:

DME/DME ASSESSMENT: SAT (RNP 2.0)

REFERENCE MAG VAR: KDCA 11W/2020

CHART PROHIBITED AREAS P56A AND P56B.

CHART: KDCA, P56A, P56B.



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FRDMM (RNAV)	FOUR	ALWYZ.FRDM4	THREE	04/30/2015	

FLIGHT INSPECTED BY:

FLIGHT INSPECTION NOT REQUIRED, MANAGER ROBERT STUCKERT

ORGANIZATION:

AJW-331

DATE:

Flight Inspected Signature: *Digitally signed by*
ADOLFO D URRUTIA
Jan 26, 2018

DEVELOPED BY:

Digitally signed by
SEAN BARBEE
SEAN BARBEE
Nov 14, 2017

AJV-5431

09/29/2017

Developed By Signature:

APPROVED BY:

PATRICK MULQUEEN

AJV-5430

Approved By Signature: *Digitally signed by*
ADOLFO D URRUTIA
Jan 26, 2018

CHANGES:

1. INCREASED ALL MAGNETIC COURSES 2 DEGREES.
2. CHANGED REFERENCE MAGVAR DATA FOR KDCA FROM 9W/1985 TO 11W/2020 IN ADDITIONAL FLIGHT DATA BLOCK.
3. CHANGED RECOMMENDED NAVAID FROM DCA VOR/DME TO BAL VORTAC.

REASONS:

- 1, 2. KDCA MAGVAR UPDATED FROM 9W/1985 TO 11W/2020.
3. RECOMMENDED NAVAID CHANGED TO MATCH KDCA MAGVAR OF 11W.

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

Arrival Name	Number	STAR Computer Code	Superseded Number	Dated	Effective Date
FRDMM (RNAV)	FOUR	ALWYZ.FRDMM4	THREE	04/30/2015	

FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
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ENROUTE TRANSITION

BUCKO	391737.82N / 0794930.10W	Y		IF			AT FL310		BUCKO.FRDMM4
DRRON	391622.12N / 0793335.86W	Y	FB	TF	095.74	12.41	AT/BELOW FL310 AT/ABOVE FL270		
HONNR	391446.59N / 0791408.91W	Y	FB	TF	095.91	15.19	AT/BELOW FL280 AT/ABOVE FL240	AT 280K	
BRVRY	391322.68N / 0785747.18W	Y	FB	TF	096.19	12.79	AT/BELOW FL260 AT/ABOVE FL220		
COURG	391201.14N / 0784344.52W	Y	FB	TF	097.02	11.00	AT/BELOW FL230 AT/ABOVE FL200	AT 280K	
PLDGE	390951.33N / 0782158.72W	Y	FB	TF	097.16	17.06	AT/BELOW 17000 AT/ABOVE 15000	AT 280K	
WEWIL	390605.98N / 0780651.76W	Y	FB	TF	107.61	12.35	AT/ABOVE 14000		
NEVVR	390413.29N / 0775930.17W	Y	FB	TF	108.09	06.03	AT/ABOVE 12000		
FORGT	390207.34N / 0775119.25W	Y	FB	TF	108.17	06.71	AT/ABOVE 11000	AT 250K	
SEPII	390033.12N / 0774513.74W	Y	FB	TF	108.25	05.00	AT/ABOVE 10000	AT 250K	
ALWYZ	385900.66N / 0773916.54W	Y	FB	TF	108.32	04.89	AT/BELOW 10000		

RUNWAY TRANSITION

ALWYZ	385900.66N / 0773916.54W	Y		IF			AT/BELOW 10000		ALWYZ.FRDMM4
LETZZ	385442.36N / 0772702.40W	Y	FB	TF	114.19	10.47	AT 8000		



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FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
RLLLL	385055.11N / 0771820.23W	Y	FB	TF	119.06	07.78	AT 6000	AT 250K	
VCTRY	384543.63N / 0770649.28W	Y	FB	TF	119.89	10.39			
HEROO	383737.42N / 0770622.27W	Y	FO	TF	177.50	08.10			
KDAA				FM	177.50				RECOMMENDED NAVAID: BAL VORTAC
RUNWAY TRANSITION									
ALWYZ	385900.66N / 0773916.54W	Y		IF			AT/BELOW 10000		ALWYZ.FRDMM4
LETZZ	385442.36N / 0772702.40W	Y	FB	TF	114.19	10.47	AT 8000		
RLLLL	385055.11N / 0771820.23W	Y	FB	TF	119.06	07.78	AT 6000	AT 250K	
VCTRY	384543.63N / 0770649.28W	Y	FB	TF	119.89	10.39			
HEROO	383737.42N / 0770622.27W	Y	FO	TF	177.50	08.10			
KADW: RWY 01L, RWY 01R				FM	177.50				RECOMMENDED NAVAID: BAL VORTAC
RUNWAY TRANSITION									
ALWYZ	385900.66N / 0773916.54W	Y		IF			AT/BELOW 10000		ALWYZ.FRDMM4
FRDMM	385634.54N / 0773101.39W	Y	FB	TF	110.66	06.88	AT 8000	AT 240K	
STAND	390016.17N / 0771957.84W	Y	FB	TF	066.78	09.38			



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FIX/NAVAID	LAT/LONG	C	FO/FB	LEG TYPE	TC	DIST (NM)	ALTITUDE	SPEED	REMARKS
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TGTHR	390208.41N / 0771423.69W	Y	FB	TF	066.67	04.73			
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FERGI	385912.16N / 0771050.18W	Y	FB	TF	136.60	04.04			
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KDCA: RWY 15,
RWY 19, RWY 22

RUNWAY TRANSITION

ALWYZ	385900.66N / 0773916.54W	Y		IF			AT/BELOW 10000		ALWYZ.FRDMM4
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LETZZ	385442.36N / 0772702.40W	Y	FB	TF	114.19	10.47	AT 8000		
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RLLLL	385055.11N / 0771820.23W	Y	FB	TF	119.06	07.78	AT 6000	AT 250K	
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VCTRY	384543.63N / 0770649.28W	Y	FB	TF	119.89	10.39			
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HEROO	383737.42N / 0770622.27W	Y	FO	TF	177.50	08.10			
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KDCA: RWY 01, RWY 04, RWY 33				FM	177.50				RECOMMENDED NAVAID: BAL VORTAC
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RUNWAY TRANSITION

ALWYZ	385900.66N / 0773916.54W	Y		IF			AT/BELOW 10000		ALWYZ.FRDMM4
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FRDMM	385634.54N / 0773101.39W	Y	FB	TF	110.66	06.88	AT 8000	AT 240K	
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STAND	390016.17N / 0771957.84W	Y	FO	TF	066.78	09.38			
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KADW: RWY 19L, RWY 19R				FM	066.78				RECOMMENDED NAVAID: BAL VORTAC
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